PRECITOOL®

ALWAYS THE RIGHT SOLUTION



TOOLS
2024/25

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CORE OPTIMISED WORKING



PRECITOOL®

ALWAYS THE RIGHT SOLUTION

The best address for solutions with KNOW WOW

ORDER-SPECIFIC CONSULTING
We approach each task differently and always do our best for you.

HIGH-QUALITY PRECISION TOOLS
Only when we are totally confident about a tool, we will recommend it to you.

DELIVERY SERVICE OF MAX. 24 HOURS
For stock items within Germany.
We rather have our hands full than leave you standing with empty ones.

98 % SUPPLY AVAILABILITY
Due to the high availability of our stock items you will have them at hand the day after placing your order. You can work with that - right?

ALWAYS THE RIGHT SOLUTION
PRECITOOL means precision –
in the project, in the product, in the result.



PRECITOOL®

ALWAYS THE RIGHT SOLUTION

Always the RIGHT SOLUTION

PRECITOOL – Behind this are our high-performance national and international shareholders and distributors, linked by our modern logistics and service centre.

This partnership enables us to serve our domestic and foreign customers quickly and optimally at any time.



ASSORTMENT DIVERSITY



PRECITOOL®

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One million sound reasons with KNOW WOW

WITH US YOU ARE OPTIMALLY EQUIPPED

More than 1,000,000 items are currently available online. Benefit from one of the largest ranges of precision tools, factory equipment, power tools and industrial safety! This is because every production is only as good as its tools.

Everything from a single source

Machining from A to Z:
From external deburrers to gear moulding cutters, from micromachining to heavy-duty cutting, from standard to premium tools. Everything for drilling, countersinking, threading, milling and turning.

Tools for maximum chucking:
Tool and workpiece clamping with maximum precision.

Measuring in the µ range:
Standardised and precision measuring instruments, measuring tools, control instruments, callipers and gauges, probes, gauges, microscopes, profile projectors and calibration services.

Surface treatment and finishing:
Filing and grinding tools, roughing and grinding discs as well as brushes and dressing tools.

Screwdriving tools and general manual tools:
spanners, sockets, ratchets, torque technology and safety tools.

Operating facilities:
Shelving and cabinet systems, transport and conveyor equipment, new furnishings for offices or warehouses, environmental protection and occupational safety systems.

Electric and pneumatic tools:
Cordless and mains-operated power tools, industrial cut-off screwdrivers, pneumatic tools and accessories, extension cables and cable reels, electrical testing equipment.

Occupational safety:
General and special workwear, eye protection, respiratory protection, fall protection/operational requirements, foot protection, hearing protection, hand protection, head/face protection, protective clothing.

HOTLINE

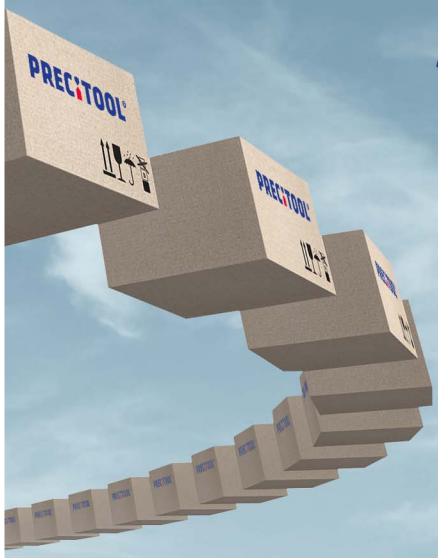


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ON-CALL SERVICE

FOR TOOLS



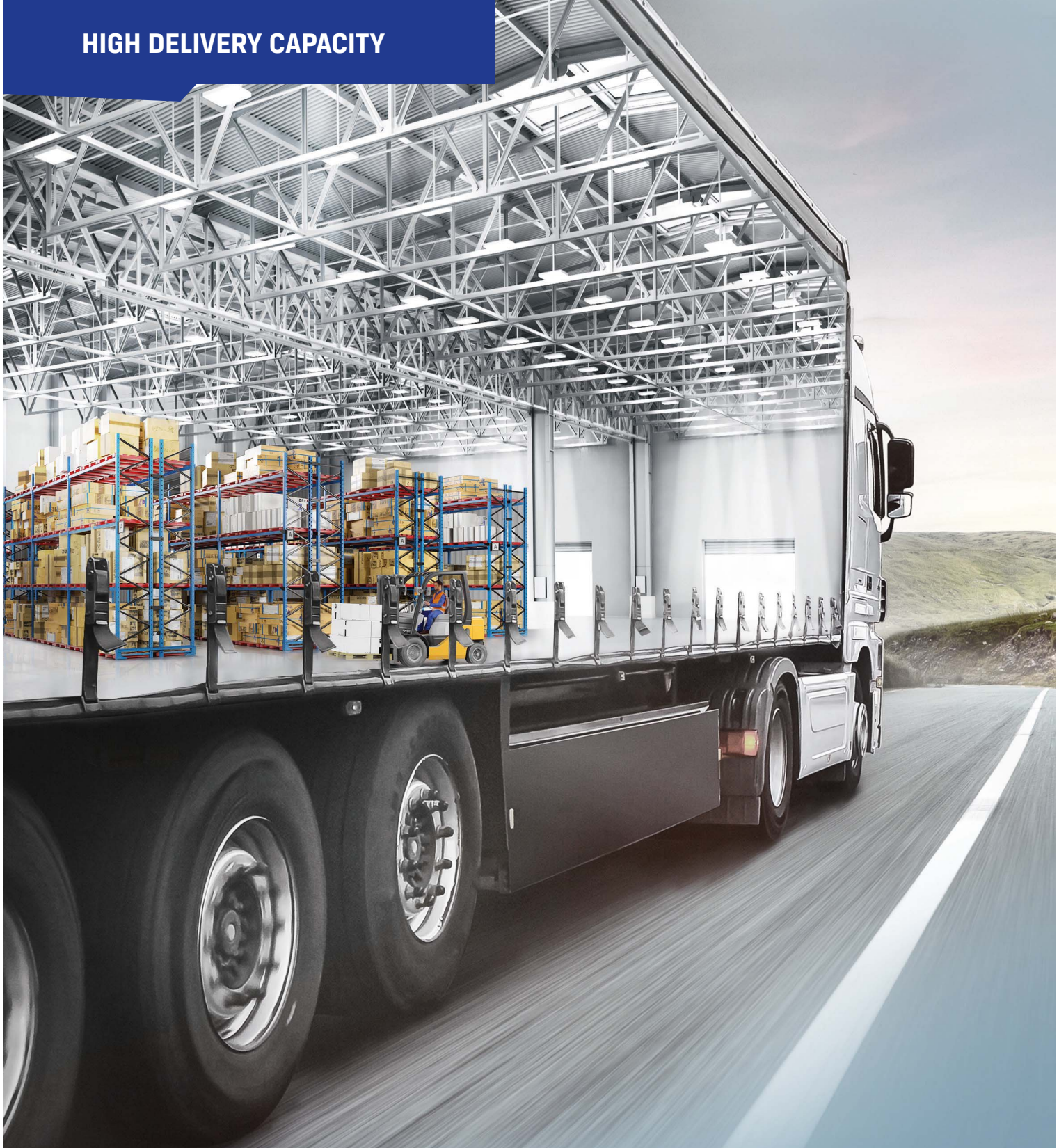
THE FASTEST DELIVERY TIMES are the be-all and end-all for you. We know that! The answer to that: Our hotline. If we receive your order by 9 pm, it will be delivered the next working day*. And by the way: Our central warehouse is located right in the very heart of Germany. Therefore your tool will always find the shortest route to you. That´s our notion of tool logistics in the 21st century.

0800 - 773248665

Hotline available
MO–FR 5 p.m. – 9 p.m. | SA 8 a.m. – 3 p.m.

* **Only dispatch of items in stock (suitable for parcel service). We guarantee the processing of the order within the above-mentioned working hours on the day the order is received. We cannot guarantee the punctual delivery of the goods by the parcel service commissioned with the delivery.**

HIGH DELIVERY CAPACITY



TÜV AUSTRIA

ZERTIFIZIERT
EN ISO 9001
ZERTIFIKAT NR. 20100193005538
TÜV AUSTRIA CERT GMBH

PRECITOOL®

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Onto the axis,

GET SET, GO!

We guarantee 98 % delivery availability of the items in stock at the central warehouse. Which does mean for you: No more long-winded or wobbly delivery deadlines, sluggish ordering processes or troublesome telephone calls to various dealers.

When it matters, trust in us:
We are the perfect solution.

98
PERCENT

DELIVERY CAPACITY

24
HOURS

DELIVERY SERVICE
MAX. 24 H
THROUGHOUT GERMANY

1,500 PARCELS DAILY
THANKS TO OPTIMAL
COORDINATED LOGISTICS

EFFICIENCY AND PREDICTABILITY



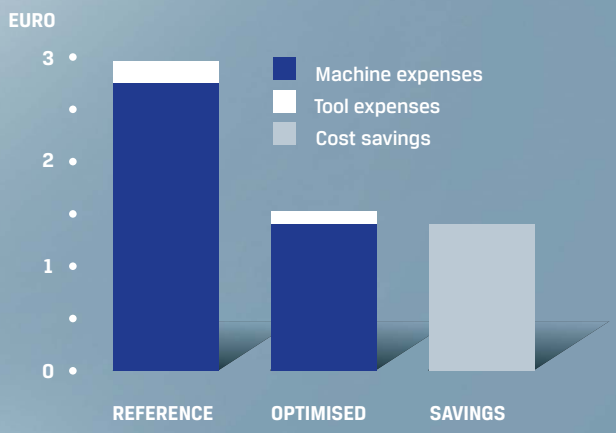
PRECITOOL®

ALWAYS THE RIGHT SOLUTION

WIN WIN-

Effects included

Example of an optimisation result



WE OPTIMISE PROCESSES AND DELIVER SOLUTIONS!
Because we love tools - and we live tools.
As real application professionals, the field representatives of our dealers would rather love to stand at the machine themselves. We are only satisfied, when you are and when we have been able to bring your production process forward as an overall process with the right tool.

In addition to the right tool, we can also provide smart planning and lots of clever ideas at the same time. Precise high-performance tools and an optimised manufacturing process result in shorter production times, reduced downtimes and verifiably lower unit costs.

For one thing´s clear:
The tool is only one aspect, the optimal use is the other.

PREMUS®



HIGH PERFORMANCE

Due to specially selected materials PREMUS and PREMUS GP tools can guarantee unconditional reliability, precision and stability even for the most demanding applications and loads. PREMUS and PREMUS GP offer 100 % premium quality – for special orders, long-term serial production and individual customer orders. And this all with 100 % stock availability.

- **high-performance**
- **innovative**
- **outstanding price/ performance ratio**
- **best-in-class**

PRECITOOL®

ALWAYS THE RIGHT SOLUTION

PRETEC®



DAILY BREAD

PRETEC tools offer top-brand quality with high stock availability for daily use under high strain. A coordinated assortment in reliable quality and a favourable price guarantee an optimal price-performance ratio for cool-headed calculators.

- **good performance**
- **reasonable price**
- **sophisticated & proven**

AUTOMATION

Product Information

Why has automation become so important?

Many manufacturing companies are facing major challenges today:

- Shortage of skilled labour/staff
- Rising production costs
- Lack of capacity/space
- Increase in small and medium series

To solve these challenges, automation is pursuing numerous approaches with the following goals:

- **Increase machine running times**
  - Increase throughput and production volume
  - Reduction in production/labour costs
  - Reduction of set-up costs
- **Improvement in product quality**
  - More consistent production results
  - Reduction of production errors
- **Relief for employees**
  - Automate labour-intensive and repetitive activities (e.g. product feeding, fixtures, cleaning, quality control)
  - Reduce physically heavy and monotonous work
  - Gain more time for production-related work



PREMUS®
HIGH PERFORMANCE BY PRECITOOL

Robot automation makes it possible to automate several manual machining processes, such as

- **Product handling for CNC lathes**
  - Import of raw material
  - Changing of collets
  - Execution and storage of processed products

  Avoidance of labour-intensive processes
  Changing product series requires the CNC lathe to be set up by an operator.
  Different grippers, collets or jaws can be changed using robot automation.

- **Product handling for CNC milling machines**
  - Receipt of raw material through product handling and/or pallet handling
  - Changing grippers, vices and tools
  - Turning and clamping of products for further processing
  - Export and storage of finished products

Significant time saving
Manual clamping and reclamping can be replaced by automatic clamping and reclamping.

High accuracy
All blanks are guided from the drawers via a centring station and picked up from the same position to improve process accuracy.

Great flexibility
A hybrid combination of product and pallet handling in a robot cell offers maximum flexibility.

What must be taken into account with CNC automation?

Numerous factors play a role in deciding whether automation makes sense in your production. These need to be identified, analysed and evaluated. The following factors are considered together with you:

1. Your company
2. Your CNC machine
3. Your production environment
4. Your products
5. Your processes

Get in touch with your local Precitool dealer.

We offer a wide range of products for customised automation.



PREMUS® machine automation

Product Information

PRECIMATE C8 - The complete solution

A multifunctional cobot (collaborative robot) solution that has been specially optimised for the operation of CNC machines. With a payload of 10 kg and an extended reach, this cobot can grip almost any part and act as an assistant to the machine operator.

- **Can be used almost anywhere in the production process due to its compact dimensions**
- **Precise sensors ensure a high level of work safety**
- **position robots and install them using drag & drop programming**

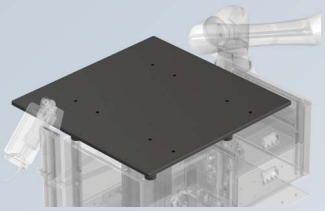


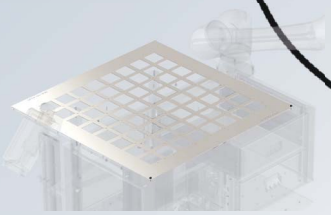
Graphical cobot control

A tablet can be used to easily configure the removal and placement of parts



Storage table and inlay



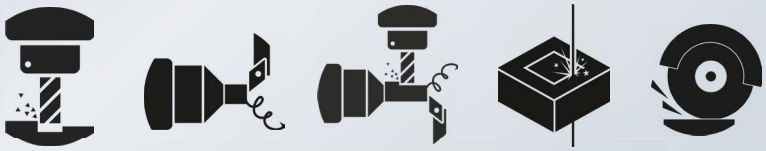


A standard inlay of 6 × 8 parts can hold 48 products and, with a running time of and support 2-3 hours of stand-alone production with a running time of 3 minutes.

Cobot gripper options	
Single or double gripper (× kg)	Multiple grippers on the robot reduce the payload, but shorten the changeover times.
2-point gripper (× kg)	For holding rectangular parts or shafts.
3-point gripper (× kg)	For gripping cylindrical parts.
Magnetic gripper (× kg)	For gripping irregular products.
Vacuum gripper (× kg)	For gripping flat parts.

PREMUS®
HIGH PERFORMANCE BY PRECITOOL

Automation - possible for every machining



Milling | Turning | Turning/ milling | EDM (electrical discharge machining) | Grinding



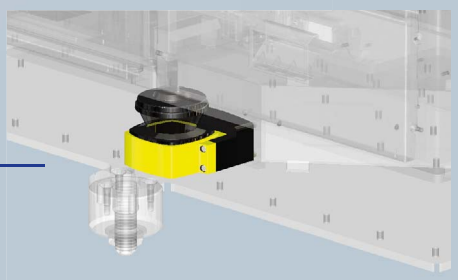


Product gripper

Different parts can be moved with a variety of grippers and gripper fingers. The simple click system allows the operator to change the gripper quickly.

Floor scanner

The floor scanner creates a safety zone:
When entering the outer zone, the robot reduces the speed considerably (< 250 mm/s). When approaching further the robot stops automatically. With Reset and Start the robot is restarted.



Technical data:	
Cell dimensions (L × B × H) mm	639 × 1260 × 680
Power connections	400VAC+N+PE - 50Hz 230VAC+PE - 50Hz
Cobot	Cobot Fanuc CRX-10iA/L
Table variants (L× B) mm	900 × 600 | 900 × 900 | 1350 × 1600

WELL POSITIONED FOR YOU



The PRECITOOL consortium

PRECITOOL national shareholders

01 **LUHA GmbH** Rellingen
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24 **VSB Holding** Delémont, Switzerland

PRECITOOL central warehouse, Neuenstein

Organisation of the Catalogue

Quick Overview for Easy Ordering

How you´ll find what you are looking for!

The catalogue is partitioned into tool categories 1 to 6 plus 9:

1 Cutting, Chipping, Moulding
2 Clamping, Chucking
3 Gauging, Inspecting
4 Filing, Grinding, Sawing
5 Screwing, Mounting, Levelling
6 Sorting, Storing
9 Industrial Supply

Please do consider:

The meaning of the sign behind the quotations:

100420 (RG 1016)
○
● +
○ +

\+ = Prices exclusive transport and packaging

A search example

You are looking for taps.

- Taps and dies are cutting tools
- Cutting tools = tool group **1**
- Taps = product line **13**

You will be able to find your desired tool easily via the product line overview at the beginning of each tool group.



Composition of the catalogue number

The catalogue number, too, is directly related to the subdivision of the tool groups.

130050 = Tool category
130050 = Product line
130050 = Structured catalogue number

It´s that simple - only 3 entries are needed:

- **Quantity**
- **Catalogue number**
- **Size**

Piece	Catalogue number	Size
1	104000	M8

for threads	104000 Core drilling (RG 1019)	d_1 mm	d_3 mm	l_1 mm	l_2 mm	l_3 mm	d_2 mm	f mm/U
M3	●	2.5	3.4	70	39	8.8	3.4	0,025 - 0,040
M4	●	3.3	4.5	80	47	11.4	4.5	0,040 - 0,063
M5	●	4.2	5.5	93	57	13.6	5.5	0,050 - 0,080
M6	●	5.0	6.6	101	63	16.5	6.6	0,050 - 0,080
M8	●	6.8	9.0	125	81	21.0	9.0	0,063 - 0,100
M10	○	8.5	11.0	142	94	25.5	11.0	0,080 - 0,125
M12	○	10.2	13.5	160	108	30.0	13.5	0,100 - 0,160

Cutting data / CAD data

Cutting Data

You will find the cutting data under:
https://precitool.de/service/schnittdaten

CAD data

You will find the CAD data under:
https://precitool.de/service/cad

Your full-range provider

For every application the proper tool!

PRECITOOL®



More than
1,000,000 articles
available online!



Factory Equipment



Occupational safety



Power tool, compressed air tools and accessories



Micromachining and accessories

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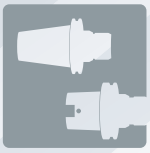
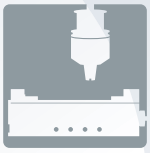




Cutting Tools

1

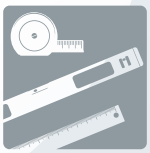
Cutting
Chipping
Forming


Clamping Tools

2

Chucking
Clamping


Measuring Tools

3

Gauging
Inspecting





Filing, Grinding and Sawing Tools

4

Grinding
Sawing
Filing





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5

Screwing
Mounting
Levelling





Organising | Industrial Supply

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Welding | Soldering
Cooling | Lubrication
Chemistry

NEW



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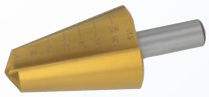
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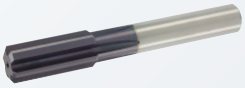
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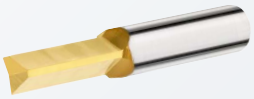
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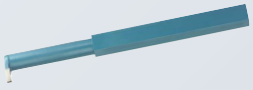
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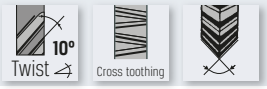
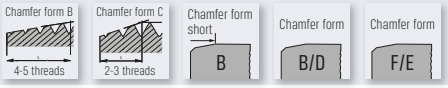
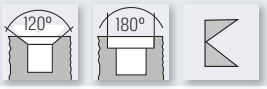
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Pictograms

Tool Categories 1 to 9

For a better and faster selection of the right tool, we have added more than 1,000 different text and symbol pictograms to the catalogue. They are shown in the upper right corner of the article area.

These example pictograms	signify	the following
HSS · HSS-Co · HSS-E-Co · HSS-PM · SC	Material of the tool	HSS / HSS-Co / SC
	Coating of the tool	TiAlN / TiCN
DIN 338 · DIN 335 · similar DIN 212 · DIN 371 · DIN 844 · DIN 895	Standard of the tool	DIN 338 / DIN 371
Typ N · Form C · Form D · HR	Type / version of the tool	Type N / form B
	Cutting direction of the tool	left
	Thread type / tool type	M / MF / thread former
DIN 13	Standard of the shape to be created	DIN 13
	Angles at the tool	118° / 130° / 60°
	Tooth form of the tool	fine, medium, coarse
	Profile of the tool	stagger-toothed
Teeth 2 · Teeth 3 · Teeth 4 · Teeth 6 · Teeth 8-12 · Teeth 10-12	Teeth number of the tool	2, 3, 4
	Shank form of the tool	MK / HE shank
	Starting cut	Spiral point form B
5H · 6G · h10	Tool tolerance	6G
	Application criteria	3 × D
	Manufacturing angle	120°, 180°
	Type of cooling	Internal cooling, wet and dry processing
	Protection class	IP65

PRECITOOL tolerance fields (e8 - js15)

Nominal dimension range mm	e8	g7	h5	h6	h7	h8	h9	h10	js12	js14	js15
up to 3	-14 / -28	-2 / -12	0 / -4	0 / -6	0 / -10	0 / -14	0 / -25	0 / -40	+50 / -50	+125 / -125	+200 / -200
above 3 to 6	-20 / -38	-4 / -16	0 / -5	0 / -8	0 / -12	0 / -18	0 / -30	0 / -48	+60 / -60	+150 / -150	+240 / -240
above 6 to 10	-25 / -47	-5 / -20	0 / -6	0 / -9	0 / -15	0 / -22	0 / -36	0 / -58	+75 / -75	+180 / -180	+290 / -290
above 10 to 18	-32 / -59	-6 / -24	0 / -8	0 / -11	0 / -18	0 / -27	0 / -43	0 / -70	+90 / -90	+215 / -215	+350 / -350
above 18 to 30	-40 / -73	-7 / -28	0 / -9	0 / -13	0 / -21	0 / -33	0 / -52	0 / -84	+105 / -105	+260 / -260	+420 / -420
above 30 to 50	-50 / -89	-9 / -34	0 / -11	0 / -16	0 / -25	0 / -39	0 / -62	0 / -100	+125 / -125	+310 / -310	+500 / -500
above 50 to 80	-60 / -106	-10 / -40	0 / -13	0 / -19	0 / -30	0 / -46	0 / -74	0 / -120	+150 / -150	+370 / -370	+600 / -600
above 80 to 120	-72 / -126	-12 / -47	0 / -15	0 / -22	0 / -35	0 / -54	0 / -87	0 / -140	+175 / -175	+435 / -435	+700 / -700
above 120 to 180	-85 / -148	-14 / -54	0 / -18	0 / -25	0 / -40	0 / -63	0 / -100	0 / -160	+200 / -200	+500 / -500	+800 / -800
above 180 to 250	-100 / -172	-15 / -61	0 / -20	0 / -29	0 / -46	0 / -72	0 / -115	0 / -185	+230 / -230	+575 / -575	+925 / -925
above 250 to 315	-110 / -191	-17 / -69	0 / -23	0 / -32	0 / -52	0 / -81	0 / -130	0 / -210	+260 / -260	+650 / -650	+1,050 / -1,050
above 315 to 400	-125 / -214	-18 / -75	0 / -25	0 / -36	0 / -57	0 / -89	0 / -140	0 / -230	+285 / -285	+700 / -700	+1,150 / -1,150
above 400 to 500	-135 / -232	-20 / -83	0 / -27	0 / -40	0 / -63	0 / -97	0 / -155	0 / -250	+315 / -315	+775 / -775	+1,250 / -1,250

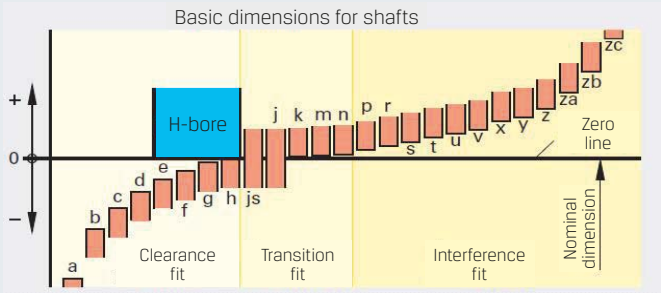
PRECITOOL tolerance fields (js16 - P9)

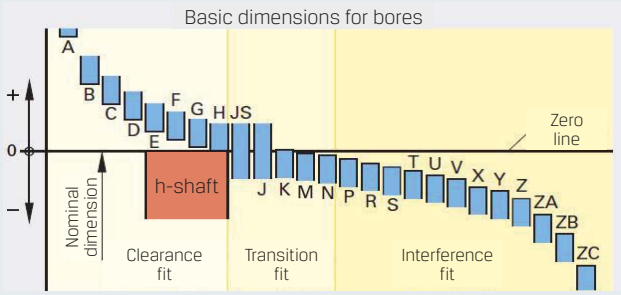
Nominal dimension range mm	js16	k5	k6	k10	m5	m7	H7	H8	H9	P9
up to 3	+300 / -300	+4 / 0	+6 / 0	+40 / 0	+6 / +2	-	+10 / 0	+14 / 0	+25 / 0	-6 / -31
above 3 to 6	+375 / -375	+6 / +1	+9 / +1	+48 / 0	+9 / +4	+16 / +4	+12 / 0	+18 / 0	+30 / 0	-12 / -42
above 6 to 10	+450 / -450	+7 / +1	+10 / +1	+58 / 0	+12 / +6	+21 / +6	+15 / 0	+22 / 0	+36 / 0	-15 / -51
above 10 to 18	+550 / -550	+9 / +1	+12 / +1	+70 / 0	+15 / +7	+25 / +7	+18 / 0	+27 / 0	+43 / 0	-18 / -61
above 18 to 30	+650 / -650	+11 / +2	+15 / +2	+84 / 0	+17 / +8	+29 / +8	+21 / 0	+33 / 0	+52 / 0	-22 / -74
above 30 to 50	+800 / -800	+13 / +2	+18 / +2	+100 / 0	+20 / +9	+34 / +9	+25 / 0	+39 / 0	+62 / 0	-26 / -88
above 50 to 80	+950 / -950	+15 / +2	+21 / +2	+120 / 0	+24 / +11	+41 / +11	+30 / 0	+46 / 0	+74 / 0	-32 / -106
above 80 to 120	+1,100 / -1,100	+18 / +3	+25 / +3	+140 / 0	+28 / +13	+48 / +13	+35 / 0	+54 / 0	+87 / 0	-37 / -124
above 120 to 180	+1,250 / -1,250	+21 / +3	+28 / +3	+160 / 0	+33 / +15	+55 / +15	+40 / 0	+63 / 0	+100 / 0	-43 / -143
above 180 to 250	+1,450 / -1,450	+24 / +4	+33 / +4	+185 / 0	+37 / +17	+63 / +17	+46 / 0	+72 / 0	+115 / 0	-50 / -165
above 250 to 315	+1,600 / -1,600	+27 / +4	+36 / +4	+210 / 0	+43 / +20	+72 / +20	+52 / 0	+81 / 0	+130 / 0	-56 / -186
above 315 to 400	+1,800 / -1,800	+29 / +4	+40 / +4	+230 / 0	+46 / +21	+78 / +21	+57 / 0	+89 / 0	+140 / 0	-62 / -202
above 400 to 500	+2,000 / -2,000	+32 / +5	+45 / +5	+250 / 0	+50 / +23	+86 / +23	+63 / 0	+97 / 0	+155 / 0	-68 / -223

Example of cutter diameter X d1 (e8)

- Milling cutter edge diameter : x 10,000 e8
- Tolerance field e8 at x 10 mm : -25 µm / -47 µm
- Diameter range of the milling cutter: x 9.975 mm - 9.953 mm

(Please make sure to observe the small / big letters of the tolerance field))





Overview Materials

The Colour Guidance System for Materials

P H M K S N

ISO	CMCCode[1]	CMC classification	Reference hardness
P	01.0	unalloyed steel, not hardened, with 0.05 - 0.1 % C	90 HB
	01.1	unalloyed steel, not hardened, with 0.1 - 0.25 % C	125 HB
	01.2	unalloyed steel, not hardened, with 0.25 - 0.55 % C	150 HB
	01.3	unalloyed steel, not hardened, with 0.55 - 0.8 % C	170 HB
	01.4	unalloyed steel, high carbon steel, annealed	210 HB
	01.5	unalloyed steel, hardened and tempered	300 HB
	02.1	low alloyed steel, not hardened	175 HB
	02.10	structural steels	175 HB
	02.12	ball bearing steels	210 HB
	02.2	low alloyed steel, hardened and tempered	330 HB
	02.3	low alloyed steel, hardened	400 HB
	03.11	high-alloy steels, annealed	200 HB
	03.13	high-alloy steels, annealed HSS	200 HB
	03.21	high-alloy steels, hardened tool steels	300 HB
	03.22	high-alloy steels, hardened steels, misc.	380 HB
	06.1	cast steel, non-alloy	150 HB
	06.2	cast steel, low alloyed (alloying elements < 5 %)	200 HB
	06.3	cast steel, high-alloy (alloying elements > 5 %)	200 HB
	06.31	cast steel, stainless, ferritic/martensitic	200 HB
	06.32	cast steel, stainless, austenitic	200 HB
	06.33	cast steel, manganese steel (12-14 % Mn)	250 HB
	06.34	cast steel, hardened and tempered	380 HB
H	10.1	chilled cast iron, cast or cast and hardened	400 HB
	04.1	extra hard steel, tempered	59 HRC
M	05.1	stainless steel, annealed, ferritic/martensitic	200 HB
	05.10	stainless steel, rolled/forged, ferritic/martensitic, machining steel	200 HB
	05.11	stainless steel, rolled/forged, ferritic/martensitic, not hardened	200 HB
	05.12	stainless steel, rolled/forged, ferritic/martensitic, PH hardened	330 HB
	05.13	stainless steel, rolled/forged, ferritic/martensitic, hardened	330 HB
	05.2	stainless steel, annealed, austenitic	200 HB
	05.20	stainless steel, rolled/forged, austenitic, machining steel	200 HB
	05.21	stainless steel, rolled/forged, austenitic	200 HB
	05.22	stainless steel, rolled/forged, austenitic, PH hardened	330 HB
	05.23	stainless steel, rolled/forged, super austenitic	200 HB
	05.3	stainless steel, tempered, martensitic	330 HB
	05.4	stainless steel, precipitation hardened steels	330 HB
	05.51	stainless steel, forged, austenitic, ferritic, (Duplex) not weldable > 0.05 % C	230 HB
	05.52	stainless steel, forged, austenitic, ferritic, (Duplex) weldable > 0.05 % C	260 HB
	15.11	stainless steel, cast, ferritic/martensitic, not hardened	200 HB
	15.12	stainless steel, cast, ferritic/martensitic, PH hardened	330 HB
	15.13	stainless steel, cast, ferritic/martensitic, hardened	330 HB
	15.21	stainless steel, cast, austenitic	200 HB
	15.22	stainless steel, cast, austenitic PH hardened	330 HB
	15.23	stainless steel, cast, super austenitic	200 HB
	15.51	stainless steel, cast, austenitic, ferritic, (Duplex) not weldable > 0.05 % C	230 HB
	15.52	stainless steel, cast, austenitic, ferritic, (Duplex) weldable > 0.05 % C	260 HB

[1] SANDVIK-Coromant material code

Overview Materials

The Colour Guidance System for Materials

P H M K S N

ISO	CMCCode[1]	CMC classification	Reference hardness
K	07.1	malleable cast iron, ferritic	130 HB
	07.2	malleable cast iron, pearlitic	230 HB
	07.3	malleable cast iron, martensitic	250 HB
	08.1	grey cast iron, low tensile strength	180 HB
	08.2	grey cast iron, high tensile strength	245 HB
	08.3	grey cast iron, austenitic	175 HB
	09.1	Spheroidal graphite cast iron, ferritic	160 HB
	09.2	Spheroidal graphite cast iron, pearlitic	250 HB
	09.3	Spheroidal graphite cast iron, martensitic	330 HB
S	20.1	heat-resistant superalloys, iron-based	
	20.11	heat-resistant superalloys, iron-based, annealed or solution treated	200 HB
	20.12	heat-resistant superalloys, iron-based, annealed or solution treated and hardened	280 HB
	20.2	heat-resistant superalloys, nickel-based	
	20.21	heat-resistant superalloys, nickel-based, annealed or solution treated	250 HB
	20.22	heat-resistant superalloys, nickel-based, annealed or solution treated and hardened	350 HB
	20.23	heat-resistant superalloys, nickel-based, cold drawn	275 HB
	20.24	heat-resistant superalloys, nickel-based, cast or cast and hardened	320 HB
	20.3	heat-resistant superalloys, cobalt-based	
	20.31	heat-resistant superalloys, cobalt-based, annealed or solution treated	200 HB
	20.32	heat-resistant superalloys, cobalt-based, annealed or solution treated and hardened	300 HB
	20.33	heat-resistant superalloys, cobalt-based, cast or cast and hardened	320 HB
	21.11	Nickel techn. pure (≦90 %) heat-treated or cold drawn	130 HB
	21.21	nickel alloyed with copper (20-50 %), heat-treated, cold drawn, cast	180 HB
	21.22	nickel alloyed with copper (20-50 %), tempered	220 HB
	21.23	nickel alloyed with copper (20-50 %), age-hardened	340 HB
	22.1	heat-resistant superalloys, niobium-based	190 HB
	22.2	heat-resistant superalloys, molybdenum-based	250 HB
	22.3	heat-resistant superalloys, tantalum-based	230 HB
	22.4	heat-resistant superalloys, tungsten-based, non-alloyed	
	22.5	heat-resistant superalloys, tungsten-based, alloyed	
	23.1	titanium a-titanium,annealed / pure titanium (99.5 % Ti)	400 N/mm²
	23.21	titanium a-, similar a- and a+b- alloys in the annealed state	950 N/mm²
	23.22	Titanium: a+b- alloys in age-hardened conditionb- alloys annealed or age-hardened	1,050 N/mm²
N	30:	Aluminium alloys,	
	30.11	aluminium alloys, rolled or rolled and cold work hardened. Not hardened	60 HB
	30.12	aluminium alloys, rolled or rolled and hardened	100 HB
	30.21	aluminium alloys, cast, not hardened	75 HB
	30.22	aluminium alloys, cast or cast and hardened	90 HB
	30.3	Aluminium alloys, pure aluminium	30 HB
	30.41	aluminium alloys, cast, Si 13-15 % (Mg, Cu)	130 HB
	30.42	aluminium alloys, cast, Si 16-22 % (Mg, Cu)	130 HB
	33:	Copper alloys	
	33.1	copper and copper alloys, machining alloys (Pb > 1 %)	110 HB
	33.2	Copper and copper alloys: Brass and leaded bronzes (Pb ≤1 %)	90 HB
	33.3	Copper and copper alloys: Bronze and lead-free copper (including electrolytic copper)	100 HB
	40.1	Thermoplastics	50 N/mm²
	40.2	Thermoset	80 N/mm²
	40.3	thermoset and fibre-reinforced plastics	80 N/mm²
	40.4	carbon fibre-reinforced pressed composite material	1,500 N/mm²
	65	Graphite	100 N/mm²

[1] SANDVIK-Coromant material code

Overview Materials

The Colour Guidance System for Materials

P H M K S N

ISO range		CMC material code[1]	Material no.	Material description	Base hardness	Tensile strength
P	Unalloyed steel	01.1	1.0301	C10	130 HB	490 - 640 N/mm²
			1.0345	235GH / HI	105 HB	285 - 510 N/mm²
			1.0401	C15	140 HB	590 - 780 N/mm²
			1.0402	C22	160 HB	500 - 650 N/mm²
			1.0715	9SMn28	150 HB	460 - 710 N/mm²
			1.0718	9SMnPb28	170 HB	460 - 710 N/mm²
			1.0736	9SMn36	150 HB	540 - 780 N/mm²
			1.0737	9SMnPb36	170 HB	540 - 780 N/mm²
			1.1133	20Mn5	160 HB	490 - 640 N/mm²
			1.1121	C10E / Ck10	130 HB	490 - 640 N/mm²
			1.1152	C22 / Cq22	160 HB	490 - 640 N/mm²
		01.2	1.0501	C35 / 1C35	190 HB	550 - 750 N/mm²
			1.0503	C45 / ETG88	190 HB	550 - 750 N/mm²
			1.1167	35Mn5	210 HB	640 - 980 N/mm²
			1.1181	C35E / Ck35	190 HB	550 - 750 N/mm²
			1.1191	C45E / Ck45	190 HB	630 - 800 N/mm²
			1.1157	40Mn4	230 HB	690 - 930 N/mm²
		01.3	1.0535	C55 / 1 C 55	230 HB	700 - 900 N/mm²
			1.0601	C60 / 1 C 60	250 HB	750 - 950 N/mm²
			1.1167	36Mn5	210 HB	640 - 980 N/mm²
			1.1213	Cf53 / C53	220 HB	640 - 880 N/mm²
			1.1221	C60E / Ck60 / 2 C 60	260 HB	790 - 1,100 N/mm²
		01.4	1.1274	Ck101	280 HB	
			1.1520	C70W2	250 HB	
			1.1545	C105W1	280 HB	
	02.1 not tempered / 02.2 tempered steel					
	Structural steels	02.10	1.0035	S185 / St33	125 HB	310 - 450 N/mm²
			1.0037	S235JR / St37-2	125 HB	340 - 510 N/mm²
			1.0050	E295 / St50-2	190 HB	490 - 660 N/mm²
			1.0070	E360 / St70-2	220 HB	620 - 900 N/mm²
			1.0116	S235J2G3 / St37-3	125 HB	340 - 510 N/mm²
			1.0486	StE285	150 HB	390 - 510 N/mm²
			1.0553	S355J0 / St52-3U	190 HB	490 - 660 N/mm²
			1.0570	S355J2G3 / St52-3N	180 HB	510 - 680 N/mm²
	Low-alloyed steel with < 5 % alloy components	02.1	1.0762	44Mn28 / ETG100	200 HB	640 - 850 N/mm²
			1.0900	38Si6	250 HB	
			1.2510	100MnCrW4	205 HB	
			1.2721	50NiCr13	250 HB	
			1.3505	100Cr6 / W3	205 HB	
			1.3520	100CrMn6 / W5	220 HB	
			1.5415	16Mo3	160 HB	440 - 590 N/mm²
			1.5622	14Ni6	190 HB	490 - 640 N/mm²
			1.6368	15NiCuMoNb5	210 HB	610 - 780 N/mm²
			1.6526	21NiCrMoS2	210 HB	610 - 780 N/mm²
			1.7176	55Cr3	250 HB	
				Ovaco 225A	210 HB	550 N/mm²
				SSAB Weldox 420	180 HB	550 N/mm²
				SSAB Weldox 500	200 HB	620 N/mm²
		02.1 / 02.2	1.1303	38MnVS6 / 38MnSiVS5	250 HB	800 - 950 N/mm²
			1.2063	145Cr6	230 HB	
			1.2311	40CrMnMo7 / Böhler M201	230 HB	
			1.2312	40CrMnMoS8-6 / Uddeholm HOLDAX	230 HB	
			1.2323	48CrMoV6-7 / Kind + Co. CM167	230 HB	
			1.2327	86CrMoV7	230 HB	
			1.2382	43MnSiMo4	230 HB	
			1.2713	55NiCrMoV6	250 HB	
			1.2738	40CrMnNiMo8-6-4 / Uddeholm IMPAX SUPREME	230 HB	
			1.2842	90MnCrV8	230 HB	
			1.5755	31NiCr14	250 HB	780 - 1,100 N/mm²
			1.5919	15CrNi6	250 HB	780 - 1,270 N/mm²
			1.6511	36CrNiMo4	260 HB	800 - 1,300 N/mm²
			1.6523	21NiCrMo2	230 HB	640 - 1,200 N/mm²
			1.6587	17CrNiMo6 / 18CrNiMo7	300 HB	980 - 1,420 N/mm²
			1.7131	16MnCr5 / EC80 / ESP65 / ZF6	210 HB	640 - 1,100 N/mm²
			1.7147	20MnCr5 / EC100	240 HB	750 - 1,200 N/mm²

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ISO range		CMC material code[1]	Material no.	Material description	Base hardness	Tensile strength
P	Unalloyed steel	02.1 / 02.2	1.7225	42CrMo4	230 HB	650 - 1,200 N/mm²
			1.7228	50CrMo4	260 HB	850 - 1,200 N/mm²
			1.8159	50CrV4	250 HB	850 - 1,200 N/mm²
			1.8507	34CrAlMo5	250 HB	640 - 1,100 N/mm²
			1.8550	34CrAlNi7	230 HB	650 - 1,200 N/mm²
			1.8933	S960-QL	315 HB	980 - 1,150 N/mm²
				Dillmax 965T	315 HB	980 - 1,150 N/mm²
	Low-alloyed steel (high-strength)	02.3	1.8925	EstE890V	350 HB	
				HZB 500	500 HB	
				SteelTec HSC110	330 HB	1,100 - 1,250 N/mm²
				SteelTec HSC130	385 HB	1,300 - 1,400 N/mm²
				SSAB Hardox 400	400 HB	1,250 N/mm²
				SSAB Hardox 450	450 HB	1,400 N/mm²
				SSAB Hardox 500	500 HB	1,550 N/mm²
				SSAB Weldox 900 D	315 HB	
				SSAB Weldox 1100	430 HB	1,350 N/mm²
				TA-Steel Fora 400	400 HB	
				TA-Steel Creusabro 4000	420 HB	
				Thyssen XAR 320	350 HB	
				Thyssen XAR 400	400 HB	
				Thyssen XAB0890	315 HB	940 - 1,100 N/mm²
				Thyssen Thyrofort 1600	500 HB	1,600 N/mm²
	High-alloyed steel with > 5 %alloy components	03.11	1.2083	X42Cr13 / Uddeholm STAVAX ESR	230 HB	
			1.2085	X33CrS16 / Böhler M314 / Eschmann Antikor-S	230 HB	
			1.2316	X36CrMo17 / Böhler M300	230 HB	
			1.2343	X38CrMoV5-1 / Uddeholm VIDAR SUPREME	230 HB	
			1.2344	X40CrMoV5-1 / Uddeholm ORVAR SUPREME	230 HB	
			1.2362	X63CrMoV5-1	225 HB	
			1.2414	120W4	230 HB	
			1.5662	X8Ni9	180 HB	510 - 710 N/mm²
			1.5680	12Ni19 / X12Ni5	180 HB	510 - 710 N/mm²
				Kind + Co. TQ1	280 HB	
		03.21 / 03.22	1.2080	X210Cr12 / Eschmann 50S	250 HB	
			1.2201	X165CrV12	230 HB	
			1.2360	X48CrMoV8-1-1	255 HB	
			1.2379	X155CrVMo12-1 / Uddeholm SVERKER 21	255 HB	
			1.2380	X220CrVMo13-4	320 HB	
			1.2436	X210CrW12 / Eschmann 50SW	250 HB	
			1.3207	HS10-4-3-10	280 HB	
			1.3343	HS6-5-2	280 HB	
	Cast steel	06.1	1.0420	GS-38	160 HB	420 - 600 N/mm²
			1.0446	GS-45	160 HB	420 - 600 N/mm²
			1.0619	GP240GH	160 HB	420 - 600 N/mm²
		06.2	1.1120	GS-20Mn5+N	180 HB	460 - 630 N/mm²
			1.6221	GS-13MnNi6-3	160 HB	460 - 630 N/mm²
			1.6760	GS-22NiMoCr5-6	210 HB	650 - 800 N/mm²
			1.6781	GS-17NiCrMo13-6	210 HB	650 - 800 N/mm²
H		04.1	1.2080	By means of a temperature treatment these and similar materials are modified in their hardness in such a way that they change from the former to this new material classification. The respective hardness has to be ascertained.		
			1.2379			
			1.2426			
			1.3207			
			1.3343			
M	05.11 Material rolled, drawn or forged / 15.11 Material cast					
	Stainless steel ferritic, martensitic	05.11 / 15.11	1.4000	X6Cr13	180 HB	400 - 600 N/mm²
			1.4002	X6CrAl13	180 HB	400 - 600 N/mm²
			1.4016	X6Cr17 / X8Cr17	170 HB	450 - 600 N/mm²
			1.4021	X20Cr13	200 HB	500 - 760 N/mm²
			1.4024	X15Cr13	200 HB	500 - 750 N/mm²
			1.4034	X46Cr13	200 HB	600 - 800 N/mm²
			1.4057	X17CrNi16-2 / X20CrNi17-2	250 HB	750 - 1,000 N/mm²
			1.4086	G-X120Cr29	300 HB	880 - 1,100 N/mm²
			1.4104	X14CrMoS17	220 HB	550 - 750 N/mm²
			1.4112	X90CrMoV18	265 HB	700 - 950 N/mm²
			1.4113	X6CrMo17-1	170 HB	450 - 650 N/mm²
			1.4122	X39CrMo17-1	220 HB	600 - 900 N/mm²

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ISO range		CMC material code[1]	Material no.	Material description	Base hardness	Tensile strength
M	Stainless steel ferritic martensitic	05.11 / 15.11	1.4509	X2CrTiNb18	200 HB	500 - 760 N/mm²
			1.4510	X8CrTi17	185 HB	420 - 600 N/mm²
			1.4724	X10CrAlSi13	190 HB	450 - 650 N/mm²
			1.4922	X20CrMoV12-1	240 HB	690 - 840 N/mm²
		05.12/ 15.12	1.4313	X3CrNiMo13-4	300 HB	900 - 1,100 N/mm²
			1.4528	X105CrCoMo18-2	300 HB	900 - 1,100 N/mm²
			1.4545	X4CrniCu16-6 / 15-5PH	300 HB	900 - 1,100 N/mm²
			1.4575	X1CrNiMoNb28-4-2	200 HB	600 - 750 N/mm²
			1.4725	X8CrAl144	200 HB	600 - 750 N/mm²
	Stainless steel austenitic	05.21/ 15.21	1.4300	X12CrNi18-8	175 HB	
			1.4301	X5CrNi18-10	200 HB	540 - 750 N/mm²
			1.4303	X4CrNi18-12	180 HB	490 - 690 N/mm²
			1.4305	X8CrNiS18-9	170 HB	500 - 750 N/mm²
			1.4306	X2CrNi19-11	190 HB	520 - 670 N/mm²
			1.4311	X2CrNiN18-10	190 HB	540 - 740 N/mm²
			1.4373	X12CrMnNiN18-9-5	220 HB	
			1.4401	X5CrNiMo17-12-2	175 HB	510 - 750 N/mm²
			1.4404	X2CrNiMo17-12-2	190 HB	490 - 690 N/mm²
			1.4429	X2CrNiMoN17-13-3	205 HB	580 - 800 N/mm²
			1.4435	X2CrNiMo18-14-3	190 HB	490 - 690 N/mm²
			1.4441	X2CrNiMo18-15-3	170 HB	510 - 750 N/mm²
			1.4449	X5CrNiMo17-13	185 HB	540 - 750 N/mm²
			1.4505	X4NiCrMoCuNb20-18-2	185 HB	490 - 750 N/mm²
			1.4541	X6CrNiTi18-10	180 HB	500 - 730 N/mm²
			1.4571	X6CrNiMoTi17-12-2	180 HB	500 - 730 N/mm²
			1.4583	X10CrNiMoNb18-12	190 HB	640 - 900 N/mm²
		05.23/ 1.15	1.3401	X120Mn12	240 HB	690 - 930 N/mm²
			1.3802	X120Mn13	345 HB	780 - 1,080 N/mm²
			1.3805	X35Mn18	245 HB	690 - 930 N/mm²
			1.3813	X40MnCrN19	300 HB	740 - 1,100 N/mm²
			1.3912	Ni 36 / Nilo Alloy36	330 HB	
			1.4465	X1CrNiMoN25-25-2	220 HB	540 - 740 N/mm²
			1.4539	X1NiCrMoCu25-20-5	200 HB	490 - 730 N/mm²
			1.4821	X20CrNiSi25-4	23 HB	600 - 850 N/mm²
			1.4828	X15CrNiSi20-12	223 HB	500 - 750 N/mm²
			1.4878	X12CrNiTi18-9	192 HB	500 - 750 N/mm²
	Duplex austenitic / ferritic	05.51/ 1.15	1.4417	X2CrNiMoSi19-5	190 HB	640 - 900 N/mm²
			1.4460	X3CrNiMoN27-5-2	220 HB	620 - 900 N/mm²
		05.52/ 15.52	1.4362	X2CrNiN23-4	190 HB	500 - 750 N/mm²
			1.4461	X2CrNiMnMoN22-13-6	205 HB	680 - 900 N/mm²
			1.4462	X2CrNiMoN22-5-3	240 HB	660 - 950 N/mm²
			1.4501	X2CrNiMoCuWN25-7-4	290 HB	730 - 930 N/mm²
			1.4507	X2NiMoCuN25-6-3	290 HB	700 - 900 N/mm²
K	Malleable cast iron	07.1	0.8035	EN-GJMW-350-4 / EN-JM1010 / GTW-35-4	230 HB	270 - 360 N/mm²
			0.8038	EN-GJMW-360-12 / EN-JM1010 / GTW-38-12	200 HB	280 - 370 N/mm²
			0.8135	EN-GJMB-350-10 / EN-JM1130 / GTS-35-10	15 HB	270 - 360 N/mm²
		07.2	0.8040	EN-GJMW-400-5 / EN-JM1030 / GTW-40-05	220 HB	300 - 420 N/mm²
			0.8045	EN-GJMW-450-7 / EN-JM1030 / GTW-45-07	220 HB	330 - 480 N/mm²
			0.8055	EN-GJMW-550-4 / EN-JM1050	250 HB	490 - 570 N/mm²
			0.8145	EN-GJMW-450-6 / EN-JM1140 / GTS-45-06	200 HB	450 N/mm²
			0.8155	EN-GJMW-550-4 / EN-JM1160 / GTS-55-4	230 HB	550 N/mm²
	Grey cast iron	08.1	0.6010	EN-GJL-100 / EN-JL1010 / GG-10	150 HB	110 N/mm²
			0.6015	EN-GJL-150 / EN-JL1010 / GG-15	150 HB	150 - 250 N/mm²
			0.6020	EN-GJL-200 / EN-JL1010 / GG-20	160 HB	200 - 300 N/mm²
		08.2	0.6025	EN-GJL-250 / EN-JL1010 / GG-25	190 HB	250 - 350 N/mm²
			0.6030	EN-GJL-300 / EN-JL1010 / GG-30	220 HB	300 - 400 N/mm²
			0.6035	EN-GJL-350 / EN-JL1010 / GG-30	250 HB	350 - 450 N/mm²
	Spheroidal graphite cast iron	09.1	0.7040	EN-GJS-400-15 / EN-JS1030 / GGG-40	160 HB	400 - 450 N/mm²
			0.7043	EN-GJS-400-18-LT / EN-JS1020 / GGG-40.3	200 HB	350 - 400 N/mm²
			0.7050	EN-GJS-500-7 / EN-JS1030 / GGG-50	220 HB	500 - 650 N/mm²
				EN-GJV-300	250 HB	350 - 400 N/mm²
		09.2	0.7060	EN-GJS-600-3 / EN-JS1030 / GGG-60	260 HB	600 - 750 N/mm²
			0.7070	EN-GJS-700-2 / EN-JS1030 / GGG-70	290 HB	700 - 850 N/mm²
			0.7080	EN-GJS-800-2 / EN-JS1030 / GGG-80	300 HB	800 - 1,000 N/mm²
				EN-GJS-900-2 / EN-JS1090	300 HB	800 - 1,000 N/mm²

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ISO range		CMC material code[1]	Material no.	Material description	Base hardness	Tensile strength
K	Spheroidal graphite cast iron	09.2		EN-GJS-800-8 / ADI-800-8	300 HB	
				EN-GJS-1400-1 / ADI-1400-1	440 HB	
					250 HB	
S	Heat-resistant superalloy Fe base	20.1	1.3927	RNi8		
			1.3942	NiMn20-6		
			1.3981	X3NiCo29-18 / Nilo-K		
			1.4558	X2NiCrAlTi32-20		
			1.4843	CrNi25-20		
			1.4860	NiCr3020 / X16NiCr30-20		
			1.4861	X10NiCr32-20		
			1.4864	X12NiCrSi36-16 / Incoloy DS		
			1.4868	X50CrNi3030 / Incoloy 801		
			1.4876	X10NiCrAlTi32-20 / Alloy 800H		
			1.4917	X12CrCoNi2120		
	Heat-resistant superalloy Ni base	20.2*	1.3917	Ni42 / Invar 42		
			1.3928	Ni52		
			1.3946	NiCr42-6		
			1.4867	NiCr60-15		
			2.4858	NiCr21Mo / Incoloy 825		
			2.4360	NiCu30Fe / Alloy 400 Monel 400		
			2.4375	NiCu30Al / Alloy K500 / Monel K500		
			2.4602	NiCr21Mo14FeW / Alloy C22 / Hastalloy C-22		
			2.4610	NiMo16Cr16Ti / Alloy C-4		
			2.4631	NiCr20TiAl / Alloy 80A / Nimonic 80		
			2.4916	NiCr19Co11MoTi / M-252		
	Heat-resistant superalloy Co base	20.3*		Air Resist 13		
			LW 2.4964	CoCr20W15Ni / Haynes 25		
			LW 2.4989	CoCr20Ni20W / Altemp S816		
				CoCr20W13 / Haynes 36		
			LW 2.4670	CoCr25NiW / HS31		
				CoCr21W11Nb / Jessob 875		
				CoCr22W14Ni / Haynes188		
				J1650		
				CoCr29Moo / HS21		
				J1570		
	Titanium materials	23.1	3.7024-WL	Ti99.5 / Ti35A / Titanium Grade 1		290 - 430 N/mm²
			3.7025			
			3.7034-WL	Ti99.4 / Ti50A / Titanium Grade 2		390 - 540 N/mm²
			3.7035			
			3.7055	Ti65A / Titanium Grade 3		
			3.7064-WL	Ti99.2 / Ti75A / Titanium Grade 4		540 - 740 N/mm²
			3.7065			
		23.21		TiV10Cr11Al13		
				TiAl5Sn2Zr3Mo4Cr4		
				TiV12Cr11Al3		
				TiMn8		
		23.22	3.7115	TiAl5Sn2.5		
			3.7164-WL	TiAl6V4 / Ti35A / Titanium Grade 5		830 - 1,100 N/mm²
			3.7165			
			3.7174-WL	TiAl6V6Sn		930 - 1,200 N/mm²
			3.7175			
			3.7184-WL	TiAl4Mo4Sn2Si0.5		870 - 1,050 N/mm²
			3.7185			
			3.7225	Ti35A0.2Pd / Titanium Grade 11		
N	Al rolled / forged	30.11	3.0515	AlMn		
			3.0516	S-AlMn		200 N/mm²
			3.0615	EN-AW-6012 / AlMgSiPb		200 N/mm²
		30.12	3.1255	EN-AW-2014 / AlCu4SiMg	55 HB	
			3.1305	EN-AW-2117 / AlCu2,5SiMg	55 HB	
	Al cast	30.21	3.2151	EN-AC-45000 / G-AlSi6Cu4	80 HB	
			3.2163	EN-AC-46200 / G-AlSi9Cu3	80 HB	240 N/mm²
			3.2341	G-AlSi5Mg		

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ISO range		CMC material code[1]	Material no.	Material description	Base hardness	Tensile strength
N	Al cast	30.22	3.1371	EN-AC-21000 / G-AlCu4TiMg	90 HB	300 N/mm²
			3.1841	EN-AC-21100 / G-AlCu4Ti	95 HB	
			3.2371	EN-AC-42100 / G-AlSi7Mg	75 HB	220 - 260 N/mm²
			3.2381	EN-AC-43000 / G-AlSi10Mg	75 HB	
	Pure Al	30.3	3.0205	EN-AW-1200 / Al99		60 N/mm²
			3.0255	EN-AW-1050A / Al99,5		60 N/mm²
			3.0275	EN-AW-1060 / Al99,7		125 N/mm²
	Cu machining alloys (< 1 % Pb)	33.1	2.0331	CuZn35Pb2 / CuZn35Pb2 / Ms63Pb (long chipping)		
			2.0340	G-CuZn37		
			2.0371	CW608N / CuZn38Pb1,5	140 HB	340 - 470 N/mm²
			2.0375	CuZn36Pb3 (long chipping)		
			2.0380	CuZn39Pb2 / Ms58		
			2.0401	CuZn39Pb3		
			2.0402	CuZn40Pb2		
			2.0410	CuZn44Pb2 / Ms56		
	Cu alloys / brass (< 1 % Pb)	33.2	2.0220	CuZn5 / Ms95 (long chipping)		
			2.0230	CW501L / CuZn10 / Ms90 (long chipping)		
			2.0250	CuZn20 / Ms80 (long chipping)		
			2.0265	CW505L / CuZn30 / Ms70 (long chipping)	110 HB	260 - 390 N/mm²
			2.0332	CW604N / CuZn37Pb0,5 (long chipping)	135 HB	300 - 440 N/mm²
			2360	CuZn40 / Ms60		
			2.0510	CuZn37Al1		
			2.0550	CuZn40Al2	160 HB	
			2.0572	CuZn40Mn2 / SoMs58		
			2.0590	G-CuZn40Fe / G-SoMsF30		
			2.2140	G-CuZnAl4 / Zamak		
	Bronze / Pb-free Cu and E-Cu	33.3	2.0065	E-Cu58		
			2.0070	Se-Cu		
			2.0090	Cu-DHP / CW024A / SF-Cu		
			2.1030	CW453K / CuSn8 (long chipping)		
			2.1050	G-CuSn10Zn / G-CuBz10		
			2.1052	G-CuSn12Pb		
			2.1090	G-CuSn7ZnPb / Rg7 (long chipping)		
			2.1096	G-CuSn5ZnPb / Rg5 (long chipping)		
	Thermoplastics	40.1		ABS		
				EP / epoxy		
				PA / polyamide		
				PC / polycarbonate		
				PE / polyethylene		
				PMMA / acrylic glass		
	Thermoset	40.2		Bakelite / Urea formaldehyde		
				MF / melamine formaldehyde		
				Pertinax		
				Polysulfone		
				Resopal		
	Fibre-reinforced plastics	40.3		ARP		
				CRP		
				GRP		
				Kevlar		
				Travolit		
	Graphite	65		ISEM 3		
				ISEM 8		
				R8340		
				R8650		
				Technograph 15		
				Uni Poco EDM		

Material hardness value comparison table

Tensile strength	Hardness Brinell	Hardness Vickers	Hardness Rockwell
255 N/mm²	76 HB	80 HV	–
285 N/mm²	85 HB	90 HV	–
320 N/mm²	95 HB	100 HV	–
350 N/mm²	105 HB	110 HV	–
385 N/mm²	110 HB	120 HV	–
415 N/mm²	124 HB	130 HV	–
450 N/mm²	133 HB	140 HV	–
480 N/mm²	143 HB	150 HV	–
510 N/mm²	152 HB	160 HV	–
545 N/mm²	162 HB	170 HV	–
575 N/mm²	171 HB	180 HV	–
610 N/mm²	181 HB	190 HV	–
640 N/mm²	190 HB	200 HV	–
675 N/mm²	199 HB	210 HV	–
705 N/mm²	209 HB	220 HV	–
740 N/mm²	219 HB	230 HV	–
770 N/mm²	228 HB	240 HV	20,3 HRC
800 N/mm²	238 HB	250 HV	22,2 HRC
835 N/mm²	247 HB	260 HV	24,0 HRC
865 N/mm²	257 HB	270 HV	25,6 HRC
900 N/mm²	266 HB	280 HV	27,1 HRC
930 N/mm²	276 HB	290 HV	28,5 HRC
965 N/mm²	285 HB	300 HV	29,8 HRC
1,030 N/mm²	304 HB	320 HV	32,2 HRC
1,095 N/mm²	324 HB	340 HV	34,4 HRC

Tensile strength	Hardness Brinell	Hardness Vickers	Hardness Rockwell
1,155 N/mm²	342 HB	360 HV	36,6 HRC
1,220 N/mm²	361 HB	380 HV	38,8 HRC
1,290 N/mm²	380 HB	400 HV	40,8 HRC
1,350 N/mm²	399 HB	420 HV	42,7 HRC
1,420 N/mm²	418 HB	440 HV	44,5 HRC
1,485 N/mm²	437 HB	460 HV	46,1 HRC
1,555 N/mm²	456 HB	480 HV	47,7 HRC
1,595 N/mm²	466 HB	490 HV	48,4 HRC
1,665 N/mm²	485 HB	510 HV	49,8 HRC
1,740 N/mm²	504 HB	530 HV	51,1 HRC
1,810 N/mm²	523 HB	550 HV	52,3 HRC
1,880 N/mm²	542 HB	570 HV	53,6 HRC
1,955 N/mm²	561 HB	590 HV	54,7 HRC
2,030 N/mm²	580 HB	610 HV	55,7 HRC
3,105 N/mm²	599 HB	630 HV	56,8 HRC
2,180 N/mm²	618 HB	650 HV	57,8 HRC
–	636 HB	670 HV	58,8 HRC
–	–	690 HV	59,7 HRC
–	–	720 HV	61,0 HRC
–	–	760 HV	62,5 HRC
–	–	800 HV	64,0 HRC
–	–	840 HV	65,3 HRC
–	–	880 HV	66,4 HRC
–	–	920 HV	67,5 HRC
–	–	–	–

Milling basics – speed, feed and milling

Description	Formula
Rotational speed	$n = \frac{V_c \cdot 1.000}{D \cdot \pi}$
Cutting speed	$v_c = \frac{D \cdot \pi \cdot n}{1000}$
Feed per tooth	$f_z = \frac{f_n}{z}$ $f_z = \frac{v_f}{z \cdot n}$
Feed per rotation	$f_n = f_z \cdot z$ $f_n = \frac{v_f}{n}$
Feeding speed	$v_f = f_z \cdot z \cdot n$
Removal rate	$Q = \frac{a_p \cdot a_e \cdot v_f}{1000}$
Drive power	$P_a = \frac{a_p \cdot a_e \cdot v_f \cdot k_c}{60 \cdot 10^6 \cdot \eta_{mt}}$
Processing time	$T_c = \frac{l}{v_f}$ = min
Average chip thickness	$h_m = f_z \cdot \sqrt{\frac{a_e}{d}}$

Legend

- $_ae$ = Radial cutting depth (mm)
- $_ap$ = Axial cutting depth (mm)
- D = Diameter (mm)
- $_fn$ = Feed per revolution (mm/rev)
- $_fz$ = Feed per tooth (mm/t)
- $_hm$ = Average chip thickness (mm)
- $_kc$ = Specific cutting force (N/mm²)
- l = Working length (mm)
- n = Rotational speed (rev/min)
- P_a = Driving power (kW)
- Q = Removal rate (cm3/min)
- T_c = Processing time (min)
- $_vc$ = Cutting speed (m/min)
- $_vf$ = Feeding speed (mm/min)
- z = Number of teeth
- π = 3.14...
- η_{mt} = Efficiency rate

Overview drilling tools

Product line 10

Cat. no.	Brand	⦰ mm	Page	Material	Drilling depth	Cutting material	Coating	Point angle	Drill type	DIN	Drilling Tools
100010	PRETEC	1.00 - 13.00	10/24	P		HSS		118°	Typ N	DIN 338	
100015	PRETEC	1.00 - 16.00	10/24	P		HSS		118°	Typ N	DIN 338	
100020	PREMUS	0.20 - 20.00	10/25	P		HSS		118°	Typ N	DIN 338	
100026	PRETEC	13.00 - 20.00	10/26	P		HSS		118°	Typ N	Factory standard	
100084	PREMUS	1.00 - 16.00	10/26	UNI		HSS		130°		DIN 338	
100086	PREMUS	1.00 - 16.00	10/26	UNI		HSS	coated	130°		DIN 338	
100100	PREMUS	1.00 - 14.00	10/28	UNI		HSS-Co	coated	118°	Typ N	DIN 338	
100160	PREMUS	1.00 - 13.00	10/27	N		HSS		130°	Typ W	DIN 338	
100350	PREMUS	1.00 - 13.00	10/28	UNI		HSS-Co		118°	Typ N	DIN 338	
100410	PREMUS	2.00 - 13.00	10/30	UNI		HSS-Co		130°		DIN 338	
100420	PREMUS	1.00 - 13.00	10/30	M		HSS-Co		130°		DIN 338	
100426	PREMUS	0.40 - 13.00	10/31	M		HSS-Co		130°	Typ Ti	DIN 338	
100428	PREMUS	1.00 - 13.00	10/31	M		HSS-Co	coated	130°	Typ Ti	DIN 338	
100431	PREMUS	1.00 - 13.00	10/29	UNI		HSS-Co		130°	Typ N	DIN 338	
100433	PREMUS	1.00 - 13.00	10/29	UNI		HSS-Co	coated	130°	Typ N	DIN 338	
100435	PREMUS	2.00 - 20.00	10/29	UNI		HSS-Co	coated	130°		Factory standard	
100600	PREMUS	1.00 - 16.00	10/32	P		HSS		118°	Typ N	DIN 1897	
100670	PREMUS	1.00 - 12.00	10/35	M		HSS-Co		130°	Typ INOX	DIN 1897	
100690	PREMUS	1.00 - 13.00	10/32	UNI		HSS-Co		130°	Typ N	DIN 1897	
100720	PREMUS	1.00 - 14.00	10/33	UNI		HSS-Co	coated	118°	Typ PU 500	DIN 1897	
100725	PREMUS	1.00 - 20.00	10/34	UNI		HSS-Co	coated			Factory standard	
100820	PREMUS	0.20 - 1.45	10/35	UNI		HSS-Co PM		118°	Typ N	DIN 1899	
101110	PREMUS	1.00 - 13.00	10/36	P		HSS		118°	Typ N	DIN 340	
101430	PREMUS	1.00 - 13.00	10/36	UNI		HSS-Co		130°	Typ N	DIN 340	
101435	PREMUS	1.00 - 13.00	10/36	UNI		HSS-Co	coated	130°	Typ N	DIN 340	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	⦰ mm	Page	Material	Drilling depth	Cutting material	Coating	Point angle	Drill type	DIN	Drilling Tools
101510 - 14	REMUS	2.00 - 10.00	10/37	UNI		HSS		130°	Typ PT	DIN 1869 überlang	
101530	REMUS	3.00 - 12.00	10/37	P		HSS		118°	Typ N	DIN 1898	
101550 - 52	REMUS	3.00 - 10.00	10/37	UNI		HSS		130°	Typ PT	DIN 1869 überlang	
102000	RETEC	10.00 - 60.00	10/38	P		HSS		118°	Typ N	DIN 345	
102050	REMUS	10.00 - 65.00	10/38	P		HSS		118°	Typ N	DIN 345	
102350	REMUS	10.00 - 40.00	10/38	P		HSS-Co		118°	Typ N	DIN 345	
102401	MIKRON TOOL	0.40-6.00	10/43	UNI	2 × A11	SC	coated	140°		Factory standard	
102403	MIKRON TOOL	0.40 - 6.00	10/43	UNI	2 × A11	SC	coated	170°		Factory standard	
102405	MIKRON TOOL	0.50 - 10.00	10/42	UNI		SC	coated	120°	ICS	Factory standard	
102407	MIKRON TOOL	0.30 - 6.00	10/42	UNI		SC	coated	130°	ICS	Factory standard	
102409	MIKRON TOOL	3.00 - 6.00	10/42	UNI		SC	coated	130°	ICS	Factory standard	
102410 - 11	MIKRON TOOL	0.10 - 1.20	10/48	P	3 × A11	SC	coated	140°		Factory standard	
102412	MIKRON TOOL	0.10-1.20	10/56	S	3 × A11	SC		140°		Factory standard	
102413+17	MIKRON TOOL	0.50 - 6.00	10/40	UNI		SC		90° 120°		Factory standard	
102414	MIKRON TOOL	0.30 - 2.00	10/50	M	3 × A11	SC	coated	140°		Factory standard	
102415+19	MIKRON TOOL	0.50 - 6.00	10/40	UNI		SC	coated	90° 120°		Factory standard	
102416	MIKRON TOOL	1.00 - 6.00	10/50	M	3 × A11	SC	coated	140°	ICS	Factory standard	
102421 - 23	MIKRON TOOL	0.40 - 6.00	10/44	P	4 × A11 7 × A11	SC	coated	140°		Factory standard	
102425 - 27	MIKRON TOOL	0.75 - 6.00	10/45	UNI	6 × A11	SC	coated	140°	ICS	Factory standard	
102429 - 31	MIKRON TOOL	0.75 - 6.00	10/45	UNI	10 × A11	SC	coated	140°	ICS	Factory standard	
102433 - 35	MIKRON TOOL	0.75 - 6.00	10/46	UNI	15 × A11	SC	coated	140°	ICS	Factory standard	
102437 - 39	MIKRON TOOL	1.00 - 6.00	10/47	UNI	15 × A11 20 × A11	SC	coated	140°	ICS	Factory standard	
102441 - 43	MIKRON TOOL	1.00 - 6.00	10/47	UNI	30 × A11 40 × A11	SC	coated	140°	ICS	Factory standard	
102444 - 45	MIKRON TOOL	0.10 - 1.20	10/48	P	20 × A11	SC	coated	140°		Factory standard	
102446 - 47	MIKRON TOOL	0.10 - 1.20	10/49	P	30 × A11	SC	coated	140°		Factory standard	

Overview drilling tools

Product line 10

Cat. no.	Brand	⌀ mm	Page	Material	Drilling depth	Cutting material	Coating	Point angle	Drill type	DIN	Drilling Tools
102448 - 50	MIKRON TOOL	0.30 - 1.20	10/49	P	50 × A11	SC	coated	140°		Factory standard	
102449+51	MIKRON TOOL	0.40 - 3.00	10/56	N	5 × A11 10 × A11	SC	coated	130°		Factory standard	
102452+54	MIKRON TOOL	0.90 - 3.80	10/57	S M		SC	coated	140°			
102453 - 55	MIKRON TOOL	0.10 - 1.50	10/40	UNI		SC	coated			Factory standard	
102457 - 59	MIKRON TOOL	0.10 - 3.00	10/41	UNI		SC	coated			Factory standard	
102460	MIKRON TOOL	0.10 - 1.20	10/58	S	30 × A11	SC		140°		Factory standard	
102461	MIKRON TOOL	1.00 - 6.00	10/59	S	3 × A11	SC	coated	141°	ICS	Factory standard	
102462	MIKRON TOOL	0.30 - 1.20	10/58	S	50 × A11	SC		140°		Factory standard	
102464	MIKRON TOOL	0.20 - 2.00	10/51	M	8 × A11	SC	coated	130°		Factory standard	
102466	MIKRON TOOL	0.20 - 2.00	10/51	M	8 × A11	SC	coated	130°		Factory standard	
102467	MIKRON TOOL	0.20 - 2.00	10/51	M	12 × A11	SC	coated	130°		Factory standard	
102468	MIKRON TOOL	0.20 - 2.00	10/51	M	12 × A11	SC	coated	130°		Factory standard	
102470	MIKRON TOOL	1.00 - 6.00	10/52	M	6 × A11	SC	coated	130°	ICS	Factory standard	
102472	MIKRON TOOL	1.00-6.00	10/52	M	10 × A11	SC	coated	140°	ICS	Factory standard	
102473	MIKRON TOOL	1.00 - 6.00	10/53	M	15 × A11	SC	coated	140°	ICS	Factory standard	
102474	MIKRON TOOL	1.00 - 6.00	10/53	M	20 × A11	SC	coated	140°	ICS	Factory standard	
102475	MIKRON TOOL	1.45 - 6.00	10/54	M	30 × A11	SC	coated	140°	ICS	Factory standard	
102476	MIKRON TOOL	0.20 - 2.00	10/55	M	30 × A11	SC	coated	130°		Factory standard	
102477	MIKRON TOOL	2.00 - 6.00	10/54	M	40 × A11	SC	coated	140°	ICS	Factory standard	
102478	MIKRON TOOL	0.30 - 1.20	10/55	M	50 × A11	SC	coated	130°		Factory standard	
102480	MIKRON TOOL	1.00 - 6.00	10/61	S	3 × A11	SC	coated	140°	ICS	Factory standard	
102485	MIKRON TOOL	1.00 - 6.00	10/61	S	6 × A11	SC	coated	140°	ICS	Factory standard	
102615	PREMUS	1.00 - 16.00	10/62	UNI	3 × A11	SC		118°	Typ N	DIN 6539	
102620	PREMUS	1.00 - 12.00	10/63	UNI	5 × A11	SC		118°	Typ N	Factory standard	
102625	PREMUS	1.00 - 12.00	10/63	UNI	5 × A11	SC	coated	118°	Typ N	Factory standard	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	∅ mm	Page	Material	Drilling depth	Cutting material	Coating	Point angle	Drill type	DIN	Drilling Tools
102632	RETEC	3.00 - 20.00	10/64	P	3 × A11	SC	coated	140°		DIN 6537	
102637	RETEC	3.00 - 20.00	10/66	UNI	3 × A11	SC	coated	140°	ICS	DIN 6537	
102650	REMUS	3.00 - 16.00	10/63	UNI		Carbide cutting edge		118°		DIN 8037	
102657	RETEC	3.00 - 20.00	10/69	UNI	5 × A11	SC	coated	140°	ICS	DIN 6537	
102731	REMUS GP	1.00 - 20.00	10/65	P	3 × A11	SC	coated	140°		DIN 6537	
102732	REMUS GP	3.00 - 20.00	10/65	P	3 × A11	SC	coated	140°		DIN 6537	
102736	REMUS GP	2.00 - 20.00	10/67	UNI	3 × A11	SC	coated	140°	ICS	DIN 6537	
102737	REMUS GP	3.00 - 20.00	10/67	UNI	3 × A11	SC	coated	140°	ICS	DIN 6537	
102756	REMUS GP	2.00 - 20.00	10/70	UNI	5 × A11	SC	coated	140°	ICS	DIN 6537	
102757	REMUS GP	3.00 - 20.00	10/70	UNI	5 × A11	SC	coated	140°	ICS	DIN 6537	
102786	REMUS GP	2.80 - 16.00	10/71	UNI	8 × A11	SC	coated	140°	ICS	DIN 6537	
102810	REMUS	3.00 - 20.00	10/68	P	5 × A11	SC	coated	140°		DIN 6537	
103100	REMUS	3.00 - 20.00	10/75	UNI	8 × A11	SC	coated	140°	ICS	DIN 6537	
103110	REMUS	3.00 - 20.00	10/74	UNI	5 × A11	SC	coated	140°	ICS	DIN 6537	
103120	REMUS	3.00 - 20.00	10/75	UNI	12 × A11	SC	coated	140°	ICS	DIN 6537	
103136	REMUS	5.00 - 20.00	10/77	UNI	5 × A11	SC	coated	140°	ICS	Factory standard	
103139	REMUS	5.00 - 18.00	10/72	UNI	8 × A11	SC	coated	135°	ICS	Factory standard	
103144 - 103149	REMUS	3.00 - 20.00	10/73	UNI	3 × A11 5 × A11 8 × A11	SC	coated	145°	ICS	DIN 6537	
103150+ 103160	REMUS	3.00 - 20.00	10/76	UNI	3 × A11 5 × A11	SC	coated	180°	ICS	Factory standard	
103222	REMUS	3.00 - 16.00	10/84	N	5 × A11	SC		140°	ICS	DIN 6537	
103271 - 103277	REMUS	3.00 - 16.00	10/78	P	15 × A11 20 × A11 25 × A11 30 × A11	SC	coated	137°	ICS	Factory standard	
103300+05	REMUS	5.97 - 16.00	10/79	P	3 × A11 5 × A11	SC	coated	140°	ICS	DIN 6537	
103431	REMUS GP	1.00 - 20.00	10/80	M	3 × A11	SC	coated	140°		DIN 6537	
103432	REMUS GP	3.00 - 20.00	10/80	M	3 × A11	SC	coated	140°		DIN 6537	
103436	REMUS GP	2.00 - 20.00	10/81	M	3 × A11	SC	coated	140°	ICS	DIN 6537	

Overview drilling tools

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Cat. no.	Brand	⦰ mm	Page	Material	Drilling depth	Cutting material	Coating	Point angle	Drill type	DIN	Drilling Tools
103437	PREMUS GP	3.00 - 20.00	10/81	M	3 × A11	SC	coated	140°	ICS	DIN 6537	
103456	PREMUS GP	2.00 - 20.00	10/82	M	5 × A11	SC	coated	140°	ICS	DIN 6537	
103457	PREMUS GP	3.00 - 20.00	10/82	M	5 × A11	SC	coated	140°	ICS	DIN 6537	
103715	PREMUS	3.00 - 20.00	10/83	M	8 × A11	SC	coated	135°	ICS	Factory standard	
103721	PREMUS	3.00 - 20.00	10/83	M	12 × A11	SC	coated	135°	ICS	Factory standard	
104000	PREMUS	M3 - M12	10-85	P		HSS		118°	Typ N	DIN 8378	
104050	PREMUS	M3 - M10	10/85	P		HSS		118°	Typ N	DIN 8374	
104100	PREMUS	M3 - M10	10/85	P		HSS		118°	Typ N	DIN 8376	
104150	PREMUS	M5 - M20	10/85	P		HSS		118°	Typ N	DIN 8377	
104410	PREMUS	M3 - M10	10/86	P		HSS		118°	Typ N	Factory standard	
104412	PREMUS	M3 - M10	10/86	P		HSS	coated	118°	Typ N	Factory standard	
104420	PREMUS	M3 - M10	10/86	P		HSS		118°	Typ N	Factory standard	
104430	PREMUS	M3 - M12	10-86	P		HSS		118°	Typ N	Factory standard	
104432	PREMUS	M3 - M12	10-86	P		HSS	coated	118°	Typ N	Factory standard	
104460	PREMUS	M3 - M10	10/86	P		HSS		118°	Typ N	Factory standard	
104462	PREMUS	M3 - M12	10-86	P		HSS	coated	118°	Typ N	Factory standard	
105005	PREMUS	0.50 - 10.00	10/87	UNI		HSS				DIN 333 A	
105010	PREMUS	1.00 - 5.00	10/87	UNI	left hand cutting	HSS				DIN 333 A	
105050	PREMUS	1.00 - 5.00	10/87	UNI		HSS				DIN 333 A Bead	
105080	PREMUS	1.00 - 5.00	10/87	UNI		HSS				DIN 333 R	
105200	PREMUS	1.00 - 4.00	10/87	UNI		HSS-Co				DIN 333 A	
105220	PREMUS	1.00 - 4.00	10/87	UNI		HSS-Co	coated			DIN 333 A	
105240	PREMUS	0.80 - 5.00	10/87	UNI		SC				DIN 333 A	
105300	PREMUS	1.00 - 6.30	10/88	UNI		HSS				DIN 333 B	
105500	PREMUS	2.00 - 6.30	10/88	UNI		HSS				Factory standard	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	⦸ mm	Page	Material	Drilling depth	Cutting material	Coating	Point angle	Drill type	DIN	Drilling Tools
105550	PREMUS	1.6 - 6.30	10/88	UNI		HSS				Factory standard	
105600+04	PREMUS	1.00 - 4.00	10/88	UNI		HSS				Factory standard	
105700	PREMUS	M4 - M16	10/89	UNI		HSS				Factory standard	
105750	PREMUS	M4 - M10	10/89	UNI		HSS				Factory standard	
105780	PREMUS	M3 - M16	10/89	UNI		SC	coated	140°		DIN 6537	
105785	PREMUS	M3 - M16	10/89	UNI		SC	coated	140°	ICS	DIN 6537	
106000	PREMUS	3.0 - 20.0	10/90	UNI		HSS-Co		120°	Typ N	ISO 10898	
106020	PREMUS	3.0 - 20.0	10/90	UNI		HSS-Co	coated	120°	Typ N	ISO 10898	
106040	PREMUS	3.0 - 20.0	10/90	UNI		HSS-Co	coated	120°	Typ N	ISO 10898	
106050	PREMUS	4.0 - 20.0	10/90	UNI		HSS-Co		120°	Typ N	ISO 10898	
106060	PREMUS	4.0 - 20.0	10/90	UNI		HSS-Co	coated	120°	Typ N	ISO 10898	
106070	PREMUS	4.0 - 20.0	10/90	UNI		HSS-Co		90°	Typ N	ISO 10898	
106080	PREMUS	4.0 - 20.0	10/90	UNI		HSS-Co	coated	90°	Typ N	ISO 10898	
106100	PREMUS	3.0 - 20.0	10/90	UNI		HSS-Co		90°	Typ N	ISO 10898	
106120	PREMUS	3.0 - 20.0	10/90	UNI		HSS-Co	coated	90°	Typ N	ISO 10898	
106130	PREMUS	3.0 - 20.0	10/90	UNI		HSS-Co	coated	90°	Typ N	ISO 10898	
106140	PREMUS	3.0 - 20.0	10/90	UNI		SC		120°	Typ N	ISO 10898	
106160	PREMUS	3.0 - 20.0	10/90	UNI		SC	coated	120°	Typ N	ISO 10898	
106170	PREMUS	3.0 - 20.0	10/90	UNI		SC		90°	Typ N	ISO 10898	
106180	PREMUS	6.0 - 20.0	10/90	UNI		SC		142°	Typ N	ISO 10898	
106185	PREMUS	6.0 - 20.0	10/90	UNI		SC	coated	142°	Typ N	ISO 10898	
106190	PREMUS	3.0 - 20.0	10/90	UNI		SC	coated	90°	Typ N	ISO 10898	

Twist drill HSS Steel

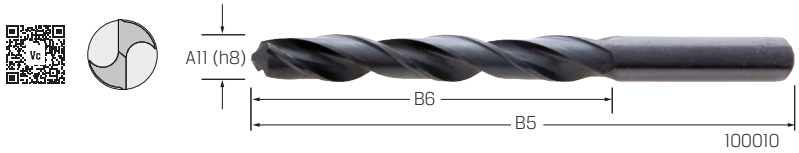
PRETEC

	P N/mm²	K HB
100010	<850	<200
100015		<350
vc = m/min.		
100010	8-25	15-25
100015	15-30	20-25

HSS | DIN 338 | Typ N | Teeth 2 | 118° | Straight shank | P | K

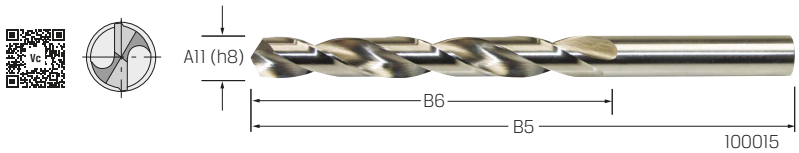
Design 100010:
- relived cone
- rollforged standard quality

Use 100010:
Standard twist drill for general use



Design 100015:
- split point from 3.00 mm
- profile-ground quality
- blank

Use 100015:
For the machining of steel and cast iron (alloyed and unalloyed), grey cast iron, malleable iron, spheroidal cast iron, sintered iron and graphite



N° article	100010 rollforged	100015 profile-ground	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	●	1	34	12	0,014-0,018	10
1,10	●	●	1,1	36	14	0,014-0,018	10
1,20	●	●	1,2	38	16	0,014-0,018	10
1,30	●	●	1,3	38	16	0,014-0,018	10
1,40	●	●	1,4	40	18	0,014-0,018	10
1,50	●	●	1,5	40	18	0,014-0,018	10
1,60	●	●	1,6	43	20	0,014-0,018	10
1,70	●	●	1,7	43	20	0,014-0,018	10
1,80	●	●	1,8	46	22	0,014-0,018	10
1,90	●	●	1,9	46	22	0,014-0,018	10
2,00	●	●	2	49	24	0,040-0,063	10
2,10	●	●	2,1	49	24	0,040-0,063	10
2,20	●	●	2,2	53	27	0,040-0,063	10
2,30	●	●	2,3	53	27	0,040-0,063	10
2,40	●	●	2,4	57	30	0,040-0,063	10
2,50	●	●	2,5	57	30	0,050-0,080	10
2,60	●	●	2,6	57	50	0,050-0,080	10
2,70	●	●	2,7	61	33	0,050-0,080	10
2,80	●	●	2,8	61	33	0,050-0,080	10
2,90	●	●	2,9	61	33	0,050-0,080	10
3,00	●	●	3	61	33	0,050-0,080	10
3,10	●	●	3,1	65	36	0,050-0,080	10
3,20	●	●	3,2	65	36	0,063-0,100	10
3,30	●	●	3,3	65	36	0,063-0,100	10
3,40	●	●	3,4	70	39	0,063-0,100	10
3,50	●	●	3,5	70	39	0,063-0,100	10
3,60	●	●	3,6	70	39	0,063-0,100	10
3,70	●	●	3,7	70	39	0,063-0,100	10
3,80	●	●	3,8	75	43	0,063-0,100	10
3,90	●	●	3,9	75	43	0,063-0,100	10
4,00	●	●	4	75	43	0,080-0,125	10
4,10	●	●	4,1	75	43	0,080-0,125	10
4,20	●	●	4,2	75	43	0,080-0,125	10
4,30	●	●	4,3	80	47	0,080-0,125	10
4,40	●	●	4,4	80	47	0,080-0,125	10
4,50	●	●	4,5	80	47	0,080-0,125	10
4,60	●	●	4,6	80	47	0,080-0,125	10
4,70	●	●	4,7	80	47	0,080-0,125	10
4,80	●	●	4,8	86	52	0,080-0,125	10
4,90	●	●	4,9	86	52	0,080-0,125	10
5,00	●	●	5	86	52	0,080-0,125	10
5,10	●	●	5,1	86	52	0,080-0,125	10
5,20	●	●	5,2	86	52	0,080-0,125	10

N° article	100010 rollforged	100015 profile-ground	A11 mm	B5 mm	B6 mm	f mm/rev	
5,30	●	●	5,3	86	52	0,080-0,125	10
5,40	●	●	5,4	93	57	0,080-0,125	10
5,50	●	●	5,5	93	57	0,080-0,125	10
5,60	●	●	5,6	93	57	0,080-0,125	10
5,70	●	●	5,7	93	57	0,080-0,125	10
5,80	●	●	5,8	93	57	0,080-0,125	10
5,90	●	●	5,9	93	57	0,080-0,125	10
6,00	●	●	6	93	57	0,080-0,125	10
6,10	●	●	6,1	101	63	0,080-0,125	10
6,20	●	●	6,2	101	63	0,080-0,125	10
6,30	●	●	6,3	101	63	0,100-0,160	10
6,40	●	●	6,4	101	63	0,100-0,160	10
6,50	●	●	6,5	101	63	0,100-0,160	10
6,60	●	●	6,6	101	63	0,100-0,160	10
6,70	●	●	6,7	101	63	0,100-0,160	10
6,80	●	●	6,8	109	69	0,100-0,160	10
6,90	●	●	6,9	109	69	0,100-0,160	10
7,00	●	●	7	109	69	0,100-0,160	10
7,10	●	●	7,1	109	69	0,100-0,160	10
7,20	●	●	7,2	109	69	0,100-0,160	10
7,30	●	●	7,3	109	69	0,100-0,160	10
7,40	●	●	7,4	109	69	0,100-0,160	10
7,50	●	●	7,5	109	69	0,100-0,160	10
7,60	●	●	7,6	117	75	0,100-0,160	10
7,70	●	●	7,7	117	75	0,100-0,160	10
7,80	●	●	7,8	117	75	0,100-0,160	10
7,90	●	●	7,9	117	75	0,100-0,160	10
8,00	●	●	8	117	75	0,125-0,200	10
8,10	●	●	8,1	117	75	0,125-0,200	10
8,20	●	●	8,2	117	75	0,125-0,200	10
8,30	●	●	8,3	117	75	0,125-0,200	10
8,40	●	●	8,4	117	75	0,125-0,200	10
8,50	●	●	8,5	117	75	0,125-0,200	10
8,60	●	●	8,6	125	81	0,125-0,200	10
8,70	●	●	8,7	125	81	0,125-0,200	10
8,80	●	●	8,8	125	81	0,125-0,200	10
8,90	●	●	8,9	125	81	0,125-0,200	10
9,00	●	●	9	125	81	0,125-0,200	10
9,10	●	●	9,1	125	81	0,125-0,200	10
9,20	●	●	9,2	125	81	0,125-0,200	10
9,30	●	●	9,3	125	81	0,125-0,200	10
9,40	●	●	9,4	125	81	0,125-0,200	10
9,50	●	●	9,5	125	81	0,125-0,200	10

N° article	100010 rollforged	100015 profile-ground	A11 mm	B5 mm	B6 mm	f mm/rev	
9,60	●	●	9,6	125	81	0,125-0,200	10
9,70	●	●	9,7	133	87	0,125-0,200	10
9,80	●	●	9,8	133	87	0,125-0,200	10
9,90	●	●	9,9	133	87	0,125-0,200	10
10,00	●	●	10	133	87	0,160-0,250	10
10,10	–	●	10,1	133	87	0,160-0,250	10
10,20	●	●	10,2	133	87	0,160-0,250	10
10,30	–	●	10,3	133	87	0,160-0,250	10
10,40	–	●	10,4	133	87	0,160-0,250	10
10,50	●	●	10,5	133	87	0,160-0,250	10
10,60	–	●	10,6	133	87	0,160-0,250	5
10,70	–	●	10,7	142	94	0,160-0,250	5
10,80	–	●	10,8	142	94	0,160-0,250	5
10,90	–	●	10,9	142	94	0,160-0,250	5
11,00	●	●	11	142	94	0,160-0,250	5
11,10	–	●	11,1	142	94	0,160-0,250	5
11,20	–	●	11,2	142	94	0,160-0,250	5
11,30	–	●	11,3	142	94	0,160-0,250	5
11,40	–	●	11,4	142	94	0,160-0,250	5
11,50	●	●	11,5	142	94	0,160-0,250	5
11,60	–	●	11,6	142	94	0,160-0,250	5
11,70	–	●	11,7	142	94	0,160-0,250	5
11,80	–	●	11,8	142	94	0,160-0,250	5
11,90	–	●	11,9	151	101	0,160-0,250	5
12,00	●	●	12	151	101	0,160-0,250	5
12,10	–	●	12,1	151	101	0,160-0,250	5
12,20	–	●	12,2	151	101	0,160-0,250	5
12,30	–	●	12,3	151	101	0,160-0,250	5
12,40	–	●	12,4	151	101	0,160-0,250	5
12,50	●	●	12,5	151	101	0,160-0,250	5
12,60	–	●	12,6	151	101	0,160-0,250	5
12,70	–	●	12,7	151	101	0,160-0,250	5
12,80	–	●	12,8	151	101	0,160-0,250	5
12,90	–	●	12,9	151	101	0,160-0,250	5
13,00	●	●	13	151	101	0,160-0,250	5
13,50	–	●	13,5	160	108	0,160-0,250	5
14,00	–	●	14	160	108	0,160-0,250	5
14,50	–	●	14,5	169	114	0,160-0,250	5
15,00	–	●	15	169	114	0,160-0,250	5
15,50	–	●	15,5	178	120	0,160-0,250	5
16,00	–	●	16	178	120	0,160-0,315	5

Twist drill HSS Steel

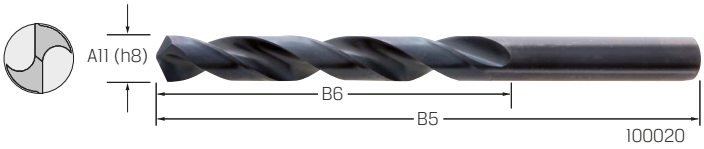
PREMUS®

	P N/mm²	K HB
100020	<1000	<300
vc = m/min.		
100020	16-32	20-32

HSS | DIN 338 | Typ N | Teeth 2 | 118° | Straight shank | P | K

Design:
- relived cone
- steam tempered from 2.40 mm

Use:
For the machining of steel and cast iron (alloyed and unalloyed), grey cast iron, malleable iron, spheroidal cast iron, sintered iron and graphite



N° article	100020 CBN ground	A11 mm	B5 mm	B6 mm	f mm/rev	
0,20	●	0,2	19	2,5	0,008-0,012	10
0,25	●	0,25	19	3	0,008-0,012	10
0,30	●	0,3	19	3	0,008-0,012	10
0,35	●	0,35	19	4	0,008-0,012	10
0,40	●	0,4	20	5	0,008-0,012	10
0,45	●	0,45	20	5	0,008-0,012	10
0,50	●	0,5	22	6	0,008-0,012	10
0,55	●	0,55	24	7	0,008-0,012	10
0,60	●	0,6	24	7	0,008-0,012	10
0,65	●	0,65	26	8	0,008-0,012	10
0,70	●	0,7	28	9	0,008-0,012	10
0,75	●	0,75	28	9	0,008-0,012	10
0,80	●	0,8	30	10	0,008-0,012	10
0,85	●	0,85	30	10	0,008-0,012	10
0,90	●	0,9	32	11	0,008-0,012	10
0,95	●	0,95	32	11	0,008-0,012	10
1,00	●	1	34	12	0,014-0,018	10
1,05	●	1,05	34	12	0,014-0,018	10
1,10	●	1,1	36	14	0,014-0,018	10
1,15	●	1,15	36	14	0,014-0,018	10
1,20	●	1,2	38	16	0,014-0,018	10
1,25	●	1,25	38	16	0,014-0,018	10
1,30	●	1,3	38	16	0,014-0,018	10
1,35	●	1,35	40	18	0,014-0,018	10
1,40	●	1,4	40	18	0,014-0,018	10
1,45	●	1,45	40	18	0,014-0,018	10
1,50	●	1,5	40	18	0,014-0,018	10
1,55	●	1,55	43	20	0,014-0,018	10
1,60	●	1,6	43	20	0,014-0,018	10
1,65	●	1,65	43	20	0,014-0,018	10
1,70	●	1,7	43	20	0,014-0,018	10
1,75	●	1,75	46	22	0,014-0,018	10
1,80	●	1,8	46	22	0,014-0,018	10
1,85	●	1,85	46	22	0,014-0,018	10
1,90	●	1,9	46	22	0,014-0,018	10
1,95	●	1,95	49	24	0,014-0,018	10
2,00	●	2	49	24	0,040-0,063	10
2,10	●	2,1	49	24	0,040-0,063	10
2,20	●	2,2	53	27	0,040-0,063	10
2,30	●	2,3	53	27	0,040-0,063	10
2,40	●	2,4	57	30	0,040-0,063	10
2,50	●	2,5	57	30	0,050-0,080	10
2,60	●	2,6	57	30	0,050-0,080	10
2,70	●	2,7	61	33	0,050-0,080	10
2,80	●	2,8	61	33	0,050-0,080	10
2,90	●	2,9	61	33	0,050-0,080	10
3,00	●	3	61	33	0,050-0,080	10
3,10	●	3,1	65	36	0,050-0,080	10
3,20	●	3,2	65	36	0,063-0,100	10
3,30	●	3,3	65	36	0,063-0,100	10
3,40	●	3,4	70	39	0,063-0,100	10
3,50	●	3,5	70	39	0,063-0,100	10
3,60	●	3,6	70	39	0,063-0,100	10
3,70	●	3,7	70	39	0,063-0,100	10
3,80	●	3,8	75	43	0,063-0,100	10
3,90	●	3,9	75	43	0,063-0,100	10
4,00	●	4	75	43	0,080-0,125	10
4,10	●	4,1	75	43	0,080-0,125	10
4,20	●	4,2	75	43	0,080-0,125	10
4,30	●	4,3	80	47	0,080-0,125	10
4,40	●	4,4	80	47	0,080-0,125	10
4,50	●	4,5	80	47	0,080-0,125	10

N° article	100020 CBN ground	A11 mm	B5 mm	B6 mm	f mm/rev	
4,60	●	4,6	80	47	0,080-0,125	10
4,70	●	4,7	86	52	0,080-0,125	10
4,80	●	4,8	86	52	0,080-0,125	10
4,90	●	4,9	86	52	0,080-0,125	10
5,00	●	5	86	52	0,080-0,125	10
5,10	●	5,1	86	52	0,080-0,125	10
5,20	●	5,2	86	52	0,080-0,125	10
5,30	●	5,3	93	57	0,080-0,125	10
5,40	●	5,4	93	57	0,080-0,125	10
5,50	●	5,5	93	57	0,080-0,125	10
5,60	●	5,6	93	57	0,080-0,125	10
5,70	●	5,7	93	57	0,080-0,125	10
5,80	●	5,8	93	57	0,080-0,125	10
5,90	●	5,9	93	57	0,080-0,125	10
6,00	●	6	93	57	0,080-0,125	10
6,10	●	6,1	101	63	0,080-0,125	10
6,20	●	6,2	101	63	0,080-0,125	10
6,30	●	6,3	101	63	0,100-0,160	10
6,40	●	6,4	101	63	0,100-0,160	10
6,50	●	6,5	101	63	0,100-0,160	10
6,60	●	6,6	101	63	0,100-0,160	10
6,70	●	6,7	101	63	0,100-0,160	10
6,80	●	6,8	109	69	0,100-0,160	10
6,90	●	6,9	109	69	0,100-0,160	10
7,00	●	7	109	69	0,100-0,160	10
7,10	●	7,1	109	69	0,100-0,160	10
7,20	●	7,2	109	69	0,100-0,160	10
7,30	●	7,3	109	69	0,100-0,160	10
7,40	●	7,4	109	69	0,100-0,160	10
7,50	●	7,5	109	69	0,100-0,160	10
7,60	●	7,6	117	75	0,100-0,160	5
7,70	●	7,7	117	75	0,100-0,160	5
7,80	●	7,8	117	75	0,100-0,160	5
7,90	●	7,9	117	75	0,100-0,160	5
8,00	●	8	117	75	0,125-0,200	5
8,10	●	8,1	117	75	0,125-0,200	5
8,20	●	8,2	117	75	0,125-0,200	5
8,30	●	8,3	117	75	0,125-0,200	5
8,40	●	8,4	117	75	0,125-0,200	5
8,50	●	8,5	117	75	0,125-0,200	5
8,60	●	8,6	125	81	0,125-0,200	5
8,70	●	8,7	125	81	0,125-0,200	5
8,80	●	8,8	125	81	0,125-0,200	5
8,90	●	8,9	125	81	0,125-0,200	5
9,00	●	9	125	81	0,125-0,200	5
9,10	●	9,1	125	81	0,125-0,200	5
9,20	●	9,2	125	81	0,125-0,200	5
9,30	●	9,3	125	81	0,125-0,200	5
9,40	●	9,4	125	81	0,125-0,200	5
9,50	●	9,5	125	81	0,125-0,200	5
9,60	●	9,6	133	87	0,125-0,200	5
9,70	●	9,7	133	87	0,125-0,200	5
9,80	●	9,8	133	87	0,125-0,200	5
9,90	●	9,9	133	87	0,125-0,200	5
10,00	●	10	133	87	0,160-0,250	5
10,10	●	10,1	133	87	0,160-0,250	5
10,20	●	10,2	133	87	0,160-0,250	5
10,25	●	10,25	133	87	0,160-0,250	5
10,30	●	10,3	133	87	0,160-0,250	5
10,40	●	10,4	133	87	0,160-0,250	5
10,50	●	10,5	133	87	0,160-0,250	5
10,60	●	10,6	133	87	0,160-0,250	5

N° article	100020 CBN ground	A11 mm	B5 mm	B6 mm	f mm/rev	
10,70	●	10,7	142	94	0,160-0,250	1
10,80	●	10,8	142	94	0,160-0,250	1
10,90	●	10,9	142	94	0,160-0,250	1
11,00	●	11	142	94	0,160-0,250	1
11,10	●	11,1	142	94	0,160-0,250	1
11,20	●	11,2	142	94	0,160-0,250	1
11,25	●	11,25	142	94	0,160-0,250	1
11,30	●	11,3	142	94	0,160-0,250	1
11,40	●	11,4	142	94	0,160-0,250	1
11,50	●	11,5	142	94	0,160-0,250	1
11,60	●	11,6	142	94	0,160-0,250	1
11,70	●	11,7	142	94	0,160-0,250	1
11,75	●	11,75	142	94	0,160-0,250	1
11,80	●	11,8	142	94	0,160-0,250	1
11,90	●	11,9	151	101	0,160-0,250	1
12,00	●	12	151	101	0,160-0,250	1
12,10	●	12,1	151	101	0,160-0,250	1
12,20	●	12,2	151	101	0,160-0,250	1
12,25	●	12,25	151	101	0,160-0,250	1
12,30	●	12,3	151	101	0,160-0,250	1
12,40	●	12,4	151	101	0,160-0,250	1
12,50	●	12,5	151	101	0,160-0,250	1
12,60	●	12,6	151	101	0,160-0,250	1
12,70	●	12,7	151	101	0,160-0,250	1
12,75	●	12,75	151	101	0,160-0,250	1
12,80	●	12,8	151	101	0,160-0,250	1
12,90	●	12,9	151	101	0,160-0,250	1
13,00	●	13	151	101	0,160-0,250	1
13,10	●	13,1	151	101	0,160-0,250	1
13,20	●	13,2	151	101	0,160-0,250	1
13,25	●	13,25	160	108	0,160-0,250	1
13,30	●	13,3	160	108	0,160-0,250	1
13,40	●	13,4	160	108	0,160-0,250	1
13,50	●	13,5	160	108	0,160-0,250	1
13,60	●	13,6	160	108	0,160-0,250	1
13,70	●	13,7	160	108	0,160-0,250	1
13,75	●	13,75	160	108	0,160-0,250	1
13,80	●	13,8	160	108	0,160-0,250	1
13,90	●	13,9	160	108	0,160-0,250	1
14,00	●	14	160	108	0,160-0,250	1
14,10	●	14,1	169	114	0,160-0,250	1
14,20	●	14,2	169	114	0,160-0,250	1
14,25	●	14,25	169	114	0,160-0,250	1
14,30	●	14,3	169	114	0,160-0,250	1
14,40	●	14,4	169	114	0,160-0,250	1
14,50	●	14,5	169	114	0,160-0,250	1
14,70	●	14,7	169	114	0,160-0,250	1
14,75	●	14,75	169	114	0,160-0,250	1
14,80	●	14,8	169	114	0,160-0,250	1
14,90	●	14,9	169	114	0,160-0,250	1
15,00	●	15	169	114	0,160-0,250	1
15,50	●	15,5	178	120	0,160-0,250	1
16,00	●	16	178	120	0,200-0,315	1
16,50	●	16,5	184	125	0,200-0,315	1
17,00	●	17	184	125	0,200-0,315	1
17,50	●	17,5	191	130	0,200-0,315	1
18,00	●	18	191	130	0,200-0,315	1
18,50	●	18,5	198	135	0,200-0,315	1
19,00	●	19	198	135	0,200-0,315	1
19,50	●	19,5	205	140	0,200-0,315	1
20,00	●	20	205	140	0,200-0,315	1

Twist drill HSS Steel

PRETEC

Design:
- relived cone
- rollforged
- steam tempered

Use:
Standard drill with diameter-independent and uniformly long parallel shank, granting clamping and hence setting benefits

HSS | Factory standard | Typ N | Teeth 2 | 118° | Straight shank | P

K



N° article	100026 rollforged	A11 mm	B5 mm	B6 mm	C3 mm
13,0	●	13	151	101	10
13,5	●	13,5	160	108	13
14,0	●	14	160	108	13
14,5	●	14,5	169	114	13
15,0	●	15	169	114	13
15,5	●	15,5	178	120	13
16,0	●	16	178	120	13
16,5	●	16,5	184	125	13
17,0	●	17	184	125	13
17,5	●	17,5	191	130	13
18,0	●	18	191	130	13
19,0	●	19	198	135	13
20,0	●	20	205	140	13

Twist drill HSS Universal

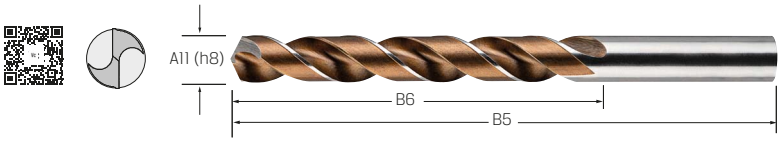
PREMUS

	P N/mm²	K HB
100086	<1000	<300
100084		
vc = m/min.		
100086	25-40	27-36
100084	15-30	20-30

Use:
Universal, very sturdy HSS drill for the machining of materials up to 1,000 N/mm² like cast steel, cast iron, malleable iron, sintered iron, nickel silver and graphite

HSS | DIN 338 | Teeth 2 | 130° | Straight shank | UNI

Design:
- relived cone
- 130° point geometry
- with TiN head coating



100084



100086

NEW

N° article	100084	100086 TiN head	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	●	1	34	12	0,050-0,080	10
1,10	●	●	1,1	36	14	0,050-0,080	10
1,20	●	●	1,2	38	16	0,050-0,080	10
1,30	●	●	1,3	38	16	0,050-0,080	10
1,40	●	●	1,4	40	18	0,050-0,080	10
1,50	●	●	1,5	40	18	0,050-0,080	10
1,60	●	●	1,6	43	20	0,050-0,080	10
1,70	●	●	1,7	43	20	0,050-0,080	10
1,80	●	●	1,8	46	22	0,050-0,080	10
1,90	●	●	1,9	46	22	0,050-0,080	10
2,00	●	●	2	49	24	0,050-0,100	10
2,10	●	●	2,1	49	24	0,050-0,100	10
2,20	●	●	2,2	53	27	0,050-0,100	10
2,30	●	●	2,3	53	27	0,050-0,100	10
2,40	●	●	2,4	57	30	0,050-0,100	10
2,50	●	●	2,5	57	30	0,050-0,100	10
2,60	●	●	2,6	57	30	0,050-0,100	10
2,70	●	●	2,7	61	33	0,050-0,100	10
2,80	●	●	2,8	61	33	0,050-0,100	10
2,90	●	●	2,9	61	33	0,050-0,100	10
3,00	●	●	3	61	33	0,100-0,140	10
3,10	●	●	3,1	65	36	0,100-0,140	10
3,20	●	●	3,2	65	36	0,100-0,140	10
3,30	●	●	3,3	65	36	0,100-0,140	10
3,40	●	●	3,4	70	39	0,100-0,140	10
3,50	●	●	3,5	70	39	0,100-0,140	10
3,60	●	●	3,6	70	39	0,100-0,140	10
3,70	●	●	3,7	70	39	0,100-0,140	10
3,80	●	●	3,8	75	43	0,100-0,140	10
3,90	●	●	3,9	75	43	0,100-0,140	10
4,00	●	●	4	75	43	0,110-0,160	10
4,10	●	●	4,1	75	43	0,110-0,160	10
4,20	●	●	4,2	75	43	0,110-0,160	10
4,30	●	●	4,3	80	47	0,110-0,160	10
4,40	●	●	4,4	80	47	0,110-0,160	10
4,50	●	●	4,5	80	47	0,110-0,160	10
4,60	●	●	4,6	80	47	0,110-0,160	10
4,70	●	●	4,7	80	47	0,110-0,160	10
4,80	●	●	4,8	86	52	0,110-0,160	10
4,90	●	●	4,9	86	52	0,110-0,160	10
5,00	●	●	5	86	52	0,130-0,200	10
5,10	●	●	5,1	86	52	0,130-0,200	10
5,20	●	●	5,2	86	52	0,130-0,200	10
5,30	●	●	5,3	86	52	0,130-0,200	10
5,40	●	●	5,4	93	57	0,130-0,200	10
5,50	●	●	5,5	93	57	0,130-0,200	10
5,60	●	●	5,6	93	57	0,130-0,200	10
5,70	●	●	5,7	93	57	0,130-0,200	10
5,80	●	●	5,8	93	57	0,130-0,200	10
5,90	●	●	5,9	93	57	0,130-0,200	10
6,00	●	●	6	93	57	0,140-0,230	10
6,10	●	●	6,1	101	63	0,140-0,230	10
6,20	●	●	6,2	101	63	0,140-0,230	10
6,30	●	●	6,3	101	63	0,140-0,230	10
6,40	●	●	6,4	101	63	0,140-0,230	10
6,50	●	●	6,5	101	63	0,140-0,230	10
6,60	●	●	6,6	101	63	0,140-0,230	10
6,70	●	●	6,7	101	63	0,140-0,230	10
6,80	●	●	6,8	109	69	0,140-0,230	10
6,90	●	●	6,9	109	69	0,140-0,230	10
7,00	●	●	7	109	69	0,150-0,250	10
7,10	●	●	7,1	109	69	0,150-0,250	10
7,20	●	●	7,2	109	69	0,150-0,250	10
7,30	●	●	7,3	109	69	0,150-0,250	10
7,40	●	●	7,4	109	69	0,150-0,250	10
7,50	●	●	7,5	109	69	0,150-0,250	10
7,60	●	●	7,6	117	75	0,150-0,250	10
7,70	●	●	7,7	117	75	0,150-0,250	10
7,80	●	●	7,8	117	75	0,150-0,250	10
7,90	●	●	7,9	117	75	0,150-0,250	10
8,00	●	●	8	117	75	0,180-0,270	10
8,10	●	●	8,1	117	75	0,180-0,270	10
8,20	●	●	8,2	117	75	0,180-0,270	10
8,30	●	●	8,3	117	75	0,180-0,270	10
8,40	●	●	8,4	117	75	0,180-0,270	10
8,50	●	●	8,5	117	75	0,180-0,270	10
8,60	●	●	8,6	125	81	0,180-0,270	10
8,70	●	●	8,7	125	81	0,180-0,270	10
8,80	●	●	8,8	125	81	0,180-0,270	10
8,90	●	●	8,9	125	81	0,180-0,270	10
9,00	●	●	9	125	81	0,190-0,280	10
9,10	●	●	9,1	125	81	0,190-0,280	10
9,20	●	●	9,2	125	81	0,190-0,280	10
9,30	●	●	9,3	125	81	0,190-0,280	10
9,40	●	●	9,4	125	81	0,190-0,280	10
9,50	●	●	9,5	125	81	0,190-0,280	10
9,60	●	●	9,6	133	87	0,190-0,280	10
9,70	●	●	9,7	133	87	0,190-0,280	10
9,80	●	●	9,8	133	87	0,190-0,280	10
9,90	●	●	9,9	133	87	0,190-0,280	10
10,00	●	●	10	133	87	0,200-0,300	10
10,10	–	●	10,1	133	87	0,200-0,300	1
10,20	●	●	10,2	133	87	0,200-0,300	1
10,30	–	●	10,3	133	87	0,200-0,300	1
10,40	–	●	10,4	133	87	0,200-0,300	1
10,50	●	●	10,5	133	87	0,200-0,300	1
10,60	–	●	10,6	133	87	0,200-0,300	1
10,80	–	●	10,8	142	94	0,200-0,300	1
11,00	●	●	11	142	94	0,200-0,320	1
11,10	–	●	11,1	142	94	0,200-0,320	1
11,20	–	●	11,2	142	94	0,200-0,320	1
11,50	●	●	11,5	142	94	0,200-0,320	1
11,70	–	●	11,7	142	94	0,200-0,320	1
11,80	–	●	11,8	142	94	0,200-0,320	1
12,00	●	●	12	151	101	0,200-0,320	1
12,10	–	●	12,1	151	101	0,200-0,320	1
12,30	–	●	12,3	151	101	0,200-0,320	1
12,50	●	●	12,5	151	101	0,200-0,320	1
12,70	–	●	12,7	151	101	0,200-0,320	1
13,00	●	●	13	151	101	0,200-0,320	1
14,00	–	●	14	160	108	0,220-0,350	1
14,50	–	●	14,5	169	114	0,220-0,350	1
15,00	–	●	15	169	114	0,220-0,350	1
15,50	–	●	15,5	178	120	0,220-0,350	1
16,00	–	●	16	178	120	0,250-0,370	1

Twist drill HSS Aluminium

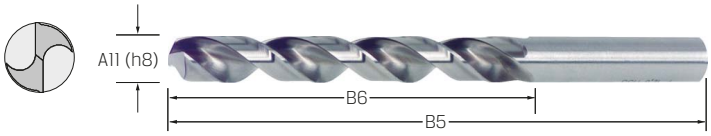
PREMUS

	N N/mm²	
100160	Alu, brass ⟨ 600	Plastics
	vc = m/min.	
100160	50-63	16-25

HSS | DIN 338 | Typ W | Teeth 2 | 130° | Straight shank | N

Design:
- relived cone
- blank

Use:
Soft and long-chipping materials, aluminium alloys, zinc, refined copper, silumin, electrodes, plastics (soft), wood



N° article	100160	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	34	12	0,016-0,020	10
1,10	●	1,1	36	14	0,016-0,020	10
1,20	●	1,2	38	16	0,016-0,020	10
1,30	●	1,3	38	16	0,016-0,020	10
1,40	●	1,4	40	18	0,016-0,020	10
1,50	●	1,5	40	18	0,016-0,020	10
1,60	●	1,6	43	20	0,016-0,020	10
1,70	●	1,7	43	20	0,016-0,020	10
1,80	●	1,8	46	22	0,016-0,020	10
1,90	○	1,9	46	22	0,016-0,020	10
2,00	●	2	49	24	0,040-0,063	10
2,10	●	2,1	49	24	0,040-0,063	10
2,20	●	2,2	53	27	0,040-0,063	10
2,30	●	2,3	53	27	0,040-0,063	10
2,40	●	2,4	57	30	0,040-0,063	10
2,50	●	2,5	57	30	0,050-0,080	10
2,60	●	2,6	57	30	0,050-0,080	10
2,70	●	2,7	61	33	0,050-0,080	10
2,80	●	2,8	61	33	0,050-0,080	10
2,90	●	2,9	61	33	0,050-0,080	10
3,00	●	3	61	33	0,050-0,080	10
3,10	●	3,1	65	36	0,050-0,080	10
3,20	●	3,2	65	36	0,063-0,100	10
3,30	●	3,3	65	36	0,063-0,100	10
3,40	●	3,4	70	39	0,063-0,100	10
3,50	●	3,5	70	39	0,063-0,100	10
3,60	●	3,6	70	39	0,063-0,100	10
3,70	●	3,7	70	39	0,063-0,100	10
3,80	●	3,8	75	43	0,063-0,100	10
3,90	●	3,9	75	43	0,063-0,100	10
4,00	●	4	75	43	0,080-0,125	10
4,10	●	4,1	75	43	0,080-0,125	10
4,20	●	4,2	75	43	0,080-0,125	10
4,30	●	4,3	80	47	0,080-0,125	10
4,40	○	4,4	80	47	0,080-0,125	10
4,50	●	4,5	80	47	0,080-0,125	10
4,60	●	4,6	80	47	0,080-0,125	10
4,70	●	4,7	80	47	0,080-0,125	10
4,90	●	4,9	86	52	0,080-0,125	10
5,00	●	5	86	52	0,080-0,125	10
5,10	●	5,1	86	52	0,080-0,125	10
5,20	●	5,2	86	52	0,080-0,125	10
5,50	●	5,5	93	57	0,080-0,125	10
5,80	●	5,8	93	57	0,080-0,125	10
6,00	●	6	93	57	0,080-0,125	10
6,20	●	6,2	101	63	0,080-0,125	10
6,40	●	6,4	101	63	0,100-0,160	10
6,50	●	6,5	101	63	0,100-0,160	10
6,80	●	6,8	109	69	0,100-0,160	10
7,00	●	7	109	69	0,100-0,160	10
7,20	●	7,2	109	69	0,100-0,160	10
7,50	●	7,5	109	69	0,100-0,160	10
8,00	●	8	117	75	0,125-0,200	5
8,50	●	8,5	117	75	0,125-0,200	5
9,00	●	9	125	81	0,125-0,200	5
9,50	○	9,5	125	81	0,125-0,200	5
9,80	○	9,8	133	87	0,125-0,200	5
10,00	●	10	133	87	0,160-0,250	5
10,20	●	10,2	133	87	0,160-0,250	5
10,50	●	10,5	133	87	0,160-0,250	5
11,00	●	11	142	94	0,160-0,250	1
11,50	○	11,5	142	94	0,160-0,250	1
12,00	●	12	151	101	0,160-0,250	1
12,50	○	12,5	151	101	0,160-0,250	1
13,00	●	13	151	101	0,160-0,250	1

Twist drill set HSS

PRETEC PREMUS

Design:
100510: Set of twist drills DIN 338, CBN ground, 100020 in plastic case
100520: Set of twist drills DIN 338, roll-forged, 100010 in metal case
100525: Set of twist drills DIN 338, profile ground, 100015 in plastic case

HSS | DIN 338 | Typ N | Teeth 2 | 118° | Straight shank | P


100510


100520


100525

N° article	100510 Set, CBN ground	100520 Set, roll-forged	100525 Set, profile-ground	100532 Plastic case, empty (without fig.)	100533 Plastic stand, empty (without fig.)	Number of drills	in each case increasing by mm
1,0-5,0	–	–	–	–	●	41	0.1
5,1-10,0	–	–	–	–	●	50	0.1
1,0-5,9	●	●	–	●	–	50	0.1
6,0-10,0	●	●	–	●	–	41	0.1
1,0-10,0	●	●	●	●	–	19	0.5
1,0-13,0	●	●	●	●	●	25	0.5
1,0-10,5	●	●	–	●	–	24	0.5 (plus KB)

Twist drill HSS-Co Universal

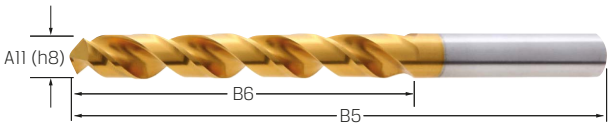
PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
100100	⟨1200	⟨800		Alu, brass, bronze ⟨600	Plastics
100350		⟨850	⟨800	Alu ⟨600	
vc = m/min.					
100100	12-50	15-18	28-45	50-85	15-20
100350	10-28	10-14	8-36	55-90	

HSS-Co | DIN 338 | Typ N | Teeth 2 | 118° | Straight shank | UNI

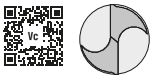
Design:
- relived cone
- point thinning from 1.00 mm
- TiN coating (100100)
- steam tempered from 2.40 mm (100350)

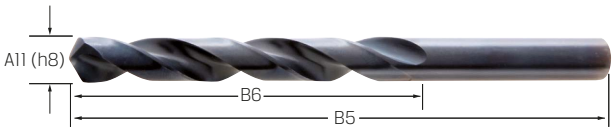




100100

Use:
Universal drill for a wide range of applications, such as alloyed and unalloyed steels, types of castings above 800 N/mm, hot and cold work steels, high-alloyed steels





100350

N° article	100100 TiN	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	34	12	0,012-0,020	10
1,10	●	1,1	36	14	0,012-0,020	10
1,20	●	1,2	38	16	0,012-0,020	10
1,30	●	1,3	38	16	0,012-0,020	10
1,40	●	1,4	40	18	0,012-0,020	10
1,50	●	1,5	40	18	0,012-0,020	10
1,60	●	1,6	43	20	0,012-0,020	10
1,70	●	1,7	43	20	0,012-0,020	10
1,80	●	1,8	46	22	0,012-0,020	10
1,90	●	1,9	46	22	0,012-0,020	10
2,00	●	2	49	24	0,032-0,080	10
2,10	●	2,1	49	24	0,032-0,080	10
2,20	●	2,2	53	27	0,032-0,080	10
2,30	●	2,3	53	27	0,032-0,080	10
2,40	●	2,4	57	30	0,032-0,080	10
2,50	●	2,5	57	30	0,040-0,100	10
2,60	●	2,6	57	33	0,040-0,100	10
2,70	●	2,7	61	33	0,040-0,100	10
2,80	●	2,8	61	33	0,040-0,100	10
2,90	●	2,9	61	33	0,040-0,100	10
3,00	●	3	61	33	0,050-0,125	10
3,10	●	3,1	65	36	0,050-0,125	10
3,20	●	3,2	65	36	0,050-0,125	10
3,30	●	3,3	65	36	0,050-0,125	10
3,40	●	3,4	70	39	0,050-0,125	10
3,50	●	3,5	70	39	0,050-0,125	10
3,60	●	3,6	70	39	0,050-0,125	10
3,70	●	3,7	70	39	0,050-0,125	10
3,80	●	3,8	75	43	0,050-0,125	10
3,90	●	3,9	75	43	0,050-0,125	10
4,00	●	4	75	43	0,063-0,160	10

N° article	100100 TiN	A11 mm	B5 mm	B6 mm	f mm/rev	
4,10	●	4,1	75	43	0,063-0,160	10
4,20	●	4,2	75	43	0,063-0,160	10
4,30	●	4,3	80	47	0,063-0,160	10
4,40	●	4,4	80	47	0,063-0,160	10
4,50	●	4,5	80	47	0,063-0,160	10
4,60	●	4,6	80	47	0,063-0,160	10
4,70	●	4,7	80	47	0,063-0,160	10
4,80	●	4,8	86	52	0,063-0,160	10
4,90	●	4,9	86	52	0,063-0,160	10
5,00	●	5	86	52	0,063-0,160	10
5,10	●	5,1	86	52	0,063-0,160	10
5,20	●	5,2	86	52	0,063-0,160	10
5,30	●	5,3	86	52	0,063-0,160	10
5,40	●	5,4	93	57	0,063-0,160	10
5,50	●	5,5	93	57	0,063-0,160	10
5,60	●	5,6	93	57	0,063-0,160	10
5,70	●	5,7	93	57	0,063-0,160	10
5,80	●	5,8	93	57	0,063-0,160	10
5,90	●	5,9	93	57	0,063-0,160	10
6,00	●	6	93	57	0,063-0,160	10
6,10	●	6,1	101	63	0,063-0,160	10
6,20	●	6,2	101	63	0,063-0,160	10
6,30	●	6,3	101	63	0,080-0,200	10
6,40	●	6,4	101	63	0,080-0,200	10
6,50	●	6,5	101	63	0,080-0,200	10
6,60	●	6,6	101	63	0,080-0,200	10
6,70	●	6,7	101	63	0,080-0,200	10
6,80	●	6,8	109	69	0,080-0,200	10
6,90	●	6,9	109	69	0,080-0,200	10
7,00	●	7	109	69	0,080-0,200	10
7,10	●	7,1	109	69	0,080-0,200	10

N° article	100100 TiN	A11 mm	B5 mm	B6 mm	f mm/rev	
7,20	●	7,2	109	69	0,080-0,200	10
7,30	●	7,3	109	69	0,080-0,200	10
7,40	●	7,4	109	69	0,080-0,200	10
7,50	●	7,5	109	69	0,080-0,200	10
7,60	●	7,6	117	75	0,080-0,200	5
7,70	●	7,7	117	75	0,080-0,200	5
7,80	●	7,8	117	75	0,080-0,200	5
7,90	●	7,9	117	75	0,080-0,200	5
8,00	●	8	117	75	0,100-0,250	5
8,10	●	8,1	117	75	0,100-0,250	5
8,20	●	8,2	117	75	0,100-0,250	5
8,30	●	8,3	117	75	0,100-0,250	5
8,40	●	8,4	117	75	0,100-0,250	5
8,50	●	8,5	117	75	0,100-0,250	5
8,80	●	8,8	125	81	0,100-0,250	5
9,00	●	9	125	81	0,100-0,250	5
9,30	●	9,3	125	81	0,100-0,250	5
9,50	●	9,5	125	81	0,100-0,250	5
9,80	●	9,8	125	87	0,100-0,250	5
10,00	●	10	133	87	0,125-0,315	5
10,20	●	10,2	133	87	0,125-0,315	5
10,50	●	10,5	133	87	0,125-0,315	5
11,00	●	11	142	94	0,125-0,315	1
11,50	●	11,5	142	94	0,125-0,315	1
12,00	●	12	142	101	0,125-0,315	1
12,50	●	12,5	151	101	0,125-0,315	1
13,00	●	13	151	101	0,125-0,315	1
13,50	●	13,5	160	108	0,125-0,315	1
14,00	●	14	160	108	0,125-0,315	1

N° article	100350	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	34	12	0,012-0,018	10
1,10	●	1,1	36	14	0,012-0,018	10
1,20	●	1,2	38	16	0,012-0,018	10
1,30	●	1,3	38	16	0,012-0,018	10
1,40	●	1,4	40	18	0,012-0,018	10
1,50	●	1,5	40	18	0,012-0,018	10
1,60	●	1,6	43	20	0,012-0,018	10
1,70	●	1,7	43	20	0,012-0,018	10
1,80	●	1,8	46	22	0,012-0,018	10
1,90	●	1,9	46	22	0,012-0,018	10
2,00	●	2	49	24	0,032-0,063	10
2,10	●	2,1	49	24	0,032-0,063	10
2,20	●	2,2	53	27	0,032-0,063	10
2,30	●	2,3	53	27	0,032-0,063	10
2,40	●	2,4	57	30	0,032-0,063	10
2,50	●	2,5	57	30	0,040-0,080	10
2,60	●	2,6	57	30	0,040-0,080	10
2,70	●	2,7	61	33	0,040-0,080	10
2,80	●	2,8	61	33	0,040-0,080	10
2,90	●	2,9	61	33	0,040-0,080	10
3,00	●	3	61	33	0,040-0,080	10
3,10	●	3,1	65	36	0,040-0,080	10
3,20	●	3,2	65	36	0,050-0,100	10
3,30	●	3,3	65	36	0,050-0,100	10
3,40	●	3,4	70	39	0,050-0,100	10
3,50	●	3,5	70	39	0,050-0,100	10
3,60	●	3,6	70	39	0,050-0,100	10
3,70	●	3,7	70	39	0,050-0,100	10
3,80	●	3,8	75	43	0,050-0,100	10
3,90	●	3,9	75	43	0,050-0,100	10
4,00	●	4	75	43	0,063-0,125	10
4,10	●	4,1	75	43	0,063-0,125	10
4,20	●	4,2	75	43	0,063-0,125	10

N° article	100350	A11 mm	B5 mm	B6 mm	f mm/rev	
4,30	●	4,3	80	47	0,063-0,125	10
4,40	●	4,4	80	47	0,063-0,125	10
4,50	●	4,5	80	47	0,063-0,125	10
4,60	●	4,6	80	47	0,063-0,125	10
4,70	●	4,7	80	47	0,063-0,125	10
4,80	●	4,8	86	52	0,063-0,125	10
4,90	●	4,9	86	52	0,063-0,125	10
5,00	●	5	86	52	0,063-0,125	10
5,10	●	5,1	86	52	0,063-0,125	10
5,20	●	5,2	86	52	0,063-0,125	10
5,30	●	5,3	86	52	0,063-0,125	10
5,40	●	5,4	93	57	0,063-0,125	10
5,50	●	5,5	93	57	0,063-0,125	10
5,60	●	5,6	93	57	0,063-0,125	10
5,70	●	5,7	93	57	0,063-0,125	10
5,80	●	5,8	93	57	0,063-0,125	10
5,90	●	5,9	93	57	0,063-0,125	10
6,00	●	6	93	57	0,063-0,125	10
6,10	●	6,1	101	63	0,063-0,125	10
6,20	●	6,2	101	63	0,063-0,125	10
6,30	●	6,3	101	63	0,080-0,160	10
6,40	●	6,4	101	63	0,080-0,160	10
6,50	●	6,5	101	63	0,080-0,160	10
6,60	●	6,6	101	63	0,080-0,160	10
6,70	●	6,7	101	63	0,080-0,160	10
6,80	●	6,8	109	69	0,080-0,160	10
6,90	●	6,9	109	69	0,080-0,160	10
7,00	●	7	109	69	0,080-0,160	10
7,10	●	7,1	109	69	0,080-0,160	10
7,20	●	7,2	109	69	0,080-0,160	10
7,30	●	7,3	109	69	0,080-0,160	10
7,40	●	7,4	109	69	0,080-0,160	10
7,50	●	7,5	109	69	0,080-0,160	10

N° article	100350	A11 mm	B5 mm	B6 mm	f mm/rev	
7,60	●	7,6	117	75	0,080-0,160	5
7,70	●	7,7	117	75	0,080-0,160	5
7,80	●	7,8	117	75	0,080-0,160	5
7,90	●	7,9	117	75	0,080-0,160	5
8,00	●	8	117	75	0,100-0,200	5
8,10	●	8,1	117	75	0,100-0,200	5
8,20	●	8,2	117	75	0,100-0,200	5
8,30	●	8,3	117	75	0,100-0,200	5
8,40	●	8,4	117	75	0,100-0,200	5
8,50	●	8,5	117	75	0,100-0,200	5
8,60	●	8,6	125	81	0,100-0,200	5
8,70	●	8,7	125	81	0,100-0,200	5
8,80	●	8,8	125	81	0,100-0,200	5
8,90	●	8,9	125	81	0,100-0,200	5
9,00	●	9	125	81	0,100-0,200	5
9,10	●	9,1	125	81	0,100-0,200	5
9,20	●	9,2	125	81	0,100-0,200	5
9,30	●	9,3	125	81	0,100-0,200	5
9,40	●	9,4	125	81	0,100-0,200	5
9,50	●	9,5	125	81	0,100-0,200	5
9,60	●	9,6	133	87	0,100-0,200	5
9,70	●	9,7	133	87	0,100-0,200	5
9,80	●	9,8	133	87	0,100-0,200	5
9,90	●	9,9	133	87	0,100-0,200	5
10,00	●	10	133	87	0,125-0,250	5
10,20	●	10,2	133	87	0,125-0,250	5
10,50	●	10,5	133	87	0,125-0,250	5
11,00	●	11	142	94	0,125-0,250	1
11,50	●	11,5	142	94	0,125-0,250	1
12,00	●	12	151	101	0,125-0,250	1
12,50	●	12,5	151	101	0,125-0,250	1
13,00	●	13	151	101	0,125-0,250	1

Twist drill HSS-Co Universal

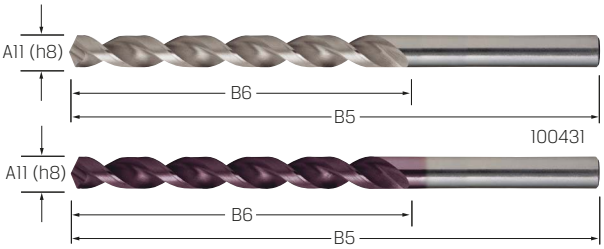
PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
100431	⟨1500	⟨850	⟨300	Bronze, Alu ⟨600	Plastics
100433					
	vc = m/min.				
100431	8-20	10-20	18-20	32-48	40-50
100433	10-24	10-12	20-24	25-48	

Design:
- relieved cone form S (⟨ 3.00 form C)
- 130° point geometry
- 40° helix angle
- TiAlN coating (100433)

HSS-Co | DIN 338 | Typ N | Teeth 2 | 130° | Straight shank | UNI

Use:
This combination of stable core, flutes with parabolic shape and a special point relief results in a drill with better performance at difficult to machine materials. Larger bore depths can be reached without chip removal.



N° article	100431 R40NH	100433 R40NH, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	●	1	34	13	0,040-0,060	10
1,10	●	–	1,1	36	15	0,040-0,060	10
1,20	●	●	1,2	38	17	0,040-0,060	10
1,30	●	–	1,3	38	17	0,040-0,060	10
1,40	●	–	1,4	40	19	0,040-0,060	10
1,50	●	●	1,5	40	19	0,040-0,060	10
1,60	●	●	1,6	43	21	0,040-0,060	10
1,70	●	–	1,7	43	21	0,040-0,060	10
1,80	●	–	1,8	46	23	0,040-0,060	10
1,90	●	–	1,9	46	23	0,040-0,060	10
2,00	●	●	2	49	25	0,040-0,060	10
2,10	●	–	2,1	49	25	0,040-0,060	10
2,20	●	●	2,2	53	28	0,040-0,060	10
2,30	●	●	2,3	53	28	0,040-0,060	10
2,40	●	–	2,4	57	31	0,040-0,060	10
2,50	●	●	2,5	57	31	0,040-0,060	10
2,60	●	–	2,6	57	31	0,040-0,060	10
2,70	●	–	2,7	61	34	0,040-0,060	10
2,80	●	●	2,8	61	34	0,040-0,060	10
2,90	●	●	2,9	61	34	0,040-0,060	10
3,00	●	●	3	61	33	0,060-0,100	10
3,10	●	●	3,1	65	36	0,060-0,100	10
3,20	●	●	3,2	65	36	0,060-0,100	10
3,30	●	●	3,3	65	36	0,060-0,100	10
3,40	●	●	3,4	70	39	0,060-0,100	10

N° article	100431 R40NH	100433 R40NH, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
3,50	●	●	3,5	70	39	0,060-0,100	10
3,60	●	–	3,6	70	39	0,060-0,100	10
3,70	●	●	3,7	70	39	0,060-0,100	10
3,80	●	–	3,8	75	43	0,060-0,100	10
3,90	●	–	3,9	75	43	0,060-0,100	10
4,00	●	●	4	75	43	0,080-0,120	10
4,10	●	●	4,1	75	43	0,080-0,120	10
4,20	●	●	4,2	75	43	0,080-0,120	10
4,30	●	●	4,3	80	47	0,080-0,120	10
4,40	●	–	4,4	80	47	0,080-0,120	10
4,50	●	●	4,5	80	47	0,080-0,120	10
4,60	●	–	4,6	80	47	0,080-0,120	10
4,70	●	●	4,7	80	47	0,080-0,120	10
4,80	●	●	4,8	86	52	0,080-0,120	10
4,90	●	–	4,9	86	52	0,080-0,120	10
5,00	●	●	5	86	52	0,085-0,135	10
5,10	●	●	5,1	86	52	0,085-0,135	10
5,20	●	●	5,2	86	52	0,085-0,135	10
5,30	●	–	5,3	86	52	0,085-0,135	10
5,40	●	–	5,4	93	57	0,085-0,135	10
5,50	●	●	5,5	93	57	0,085-0,135	10
5,60	●	–	5,6	93	57	0,085-0,135	10
5,70	●	–	5,7	93	57	0,085-0,135	10
5,80	●	–	5,8	93	57	0,085-0,135	10
5,90	●	–	5,9	93	57	0,085-0,135	10

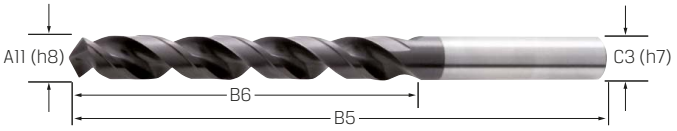
N° article	100431 R40NH	100433 R40NH, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
6,00	●	●	6	93	57	0,100-0,150	10
6,10	●	–	6,1	101	63	0,100-0,150	10
6,20	●	–	6,2	101	63	0,100-0,150	10
6,30	●	●	6,3	101	63	0,100-0,150	10
6,40	●	●	6,4	101	63	0,100-0,150	10
6,50	●	●	6,5	101	63	0,100-0,150	10
6,60	●	●	6,6	101	63	0,100-0,150	10
6,70	●	–	6,7	101	63	0,100-0,150	10
6,80	●	●	6,8	109	69	0,100-0,150	10
6,90	●	–	6,9	109	69	0,100-0,150	10
7,00	●	●	7	109	69	0,100-0,150	10
7,50	●	●	7,5	109	69	0,100-0,150	10
8,00	●	●	8	117	75	0,120-0,200	10
8,50	●	●	8,5	117	75	0,120-0,200	5
8,60	●	●	8,6	125	81	0,120-0,200	5
9,00	●	●	9	125	81	0,120-0,200	5
9,50	●	●	9,5	125	81	0,120-0,200	5
10,00	●	●	10	133	87	0,150-0,250	5
10,20	●	●	10,2	133	87	0,150-0,250	1
10,50	●	●	10,5	133	87	0,150-0,250	1
11,00	●	●	11	142	94	0,150-0,250	1
11,50	●	●	11,5	142	94	0,150-0,250	1
12,00	●	●	12	151	101	0,150-0,250	1
12,50	●	●	12,5	151	101	0,150-0,250	1
13,00	●	●	13	151	101	0,150-0,250	1

Design:
- with the twist drill made of HSS-Co and a special coating of TiAlN you can, process a wide variety of materials, including stainless and acid-resistant steels
- the special HSS-Co material gives the twist drill the highest toughness and thus prevents the cutting edge chipping that often occurs during drilling
- the special, heavily twisted groove geometry reduces the material hardening during the drilling process and provides the highest speeds
- the twist drill produces short, easily dischargeable chips and thus ensures a safe and economical drilling process
- pre-centring the bore is not necessary
- the special TiAlN coating prevents the formation of built-up edges and gives the twist drill maximum wear resistance at high feed rates.

HSS-Co | coated | Factory standard | Teeth 2 | 120° | 130° | 6335 HA shank | UNI

	P N/mm²	M N/mm²	K HB	N N/mm²	
100435	⟨1200	⟨850	⟨300	Alu ⟨600	Copper
	vc = m/min.				
100435	25-60	12-25	32-40	70-112	40-70

Ø 2.00 - 4.00 mm = 130° point angle
Ø 4.10 - 20.0 mm = 120° point angle



N° article	100435 TiAlN, long	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
2,00	●	2	49	24	3	0,030-0,120
2,10	●	2,1	56	24	3	0,030-0,120
2,20	●	2,2	56	25	3	0,030-0,120
2,30	●	2,3	56	25	3	0,030-0,120
2,40	●	2,4	61	30	3	0,030-0,120
2,50	●	2,5	61	30	3	0,030-0,120
2,60	●	2,6	61	30	3	0,030-0,120
2,70	●	2,7	64	33	3	0,030-0,120
2,80	●	2,8	64	33	3	0,030-0,120
2,90	●	2,9	64	33	3	0,030-0,120
3,00	●	3	61	33	3	0,040-0,180
3,20	●	3,2	65	36	4	0,040-0,180
3,30	●	3,3	65	36	4	0,040-0,180
3,40	●	3,4	70	39	4	0,040-0,180
3,50	●	3,5	70	39	4	0,040-0,180
3,60	●	3,6	70	39	4	0,040-0,180
3,70	●	3,7	70	39	4	0,040-0,180
3,80	●	3,8	75	43	4	0,040-0,180
3,90	●	3,9	75	43	4	0,040-0,180
4,00	●	4	75	43	4	0,060-0,240
4,10	●	4,1	75	43	6	0,060-0,240
4,20	●	4,2	75	43	6	0,060-0,240
4,30	●	4,3	80	47	6	0,060-0,240
4,40	●	4,4	80	47	6	0,060-0,240
4,50	●	4,5	80	47	6	0,060-0,240
4,80	●	4,8	86	52	6	0,060-0,240
5,00	●	5	86	52	6	0,080-0,300
5,10	●	5,1	86	52	6	0,080-0,300

N° article	100435 TiAlN, long	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
5,20	●	5,2	86	52	6	0,080-0,300
5,30	●	5,3	86	52	6	0,080-0,300
5,50	●	5,5	93	57	6	0,080-0,300
5,80	●	5,8	93	57	6	0,080-0,300
6,00	●	6	93	57	6	0,090-0,360
6,10	○	6,1	101	63	8	0,090-0,360
6,20	●	6,2	101	63	8	0,090-0,360
6,30	●	6,3	101	63	8	0,090-0,360
6,40	○	6,4	101	63	8	0,090-0,360
6,50	●	6,5	101	63	8	0,090-0,360
6,60	●	6,6	101	63	8	0,090-0,360
6,80	●	6,8	109	69	8	0,090-0,360
6,90	●	6,9	109	69	8	0,090-0,360
7,00	●	7	109	69	8	0,090-0,360
7,40	●	7,4	109	69	8	0,090-0,360
7,50	○	7,5	109	69	8	0,090-0,360
7,80	●	7,8	117	75	8	0,090-0,360
8,00	●	8	117	75	8	0,120-0,450
8,10	●	8,1	117	75	10	0,120-0,450
8,20	●	8,2	117	75	10	0,120-0,450
8,40	●	8,4	117	75	10	0,120-0,450
8,50	●	8,5	117	75	10	0,120-0,450
8,60	●	8,6	125	81	10	0,120-0,450
8,70	●	8,7	125	81	10	0,120-0,450
8,80	●	8,8	125	81	10	0,120-0,450
9,00	●	9	125	81	10	0,120-0,450
9,50	○	9,5	125	81	10	0,120-0,450
9,70	○	9,7	133	87	10	0,120-0,450

N° article	100435 TiAlN, long	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
9,80	●	9,8	133	87	10	0,120-0,450
10,00	●	10	133	87	10	0,150-0,550
10,10	●	10,1	133	87	10	0,150-0,550
10,20	●	10,2	133	87	10	0,150-0,550
10,30	●	10,3	133	87	10	0,150-0,550
10,40	●	10,4	133	87	10	0,150-0,550
10,50	●	10,5	133	87	10	0,150-0,550
10,80	●	10,8	142	94	12	0,150-0,550
11,00	●	11	142	94	12	0,150-0,550
11,20	○	11,2	142	94	12	0,150-0,550
11,50	●	11,5	142	94	12	0,150-0,550
11,80	●	11,8	142	94	12	0,150-0,550
12,00	●	12	151	101	12	0,180-0,660
12,20	●	12,2	151	101	16	0,180-0,660
12,30	●	12,3	151	101	16	0,180-0,660
12,50	○	12,5	151	101	16	0,180-0,660
13,00	●	13	151	101	16	0,200-0,720
13,50	●	13,5	160	108	16	0,200-0,720
14,00	●	14	160	108	16	0,210-0,740
14,50	●	14,5	169	114	16	0,210-0,740
15,00	●	15	169	114	16	0,220-0,800
15,50	●	15,5	178	120	16	0,220-0,800
16,00	●	16	178	120	16	0,230-0,830
17,00	●	17	184	125	20	0,240-0,880
17,50	●	17,5	191	130	20	0,240-0,880
18,00	●	18	191	130	20	0,250-0,940
19,00	●	19	198	135	20	0,250-0,940
20,00	●	20	205	140	20	0,250-0,940

Twist drill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²
100410	⟨1000	⟨850	⟨350	⟨600
vc = m/min.				
100410	10-25	7-10	25-40	35-65

Design:
- three cutting edges, three guide chamfers
- surface grinding with point thinning
- blank

HSS-Co | DIN 338 | Teeth 3 | 130° | Straight shank | UNI | PU

Use:
Ideal for machining steel, cast iron and non-ferrous metals.Ideal for machining steel, cast iron and non-ferrous metals. The three cutting edges enable higher feed rates compared to a double-edged drill and the best roundness of the holes.

NEW



Note:
Price per piece

N° article	100410	A11 mm	B5 mm	B6 mm	f mm/rev	
2,00	●	2	49	24	0,040-0,080	10
2,10	●	2,1	49	24	0,040-0,080	10
2,20	●	2,2	53	27	0,040-0,080	10
2,30	●	2,3	53	27	0,040-0,080	10
2,40	●	2,4	57	30	0,040-0,080	10
2,50	●	2,5	57	30	0,050-0,100	10
2,60	●	2,6	57	30	0,050-0,100	10
2,70	●	2,7	61	33	0,050-0,100	10
2,80	●	2,8	61	33	0,050-0,100	10
2,90	●	2,9	61	33	0,050-0,100	10
3,00	●	3	61	33	0,050-0,100	10
3,10	●	3,1	65	36	0,050-0,100	10
3,20	●	3,2	65	36	0,060-0,125	10
3,30	●	3,3	65	36	0,060-0,125	10
3,40	●	3,4	70	39	0,060-0,125	10
3,50	●	3,5	70	39	0,060-0,125	10
3,60	●	3,6	70	39	0,060-0,125	10
3,70	●	3,7	70	39	0,060-0,125	10
3,80	●	3,8	75	43	0,060-0,125	10

N° article	100410	A11 mm	B5 mm	B6 mm	f mm/rev	
3,90	●	3,9	75	43	0,060-0,125	10
4,00	●	4	75	43	0,080-0,160	10
4,10	●	4,1	75	43	0,080-0,160	10
4,20	●	4,2	75	43	0,080-0,160	10
4,30	●	4,3	80	47	0,080-0,160	10
4,40	●	4,4	80	47	0,080-0,160	10
4,50	●	4,5	80	47	0,080-0,160	10
4,60	●	4,6	80	47	0,080-0,160	10
4,70	●	4,7	80	47	0,080-0,160	10
4,80	●	4,8	86	52	0,080-0,160	10
4,90	●	4,9	86	52	0,080-0,160	10
5,00	●	5	86	52	0,080-0,160	10
5,10	●	5,1	86	52	0,080-0,160	10
5,20	●	5,2	86	52	0,080-0,160	10
5,30	●	5,3	86	52	0,080-0,160	10
5,40	●	5,4	86	52	0,080-0,160	10
5,50	●	5,5	93	57	0,080-0,160	10
5,60	●	5,6	93	57	0,080-0,160	10
5,70	●	5,7	93	57	0,080-0,160	10

N° article	100410	A11 mm	B5 mm	B6 mm	f mm/rev	
5,80	●	5,8	93	57	0,080-0,160	10
5,90	●	5,9	93	57	0,080-0,160	10
6,00	●	6	93	57	0,080-0,160	10
6,50	●	6,5	101	63	0,080-0,200	10
6,80	●	6,8	109	69	0,080-0,200	10
7,00	●	7	109	69	0,080-0,200	10
7,50	●	7,5	109	69	0,080-0,200	10
8,00	●	8	117	75	0,125-0,250	10
8,50	●	8,5	117	75	0,125-0,250	10
9,00	●	9	125	81	0,125-0,250	10
9,50	●	9,5	125	81	0,125-0,250	10
10,00	●	10	133	87	0,160-0,315	10
10,20	●	10,2	133	87	0,160-0,315	10
10,50	●	10,5	133	87	0,160-0,315	10
11,00	●	11	142	94	0,160-0,315	5
11,50	●	11,5	142	94	0,160-0,315	5
12,00	●	12	151	101	0,160-0,315	5
12,50	●	12,5	151	101	0,160-0,315	5
13,00	●	13	151	101	0,160-0,315	5

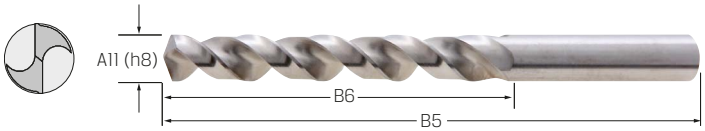
Twist drill HSS-Co INOX

PREMUS

	M N/mm²	N N/mm²	
100420	⟨1000	Alu ⟨600	bronze ⟨1000
vc = m/min.			
100420	10-14	55-90	22-28

Design:
- relived cone
- blank

HSS-Co | DIN 338 | Teeth 2 | 130° | Straight shank | M



Use:
Special geometry. For the machining of rust-, acid-, heat-resistant and austenitic steels

N° article	100420	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	34	12	0,014-0,020	10
1,10	●	1,1	36	14	0,014-0,020	10
1,20	●	1,2	38	16	0,014-0,020	10
1,30	●	1,3	38	16	0,014-0,020	10
1,40	●	1,4	40	18	0,014-0,020	10
1,50	●	1,5	40	18	0,014-0,020	10
1,60	●	1,6	43	20	0,014-0,020	10
1,70	●	1,7	43	20	0,014-0,020	10
1,80	●	1,8	46	22	0,014-0,020	10
1,90	●	1,9	46	22	0,014-0,020	10
2,00	●	2	49	24	0,040-0,080	10
2,10	●	2,1	49	24	0,040-0,080	10
2,20	●	2,2	53	27	0,040-0,080	10
2,30	●	2,3	53	27	0,040-0,080	10
2,40	●	2,4	57	30	0,040-0,080	10
2,50	●	2,5	57	30	0,050-0,100	10
2,60	●	2,6	57	30	0,050-0,100	10
2,70	●	2,7	61	33	0,050-0,100	10
2,80	●	2,8	61	33	0,050-0,100	10
2,90	●	2,9	61	33	0,050-0,100	10
3,00	●	3	61	33	0,050-0,100	10
3,10	●	3,1	65	36	0,050-0,100	10
3,20	●	3,2	65	36	0,063-0,125	10
3,30	●	3,3	65	36	0,063-0,125	10
3,40	●	3,4	70	39	0,063-0,125	10
3,50	●	3,5	70	39	0,063-0,125	10
3,60	●	3,6	70	39	0,063-0,125	10
3,70	●	3,7	70	39	0,063-0,125	10
3,80	●	3,8	75	43	0,063-0,125	10
3,90	●	3,9	75	43	0,063-0,125	10
4,00	●	4	75	43	0,080-0,160	10
4,10	●	4,1	75	43	0,080-0,160	10
4,20	●	4,2	75	43	0,080-0,160	10

N° article	100420	A11 mm	B5 mm	B6 mm	f mm/rev	
4,30	●	4,3	80	47	0,080-0,160	10
4,40	●	4,4	80	47	0,080-0,160	10
4,50	●	4,5	80	47	0,080-0,160	10
4,60	●	4,6	80	47	0,080-0,160	10
4,70	●	4,7	86	52	0,080-0,160	10
4,80	●	4,8	86	52	0,080-0,160	10
4,90	●	4,9	86	52	0,080-0,160	10
5,00	●	5	86	52	0,080-0,160	10
5,10	●	5,1	86	52	0,080-0,160	10
5,20	●	5,2	86	52	0,080-0,160	10
5,30	●	5,3	86	52	0,080-0,160	10
5,40	●	5,4	93	57	0,080-0,160	10
5,50	●	5,5	93	57	0,080-0,160	10
5,60	●	5,6	93	57	0,080-0,160	10
5,70	●	5,7	93	57	0,080-0,160	10
5,80	●	5,8	93	57	0,080-0,160	10
5,90	●	5,9	93	57	0,080-0,160	10
6,00	●	6	93	57	0,080-0,160	10
6,10	●	6,1	101	63	0,080-0,160	10
6,20	●	6,2	101	63	0,080-0,160	10
6,30	●	6,3	101	63	0,100-0,200	10
6,40	●	6,4	101	63	0,100-0,200	10
6,50	●	6,5	101	63	0,100-0,200	10
6,60	●	6,6	101	63	0,100-0,200	10
6,70	●	6,7	101	63	0,100-0,200	10
6,80	●	6,8	109	69	0,100-0,200	10
6,90	●	6,9	109	69	0,100-0,200	10
7,00	●	7	109	69	0,100-0,200	10
7,10	●	7,1	109	69	0,100-0,200	10
7,20	●	7,2	109	69	0,100-0,200	10
7,30	●	7,3	109	69	0,100-0,200	10
7,40	●	7,4	109	69	0,100-0,200	10
7,50	●	7,5	109	69	0,100-0,200	10

N° article	100420	A11 mm	B5 mm	B6 mm	f mm/rev	
7,60	●	7,6	117	75	0,100-0,200	5
7,70	●	7,7	117	75	0,100-0,200	5
7,80	●	7,8	117	75	0,100-0,200	5
7,90	●	7,9	117	75	0,100-0,200	5
8,00	●	8	117	75	0,125-0,250	5
8,10	●	8,1	117	75	0,125-0,250	5
8,20	●	8,2	117	75	0,125-0,250	5
8,30	●	8,3	117	75	0,125-0,250	5
8,40	●	8,4	117	75	0,125-0,250	5
8,50	●	8,5	117	75	0,125-0,250	5
8,60	●	8,6	125	81	0,125-0,250	5
8,70	●	8,7	125	81	0,125-0,250	5
8,80	●	8,8	125	81	0,125-0,250	5
8,90	●	8,9	125	81	0,125-0,250	5
9,00	●	9	125	81	0,125-0,250	5
9,10	●	9,1	125	81	0,125-0,250	5
9,20	●	9,2	125	81	0,125-0,250	5
9,30	●	9,3	125	81	0,125-0,250	5
9,40	●	9,4	125	81	0,125-0,250	5
9,50	●	9,5	125	81	0,125-0,250	5
9,60	●	9,6	133	87	0,125-0,250	5
9,70	●	9,7	133	87	0,125-0,250	5
9,80	●	9,8	133	87	0,125-0,250	5
9,90	●	9,9	133	87	0,125-0,250	5
10,00	●	10	133	87	0,160-0,315	5
10,20	●	10,2	133	87	0,160-0,315	5
10,50	●	10,5	133	87	0,160-0,315	5
11,00	●	11	142	94	0,160-0,315	1
11,50	●	11,5	142	94	0,160-0,315	1
12,00	●	12	151	101	0,160-0,315	1
12,50	●	12,5	151	101	0,160-0,315	1
13,00	●	13	151	101	0,160-0,315	1

Twist drill HSS-Co INOX

PREMUS

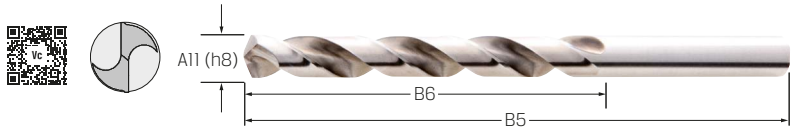
	M N/mm²	S N/mm²
100426	⟨1000	Titanium ⟨1200
100428		
vc = m/min.		
100426	10-14	6-10
100428	18-23	10-15

HSS-Co | DIN 338 | Typ Ti | Teeth 2 | 130° | Straight shank

M S

Design:
- relived cone
- point thinning from 1.00 mm
- blank / TiAlN coating

Use:
For rust- and acid-proof, heat-resisting and austenitic steel, titanium and titanium alloys. High-strength, short-chipping steels from 900 N/mm², special alloys like Hastelloy, Inconel, Nimonic®.



100426



100428

N° article	100426	100428 TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev		N° article	100426	100428 TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev		N° article	100426	100428 TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
0,40	●	–	0,4	20	5	0,006-0,007	10	3,30	●	●	3,3	65	36	0,040-0,050	10	6,70	●	–	6,7	101	63	0,063-0,080	10
0,50	●	–	0,5	22	6	0,006-0,007	10	3,40	●	●	3,4	70	39	0,040-0,050	10	6,80	●	●	6,8	109	69	0,063-0,080	10
0,60	●	–	0,6	24	7	0,006-0,007	10	3,50	●	●	3,5	70	39	0,040-0,050	10	6,90	–	●	6,9	109	69	0,063-0,100	10
0,70	●	–	0,7	28	9	0,006-0,007	10	3,60	●	–	3,6	70	39	0,040-0,050	10	7,00	●	●	7	109	69	0,063-0,080	10
0,80	●	–	0,8	30	10	0,006-0,007	10	3,70	●	●	3,7	70	39	0,040-0,050	10	7,10	●	–	7,1	109	69	0,063-0,080	10
0,90	●	–	0,9	32	11	0,006-0,007	10	3,80	●	●	3,8	75	43	0,040-0,050	10	7,20	○	○	7,2	109	69	0,063-0,080	10
1,00	●	●	1	34	12	0,008-0,012	10	4,00	●	●	4	75	43	0,050-0,063	10	7,50	●	●	7,5	109	69	0,063-0,080	10
1,10	●	●	1,1	36	14	0,008-0,012	10	4,10	●	–	4,1	75	43	0,050-0,063	10	7,80	●	●	7,8	117	75	0,063-0,080	5
1,20	●	●	1,2	38	16	0,008-0,012	10	4,20	●	●	4,2	75	43	0,050-0,063	10	8,00	●	●	8	117	75	0,080-0,100	5
1,30	●	●	1,3	38	16	0,008-0,012	10	4,30	●	●	4,3	80	47	0,050-0,063	10	8,20	–	●	8,2	117	75	0,080-0,125	5
1,40	●	●	1,4	40	18	0,008-0,012	10	4,40	–	●	4,4	80	47	0,050-0,080	10	8,40	○	–	8,4	117	75	0,080-0,100	5
1,50	●	●	1,5	40	18	0,008-0,012	10	4,50	●	●	4,5	80	47	0,050-0,063	10	8,50	●	●	8,5	117	75	0,080-0,100	5
1,60	●	●	1,6	43	20	0,008-0,012	10	4,60	–	●	4,6	80	47	0,050-0,080	10	8,60	○	●	8,6	125	81	0,080-0,100	5
1,70	–	●	1,7	43	20	0,008-0,014	10	4,80	●	●	4,8	86	52	0,050-0,063	10	8,70	–	●	8,7	125	81	0,080-0,125	5
1,80	●	●	1,8	46	22	0,008-0,012	10	4,90	○	●	4,9	86	52	0,050-0,063	10	8,80	–	●	8,8	125	81	0,080-0,125	5
1,90	●	●	1,9	46	22	0,008-0,012	10	5,00	●	●	5	86	52	0,050-0,063	10	9,00	●	●	9	125	81	0,080-0,100	5
2,00	●	●	2	49	24	0,025-0,032	10	5,10	●	●	5,1	86	52	0,050-0,063	10	9,20	–	○	9,2	125	81	0,080-0,125	5
2,10	●	●	2,1	49	24	0,025-0,032	10	5,20	●	●	5,2	86	52	0,050-0,063	10	9,50	●	●	9,5	125	81	0,080-0,100	5
2,20	●	●	2,2	53	27	0,025-0,032	10	5,50	●	●	5,5	93	57	0,050-0,063	10	9,80	●	○	9,8	133	87	0,080-0,100	5
2,30	●	●	2,3	53	27	0,025-0,032	10	5,70	●	–	5,7	93	57	0,050-0,063	10	10,00	●	●	10	133	87	0,100-0,125	5
2,40	●	●	2,4	57	30	0,025-0,032	10	5,80	●	●	5,8	93	57	0,050-0,063	10	10,20	●	●	10,2	133	87	0,100-0,125	5
2,50	●	●	2,5	57	30	0,032-0,040	10	5,90	●	–	5,9	93	57	0,050-0,063	10	10,50	●	●	10,5	133	87	0,100-0,125	5
2,60	●	●	2,6	57	30	0,032-0,040	10	6,00	●	●	6	93	57	0,050-0,063	10	11,00	●	●	11	142	94	0,100-0,125	1
2,70	●	–	2,7	61	33	0,032-0,040	10	6,10	–	●	6,1	101	63	0,050-0,080	10	11,50	–	●	11,5	142	94	0,100-0,160	1
2,80	●	●	2,8	61	33	0,032-0,040	10	6,20	●	●	6,2	101	63	0,050-0,063	10	12,00	○	●	12	151	101	0,100-0,125	1
2,90	●	●	2,9	61	33	0,032-0,040	10	6,30	–	●	6,3	101	63	0,063-0,100	10	12,50	○	●	12,5	151	101	0,100-0,125	1
3,00	●	●	3	61	33	0,032-0,040	10	6,40	–	●	6,4	101	63	0,063-0,100	10	13,00	●	●	13	151	101	0,100-0,125	1
3,10	●	–	3,1	65	36	0,032-0,040	10	6,50	●	●	6,5	101	63	0,063-0,080	10								
3,20	●	●	3,2	65	36	0,040-0,050	10	6,60	●	●	6,6	101	63	0,063-0,080	10								

Twist drill set HSS-Co INOX

PREMUS

Design:
- set of twist drills
- type INOX, 100420 in plastic box

*Sizes 1.0 - 10.5 with core hole dimensions 1x each 3.3/4.2/6.8/10.2 mm

HSS-Co | DIN 338 | 130° | Straight shank | M | Vc



N° article	100596	Number of drills	in each case increasing by mm
1,0-13,0	●	25	0.5
1,0-10,5	●	24	0.5 (plus KB*)

Twist drill HSS Steel

PREMUS

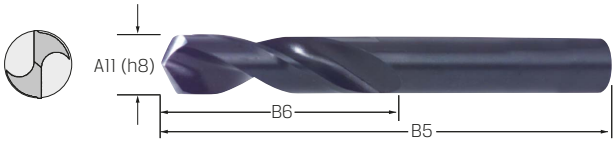
	P N/mm²	K HB
100600	<1000	<300
vc = m/min.		
100600	18-36	23-36

HSS | DIN 1897 | Typ N | Teeth 2 | 118° | Straight shank | P

K

Design:
- relived cone
- point thinning from 1.00 mm
- steam tempered from 2.40 mm

Use:
Robust short twist drill for automats, turret lathes and power drills.
Especially for thin-walled materials



N° article	100600	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	26	6	0,016-0,018	10
1,10	●	1,1	28	7	0,016-0,018	10
1,20	●	1,2	30	8	0,016-0,018	10
1,30	●	1,3	30	8	0,016-0,018	10
1,40	●	1,4	32	9	0,016-0,018	10
1,50	●	1,5	32	9	0,016-0,018	10
1,60	●	1,6	34	10	0,016-0,018	10
1,70	●	1,7	34	10	0,016-0,018	10
1,80	●	1,8	36	11	0,016-0,018	10
2,00	●	2	38	12	0,050-0,063	10
2,10	●	2,1	38	12	0,050-0,063	10
2,20	●	2,2	40	13	0,050-0,063	10
2,30	●	2,3	40	13	0,050-0,063	10
2,40	●	2,4	43	14	0,050-0,063	10
2,50	●	2,5	43	14	0,063-0,080	10
2,60	●	2,6	43	14	0,063-0,080	10
2,70	●	2,7	46	16	0,063-0,080	10
2,80	●	2,8	46	16	0,063-0,080	10
2,90	●	2,9	46	16	0,063-0,080	10
3,00	●	3	46	16	0,063-0,080	10
3,10	●	3,1	49	18	0,063-0,080	10
3,20	●	3,2	49	18	0,080-0,100	10
3,30	●	3,3	49	18	0,080-0,100	10
3,40	●	3,4	52	20	0,080-0,100	10
3,50	●	3,5	52	20	0,080-0,100	10
3,60	●	3,6	50	20	0,080-0,100	10
3,70	●	3,7	52	20	0,080-0,100	10
3,80	●	3,8	55	22	0,080-0,100	10
4,00	●	4	55	22	0,100-0,125	10
4,10	●	4,1	55	22	0,100-0,125	10
4,20	●	4,2	55	22	0,100-0,125	10
4,30	●	4,3	58	24	0,100-0,125	10
4,40	●	4,4	58	24	0,100-0,125	10
4,50	●	4,5	58	24	0,100-0,125	10
4,60	●	4,6	58	24	0,100-0,125	10
4,70	●	4,7	58	24	0,100-0,125	10
4,80	●	4,8	62	26	0,100-0,125	10
4,90	●	4,9	62	26	0,100-0,125	10
5,00	●	5	62	26	0,100-0,125	10
5,10	●	5,1	62	26	0,100-0,125	10
5,20	●	5,2	62	26	0,100-0,125	10
5,30	●	5,3	62	26	0,100-0,125	10
5,40	●	5,4	66	28	0,100-0,125	10
5,50	●	5,5	66	28	0,100-0,125	10
5,60	●	5,6	66	28	0,100-0,125	10
5,70	●	5,7	66	28	0,100-0,125	10
5,80	●	5,8	66	28	0,100-0,125	10
5,90	●	5,9	66	28	0,100-0,125	10
6,00	●	6	66	28	0,100-0,125	10
6,10	●	6,1	70	31	0,100-0,125	10
6,20	●	6,2	70	31	0,100-0,125	10
6,30	●	6,3	70	31	0,125-0,160	10
6,40	●	6,4	70	31	0,125-0,160	10
6,50	●	6,5	70	31	0,125-0,160	10
6,60	●	6,6	70	31	0,125-0,160	10
6,70	●	6,7	70	31	0,125-0,160	10
6,80	●	6,8	74	34	0,125-0,160	10
6,90	●	6,9	74	34	0,125-0,160	10
7,00	●	7	74	34	0,125-0,160	10
7,10	●	7,1	74	34	0,125-0,160	10
7,20	●	7,2	74	34	0,125-0,160	10
7,50	●	7,5	74	34	0,125-0,160	10
7,80	●	7,8	79	37	0,125-0,160	5
7,90	●	7,9	79	37	0,125-0,160	5
8,00	●	8	79	37	0,160-0,200	5
8,10	●	8,1	79	37	0,160-0,200	5
8,20	●	8,2	79	37	0,160-0,200	5
8,30	●	8,3	79	37	0,160-0,200	5
8,40	●	8,4	79	37	0,160-0,200	5
8,50	●	8,5	79	37	0,160-0,200	5
8,60	●	8,6	84	40	0,160-0,200	5
8,70	●	8,7	84	40	0,160-0,200	5
8,80	●	8,8	84	40	0,160-0,200	5
8,90	●	8,9	84	40	0,160-0,200	5
9,00	●	9	84	40	0,160-0,200	5
9,10	●	9,1	84	40	0,160-0,200	5
9,20	●	9,2	84	40	0,160-0,200	5
9,50	●	9,5	84	40	0,160-0,200	5
9,70	●	9,7	89	43	0,160-0,200	5
9,80	●	9,8	89	43	0,160-0,200	5
10,00	●	10	89	43	0,200-0,250	5
10,20	●	10,2	89	43	0,200-0,250	5
10,50	●	10,5	89	43	0,200-0,250	5
11,00	●	11	95	47	0,200-0,250	1
11,50	●	11,5	95	47	0,200-0,250	1
12,00	●	12	102	51	0,200-0,250	1
12,50	●	12,5	102	51	0,200-0,250	1
13,00	●	13	102	51	0,200-0,250	1
13,50	●	13,5	107	54	0,200-0,250	1
14,00	●	14	107	54	0,200-0,250	1
14,50	●	14,5	111	56	0,200-0,250	1
15,00	●	15	111	56	0,200-0,250	1
15,50	●	15,5	115	58	0,200-0,250	1
16,00	●	16	115	58	0,250-0,315	1

Twist drill HSS-Co Universal

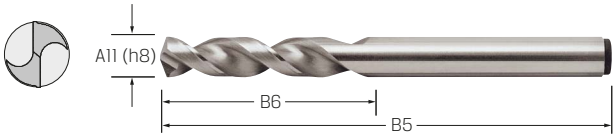
PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
100690	⟨1500	⟨850	⟨300	Copper, bronze, Alu ⟨600	Plastics
	vc = m/min.				
100690	8-20	7-11	15-20	28-42	40-50

Design:
- relived cone
- 130° point geometry
- 40° helix angle

HSS-Co | DIN 1897 | Teeth 2 | 130° | Straight shank | UNI | Vc

Use:
This combination of stable core, flutes with parabolic shape and a special point relief results in a drill with better performance at difficult to machine materials. Larger bore depths can be reached without chip removal.



N° article	100690	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	26	6	0,040-0,060	10
1,20	●	1,2	30	8	0,040-0,060	10
1,50	●	1,5	32	9	0,040-0,060	10
1,60	●	1,6	34	10	0,040-0,060	10
2,00	●	2	38	12	0,040-0,060	10
2,10	●	2,1	40	13	0,040-0,060	10
2,50	●	2,5	43	14	0,040-0,060	10
3,00	●	3	46	16	0,060-0,100	10
3,10	●	3,1	49	18	0,060-0,100	10
3,20	●	3,2	49	18	0,060-0,100	10
3,30	●	3,3	49	18	0,060-0,100	10
3,40	●	3,4	52	20	0,060-0,100	10
3,50	●	3,5	52	20	0,060-0,100	10
3,60	●	3,6	52	20	0,060-0,100	10

N° article	100690	A11 mm	B5 mm	B6 mm	f mm/rev	
4,00	●	4	55	22	0,080-0,120	10
4,20	●	4,2	55	22	0,080-0,120	10
4,30	●	4,3	58	24	0,080-0,120	10
4,50	●	4,5	58	24	0,080-0,120	10
5,00	●	5	62	26	0,085-0,135	10
5,10	●	5,1	62	26	0,085-0,135	10
5,50	●	5,5	66	28	0,085-0,135	10
6,00	●	6	66	28	0,100-0,150	10
6,50	●	6,5	70	31	0,100-0,150	10
6,80	●	6,8	74	34	0,100-0,150	10
7,00	●	7	74	34	0,100-0,150	10
7,50	●	7,5	74	34	0,100-0,150	10
8,00	●	8	79	37	0,120-0,200	10
8,50	●	8,5	79	37	0,120-0,200	5

N° article	100690	A11 mm	B5 mm	B6 mm	f mm/rev	
8,60	●	8,6	84	40	0,120-0,200	5
8,70	●	8,7	84	40	0,120-0,200	5
9,00	●	9	84	40	0,120-0,200	5
9,50	●	9,5	84	40	0,120-0,200	5
10,00	●	10	89	43	0,150-0,250	5
10,20	●	10,2	89	43	0,150-0,250	1
10,50	●	10,5	89	43	0,150-0,250	1
11,00	●	11	95	47	0,150-0,250	1
11,50	●	11,5	95	47	0,150-0,250	1
12,00	●	12	102	51	0,150-0,250	1
12,50	●	12,5	102	51	0,150-0,250	1
13,00	●	13	102	51	0,150-0,250	1

Twist drill HSS-Co Universal

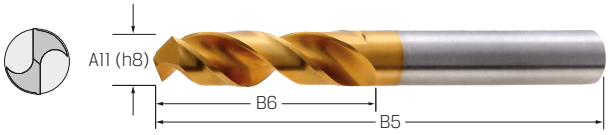
PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
100720	⟨1200	⟨1000	⟨300	Alu ⟨600	Copper, brass, bronze
	vc = m/min.				
100720	13-50	10-14	28-45	70-85	30-60

Design:
- relived cone
- TiN coating

HSS-Co | coated | DIN 1897 | Typ PU 500 | Teeth 2 | 118° | Straight shank | UNI | Vc

Use:
For universal drilling jobs, especially for steel. Good centring at spot-drilling and reduction of feed force



N° article	100720 TiN	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	26	6	0,014-0,018	10
1,10	●	1,1	28	7	0,014-0,018	10
1,20	●	1,2	30	8	0,014-0,018	10
1,30	●	1,3	30	8	0,014-0,018	10
1,40	●	1,4	32	9	0,014-0,018	10
1,50	●	1,5	32	9	0,014-0,018	10
1,60	●	1,6	34	10	0,014-0,018	10
1,70	●	1,7	34	10	0,014-0,018	10
1,80	●	1,8	36	11	0,014-0,018	10
1,90	●	1,9	36	11	0,014-0,018	10
2,00	●	2	38	12	0,040-0,063	10
2,10	●	2,1	38	12	0,040-0,063	10
2,20	●	2,2	40	13	0,040-0,063	10
2,30	●	2,3	40	13	0,040-0,063	10
2,40	●	2,4	43	14	0,040-0,063	10
2,50	●	2,5	43	14	0,050-0,080	10
2,60	●	2,6	43	14	0,050-0,080	10
2,70	●	2,7	46	16	0,050-0,080	10
2,80	●	2,8	46	16	0,050-0,080	10
2,90	●	2,9	46	16	0,050-0,080	10
3,00	●	3	46	16	0,050-0,080	10
3,10	●	3,1	49	18	0,050-0,080	10
3,20	●	3,2	49	18	0,063-0,100	10
3,30	●	3,3	49	18	0,063-0,100	10
3,40	●	3,4	52	20	0,063-0,100	10
3,50	●	3,5	52	20	0,063-0,100	10
3,60	●	3,6	52	20	0,063-0,100	10
3,70	●	3,7	52	20	0,063-0,100	10
3,80	●	3,8	55	22	0,063-0,100	10
3,90	●	3,9	55	22	0,063-0,100	10
4,00	●	4	55	22	0,080-0,125	10

N° article	100720 TiN	A11 mm	B5 mm	B6 mm	f mm/rev	
4,10	●	4,1	55	22	0,080-0,125	10
4,20	●	4,2	55	22	0,080-0,125	10
4,30	●	4,3	58	24	0,080-0,125	10
4,40	●	4,4	58	24	0,080-0,125	10
4,50	●	4,5	58	24	0,080-0,125	10
4,60	●	4,6	58	24	0,080-0,125	10
4,70	●	4,7	58	24	0,080-0,125	10
4,80	●	4,8	62	26	0,080-0,125	10
4,90	●	4,9	62	26	0,080-0,125	10
5,00	●	5	62	26	0,080-0,125	10
5,10	●	5,1	62	26	0,080-0,125	10
5,20	●	5,2	62	26	0,080-0,125	10
5,30	●	5,3	62	26	0,080-0,125	10
5,40	●	5,4	66	28	0,080-0,125	10
5,50	●	5,5	66	28	0,080-0,125	10
5,60	●	5,6	66	28	0,080-0,125	10
5,70	●	5,7	66	28	0,080-0,125	10
5,80	●	5,8	66	28	0,080-0,125	10
5,90	●	5,9	66	28	0,080-0,125	10
6,00	●	6	66	28	0,080-0,125	10
6,10	●	6,1	70	31	0,080-0,125	10
6,20	●	6,2	70	31	0,080-0,125	10
6,30	●	6,3	70	31	0,100-0,160	10
6,40	●	6,4	70	31	0,100-0,160	10
6,50	●	6,5	70	31	0,100-0,160	10
6,60	●	6,6	70	31	0,100-0,160	10
6,70	●	6,7	70	31	0,100-0,160	10
6,80	●	6,8	74	34	0,100-0,160	10
6,90	●	6,9	74	34	0,100-0,160	10
7,00	●	7	74	34	0,100-0,160	10
7,10	●	7,1	74	34	0,100-0,160	10

N° article	100720 TiN	A11 mm	B5 mm	B6 mm	f mm/rev	
7,20	●	7,2	74	34	0,100-0,160	10
7,30	●	7,3	74	34	0,100-0,160	10
7,40	●	7,4	74	34	0,100-0,160	10
7,50	●	7,5	74	34	0,100-0,160	10
7,60	●	7,6	79	37	0,100-0,160	5
7,70	●	7,7	79	37	0,100-0,160	5
7,80	●	7,8	79	37	0,100-0,160	5
7,90	●	7,9	79	37	0,100-0,160	5
8,00	●	8	79	37	0,125-0,200	5
8,10	●	8,1	79	37	0,125-0,200	5
8,20	●	8,2	79	37	0,125-0,200	5
8,30	●	8,3	79	37	0,125-0,200	5
8,40	●	8,4	79	37	0,125-0,200	5
8,50	●	8,5	79	37	0,125-0,200	5
8,80	●	8,8	84	40	0,125-0,200	5
9,00	●	9	84	40	0,125-0,200	5
9,30	●	9,3	84	40	0,125-0,200	5
9,50	●	9,5	84	40	0,125-0,200	5
9,80	●	9,8	89	43	0,125-0,200	5
10,00	●	10	89	43	0,160-0,250	5
10,20	●	10,2	89	43	0,160-0,250	5
10,50	●	10,5	89	43	0,160-0,250	5
11,00	●	11	95	47	0,160-0,250	1
11,50	●	11,5	95	47	0,160-0,250	1
12,00	●	12	102	51	0,160-0,250	1
12,50	●	12,5	102	51	0,160-0,250	1
13,00	●	13	102	51	0,160-0,250	1
13,50	●	13,5	107	54	0,160-0,250	1
14,00	●	14	107	54	0,160-0,250	1

Twist drill HSS-Co Universal

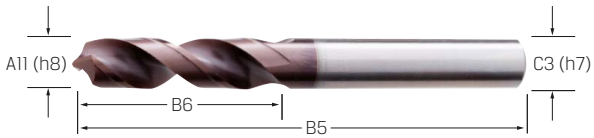
PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
100725	⟨1200	⟨850	⟨300	Alu ⟨600	Copper
	vc = m/min.				
100725	30-60	12-30	32-40	70-112	50-80

HSS-Co | coated | Factory standard | Teeth 2 | 120° | 130° | 140° | 6335 HA shank | UNI | Vc

Design:
- with the twist drill made of HSS-Co and a special coating of TiAlN you can process a wide variety of materials, including stainless and acid-resistant steels
- the special HSS-Co material gives the twist drill the highest toughness and thus prevents the cutting edge chipping that often occurs during drilling
- the special, heavily twisted groove geometry reduces the material hardening during the drilling process and provides the highest speeds
- the twist drill produces short, easily dischargeable chips and thus ensures a safe and economical drilling process
- pre-centring the bore is not necessary
- the special TiAlN coating prevents the formation of built-up edges and gives the twist drill maximum wear resistance at high feed rates.

Ø 1.0 - 1.9 mm = 140° point angle
Ø 2.0 - 4.0 mm = 130° point angle
Ø 4.1 - 20.0 mm = 120° point angle



N° article	100725 TiAlN, short	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
1,00	●	1	26	6	3	0,010-0,060
1,10	●	1,1	28	7	3	0,010-0,060
1,20	●	1,2	30	8	3	0,010-0,060
1,30	●	1,3	30	8	3	0,010-0,060
1,40	●	1,4	32	9	3	0,010-0,060
1,50	●	1,5	32	9	3	0,010-0,060
1,60	●	1,6	34	10	3	0,010-0,060
1,70	●	1,7	34	10	3	0,010-0,060
1,80	●	1,8	36	11	3	0,010-0,060
1,90	●	1,9	36	11	3	0,010-0,060
2,00	●	2	38	12	3	0,030-0,120
2,10	●	2,1	38	12	3	0,030-0,120
2,20	●	2,2	40	13	3	0,030-0,120
2,30	●	2,3	40	13	3	0,030-0,120
2,40	●	2,4	43	14	3	0,030-0,120
2,50	●	2,5	43	14	3	0,030-0,120
2,60	●	2,6	43	14	3	0,030-0,120
2,70	●	2,7	46	16	3	0,030-0,120
2,80	●	2,8	46	16	3	0,030-0,120
2,85	●	2,85	46	16	3	0,030-0,120
2,90	●	2,9	46	16	3	0,030-0,120
3,00	●	3	46	16	3	0,040-0,180
3,10	●	3,1	49	18	4	0,040-0,180
3,20	●	3,2	49	18	4	0,040-0,180
3,30	●	3,3	49	18	4	0,040-0,180
3,40	●	3,4	52	20	4	0,040-0,180
3,50	●	3,5	52	20	4	0,040-0,180
3,60	●	3,6	52	20	4	0,040-0,180
3,70	●	3,7	52	20	4	0,040-0,180
3,78	●	3,78	55	22	4	0,040-0,180
3,80	●	3,8	55	22	4	0,040-0,180
3,90	●	3,9	55	22	4	0,040-0,180
4,00	●	4	55	22	4	0,060-0,240
4,10	●	4,1	55	22	6	0,060-0,240
4,20	●	4,2	55	22	6	0,060-0,240
4,30	●	4,3	58	24	6	0,060-0,240
4,40	●	4,4	58	24	6	0,060-0,240
4,50	●	4,5	58	24	6	0,060-0,240
4,60	●	4,6	58	24	6	0,060-0,240
4,65	●	4,65	58	24	6	0,060-0,240
4,70	●	4,7	58	24	6	0,060-0,240
4,80	●	4,8	62	26	6	0,060-0,240
4,90	●	4,9	62	26	6	0,060-0,240
5,00	●	5	62	26	6	0,080-0,300

N° article	100725 TiAlN, short	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
5,10	●	5,1	62	26	6	0,080-0,300
5,20	●	5,2	62	26	6	0,080-0,300
5,30	●	5,3	62	26	6	0,080-0,300
5,40	●	5,4	66	28	6	0,080-0,300
5,50	●	5,5	66	28	6	0,080-0,300
5,55	●	5,55	66	28	6	0,080-0,300
5,60	●	5,6	66	28	6	0,080-0,300
5,65	●	5,65	66	28	6	0,080-0,300
5,70	●	5,7	66	28	6	0,080-0,300
5,80	●	5,8	66	28	6	0,080-0,300
5,90	●	5,9	66	28	6	0,080-0,300
6,00	●	6	66	28	6	0,090-0,360
6,10	●	6,1	70	32	8	0,090-0,360
6,20	●	6,2	70	32	8	0,090-0,360
6,30	●	6,3	70	32	8	0,090-0,360
6,40	●	6,4	70	32	8	0,090-0,360
6,50	●	6,5	70	32	8	0,090-0,360
6,60	●	6,6	70	32	8	0,090-0,360
6,70	●	6,7	70	32	8	0,090-0,360
6,80	●	6,8	74	34	8	0,090-0,360
6,90	●	6,9	74	34	8	0,090-0,360
7,00	●	7	74	34	8	0,090-0,360
7,10	●	7,1	74	34	8	0,090-0,360
7,20	●	7,2	74	34	8	0,090-0,360
7,30	●	7,3	74	34	8	0,090-0,360
7,40	●	7,4	74	34	8	0,090-0,360
7,50	●	7,5	74	34	8	0,090-0,360
7,60	○	7,6	79	37	8	0,090-0,360
7,70	○	7,7	79	37	8	0,090-0,360
7,80	●	7,8	79	37	8	0,090-0,360
7,90	●	7,9	79	37	8	0,090-0,360
8,00	●	8	79	37	8	0,120-0,450
8,10	●	8,1	79	37	10	0,120-0,450
8,20	●	8,2	79	37	10	0,120-0,450
8,30	●	8,3	79	37	10	0,120-0,450
8,40	●	8,4	79	37	10	0,120-0,450
8,50	●	8,5	79	37	10	0,120-0,450
8,60	●	8,6	84	40	10	0,120-0,450
8,70	●	8,7	84	40	10	0,120-0,450
8,80	●	8,8	84	40	10	0,120-0,450
8,90	●	8,9	84	40	10	0,120-0,450
9,00	●	9	84	40	10	0,120-0,450
9,10	●	9,1	84	40	10	0,120-0,450
9,20	●	9,2	84	40	10	0,120-0,450

N° article	100725 TiAlN, short	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
9,30	●	9,3	84	40	10	0,120-0,450
9,40	●	9,4	84	40	10	0,120-0,450
9,50	●	9,5	84	40	10	0,120-0,450
9,60	●	9,6	89	43	10	0,120-0,450
9,70	●	9,7	89	43	10	0,120-0,450
9,80	●	9,8	89	43	10	0,120-0,450
9,90	●	9,9	89	43	10	0,120-0,450
10,00	●	10	89	43	10	0,150-0,550
10,10	●	10,1	89	43	10	0,150-0,550
10,20	●	10,2	89	43	10	0,150-0,550
10,30	●	10,3	89	43	10	0,150-0,550
10,40	●	10,4	89	43	10	0,150-0,550
10,50	●	10,5	89	43	10	0,150-0,550
10,80	●	10,8	95	47	12	0,150-0,550
11,00	●	11	95	47	12	0,150-0,550
11,10	●	11,1	95	47	12	0,150-0,550
11,20	●	11,2	95	47	12	0,150-0,550
11,30	●	11,3	95	47	12	0,150-0,550
11,50	●	11,5	95	47	12	0,150-0,550
11,70	●	11,7	95	47	12	0,150-0,550
11,80	●	11,8	95	47	12	0,150-0,550
12,00	●	12	102	51	12	0,180-0,660
12,10	●	12,1	102	51	16	0,180-0,660
12,20	●	12,2	102	51	16	0,180-0,660
12,30	●	12,3	102	51	16	0,180-0,660
12,50	●	12,5	102	51	16	0,180-0,660
12,70	●	12,7	102	51	16	0,180-0,660
12,90	●	12,9	102	51	16	0,180-0,660
13,00	●	13	102	51	16	0,200-0,720
13,50	●	13,5	107	54	16	0,200-0,720
14,00	●	14	107	54	16	0,210-0,740
14,50	●	14,5	111	56	16	0,210-0,740
15,00	●	15	111	56	16	0,220-0,800
15,50	●	15,5	115	58	16	0,220-0,800
16,00	●	16	115	58	16	0,230-0,830
16,50	●	16,5	119	60	20	0,230-0,830
17,00	●	17	119	60	20	0,240-0,880
17,50	●	17,5	123	62	20	0,240-0,880
18,00	●	18	123	62	20	0,250-0,940
18,50	●	18,5	127	64	20	0,250-0,940
19,00	●	19	127	64	20	0,250-0,940
20,00	●	20	131	66	20	0,250-0,940

Twist drill HSS-Co INOX

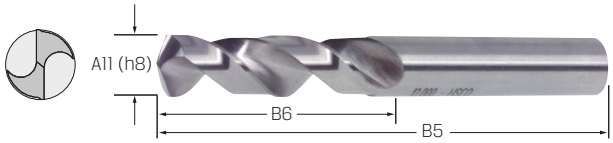
PREMUS

	M N/mm²	S N/mm²	N N/mm²	
100670	⟨850	Titanium ⟨850	Alu ⟨600	bronze ⟨1000
	vc = m/min.			
100670	12-16	1-2	60-100	25-30

HSS-Co | DIN 1897 | Typ INOX | Teeth 2 | 130° | Straight shank | M

Design:
- relived cone
- blank

Use:
For rust-, acid-, heat-resisting and austenitic steel



N° article	100670	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	26	6	0,014-0,020	10
1,10	●	1,1	28	7	0,014-0,020	10
1,20	●	1,2	30	8	0,014-0,020	10
1,30	●	1,3	30	8	0,014-0,020	10
1,40	●	1,4	32	9	0,014-0,020	10
1,50	●	1,5	32	9	0,014-0,020	10
1,60	●	1,6	34	10	0,014-0,020	10
1,70	●	1,7	34	10	0,014-0,020	10
1,80	●	1,8	36	11	0,014-0,020	10
1,90	●	1,9	36	11	0,014-0,020	10
2,00	●	2	38	12	0,040-0,080	10
2,10	●	2,1	38	12	0,040-0,080	10
2,20	●	2,2	40	13	0,040-0,080	10
2,30	●	2,3	40	13	0,040-0,080	10
2,40	●	2,4	43	14	0,040-0,080	10
2,50	●	2,5	43	14	0,050-0,100	10
2,60	●	2,6	43	14	0,050-0,100	10
2,70	●	2,7	46	16	0,050-0,100	10
2,80	●	2,8	46	16	0,050-0,100	10
2,90	●	2,9	46	16	0,050-0,100	10
3,00	●	3	46	16	0,050-0,100	10
3,10	●	3,1	49	18	0,050-0,100	10
3,20	●	3,2	49	18	0,050-0,100	10
3,30	●	3,3	49	18	0,063-0,125	10
3,40	●	3,4	52	20	0,063-0,125	10
3,50	●	3,5	52	20	0,063-0,125	10
3,60	●	3,6	50	20	0,063-0,125	10

N° article	100670	A11 mm	B5 mm	B6 mm	f mm/rev	
3,70	●	3,7	52	20	0,063-0,125	10
3,80	●	3,8	55	22	0,063-0,125	10
4,00	●	4	55	22	0,063-0,125	10
4,10	●	4,1	55	22	0,080-0,160	10
4,20	●	4,2	55	22	0,080-0,160	10
4,30	●	4,3	58	24	0,080-0,160	10
4,50	●	4,5	58	24	0,080-0,160	10
4,70	●	4,7	58	24	0,080-0,160	10
4,80	●	4,8	62	26	0,080-0,160	10
4,90	●	4,9	62	26	0,080-0,160	10
5,00	●	5	62	26	0,080-0,160	10
5,10	●	5,1	62	26	0,080-0,160	10
5,20	●	5,2	62	26	0,080-0,160	10
5,30	●	5,3	62	26	0,080-0,160	10
5,50	●	5,5	66	28	0,080-0,160	10
5,60	●	5,6	66	28	0,080-0,160	10
5,70	○	5,7	66	28	0,080-0,160	10
5,80	●	5,8	66	28	0,080-0,160	10
5,90	●	5,9	66	28	0,080-0,160	10
6,00	●	6	66	28	0,080-0,160	10
6,10	●	6,1	70	31	0,080-0,160	10
6,20	●	6,2	70	31	0,080-0,160	10
6,30	●	6,3	70	31	0,100-0,200	10
6,40	●	6,4	70	31	0,100-0,200	10
6,50	●	6,5	70	31	0,100-0,200	10
6,60	●	6,6	70	31	0,100-0,200	10
6,70	●	6,7	70	31	0,100-0,200	10

N° article	100670	A11 mm	B5 mm	B6 mm	f mm/rev	
6,80	●	6,8	74	34	0,100-0,200	10
6,90	●	6,9	74	34	0,100-0,200	10
7,00	●	7	74	34	0,100-0,200	10
7,10	●	7,1	74	34	0,100-0,200	10
7,20	●	7,2	74	34	0,100-0,200	10
7,50	●	7,5	74	34	0,100-0,200	10
7,70	●	7,7	79	37	0,100-0,200	5
7,90	●	7,9	79	37	0,100-0,200	5
8,00	●	8	79	37	0,125-0,250	5
8,10	●	8,1	79	37	0,125-0,250	5
8,20	●	8,2	79	37	0,125-0,250	5
8,30	●	8,3	79	37	0,125-0,250	5
8,40	●	8,4	79	37	0,125-0,250	5
8,50	●	8,5	79	37	0,125-0,250	5
8,60	●	8,6	84	40	0,125-0,250	5
8,70	●	8,7	84	40	0,125-0,250	5
9,00	●	9	84	40	0,125-0,250	5
9,20	●	9,2	84	40	0,125-0,250	5
9,30	●	9,3	84	40	0,125-0,250	5
9,50	●	9,5	84	40	0,125-0,250	5
9,80	●	9,8	89	43	0,125-0,250	5
10,00	●	10	89	43	0,160-0,315	5
10,20	●	10,2	89	43	0,160-0,315	5
10,50	●	10,5	89	43	0,160-0,315	5
11,00	●	11	95	47	0,160-0,315	1
11,50	●	11,5	95	47	0,160-0,315	1
12,00	●	12	102	51	0,160-0,315	1

Microdrill HSS-Co PM Universal

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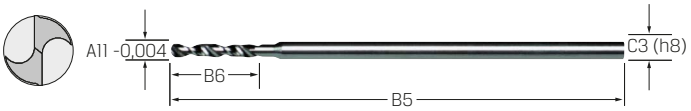
	P N/mm²	M N/mm²	K HB	N N/mm²	
100820	⟨1200	⟨850	⟨300	Alu, bronze ⟨600	Plastics
	vc = m/min.				
100820	8-21	4-6	18-26	18-26	16-18

HSS-Co PM | DIN 1899 | Typ N | Teeth 2 | 118° | 6335 HA shank | UNI

Delivery only in 10-piece packages

Design:
- relived cone
- blank

Use:
for high-alloy steels



N° article	100820	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	
0,20	●	0,2	25	1,5	1	0,005 - 0,009	10
0,25	●	0,25	25	1,9	1	0,007 - 0,011	10
0,30	●	0,3	25	1,9	1	0,009 - 0,015	10
0,35	●	0,35	25	2,4	1	0,009 - 0,015	10
0,40	●	0,4	25	3	1	0,009 - 0,015	10
0,45	●	0,45	25	3	1	0,009 - 0,015	10
0,50	●	0,5	25	3,4	1	0,011 - 0,019	10
0,55	●	0,55	25	3,9	1	0,011 - 0,019	10
0,60	●	0,6	25	3,9	1	0,011 - 0,019	10

N° article	100820	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	
0,65	●	0,65	25	4,2	1	0,015 - 0,026	10
0,70	●	0,7	25	4,8	1	0,015 - 0,026	10
0,75	●	0,75	25	4,8	1	0,015 - 0,026	10
0,80	●	0,8	25	5,3	1,5	0,020 - 0,031	10
0,85	●	0,85	25	5,3	1,5	0,020 - 0,031	10
0,90	●	0,9	25	6	1,5	0,020 - 0,031	10
0,95	●	0,95	25	6	1,5	0,020 - 0,031	10
1,00	●	1	25	6,8	1,5	0,035 - 0,050	10
1,05	●	1,05	25	6,8	1,5	0,035 - 0,050	10

N° article	100820	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	
1,10	●	1,1	25	7,6	1,5	0,035 - 0,050	10
1,15	○	1,15	25	7,6	1,5	0,035 - 0,050	10
1,20	●	1,2	25	8,5	1,5	0,035 - 0,050	10
1,30	●	1,3	25	8,8	1,5	0,035 - 0,050	10
1,35	○	1,35	25	9,5	1,5	0,035 - 0,050	10
1,40	●	1,4	25	9,5	1,5	0,035 - 0,050	10
1,45	○	1,45	25	9,5	1,5	0,035 - 0,050	10

Twist drill HSS Steel

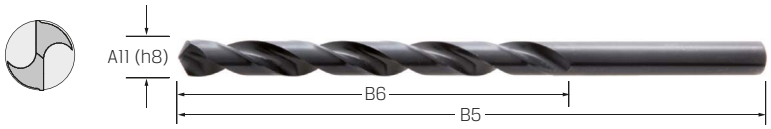
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	P N/mm²	K HB
101110	⟨850	⟨300
vc = m/min.		
101110	25-32	20-32

Design:
- relived cone
- point thinning from 1.00 mm
- steam tempered from 2.40 mm

HSS | DIN 340 | Typ N | Teeth 2 | 118° | Straight shank | P | K

Use:
Standard drill for deep holes in alloyed and unalloyed steel and cast iron, grey cast iron, malleable iron, nodular cast iron, sintered iron, nickel silver, graphite



N° article	101110	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	1	56	33	0,014-0,018	10
1,20	●	1,2	65	41	0,014-0,018	10
1,30	●	1,3	65	41	0,014-0,018	10
1,40	●	1,4	70	45	0,014-0,018	10
1,50	●	1,5	70	45	0,014-0,018	10
1,60	●	1,6	76	50	0,014-0,018	10
1,70	●	1,7	76	50	0,014-0,018	10
1,80	●	1,8	80	53	0,014-0,018	10
1,90	●	1,9	80	53	0,014-0,018	10
2,00	●	2	86	56	0,040-0,063	10
2,10	●	2,1	85	56	0,040-0,063	10
2,20	●	2,2	90	59	0,040-0,063	10
2,30	●	2,3	90	59	0,040-0,063	10
2,40	●	2,4	95	62	0,040-0,063	10
2,50	●	2,5	95	62	0,050-0,080	10
2,60	●	2,6	95	62	0,050-0,080	10
2,80	●	2,8	100	66	0,050-0,080	10
2,90	●	2,9	100	66	0,050-0,080	10
3,00	●	3	100	66	0,050-0,080	10
3,10	●	3,1	106	69	0,050-0,080	10
3,20	●	3,2	106	69	0,063-0,100	10
3,30	●	3,3	106	69	0,063-0,100	10
3,40	●	3,4	112	73	0,063-0,100	10
3,50	●	3,5	112	73	0,063-0,100	10
3,70	●	3,7	112	73	0,063-0,100	10
3,80	●	3,8	119	78	0,063-0,100	10
3,90	●	3,9	119	78	0,063-0,100	10

N° article	101110	A11 mm	B5 mm	B6 mm	f mm/rev	
4,00	●	4	119	78	0,080-0,125	10
4,10	●	4,1	119	78	0,080-0,125	10
4,20	●	4,2	119	78	0,080-0,125	10
4,30	●	4,3	126	82	0,080-0,125	10
4,40	○	4,4	126	82	0,080-0,125	10
4,50	●	4,5	126	82	0,080-0,125	10
4,60	●	4,6	126	82	0,080-0,125	10
4,70	●	4,7	126	82	0,080-0,125	10
4,80	●	4,8	132	87	0,080-0,125	10
4,90	●	4,9	132	87	0,080-0,125	10
5,00	●	5	132	87	0,080-0,125	10
5,10	●	5,1	132	87	0,080-0,125	10
5,20	●	5,2	132	87	0,080-0,125	10
5,30	○	5,3	132	87	0,080-0,125	10
5,40	●	5,4	139	91	0,080-0,125	10
5,50	●	5,5	139	91	0,080-0,125	10
5,60	●	5,6	139	91	0,080-0,125	10
5,70	●	5,7	139	91	0,080-0,125	10
5,80	●	5,8	139	91	0,080-0,125	10
5,90	●	5,9	139	91	0,080-0,125	10
6,00	●	6	139	91	0,080-0,125	10
6,10	●	6,1	148	97	0,080-0,125	10
6,20	●	6,2	148	97	0,080-0,125	10
6,30	●	6,3	148	97	0,100-0,160	10
6,50	●	6,5	148	97	0,100-0,160	10
6,60	●	6,6	148	97	0,100-0,160	10
6,70	●	6,7	148	97	0,100-0,160	10

N° article	101110	A11 mm	B5 mm	B6 mm	f mm/rev	
6,80	●	6,8	156	102	0,100-0,160	5
7,00	●	7	156	102	0,100-0,160	5
7,10	●	7,1	156	102	0,100-0,160	5
7,20	○	7,2	156	102	0,100-0,160	5
7,50	●	7,5	156	102	0,100-0,160	5
7,70	●	7,7	165	109	0,100-0,160	5
7,80	●	7,8	165	109	0,100-0,160	5
7,90	●	7,9	165	109	0,100-0,160	5
8,00	●	8	165	109	0,125-0,200	5
8,20	●	8,2	165	109	0,125-0,200	5
8,30	○	8,3	165	109	0,125-0,200	5
8,50	●	8,5	165	109	0,125-0,200	5
8,60	●	8,6	175	115	0,125-0,200	5
8,70	●	8,7	175	115	0,125-0,200	5
9,00	●	9	175	115	0,125-0,200	5
9,50	●	9,5	175	115	0,125-0,200	5
9,80	●	9,8	184	121	0,125-0,200	5
9,90	●	9,9	184	121	0,125-0,200	5
10,00	●	10	184	121	0,160-0,250	5
10,20	●	10,2	184	121	0,160-0,250	5
10,50	●	10,5	184	121	0,160-0,250	5
11,00	●	11	195	128	0,160-0,250	1
11,50	●	11,5	195	128	0,160-0,250	1
12,00	●	12	205	134	0,160-0,250	1
12,50	●	12,5	205	134	0,160-0,250	1
13,00	●	13	205	134	0,160-0,250	1

Twist drill HSS-Co Universal

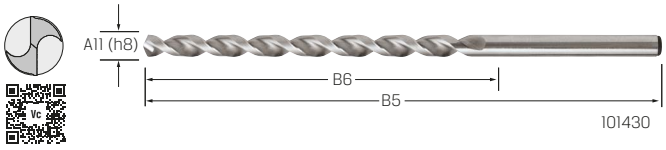
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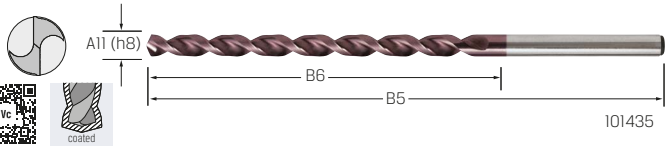
	P N/mm²	M N/mm²	K HB	N N/mm²	
101430 / 101435	⟨1200	⟨850	⟨300	Bronze, Alu ⟨600	Plastics
vc = m/min.					
101430	8-25	6-8	13-16	22-41	20-30
101435	10-30	8-10	16-19	18-32	30-40

Design:
- relived cone
- 130° point geometry
- 40° helix angle

HSS-Co | DIN 340 | Typ N | Teeth 2 | 130° | Straight shank | UNI

Use:
This combination of stable core, flutes with parabolic shape and a special point relief results in a drill with better performance at difficult to machine materials. Larger bore depths can be reached without chip removal.





N° article	101430 R40NH	101435 R40NH, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	●	1	56	33	0,040-0,060	10
1,10	●	–	1,1	60	37	0,040-0,060	10
1,20	●	–	1,2	65	41	0,040-0,060	10
1,30	●	–	1,3	65	41	0,040-0,060	10
1,40	●	–	1,4	70	45	0,040-0,060	10
1,50	●	●	1,5	70	45	0,040-0,060	10
1,60	●	–	1,6	76	50	0,040-0,060	10
1,70	●	–	1,7	76	50	0,040-0,060	10
1,80	●	●	1,8	80	53	0,040-0,060	10
1,90	●	–	1,9	80	53	0,040-0,060	10
2,00	●	●	2	85	56	0,040-0,060	10
2,10	●	●	2,1	85	56	0,040-0,060	10
2,20	●	–	2,2	90	59	0,040-0,060	10
2,30	●	–	2,3	90	59	0,040-0,060	10
2,40	●	–	2,4	95	62	0,040-0,060	10
2,50	●	●	2,5	95	62	0,040-0,060	10
2,60	●	–	2,6	95	62	0,040-0,060	10
2,70	●	–	2,7	100	66	0,040-0,060	10
2,80	●	–	2,8	100	66	0,040-0,060	10
2,90	●	–	2,9	100	66	0,040-0,060	10
3,00	●	●	3	100	66	0,060-0,100	10
3,10	●	–	3,1	106	69	0,060-0,100	10
3,20	●	–	3,2	106	69	0,060-0,100	10
3,30	●	●	3,3	106	69	0,060-0,100	10
3,40	●	–	3,4	112	73	0,060-0,100	10
3,50	●	●	3,5	112	73	0,060-0,100	10
3,60	●	–	3,6	112	73	0,060-0,100	10
3,70	●	–	3,7	112	73	0,060-0,100	10
3,80	●	–	3,8	119	78	0,060-0,100	10
3,90	●	–	3,9	119	78	0,060-0,100	10
4,00	●	●	4	119	78	0,080-0,120	10
4,10	●	–	4,1	119	78	0,080-0,120	10

N° article	101430 R40NH	101435 R40NH, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
4,20	●	●	4,2	119	78	0,080-0,120	10
4,30	●	–	4,3	126	82	0,080-0,120	10
4,40	●	–	4,4	126	82	0,080-0,120	10
4,50	●	●	4,5	126	82	0,080-0,120	10
4,60	●	–	4,6	126	82	0,080-0,120	10
4,70	●	–	4,7	126	82	0,080-0,120	10
4,80	●	●	4,8	132	87	0,080-0,120	10
4,90	●	–	4,9	132	87	0,080-0,120	10
5,00	●	●	5	132	87	0,085-0,135	10
5,10	●	–	5,1	132	87	0,085-0,135	10
5,20	●	–	5,2	132	87	0,085-0,135	10
5,30	●	●	5,3	132	87	0,085-0,135	10
5,40	●	–	5,4	139	91	0,085-0,135	10
5,50	●	●	5,5	139	91	0,085-0,135	10
5,60	●	–	5,6	139	91	0,085-0,135	10
5,70	●	–	5,7	139	91	0,085-0,135	10
5,80	●	–	5,8	139	91	0,085-0,135	10
5,90	●	–	5,9	139	91	0,085-0,135	10
6,00	●	●	6	139	91	0,100-0,150	10
6,10	●	–	6,1	148	97	0,100-0,150	5
6,20	●	–	6,2	148	97	0,100-0,150	5
6,30	●	–	6,3	148	97	0,100-0,150	5
6,40	●	–	6,4	148	97	0,100-0,150	5
6,50	●	●	6,5	148	97	0,100-0,150	5
6,60	●	–	6,6	148	97	0,100-0,150	5
6,70	●	–	6,7	148	97	0,100-0,150	5
6,80	●	●	6,8	156	102	0,100-0,150	5
6,90	●	–	6,9	156	102	0,100-0,150	5
7,00	●	●	7	156	102	0,100-0,150	5
7,10	●	–	7,1	156	102	0,100-0,150	5
7,20	●	–	7,2	156	102	0,100-0,150	5
7,30	●	–	7,3	156	102	0,100-0,150	5

N° article	101430 R40NH	101435 R40NH, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
7,40	●	–	7,4	156	102	0,100-0,150	5
7,50	●	●	7,5	156	102	0,100-0,150	5
7,60	●	–	7,6	165	109	0,100-0,150	5
7,70	●	–	7,7	165	109	0,100-0,150	5
7,80	●	–	7,8	165	109	0,100-0,150	5
7,90	●	–	7,9	165	109	0,100-0,150	5
8,00	●	●	8	165	109	0,120-0,200	5
8,10	●	–	8,1	165	109	0,120-0,200	1
8,20	●	–	8,2	165	109	0,120-0,200	1
8,30	●	–	8,3	165	109	0,120-0,200	1
8,40	●	–	8,4	165	109	0,120-0,200	1
8,50	●	●	8,5	165	109	0,120-0,200	1
8,60	●	–	8,6	175	115	0,120-0,200	1
8,70	●	–	8,7	175	115	0,120-0,200	1
8,80	●	–	8,8	175	115	0,120-0,200	1
8,90	●	–	8,9	175	115	0,120-0,200	1
9,00	●	●	9	175	115	0,120-0,200	1
9,50	●	●	9,5	175	115	0,120-0,200	1
9,80	●	–	9,8	184	121	0,120-0,200	1
10,00	●	●	10	184	121	0,150-0,250	1
10,20	●	●	10,2	184	121	0,150-0,250	1
10,50	●	●	10,5	184	121	0,150-0,250	1
11,00	●	●	11	195	128	0,150-0,250	1
11,50	●	●	11,5	195	128	0,150-0,250	1
12,00	●	●	12	205	134	0,150-0,250	1
12,50	●	●	12,5	205	134	0,150-0,250	1
13,00	●	●	13	205	134	0,150-0,250	1

Twist drill HSS Universall

PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
101510					
101512	<1000	<850	<300	Alu, Brass <600	Plastics
101514					
vc = m/min.					
101510					
101512	6-22	2-3	14-22	26-45	12-18
101514					

Design:
- relived cone
- point thinning from 2.00 mm
- chamfers nitrided from 2.50 mm

Use:
For drilling extremely deep holes in grey cast iron and steel up to 1,000 N/mm² with excellent chip removal

HSS | DIN 1869 overlong | Typ PT | Teeth 2 | 130° | Straight shank | UNI

Vc 101510 | Vc 101512 | Vc 101514



N° article	101510 Series 1	A11 mm	B5 mm	B6 mm	f mm/rev
2,00	●	2	125	85	0,040-0,063
2,20	●	2,2	135	90	0,040-0,063
2,30	○	2,3	135	90	0,040-0,063
2,50	●	2,5	140	95	0,050-0,080
2,80	●	2,8	150	100	0,050-0,080
3,00	●	3	150	100	0,050-0,080
3,10	●	3,1	155	105	0,050-0,080
3,20	●	3,2	155	105	0,053-0,100
3,30	●	3,3	155	105	0,053-0,100
3,50	●	3,5	165	115	0,053-0,100
4,00	●	4	175	120	0,080-0,125
4,20	●	4,2	175	120	0,080-0,125
4,50	●	4,5	185	125	0,080-0,125
4,80	●	4,8	195	135	0,080-0,125

N° article	101510 Series 1	A11 mm	B5 mm	B6 mm	f mm/rev
5,00	●	5	195	135	0,080-0,125
5,20	●	5,2	195	135	0,080-0,125
5,50	●	5,5	205	125	0,080-0,125
5,80	●	5,8	205	140	0,080-0,125
6,00	●	6	205	140	0,080-0,125
6,80	●	6,8	225	155	0,100-0,160
7,00	●	7	225	155	0,100-0,160
7,50	●	7,5	225	155	0,100-0,160
8,00	●	8	240	165	0,125-0,200
8,50	●	8,5	240	165	0,125-0,200
9,00	●	9	250	175	0,125-0,200
9,50	●	9,5	250	175	0,125-0,200
10,00	●	10	265	185	0,160-0,250

N° article	101512 Series 2	A11 mm	B5 mm	B6 mm	f mm/rev
3,00	●	3	190	130	0,050-0,080
3,50	●	3,5	210	145	0,063-0,100
4,00	●	4	220	150	0,080-0,125
4,50	●	4,5	235	160	0,080-0,125
5,00	●	5	245	170	0,080-0,125
5,50	●	5,5	260	180	0,080-0,125
6,00	●	6	260	180	0,080-0,125
6,50	●	6,5	275	190	0,100-0,160

N° article	101512 Series 2	A11 mm	B5 mm	B6 mm	f mm/rev
7,00	●	7	290	200	0,100-0,160
7,50	●	7,5	290	200	0,100-0,160
8,00	●	8	305	210	0,125-0,200
8,50	●	8,5	305	210	0,125-0,200
9,00	●	9	320	220	0,125-0,200
9,50	●	9,5	320	220	0,125-0,200
10,00	●	10	340	235	0,160-0,250

N° article	101514 Series 3	A11 mm	B5 mm	B6 mm	f mm/rev
3,50	●	3,5	265	180	0,063-0,100
4,00	●	4	280	190	0,080-0,125
5,00	●	5	315	210	0,080-0,125
6,00	●	6	330	225	0,080-0,125
6,50	●	6,5	350	235	0,100-0,160
7,00	●	7	370	250	0,100-0,160

N° article	101514 Series 3	A11 mm	B5 mm	B6 mm	f mm/rev
7,50	●	7,5	370	250	0,100-0,160
8,00	●	8	390	265	0,125-0,200
8,50	●	8,5	390	265	0,125-0,200
9,00	●	9	410	280	0,125-0,200
10,00	●	10	430	295	0,160-0,250

Twist drill HSS-Co Universal

PREMUS

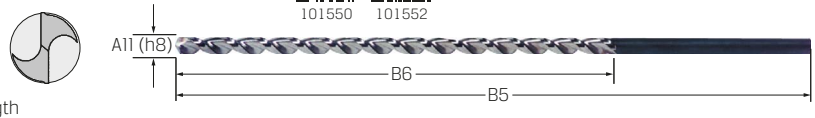
	P N/mm²	M N/mm²	K HB	N N/mm²	
101550	<1200	<850	<350	Alu, Brass <600	Copper, bronze
101552					
vc = m/min.					
101550	8-20	8-10	6-20	30-50	18-24
101552					

Design:
- relived cone
- point thinning from 3.00 mm
- chamfers nitrided

Use:
Special drill with distinctive thermal stability and large flute volume for large drilling depths. For drilling of steel and high-strength cast steels, grey cast iron, malleable iron, ductile cast iron

HSS-Co | DIN 1869 overlong | Typ PT | Teeth 2 | 130° | Straight shank | UNI

Vc 101550 | Vc 101552



N° article	101550 Series 1	A11 mm	B5 mm	B6 mm	f mm/rev
3,00	●	3	150	100	0,040-0,063
4,00	●	4	175	120	0,063-0,100
4,50	●	4,5	185	125	0,063-0,100
5,00	●	5	195	135	0,063-0,100
5,50	●	5,5	205	125	0,063-0,100
6,00	●	6	205	140	0,063-0,100

N° article	101550 Series 1	A11 mm	B5 mm	B6 mm	f mm/rev
7,00	●	7	225	155	0,080-0,125
7,50	○	7,5	225	155	0,080-0,125
8,00	●	8	240	165	0,100-0,160
8,50	●	8,5	240	165	0,100-0,160
9,00	●	9	250	175	0,100-0,160
10,00	●	10	265	185	0,125-0,200

N° article	101552 Series 2	A11 mm	B5 mm	B6 mm	f mm/rev
3,00	●	3	190	130	0,040-0,063
4,00	●	4	220	150	0,063-0,100
4,50	●	4,5	235	160	0,063-0,100
5,00	●	5	245	170	0,063-0,100
5,50	●	5,5	180	135	0,063-0,100
6,00	●	6	260	180	0,063-0,100

N° article	101552 Series 2	A11 mm	B5 mm	B6 mm	f mm/rev
6,50	●	6,5	275	190	0,080-0,125
7,00	●	7	290	200	0,080-0,125
8,00	●	8	305	210	0,100-0,160
8,50	●	8,5	305	210	0,100-0,160
9,00	●	9	320	220	0,100-0,160
10,00	●	10	340	235	0,125-0,200

Twist drill HSS Steel

PREMUS

	P N/mm²	M N/mm²	K HB
101530	<1000	<750	<300
vc = m/min.			
101530	8-24	8-12	20-30

Design:
- relived cone
- point thinning from 2.00 mm
- steam tempered from 2.50 mm

Use:
The conical bore (1:50 for taper pins DIN 1 and 7978) is achieved in one operation
Important: Drill with low feed rates; use taper pin reamers 123800, 124000 and 124100 for finishing.

HSS | DIN 1898 | Typ N | Teeth 2 | 118° | 1:50 | Driver | P | K

Vc

Further sizes available on request.

N° article	101530 Pin hole taper drill	A11 mm	B5 mm	B6 mm	f mm/rev	
3,00	●	3	100	58	0,040-0,050	1
4,00	●	4	112	68	0,063-0,080	1
5,00	●	5	122	73	0,063-0,080	1
6,00	●	6	160	105	0,063-0,080	1
8,00	●	8	207	145	0,100-0,125	1
10,00	●	10	245	175	0,125-0,160	1
12,00	○	12	275	210	0,125-0,160	1



Twist drill HSS / HSS-Co Steel

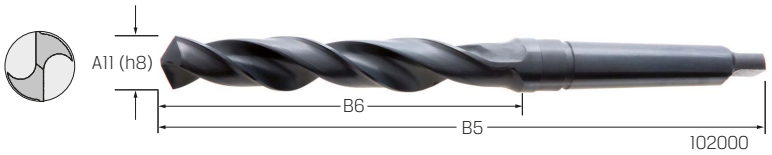
PREMUS® PRETEC®

	P N/mm²	M N/mm²	K HB
102000	⟨850		⟨200
102050	⟨1000		⟨300
102350	⟨1200	⟨850	⟨350
vc = m/min.			
102000	20-40		20-25
102050	16-32		20-32
102350	10-28	10-14	8-36

Versions 102000 and 102050:
- made of HSS
- relived cone
- point thinning from 14.25 mm
- steam tempered

DIN 345 | Typ N | Teeth 2 | 118° | MK shank | P | K

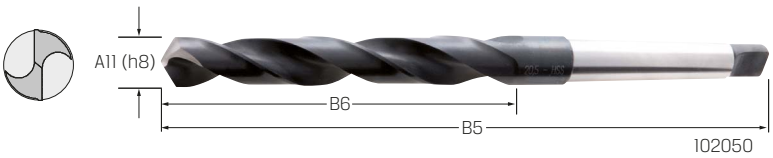
HSS



102000

Use 102000 and 102050:
Standard twist drill for general machining of alloyed and unalloyed steel, cast steel, grey cast iron, malleable iron, ductile iron, sintered iron, nickel silver and graphite

HSS

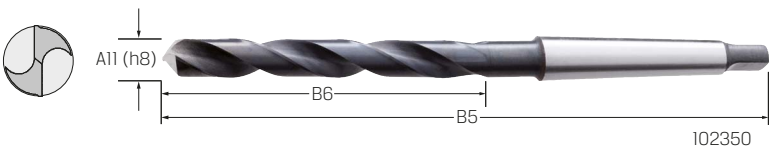


102050

Design 102350:
- made of HSS-Co
- relived cone
- point thinning from 10.00 mm
- steam tempered

Use 102350:
Alloyed and unalloyed steel and cast iron types above 800 N/mm², hot and cold work steels, high alloyed steels, tempered and hardened steel

HSS-Co



102350

N° article	102000 PRETEC® HSS, milled	102050 PREMUS® HSS	102350 PREMUS® HSS-Co	A11 mm	B5 mm	B6 mm	C2	f mm/rev
10,00	●	●	●	10	168	87	MK1	0,160-0,250
10,20	●	●	–	10,2	168	87	MK1	0,160-0,250
10,25	–	●	–	10,25	168	87	MK1	0,160-0,250
10,50	●	●	○	10,5	168	87	MK1	0,160-0,250
10,75	–	●	–	10,75	175	94	MK1	0,160-0,250
11,00	●	●	●	11	175	94	MK1	0,160-0,250
11,25	–	●	–	11,25	175	94	MK1	0,160-0,250
11,50	●	●	○	11,5	175	94	MK1	0,160-0,250
11,75	–	●	–	11,75	175	94	MK1	0,160-0,250
12,00	●	●	●	12	182	101	MK1	0,160-0,250
12,25	–	●	–	12,25	182	101	MK1	0,160-0,250
12,50	●	●	○	12,5	182	101	MK1	0,160-0,250
12,75	–	●	–	12,75	182	101	MK1	0,160-0,250
13,00	●	●	●	13	182	101	MK1	0,160-0,250
13,25	–	○	–	13,25	189	108	MK1	0,160-0,250
13,50	●	●	●	13,5	189	108	MK1	0,160-0,250
13,75	–	●	–	13,75	189	108	MK1	0,160-0,250
14,00	●	●	●	14	189	108	MK1	0,160-0,250
14,25	–	●	–	14,25	212	114	MK2	0,160-0,250
14,50	●	●	●	14,5	212	114	MK2	0,160-0,250
14,75	–	●	–	14,75	212	114	MK2	0,160-0,250
15,00	●	●	●	15	212	114	MK2	0,160-0,250
15,25	–	●	○	15,25	218	120	MK2	0,160-0,250
15,50	●	●	●	15,5	218	120	MK2	0,160-0,250
15,75	–	●	●	15,75	218	120	MK2	0,160-0,250
16,00	●	●	●	16	218	120	MK2	0,200-0,315
16,25	–	●	○	16,25	223	125	MK2	0,200-0,315
16,50	●	●	●	16,5	223	125	MK2	0,200-0,315
16,75	–	●	○	16,75	223	125	MK2	0,200-0,315
17,00	●	●	●	17	223	125	MK2	0,200-0,315
17,25	–	○	–	17,25	228	130	MK2	0,200-0,315
17,50	●	●	●	17,5	228	130	MK2	0,200-0,315
17,75	–	●	–	17,75	228	130	MK2	0,200-0,315
18,00	●	●	●	18	228	130	MK2	0,200-0,315
18,25	–	●	–	18,25	233	135	MK2	0,200-0,315
18,50	●	●	●	18,5	233	135	MK2	0,200-0,315
18,75	–	●	–	18,75	233	135	MK2	0,200-0,315
19,00	●	●	●	19	233	135	MK2	0,200-0,315
19,25	–	●	–	19,25	238	140	MK2	0,200-0,315
19,50	●	●	●	19,5	238	140	MK2	0,200-0,315
19,75	–	●	●	19,75	238	140	MK2	0,200-0,315
20,00	●	●	●	20	238	140	MK2	0,250-0,400
20,25	–	●	–	20,25	243	145	MK2	0,250-0,400
20,50	●	●	●	20,5	243	145	MK2	0,250-0,400
20,75	–	–	○	20,75	243	145	MK2	0,250-0,400
21,00	●	●	●	21	243	145	MK2	0,250-0,400
21,50	●	●	○	21,5	243	145	MK2	0,250-0,400
21,75	–	●	–	21,75	248	150	MK2	0,250-0,400
22,00	●	●	●	22	248	150	MK2	0,250-0,400
22,25	–	●	–	22,25	248	150	MK2	0,250-0,400
22,50	●	●	○	22,5	248	150	MK2	0,250-0,400
22,75	–	●	–	22,75	253	155	MK2	0,250-0,400
23,00	●	●	●	23	253	155	MK2	0,250-0,400
23,50	●	●	–	23,5	276	155	MK3	0,250-0,400
23,75	–	●	–	23,75	281	160	MK3	0,250-0,400

N° article	102000 PRETEC® HSS, milled	102050 PREMUS® HSS	102350 PREMUS® HSS-Co	A11 mm	B5 mm	B6 mm	C2	f mm/rev
24,00	●	●	●	24	281	160	MK3	0,250-0,400
24,50	●	●	○	24,5	281	160	MK3	0,250-0,400
24,75	–	●	–	24,75	281	160	MK3	0,250-0,400
25,00	●	●	●	25	281	160	MK3	0,315-0,500
25,50	●	●	–	25,5	286	165	MK3	0,315-0,500
25,75	–	●	–	25,75	286	165	MK3	0,315-0,500
26,00	●	●	●	26	286	165	MK3	0,315-0,500
26,50	●	●	●	26,5	286	165	MK3	0,315-0,500
26,75	–	●	–	26,75	291	170	MK3	0,315-0,500
27,00	●	●	○	27	291	170	MK3	0,315-0,500
27,50	●	●	–	27,5	291	170	MK3	0,315-0,500
27,75	–	●	–	27,75	291	170	MK3	0,315-0,500
28,00	●	●	○	28	291	170	MK3	0,315-0,500
28,50	●	●	–	28,5	296	175	MK3	0,315-0,500
28,75	–	●	–	28,75	296	175	MK3	0,315-0,500
29,00	●	●	–	29	296	175	MK3	0,315-0,500
29,50	●	●	○	29,5	296	175	MK3	0,315-0,500
29,75	–	●	–	29,75	296	175	MK3	0,315-0,500
30,00	●	●	●	30	296	175	MK3	0,315-0,500
30,50	–	●	–	30,5	301	180	MK3	0,315-0,500
31,00	●	●	–	31	301	180	MK3	0,315-0,500
31,50	–	●	–	31,5	301	180	MK3	0,315-0,500
32,00	●	●	●	32	334	185	MK4	0,315-0,500
32,50	–	○	–	32,5	334	185	MK4	0,315-0,500
33,00	●	●	○	33	334	185	MK4	0,315-0,500
33,50	–	●	–	33,5	334	185	MK4	0,315-0,500
34,00	●	●	–	34	339	190	MK4	0,315-0,500
34,50	–	●	–	34,5	339	190	MK4	0,315-0,500
35,00	●	●	○	35	339	190	MK4	0,315-0,500
35,50	–	○	–	35,5	339	190	MK4	0,315-0,500
36,00	●	●	○	36	334	195	MK4	0,315-0,500
37,00	●	○	–	37	334	195	MK4	0,315-0,500
37,50	–	●	–	37,5	334	195	MK4	0,315-0,500
38,00	●	●	–	38	349	200	MK4	0,315-0,500
39,00	●	–	–	39	349	200	MK4	0,315-0,500
39,50	–	●	–	39,5	349	200	MK4	0,315-0,500
40,00	●	●	○	40	349	200	MK4	0,400-0,630
41,00	●	●	–	41	534	205	MK4	0,400-0,630
42,00	●	●	–	42	354	205	MK4	0,400-0,630
43,00	●	●	–	43	359	210	MK4	0,400-0,630
44,00	●	●	–	44	359	210	MK4	0,400-0,630
45,00	●	●	–	45	359	210	MK4	0,400-0,630
46,00	●	○	–	46	364	215	MK4	0,400-0,630
47,00	●	●	–	47	364	215	MK4	0,400-0,630
48,00	●	●	–	48	369	220	MK4	0,400-0,630
49,00	●	○	–	49	369	220	MK4	0,400-0,630
50,00	●	●	–	50	369	220	MK4	0,500-0,800
51,00	●	–	–	51	412	225	MK5	0,500-0,800
52,00	●	–	–	52	412	225	MK5	0,500-0,800
53,00	○	–	–	53	412	225	MK5	0,500-0,800
54,00	●	–	–	54	417	230	MK5	0,500-0,800
55,00	●	○	–	55	417	230	MK5	0,500-0,800
58,00	●	–	–	58	422	235	MK5	0,500-0,800
60,00	●	●	–	60	422	235	MK5	0,500-0,800
65,00	–	○	–	65	432	245	MK5	0,630-1,000

Drill bit grinder

Technical Data:	
Electrical connection value	230 V / 1 Ph ~ 50 Hz
Motor power	180 W
Idling speed	5,300 min^{-1}
Angle of tip sharpening	90° - 135°
Grinding capacity drill	∅ 2-13 mm
Length × width × height	310×180×190 mm
Weight	9.50 kg

Design:
- drill grinding machine with simple operation for precise and cost-effective grinding of double-edged twist drills
- drill grinding without prior experience
- clean, fast and good
- diamond grindstone with long service life for a perfect finish
- complete equipment with ER collets inside the machine

Use:
The cutting edges of the drill are fixed in the collet holder by means of the setting device in a defined position and inserted in a predetermined sequence in the grinding openings in order to grind the cutting edges with a short rotary movement of the collet holder

Delivery:
Incl. collets
11× ER20
∅ 2 to 13 mm and collet chuck



0010

Nº article	795015 GH 10T	Design
0010	●	Drill bit grinder
0015	○	Replacement grinding disc diamond

Drill bit grinder

Technical Data:	
Electrical connection value	230 V / 1 Ph ~ 50 Hz
Motor power	450 W
Idling speed	5,000 min^{-1}
Angle of tip sharpening	90° - 145°
Grinding capacity drill	∅ 3-30 mm
Length × width × height	450×240×270 mm
Weight	33.00 kg

Design:
- easy operation for accurate and cost-effective grinding of double-edged twist drills
- drill grinding without prior experience
- clean, fast and good
- diamond grindstone with long service life for a perfect finish
- complete equipment with ER collets inside the machine

Use:
The cutting edges of the drill are fixed in the collet holder by means of the setting device in a defined position and inserted in a predetermined sequence in the grinding openings in order to grind the cutting edges with a short rotary movement of the collet holder

Delivery:
Incl. collets
6× ER20 ∅ 3 up to 8 mm,
22× ER40 ∅ 8 up to 30 mm
and collet chuck



0010



Nº article	795025 GH 15T	Design
0010	● +	Drill bit grinder
0015	○	Replacement grinding disc diamond

Stylus and tool grinding machine

Technical Data:	
Electrical connection value	400 V / 3 Ph ~ 50 Hz
Motor power	370 W
Idling speed	5,000 min^{-1}
Fine adjustment tool holder	18 mm
Travel of tool holder	140 mm
Fine adjustment longitudinal axis	6 mm
Adjustable angles vertical / rear	0 - 40°
Adjustable angle horizontal / cone	0 - 180°
Lathe tool	21×21 mm
Clamping range	∅ 1×12 mm
Collet type	385E (5C), DIN 6341
Length × width × height	350×450×340 mm
Weight	45.00 kg

Design:
- versatile applicable stylus grinding and tool grinding machine for different tool geometries
- many swivelling and setting possibilities for the production of gravers (cylindrical, concentric, conical)
- for the grinding of punches, twist drills, electrodes, lathe tools, turning centres etc.
- high precision by robust machine body and vibration-free driven precision grinding spindle
- easy handling and operation
- index head with 24 locking positions
- adjustable extractor

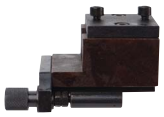
Delivery:
Incl. collets 385 E (5 C) DIN 6361 (∅ 37.5 mm, L = 89 mm, 20°)
∅ 4|6|8|10|12 mm, 1× corundum and diamond grinding cup each
100×51×20 mm, 1× device each for regrinding end mills / twist drills / lathe tools and operating tools


Collets


Cup wheel


Device for regrinding after end milling


Device for regrinding twist drills


Device for regrinding lathe tools


Operating tools



Nº article	795035 GH 20T	Design
0010	○ +	Stylus and tool grinding machine
0015	○	Replacement grinding disk corundum
0020	○	Replacement grinding disc diamond

Micro drill SC Universal

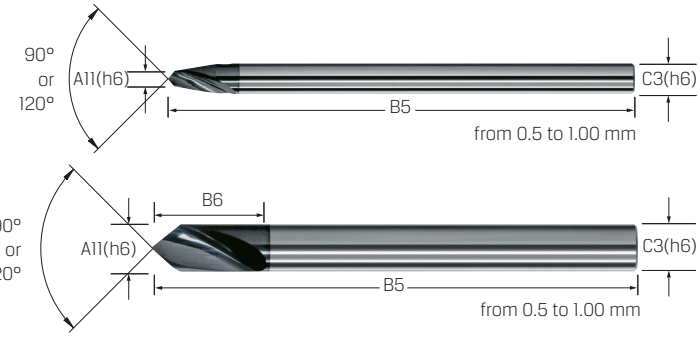
MIQUDRILL Centro — MIKRON TOOL

Design:
- SC NC spotting drill
- with 2 cutting edges
- right-hand cutting
- from 0.5 mm to 6 mm diameter

Note:
Delivery only in specified PU

SC | coated | Factory standard | Teeth 2 | 90° | 120° | Straight shank | UNI





N° article	102413 90°	102415 90°, eXedur RIP	102417 120°	102419 120°, eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm	
0050	●	●	○	●	0,5	30	4,5	2	3
0100	●	●	●	●	1	30	4,5	2	3
0200	●	●	●	●	2	30	6	2	3
0300	●	●	○	●	3	40	8	3	3
0400	●	●	○	●	4	45	10	4	3
0500	○	●	○	●	5	50	12	5	3
0600	●	●	●	○	6	60	15	6	3

Micro drill SC Universal

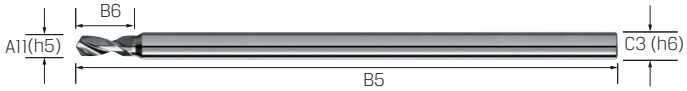
MIQUDRILL 200 — MIKRON TOOL

Design:
- SC
- tools with or without coating
- increments every 0.01 mm
- effective length about 1.4-2.4 × Ø
- 2 cutting edges
- right-hand cutting
- suitable for various materials

Note:
Delivery only in specified PU

SC | coated | Factory standard | Teeth 2 | 120° | Straight shank | UNI





N° article	102453 SC, 3× A11	102455 eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm	
0010	○	–	0,1	30	0,3	1	5
0011	○	–	0,11	30	0,4	1	5
0012	○	–	0,12	30	0,4	1	5
0013	○	–	0,13	30	0,4	1	5
0014	○	–	0,14	30	0,4	1	5
0015	○	–	0,15	30	0,4	1	5
0016	○	–	0,16	30	0,5	1	5
0017	○	–	0,17	30	0,5	1	5
0018	○	–	0,18	30	0,5	1	5
0019	○	–	0,19	30	0,5	1	5
0020	●	–	0,2	30	0,5	1	5
0021	○	–	0,21	30	0,7	1	5
0022	○	–	0,22	30	0,7	1	5
0023	○	–	0,23	30	0,7	1	5
0024	○	–	0,24	30	0,7	1	5
0025	●	–	0,25	30	0,7	1	5
0026	○	–	0,26	30	0,8	1	5
0027	○	–	0,27	30	0,8	1	5
0028	○	–	0,28	30	0,8	1	5
0029	○	–	0,29	30	0,8	1	5
0030	●	●	0,3	30	0,8	1	5
0031	○	○	0,31	30	0,9	1	5
0032	○	○	0,32	30	0,9	1	5
0033	○	○	0,33	30	0,9	1	5
0034	○	○	0,34	30	0,9	1	5
0035	○	○	0,35	30	0,9	1	5
0036	○	○	0,36	30	1	1	5
0037	○	○	0,37	30	1	1	5
0038	○	○	0,38	30	1	1	5
0039	○	○	0,39	30	1	1	5
0040	○	○	0,4	30	1	1	5
0041	○	○	0,41	30	1,2	1	5
0042	○	○	0,42	30	1,2	1	5
0043	○	○	0,43	30	1,2	1	5
0044	○	○	0,44	30	1,2	1	5
0045	○	○	0,45	30	1,2	1	5
0046	○	○	0,46	30	1,3	1	5
0047	○	○	0,47	30	1,3	1	5
0048	○	○	0,48	30	1,3	1	5
0049	○	○	0,49	30	1,3	1	5
0050	○	●	0,5	30	1,4	1	5
0051	○	○	0,51	30	1,4	1	5
0052	○	○	0,52	30	1,4	1	5
0053	○	○	0,53	30	1,4	1	5
0054	○	○	0,54	30	1,4	1	5
0055	○	○	0,55	30	1,4	1	5
0056	○	○	0,56	30	1,5	1	5

N° article	102453 SC, 3× A11	102455 eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm	
0057	○	○	0,57	30	1,5	1	5
0058	○	○	0,58	30	1,5	1	5
0059	○	○	0,59	30	1,5	1	5
0060	○	○	0,6	30	1,5	1	5
0061	○	●	0,61	30	1,6	1	5
0062	○	○	0,62	30	1,6	1	5
0063	○	○	0,63	30	1,6	1	5
0064	○	○	0,64	30	1,6	1	5
0065	○	○	0,65	30	1,6	1	5
0066	○	○	0,66	30	1,8	1	5
0067	○	○	0,67	30	1,8	1	5
0068	○	○	0,68	30	1,8	1	5
0069	○	○	0,69	30	1,8	1	5
0070	○	●	0,7	30	1,8	1	5
0071	○	○	0,71	30	1,9	1	5
0072	○	○	0,72	30	1,9	1	5
0073	○	○	0,73	30	1,9	1	5
0074	○	○	0,74	30	1,9	1	5
0075	○	○	0,75	30	1,9	1	5
0076	○	○	0,76	30	2	1	5
0077	○	○	0,77	30	2	1	5
0078	○	○	0,78	30	2	1	5
0079	○	○	0,79	30	2	1	5
0080	●	●	0,8	30	2	1,5	5
0081	○	○	0,81	30	2,1	1,5	5
0082	○	○	0,82	30	2,1	1,5	5
0083	○	○	0,83	30	2,1	1,5	5
0084	○	○	0,84	30	2,1	1,5	5
0085	○	○	0,85	30	2,1	1,5	5
0086	○	○	0,86	30	2,3	1,5	5
0087	○	○	0,87	30	2,3	1,5	5
0088	○	○	0,88	30	2,3	1,5	5
0089	○	○	0,89	30	2,3	1,5	5
0090	○	○	0,9	30	2,3	1,5	5
0091	○	○	0,91	30	2,3	1,5	5
0092	○	○	0,92	30	2,3	1,5	5
0093	○	○	0,93	30	2,3	1,5	5
0094	○	○	0,94	30	2,3	1,5	5
0095	●	○	0,95	30	2,3	1,5	5
0096	○	○	0,96	30	2,5	1,5	5
0097	○	○	0,97	30	2,5	1,5	5
0098	○	○	0,98	30	2,5	1,5	5
0099	○	○	0,99	30	2,5	1,5	5
0100	●	●	1	30	2,5	1,5	5
0101	○	○	1,01	30	2,6	1,5	5
0102	○	●	1,02	30	2,6	1,5	5
0103	○	○	1,03	30	2,6	1,5	5

N° article	102453 SC, 3× A11	102455 eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm	
0104	○	○	1,04	30	2,6	1,5	5
0105	○	○	1,05	30	2,6	1,5	5
0106	○	○	1,06	30	2,8	1,5	5
0107	○	○	1,07	30	2,8	1,5	5
0108	○	○	1,08	30	2,8	1,5	5
0109	○	○	1,09	30	2,8	1,5	5
0110	○	○	1,1	30	3	1,5	5
0111	○	○	1,11	30	3	1,5	5
0112	○	○	1,12	30	3	1,5	5
0113	○	○	1,13	30	3	1,5	5
0114	○	○	1,14	30	3	1,5	5
0115	○	○	1,15	30	3	1,5	5
0116	○	○	1,16	30	3	1,5	5
0117	○	○	1,17	30	3	1,5	5
0118	○	○	1,18	30	3	1,5	5
0119	○	○	1,19	30	3	1,5	5
0120	○	●	1,2	30	3	1,5	5
0121	○	○	1,21	30	3	1,5	5
0122	○	○	1,22	30	3	1,5	5
0123	○	○	1,23	30	3	1,5	5
0124	○	○	1,24	30	3	1,5	5
0125	○	○	1,25	30	3	1,5	5
0126	○	○	1,26	30	3,3	1,5	5
0127	○	○	1,27	30	3,3	1,5	5
0128	○	○	1,28	30	3,3	1,5	5
0129	○	○	1,29	30	3,3	1,5	5
0130	○	○	1,3	30	3,3	1,5	5
0131	○	○	1,31	30	3,3	1,5	5
0132	○	○	1,32	30	3,3	1,5	5
0133	○	○	1,33	30	3,3	1,5	5
0134	○	○	1,34	30	3,3	1,5	5
0135	○	○	1,35	30	3,3	1,5	5
0136	○	○	1,36	30	3,5	1,5	5
0137	○	○	1,37	30	3,5	1,5	5
0138	○	○	1,38	30	3,5	1,5	5
0139	○	○	1,39	30	3,5	1,5	5
0140	●	●	1,4	30	3,5	1,5	5
0141	○	○	1,41	30	3,5	1,5	5
0142	○	○	1,42	30	3,5	1,5	5
0143	○	○	1,43	30	3,5	1,5	5
0144	○	○	1,44	30	3,5	1,5	5
0145	○	○	1,45	30	3,5	1,5	5
0146	○	○	1,46	30	3,8	1,5	5
0147	○	○	1,47	30	3,8	1,5	5
0148	○	○	1,48	30	3,8	1,5	5
0149	○	○	1,49	30	3,8	1,5	5
0150	○	●	1,5	38	3,8	2	5

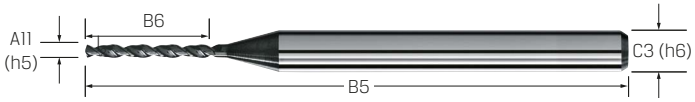
Micro drill SC Universal

MIQUDRILL 210 — MIKRON TOOL

Design:
- SC
- tools with or without coating
- gradation every 0.01 mm till 2 mm in size, then every 0.05 mm
- 2 cutting edges
- right-hand cutting
- suitable for various materials

Note:
Delivery only in specified PU
Place a pilot hole using 102413 or 102419, resp.

SC | coated | Factory standard | Teeth 2 | 118° | Straight shank | UNI



N° article	102457	102459 eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm	
0010	●	–	0,1	30	0,6	1	5
0011	○	–	0,11	30	0,6	1	5
0012	○	–	0,12	30	0,6	1	5
0013	○	–	0,13	30	0,8	1	5
0014	○	–	0,14	30	0,8	1	5
0015	○	–	0,15	30	0,8	1	5
0016	○	–	0,16	30	1	1	5
0017	○	–	0,17	30	1	1	5
0018	○	–	0,18	30	1	1	5
0019	○	–	0,19	30	1	1	5
0020	○	–	0,2	30	1	1	5
0021	○	–	0,21	30	1	1	5
0022	○	–	0,22	30	1	1	5
0023	○	–	0,23	30	1	1	5
0024	○	–	0,24	30	1	1	5
0025	●	–	0,25	30	1	1	5
0026	○	–	0,26	30	1	1	5
0027	○	–	0,27	30	1	1	5
0028	○	–	0,28	30	1	1	5
0029	○	–	0,29	30	1	1	5
0030	●	●	0,3	30	1,5	1	5
0031	○	○	0,31	30	1,5	1	5
0032	○	○	0,32	30	1,5	1	5
0033	○	○	0,33	30	1,5	1	5
0034	○	○	0,34	30	1,5	1	5
0035	○	●	0,35	30	1,5	1	5
0036	○	○	0,36	30	1,5	1	5
0037	○	○	0,37	30	1,5	1	5
0038	○	○	0,38	30	1,5	1	5
0039	○	○	0,39	30	1,5	1	5
0040	●	●	0,4	30	2	1	5
0041	○	○	0,41	30	2	1	5
0042	○	○	0,42	30	2	1	5
0043	○	○	0,43	30	2	1	5
0044	○	○	0,44	30	2	1	5
0045	○	○	0,45	30	3,5	1	5
0046	○	○	0,46	30	3,5	1	5
0047	○	○	0,47	30	3,5	1	5
0048	●	○	0,48	30	3,5	1	5
0049	○	○	0,49	30	4	1	5
0050	●	●	0,5	30	4	1	5
0051	○	●	0,51	30	4	1	5
0052	○	○	0,52	30	4	1	5
0053	○	●	0,53	30	4	1	5
0054	○	○	0,54	30	4,5	1	5
0055	●	●	0,55	30	4,5	1	5
0056	●	○	0,56	30	4,5	1	5
0057	○	○	0,57	30	4,5	1	5
0058	●	○	0,58	30	4,5	1	5
0059	○	●	0,59	30	4,5	1	5
0060	●	●	0,6	30	4,5	1	5
0061	●	●	0,61	30	5	1	5
0062	●	●	0,62	30	5	1	5
0063	○	●	0,63	30	5	1	5
0064	○	●	0,64	30	5	1	5
0065	○	●	0,65	30	5	1	5
0066	●	○	0,66	30	5	1	5
0067	○	○	0,67	30	5	1	5
0068	○	○	0,68	30	5,6	1	5
0069	○	○	0,69	30	5,6	1	5
0070	●	●	0,7	30	5,6	1	5
0071	○	○	0,71	30	5,6	1	5
0072	●	○	0,72	30	5,6	1	5
0073	○	●	0,73	30	5,6	1	5
0074	○	○	0,74	30	5,6	1	5
0075	●	●	0,75	30	5,6	1	5
0076	○	○	0,76	30	6,5	1	5
0077	●	○	0,77	30	6,5	1	5
0078	○	●	0,78	30	6,5	1	5
0079	○	○	0,79	30	6,5	1	5
0080	●	●	0,8	30	6,5	1,5	5
0081	○	○	0,81	30	6,5	1,5	5
0082	●	○	0,82	30	6,5	1,5	5
0083	●	○	0,83	30	6,5	1,5	5
0084	○	○	0,84	30	6,5	1,5	5
0085	●	●	0,85	30	6,5	1,5	5
0086	○	○	0,86	30	7	1,5	5
0087	●	○	0,87	30	7	1,5	5
0088	●	○	0,88	30	7	1,5	5
0089	○	○	0,89	30	7	1,5	5
0090	●	●	0,9	30	7	1,5	5
0091	○	○	0,91	30	7	1,5	5
0092	○	○	0,92	30	7	1,5	5
0093	○	○	0,93	30	7	1,5	5
0094	○	○	0,94	30	7	1,5	5
0095	●	●	0,95	30	7	1,5	5
0096	○	○	0,96	30	8	1,5	5
0097	○	●	0,97	30	8	1,5	5
0098	●	●	0,98	30	8	1,5	5
0099	○	●	0,99	30	8	1,5	5
0100	●	●	1	30	9	1,5	5
0101	○	●	1,01	30	9	1,5	5
0102	●	●	1,02	30	9	1,5	5
0103	○	●	1,03	30	9	1,5	5
0104	○	●	1,04	30	9	1,5	5
0105	●	●	1,05	30	9	1,5	5
0106	●	○	1,06	30	9	1,5	5
0107	○	○	1,07	30	9	1,5	5
0108	○	○	1,08	30	9	1,5	5
0109	○	○	1,09	30	9	1,5	5
0110	○	●	1,1	30	9	1,5	5
0111	○	○	1,11	30	9	1,5	5
0112	○	●	1,12	30	9	1,5	5
0113	○	○	1,13	30	9	1,5	5
0114	○	○	1,14	30	9	1,5	5
0115	●	●	1,15	30	9	1,5	5
0116	○	●	1,16	30	9	1,5	5
0117	●	○	1,17	30	9	1,5	5
0118	○	○	1,18	30	9	1,5	5
0119	○	●	1,19	30	10	1,5	5
0120	●	●	1,2	30	10	1,5	5
0121	○	●	1,21	30	10	1,5	5
0122	○	●	1,22	30	10	1,5	5
0123	●	●	1,23	30	10	1,5	5
0124	○	○	1,24	30	10	1,5	5
0125	○	●	1,25	30	10	1,5	5
0126	○	○	1,26	30	10	1,5	5
0127	●	○	1,27	30	10	1,5	5
0128	●	○	1,28	30	10	1,5	5
0129	○	○	1,29	30	10	1,5	5
0130	●	●	1,3	30	10	1,5	5
0131	●	○	1,31	30	10	1,5	5
0132	●	●	1,32	30	10	1,5	5
0133	●	●	1,33	30	11,5	1,5	5
0134	○	○	1,34	30	11,5	1,5	5
0135	●	●	1,35	30	11,5	1,5	5
0136	●	●	1,36	30	11,5	1,5	5
0137	○	○	1,37	30	11,5	1,5	5
0138	○	○	1,38	30	11,5	1,5	5
0139	○	○	1,39	30	11,5	1,5	5
0140	●	●	1,4	30	11,5	1,5	5
0141	○	○	1,41	30	11,5	1,5	5
0142	●	●	1,42	30	11,5	1,5	5
0143	●	○	1,43	30	11,5	1,5	5
0144	○	○	1,44	30	11,5	1,5	5
0145	●	●	1,45	30	11,5	1,5	5
0146	○	●	1,46	30	11,5	1,5	5
0147	●	●	1,47	30	11,5	1,5	5
0148	●	○	1,48	30	11,5	1,5	5
0149	●	●	1,49	30	11,5	1,5	5
0150	●	●	1,5	38	12	2	5
0151	●	●	1,51	38	12	2	5
0152	●	○	1,52	38	12	2	5
0153	○	○	1,53	38	12	2	5
0154	○	●	1,54	38	12	2	5
0155	●	●	1,55	38	12	2	5
0156	○	○	1,56	38	12	2	5
0157	●	○	1,57	38	12	2	5
0158	○	●	1,58	38	12	2	5
0159	○	○	1,59	38	12	2	5
0160	●	●	1,6	38	12	2	5
0161	○	○	1,61	38	12	2	5
0162	○	○	1,62	38	12	2	5
0163	○	●	1,63	38	12	2	5
0164	○	○	1,64	38	12	2	5
0165	●	●	1,65	38	12	2	5
0166	●	●	1,66	38	12	2	5
0167	●	●	1,67	38	12	2	5
0168	●	●	1,68	38	12	2	5
0169	○	○	1,69	38	12	2	5
0170	●	●	1,7	38	12	2	5
0171	○	○	1,71	38	12	2	5
0172	○	○	1,72	38	12	2	5
0173	○	●	1,73	38	12	2	5
0174	○	○	1,74	38	12	2	5
0175	●	○	1,75	38	12	2	5
0176	○	○	1,76	38	12	2	5
0177	○	○	1,77	38	12	2	5
0178	○	○	1,78	38	12	2	5
0179	○	○	1,79	38	12	2	5
0180	●	●	1,8	38	12	2	5
0181	○	○	1,81	38	12	2	5
0182	○	●	1,82	38	12	2	5
0183	●	●	1,83	38	12	2	5
0184	○	○	1,84	38	12	2	5
0185	●	●	1,85	38	12	2	5
0186	○	○	1,86	38	12	2	5
0187	○	○	1,87	38	12	2	5
0188	○	○	1,88	38	12	2	5
0189	○	○	1,89	38	12	2	5
0190	●	●	1,9	38	12	2	5
0191	○	○	1,91	38	12	2	5
0192	○	○	1,92	38	12	2	5
0193	○	●	1,93	38	12	2	5
0194	○	○	1,94	38	12	2	5
0195	●	●	1,95	38	12	2	5
0196	○	○	1,96	38	12	2	5
0197	●	○	1,97	38	12	2	5
0198	●	●	1,98	38	12	2	5
0199	●	●	1,99	38	12	2	5
0200	●	●	2	38	12	3	5
0205	●	●	2,05	38	12	3	5
0210	●	●	2,1	38	12	3	5
0215	○	●	2,15	38	12	3	5
0220	○	●	2,2	38	12	3	5
0225	●	●	2,25	38	12	3	5
0230	●	●	2,3	38	12	3	5
0235	●	●	2,35	38	12	3	5
0240	●	●	2,4	38	12	3	5
0245	●	●	2,45	38	12	3	5
0250	●	●	2,5	38	12	3	5
0255	●	●	2,55	38	12	3	5
0260	●	●	2,6	38	12	3	5
0265	●	●	2,65	38	12	3	5
0270	●	●	2,7	38	12	3	5
0275	●	●	2,75	38	12	3	5
0280	○	●	2,8	38	12	3	5
0285	○	○	2,85	38	12	3	5
0290	○	●	2,9	38	12	3	5
0295	●	●	2,95	38	12	3	5
0300	○	○	3	38	12	3	5

Micro drill SC Universal

CRAZYDRILL Twicenter — MIKRON TOOL

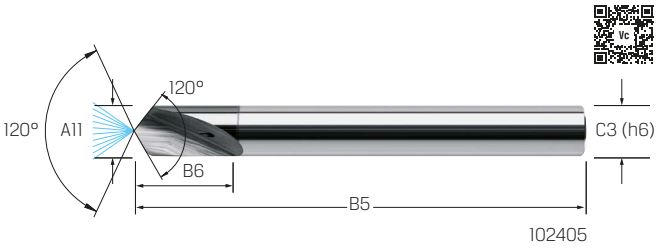
SC | coated | Factory standard | Teeth 2 | Blade form chamfer | Straight shank | ICS | UNI

Design 102405:
- short cutting edge reduces penetration force and pressure on the tip
- internal cooling supply for optimal cooling and lubricating performance

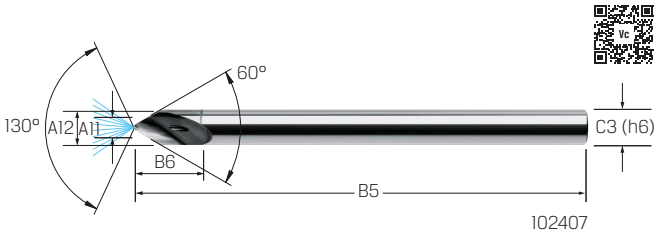
Versions 102407 and 102409:
- 130° point angle supports free chip flow directly into the chip groove
- 130° point angle reduces the pressure at the tip
- short cutting edge reduces penetration force and pressure on the tip
- internal cooling supply for optimal cooling and lubricating performance

Use 102405:
For centring and chamfering in one step

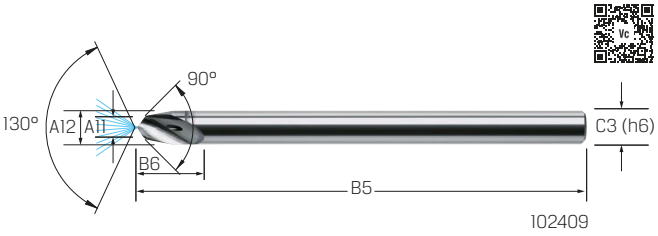
N° article	102405 Chamfer 120° eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0050	○	0,5	40	7	3
0100	●	1	40	6,15	3
0200	○	2	40	6	3
0300	○	3	40	8	3
0400	●	4	50	10	4
0600	●	6	60	15	6
0800	○	8	70	17	8
1000	○	10	80	21	10



N° article	102407 Chamfer 60° eXedur RIP, ICS	A11 mm	A12 mm	B5 mm	B6 mm	C3 mm
0030	●	0,3	1	40	6,4	3
0050	●	0,5	1,4	40	6,3	3
0100	●	1	2	40	6,3	3
0150	●	1,5	3	40	6,3	3
0200	●	2	4	50	8	4
0300	●	3	6	60	12	6
0400	●	4	8	70	16	8
0600	●	6	10	80	20	10



N° article	102409 Chamfer 90° eXedur RIP, ICS	A11 mm	A12 mm	B5 mm	B6 mm	C3 mm
0030	●	0,3	1	40	6,4	3
0050	●	0,5	1,4	40	6	3
0100	●	1	2	40	6,2	3
0150	●	1,5	3	40	6,3	3
0200	●	2	4	50	8	4
0300	●	3	6	60	12	6
0400	●	4	8	70	16	8
0600	●	6	10	80	20	10

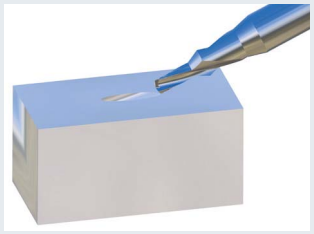


CrazyDrill™ Crosspilot

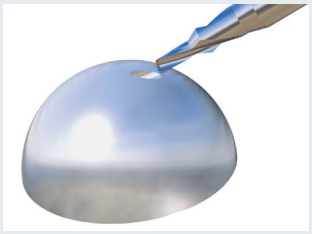
Product Information

MIKRON TOOL

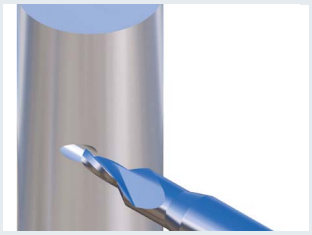
Application areas for the CrazyDrill Crosspilot:



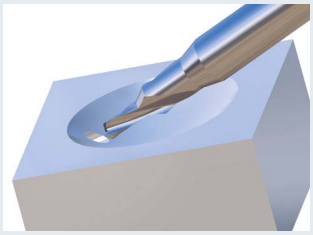
Inclined holes with an angle up to 60° on flat surfaces



Inclined bores in convex surfaces.



Eccentric bores in convex surfaces.



Inclined bores in concave surfaces.

Micro drill SC Universal

CRAZYDRILL Pilot — MIKRON TOOL

Design:
- centring and pilot drilling in one step
- bore hole directly chamfered with 90° countersink
- tuned to CrazyDrill line
- high precision and durability
- point angle 140°
- high-performance cutting geometry CrazyDrill
- special degressive spiral groove geometry for optimal chip removal

SC | coated | Factory standard | 2 × A11 | Teeth 2 | 140° | 90° | UNI



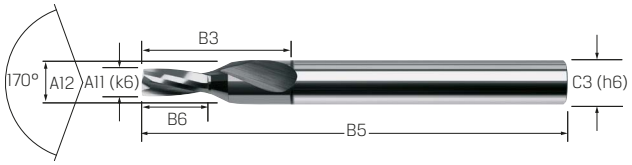
N° article	102401 eXedur RIP	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0040	●	0,4	1	46,5	2,8	0,8	4
0045	○	0,45	1	46,5	2,9	0,9	4
0050	●	0,5	1,2	47	3,4	1	4
0055	●	0,55	1,2	47	3,5	1,1	4
0060	●	0,6	1,5	48	4,2	1,2	4
0065	●	0,65	1,5	48	4,3	1,3	4
0070	●	0,7	1,75	49	4,9	1,4	4
0075	●	0,75	1,75	49	5	1,5	4
0080	●	0,8	2	49	5,6	1,6	4
0085	●	0,85	2	49	5,7	1,7	4
0090	●	0,9	2	49	5,8	1,8	4
0095	●	0,95	2	49	5,9	1,9	4
0100	●	1	2,5	51	7	2	4
0105	●	1,05	2,5	51	7,1	2,1	4
0110	●	1,1	2,5	51	7,2	2,2	4
0115	●	1,15	2,5	51	7,3	2,3	4
0120	●	1,2	2,5	51	7,4	2,4	4
0125	●	1,25	2,5	51	7,5	2,5	4
0130	●	1,3	2,5	51	7,6	2,6	4
0135	●	1,35	2,5	51	7,7	2,7	4
0140	●	1,4	2,5	51	7,8	2,8	4
0145	●	1,45	2,5	51	7,9	2,9	4
0150	●	1,5	3	53	9	3	4
0155	●	1,55	3	53	9,1	3,1	4
0160	●	1,6	3	53	9,2	3,2	4
0165	●	1,65	3	53	9,3	3,3	4
0170	●	1,7	3	53	9,4	3,4	4
0175	●	1,75	3	53	9,5	3,5	4
0180	●	1,8	3	53	9,6	3,6	4
0185	●	1,85	3	53	9,7	3,7	4
0190	●	1,9	3	53	9,8	3,8	4

N° article	102401 eXedur RIP	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0195	●	1,95	3	53	9,9	3,9	4
0200	●	2	3,5	55	11	4	4
0205	●	2,05	3,5	55	11,1	4,1	4
0210	●	2,1	3,5	55	11,2	4,2	4
0215	●	2,15	3,5	55	11,3	4,3	4
0220	●	2,2	3,5	55	11,4	4,4	4
0225	○	2,25	3,5	55	11,5	4,5	4
0230	●	2,3	3,5	55	11,6	4,6	4
0235	○	2,35	3,5	55	11,7	4,7	4
0240	●	2,4	3,5	55	11,8	4,8	4
0245	●	2,45	3,5	55	11,9	4,9	4
0250	●	2,5	3,8	57	12,6	5	4
0255	●	2,55	3,8	57	12,7	5,1	4
0260	●	2,6	3,8	57	12,8	5,2	4
0265	●	2,65	3,8	57	12,9	5,3	4
0270	●	2,7	3,8	57	13	5,4	4
0275	●	2,75	3,8	57	13,1	5,5	4
0280	●	2,8	3,8	57	13,2	5,6	4
0285	●	2,85	3,8	57	13,3	5,7	4
0290	●	2,9	3,8	57	13,4	5,8	4
0295	●	2,95	3,8	57	13,5	5,9	4
0300	●	3	3,8	57	13,6	6	4
0305	●	3,05	4,5	61	15,1	6,1	6
0310	●	3,1	4,5	61	15,2	6,2	6
0315	○	3,15	4,5	61	15,3	6,3	6
0320	●	3,2	4,5	61	15,4	6,4	6
0325	●	3,25	4,5	61	15,5	6,5	6
0330	●	3,3	4,5	61	15,6	6,6	6
0335	●	3,35	4,5	61	15,7	6,7	6
0340	●	3,4	4,5	61	15,8	6,8	6
0345	●	3,45	4,5	61	15,9	6,9	6

N° article	102401 eXedur RIP	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0350	●	3,5	4,5	61	16	7	6
0355	●	3,55	5,3	64	17,7	7,1	6
0360	●	3,6	5,3	64	17,8	7,2	6
0365	●	3,65	5,3	64	17,9	7,3	6
0370	●	3,7	5,3	64	18	7,4	6
0375	○	3,75	5,3	64	18,1	7,5	6
0380	●	3,8	5,3	64	18,2	7,6	6
0385	●	3,85	5,3	64	18,3	7,7	6
0390	●	3,9	5,3	64	18,4	7,8	6
0395	○	3,95	5,3	64	18,5	7,9	6
0400	●	4	5,3	64	18,6	8	6
0410	●	4,1	6	70	20,2	8,2	6
0420	●	4,2	6	70	20,4	8,4	6
0430	●	4,3	6	70	20,6	8,6	6
0440	○	4,4	6	70	20,8	8,8	6
0450	●	4,5	6	70	21	9	6
0460	○	4,6	6	70	21,2	9,2	6
0470	○	4,7	6	70	21,4	9,4	6
0480	●	4,8	6	70	21,6	9,6	6
0490	○	4,9	6	70	21,8	9,8	6
0500	●	5	6	70	22	10	6
0510	○	5,1	8	80	26,2	10,2	8
0520	●	5,2	8	80	26,4	10,4	8
0530	●	5,3	8	80	26,6	10,6	8
0540	○	5,4	8	80	26,8	10,8	8
0550	○	5,5	8	80	27	11	8
0560	○	5,6	8	80	27,2	11,2	8
0570	○	5,7	8	80	27,4	11,4	8
0580	○	5,8	8	80	27,6	11,6	8
0590	○	5,9	8	80	27,8	11,8	8
0600	●	6	8	80	28	12	8

Design:
- centring and pilot drill
- very robust construction, counteracts lateral forces
- special tip geometry (170°) ensures centring of the subsequent drilling
- guiding land prevents lateral hooking
- reinforced shank with special length allows optimal clamping
- high positioning and alignment accuracy
- for inclined bores on flat, convex and concave surfaces

SC | coated | Factory standard | 2 × A11 | Teeth 2 | 170° | UNI



N° article	102403 eXedur RIP	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0040	●	0,4	1	50	2,6	0,8	4
0045	○	0,45	1	50	2,8	0,9	4
0050	●	0,5	1,2	50	3,2	1	4
0055	●	0,55	1,2	50	3,3	1,1	4
0060	●	0,6	1,5	50	4	1,2	4
0065	●	0,65	1,5	50	4,1	1,3	4
0070	●	0,7	1,5	50	4,2	1,4	4
0075	○	0,75	1,5	50	4,3	1,5	4
0080	●	0,8	1,7	50	4,8	1,6	4
0085	●	0,85	1,7	50	4,9	1,7	4
0090	●	0,9	1,7	50	5	1,8	4
0095	●	0,95	1,7	50	5,1	1,9	4
0100	●	1	2	55	5,7	2	4
0105	●	1,05	2	55	5,8	2,1	4
0110	●	1,1	2	55	6	2,2	4
0115	○	1,15	2	55	6,1	2,3	4
0120	●	1,2	2	55	6,2	2,4	4
0125	●	1,25	2,5	55	7,2	2,5	4
0130	●	1,3	2,5	55	7,3	2,6	4
0135	●	1,35	2,5	55	7,4	2,7	4
0140	●	1,4	2,5	55	7,5	2,8	4
0145	○	1,45	2,5	55	7,6	2,9	4
0150	●	1,5	3	55	8,6	3	4
0155	●	1,55	3	55	8,7	3,1	4
0160	●	1,6	3	55	8,8	3,2	4
0165	○	1,65	3	55	8,9	3,3	4
0170	●	1,7	3	55	9,1	3,4	4
0175	●	1,75	3	55	9,2	3,5	4
0180	●	1,8	3,5	55	10,1	3,6	4
0185	●	1,85	3,5	55	10,3	3,7	4
0190	●	1,9	3,5	55	10,4	3,8	4

N° article	102403 eXedur RIP	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0195	●	1,95	3,5	55	10,5	3,9	4
0200	●	2	3,5	65	10,6	4	6
0205	●	2,05	3,5	65	10,7	4,1	6
0210	●	2,1	3,5	65	10,8	4,2	6
0215	○	2,15	3,5	65	10,9	4,3	6
0220	●	2,2	4,5	65	12,8	4,4	6
0225	○	2,25	4,5	65	12,9	4,5	6
0230	●	2,3	4,5	65	13	4,6	6
0235	○	2,35	4,5	65	13,1	4,7	6
0240	●	2,4	4,5	65	13,2	4,8	6
0245	○	2,45	4,5	65	13,4	4,9	6
0250	●	2,5	4,5	65	13,5	5	6
0255	●	2,55	4,5	65	13,6	5,1	6
0260	●	2,6	4,5	65	13,7	5,2	6
0265	●	2,65	5	65	14,7	5,3	6
0270	●	2,7	5	65	14,8	5,4	6
0275	●	2,75	5	65	14,9	5,5	6
0280	●	2,8	5	65	15	5,6	6
0285	●	2,85	5	65	15,1	5,7	6
0290	●	2,9	5	65	15,2	5,8	6
0295	●	2,95	5	65	15,4	5,9	6
0300	●	3	6	70	17,2	6	6
0305	●	3,05	6	70	17,3	6,1	6
0310	●	3,1	6	70	17,4	6,2	6
0315	●	3,15	6	70	17,5	6,3	6
0320	●	3,2	6	70	17,7	6,4	6
0325	●	3,25	6	70	17,8	6,5	6
0330	●	3,3	6	70	17,9	6,6	6
0335	○	3,35	6	70	18	6,7	6
0340	○	3,4	6	70	18,1	6,8	6
0345	○	3,45	6	70	18,2	6,9	6

N° article	102403 eXedur RIP	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0350	●	3,5	6	70	18,3	7	6
0355	○	3,55	6	70	18,4	7,1	6
0360	●	3,6	6	70	18,6	7,2	6
0365	○	3,65	6	70	18,7	7,3	6
0370	○	3,7	6	70	18,8	7,4	6
0375	○	3,75	6	70	18,9	7,5	6
0380	●	3,8	6	70	19	7,6	6
0385	○	3,85	6	70	19,1	7,7	6
0390	○	3,9	6	70	19,2	7,8	6
0395	●	3,95	6	70	19,4	7,9	6
0400	●	4	6	70	19,5	8	6
0410	○	4,1	6	70	21,3	8,2	6
0420	●	4,2	6	70	21,4	8,4	6
0430	●	4,3	6	70	21,6	8,6	6
0440	○	4,4	6	70	21,7	8,8	6
0450	●	4,5	8	80	27	9	8
0460	○	4,6	8	80	27,1	9,2	8
0470	○	4,7	8	80	27,3	9,4	8
0480	●	4,8	8	80	27,4	9,6	8
0490	○	4,9	8	80	27,6	9,8	8
0500	●	5	8	80	27,7	10	8
0510	●	5,1	8	80	27,9	10,2	8
0520	○	5,2	8	80	28	10,4	8
0530	○	5,3	8	80	28,1	10,6	8
0540	○	5,4	8	80	28,3	10,8	8
0550	○	5,5	8	80	28,4	11	8
0560	○	5,6	8	80	28,6	11,2	8
0570	○	5,7	8	80	28,7	11,4	8
0580	●	5,8	8	80	28,9	11,6	8
0590	○	5,9	8	80	29	11,8	8
0600	●	6	8	80	29,1	12	8

Micro drill SC Steel

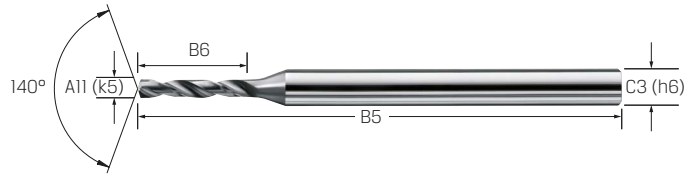
CRAZYDRILL Steel — MIKRON TOOL

Design:
- solid carbide with straight shank
- point angle 140°
- eXedur RIP coated
- highest drilling speed and durability
- self-centring
- for exceptional surface quality

Note:
Make pilot bore with 102401 or 102403, resp.

SC | coated | Factory standard | Teeth 2 | 140° | Straight shank | P

4 × A11



N° article	102421 4×A11 eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm
0040	●	0,4	42	2,3	3
0045	●	0,45	42	2,6	3
0050	●	0,5	42	2,9	3
0055	●	0,55	42	3,2	3
0060	●	0,6	43,5	3,5	3
0065	●	0,65	43,5	3,8	3
0070	●	0,7	43,5	4,1	3
0075	○	0,75	43,5	4,4	3
0080	●	0,8	43,5	4,6	3
0085	○	0,85	43,5	4,9	3
0090	●	0,9	43,5	5,2	3
0095	●	0,95	43,5	5,5	3
0100	●	1	44	5,8	3
0105	○	1,05	44	6,1	3
0110	○	1,1	44	6,3	3
0115	○	1,15	44	6,6	3
0120	●	1,2	45	7	3
0125	●	1,25	45	7,3	3
0130	●	1,3	45	7,6	3
0135	●	1,35	45	7,9	3
0140	●	1,4	46	8,2	3
0145	●	1,45	46	8,6	3
0150	●	1,5	46	8,7	3
0155	●	1,55	46	9,1	3
0160	●	1,6	47	9,5	3
0165	○	1,65	47	9,7	3
0170	●	1,7	47	10	3
0175	○	1,75	47	10,3	3
0180	●	1,8	48	10,8	3
0185	○	1,85	48	11	3
0190	●	1,9	48	11,2	3
0195	●	1,95	48	11,4	3
0200	●	2	55	11,9	4
0205	●	2,05	55	12,1	4
0210	●	2,1	55	12,3	4
0215	●	2,15	55	12,6	4
0220	○	2,2	56	13	4
0225	●	2,25	56	13,3	4
0230	●	2,3	56	13,6	4
0235	○	2,35	56	13,9	4
0240	●	2,4	57	14,2	4
0245	●	2,45	57	14,6	4
0250	●	2,5	57	14,7	4
0255	●	2,55	57	15,1	4
0260	○	2,6	58	15,5	4
0265	●	2,65	58	15,7	4
0270	●	2,7	58	16	4
0275	●	2,75	58	16,3	4
0280	●	2,8	59	16,8	4
0285	●	2,85	59	17	4
0290	●	2,9	59	17,2	4
0295	●	2,95	59	17,4	4
0300	○	3	59	17,6	4
0305	●	3,05	60	17,8	4
0310	○	3,1	60	18,1	4
0315	●	3,15	60	18,4	4
0320	●	3,2	60	18,7	4
0325	●	3,25	60	19	4
0330	○	3,3	60	19,3	4
0335	●	3,35	60	19,6	4
0340	●	3,4	60	19,9	4
0345	●	3,45	60	20,2	4
0350	○	3,5	60	20,5	4
0355	●	3,55	60	20,8	4
0360	○	3,6	64,5	21,1	4
0365	○	3,65	64,5	21,4	4
0370	○	3,7	64,5	21,6	4
0375	○	3,75	64,5	21,9	4
0380	○	3,8	64,5	22,2	4
0385	○	3,85	64,5	22,5	4
0390	○	3,9	64,5	22,8	4
0395	○	3,95	64,5	23,1	4
0400	●	4	70	23,4	6
0410	●	4,1	70	24	6
0420	○	4,2	70	24,6	6
0430	●	4,3	70	25,2	6
0440	○	4,4	70	25,7	6
0450	●	4,5	70	26,3	6
0460	○	4,6	70	26,9	6
0470	○	4,7	70	27,5	6
0480	○	4,8	70	28,1	6
0490	○	4,9	70	28,7	6
0500	●	5	70	29,2	6
0510	○	5,1	70	29,8	6
0520	○	5,2	75	30,4	6
0530	○	5,3	75	31	6
0540	○	5,4	75	31,6	6
0550	○	5,5	75	32,2	6
0560	○	5,6	75	32,8	6
0570	○	5,7	75	33,3	6
0580	○	5,8	75	33,9	6
0590	○	5,9	75	34,5	6
0600	●	6	75	35,1	6

Note:
Make pilot bore with 102401 or 102403, resp.

6 × A11

N° article	102423 6×A11 eXedur RIP	A11 mm	B5 mm	B6 mm	C3 mm
0040	●	0,4	42	3,1	3
0045	○	0,45	42	3,5	3
0050	●	0,5	42	3,9	3
0055	●	0,55	42	4,3	3
0060	●	0,6	43,5	4,7	3
0065	○	0,65	43,5	5	3
0070	●	0,7	43,5	5,4	3
0075	○	0,75	43,5	5,8	3
0080	●	0,8	45	6,2	3
0085	○	0,85	45	6,6	3
0090	○	0,9	45	7	3
0095	●	0,95	45	7,4	3
0100	●	1	46	7,8	3
0105	○	1,05	46	8,1	3
0110	●	1,1	46	8,6	3
0115	○	1,15	46	8,7	3
0120	●	1,2	49	10,9	3
0125	●	1,25	49	11,1	3
0130	●	1,3	49	11,5	3
0135	○	1,35	49	11,9	3
0140	●	1,4	50,5	12,7	3
0145	○	1,45	50,5	12,9	3
0150	●	1,5	50,5	13,4	3
0155	●	1,55	50,5	13,7	3
0160	○	1,6	52	14,5	3
0165	●	1,65	52	14,7	3
0170	○	1,7	52	15	3
0175	○	1,75	52	15,3	3
0180	●	1,8	53,5	16,3	3
0185	●	1,85	53,5	16,5	3
0190	●	1,9	53,5	16,9	3
0195	●	1,95	53,5	17,1	3
0200	●	2	61,5	18	4
0205	●	2,05	61,5	18,3	4
0210	●	2,1	61,5	18,7	4
0215	○	2,15	61,5	19,1	4
0220	○	2,2	63	20	4
0225	○	2,25	63	20,3	4
0230	○	2,3	63	20,6	4
0235	○	2,35	63	20,9	4
0240	○	2,4	64,5	21,7	4
0245	○	2,45	64,5	22,1	4
0250	●	2,5	64,5	22,2	4
0255	●	2,55	64,5	22,6	4
0260	●	2,6	66	23,5	4
0265	○	2,65	66	23,7	4
0270	○	2,7	66	24	4
0275	●	2,75	66	24,3	4
0280	●	2,8	67,5	25,3	4
0285	○	2,85	67,5	25,5	4
0290	○	2,9	67,5	25,7	4
0295	○	2,95	67,5	25,9	4
0300	●	3	67,5	26,2	4
0305	○	3,05	70	27,5	4
0310	○	3,1	70	27,9	4
0315	○	3,15	70	28,4	4
0320	○	3,2	70	28,8	4
0325	○	3,25	70	29,3	4
0330	○	3,3	70	29,7	4
0335	○	3,35	70	30,2	4
0340	○	3,4	70	30,6	4
0345	○	3,45	75	31,1	4
0350	○	3,5	75	31,5	4
0355	○	3,55	75	32	4
0360	○	3,6	75	32,4	4
0365	○	3,65	75	32,9	4
0370	○	3,7	75	33,3	4
0375	○	3,75	75	33,8	4
0380	○	3,8	75	34,2	4
0385	○	3,85	75	34,7	4
0390	○	3,9	75	35,1	4
0395	○	3,95	75	35,6	4
0400	○	4	80	36	6
0410	○	4,1	80	36,9	6
0420	○	4,2	80	37,8	6
0430	○	4,3	80	38,7	6
0440	○	4,4	80	39,6	6
0450	○	4,5	85	40,5	6
0460	○	4,6	85	41,4	6
0470	○	4,7	85	42,3	6
0480	○	4,8	85	43,2	6
0490	○	4,9	85	44,1	6
0500	○	5	85	45	6
0510	○	5,1	90	45,9	6
0520	○	5,2	90	46,8	6
0530	○	5,3	90	47,7	6
0540	○	5,4	90	48,6	6
0550	○	5,5	90	49,5	6
0560	○	5,6	90	50,4	6
0570	○	5,7	95	51,3	6
0580	○	5,8	95	52,2	6
0590	○	5,9	95	53,1	6
0600	○	6	95	54	6

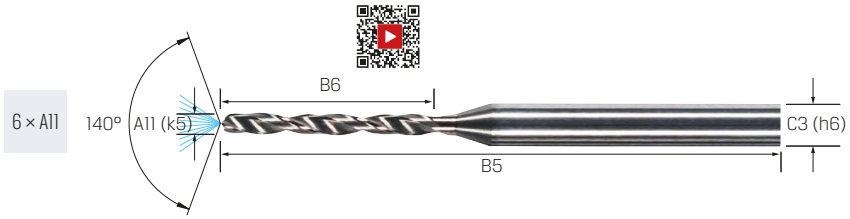
Micro drill SC Universal

CRAZYDRILL Cool by Mikron Tool — MIKRON TOOL

Design:
- shaft-integrated "power chamber" up to drill Ø 2.95 mm
- sufficient coolant supply even at lower pressure
- three times higher oil quantity at the same pressure
- increased drilling speeds
- longer tool life
- efficient chip removal
- special spiral groove shape for optimal chip transport
- cooling, lubrication and flushing out of the chips

Note:
Make pilot bore with 102401, 102403 or 102416, resp.

SC | coated | Factory standard | Teeth 2 | 140° | ICS | UNI



N° article	102425 6× A11 ICS	102427 6× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0075	○	○	0,75	51,5	6,8	3
0080	○	●	0,8	51,5	7,2	3
0085	○	○	0,85	51,5	7,7	3
0090	○	●	0,9	51,5	8,1	3
0095	○	●	0,95	51,5	8,6	3
0100	○	●	1	55	9	4
0105	○	●	1,05	55	9,5	4
0110	○	●	1,1	55	9,9	4
0115	○	○	1,15	55	10,4	4
0120	○	●	1,2	55	10,8	4
0125	○	○	1,25	55	11,3	4
0130	○	●	1,3	57	11,7	4
0135	○	○	1,35	57	12,2	4
0140	○	●	1,4	57	12,6	4
0145	○	●	1,45	57	13,1	4
0150	●	●	1,5	57	13,5	4
0155	○	●	1,55	59	14	4
0160	●	●	1,6	59	14,4	4
0165	○	●	1,65	59	14,9	4
0170	○	●	1,7	59	15,3	4
0175	○	○	1,75	59	15,8	4
0180	○	●	1,8	61	16,2	4
0185	○	●	1,85	61	16,7	4
0190	○	●	1,9	61	17,1	4
0195	○	○	1,95	61	17,6	4
0200	●	●	2	63	18	4
0205	○	●	2,05	63	18,5	4
0210	○	●	2,1	63	18,9	4
0215	○	●	2,15	63	19,4	4

N° article	102425 6× A11 ICS	102427 6× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0220	●	●	2,2	63	19,8	4
0225	○	○	2,25	63	20,3	4
0230	○	●	2,3	65	20,7	4
0235	○	●	2,35	65	21,2	4
0240	○	●	2,4	65	21,6	4
0245	○	○	2,45	65	22,1	4
0250	○	●	2,5	65	22,5	4
0255	○	●	2,55	65	22,7	4
0260	○	●	2,6	66,5	23,4	4
0265	○	●	2,65	66,5	23,9	4
0270	○	●	2,7	66,5	24,3	4
0275	○	●	2,75	68,5	24,8	4
0280	○	●	2,8	68,5	25,2	4
0285	○	●	2,85	68,5	25,7	4
0290	●	●	2,9	68,5	26,1	4
0295	○	●	2,95	68,5	26,6	4
0300	○	●	3	73	27	6
0305	○	●	3,05	73	27,5	6
0310	○	●	3,1	73	27,9	6
0315	○	○	3,15	73	28,4	6
0320	○	●	3,2	73	28,8	6
0325	○	○	3,25	73	29,3	6
0330	○	○	3,3	75,5	29,7	6
0335	○	○	3,35	75,5	30,2	6
0340	○	●	3,4	75,5	30,6	6
0345	○	○	3,45	75,5	31,1	6
0350	○	○	3,5	75,5	31,5	6
0355	○	●	3,55	75,5	32	6
0360	○	●	3,6	77,5	32,4	6

N° article	102425 6× A11 ICS	102427 6× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0365	○	●	3,65	77,5	32,9	6
0370	○	○	3,7	77,5	33,3	6
0375	○	○	3,75	77,5	33,8	6
0380	○	●	3,8	77,5	34,2	6
0385	○	○	3,85	79	34,7	6
0390	○	○	3,9	79	35,1	6
0395	○	○	3,95	79	35,6	6
0400	○	●	4	79	36	6
0410	○	○	4,1	80,5	35,3	6
0420	○	○	4,2	80,5	36,1	6
0430	○	●	4,3	80,5	36,1	6
0440	○	○	4,4	80,5	37	6
0450	○	○	4,5	80,5	37,8	6
0460	○	○	4,6	80,5	38,6	6
0470	○	○	4,7	84,5	39,5	6
0480	○	○	4,8	84,5	40,3	6
0490	○	○	4,9	84,5	41,2	6
0500	○	○	5	84,5	42	6
0510	○	○	5,1	84,5	40,8	6
0520	○	●	5,2	84,5	41,6	6
0530	○	○	5,3	84,5	42,4	6
0540	○	○	5,4	88	45,4	6
0550	○	●	5,5	88	46,2	6
0560	○	○	5,6	88	47	6
0570	○	○	5,7	88	45,6	6
0580	○	●	5,8	88	46,4	6
0590	○	○	5,9	88	47,2	6
0600	○	○	6	88	48	6

Note:
Make pilot bore with 102401, 102403 or 102416, resp.

10 × A11

N° article	102429 10× A11, ICS	102431 10× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0075	○	○	0,75	54	9,8	3
0080	●	●	0,8	54	10,4	3
0085	○	●	0,85	56	11,1	3
0090	○	●	0,9	56	11,7	3
0095	○	○	0,95	56	12,4	3
0100	●	●	1	59	13	4
0105	○	●	1,05	59	13,7	4
0110	○	●	1,1	59	14,3	4
0115	○	●	1,15	59	15	4
0120	●	●	1,2	61,5	15,6	4
0125	○	●	1,25	61,5	16,3	4
0130	○	●	1,3	61,5	16,9	4
0135	○	○	1,35	61,5	17,6	4
0140	●	●	1,4	61,5	18	4
0145	○	●	1,45	63,5	18,9	4
0150	●	●	1,5	63,5	19,5	4
0155	○	●	1,55	63,5	20,2	4
0160	○	●	1,6	66	20,8	4
0165	○	●	1,65	66	21,5	4
0170	○	●	1,7	66	22,1	4
0175	○	●	1,75	66	22,8	4
0180	○	●	1,8	68	23,4	4
0185	○	○	1,85	68	24,1	4
0190	●	●	1,9	68	24,7	4
0195	○	●	1,95	68	25	4
0200	●	●	2	70	26	4
0205	○	●	2,05	70	26,7	4
0210	○	●	2,1	70	27,3	4
0215	○	○	2,15	72	28	4

N° article	102429 10× A11, ICS	102431 10× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0220	○	●	2,2	72	28,6	4
0225	○	●	2,25	72	39,3	4
0230	○	●	2,3	74	29,9	4
0235	○	○	2,35	74	30,6	4
0240	○	●	2,4	74	31,2	4
0245	○	●	2,45	75,5	31,9	4
0250	●	●	2,5	75,5	32,5	4
0255	○	●	2,55	75,5	33,2	4
0260	○	●	2,6	77,5	33,8	4
0265	○	○	2,65	77,5	34,5	4
0270	○	●	2,7	77,5	35,1	4
0275	○	○	2,75	79	35,8	4
0280	○	●	2,8	79	36,4	4
0285	○	●	2,85	79	37,1	4
0290	○	●	2,9	80,5	37,7	4
0295	○	○	2,95	80,5	38,4	4
0300	○	●	3	85	39	6
0305	○	○	3,05	85	39,7	6
0310	○	○	3,1	85	40,3	6
0315	○	○	3,15	86,5	41	6
0320	○	●	3,2	86,5	41,6	6
0325	○	○	3,25	86,5	42,3	6
0330	○	●	3,3	86,5	42,9	6
0335	○	○	3,35	89	43,6	6
0340	○	●	3,4	89	44,2	6
0345	○	○	3,45	89	44,9	6
0350	○	●	3,5	91	45,5	6
0355	○	○	3,55	91	46,2	6
0360	○	○	3,6	91	46,8	6

N° article	102429 10× A11, ICS	102431 10× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0365	○	○	3,65	91	47,5	6
0370	○	●	3,7	93	48,1	6
0375	○	○	3,75	93	48,8	6
0380	○	○	3,8	93	49,4	6
0385	○	○	3,85	95	50,1	6
0390	○	○	3,9	95	50,7	6
0395	○	○	3,95	95	51,4	6
0400	○	●	4	95	52	6
0410	○	○	4,1	98,5	53,3	6
0420	○	●	4,2	98,5	54,6	6
0430	●	○	4,3	98,5	54,2	6
0440	○	○	4,4	98,5	55,4	6
0450	○	○	4,5	98,5	54,9	6
0460	○	○	4,6	98,5	56,1	6
0470	○	○	4,7	106	61,1	6
0480	○	○	4,8	106	62,4	6
0490	○	○	4,9	106	61,7	6
0500	○	○	5	106	63	6
0510	○	○	5,1	106	64,3	6
0520	○	○	5,2	106	62,4	6
0530	○	●	5,3	106	63,6	6
0540	○	○	5,4	113,5	70,2	6
0550	○	○	5,5	113,5	71,5	6
0560	○	○	5,6	113,5	72,8	6
0570	○	○	5,7	113,5	71,8	6
0580	○	○	5,8	113,5	73,1	6
0590	○	○	5,9	113,5	72	6
0600	○	●	6	113,5	73,2	6

Micro drill SC Universal

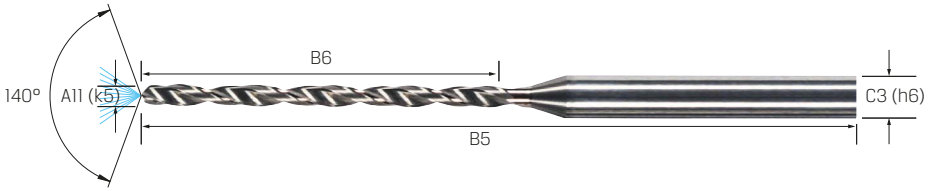
CRAZYDRILL Cool — MIKRON TOOL

Design:
- like 102425 and 102427.

Note:
Make pilot bore with 102401, 102403 or 102416, resp.

SC | coated | Factory standard | 15 × A11 | Teeth 2 | 140° | ICS

UNI



N° article	102433 15× A11, ICS	102435 15× A11, eXedur RIP, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0075	○	○	0,75	58	13,5	3
0080	●	●	0,8	58	14,4	3
0085	●	●	0,85	60	15,3	3
0090	○	○	0,9	60	16,2	3
0095	●	○	0,95	60	17,1	3
0100	●	●	1	64	18	4
0105	○	○	1,05	64	18,9	4
0110	○	●	1,1	64	19,8	4
0115	●	●	1,15	66,5	20,7	4
0120	○	●	1,2	66,5	21,6	4
0125	○	○	1,25	66,5	22,5	4
0130	○	●	1,3	69	23,4	4
0135	○	●	1,35	69	24,3	4
0140	○	●	1,4	69	25,2	4
0145	○	○	1,45	71,5	26,1	4
0150	●	●	1,5	71,5	27	4
0155	●	●	1,55	71,5	27,9	4
0160	○	●	1,6	74	28,8	4
0165	○	○	1,65	74	29,7	4
0170	○	●	1,7	74	30,6	4
0175	○	○	1,75	76,5	31,5	4
0180	●	●	1,8	76,5	32,5	4
0185	○	○	1,85	76,5	33,3	4
0190	○	○	1,9	79	34,2	4
0195	○	●	1,95	79	35,1	4
0200	●	●	2	79	36	4
0205	○	●	2,05	81,5	36,9	4
0210	○	●	2,1	81,5	37,8	4
0215	○	●	2,15	81,5	38,7	4
0220	○	●	2,2	84	39,6	4
0225	○	○	2,25	84	40,5	4
0230	○	●	2,3	84	41,4	4
0235	○	○	2,35	86,5	42,3	4
0240	○	●	2,4	86,5	43,2	4
0245	○	○	2,45	86,5	44,1	4
0250	●	●	2,5	89	45	4
0255	●	○	2,55	89	45,9	4
0260	○	●	2,6	89	46,8	4
0265	○	○	2,65	91	47,7	4
0270	○	○	2,7	91	48,6	4
0275	○	○	2,75	92,5	49,5	4
0280	○	●	2,8	92,5	50,4	4
0285	○	○	2,85	94,5	51,3	4
0290	○	○	2,9	94,5	52,2	4
0295	○	○	2,95	96	53,1	4
0300	●	●	3	100	54	6
0305	○	●	3,05	100	54,9	6
0310	○	○	3,1	100	55,8	6
0315	○	○	3,15	103	56,7	6
0320	○	○	3,2	103	57,6	6
0325	○	○	3,25	103	58,5	6
0330	○	○	3,3	103	59,4	6
0335	○	○	3,35	106	60,3	6
0340	○	○	3,4	106	61,2	6
0345	○	○	3,45	106	62,1	6
0350	○	●	3,5	108,5	63	6
0355	○	○	3,55	108,5	63,9	6
0360	○	○	3,6	108,5	64,8	6
0365	○	○	3,65	111	65,7	6
0370	○	○	3,7	111	66,7	6
0375	○	○	3,75	111	67,5	6
0380	○	●	3,8	113,5	68,4	6
0385	○	○	3,85	113,5	69,3	6
0390	○	○	3,9	113,5	70,2	6
0395	○	○	3,95	115,5	71,1	6
0400	○	●	4	115,5	72	6
0410	○	○	4,1	121,5	73,8	6
0420	●	○	4,2	121,5	73,9	6
0430	○	●	4,3	121,5	75,7	6
0440	○	○	4,4	121,5	76,6	6
0450	○	○	4,5	121,5	76,5	6
0460	○	○	4,6	121,5	78,2	6
0470	○	●	4,7	131,5	84,6	6
0480	○	○	4,8	131,5	86,4	6
0490	○	○	4,9	131,5	86,2	6
0500	○	●	5	131,5	88	6
0510	○	○	5,1	131,5	88,7	6
0520	○	○	5,2	131,5	88,4	6
0530	○	○	5,3	131,5	90,1	6
0540	○	○	5,4	141,5	97,2	6
0550	○	○	5,5	141,5	99	6
0560	○	○	5,6	141,5	98,6	6
0570	○	○	5,7	141,5	99,2	6
0580	○	○	5,8	141,5	100,9	6
0590	○	○	5,9	141,5	100,3	6
0600	○	○	6	141,5	102	6

Micro drill SC Universal

CRAZYDRILL Cool XL | MIKRON TOOL

Design:
- extremely high red hardness
- oxidation and wear resistance
- for machining of difficult to machine materials
- with internal cooling
- no chip removal
- short chips mean no winding
- maximum drilling speed
- utmost alignment accuracy
- high diameter precision and surface quality

Note:
Make pilot bore with 102401, 102403 or 102416, resp.
Further diameters available on request

SC | coated | Factory standard | Teeth 2 | 140° | ICS | UNI



15 × A11

N° article	102437 15× A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0100	●	1	58	18	4
0105	○	1,05	59	18,9	4
0110	●	1,1	60	19,8	4
0115	○	1,15	61	20,7	4
0120	●	1,2	62	21,6	4
0125	○	1,25	62	22,5	4
0130	●	1,3	63	23,4	4
0135	○	1,35	64	24,3	4
0140	●	1,4	65	25,2	4
0145	○	1,45	66	26,1	4
0150	●	1,5	67	27	4
0155	●	1,55	68	27,9	4
0160	●	1,6	68	28,8	4
0165	○	1,65	69	29,7	4
0170	●	1,7	70	30,6	4
0175	○	1,75	71	31,5	4
0180	●	1,8	72	32,4	4
0185	○	1,85	73	33,3	4
0190	●	1,9	74	34,2	4
0195	○	1,95	74	35,1	4
0200	●	2	75	36	4
0205	○	2,05	76	36,9	4
0210	●	2,1	77	37,8	4
0215	○	2,15	78	38,7	4
0220	●	2,2	79	39,6	4
0225	○	2,25	80	40,5	4
0230	●	2,3	80	41,4	4
0235	●	2,35	81	42,3	4
0240	●	2,4	82	43,2	4
0245	○	2,45	83	44,1	4
0250	●	2,5	84	45	4
0255	○	2,55	85	45,9	4
0260	●	2,6	86	46,8	4
0265	○	2,65	86	47,7	4
0270	●	2,7	87	48,6	4
0275	○	2,75	88	49,5	4
0280	●	2,8	89	50,4	4
0285	○	2,85	90	51,3	4
0290	●	2,9	91	52,2	4
0295	○	2,95	92	53,1	4
0300	●	3	92	54	4

N° article	102437 15× A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0305	○	3,05	99	54,9	6
0310	●	3,1	100	55,8	6
0315	○	3,15	101	56,7	6
0320	●	3,2	102	57,6	6
0325	○	3,25	102	58,5	6
0330	●	3,3	103	59,4	6
0335	○	3,35	104	60,3	6
0340	●	3,4	105	61,2	6
0345	○	3,45	106	62,1	6
0350	●	3,5	107	63	6
0355	○	3,55	108	63,9	6
0360	●	3,6	108	64,8	6
0365	○	3,65	109	65,7	6
0370	●	3,7	110	66,6	6
0375	○	3,75	111	67,5	6
0380	●	3,8	112	68,4	6
0385	○	3,85	113	69,3	6
0390	●	3,9	114	70,2	6
0395	○	3,95	114	71,1	6
0400	●	4	115	72	6
0410	○	4,1	117	73,8	6
0420	○	4,2	119	75,6	6
0430	○	4,3	120	77,4	6
0440	○	4,4	122	79,2	6
0450	●	4,5	124	81	6
0460	○	4,6	126	82,8	6
0470	○	4,7	127	84,6	6
0480	○	4,8	129	86,4	6
0490	○	4,9	131	88,2	6
0500	●	5	133	90	6
0510	○	5,1	134	91,8	6
0520	○	5,2	136	93,6	6
0530	○	5,3	138	95,4	6
0540	○	5,4	139	97,2	6
0550	○	5,5	141	99	6
0560	○	5,6	143	100,8	6
0570	○	5,7	145	102,6	6
0580	○	5,8	146	104,4	6
0590	○	5,9	148	106,2	6
0600	●	6	150	108	6

30 × A11

N° article	102441 30× A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0100	●	1	73	33	4
0110	●	1,1	76	36,3	4
0120	●	1,2	80	39,6	4
0130	●	1,3	83	42,9	4
0140	●	1,4	86	46,2	4
0150	●	1,5	89	49,5	4
0160	●	1,6	92	52,8	4
0170	●	1,7	96	56,1	4
0180	●	1,8	99	59,4	4
0190	●	1,9	102	62,7	4
0200	●	2	105	66	4
0210	●	2,1	109	69,3	4
0220	●	2,2	112	72,6	4
0230	●	2,3	115	75,9	4
0240	●	2,4	118	79,2	4
0250	●	2,5	121	82,5	4
0260	●	2,6	125	85,8	4
0270	●	2,7	128	89,1	4
0280	●	2,8	131	92,4	4
0290	●	2,9	134	95,7	4
0300	●	3	137	99	4
0310	●	3,1	146	102,3	6
0320	●	3,2	150	105,6	6
0330	●	3,3	153	108,9	6
0340	●	3,4	156	112,2	6
0350	●	3,5	159	115,5	6

N° article	102441 30× A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0360	●	3,6	162	118,8	6
0370	●	3,7	166	122,1	6
0380	●	3,8	169	125,4	6
0390	●	3,9	172	128,7	6
0400	●	4	175	132	6
0410	○	4,1	179	135,3	6
0420	○	4,2	182	138,6	6
0430	○	4,3	185	141,9	6
0440	○	4,4	188	145,2	6
0450	○	4,5	191	148,5	6
0460	○	4,6	195	151,8	6
0470	○	4,7	198	155,1	6
0480	○	4,8	201	158,4	6
0490	○	4,9	204	161,7	6
0500	●	5	208	165	6
0510	○	5,1	211	168,3	6
0520	○	5,2	214	171,6	6
0530	○	5,3	217	174,9	6
0540	○	5,4	220	178,2	6
0550	○	5,5	224	181,5	6
0560	○	5,6	227	184,8	6
0570	○	5,7	230	188,1	6
0580	○	5,8	233	191,4	6
0590	○	5,9	236	194,7	6
0600	○	6	240	198	6

20 × A11

N° article	102439 20×A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0100	●	1	63	23	4
0110	●	1,1	65	25,3	4
0120	●	1,2	68	27,6	4
0130	●	1,3	70	29,9	4
0140	●	1,4	72	32,2	4
0150	●	1,5	74	34,5	4
0160	●	1,6	76	36,8	4
0170	●	1,7	79	39,1	4
0180	●	1,8	81	41,4	4
0190	●	1,9	83	43,7	4
0200	●	2	85	46	4
0210	●	2,1	88	48,3	4
0220	●	2,2	90	50,6	4
0230	●	2,3	92	52,9	4
0240	●	2,4	94	55,2	4
0250	●	2,5	96	57,5	4
0260	●	2,6	99	59,8	4
0270	●	2,7	101	62,1	4
0280	●	2,8	103	64,4	4
0290	●	2,9	105	66,7	4
0300	●	3	107	69	4
0310	●	3,1	115	71,3	6
0320	●	3,2	118	73,6	6
0330	●	3,3	120	75,9	6
0340	●	3,4	122	78,2	6
0350	●	3,5	124	80,5	6

N° article	102439 20×A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0360	●	3,6	126	82,8	6
0370	●	3,7	129	85,1	6
0380	●	3,8	131	87,4	6
0390	●	3,9	133	89,7	6
0400	●	4	135	92	6
0410	○	4,1	138	94,3	6
0420	○	4,2	140	96,6	6
0430	○	4,3	142	98,9	6
0440	○	4,4	144	101,2	6
0450	●	4,5	146	103,5	6
0460	○	4,6	149	105,8	6
0470	○	4,7	151	108,1	6
0480	○	4,8	153	110,4	6
0490	○	4,9	155	112,7	6
0500	●	5	158	115	6
0510	○	5,1	160	117,3	6
0520	○	5,2	162	119,6	6
0530	○	5,3	164	121,9	6
0540	○	5,4	166	124,2	6
0550	○	5,5	169	126,5	6
0560	○	5,6	171	128,8	6
0570	○	5,7	173	131,1	6
0580	○	5,8	175	133,4	6
0590	○	5,9	177	135,7	6
0600	●	6	180	138	6

40 × A11

N° article	102443 40× A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0200	●	2	125	86	4
0210	○	2,1	130	90,3	4
0220	○	2,2	134	94,6	4
0230	○	2,3	138	98,9	4
0240	○	2,4	142	103,2	4
0250	●	2,5	146	107,5	4
0260	○	2,6	151	111,8	4
0270	○	2,7	155	116,1	4
0280	●	2,8	159	120,4	4
0290	○	2,9	163	124,7	4
0300	○	3	167	129	4
0310	○	3,1	177	133,3	6
0320	○	3,2	182	137,6	6
0330	○	3,3	186	141,9	6
0340	○	3,4	190	146,2	6
0350	○	3,5	194	150,5	6
0360	○	3,6	198	154,8	6
0370	○	3,7	203	159,1	6
0380	○	3,8	207	163,4	6
0390	○	3,9	211	167,7	6
0400	●	4	215	172	6

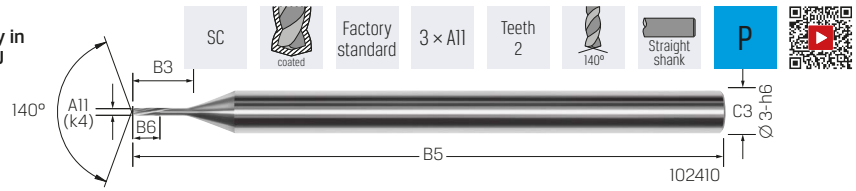
N° article	102443 40× A11, eXedur SL, ICS	A11 mm	B5 mm	B6 mm	C3 mm
0410	○	4,1	220	176,3	6
0420	○	4,2	224	180,6	6
0430	○	4,3	228	184,9	6
0440	○	4,4	232	189,2	6
0450	○	4,5	236	193,5	6
0460	○	4,6	241	197,8	6
0470	○	4,7	245	202,1	6
0480	○	4,8	249	206,4	6
0490	○	4,9	253	210,7	6
0500	○	5	258	215	6
0510	○	5,1	262	219,3	6
0520	○	5,2	266	223,6	6
0530	○	5,3	270	227,9	6
0540	○	5,4	274	232,2	6
0550	○	5,5	279	236,5	6
0560	○	5,6	283	240,8	6
0570	○	5,7	287	245,1	6
0580	○	5,8	291	249,4	6
0590	○	5,9	295	253,7	6
0600	○	6	300	258	6

Micro drill SC

CRAZYDRILL Flexpilot STEEL — MIKRON TOOL

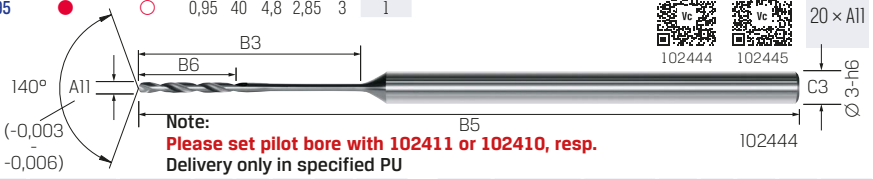
Design:
- solid carbide pilot drill
- centring and pilot drilling up to 3× A11
- attuned to CrazyDrill Flex line
- robust unified shank Ø 3 - h6

Note:
Delivery only in specified PU



N° article	102410 3× A11, eXedur, RIP	102411 3× A11	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0010	–	○	0,1	40	0,5	0,3	3	1
0011	–	○	0,11	40	0,6	0,33	3	5
0012	–	○	0,12	40	0,6	0,36	3	5
0013	–	○	0,13	40	0,7	0,39	3	5
0014	–	○	0,14	40	0,7	0,42	3	5
0015	–	○	0,15	40	0,8	0,45	3	1
0016	–	○	0,16	40	0,8	0,48	3	5
0017	–	○	0,17	40	0,9	0,51	3	5
0018	–	○	0,18	40	0,9	0,54	3	5
0019	–	○	0,19	40	1	0,57	3	5
0020	●	○	0,2	40	1	0,6	3	1
0021	○	○	0,21	40	1,1	0,63	3	5
0022	○	○	0,22	40	1,1	0,66	3	5
0023	○	○	0,23	40	1,2	0,69	3	5
0024	○	○	0,24	40	1,2	0,72	3	5
0025	●	○	0,25	40	1,3	0,75	3	1
0026	○	○	0,26	40	1,3	0,78	3	5
0027	○	○	0,27	40	1,4	0,81	3	5
0028	○	○	0,28	40	1,4	0,84	3	5
0029	○	○	0,29	40	1,5	0,87	3	5
0030	●	●	0,3	40	1,5	0,9	3	1
0031	○	○	0,31	40	1,6	0,93	3	5
0032	○	○	0,32	40	1,6	0,96	3	5
0033	○	○	0,33	40	1,7	0,99	3	5
0034	○	○	0,34	40	1,7	1,02	3	5
0035	●	○	0,35	40	1,8	1,05	3	1
0036	○	○	0,36	40	1,8	1,08	3	5
0037	○	○	0,37	40	1,9	1,11	3	5
0038	○	○	0,38	40	1,9	1,14	3	5
0039	○	○	0,39	40	2	1,17	3	5
0040	●	○	0,4	40	2	1,2	3	1
0041	○	○	0,41	40	2,1	1,23	3	5
0042	○	○	0,42	40	2,1	1,26	3	5
0043	○	○	0,43	40	2,2	1,29	3	5
0044	○	○	0,44	40	2,2	1,32	3	5
0045	●	○	0,45	40	2,3	1,35	3	1
0046	○	○	0,46	40	2,3	1,38	3	5
0047	○	○	0,47	40	2,4	1,41	3	5
0048	○	○	0,48	40	2,4	1,44	3	5
0049	○	○	0,49	40	2,5	1,47	3	5
0050	●	●	0,5	40	2,5	1,5	3	1
0051	○	○	0,51	40	2,6	1,53	3	5
0052	○	○	0,52	40	2,6	1,56	3	5
0053	○	○	0,53	40	2,7	1,59	3	5
0054	○	○	0,54	40	2,7	1,62	3	5
0055	●	○	0,55	40	2,8	1,65	3	1
0056	○	○	0,56	40	2,8	1,68	3	5
0057	○	○	0,57	40	2,9	1,71	3	5
0058	○	○	0,58	40	2,9	1,74	3	5
0059	○	○	0,59	40	3	1,77	3	5
0060	●	●	0,6	40	3	1,8	3	1
0061	○	○	0,61	40	3,1	1,83	3	5
0062	○	○	0,62	40	3,1	1,86	3	5
0063	○	○	0,63	40	3,2	1,89	3	5
0064	○	○	0,64	40	3,2	1,92	3	5
0065	●	○	0,65	40	3,3	1,95	3	1
0066	○	○	0,66	40	3,3	1,98	3	5
0067	○	○	0,67	40	3,4	2,01	3	5
0068	○	○	0,68	40	3,4	2,04	3	5
0069	○	○	0,69	40	3,5	2,07	3	5
0070	●	○	0,7	40	3,5	2,1	3	1
0071	○	○	0,71	40	3,6	2,13	3	5
0072	○	○	0,72	40	3,6	2,16	3	5
0073	○	○	0,73	40	3,7	2,19	3	5
0074	○	○	0,74	40	3,7	2,22	3	5
0075	●	○	0,75	40	3,8	2,25	3	1
0076	○	○	0,76	40	3,8	2,28	3	5
0077	○	○	0,77	40	3,9	2,31	3	5
0078	○	○	0,78	40	3,9	2,34	3	5
0079	○	○	0,79	40	4	2,37	3	5
0080	●	●	0,8	40	4	2,4	3	1
0081	○	○	0,81	40	4,1	2,43	3	5
0082	○	○	0,82	40	4,1	2,46	3	5
0083	○	○	0,83	40	4,2	2,49	3	5
0084	○	○	0,84	40	4,2	2,52	3	5
0085	●	○	0,85	40	4,3	2,55	3	1
0086	○	○	0,86	40	4,3	2,58	3	5
0087	○	○	0,87	40	4,4	2,61	3	5
0088	○	○	0,88	40	4,4	2,64	3	5
0089	○	○	0,89	40	4,5	2,67	3	5
0090	●	●	0,9	40	4,5	2,7	3	1
0091	○	○	0,91	40	4,6	2,73	3	5
0092	○	○	0,92	40	4,6	2,76	3	5
0093	○	○	0,93	40	4,7	2,79	3	5
0094	○	○	0,94	40	4,7	2,82	3	5
0095	●	○	0,95	40	4,8	2,85	3	1
0096	○	○	0,96	40	4,8	2,88	3	5
0097	○	○	0,97	40	4,9	2,91	3	5
0098	○	○	0,98	40	4,9	2,94	3	5
0099	○	○	0,99	40	5	2,97	3	5
0100	●	●	1	40	5	3	3	1
0101	○	○	1,01	40	5,1	3,03	3	5
0102	○	○	1,02	40	5,1	3,06	3	5
0103	○	○	1,03	40	5,2	3,09	3	5
0104	○	○	1,04	40	5,2	3,12	3	5
0105	●	○	1,05	40	5,3	3,15	3	1
0106	○	○	1,06	40	5,3	3,18	3	5
0107	○	○	1,07	40	5,4	3,21	3	5
0108	○	○	1,08	40	5,4	3,24	3	5
0109	○	○	1,09	40	5,5	3,27	3	5
0110	●	○	1,1	40	5,5	3,3	3	1
0111	○	○	1,11	40	5,6	3,33	3	5
0112	○	○	1,12	40	5,6	3,36	3	5
0113	○	○	1,13	40	5,7	3,39	3	5
0114	○	○	1,14	40	5,7	3,42	3	5
0115	●	○	1,15	40	5,8	3,45	3	1
0116	○	○	1,16	40	5,8	3,48	3	5
0117	○	○	1,17	40	5,9	3,51	3	5
0118	○	○	1,18	40	5,9	3,54	3	5
0119	○	○	1,19	40	6	3,57	3	5
0120	●	○	1,2	40	6	3,6	3	1
0125	●	–	1,25	40	6,3	3,75	3	1
0130	●	–	1,3	40	6,5	3,9	3	1
0135	●	–	1,35	40	6,8	4,05	3	1
0140	●	–	1,4	40	7	4,2	3	1
0145	●	–	1,45	40	7,3	4,35	3	1
0150	●	–	1,5	40	7,5	4,5	3	1
0155	●	–	1,55	40	7,8	4,65	3	1
0160	●	–	1,6	40	8	4,8	3	1
0165	●	–	1,65	40	8,3	4,95	3	1
0170	●	–	1,7	40	8,5	5,1	3	1
0175	●	–	1,75	40	8,8	5,25	3	1
0180	●	–	1,8	40	9	5,4	3	1
0185	●	–	1,85	40	9,3	5,55	3	1
0190	●	–	1,9	40	9,5	5,7	3	1
0195	●	–	1,95	40	9,8	5,85	3	1
0200	●	–	2	40	10	6	3	1

Design:
- special drill bit geometry for low heat generation and highest drilling speeds
- cutting edge protection prevents break-outs
- flute geometry for short chips
- flexible centre part
- robust unified shank Ø 3 - h6



Note:
Please set pilot bore with 102411 or 102410, resp.
Delivery only in specified PU

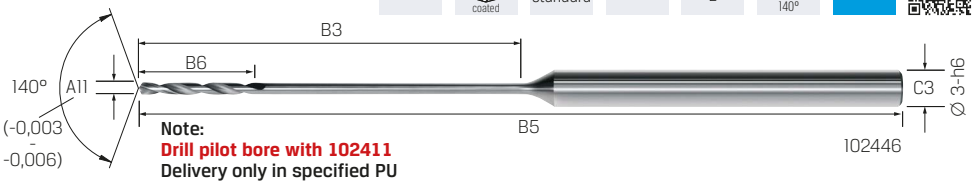
N° article	102444 20× A11, eXedur, RIP	102445 20× A11	A11 mm	B5 mm	B3 mm	B6 mm	
0010	–	●	0,1	40	2	1,1	1
0011	–	○	0,11	40	2,2	1,2	5
0012	–	○	0,12	40	2,4	1,3	5
0013	–	○	0,13	40	2,6	1,4	5
0014	–	○	0,14	40	2,8	1,5	5
0015	–	○	0,15	40	3	1,6	1
0016	–	○	0,16	40	3,2	1,7	5
0017	–	○	0,17	40	3,4	1,8	5
0018	–	○	0,18	40	3,6	1,9	5
0019	–	○	0,19	40	3,8	2	5
0020	●	○	0,2	45	4	2,1	1
0021	○	○	0,21	45	4,2	2,2	5
0022	○	○	0,22	45	4,4	2,3	5
0023	○	○	0,23	45	4,6	2,4	5
0024	○	○	0,24	45	4,8	2,5	5
0025	●	●	0,25	45	5	2,6	1
0026	○	○	0,26	45	5,2	2,7	5
0027	○	○	0,27	45	5,4	2,8	5
0028	○	○	0,28	45	5,6	2,9	5
0029	○	○	0,29	45	5,8	3	5
0030	●	●	0,3	45	6	3,2	1
0031	○	○	0,31	45	6,2	3,3	5
0032	○	○	0,32	45	6,4	3,4	5
0033	○	○	0,33	45	6,6	3,5	5
0034	○	○	0,34	45	6,8	3,6	5
0035	●	○	0,35	45	7	3,7	1
0036	○	●	0,36	45	7,2	3,8	5
0037	○	○	0,37	45	7,4	3,9	5
0038	○	○	0,38	45	7,6	4	5
0039	○	○	0,39	45	7,8	4,1	5
0040	●	●	0,4	45	8	4,2	1
0041	○	○	0,41	45	8,2	4,3	5
0042	○	○	0,42	45	8,4	4,4	5
0043	○	●	0,43	45	8,6	4,5	5
0044	○	○	0,44	45	8,8	4,6	5
0045	●	○	0,45	45	9	4,7	1
0046	○	○	0,46	45	9,2	4,8	5
0047	○	○	0,47	45	9,4	4,9	5
0048	○	○	0,48	45	9,6	5	5
0049	○	○	0,49	45	9,8	5,1	5
0050	●	●	0,5	50	10	5,3	1
0051	○	○	0,51	50	10,2	5,4	5
0052	○	○	0,52	50	10,4	5,5	5
0053	○	○	0,53	50	10,6	5,6	5
0054	○	○	0,54	50	10,8	5,7	5
0055	●	●	0,55	50	11	5,8	1
0056	○	○	0,56	50	11,2	5,9	5
0057	○	○	0,57	50	11,4	6	5
0058	○	○	0,58	50	11,6	6,1	5
0059	○	○	0,59	50	11,8	6,2	5
0060	●	●	0,6	50	12	6,3	1
0061	○	○	0,61	50	12,2	6,4	5
0062	○	○	0,62	50	12,4	6,5	5
0063	○	○	0,63	50	12,6	6,6	5
0064	○	○	0,64	50	12,8	6,7	5
0065	●	○	0,65	50	13	6,8	1
0066	○	○	0,66	50	13,2	6,9	5
0067	○	○	0,67	50	13,4	7	5
0068	○	○	0,68	50	13,6	7,1	5
0069	○	○	0,69	50	13,8	7,2	5
0070	●	●	0,7	53	14	7,4	1
0071	○	○	0,71	53	14,2	7,5	5
0072	○	○	0,72	53	14,4	7,6	5
0073	○	○	0,73	53	14,6	7,7	5
0074	○	○	0,74	53	14,8	7,8	5
0075	●	○	0,75	53	15	7,9	1
0076	○	○	0,76	53	15,2	8	5
0077	○	○	0,77	53	15,4	8,1	5
0078	○	○	0,78	53	15,6	8,2	5
0079	○	○	0,79	53	15,8	8,3	5
0080	●	●	0,8	53	16	8,4	1
0081	○	○	0,81	53	16,2	8,5	5
0082	○	○	0,82	53	16,4	8,6	5
0083	○	○	0,83	53	16,6	8,7	5
0084	○	○	0,84	53	16,8	8,8	5
0085	●	○	0,85	54	17	8,9	1
0086	○	○	0,86	54	17,2	9	5
0087	○	○	0,87	53	17,4	9,1	5
0088	○	○	0,88	53	17,6	9,2	5
0089	○	○	0,89	53	17,8	9,3	5
0090	●	●	0,9	53	18	9,5	1
0091	○	○	0,91	53	18,2	9,6	5
0092	○	○	0,92	53	18,4	9,7	5
0093	○	○	0,93	53	18,6	9,8	5
0094	○	○	0,94	53	18,8	9,9	5
0095	●	○	0,95	53	19	10	1
0096	○	○	0,96	53	19,2	10,1	5
0097	○	○	0,97	53	19,4	10,2	5
0098	○	○	0,98	53	19,6	10,3	5
0099	○	○	0,99	53	19,8	10,4	5
0100	●	●	1	60	20	10,5	1
0101	○	○	1,01	60	20,2	10,6	5
0102	○	○	1,02	60	20,4	10,7	5
0103	○	○	1,03	60	20,6	10,8	5
0104	○	○	1,04	60	20,8	10,9	5
0105	●	●	1,05	60	21	11	1
0106	○	○	1,06	60	21,2	11,1	5
0107	○	○	1,07	60	21,4	11,2	5
0108	○	○	1,08	60	21,6	11,3	5
0109	○	○	1,09	60	21,8	11,4	5
0110	●	●	1,1	60	22	11,6	1
0111	○	○	1,11	60	22,2	11,7	5
0112	○	○	1,12	60	22,4	11,8	5
0113	○	○	1,13	60	22,6	11,9	5
0114	○	○	1,14	60	22,8	12	5
0115	●	○	1,15	60	23	12,1	1
0116	○	○	1,16	60	23,2	12,2	5
0117	○	○	1,17	60	23,4	12,3	5
0118	○	○	1,18	60	23,6	12,4	5
0119	○	○	1,19	60	23,8	12,5	5
0120	●	●	1,2	60	24	12,6	1

Micro drill SC Steel

CRAZYDRILL Flex STEEL — MIKRON TOOL

Design:
- special drill bit geometry for low heat generation and highest drilling speeds
- cutting edge protection prevents break-outs
- flute geometry for short chips
- flexible centre part
- robust unified shank Ø 3 - h6

SC | coated | Factory standard | 30 × A11 | Teeth 2 | 140° | P



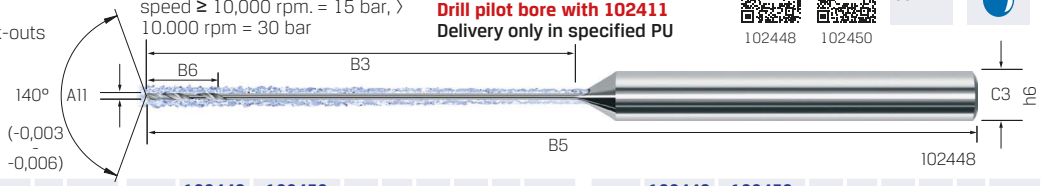
Note:
Drill pilot bore with 102411
Delivery only in specified PU

N° article	102446 30× A11, eXedur, RIP	102447 30× A11	A11 mm	B5 mm	B3 mm	B6 mm	
0010	–	○	0,1	45	3	1,1	1
0011	–	○	0,11	45	3,3	1,2	5
0012	–	○	0,12	45	3,6	1,3	5
0013	–	○	0,13	45	3,9	1,4	5
0014	–	○	0,14	45	4,2	1,5	5
0015	–	○	0,15	45	4,5	1,6	1
0016	–	○	0,16	45	4,8	1,7	5
0017	–	○	0,17	45	5,1	1,8	5
0018	–	○	0,18	45	5,4	1,9	5
0019	–	○	0,19	45	5,7	2	5
0020	●	○	0,2	45	6	2,1	1
0021	○	○	0,21	45	6,3	2,2	5
0022	○	○	0,22	45	6,6	2,3	5
0023	○	○	0,23	45	6,9	2,4	5
0024	○	○	0,24	45	7,2	2,5	5
0025	●	○	0,25	45	7,5	2,6	1
0026	○	○	0,26	45	7,8	2,7	5
0027	○	○	0,27	45	8,1	2,8	5
0028	○	○	0,28	45	8,4	2,9	5
0029	○	○	0,29	45	8,7	3	5
0030	●	○	0,3	50	9	3,2	1
0031	○	○	0,31	50	9,3	3,3	5
0032	○	○	0,32	50	9,6	3,4	5
0033	○	○	0,33	50	9,9	3,5	5
0034	○	○	0,34	50	10,2	3,6	5
0035	●	○	0,35	50	10,5	3,7	1
0036	○	○	0,36	50	10,8	3,8	5
0037	○	○	0,37	50	11,1	3,9	5
0038	○	○	0,38	50	11,4	4	5
0039	○	○	0,39	50	11,7	4,1	5
0040	●	○	0,4	50	12	4,2	1
0041	○	○	0,41	50	12,3	4,3	5
0042	○	○	0,42	50	12,6	4,4	5
0043	○	○	0,43	50	12,9	4,5	5
0044	○	○	0,44	50	13,2	4,6	5
0045	●	○	0,45	50	13,5	4,7	1
0046	○	○	0,46	50	13,8	4,8	5
0047	○	○	0,47	50	14,1	4,9	5
0048	○	○	0,48	50	14,4	5	5
0049	○	○	0,49	50	14,7	5,1	5
0050	●	●	0,5	53	15	5,3	1
0051	○	○	0,51	53	15,3	5,4	5
0052	○	○	0,52	53	15,6	5,5	5
0053	○	○	0,53	53	15,9	5,6	5
0054	○	○	0,54	53	16,2	5,7	5
0055	●	○	0,55	53	16,5	5,8	1
0056	○	○	0,56	53	16,8	5,9	5
0057	○	○	0,57	53	17,1	6	5
0058	○	○	0,58	53	17,4	6,1	5
0059	○	○	0,59	53	17,7	6,2	5
0060	●	●	0,6	53	18	6,3	1
0061	○	○	0,61	53	18,3	6,4	5
0062	○	○	0,62	53	18,6	6,5	5
0063	○	○	0,63	53	18,9	6,6	5
0064	○	○	0,64	53	19,2	6,7	5
0065	●	○	0,65	53	19,5	6,8	1
0066	○	○	0,66	53	19,8	6,9	5
0067	○	○	0,67	53	20,1	7	5
0068	○	○	0,68	53	20,4	7,1	5
0069	○	○	0,69	53	20,7	7,2	5
0070	●	○	0,7	60	21	7,4	1
0071	○	○	0,71	60	21,3	7,5	5
0072	○	○	0,72	60	21,6	7,6	5
0073	○	○	0,73	60	21,9	7,7	5
0074	○	○	0,74	60	22,2	7,8	5
0075	●	○	0,75	60	22,5	7,9	1
0076	○	○	0,76	60	22,8	8	5
0077	○	○	0,77	60	23,1	8,1	5
0078	○	○	0,78	60	23,4	8,2	5
0079	○	○	0,79	60	23,7	8,3	5
0080	●	●	0,8	60	24	8,4	1
0081	○	○	0,81	60	24,3	8,5	5
0082	○	○	0,82	60	24,6	8,6	5
0083	○	○	0,83	60	24,9	8,7	5
0084	○	○	0,84	60	25,2	8,8	5
0085	●	○	0,85	64	25,5	8,9	1
0086	○	○	0,86	64	25,8	9	5
0087	○	○	0,87	64	26,1	9,1	5
0088	○	○	0,88	64	26,4	9,2	5
0089	○	○	0,89	64	26,7	9,4	5
0090	●	●	0,9	64	27	9,5	1
0091	○	○	0,91	64	27,3	9,6	5
0092	○	○	0,92	64	27,6	9,7	5
0093	○	○	0,93	64	27,9	9,8	5
0094	○	○	0,94	64	28,2	9,9	5
0095	●	●	0,95	64	28,5	10	1
0096	○	○	0,96	64	28,8	10,1	5
0097	○	○	0,97	64	29,1	10,2	5
0098	○	○	0,98	64	29,4	10,3	5
0099	○	○	0,99	64	29,7	10,4	5
0100	●	●	1	70	30	10,5	1
0101	○	○	1,01	70	30,3	10,6	5
0102	○	○	1,02	70	30,6	10,7	5
0103	○	○	1,03	70	30,9	10,8	5
0104	○	○	1,04	70	31,2	10,9	5
0105	●	○	1,05	70	31,5	11	1
0106	○	○	1,06	70	31,8	11,1	5
0107	○	○	1,07	70	32,1	11,2	5
0108	○	○	1,08	70	32,4	11,3	5
0109	○	○	1,09	70	32,7	11,4	5
0110	●	●	1,1	70	33	11,6	1
0111	○	○	1,11	70	33,3	11,7	5
0112	○	○	1,12	70	33,6	11,8	5
0113	○	○	1,13	70	33,9	11,9	5
0114	○	○	1,14	70	34,2	12	5
0115	●	○	1,15	70	34,5	12,1	1
0116	○	○	1,16	70	34,8	12,2	5
0117	○	○	1,17	70	35,1	12,3	5
0118	○	○	1,18	70	35,4	12,4	5
0119	○	○	1,19	70	35,7	12,5	5
0120	●	●	1,2	70	36	12,6	1

Design:
- special drill bit geometry for low heat generation and highest drilling speeds
- cutting edge protection prevents break-outs
- flute geometry for short chips
- flexible centre part
- deep-hole boring with integrated cooling
- optimal cooling and precise chip evacuation
- minimum coolant pressure speed ≥ 10,000 rpm. = 15 bar, > 10.000 rpm = 30 bar

Note:
Drill pilot bore with 102411
Delivery only in specified PU

102448 | 102450 | 50 × A11



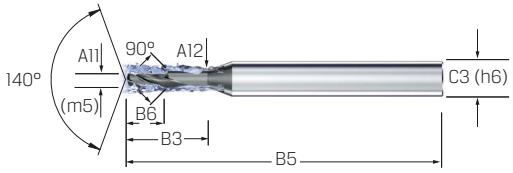
N° article	102448 50× A11, IC	102450 eXedur RIP, 50× A11, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0030	○	●	0,3	53	15	3,1	3	1
0031	○	○	0,31	53	15,5	3,2	3	5
0032	○	○	0,32	53	16	3,3	3	5
0033	○	○	0,33	53	16,5	3,4	3	5
0034	○	○	0,34	53	17	3,5	3	5
0035	○	●	0,35	53	17,6	3,6	3	1
0036	○	○	0,36	53	18	3,7	3	5
0037	○	○	0,37	53	18,5	3,8	3	5
0038	○	○	0,38	53	19	3,9	3	5
0039	○	○	0,39	53	19,5	4	3	5
0040	○	●	0,4	53	20	4,1	3	1
0041	○	○	0,41	60	20,5	4,2	3	5
0042	○	○	0,42	60	21	4,3	3	5
0043	○	○	0,43	60	21,5	4,4	3	5
0044	○	○	0,44	60	22	4,5	3	5
0045	○	●	0,45	60	22,6	4,6	3	1
0046	○	○	0,46	60	23	4,7	3	5
0047	○	○	0,47	60	23,5	4,8	3	5
0048	○	○	0,48	60	24	4,9	3	5
0049	○	○	0,49	60	24,5	5	3	5
0050	●	●	0,5	64	25	5,1	3	1
0051	○	○	0,51	64	25,5	5,3	3	5
0052	○	○	0,52	64	26	5,4	3	5
0053	○	○	0,53	64	26,5	5,5	3	5
0054	○	○	0,54	64	27	5,6	3	5
0055	○	●	0,55	64	27,6	5,8	3	1
0056	○	○	0,56	64	28	5,9	3	5
0057	○	○	0,57	64	28,5	6	3	5
0058	○	○	0,58	64	29	6,1	3	5
0059	○	○	0,59	64	29,5	6,2	3	5
0060	○	●	0,6	70	30	6,3	3	1
0061	○	○	0,61	70	30,5	6,4	3	5
0062	○	○	0,62	70	31	6,5	3	5
0063	○	○	0,63	70	31,5	6,6	3	5
0064	○	○	0,64	70	32	6,7	3	5
0065	○	●	0,65	70	32,6	6,8	3	1
0066	○	○	0,66	70	33	6,9	3	5
0067	○	○	0,67	70	33,5	7	3	5
0068	○	○	0,68	70	34	7,1	3	5
0069	○	○	0,69	70	34,5	7,2	3	5
0070	●	●	0,7	75	35	7,4	3	1
0071	○	○	0,71	75	35,5	7,5	3	5
0072	○	○	0,72	75	36	7,6	3	5
0073	○	○	0,73	75	36,5	7,7	3	5
0074	○	○	0,74	75	37	7,8	3	5
0075	○	●	0,75	75	37,6	7,9	3	1
0076	○	○	0,76	75	38	8	3	5
0077	○	○	0,77	75	38,5	8,1	3	5
0078	○	○	0,78	75	39	8,2	3	5
0079	○	○	0,79	75	39,5	8,3	3	5
0080	●	●	0,8	80	40	8,4	3	1
0081	○	○	0,81	80	40,5	8,5	3	5
0082	○	○	0,82	80	41	8,6	3	5
0083	○	○	0,83	80	41,5	8,7	3	5
0084	○	○	0,84	80	42	8,8	3	5
0085	○	●	0,85	80	42,6	8,9	3	1
0086	○	○	0,86	80	43	9	3	5
0087	○	○	0,87	80	43,5	9,1	3	5
0088	○	○	0,88	80	44	9,2	3	5
0089	○	○	0,89	80	44,5	9,3	3	5
0090	●	●	0,9	85	45	9,5	3	1
0091	○	○	0,91	85	45,5	9,6	3	5
0092	○	○	0,92	85	46	9,7	3	5
0093	○	○	0,93	85	46,5	9,8	3	5
0094	○	○	0,94	85	47	9,9	3	5
0095	○	●	0,95	85	47,6	10	3	1
0096	○	○	0,96	85	48	10,1	3	5
0097	○	○	0,97	85	48,5	10,2	3	5
0098	○	○	0,98	85	49	10,3	3	5
0099	○	○	0,99	85	49,5	10,4	3	5
0100	●	●	1	90	50	10,5	3	1
0101	○	○	1,01	90	50,5	10,6	3	5
0102	○	○	1,02	90	51	10,7	3	5
0103	○	○	1,03	90	51,5	10,8	3	5
0104	○	○	1,04	90	52	10,9	3	5
0105	○	●	1,05	90	52,6	11	3	1
0106	○	○	1,06	90	53	11,1	3	5
0107	○	○	1,07	90	53,5	11,2	3	5
0108	○	○	1,08	90	54	11,3	3	5
0109	○	○	1,09	90	54,5	11,4	3	5
0110	○	●	1,1	95	55	11,6	3	1
0111	○	○	1,11	95	55,5	11,7	3	5
0112	○	○	1,12	95	56	11,8	3	5
0113	○	○	1,13	95	56,5	11,9	3	5
0114	○	○	1,14	95	57	12	3	5
0115	○	●	1,15	95	57,6	12,1	3	1
0116	○	○	1,16	95	58	12,2	3	5
0117	○	○	1,17	95	58,5	12,3	3	5
0118	○	○	1,18	95	59	12,4	3	5
0119	○	○	1,19	95	59,5	12,5	3	5
0120	●	●	1,2	95	60	12,6	3	1
0125	–	NEW ●	1,25	105	62,5	10	4	1
0130	–	NEW ●	1,3	105	65	10,4	4	1
0135	–	NEW ●	1,35	105	67,5	10,8	4	1
0140	–	NEW ●	1,4	110	70	11,2	4	1
0145	–	NEW ●	1,45	115	72,5	11,6	4	1
0150	–	NEW ●	1,5	115	75	12	4	1
0155	–	NEW ●	1,55	115	77,5	12,4	4	1
0160	–	NEW ●	1,6	120	80	12,8	4	1
0165	–	NEW ●	1,65	120	82,5	13,5	4	1
0170	–	NEW ●	1,7	125	85	13,6	4	1
0175	–	NEW ●	1,75	130	87,5	14	4	1
0180	–	NEW ●	1,8	130	90	14,4	4	1
0185	–	NEW ●	1,85	135	92,5	14,8	4	1
0190	–	NEW ●	1,9	135	95	15,2	4	1
0195	–	NEW ●	1,95	140	97,5	15,6	4	1
0200	–	NEW ●	2	140	100	16	4	1

Micro drill SC SST-INOX

CRAZYDRILL Pilot SST-Inox — MIKRON TOOL

Design:
- pilot drill and short drill bits for stainless steel
- bore hole directly chamfered with 90° countersink
- tuned to CRAZDRILL INOX line
- point angle 140°
- high-performance cutting edge geometry CrazyDrill INOX
- special degressive spiral groove geometry for optimal chip removal
- integrated cooling

SC | coated | Factory standard | 3 × A11 | Teeth 2 | 140° | 90° | M | Vc



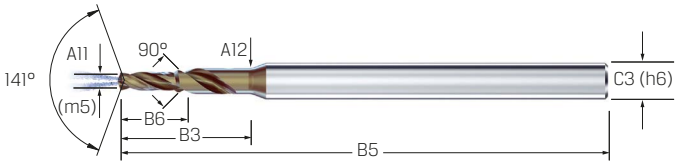
N° article	102414 3× A11, eXedur RIP, IC	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0020	NEW ●	0,2	0,5	45	1,7	0,63	3
0025	NEW ●	0,25	0,5	45	2,1	0,79	3
0030	●	0,3	0,6	45	2,5	0,95	3
0035	●	0,35	0,7	45	2,8	1,11	3
0040	●	0,4	0,8	45	3,2	1,26	3
0045	●	0,45	0,9	45	3,6	1,42	3
0050	●	0,5	1	48	4	1,58	3
0055	●	0,55	1	48	4,4	1,74	3
0060	●	0,6	1,1	48	4,7	1,9	3
0065	●	0,65	1,1	48	5,1	2,05	3
0070	●	0,7	1,3	52	5,5	2,21	4
0075	●	0,75	1,4	52	5,8	2,37	4
0080	●	0,8	1,4	52	6,2	2,53	4
0085	●	0,85	1,5	52	6,5	2,68	4
0090	●	0,9	1,5	52	6,9	2,84	4
0095	●	0,95	1,5	52	7,2	3	4
0100	●	1	1,7	55	7,5	3,16	4
0105	●	1,05	1,7	55	7,9	3,32	4
0110	●	1,1	1,7	55	8,2	3,47	4
0115	●	1,15	1,8	55	8,5	3,63	4
0120	●	1,2	1,8	55	8,8	3,79	4
0125	●	1,25	2	55	9,2	3,95	4
0130	●	1,3	2	55	9,5	4,11	4
0135	●	1,35	2	55	9,8	4,26	4
0140	●	1,4	2,25	55	10,1	4,42	4
0145	●	1,45	2,25	55	10,4	4,58	4
0150	●	1,5	2,25	55	10,7	4,74	4
0155	●	1,55	2,25	55	10,9	4,89	4
0160	●	1,6	2,25	55	11,2	5,05	4
0165	●	1,65	2,25	55	11,5	5,21	4
0170	●	1,7	2,6	55	11,8	5,37	6
0175	●	1,75	2,6	55	12	5,53	6
0180	●	1,8	2,6	55	12,3	5,68	6
0185	●	1,85	2,6	55	12,6	5,84	6
0190	●	1,9	2,6	55	12,8	6	6
0195	●	1,95	2,6	55	13,1	6,16	6
0200	●	2	3,1	55	13,3	6,32	6

Micro drill SC SST-INOX

CRAZYDRILL Coolpilot — MIKRON TOOL

Design:
- pilot drill and short drill bits for stainless steel
- bore hole directly chamfered with 90° countersink
- tuned to CRAZDRILL INOX line
- point angle 141°
- high-performance cutting edge geometry CrazyDrill INOX
- special degressive spiral groove geometry for optimal chip removal
- with internal coolant supply

SC | coated | Factory standard | 3 × A11 | Teeth 2 | 141° | 90° | ICS | M | Vc



N° article	102416 3× A11, eXedur RIP, IC	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm
0100	●	1	1,6	50	6,5	3,2	4
0105	●	1,05	1,6	50	6,8	3,3	4
0110	●	1,1	1,6	50	7,1	3,5	4
0115	●	1,15	1,6	50	7,5	3,6	4
0120	●	1,2	1,9	50	7,8	3,8	4
0125	●	1,25	1,9	50	8,1	4	4
0130	●	1,3	1,9	50	8,4	4,1	4
0135	●	1,35	1,9	50	8,8	4,3	4
0140	●	1,4	1,9	50	9,1	4,4	4
0145	●	1,45	2,25	50	10,4	4,6	4
0150	●	1,5	2,25	50	10,7	4,7	4
0155	●	1,55	2,25	50	10,9	4,9	4
0160	●	1,6	2,25	50	11,2	5,1	4
0165	●	1,65	2,25	50	11,5	5,2	4
0170	●	1,7	2,6	53	11,8	5,4	4
0175	●	1,75	2,6	53	12,1	5,5	4
0180	●	1,8	2,6	53	12,3	5,7	4
0185	●	1,85	2,6	53	12,6	5,8	4
0190	●	1,9	2,6	53	12,8	6	4
0195	●	1,95	2,6	53	13,1	6,2	4
0200	●	2	3,1	55	13,3	6,3	4
0205	●	2,05	3,1	55	13,6	6,5	4
0210	●	2,1	3,1	55	13,9	6,6	4
0215	●	2,15	3,1	55	14,1	6,8	4
0220	●	2,2	3,1	55	14,4	7	4
0225	●	2,25	3,1	55	14,7	7,1	4
0230	●	2,3	3,5	57	14,9	7,3	4
0235	●	2,35	3,5	57	15,2	7,4	4
0240	●	2,4	3,5	57	15,6	7,6	4
0245	●	2,45	3,5	57	15,9	7,7	4
0250	●	2,5	3,5	57	16,2	7,9	4
0255	●	2,55	3,5	57	16,5	8,1	4
0260	●	2,6	4	57	16,9	8,2	4
0265	●	2,65	4	57	17,2	8,4	4
0270	●	2,7	4	57	17,5	8,5	4
0275	●	2,75	4	57	17,8	8,7	4
0280	●	2,8	4	57	18,2	8,8	4
0285	●	2,85	4	57	18,5	9	4
0290	●	2,9	4	57	18,8	9,2	4
0295	●	2,95	4	57	19,1	9,3	4
0300	●	3	4,7	65	19,5	9,5	6
0305	●	3,05	4,7	65	19,8	9,6	6
0310	●	3,1	4,7	65	20,1	9,8	6
0315	●	3,15	4,7	65	20,4	10	6
0320	●	3,2	4,7	65	20,8	10,1	6
0325	●	3,25	4,7	65	21,1	10,3	6
0330	●	3,3	4,7	65	21,4	10,4	6
0335	●	3,35	4,7	65	21,7	10,6	6
0340	●	3,4	4,7	65	22,1	10,7	6
0345	●	3,45	4,7	65	22,4	10,9	6
0350	●	3,5	5,4	68	22,7	11,1	6
0355	●	3,55	5,4	68	23	11,2	6
0360	●	3,6	5,4	68	23,4	11,4	6
0365	●	3,65	5,4	68	23,7	11,5	6
0370	●	3,7	5,4	68	24	11,7	6
0375	●	3,75	5,4	68	24,3	11,8	6
0380	●	3,8	5,4	68	24,7	12	6
0385	●	3,85	5,4	68	25	12,2	6
0390	●	3,9	5,4	68	25,3	12,3	6
0395	●	3,95	5,4	68	25,6	12,5	6
0400	●	4	5,4	68	26	12,6	6
0410	●	4,1	6	72	26,6	12,9	6
0420	●	4,2	6	72	27,2	13,3	6
0430	●	4,3	6	72	27,9	13,6	6
0440	●	4,4	6	72	28,5	13,9	6
0450	●	4,5	6	72	29,2	14,2	6
0460	●	4,6	6	72	29,8	14,5	6
0470	●	4,7	8	75	30,5	14,8	8
0480	●	4,8	8	75	31,1	15,2	8
0490	●	4,9	8	75	31,8	15,5	8
0500	●	5	8	75	32,4	15,8	8
0510	●	5,1	8	75	33,1	16,1	8
0520	●	5,2	8	75	33,7	16,4	8
0530	●	5,3	8	75	34,4	16,7	8
0540	●	5,4	8	80	35	17,1	8
0550	●	5,5	8	80	35,7	17,4	8
0560	●	5,6	8	80	36,3	17,7	8
0570	●	5,7	8	80	37	18	8
0580	●	5,8	8	80	37,6	18,3	8
0590	●	5,9	8	80	38,3	18,6	8
0600	●	6	8	80	38,9	18,9	8

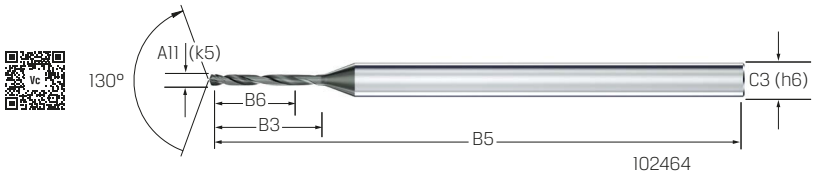
Micro drill SC SST-INOX

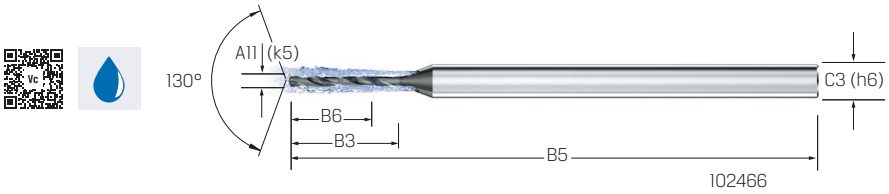
CRAZYDRILL SST-Inox — MIKRON TOOL

SC | coated | Factory standard | 8 × A11 | Teeth 2 | 130° | M

Design:
- robust carbide shank for stable, vibration-free drilling
- with wear- and heat-resistant high-performance coating eXedur
- degressive spiral for rapid chip evacuation and high stability
- special drill tip geometry for high cutting edge stability, short chips and self centring

Note:
Drill pilot bore with 102414





N° article	102464 8× A11, eXedur RIP	102466 8× A11, eXedur RIP IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0020	NEW ○	NEW ●	0,2	38	2	1,6	3
0025	NEW ○	NEW ●	0,25	38	2,5	2	3
0030	●	●	0,3	38	2,9	2,4	3
0035	○	●	0,35	38	3,4	2,8	3
0040	●	●	0,4	38	3,9	3,2	3
0045	○	●	0,45	42	4,4	3,6	3
0050	●	●	0,5	42	4,9	4	3
0055	○	●	0,55	42	5,4	4,4	3
0060	●	●	0,6	42	5,9	4,8	3
0065	○	●	0,65	45	6,4	5,2	3
0070	●	●	0,7	45	6,9	5,6	3
0075	○	●	0,75	45	7,4	6	3
0080	●	●	0,8	45	7,8	6,4	3
0085	●	●	0,85	45	8,3	6,8	3
0090	●	●	0,9	45	8,8	7,2	3
0095	●	●	0,95	48	9,3	7,6	3
0100	●	●	1	48	9,8	8	3
0105	○	●	1,05	48	10,3	8,4	3
0110	○	●	1,1	48	10,8	8,8	3
0115	○	●	1,15	48	11,3	9,2	3
0120	○	●	1,2	48	11,8	9,6	3
0125	○	●	1,25	52	12,3	10	3
0130	○	●	1,3	52	12,7	10,4	3
0135	○	●	1,35	52	13,2	10,8	3
0140	○	●	1,4	52	13,7	11,2	3
0145	○	●	1,45	52	14,2	11,6	3
0150	●	●	1,5	52	14,7	12	3
0155	○	●	1,55	55	15,2	12,4	3
0160	○	●	1,6	55	15,7	12,8	3
0165	○	●	1,65	55	16,2	13,2	3
0170	○	●	1,7	55	16,7	13,6	3
0175	●	●	1,75	55	17,2	14	3
0180	○	●	1,8	55	17,6	14,4	3
0185	○	●	1,85	55	18,1	14,8	3
0190	○	●	1,9	55	18,6	15,2	3
0195	○	●	1,95	55	19,1	15,6	3
0200	●	●	2	55	19,6	16	3

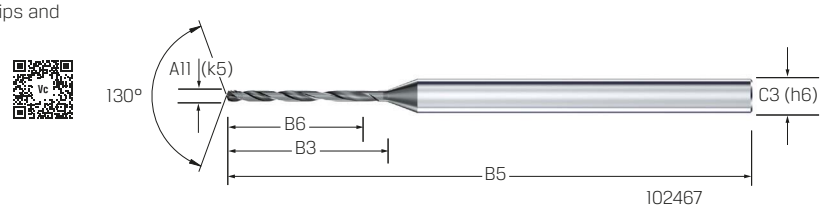
Micro drill SC SST-INOX

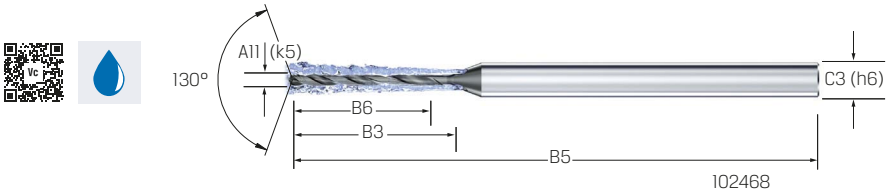
CRAZYDRILL SST-Inox — MIKRON TOOL

SC | coated | Factory standard | Teeth 2 | 12 × A11 | 130° | M

Design:
- robust carbide shank for stable, vibration-free drilling
- with wear- and heat-resistant high-performance coating eXedur
- degressive spiral for rapid chip evacuation and high stability
- special drill tip geometry for high cutting edge stability, short chips and self centring

Note:
Drill pilot bore with 102414





N° article	102467 12× A11, eXedur, RIP	102468 12× A11, eXedur, RIP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0020	NEW ○	NEW ●	0,2	38	2,8	2,4	3
0025	NEW ○	NEW ●	0,25	38	3,5	3	3
0030	○	●	0,3	38	4,1	3,6	3
0035	○	●	0,35	38	4,8	4,2	3
0040	●	●	0,4	38	5,5	4,8	3
0045	○	●	0,45	42	6,2	5,4	3
0050	●	●	0,5	42	6,9	6	3
0055	●	●	0,55	42	7,6	6,6	3
0060	○	●	0,6	42	8,3	7,2	3
0065	○	●	0,65	45	9	7,8	3
0070	○	●	0,7	45	9,7	8,4	3
0075	○	●	0,75	45	10,4	9	3
0080	○	●	0,8	45	11	9,6	3
0085	●	●	0,85	45	11,7	10,2	3
0090	○	●	0,9	45	12,4	10,8	3
0095	○	●	0,95	48	13,1	11,4	3
0100	○	●	1	48	13,8	12	3
0105	○	●	1,05	48	14,5	12,6	3
0110	○	●	1,1	48	15,2	13,2	3
0115	○	●	1,15	48	15,9	13,8	3
0120	○	●	1,2	48	16,6	14,4	3
0125	○	●	1,25	55	17,3	15	3
0130	●	●	1,3	55	17,9	15,6	3
0135	○	●	1,35	55	18,6	16,2	3
0140	○	●	1,4	55	19,3	16,8	3
0145	○	●	1,45	55	20	17,4	3
0150	●	●	1,5	55	20,7	18	3
0155	○	●	1,55	58	21,4	18,6	3
0160	○	●	1,6	58	22,1	19,2	3
0165	○	●	1,65	58	22,8	19,8	3
0170	○	●	1,7	58	23,5	20,4	3
0175	○	●	1,75	58	24,2	21	3
0180	○	●	1,8	58	24,8	21,6	3
0185	○	●	1,85	60	25,5	22,2	3
0190	○	●	1,9	60	26,2	22,8	3
0195	○	●	1,95	60	26,9	23,4	3
0200	○	●	2	60	27,6	24	3

Micro drill SC SST-INOX

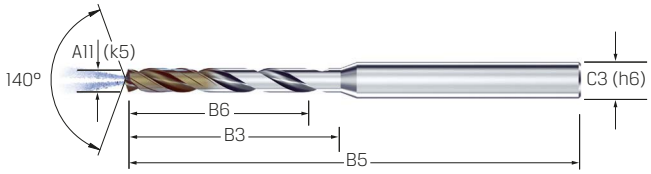
CRAZYDRILL Cool SST-Inox | MIKRON TOOL

Design:
- robust carbide shank for stable, vibration-free drilling
- new, special coating
- new, special tip and flute geometry
- new shape of the internal cooling channels with up to four times higher volume

SC | coated | Factory standard | Teeth 2 | 140° | ICS | M

Note:
Make pilot bore with 102414 or 102416, resp.

6 × A11



N° article	102470 6× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0100	●	1	55	9	6	4
0105	○	1,05	55	9,5	6,3	4
0110	●	1,1	55	9,9	6,6	4
0115	○	1,15	55	10,4	6,9	4
0120	●	1,2	57	10,8	7,2	4
0125	○	1,25	57	11,3	7,5	4
0130	●	1,3	57	11,7	7,8	4
0135	○	1,35	57	12,2	8,1	4
0140	●	1,4	57	12,6	8,4	4
0145	●	1,45	58	13,1	8,7	4
0150	●	1,5	58	13,5	9	4
0155	○	1,55	58	14	9,3	4
0160	●	1,6	58	14,4	9,6	4
0165	○	1,65	58	14,9	9,9	4
0170	●	1,7	60	15,3	10,2	4
0175	○	1,75	60	15,8	10,5	4
0180	●	1,8	60	16,2	10,8	4
0185	○	1,85	60	16,7	11,1	4
0190	●	1,9	60	17,1	11,4	4
0195	○	1,95	60	17,6	11,7	4
0200	●	2	63	18	12	4
0205	●	2,05	63	18,5	12,3	4
0210	●	2,1	63	18,9	12,6	4
0215	○	2,15	63	19,4	12,9	4
0220	●	2,2	63	19,8	13,2	4
0225	○	2,25	63	20,3	13,5	4
0230	●	2,3	65	20,7	13,8	4

N° article	102470 6× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0235	○	2,35	65	21,2	14,1	4
0240	○	2,4	65	21,6	14,4	4
0245	●	2,45	65	22,1	14,7	4
0250	●	2,5	65	22,5	15	4
0255	●	2,55	65	23	15,3	4
0260	●	2,6	68	23,4	15,6	4
0265	●	2,65	68	23,9	15,9	4
0270	○	2,7	68	24,3	16,2	4
0275	●	2,75	68	24,8	16,5	4
0280	○	2,8	68	25,2	16,8	4
0285	●	2,85	68	25,7	17,1	4
0290	●	2,9	68	26,1	17,4	4
0295	●	2,95	68	26,6	17,7	4
0300	●	3	74	27	18	6
0305	●	3,05	74	27,5	18,3	6
0310	○	3,1	74	27,9	18,6	6
0315	●	3,15	74	28,4	18,9	6
0320	●	3,2	74	28,8	19,2	6
0325	○	3,25	74	29,3	19,5	6
0330	●	3,3	74	29,7	19,8	6
0335	○	3,35	74	30,2	20,1	6
0340	●	3,4	74	30,6	20,4	6
0345	○	3,45	74	31,1	20,7	6
0350	●	3,5	78	31,5	21	6
0355	○	3,55	78	32	21,3	6
0360	●	3,6	78	32,4	21,6	6
0365	○	3,65	78	32,9	21,9	6

N° article	102470 6× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0370	●	3,7	78	33,3	22,2	6
0375	○	3,75	78	33,8	22,5	6
0380	●	3,8	78	34,2	22,8	6
0385	○	3,85	78	34,7	23,1	6
0390	●	3,9	78	35,1	23,4	6
0395	○	3,95	78	35,6	23,7	6
0400	●	4	78	36	24	6
0410	○	4,1	80	36,9	24,6	6
0420	○	4,2	80	37,8	25,2	6
0430	○	4,3	80	38,7	25,8	6
0440	○	4,4	80	39,6	26,4	6
0450	○	4,5	80	40,5	27	6
0460	○	4,6	80	41,4	27,6	6
0470	○	4,7	84	42,3	28,2	6
0480	●	4,8	84	43,2	28,8	6
0490	○	4,9	84	44,1	29,4	6
0500	○	5	84	45	30	6
0510	○	5,1	84	45,9	30,6	6
0520	○	5,2	84	46,8	31,2	6
0530	○	5,3	84	47,7	31,8	6
0540	○	5,4	88	48,6	32,4	6
0550	●	5,5	88	49,5	33	6
0560	○	5,6	88	50,4	33,6	6
0570	○	5,7	88	51,3	34,2	6
0580	○	5,8	88	52,2	34,8	6
0590	○	5,9	88	53,1	35,4	6
0600	○	6	88	54	36	6

10 × A11

N° article	102472 10× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0100	●	1	59	13	10	4
0105	○	1,05	59	13,7	10,5	4
0110	●	1,1	59	14,3	11	4
0115	○	1,15	59	15	11,5	4
0120	●	1,2	62	15,6	12	4
0125	○	1,25	62	16,3	12,5	4
0130	●	1,3	62	16,9	13	4
0135	○	1,35	62	17,6	13,5	4
0140	●	1,4	62	18,2	14	4
0145	○	1,45	65	18,9	14,5	4
0150	●	1,5	65	19,5	15	4
0155	●	1,55	65	20,2	15,5	4
0160	●	1,6	65	20,8	16	4
0165	○	1,65	65	21,5	16,5	4
0170	●	1,7	67	22,1	17	4
0175	●	1,75	67	22,8	17,5	4
0180	●	1,8	67	23,4	18	4
0185	○	1,85	67	24,1	18,5	4
0190	●	1,9	67	24,7	19	4
0195	○	1,95	67	25,4	19,5	4
0200	●	2	70	26	20	4
0205	○	2,05	70	26,7	20,5	4
0210	●	2,1	70	27,3	21	4
0215	○	2,15	70	28	21,5	4
0220	●	2,2	70	28,6	22	4
0225	○	2,25	70	29,3	22,5	4
0230	●	2,3	75	29,9	23	4

N° article	102472 10× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0235	○	2,35	75	30,6	23,5	4
0240	●	2,4	75	31,2	24	4
0245	○	2,45	75	31,9	24,5	4
0250	●	2,5	75	32,5	25	4
0255	○	2,55	75	33,2	25,5	4
0260	●	2,6	80	33,8	26	4
0265	○	2,65	80	34,5	26,5	4
0270	●	2,7	80	35,1	27	4
0275	○	2,75	80	38,5	27,5	4
0280	●	2,8	80	36,4	28	4
0285	○	2,85	80	37,1	28,5	4
0290	●	2,9	80	37,7	29	4
0295	○	2,95	80	38,4	29,5	4
0300	●	3	87	39	30	6
0305	●	3,05	87	39,7	30,5	6
0310	●	3,1	87	40,3	31	6
0315	○	3,15	87	41	31,5	6
0320	●	3,2	87	41,6	32	6
0325	●	3,25	87	42,3	32,5	6
0330	●	3,3	87	42,9	33	6
0335	○	3,35	87	43,6	33,5	6
0340	●	3,4	87	44,2	34	6
0345	○	3,45	87	44,9	34,5	6
0350	●	3,5	95	45,5	35	6
0355	○	3,55	95	46,2	35,5	6
0360	●	3,6	95	46,8	36	6
0365	○	3,65	95	47,5	36,5	6

N° article	102472 10× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0370	●	3,7	95	48,1	37,5	6
0375	○	3,75	95	48,8	37,5	6
0380	●	3,8	95	49,4	38	6
0385	○	3,85	95	50,1	38,5	6
0390	●	3,9	95	50,7	39	6
0395	○	3,95	95	51,4	39,5	6
0400	●	4	95	52	40	6
0410	○	4,1	100	53,3	41	6
0420	●	4,2	100	54,6	42	6
0430	○	4,3	100	55,9	43	6
0440	○	4,4	100	57,2	44	6
0450	○	4,5	100	58,5	45	6
0460	○	4,6	100	59,8	46	6
0470	○	4,7	105	61,1	47	6
0480	○	4,8	105	62,4	48	6
0490	○	4,9	105	63,7	49	6
0500	○	5	105	65	50	6
0510	●	5,1	105	66,3	51	6
0520	○	5,2	105	67,6	52	6
0530	○	5,3	105	68,9	53	6
0540	○	5,4	112	70,2	54	6
0550	○	5,5	112	71,5	55	6
0560	○	5,6	112	72,8	56	6
0570	○	5,7	112	74,1	57	6
0580	○	5,8	112	75,4	58	6
0590	○	5,9	112	76,7	59	6
0600	●	6	112	78	60	6

Micro drill SC SST-INOX

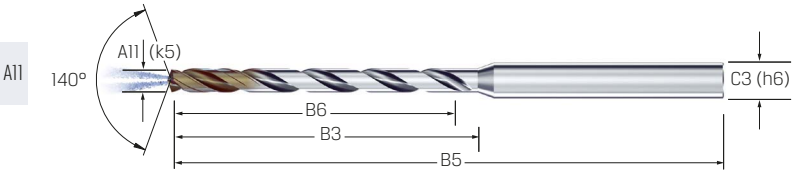
CRAZYDRILL Cool SST-Inox — MIKRON TOOL

Design:
- robust carbide shank for stable, vibration-free drilling
- new, special coating
- new, special tip and flute geometry
- new shape of the internal cooling channels with up to four times higher volume

SC | coated | Factory standard | Teeth 2 | 140° | ICS | M

Note:
Make pilot bore with 102414 or 102416, resp.
Delivery only in specified PU

15 × A11



N° article	102473 15× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0100	●	1	62	18,5	15	4
0105	○	1,05	62	19,4	15,75	4
0110	●	1,1	62	20,4	16,5	4
0115	○	1,15	62	21,3	17,25	4
0120	●	1,2	64	22,2	18	4
0125	○	1,25	64	23,1	18,75	4
0130	●	1,3	66	24,1	19,5	4
0135	○	1,35	66	25	20,25	4
0140	●	1,4	68	25,9	21	4
0145	○	1,45	70	26,8	21,75	4
0150	●	1,5	70	27,8	22,5	4
0155	○	1,55	75	28,7	23,25	4
0160	●	1,6	75	29,6	24	4
0165	○	1,65	75	30,5	24,75	4
0170	●	1,7	76	31,5	25,5	4
0175	○	1,75	76	32,4	26,25	4
0180	●	1,8	76	33,2	27	4
0185	○	1,85	76	34,2	27,75	4
0190	●	1,9	80	35,2	28,5	4
0195	○	1,95	80	36,1	29,25	4
0200	●	2	80	37	30	4
0205	○	2,05	80	37,9	30,75	4
0210	●	2,1	80	38,9	31,5	4
0215	○	2,15	85	39,8	32,25	4
0220	●	2,2	85	40,7	33	4
0225	○	2,25	85	41,6	33,75	4
0230	●	2,3	86	42,6	34,5	4

N° article	102473 15× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0235	○	2,35	86	43,5	35,25	4
0240	●	2,4	86	44,4	36	4
0245	○	2,45	86	45,3	36,75	4
0250	●	2,5	90	46,3	37,5	4
0255	○	2,55	90	47,2	38,25	4
0260	●	2,6	90	48,1	39	4
0265	○	2,65	90	49	39,75	4
0270	●	2,7	92	50	40,5	4
0275	○	2,75	92	50,9	41,25	4
0280	●	2,8	94	51,8	42	4
0285	○	2,85	94	52,7	42,75	4
0290	●	2,9	98	53,7	43,5	4
0295	○	2,95	98	54,6	44,25	4
0300	●	3	100	55,5	45	6
0305	○	3,05	100	56,4	45,75	6
0310	●	3,1	102	57,4	46,5	6
0315	○	3,15	102	58,3	47,25	6
0320	●	3,2	106	59,2	48	6
0325	○	3,25	106	60,1	48,75	6
0330	●	3,3	106	61,1	49,5	6
0335	○	3,35	106	62	50,25	6
0340	●	3,4	106	62,9	51	6
0345	○	3,45	106	63,8	51,75	6
0350	●	3,5	108	64,8	52,5	6
0355	○	3,55	108	65,7	53,25	6
0360	●	3,6	110	66,6	54	6
0365	○	3,65	110	67,5	54,75	6

N° article	102473 15× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm
0370	●	3,7	112	68,5	55,5	6
0375	○	3,75	112	69,4	56,25	6
0380	●	3,8	116	70,3	57	6
0385	○	3,85	116	71,2	57,75	6
0390	●	3,9	116	72,2	58,5	6
0395	○	3,95	116	73,1	59,25	6
0400	●	4	116	74	60	6
0410	○	4,1	118	75,9	61,5	6
0420	○	4,2	120	77,7	63	6
0430	○	4,3	122	79,6	64,5	6
0440	○	4,4	126	81,4	66	6
0450	○	4,5	126	83,3	67,5	6
0460	○	4,6	126	85,1	69	6
0470	○	4,7	129	87	70,5	6
0480	○	4,8	131	88,8	72	6
0490	○	4,9	133	90,7	73,5	6
0500	●	5	135	92,5	75	6
0510	○	5,1	137	94,4	76,5	6
0520	○	5,2	141	96,2	78	6
0530	○	5,3	141	98,1	79,5	6
0540	○	5,4	141	99,9	81	6
0550	○	5,5	143	101,8	82,5	6
0560	○	5,6	145	103,6	84	6
0570	○	5,7	147	105,5	85,5	6
0580	○	5,8	151	107,3	87	6
0590	○	5,9	151	109,2	88,5	6
0600	●	6	151	111	90	6

20 × A11

N° article	102474 20× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0100	●	1	70	23,5	20	4	1
0105	○	1,05	70	24,7	21	4	3
0110	●	1,1	70	25,9	22	4	1
0115	○	1,15	70	27	23	4	3
0120	●	1,2	70	28,2	24	4	1
0125	○	1,25	70	29,4	25	4	3
0130	●	1,3	75	30,6	26	4	1
0135	○	1,35	75	31,7	27	4	3
0140	●	1,4	75	32,9	28	4	1
0145	○	1,45	78	34,1	29	4	3
0150	●	1,5	78	35,3	30	4	1
0155	○	1,55	78	36,4	31	4	3
0160	●	1,6	82	37,6	32	4	1
0165	○	1,65	82	38,8	33	4	3
0170	●	1,7	85	40	34	4	1
0175	○	1,75	85	41,1	35	4	3
0180	●	1,8	85	42,3	36	4	1
0185	○	1,85	88	43,5	37	4	3
0190	●	1,9	88	44,7	38	4	1
0195	○	1,95	88	45,8	39	4	3
0200	●	2	90	47	40	4	1
0205	○	2,05	90	48,2	41	4	3
0210	●	2,1	93	49,4	42	4	1
0215	○	2,15	93	50,5	43	4	3
0220	●	2,2	95	51,7	44	4	1
0225	○	2,25	95	52,9	45	4	3
0230	●	2,3	98	54,1	46	4	1

N° article	102474 20× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0235	○	2,35	98	55,2	47	4	3
0240	●	2,4	98	56,4	48	4	1
0245	○	2,45	100	57,6	49	4	3
0250	●	2,5	100	58,8	50	4	1
0255	○	2,55	102	59,9	51	4	3
0260	●	2,6	104	61,1	52	4	1
0265	○	2,65	104	62,3	53	4	3
0270	●	2,7	104	63,5	54	4	1
0275	○	2,75	106	64,6	55	4	3
0280	●	2,8	106	65,8	56	4	1
0285	○	2,85	108	67	57	4	3
0290	●	2,9	108	68,2	58	4	1
0295	○	2,95	110	69,3	59	4	3
0300	●	3	116	70,5	60	6	1
0305	○	3,05	116	71,7	61	6	3
0310	●	3,1	118	72,9	62	6	1
0315	○	3,15	118	74	63	6	3
0320	●	3,2	120	75,2	64	6	1
0325	○	3,25	120	76,4	65	6	3
0330	●	3,3	122	77,6	66	6	1
0335	○	3,35	122	78,7	67	6	3
0340	●	3,4	126	79,9	68	6	1
0345	○	3,45	126	81,1	69	6	3
0350	●	3,5	126	82,3	70	6	1
0355	○	3,55	126	83,4	71	6	3
0360	●	3,6	128	84,6	72	6	1
0365	○	3,65	128	85,8	73	6	3

N° article	102474 20× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0370	●	3,7	130	87	74	6	1
0375	○	3,75	130	88,1	75	6	3
0380	●	3,8	132	89,3	76	6	1
0385	○	3,85	132	90,5	77	6	3
0390	●	3,9	136	91,7	78	6	1
0395	○	3,95	136	92,8	79	6	3
0400	●	4	136	94	80	6	1
0410	○	4,1	141	96,4	82	6	1
0420	○	4,2	143	98,7	84	6	1
0430	○	4,3	145	101,1	86	6	1
0440	○	4,4	147	103,4	88	6	1
0450	○	4,5	151	105,8	90	6	1
0460	○	4,6	151	108,1	92	6	1
0470	○	4,7	154	110,5	94	6	1
0480	○	4,8	156	112,8	96	6	1
0490	○	4,9	158	115,2	98	6	1
0500	○	5	160	117,5	100	6	1
0510	○	5,1	162	119,8	102	6	1
0520	○	5,2	166	122,2	104	6	1
0530	○	5,3	166	124,5	106	6	1
0540	○	5,4	171	126,9	108	6	1
0550	○	5,5	173	129,2	110	6	1
0560	○	5,6	175	131,6	112	6	1
0570	○	5,7	177	133,9	114	6	1
0580	○	5,8	181	136,3	116	6	1
0590	○	5,9	181	138,6	118	6	1
0600	○	6	181	141	120	6	1

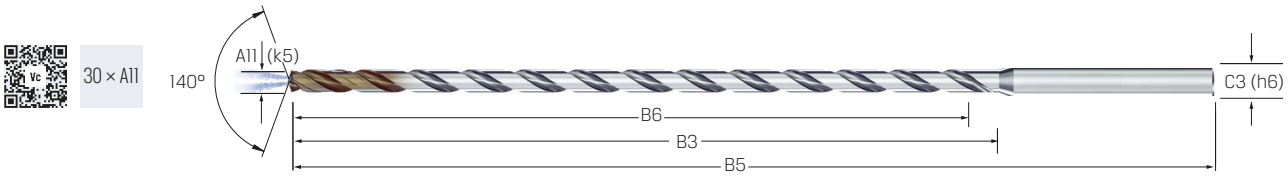
Micro drill SC Cool SST-INOX

CRAZYDRILL Cool SST-Inox — MIKRON TOOL

SC | coated | Factory standard | Teeth 2 | 140° | ICS | M

Design:
- robust carbide shank for stable, vibration-free drilling
- new, special coating
- new, special tip and flute geometry
- new form of internal cooling channels

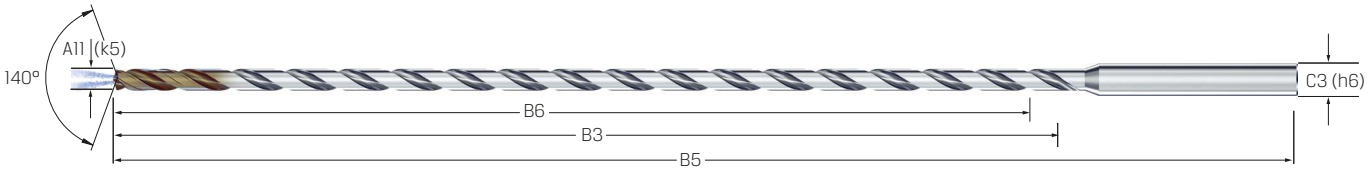
Note:
Make pilot bore with 102414 or 102416, resp.
Delivery only in specified PU



N° article	102475 30× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0145	○	1,45	95	48,6	43,5	4	3
0150	●	1,5	95	50,3	45	4	1
0155	○	1,55	95	51,9	46,5	4	3
0160	●	1,6	100	53,6	48	4	1
0165	○	1,65	100	55,3	49,5	4	3
0170	●	1,7	100	57	51	4	1
0175	○	1,75	105	58,6	52,5	4	3
0180	●	1,8	105	60,3	54	4	1
0185	○	1,85	105	62	55,5	4	3
0190	●	1,9	110	63,7	57	4	1
0195	○	1,95	110	65,3	58,5	4	3
0200	●	2	110	67	60	4	1
0205	○	2,05	115	68,7	61,5	4	3
0210	●	2,1	115	70,4	63	4	1
0215	○	2,15	115	72	64,5	4	3
0220	●	2,2	120	73,7	66	4	1
0225	○	2,25	120	75,4	67,5	4	3
0230	●	2,3	120	77,1	69	4	1
0235	○	2,35	125	78,7	70,5	4	3
0240	●	2,4	125	80,4	72	4	1
0245	○	2,45	125	82,1	73,5	4	3
0250	●	2,5	130	83,8	75	4	1
0255	○	2,55	130	85,4	76,5	4	3
0260	●	2,6	130	87,1	78	4	1

N° article	102475 30× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0265	○	2,65	135	88,8	79,5	4	3
0270	●	2,7	135	90,5	81	4	1
0275	○	2,75	138	92,1	82,5	4	3
0280	●	2,8	138	93,8	84	4	1
0285	○	2,85	138	95,5	85,5	4	3
0290	●	2,9	142	97,2	87	4	1
0295	○	2,95	142	98,8	88,5	4	3
0300	●	3	145	100,5	90	6	1
0305	○	3,05	148	102,2	91,5	6	3
0310	●	3,1	150	103,9	93	6	1
0315	○	3,15	150	105,5	94,5	6	3
0320	●	3,2	153	107,2	96	6	1
0325	○	3,25	153	108,9	97,5	6	3
0330	●	3,3	157	110,6	99	6	1
0335	○	3,35	157	112,2	100,5	6	3
0340	●	3,4	161	113,9	102	6	1
0345	○	3,45	161	115,6	103,5	6	3
0350	●	3,5	164	117,3	105	6	1
0355	○	3,55	164	118,9	106,5	6	3
0360	●	3,6	167	120,6	108	6	1
0365	○	3,65	167	122,3	109,5	6	3
0370	●	3,7	170	124	111	6	1
0375	○	3,75	170	125,6	112,5	6	3
0380	●	3,8	176	127,3	114	6	1

N° article	102475 30× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0385	○	3,85	176	129	115,5	6	3
0390	●	3,9	176	130,7	117	6	1
0395	○	3,95	176	132,3	118,5	6	3
0400	●	4	176	134	120	6	1
0410	○	4,1	181	137,4	123	6	1
0420	○	4,2	184	140,7	126	6	1
0430	○	4,3	188	144,1	129	6	1
0440	○	4,4	192	147,4	132	6	1
0450	○	4,5	196	150,8	135	6	1
0460	○	4,6	196	154,1	138	6	1
0470	○	4,7	201	157,5	141	6	1
0480	○	4,8	205	160,8	144	6	1
0490	○	4,9	208	164,2	147	6	1
0500	○	5	211	167,5	150	6	1
0510	○	5,1	214	170,9	153	6	1
0520	○	5,2	221	174,2	156	6	1
0530	○	5,3	221	177,6	159	6	1
0540	○	5,4	223	180,9	162	6	1
0550	○	5,5	227	184,3	165	6	1
0560	○	5,6	230	187,6	168	6	1
0570	○	5,7	233	191	171	6	1
0580	○	5,8	236	194,3	174	6	1
0590	○	5,9	241	197,7	177	6	1
0600	○	6	241	201	180	6	1



Vc 40 × A11

N° article	102477 40× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0200	○	2	132	87	80	4	1
0205	○	2,05	135	89,2	82	4	3
0210	○	2,1	135	91,4	84	4	1
0215	○	2,15	138	93,5	86	4	3
0220	○	2,2	143	95,7	88	4	1
0225	○	2,25	143	97,9	90	4	3
0230	○	2,3	145	100,1	92	4	1
0235	○	2,35	148	102,2	94	4	3
0240	○	2,45	148	104,4	96	4	1
0245	○	2,45	151	160,6	98	4	3
0250	○	2,5	156	108,8	100	4	1
0255	○	2,55	156	110,9	102	4	3
0260	○	2,6	158	113,1	104	4	1
0265	○	2,65	160	115,3	106	4	3
0270	○	2,7	162	117,5	108	4	1
0275	○	2,75	162	119,6	110	4	3
0280	○	2,8	165	121,8	112	4	1
0285	○	2,85	165	124	114	4	3
0290	○	2,9	172	126,2	116	4	1
0295	○	2,95	172	128,3	118	4	3
0300	○	3	178	130,5	120	6	1

N° article	102477 40× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0305	○	3,05	180	132,7	122	6	3
0310	○	3,1	182	134,9	124	6	1
0315	○	3,15	184	137	126	6	3
0320	○	3,2	186	139,2	128	6	1
0325	○	3,25	188	141,4	130	6	3
0330	○	3,3	190	143,6	132	6	1
0335	○	3,35	192	145,7	134	6	3
0340	○	3,4	196	147,9	136	6	1
0345	○	3,45	196	150,1	138	6	3
0350	○	3,5	199	152,3	140	6	1
0355	○	3,55	201	154,4	142	6	3
0360	○	3,6	203	156,6	144	6	1
0365	○	3,65	205	158,8	146	6	3
0370	○	3,7	207	161	148	6	1
0375	○	3,75	210	163,1	150	6	3
0380	○	3,8	212	165,3	152	6	1
0385	○	3,85	216	167,5	154	6	3
0390	○	3,9	216	169,7	156	6	1
0395	○	3,95	216	171,8	158	6	3
0400	○	4	216	174	160	6	1
0410	○	4,1	224	178,4	164	6	1

N° article	102477 40× A11, eXedur SNP, ICS	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0420	○	4,2	228	182,7	168	6	1
0430	○	4,3	232	187,1	172	6	1
0440	○	4,4	236	191,4	176	6	1
0450	○	4,5	241	195,8	180	6	1
0460	○	4,6	241	200,1	184	6	1
0470	○	4,7	250	204,5	188	6	1
0480	○	4,8	254	208,8	192	6	1
0490	○	4,9	258	213,2	196	6	1
0500	○	5	261	217,5	200	6	1
0510	○	5,1	267	221,9	204	6	1
0520	○	5,2	271	226,2	208	6	1
0530	○	5,3	271	230,6	212	6	1
0540	○	5,4	280	234,9	216	6	1
0550	○	5,5	284	293,3	220	6	1
0560	○	5,6	288	243,6	224	6	1
0570	○	5,7	292	248	228	6	1
0580	○	5,8	296	252,3	232	6	1
0590	○	5,9	301	256,7	236	6	1
0600	○	6	301	261	240	6	1

Micro drill SC SST-INOX

CRAZYDRILL Flex SST-INOX — MIKRON TOOL

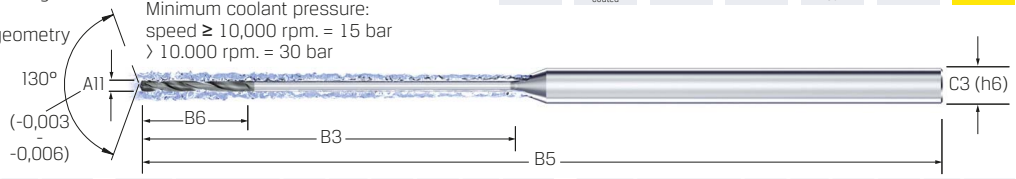
Design:
- specially developed ultra-fine grain carbide
- specially developed high-performance coating
- specially developed tip geometry
- degressive spiral groove with patented geometry
- with integrated cooling

Delivery only in specified PU

30 × A11

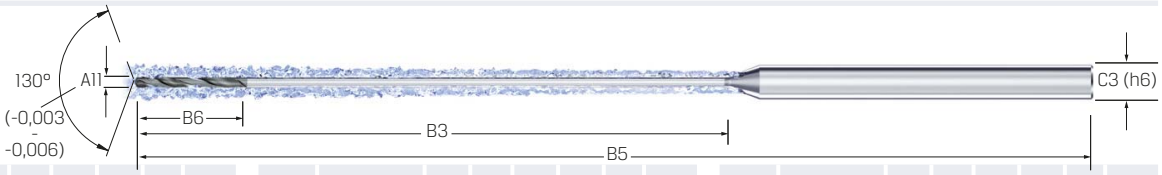
Note:
Make pilot bore with 102414 or 102416, resp.
Minimum coolant pressure:
speed ≥ 10,000 rpm. = 15 bar
〉10.000 rpm. = 30 bar

SC | coated | Factory standard | Teeth 2 | 130° | M



N° article	102476 30× A11, eXedur RIP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0020	●	0,2	50	6	2	3	1
0021	○	0,21	50	6,3	2,1	3	5
0022	○	0,22	50	6,6	2,2	3	5
0023	○	0,23	50	6,9	2,3	3	5
0024	○	0,24	50	7,2	2,4	3	5
0025	●	0,25	50	7,5	2,5	3	1
0026	○	0,26	50	7,8	2,5	3	5
0027	○	0,27	50	8,1	2,6	3	5
0028	○	0,28	50	8,4	2,7	3	5
0029	○	0,29	50	8,7	2,8	3	5
0030	●	0,3	50	9	2,9	3	1
0031	○	0,31	50	9,3	3	3	5
0032	○	0,32	50	9,6	3,1	3	5
0033	○	0,33	50	9,9	3,2	3	5
0034	○	0,34	50	10,2	3,3	3	5
0035	●	0,35	50	10,5	3,4	3	1
0036	○	0,36	50	10,8	3,5	3	5
0037	○	0,37	50	11,1	3,6	3	5
0038	○	0,38	50	11,4	3,7	3	5
0039	○	0,39	50	11,7	3,8	3	5
0040	●	0,4	50	12	3,9	3	1
0041	○	0,41	50	12,3	4	3	5
0042	○	0,42	50	12,6	4,1	3	5
0043	○	0,43	50	12,9	4,2	3	5
0044	○	0,44	50	13,2	4,3	3	5
0045	●	0,45	50	13,5	4,4	3	1
0046	○	0,46	50	13,8	4,5	3	5
0047	○	0,47	50	14,1	4,6	3	5
0048	○	0,48	50	14,4	4,7	3	5
0049	○	0,49	50	14,7	4,8	3	5
0050	●	0,5	53	15	4,9	3	1
0051	○	0,51	53	15,3	5	3	5
0052	○	0,52	53	15,6	5,1	3	5
0053	○	0,53	53	15,9	5,2	3	5
0054	○	0,54	53	16,2	5,3	3	5
0055	●	0,55	53	16,5	5,4	3	1
0056	○	0,56	53	16,8	5,5	3	5
0057	○	0,57	53	17,1	5,6	3	5
0058	○	0,58	53	17,4	5,7	3	5
0059	○	0,59	53	17,7	5,8	3	5
0060	●	0,6	53	18	5,9	3	1
0061	○	0,61	53	18,3	6	3	5
0062	○	0,62	53	18,6	6,1	3	5
0063	○	0,63	53	18,9	6,2	3	5
0064	○	0,64	53	19,2	6,3	3	5
0065	●	0,65	53	19,5	6,4	3	1
0066	○	0,66	53	19,8	6,5	3	5
0067	○	0,67	53	20,1	6,6	3	5
0068	○	0,68	53	20,4	6,7	3	5
0069	○	0,69	53	20,7	6,8	3	5
0070	●	0,7	60	21	6,9	3	1
0071	○	0,71	60	21,3	7	3	5
0072	○	0,72	60	21,6	7,1	3	5
0073	○	0,73	60	21,9	7,2	3	5
0074	○	0,74	60	22,2	7,3	3	5
0075	●	0,75	60	22,5	7,4	3	1
0076	○	0,76	60	22,8	7,4	3	5
0077	○	0,77	60	23,1	7,5	3	5
0078	○	0,78	60	23,4	7,6	3	5
0079	○	0,79	60	23,7	7,7	3	5
0080	●	0,8	60	24	7,8	3	1
0081	○	0,81	60	24,3	7,9	3	5
0082	○	0,82	60	24,6	8	3	5
0083	○	0,83	60	24,9	8,1	3	5
0084	○	0,84	60	25,2	8,2	3	5
0085	●	0,85	64	25,5	8,3	3	1
0086	○	0,86	64	25,8	8,4	3	5
0087	○	0,87	64	26,1	8,5	3	5
0088	○	0,88	64	26,4	8,6	3	5
0089	○	0,89	64	26,7	8,7	3	5
0090	●	0,9	64	27	8,8	3	1
0091	○	0,91	64	27,3	8,9	3	5
0092	○	0,92	64	27,6	9	3	5
0093	○	0,93	64	27,9	9,1	3	5
0094	○	0,94	64	28,2	9,2	3	5
0095	●	0,95	64	28,5	9,3	3	1
0096	○	0,96	64	28,8	9,4	3	5
0097	○	0,97	64	29,1	9,5	3	5
0098	○	0,98	64	29,4	9,6	3	5
0099	○	0,99	64	29,7	9,7	3	5
0100	●	1	70	30	9,8	3	1
0101	○	1,01	70	30,3	9,9	3	5
0102	○	1,02	70	30,6	10	3	5
0103	○	1,03	70	30,9	10,1	3	5
0104	○	1,04	70	31,2	10,2	3	5
0105	●	1,05	70	31,5	10,3	3	1
0106	○	1,06	70	31,8	10,4	3	5
0107	○	1,07	70	32,1	10,5	3	5
0108	○	1,08	70	32,4	10,6	3	5
0109	○	1,09	70	32,7	10,7	3	5
0110	●	1,1	70	33	10,8	3	1
0111	○	1,11	70	33,3	10,9	3	5
0112	○	1,12	70	33,6	11	3	5
0113	○	1,13	70	33,9	11,1	3	5
0114	○	1,14	70	34,2	11,2	3	5
0115	●	1,15	70	34,5	11,3	3	1
0116	○	1,16	70	34,8	11,4	3	5
0117	○	1,17	70	35,1	11,5	3	5
0118	○	1,18	70	35,4	11,6	3	5
0119	○	1,19	70	35,7	11,7	3	5
0120	●	1,2	70	36	11,8	3	1
0125	NEW ●	1,25	75	37,5	12,3	4	1
0130	NEW ●	1,3	75	39	12,7	4	1
0135	NEW ●	1,35	75	40,5	13,2	4	1
0140	NEW ●	1,4	80	42	13,7	4	1
0145	NEW ●	1,45	85	43,5	14,2	4	1
0150	NEW ●	1,5	85	45	14,7	4	1
0155	NEW ●	1,55	85	46,5	15,2	4	1
0160	NEW ●	1,6	85	48	15,7	4	1
0165	NEW ●	1,65	85	49,5	16,2	4	1
0170	NEW ●	1,7	90	51	16,7	4	1
0175	NEW ●	1,75	90	52,5	17,2	4	1
0180	NEW ●	1,8	90	54	17,6	4	1
0185	NEW ●	1,85	95	55,5	18,1	4	1
0190	NEW ●	1,9	95	57	18,6	4	1
0195	NEW ●	1,95	100	58,5	19,1	4	1
0200	NEW ●	2	100	60	19,6	4	1

50 × A11



N° article	102478 50× A11, eXedur RIP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	
0030	●	0,3	53	15	2,9	3	1
0031	○	0,31	53	15,5	3	3	5
0032	○	0,32	53	16	3,1	3	5
0033	○	0,33	53	16,5	3,2	3	5
0034	○	0,34	53	17	3,3	3	5
0035	●	0,35	53	17,5	3,4	3	1
0036	○	0,36	53	18	3,5	3	5
0037	○	0,37	53	18,5	3,6	3	5
0038	○	0,38	53	19	3,7	3	5
0039	○	0,39	53	19,5	3,8	3	5
0040	●	0,4	53	20	3,9	3	1
0041	○	0,41	60	20,5	4	3	5
0042	○	0,42	60	21	4,1	3	5
0043	○	0,43	60	21,5	4,2	3	5
0044	○	0,44	60	22	4,3	3	5
0045	●	0,45	60	22,5	4,4	3	1
0046	○	0,46	60	23	4,5	3	5
0047	○	0,47	60	23,5	4,6	3	5
0048	○	0,48	60	24	4,7	3	5
0049	○	0,49	60	24,5	4,8	3	5
0050	●	0,5	60	25	4,9	3	1
0051	○	0,51	64	25,5	5	3	5
0052	○	0,52	64	26	5,1	3	5
0053	○	0,53	64	26,5	5,2	3	5
0054	○	0,54	64	27	5,3	3	5
0055	●	0,55	64	27,5	5,4	3	1
0056	○	0,56	64	28	5,5	3	5
0057	○	0,57	64	28,5	5,6	3	5
0058	○	0,58	64	29	5,7	3	5
0059	○	0,59	64	29,5	5,8	3	5
0060	●	0,6	64	30	5,9	3	1
0061	○	0,61	70	30,5	6	3	5
0062	○	0,62	70	31	6,1	3	5
0063	○	0,63	70	31,5	6,2	3	5
0064	○	0,64	70	32	6,3	3	5
0065	●	0,65	70	32,5	6,4	3	1
0066	○	0,66	70	33	6,5	3	5
0067	○	0,67	70	33,5	6,6	3	5
0068	○	0,68	70	34	6,7	3	5
0069	○	0,69	70	34,5	6,8	3	5
0070	●	0,7	70	35	6,9	3	1
0071	○	0,71	75	35,5	7	3	5
0072	○	0,72	75	36	7,1	3	5
0073	○	0,73	75	36,5	7,2	3	5
0074	○	0,74	75	37	7,3	3	5
0075	●	0,75	75	37,5	7,4	3	1
0076	○	0,76	75	38	7,4	3	5
0077	○	0,77	75	38,5	7,5	3	5
0078	○	0,78	75	39	7,6	3	5
0079	○	0,79	75	39,5	7,7	3	5
0080	●	0,8	75	40	7,8	3	1
0081	○	0,81	80	40,5	7,9	3	5
0082	○	0,82	80	41	8	3	5
0083	○	0,83	80	41,5	8,1	3	5
0084	○	0,84	80	42	8,2	3	5
0085	●	0,85	80	42,5	8,3	3	1
0086	○	0,86	80	43	8,4	3	5
0087	○	0,87	80	43,5	8,5	3	5
0088	○	0,88	80	44	8,6	3	5
0089	○	0,89	80	44,5	8,7	3	5
0090	●	0,9	80	45	8,8	3	1
0091	○	0,91	85	45,5	8,9	3	5
0092	○	0,92	85	46	9	3	5
0093	○	0,93	85	46,5	9,1	3	5
0094	○	0,94	85	47	9,2	3	5
0095	●	0,95	85	47,5	9,3	3	1
0096	○	0,96	85	48	9,4	3	5
0097	○	0,97	85	48,5	9,5	3	5
0098	○	0,98	85	49	9,6	3	5
0099	○	0,99	85	49,5	9,7	3	5
0100	●	1	85	50	9,8	3	1
0101	○	1,01	90	50,5	9,9	3	5
0102	○	1,02	90	51	10	3	5
0103	○	1,03	90	51,5	10,1	3	5
0104	○	1,04	90	52	10,2	3	5
0105	●	1,05	90	52,5	10,3	3	1
0106	○	1,06	90	53	10,4	3	5
0107	○	1,07	90	53,5	10,5	3	5
0108	○	1,08	90	54	10,6	3	5
0109	○	1,09	90	54,5	10,7	3	5
0110	●	1,1	90	55	10,8	3	1
0111	○	1,11	95	55,5	10,9	3	5
0112	○	1,12	95	56	11	3	5
0113	○	1,13	95	56,5	11,1	3	5
0114	○	1,14	95	57	11,2	3	5
0115	●	1,15	95	57,5	11,3	3	1
0116	○	1,16	95	58	11,4	3	5
0117	○	1,17	95	58,5	11,5	3	5
0118	○	1,18	95	59	11,6	3	5
0119	○	1,19	95	59,5	11,7	3	5
0120	●	1,2	95	60	11,8	3	1
0125	NEW ●	1,25	105	62,5	12,3	4	1
0130	NEW ●	1,3	105	65	12,7	4	1
0135	NEW ●	1,35	105	67,5	13,2	4	1
0140	NEW ●	1,4	110	70	13,7	4	1
0145	NEW ●	1,45	115	72,5	14,2	4	1
0150	NEW ●	1,5	115	75	14,7	4	1
0155	NEW ●	1,55	115	77,5	15,2	4	1
0160	NEW ●	1,6	120	80	15,7	4	1
0165	NEW ●	1,65	120	82,5	16,2	4	1
0170	NEW ●	1,7	125	85	16,7	4	1
0175	NEW ●	1,75	130	87,5	17,2	4	1
0180	NEW ●	1,8	130	90	17,6	4	1
0185	NEW ●	1,85	135	92,5	18,1	4	1
0190	NEW ●	1,9	135	95	18,6	4	1
0195	NEW ●	1,95	140	97,5	19,1	4	1
0200	NEW ●	2	140	100	19,6	4	1

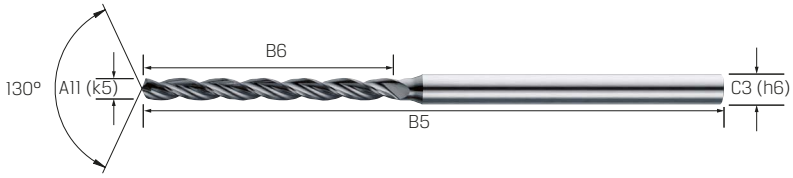
Micro drill SC Aluminium

CRAZYDRILL Alu — MIKRON TOOL

Design:
- solid carbide with straight shank
- point angle 130°
- coated
- for maximum drilling speed
- highest precision in the bore
- self-centring
- minimum chip removal
- extraordinary tool life
- 3 cutting edges

SC | coated | Factory standard | Teeth 3 | 130° | N

5 × A11

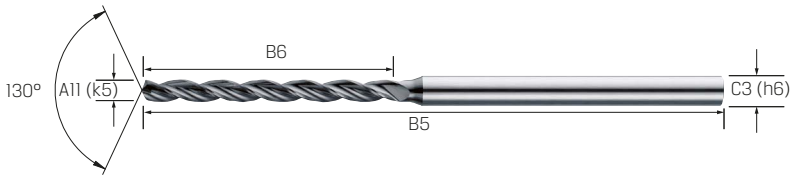


N° article	102449 5× A11, DLC	A11 mm	B5 mm	B6 mm	C3 mm
0040	○	0,4	43	2,9	3
0045	○	0,45	43	3,3	3
0050	●	0,5	43	3,6	3
0055	○	0,55	43	4	3
0060	●	0,6	43	4,3	3
0065	○	0,65	43	4,7	3
0070	○	0,7	45	5,1	3
0075	○	0,75	45	5,4	3
0080	●	0,8	45	5,8	3
0085	○	0,85	45	6,1	3
0090	●	0,9	45	6,5	3
0095	○	0,95	46	6,9	3
0100	●	1	46	7,2	3
0105	○	1,05	46	7,6	3
0110	○	1,1	46	8	3
0115	○	1,15	48	8,3	3
0120	○	1,2	48	8,7	3
0125	○	1,25	48	9	3

N° article	102449 5× A11, DLC	A11 mm	B5 mm	B6 mm	C3 mm
0130	○	1,3	48	9,4	3
0135	○	1,35	48	9,8	3
0140	○	1,4	48	10,1	3
0145	○	1,45	49	10,5	3
0150	○	1,5	49	10,9	3
0155	○	1,55	50,5	11,2	3
0160	○	1,6	50,5	11,6	3
0165	○	1,65	50,5	11,9	3
0170	○	1,7	50,5	12,3	3
0175	○	1,75	52	12,7	3
0180	○	1,8	52	13	3
0185	○	1,85	52	13,4	3
0190	○	1,9	53,5	13,7	3
0195	○	1,95	53,5	14,1	3
0200	○	2	60	14,5	4
0205	○	2,05	60	14,8	4
0210	○	2,1	60	15,2	4
0215	○	2,15	60	15,6	4

N° article	102449 5× A11, DLC	A11 mm	B5 mm	B6 mm	C3 mm
0220	○	2,2	61,5	15,9	4
0225	○	2,25	61,5	16,3	4
0230	○	2,3	61,5	16,6	4
0235	○	2,35	61,5	17	4
0240	○	2,4	62	17,4	4
0245	○	2,45	62	17,7	4
0250	●	2,5	62	18,1	4
0255	○	2,55	63	18,4	4
0260	○	2,6	63	18,8	4
0265	○	2,65	63	19,2	4
0270	○	2,7	63	19,5	4
0275	○	2,75	64,5	19,9	4
0280	●	2,8	64,5	20,3	4
0285	○	2,85	64,5	20,6	4
0290	○	2,9	65	21	4
0295	○	2,95	65	21,3	4
0300	○	3	65	21,7	4

10 × A11



N° article	102451 10× A11, DLC	A11 mm	B5 mm	B6 mm	C3 mm
0040	●	0,4	45	4,9	3
0045	○	0,45	45	5,5	3
0050	○	0,5	45	6,1	3
0055	○	0,55	45	6,7	3
0060	●	0,6	47	7,3	3
0065	○	0,65	47	8	3
0070	●	0,7	47	8,6	3
0075	○	0,75	49	9,2	3
0080	●	0,8	49	9,8	3
0085	○	0,85	49	10,4	3
0090	●	0,9	49	11	3
0095	○	0,95	50,5	11,6	3
0100	●	1	50,5	12,2	3
0105	○	1,05	52	12,8	3
0110	○	1,1	52	13,5	3
0115	○	1,15	53,5	14,1	3
0120	●	1,2	53,5	14,7	3
0125	○	1,25	53,5	15,3	3

N° article	102451 10× A11, DLC	A11 mm	B5 mm	B6 mm	C3 mm
0130	○	1,3	55,5	15,9	3
0135	○	1,35	55,5	16,5	3
0140	○	1,4	55,5	17,1	3
0145	●	1,45	55,5	17,7	3
0150	○	1,5	64,5	18,4	4
0155	○	1,55	64,5	19	4
0160	○	1,6	64,5	19,6	4
0165	○	1,65	64,5	20,2	4
0170	○	1,7	67	20,8	4
0175	○	1,75	67	21,4	4
0180	○	1,8	67	22	4
0185	○	1,85	68,5	22,6	4
0190	○	1,9	68,5	23,2	4
0195	○	1,95	68,5	23,9	4
0200	●	2	70	24,5	4
0205	○	2,05	70	25,1	4
0210	○	2,1	70	25,7	4
0215	○	2,15	72	26,3	4

N° article	102451 10× A11, DLC	A11 mm	B5 mm	B6 mm	C3 mm
0220	○	2,2	72	26,9	4
0225	○	2,25	72	27,5	4
0230	○	2,3	73,5	28,1	4
0235	○	2,35	73,5	28,7	4
0240	○	2,4	73,5	29,4	4
0245	○	2,45	75	30	4
0250	●	2,5	75	30,6	4
0255	○	2,55	75	31,2	4
0260	○	2,6	76,5	31,8	4
0265	○	2,65	76,5	32,4	4
0270	○	2,7	76,5	33	4
0275	○	2,75	78	33,6	4
0280	○	2,8	78	34,3	4
0285	○	2,85	78	34,9	4
0290	○	2,9	80	35,5	4
0295	○	2,95	80	36,1	4
0300	○	3	80	36,7	4

Micro drill SC

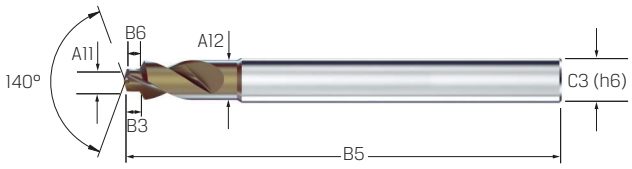
CRAZYDRILL Hexalobe — MIKRON TOOL

Design:
- the reinforced carbide shank guarantees stability, high concentricity and thus maximum drilling accuracy.
- the specially developed ultra-fine grain carbide meets all requirements in terms of mechanical properties
- the high-performance coating eXedur SNP is heat and wear resistant, prevents the cutting edges from sticking and guarantees optimal chip transport
- chrome-free coating to avoid cross-contamination, indispensable for medical parts
- dimensions according to ISO 10664

Use:
- standard diameter for pre-drilling TORX® forms from T4 to T30
- pre-drilling and production of a 120° chamfer are combined in a single operation

SC | coated | Teeth 2 | 140° | 120°

NEW



Note:
Tolerance A11 0/-0.008 mm.

CRAZYDRILL Hexalobe TITANIUM — S

N° article	102452 CrazyDrill Hexalobe, titanium	A11 mm	A12 mm	B3 mm	B5 mm	B6 mm	C3 mm	TORX type
0090	○	0,9	1,7	0,7	40	0,56	3	T4
0100	○	1	2	0,75	40	0,59	3	T5
0100L	○	1	2	0,87	40	0,72	3	T5
0120	○	1,2	2,2	0,86	40	0,67	3	T6
0120L	○	1,2	2,2	1,06	40	0,88	3	T6
0140	○	1,4	3	1,01	40	0,79	3	T7
0140L	○	1,4	3	1,05	40	0,83	3	T7
0160	○	1,6	3	1,05	40	0,81	3	T8
0160L	○	1,6	3	1,4	40	1,15	3	T8
0190	○	1,9	4	1,42	40	1,13	4	T10
0230	○	2,3	4	1,78	50	1,42	4	T15
0270	○	2,7	5	2,12	50	1,7	6	T20
0310	○	3,1	6	2,84	50	2,36	6	T25
0380	○	3,8	6	3,04	50	2,45	6	T30
0380L	○	3,8	6	3,52	50	2,93	6	T30

CRAZYDRILL Hexalobe SST-INOX — M

N° article	102454 CrazyDrill Hexalobe, stainless	A11 mm	A12 mm	B3 mm	B5 mm	B6 mm	C3 mm	TORX type
0090	○	0,9	1,7	0,7	40	0,56	3	T4
0100	○	1	2	0,75	40	0,59	3	T5
0100L	○	1	2	0,87	40	0,72	3	T5
0120	○	1,2	2,2	0,86	40	0,67	3	T6
0120L	○	1,2	2,2	1,06	40	0,88	3	T6
0140	○	1,4	3	1,01	40	0,79	3	T7
0140L	○	1,4	3	1,05	40	0,83	3	T7
0160	○	1,6	3	1,05	40	0,81	3	T8
0160L	○	1,6	3	1,4	40	1,15	3	T8
0190	○	1,9	4	1,42	40	1,13	4	T10
0230	○	2,3	4	1,78	50	1,42	4	T15
0270	○	2,7	5	2,12	50	1,7	6	T20
0310	○	3,1	6	2,84	50	2,36	6	T25
0380	○	3,8	6	3,04	50	2,45	6	T30
0380L	○	3,8	6	3,52	50	2,93	6	T30

Micro drill SC Titanium

CRAZYDRILL Flexpilot TITANIUM — MIKRON TOOL

Design:
- solid carbide pilot drill
- novel, special CrazyDrill Flex drill geometry
- especially for tough and long-chipping materials
- robust unified shank Ø 3 - h6

Use:
Implements faster and reliable drilling operations in the watch and jewellery sectors and in medical, aviation and aerospace industries

Note:
Delivery only in specified PU

SC | Factory standard | Teeth 2 | 140° | S



N° article	102412 3× A11	A11 mm	B5 mm	B3 mm	B6 mm		N° article	102412 3× A11	A11 mm	B5 mm	B3 mm	B6 mm		N° article	102412 3× A11	A11 mm	B5 mm	B3 mm	B6 mm	
0010	○	0,1	40	0,5	0,3	1	0047	○	0,47	40	2,4	1,41	5	0084	○	0,84	40	4,2	2,52	5
0011	○	0,11	40	0,6	0,33	5	0048	○	0,48	40	2,4	1,44	5	0085	●	0,85	40	4,3	2,55	1
0012	○	0,12	40	0,6	0,36	5	0049	○	0,49	40	2,5	1,47	5	0086	○	0,86	40	4,3	2,58	5
0013	○	0,13	40	0,7	0,39	5	0050	○	0,5	40	2,5	1,5	1	0087	○	0,87	40	4,4	2,61	5
0014	○	0,14	40	0,7	0,42	5	0051	○	0,51	40	2,6	1,53	5	0088	○	0,88	40	4,4	2,64	5
0015	○	0,15	40	0,8	0,45	1	0052	○	0,52	40	2,6	1,56	5	0089	○	0,89	40	4,5	2,67	5
0016	○	0,16	40	0,8	0,48	5	0053	○	0,53	40	2,7	1,59	5	0090	○	0,9	40	4,5	2,7	1
0017	○	0,17	40	0,9	0,51	5	0054	○	0,54	40	2,7	1,62	5	0091	○	0,91	40	4,6	2,73	5
0018	○	0,18	40	0,9	0,54	5	0055	○	0,55	40	2,8	1,65	1	0092	○	0,92	40	4,6	2,76	5
0019	○	0,19	40	1	0,57	5	0056	○	0,56	40	2,8	1,68	5	0093	○	0,93	40	4,7	2,79	5
0020	○	0,2	40	1	0,6	1	0057	○	0,57	40	2,9	1,71	5	0094	○	0,94	40	4,7	2,82	5
0021	○	0,21	40	1,1	0,63	5	0058	○	0,58	40	2,9	1,74	5	0095	○	0,95	40	4,8	2,85	1
0022	○	0,22	40	1,1	0,66	5	0059	○	0,59	40	3	1,77	5	0096	○	0,96	40	4,8	2,88	5
0023	○	0,23	40	1,2	0,69	5	0060	○	0,6	40	3	1,8	1	0097	○	0,97	40	4,9	2,91	5
0024	○	0,24	40	1,2	0,72	5	0061	○	0,61	40	3,1	1,83	5	0098	○	0,98	40	4,9	2,94	5
0025	○	0,25	40	1,3	0,75	1	0062	○	0,62	40	3,1	1,86	5	0099	○	0,99	40	5	2,97	5
0026	○	0,26	40	1,3	0,78	5	0063	○	0,63	40	3,2	1,89	5	0100	○	1	40	5	3	1
0027	○	0,27	40	1,4	0,81	5	0064	○	0,64	40	3,2	1,92	5	0101	○	1,01	40	5,1	3,03	5
0028	○	0,28	40	1,4	0,84	5	0065	○	0,65	40	3,3	1,95	1	0102	○	1,02	40	5,1	3,06	5
0029	○	0,29	40	1,5	0,87	5	0066	○	0,66	40	3,3	1,98	5	0103	○	1,03	40	5,2	3,09	5
0030	○	0,3	40	1,5	0,9	1	0067	○	0,67	40	3,4	2,01	5	0104	○	1,04	40	5,2	3,12	5
0031	○	0,31	40	1,6	0,93	5	0068	○	0,68	40	3,4	2,04	5	0105	○	1,05	40	5,3	3,15	1
0032	○	0,32	40	1,6	0,96	5	0069	○	0,69	40	3,5	2,07	5	0106	○	1,06	40	5,3	3,18	5
0033	○	0,33	40	1,7	0,99	5	0070	○	0,7	40	3,5	2,1	1	0107	○	1,07	40	5,4	3,21	5
0034	○	0,34	40	1,7	1,02	5	0071	○	0,71	40	3,6	2,13	5	0108	○	1,08	40	5,4	3,24	5
0035	○	0,35	40	1,8	1,05	1	0072	○	0,72	40	3,6	2,16	5	0109	○	1,09	40	5,5	3,27	5
0036	○	0,36	40	1,8	1,08	5	0073	○	0,73	40	3,7	2,19	5	0110	○	1,1	40	5,5	3,3	1
0037	○	0,37	40	1,9	1,11	5	0074	○	0,74	40	3,7	2,22	5	0111	○	1,11	40	5,6	3,33	5
0038	○	0,38	40	1,9	1,14	5	0075	○	0,75	40	3,8	2,25	1	0112	○	1,12	40	5,6	3,36	5
0039	○	0,39	40	2	1,17	5	0076	○	0,76	40	3,8	2,28	5	0113	○	1,13	40	5,7	3,39	5
0040	○	0,4	40	2	1,2	1	0077	○	0,77	40	3,9	2,31	5	0114	○	1,14	40	5,7	3,42	5
0041	○	0,41	40	2,1	1,23	5	0078	○	0,78	40	3,9	2,34	5	0115	○	1,15	40	5,8	3,45	1
0042	○	0,42	40	2,1	1,26	5	0079	○	0,79	40	4	2,37	5	0116	○	1,16	40	5,8	3,48	5
0043	○	0,43	40	2,2	1,29	5	0080	○	0,8	40	4	2,4	1	0117	○	1,17	40	5,9	3,51	5
0044	○	0,44	40	2,2	1,32	5	0081	○	0,81	40	4,1	2,43	5	0118	○	1,18	40	5,9	3,54	5
0045	○	0,45	40	2,3	1,35	1	0082	○	0,82	40	4,1	2,46	5	0119	○	1,19	40	6	3,57	5
0046	○	0,46	40	2,3	1,38	5	0083	○	0,83	40	4,2	2,49	5	0120	○	1,2	40	6	3,6	1

Micro drill SC Titanium

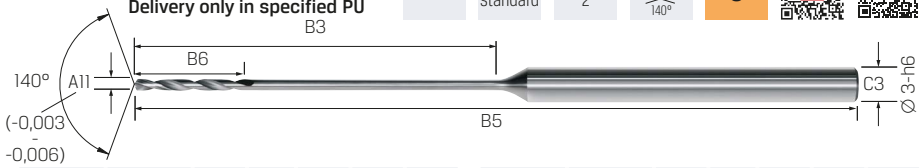
CRAZYDRILL Flexpilot TITANIUM — MIKRON TOOL

Design:
- special drill bit geometry for low heat generation and highest drilling speeds
- cutting edge protection prevents break-outs
- flute geometry for short chips
- flexible centre part
- robust unified shank Ø 3 - h6
- special cutting edge geometry for titanium processing

30 × A11

Note:
Drill pilot bore with 102412
Delivery only in specified PU

SC | Factory standard | Teeth 2 | 140° | S

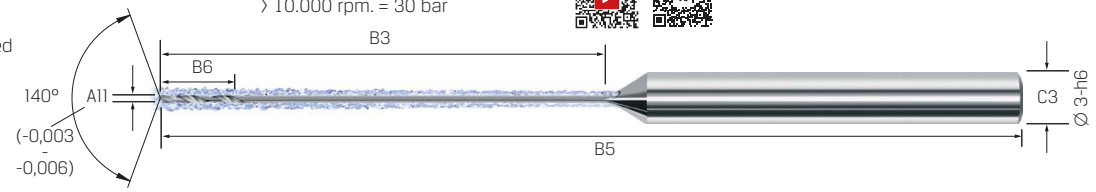


N° article	102460 30× A11	A11 mm	B5 mm	B3 mm	B6 mm	
0010	○	0,1	45	3	1,1	1
0011	○	0,11	45	3,3	1,2	5
0012	○	0,12	45	3,6	1,3	5
0013	○	0,13	45	3,9	1,4	5
0014	○	0,14	45	4,2	1,5	5
0015	○	0,15	45	4,5	1,6	1
0016	○	0,16	45	4,8	1,7	5
0017	○	0,17	45	5,1	1,8	5
0018	○	0,18	45	5,4	1,9	5
0019	○	0,19	45	5,7	2	5
0020	○	0,2	45	6	2,1	1
0021	○	0,21	45	6,3	2,2	5
0022	○	0,22	45	6,6	2,3	5
0023	○	0,23	45	6,9	2,4	5
0024	○	0,24	45	7,2	2,5	5
0025	●	0,25	45	7,5	2,6	1
0026	○	0,26	45	7,8	2,7	5
0027	○	0,27	45	8,1	2,8	5
0028	○	0,28	45	8,4	2,9	5
0029	○	0,29	45	8,7	3	5
0030	●	0,3	50	9	3,2	1
0031	○	0,31	50	9,3	3,3	5
0032	○	0,32	50	9,6	3,4	5
0033	○	0,33	50	9,9	3,5	5
0034	○	0,34	50	10,2	3,6	5
0035	○	0,35	50	10,5	3,7	1
0036	○	0,36	50	10,8	3,8	5
0037	○	0,37	50	11,1	3,9	5
0038	○	0,38	50	11,4	4	5
0039	○	0,39	50	11,7	4,1	5
0040	●	0,4	50	12	4,2	1
0041	○	0,41	50	12,3	4,3	5
0042	○	0,42	50	12,6	4,4	5
0043	○	0,43	50	12,9	4,5	5
0044	○	0,44	50	13,2	4,6	5
0045	●	0,45	50	13,5	4,7	1
0046	○	0,46	50	13,8	4,8	5
0047	○	0,47	50	14,1	4,9	5
0048	○	0,48	50	14,4	5	5
0049	○	0,49	50	14,7	5,1	5
0050	●	0,5	53	15	5,3	1
0051	○	0,51	53	15,3	5,4	5
0052	○	0,52	53	15,6	5,5	5
0053	○	0,53	53	15,9	5,6	5
0054	○	0,54	53	16,2	5,7	5
0055	○	0,55	53	16,5	5,8	1
0056	○	0,56	53	16,8	5,9	5
0057	○	0,57	53	17,1	6	5
0058	○	0,58	53	17,4	6,1	5
0059	○	0,59	53	17,7	6,2	5
0060	●	0,6	53	18	6,3	1
0061	○	0,61	53	18,3	6,4	5
0062	○	0,62	53	18,6	6,5	5
0063	○	0,63	53	18,9	6,6	5
0064	○	0,64	53	19,2	6,7	5
0065	○	0,65	53	19,5	6,8	1
0066	○	0,66	53	19,8	6,9	5
0067	○	0,67	53	20,1	7	5
0068	○	0,68	53	20,4	7,1	5
0069	○	0,69	53	20,7	7,2	5
0070	○	0,7	60	21	7,4	1
0071	○	0,71	60	21,3	7,5	5
0072	○	0,72	60	21,6	7,6	5
0073	○	0,73	60	21,9	7,7	5
0074	○	0,74	60	22,2	7,8	5
0075	○	0,75	60	22,5	7,9	1
0076	○	0,76	60	22,8	8	5
0077	○	0,77	60	23,1	8,1	5
0078	○	0,78	60	23,4	8,2	5
0079	○	0,79	60	23,7	8,3	5
0080	●	0,8	60	24	8,4	1
0081	○	0,81	60	24,3	8,5	5
0082	○	0,82	60	24,6	8,6	5
0083	○	0,83	60	24,9	8,7	5
0084	○	0,84	60	25,2	8,8	5
0085	○	0,85	64	25,5	8,9	1
0086	○	0,86	64	25,8	9	5
0087	○	0,87	64	26,1	9,1	5
0088	○	0,88	64	26,4	9,2	5
0089	○	0,89	64	26,7	9,3	5
0090	●	0,9	64	27	9,5	1
0091	○	0,91	64	27,3	9,6	5
0092	○	0,92	64	27,6	9,7	5
0093	○	0,93	64	27,9	9,8	5
0094	○	0,94	64	28,2	9,9	5
0095	○	0,95	64	28,5	10	1
0096	○	0,96	64	28,8	10,1	5
0097	○	0,97	64	29,1	10,2	5
0098	○	0,98	64	29,4	10,3	5
0099	○	0,99	64	29,7	10,4	5
0100	●	1	70	30	10,5	1
0101	○	1,01	70	30,3	10,6	5
0102	○	1,02	70	30,6	10,7	5
0103	○	1,03	70	30,9	10,8	5
0104	○	1,04	70	31,2	10,9	5
0105	○	1,05	70	31,5	11	1
0106	○	1,06	70	31,8	11,1	5
0107	○	1,07	70	32,1	11,2	5
0108	○	1,08	70	32,4	11,3	5
0109	○	1,09	70	32,7	11,4	5
0110	○	1,1	70	33	11,6	1
0111	○	1,11	70	33,3	11,7	5
0112	○	1,12	70	33,6	11,8	5
0113	○	1,13	70	33,9	11,9	5
0114	○	1,14	70	34,2	12	5
0115	○	1,15	70	34,5	12,1	1
0116	○	1,16	70	34,8	12,2	5
0117	○	1,17	70	35,1	12,3	5
0118	○	1,18	70	35,4	12,4	5
0119	○	1,19	70	35,7	12,5	5
0120	○	1,2	70	36	12,6	1

Design:
- special drill bit geometry for low heat generation and highest drilling speeds
- cutting edge protection prevents break-outs
- flute geometry for short chips
- flexible centre part
- robust unified shank Ø 3 - h6
- deep-hole boring with integrated cooling
- optimal cooling and precise chip evacuation

Note:
Drill pilot bore with 102412
Delivery only in specified PU
Minimum coolant pressure:
speed ≥ 10,000 rpm. = 15 bar
› 10.000 rpm. = 30 bar

SC | Factory standard | 50 × A11 | Teeth 2 | 140° | S



N° article	102462 50× A11, IC	A11 mm	B5 mm	B3 mm	B6 mm	
0030	○	0,3	53	15	3,2	1
0031	○	0,31	53	15,5	3,3	5
0032	○	0,32	53	16	3,4	5
0033	○	0,33	53	16,5	3,5	5
0034	○	0,34	53	17	3,6	5
0035	○	0,35	53	17,6	3,7	1
0036	○	0,36	53	18	3,8	5
0037	○	0,37	53	18,5	3,9	5
0038	○	0,38	53	19	4	5
0039	○	0,39	53	19,5	4,1	5
0040	○	0,4	53	20	4,2	1
0041	○	0,41	60	20,5	4,3	5
0042	○	0,42	60	21	4,4	5
0043	○	0,43	60	21,5	4,5	5
0044	○	0,44	60	22	4,6	5
0045	○	0,45	60	22,6	4,7	1
0046	○	0,46	60	23	4,8	5
0047	○	0,47	60	23,5	4,9	5
0048	○	0,48	60	24	5	5
0049	○	0,49	60	24,5	5,1	5
0050	○	0,5	64	25	5,3	1
0051	○	0,51	64	25,5	5,4	5
0052	○	0,52	64	26	5,5	5
0053	○	0,53	64	26,5	5,6	5
0054	○	0,54	64	27	5,7	5
0055	○	0,55	64	27,6	5,8	1
0056	○	0,56	64	28	5,9	5
0057	○	0,57	64	28,5	6	5
0058	○	0,58	64	29	6,1	5
0059	○	0,59	64	29,5	6,2	5
0060	○	0,6	70	30	6,3	1
0061	○	0,61	70	30,5	6,4	5
0062	○	0,62	70	31	6,5	5
0063	○	0,63	70	31,5	6,6	5
0064	○	0,64	70	32	6,7	5
0065	○	0,65	70	32,6	6,8	1
0066	○	0,66	70	33	6,9	5
0067	○	0,67	70	33,5	7	5
0068	○	0,68	70	34	7,1	5
0069	○	0,69	70	34,5	7,2	5
0070	○	0,7	75	35	7,4	1
0071	○	0,71	75	35,5	7,5	5
0072	○	0,72	75	36	7,6	5
0073	○	0,73	75	36,5	7,7	5
0074	○	0,74	75	37	7,8	5
0075	○	0,75	75	37,6	7,9	1
0076	○	0,76	75	38	8	5
0077	○	0,77	75	38,5	8,1	5
0078	○	0,78	75	39	8,2	5
0079	○	0,79	75	39,5	8,3	5
0080	○	0,8	80	40	8,4	1
0081	○	0,81	80	40,5	8,5	5
0082	○	0,82	80	41	8,6	5
0083	○	0,83	80	41,5	8,7	5
0084	○	0,84	80	42	8,8	5
0085	○	0,85	80	42,6	8,9	1
0086	○	0,86	80	43	9	5
0087	○	0,87	80	43,5	9,1	5
0088	○	0,88	80	44	9,2	5
0089	○	0,89	80	44,5	9,3	5
0090	○	0,9	85	45	9,5	1
0091	○	0,91	85	45,5	9,6	5
0092	○	0,92	85	46	9,7	5
0093	○	0,93	85	46,5	9,8	5
0094	○	0,94	85	47	9,9	5
0095	○	0,95	85	47,6	10	1
0096	○	0,96	85	48	10,1	5
0097	○	0,97	85	48,5	10,2	5
0098	○	0,98	85	49	10,3	5
0099	○	0,99	85	49,5	10,4	5
0100	○	1	90	50	10,5	1
0101	○	1,01	90	50,5	10,6	5
0102	○	1,02	90	51	10,7	5
0103	○	1,03	90	51,5	10,8	5
0104	○	1,04	90	52	10,9	5
0105	○	1,05	90	52,6	11	1
0106	○	1,06	90	53	11,1	5
0107	○	1,07	90	53,5	11,2	5
0108	○	1,08	90	54	11,3	5
0109	○	1,09	90	54,5	11,4	5
0110	○	1,1	95	55	11,6	1
0111	○	1,11	95	55,5	11,7	5
0112	○	1,12	95	56	11,8	5
0113	○	1,13	95	56,5	11,9	5
0114	○	1,14	95	57	12	5
0115	○	1,15	95	57,6	12,1	1
0116	○	1,16	95	58	12,2	5
0117	○	1,17	95	58,5	12,3	5
0118	○	1,18	95	59	12,4	5
0119	○	1,19	95	59,5	12,5	5
0120	○	1,2	95	60	12,6	1

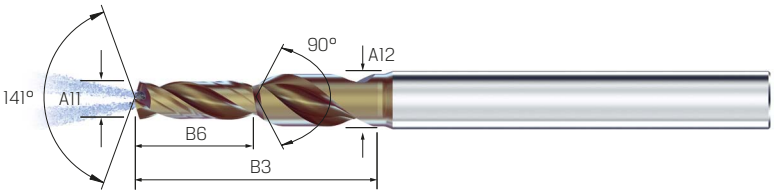
Micro drill SC ATC for titanium alloys

CRAZYDRILL Cool Titanium — MIKRON TOOL

Design:
- pilot and short drill
- bore hole directly chamfered with 90° countersink
- matched to **CrazyDrill Cool titanium**ATC Programmes
- process-safe drilling
- innovative groove and point geometry
- low cutting pressure
- with internal coolant supply

SC | coated | Factory standard | 3 × A11 | Teeth 2 | 141° | 90° | ICS | S | Vc

NEW



N° article	102461 3 x A11, eXedur SNP, IC	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
1,00	○	1	1,6	50	6,5	3,2	4	0,020 - 0,025
1,05	○	1,05	1,6	50	6,8	3,3	4	0,020 - 0,025
1,10	○	1,1	1,6	50	7,1	3,5	4	0,020 - 0,025
1,15	○	1,15	1,6	50	7,5	3,6	4	0,020 - 0,025
1,20	○	1,2	1,9	50	7,8	3,8	4	0,020 - 0,025
1,25	○	1,25	1,9	50	8,1	4	4	0,025 - 0,030
1,30	○	1,3	1,9	50	8,4	4,1	4	0,025 - 0,030
1,35	○	1,35	1,9	50	8,8	4,3	4	0,025 - 0,030
1,40	○	1,4	1,9	50	9,1	4,4	4	0,025 - 0,030
1,45	○	1,45	2,25	50	10,4	4,6	4	0,025 - 0,030
1,50	○	1,5	2,25	50	10,7	4,7	4	0,030 - 0,035
1,55	○	1,55	2,25	50	10,9	4,9	4	0,030 - 0,035
1,60	○	1,6	2,25	50	11,2	5,1	4	0,030 - 0,035
1,65	○	1,65	2,25	50	11,5	5,2	4	0,030 - 0,035
1,70	○	1,7	2,6	53	11,8	5,4	4	0,030 - 0,035
1,75	○	1,75	2,6	53	12,1	5,5	4	0,030 - 0,035
1,80	○	1,8	2,6	53	12,3	5,7	4	0,030 - 0,035
1,85	○	1,85	2,6	53	12,6	5,8	4	0,030 - 0,035
1,90	○	1,9	2,6	53	12,8	6	4	0,030 - 0,035
1,95	○	1,95	2,6	53	13,1	6,2	4	0,030 - 0,035
2,00	○	2	3,1	55	13,3	6,3	4	0,035 - 0,045
2,05	○	2,05	3,1	55	13,6	6,5	4	0,035 - 0,045
2,10	○	2,1	3,1	55	13,9	6,6	4	0,035 - 0,045
2,15	○	2,15	3,1	55	14,1	6,8	4	0,035 - 0,045
2,20	○	2,2	3,1	55	14,4	7	4	0,035 - 0,045
2,25	○	2,25	3,1	55	14,7	7,1	4	0,035 - 0,045
2,30	○	2,3	3,5	57	14,9	7,3	4	0,035 - 0,045

N° article	102461 3 x A11, eXedur SNP, IC	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
2,35	○	2,35	3,5	57	15,2	7,4	4	0,035 - 0,045
2,40	○	2,4	3,5	57	15,6	7,6	4	0,035 - 0,045
2,45	○	2,45	3,5	57	15,9	7,7	4	0,035 - 0,045
2,50	○	2,5	3,5	57	16,2	7,9	4	0,045 - 0,055
2,55	○	2,55	3,5	57	16,5	8,1	4	0,045 - 0,055
2,60	○	2,6	4	57	16,9	8,2	4	0,045 - 0,055
2,65	○	2,65	4	57	17,2	8,4	4	0,045 - 0,055
2,70	○	2,7	4	57	17,5	8,5	4	0,045 - 0,055
2,75	○	2,75	4	57	17,8	8,7	4	0,045 - 0,055
2,80	○	2,8	4	57	18,2	8,8	4	0,045 - 0,055
2,85	○	2,85	4	57	18,5	9	4	0,045 - 0,055
2,90	○	2,9	4	57	18,8	9,2	4	0,045 - 0,055
2,95	○	2,95	4	57	19,1	9,3	4	0,045 - 0,055
3,00	○	3	4,7	65	19,5	9,5	6	0,050 - 0,065
3,05	○	3,05	4,7	65	19,8	9,6	6	0,050 - 0,065
3,10	○	3,1	4,7	65	20,1	9,8	6	0,050 - 0,065
3,15	○	3,15	4,7	65	20,4	10	6	0,050 - 0,065
3,20	○	3,2	4,7	65	20,8	10,1	6	0,050 - 0,065
3,25	○	3,25	4,7	65	21,1	10,3	6	0,050 - 0,065
3,30	○	3,3	4,7	65	21,4	10,4	6	0,050 - 0,065
3,35	○	3,35	4,7	65	21,7	10,6	6	0,050 - 0,065
3,40	○	3,4	4,7	65	22,1	10,7	6	0,050 - 0,065
3,45	○	3,45	4,7	65	22,4	10,9	6	0,050 - 0,065
3,50	○	3,5	5,4	68	22,7	11,1	6	0,050 - 0,065
3,55	○	3,55	5,4	68	23	11,2	6	0,050 - 0,065
3,60	○	3,6	5,4	68	23,4	11,4	6	0,050 - 0,065
3,65	○	3,65	5,4	68	23,7	11,5	6	0,050 - 0,065

N° article	102461 3 x A11, eXedur SNP, IC	A11 mm	A12 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
3,70	○	3,7	5,4	68	24	11,7	6	0,050 - 0,065
3,75	○	3,75	5,4	68	24,3	11,8	6	0,050 - 0,065
3,80	○	3,8	5,4	68	24,7	12	6	0,050 - 0,065
3,85	○	3,85	5,4	68	25	12,2	6	0,050 - 0,065
3,90	○	3,9	5,4	68	25,3	12,3	6	0,050 - 0,065
3,95	○	3,95	5,4	68	25,6	12,5	6	0,050 - 0,065
4,00	○	4	5,4	68	25,9	12,6	6	0,060 - 0,075
4,10	○	4,1	6	72	26,5	12,9	6	0,060 - 0,075
4,20	○	4,2	6	72	27,2	13,3	6	0,060 - 0,075
4,30	○	4,3	6	72	27,8	13,6	6	0,060 - 0,075
4,40	○	4,4	6	72	28,5	13,9	6	0,060 - 0,075
4,50	○	4,5	6	72	29,1	14,2	6	0,060 - 0,075
4,60	○	4,6	6	72	29,8	14,5	6	0,060 - 0,075
4,70	○	4,7	7	75	30,4	14,8	8	0,060 - 0,075
4,80	○	4,8	7	75	31,1	15,2	8	0,060 - 0,075
4,90	○	4,9	7	75	31,8	15,5	8	0,060 - 0,075
5,00	○	5	7	75	32,4	15,8	8	0,070 - 0,085
5,10	○	5,1	7,5	75	33,1	16,1	8	0,070 - 0,085
5,20	○	5,2	7,5	75	33,7	16,4	8	0,070 - 0,085
5,30	○	5,3	7,5	75	34,4	16,7	8	0,070 - 0,085
5,40	○	5,4	8	80	35	17,1	8	0,070 - 0,085
5,50	○	5,5	8	80	35,7	17,4	8	0,070 - 0,085
5,60	○	5,6	8	80	36,3	17,7	8	0,070 - 0,085
5,70	○	5,7	8	80	37	18	8	0,070 - 0,085
5,80	○	5,8	8	80	37,6	18,3	8	0,070 - 0,085
5,90	○	5,9	8	80	38,3	18,6	8	0,070 - 0,085
6,00	○	6	8	80	38,9	18,9	8	0,075 - 0,090

Micro drill SC ATC for titanium alloys

CRAZYDRILL Cool Titanium — MIKRON TOOL

Design:
- excellent hole quality
- process-safe drilling
- innovative groove and point geometry
- low cutting pressure
- avoidance of chip jams
- excellent heat dissipation
- specially designed cooling concept

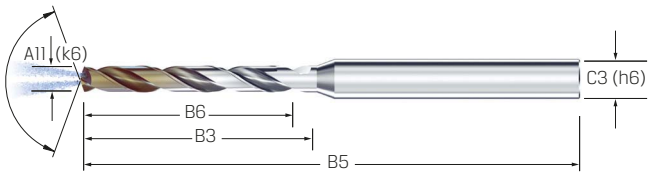
Use:
- for titanium alloys
- maximum drilling speed in one drilling stroke (drilling without repeated chip removal)

Note:
Drill pilot bore with 102461
Suitable for regrinding from
Ø 1.4 mm

NEW

SC | coated | Factory standard | Teeth 2 | 140° | ICS | S

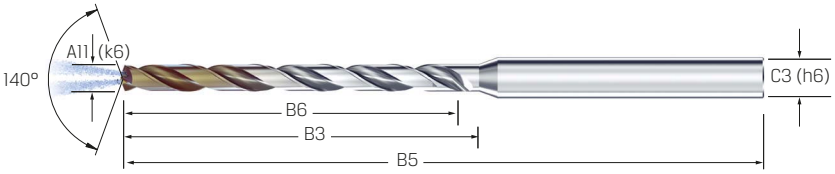
6 × A11



N° article	102463 6× A11, eXedur SNP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
1,00	○	1	55	9	6	4	0,020 - 0,025
1,05	○	1,05	55	9,5	6,3	4	0,020 - 0,025
1,10	○	1,1	55	9,9	6,6	4	0,020 - 0,025
1,15	○	1,15	55	10,4	6,9	4	0,020 - 0,025
1,20	○	1,2	57	10,8	7,2	4	0,020 - 0,025
1,25	○	1,25	57	11,3	7,5	4	0,025 - 0,030
1,30	○	1,3	57	11,7	7,8	4	0,025 - 0,030
1,35	○	1,35	57	12,2	8,1	4	0,025 - 0,030
1,40	○	1,4	57	12,6	8,4	4	0,025 - 0,030
1,45	○	1,45	58	13,1	8,7	4	0,025 - 0,030
1,50	○	1,5	58	13,5	9	4	0,030 - 0,035
1,55	○	1,55	58	14	9,3	4	0,030 - 0,035
1,60	○	1,6	58	14,4	9,6	4	0,030 - 0,035
1,65	○	1,65	58	14,9	9,9	4	0,030 - 0,035
1,70	○	1,7	60	15,3	10,2	4	0,030 - 0,035
1,75	○	1,75	60	15,8	10,5	4	0,030 - 0,035
1,80	○	1,8	60	16,2	10,8	4	0,030 - 0,035
1,85	○	1,85	60	16,7	11,1	4	0,030 - 0,035
1,90	○	1,9	60	17,1	11,4	4	0,030 - 0,035
1,95	○	1,95	60	17,6	11,7	4	0,030 - 0,035
2,00	○	2	63	18	12	4	0,035 - 0,045
2,05	○	2,05	63	18,5	12,3	4	0,035 - 0,045
2,10	○	2,1	63	18,9	12,6	4	0,035 - 0,045
2,15	○	2,15	63	19,4	12,9	4	0,035 - 0,045
2,20	○	2,2	63	19,8	13,2	4	0,035 - 0,045
2,25	○	2,25	63	20,3	13,5	4	0,035 - 0,045
2,30	○	2,3	65	20,7	13,8	4	0,035 - 0,045
2,35	○	2,35	65	21,2	14,1	4	0,035 - 0,045
2,40	○	2,4	65	21,6	14,4	4	0,035 - 0,045
2,45	○	2,45	65	22,1	14,7	4	0,035 - 0,045
2,50	○	2,5	65	22,5	15	4	0,045 - 0,055
2,55	○	2,55	65	23	15,3	4	0,045 - 0,055
2,60	○	2,6	68	23,4	15,6	4	0,045 - 0,055
2,65	○	2,65	68	23,9	15,9	4	0,045 - 0,055
2,70	○	2,7	68	24,3	16,2	4	0,045 - 0,055
2,75	○	2,75	68	24,8	16,5	4	0,045 - 0,055
2,80	○	2,8	68	25,2	16,8	4	0,045 - 0,055
2,85	○	2,85	68	25,7	17,1	4	0,045 - 0,055
2,90	○	2,9	68	26,1	17,4	4	0,045 - 0,055
2,95	○	2,95	68	26,6	17,7	4	0,045 - 0,055
3,00	○	3	74	27	18	6	0,050 - 0,065
3,05	○	3,05	74	27,5	18,3	6	0,050 - 0,065
3,10	○	3,1	74	27,9	18,6	6	0,050 - 0,065
3,15	○	3,15	74	28,4	18,9	6	0,050 - 0,065
3,20	○	3,2	74	28,8	19,2	6	0,050 - 0,065
3,25	○	3,25	74	29,3	19,5	6	0,050 - 0,065
3,30	○	3,3	74	29,7	19,8	6	0,050 - 0,065
3,35	○	3,35	74	30,2	20,1	6	0,050 - 0,065
3,40	○	3,4	74	30,6	20,4	6	0,050 - 0,065
3,45	○	3,45	74	31,1	20,7	6	0,050 - 0,065
3,50	○	3,5	78	31,5	21	6	0,050 - 0,065
3,55	○	3,55	78	32	21,3	6	0,050 - 0,065
3,60	○	3,6	78	32,4	21,6	6	0,050 - 0,065
3,65	○	3,65	78	32,9	21,9	6	0,050 - 0,065
3,70	○	3,7	78	33,3	22,2	6	0,050 - 0,065
3,75	○	3,75	78	33,8	22,5	6	0,050 - 0,065
3,80	○	3,8	78	34,2	22,8	6	0,050 - 0,065
3,85	○	3,85	78	34,7	23,1	6	0,050 - 0,065
3,90	○	3,9	78	35,1	23,4	6	0,050 - 0,065
3,95	○	3,95	78	35,6	23,7	6	0,050 - 0,065
4,00	○	4	78	36	24	6	0,060 - 0,075
4,10	○	4,1	80	36,9	24,6	6	0,060 - 0,075
4,20	○	4,2	80	37,8	25,2	6	0,060 - 0,075
4,30	○	4,3	80	38,7	25,8	6	0,060 - 0,075
4,40	○	4,4	80	39,6	26,4	6	0,060 - 0,075
4,50	○	4,5	80	40,5	27	6	0,060 - 0,075
4,60	○	4,6	80	41,4	27,6	6	0,060 - 0,075
4,70	○	4,7	84	42,3	28,2	6	0,060 - 0,075
4,80	○	4,8	84	43,2	28,8	6	0,060 - 0,075
4,90	○	4,9	84	44,1	29,4	6	0,060 - 0,075
5,00	○	5	84	45	30	6	0,070 - 0,085
5,10	○	5,1	84	45,9	30,6	6	0,070 - 0,085
5,20	○	5,2	84	46,8	31,2	6	0,070 - 0,085
5,30	○	5,3	84	47,7	31,8	6	0,070 - 0,085
5,40	○	5,4	88	48,6	32,4	6	0,070 - 0,085
5,50	○	5,5	88	49,5	33	6	0,070 - 0,085
5,60	○	5,6	88	50,4	33,6	6	0,070 - 0,085
5,70	○	5,7	88	51,3	34,2	6	0,070 - 0,085
5,80	○	5,8	88	52,2	34,8	6	0,070 - 0,085
5,90	○	5,9	88	53,1	35,4	6	0,070 - 0,085
6,00	○	6	88	54	36	6	0,075 - 0,090

NEW

10 × A11



N° article	102465 10 x A11, eXedur SNP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
1,00	○	1	59	13	10	4	0,020 - 0,025
1,05	○	1,05	59	13,7	10,5	4	0,020 - 0,025
1,10	○	1,1	59	14,3	11	4	0,020 - 0,025
1,15	○	1,15	59	15	11,5	4	0,020 - 0,025
1,20	○	1,2	62	15,6	12	4	0,020 - 0,025
1,25	○	1,25	62	16,3	12,5	4	0,025 - 0,030
1,30	○	1,3	62	16,9	13	4	0,025 - 0,030
1,35	○	1,35	62	17,6	13,5	4	0,025 - 0,030
1,40	○	1,4	62	18,2	14	4	0,025 - 0,030
1,45	○	1,45	65	18,9	14,5	4	0,025 - 0,030
1,50	○	1,5	65	19,5	15	4	0,030 - 0,035
1,55	○	1,55	65	20,2	15,5	4	0,030 - 0,035
1,60	○	1,6	65	20,8	16	4	0,030 - 0,035
1,65	○	1,65	65	21,5	16,5	4	0,030 - 0,035
1,70	○	1,7	67	22,1	17	4	0,030 - 0,035
1,75	○	1,75	67	22,8	17,5	4	0,030 - 0,035
1,80	○	1,8	67	23,4	18	4	0,030 - 0,035
1,85	○	1,85	67	24,1	18,5	4	0,030 - 0,035
1,90	○	1,9	67	24,7	19	4	0,030 - 0,035
1,95	○	1,95	67	25,4	19,5	4	0,030 - 0,035
2,00	○	2	70	26	20	4	0,035 - 0,045
2,05	○	2,05	70	26,7	20,5	4	0,035 - 0,045
2,10	○	2,1	70	27,3	21	4	0,035 - 0,045
2,15	○	2,15	70	28	21,5	4	0,035 - 0,045
2,20	○	2,2	70	28,6	22	4	0,035 - 0,045
2,25	○	2,25	70	29,3	22,5	4	0,035 - 0,045
2,30	○	2,3	75	29,9	23	4	0,035 - 0,045
2,35	○	2,35	75	30,6	23,5	4	0,035 - 0,045
2,40	○	2,4	75	31,2	24	4	0,035 - 0,045
2,45	○	2,45	75	31,9	24,5	4	0,035 - 0,045
2,50	○	2,5	75	32,5	25	4	0,045 - 0,055
2,55	○	2,55	75	33,2	25,5	4	0,045 - 0,055
2,60	○	2,6	80	33,8	26	4	0,045 - 0,055
2,65	○	2,65	80	34,5	26,5	4	0,045 - 0,055
2,70	○	2,7	80	35,1	27	4	0,045 - 0,055
2,75	○	2,75	80	35,8	27,5	4	0,045 - 0,055
2,80	○	2,8	80	36,4	28	4	0,045 - 0,055
2,85	○	2,85	80	37,1	28,5	4	0,045 - 0,055
2,90	○	2,9	80	37,7	29	4	0,045 - 0,055
2,95	○	2,95	80	38,4	29,5	4	0,045 - 0,055
3,00	○	3	87	39	30	6	0,050 - 0,065
3,05	○	3,05	87	39,7	30,5	6	0,050 - 0,065
3,10	○	3,1	87	40,3	31	6	0,050 - 0,065
3,15	○	3,15	87	41	31,5	6	0,050 - 0,065
3,20	○	3,2	87	41,6	32	6	0,050 - 0,065
3,25	○	3,25	87	42,3	32,5	6	0,050 - 0,065
3,30	○	3,3	87	42,9	33	6	0,050 - 0,065
3,35	○	3,35	87	43,6	33,5	6	0,050 - 0,065
3,40	○	3,4	87	44,2	34	6	0,050 - 0,065
3,45	○	3,45	87	44,9	34,5	6	0,050 - 0,065
3,50	○	3,5	95	45,5	35	6	0,050 - 0,065
3,55	○	3,55	95	46,2	35,5	6	0,050 - 0,065
3,60	○	3,6	95	46,8	36	6	0,050 - 0,065
3,65	○	3,65	95	47,5	36,5	6	0,050 - 0,065
3,70	○	3,7	95	48,1	37	6	0,050 - 0,065
3,75	○	3,75	95	48,8	37,5	6	0,050 - 0,065
3,80	○	3,8	95	49,4	38	6	0,050 - 0,065
3,85	○	3,85	95	50,1	38,5	6	0,050 - 0,065
3,90	○	3,9	95	50,7	39	6	0,050 - 0,065
3,95	○	3,95	95	51,4	39,5	6	0,050 - 0,065
4,00	○	4	95	52	40	6	0,060 - 0,075
4,10	○	4,1	100	53,3	41	6	0,060 - 0,075
4,20	○	4,2	100	54,6	42	6	0,060 - 0,075
4,30	○	4,3	100	55,9	43	6	0,060 - 0,075
4,40	○	4,4	100	57,2	44	6	0,060 - 0,075
4,50	○	4,5	100	58,5	45	6	0,060 - 0,075
4,60	○	4,6	100	59,8	46	6	0,060 - 0,075
4,70	○	4,7	105	61,1	47	6	0,060 - 0,075
4,80	○	4,8	105	62,4	48	6	0,060 - 0,075
4,90	○	4,9	105	63,7	49	6	0,060 - 0,075
5,00	○	5	105	65	50	6	0,070 - 0,085
5,10	○	5,1	105	66,3	51	6	0,070 - 0,085
5,20	○	5,2	105	67,6	52	6	0,070 - 0,085
5,30	○	5,3	105	68,9	53	6	0,070 - 0,085
5,40	○	5,4	112	70,2	54	6	0,070 - 0,085
5,50	○	5,5	112	71,5	55	6	0,070 - 0,085
5,60	○	5,6	112	72,8	56	6	0,070 - 0,085
5,70	○	5,7	112	74,1	57	6	0,070 - 0,085
5,80	○	5,8	112	75,4	58	6	0,070 - 0,085
5,90	○	5,9	112	76,7	59	6	0,070 - 0,085
6,00	○	6	112	78	60	6	0,075 - 0,090

Micro drill SC PTC for pure titanium.

CRAZYDRILL Cool Titanium — MIKRON TOOL

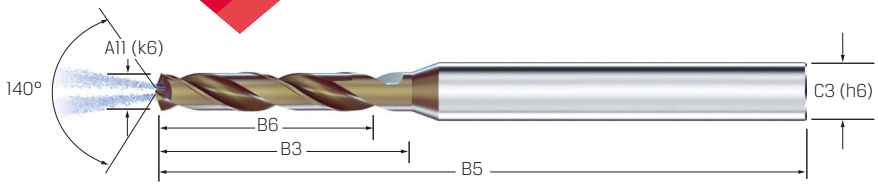
SC | coated | Factory standard | Teeth 2 | 140° | ICS | S

Design:
- excellent hole quality
- process-safe drilling
- innovative groove and point geometry
- low cutting pressure
- newly developed chip guiding bevel to avoid material adhesion
- specially designed cooling concept

Use:
For pure titanium.

NEW

3 × A11

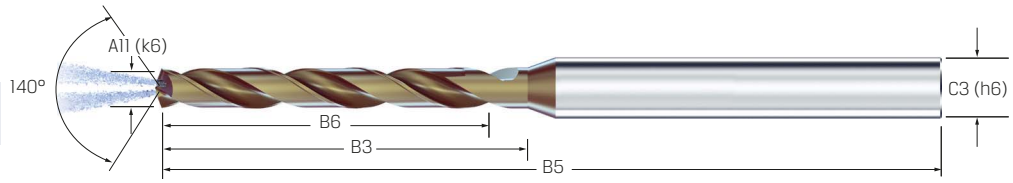


N° article	102480 3 x A11, eXedur SNP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
1,00	○	1	50	6	3	4	0,010-0,020
1,05	○	1,05	50	6,3	3,15	4	0,010-0,020
1,10	○	1,1	50	6,6	3,3	4	0,010-0,020
1,15	○	1,15	50	6,9	3,45	4	0,010-0,020
1,20	○	1,2	50	7,2	3,6	4	0,010-0,020
1,25	○	1,25	50	7,5	3,75	4	0,013-0,025
1,30	○	1,3	50	7,8	3,9	4	0,013-0,025
1,35	○	1,35	50	8,1	4,05	4	0,013-0,025
1,40	○	1,4	50	8,4	4,2	4	0,013-0,025
1,45	○	1,45	50	8,7	4,35	4	0,013-0,025
1,50	○	1,5	50	9	4,5	4	0,015-0,030
1,55	○	1,55	50	9,3	4,65	4	0,015-0,030
1,60	○	1,6	50	9,6	4,8	4	0,015-0,030
1,65	○	1,65	50	9,9	4,95	4	0,015-0,030
1,70	○	1,7	53	10,2	5,1	4	0,015-0,030
1,75	○	1,75	53	10,5	5,25	4	0,015-0,030
1,80	○	1,8	53	10,8	5,4	4	0,015-0,030
1,85	○	1,85	53	11,1	5,55	4	0,015-0,030
1,90	○	1,9	53	11,4	5,7	4	0,015-0,030
1,95	○	1,95	53	11,7	5,85	4	0,015-0,030
2,00	○	2	55	12	6	4	0,020-0,040
2,05	○	2,05	55	12,3	6,15	4	0,020-0,040
2,10	○	2,1	55	12,6	6,3	4	0,020-0,040
2,15	○	2,15	55	12,9	6,45	4	0,020-0,040
2,20	○	2,2	55	13,2	6,6	4	0,020-0,040
2,25	○	2,25	55	13,5	6,75	4	0,020-0,040
2,30	○	2,3	57	13,8	6,9	4	0,020-0,040
2,35	○	2,35	57	14,1	7,05	4	0,020-0,040
2,40	○	2,4	57	14,4	7,2	4	0,020-0,040
2,45	○	2,45	57	14,7	7,35	4	0,020-0,040
2,50	○	2,5	57	15	7,5	4	0,025-0,050
2,55	○	2,55	57	15,3	7,65	4	0,025-0,050
2,60	○	2,6	57	15,6	7,8	4	0,025-0,050
2,65	○	2,65	57	15,9	7,95	4	0,025-0,050
2,70	○	2,7	57	16,2	8,1	4	0,025-0,050
2,75	○	2,75	57	16,5	8,25	4	0,025-0,050
2,80	○	2,8	57	16,8	8,4	4	0,025-0,050
2,85	○	2,85	57	17,1	8,55	4	0,025-0,050
2,90	○	2,9	57	17,4	8,7	4	0,025-0,050
2,95	○	2,95	57	17,7	8,85	4	0,025-0,050
3,00	○	3	65	18	9	6	0,030-0,060
3,05	○	3,05	65	18,3	9,15	6	0,030-0,060
3,10	○	3,1	65	18,6	9,3	6	0,030-0,060
3,15	○	3,15	65	18,9	9,45	6	0,030-0,060
3,20	○	3,2	65	19,2	9,6	6	0,030-0,060
3,25	○	3,25	65	19,5	9,75	6	0,030-0,060
3,30	○	3,3	65	19,8	9,9	6	0,030-0,060
3,35	○	3,35	65	20,1	10,05	6	0,030-0,060
3,40	○	3,4	65	20,4	10,2	6	0,030-0,060
3,45	○	3,45	65	20,7	10,35	6	0,030-0,060
3,50	○	3,5	68	21	10,5	6	0,030-0,060
3,55	○	3,55	68	21,3	10,65	6	0,030-0,060
3,60	○	3,6	68	21,6	10,8	6	0,030-0,060
3,65	○	3,65	68	21,9	10,95	6	0,030-0,060
3,70	○	3,7	68	22,2	11,1	6	0,030-0,060
3,75	○	3,75	68	22,5	11,25	6	0,030-0,060
3,80	○	3,8	68	22,8	11,4	6	0,030-0,060
3,85	○	3,85	68	23,1	11,55	6	0,030-0,060
3,90	○	3,9	68	23,4	11,7	6	0,030-0,060
3,95	○	3,95	68	23,7	11,85	6	0,030-0,060
4,00	○	4	68	24	12	6	0,040-0,080
4,10	○	4,1	72	24,6	12,3	6	0,040-0,080
4,20	○	4,2	72	25,2	12,6	6	0,040-0,080
4,30	○	4,3	72	25,8	12,9	6	0,040-0,080
4,40	○	4,4	72	26,4	13,2	6	0,040-0,080
4,50	○	4,5	72	27	13,5	6	0,040-0,080
4,60	○	4,6	72	27,6	13,8	6	0,040-0,080
4,70	○	4,7	75	28,2	14,1	6	0,040-0,080
4,80	○	4,8	75	28,8	14,4	6	0,040-0,080
4,90	○	4,9	75	29,4	14,7	6	0,040-0,080
5,00	○	5	75	30	15	6	0,050-0,100
5,10	○	5,1	75	30,6	15,3	6	0,050-0,100
5,20	○	5,2	75	31,2	15,6	6	0,050-0,100
5,30	○	5,3	75	31,8	15,9	6	0,050-0,100
5,40	○	5,4	80	32,4	16,2	6	0,050-0,100
5,50	○	5,5	80	33	16,5	6	0,050-0,100
5,60	○	5,6	80	33,6	16,8	6	0,050-0,100
5,70	○	5,7	80	34,2	17,1	6	0,050-0,100
5,80	○	5,8	80	34,8	17,4	6	0,050-0,100
5,90	○	5,9	80	35,4	17,7	6	0,050-0,100
6,00	○	6	80	36	18	6	0,060-0,120

Note:
Drill pilot bore with 102480

NEW

6 × A11



N° article	102485 6 × A11, eXedur SNP, IC	A11 mm	B5 mm	B3 mm	B6 mm	C3 mm	f mm/rev
1,00	○	1	55	9	6	4	0,010-0,020
1,05	○	1,05	55	9,5	6,3	4	0,010-0,020
1,10	○	1,1	55	9,9	6,6	4	0,010-0,020
1,15	○	1,15	55	10,4	6,9	4	0,010-0,020
1,20	○	1,2	57	10,8	7,2	4	0,010-0,020
1,25	○	1,25	57	11,3	7,5	4	0,013-0,025
1,30	○	1,3	57	11,7	7,8	4	0,013-0,025
1,35	○	1,35	57	12,2	8,1	4	0,013-0,025
1,40	○	1,4	57	12,6	8,4	4	0,013-0,025
1,45	○	1,45	58	13,1	8,7	4	0,013-0,025
1,50	○	1,5	58	13,5	9	4	0,015-0,030
1,55	○	1,55	58	14	9,3	4	0,015-0,030
1,60	○	1,6	58	14,4	9,6	4	0,015-0,030
1,65	○	1,65	58	14,9	9,9	4	0,015-0,030
1,70	○	1,7	60	15,3	10,2	4	0,015-0,030
1,75	○	1,75	60	15,8	10,5	4	0,015-0,030
1,80	○	1,8	60	16,2	10,8	4	0,015-0,030
1,85	○	1,85	60	16,7	11,1	4	0,015-0,030
1,90	○	1,9	60	17,1	11,4	4	0,015-0,030
1,95	○	1,95	60	17,6	11,7	4	0,015-0,030
2,00	○	2	63	18	12	4	0,020-0,040
2,05	○	2,05	63	18,5	12,3	4	0,020-0,040
2,10	○	2,1	63	18,9	12,6	4	0,020-0,040
2,15	○	2,15	63	19,4	12,9	4	0,020-0,040
2,20	○	2,2	63	19,8	13,2	4	0,020-0,040
2,25	○	2,25	63	20,3	13,5	4	0,020-0,040
2,30	○	2,3	65	20,7	13,8	4	0,020-0,040
2,35	○	2,35	65	21,2	14,1	4	0,020-0,040
2,40	○	2,4	65	21,6	14,4	4	0,020-0,040
2,45	○	2,45	65	22,1	14,7	4	0,020-0,040
2,50	○	2,5	65	22,5	15	4	0,025-0,050
2,55	○	2,55	65	23	15,3	4	0,025-0,050
2,60	○	2,6	68	23,4	15,6	4	0,025-0,050
2,65	○	2,65	68	23,9	15,9	4	0,025-0,050
2,70	○	2,7	68	24,3	16,2	4	0,025-0,050
2,75	○	2,75	68	24,8	16,5	4	0,025-0,050
2,80	○	2,8	68	25,2	16,8	4	0,025-0,050
2,85	○	2,85	68	25,7	17,1	4	0,025-0,050
2,90	○	2,9	68	26,1	17,4	4	0,025-0,050
2,95	○	2,95	68	26,6	17,7	4	0,025-0,050
3,00	○	3	74	27	18	6	0,030-0,060
3,05	○	3,05	74	27,5	18,3	6	0,030-0,060
3,10	○	3,1	74	27,9	18,6	6	0,030-0,060
3,15	○	3,15	74	28,4	18,9	6	0,030-0,060
3,20	○	3,2	74	28,8	19,2	6	0,030-0,060
3,25	○	3,25	74	29,3	19,5	6	0,030-0,060
3,30	○	3,3	74	29,7	19,8	6	0,030-0,060
3,35	○	3,35	74	30,2	20,1	6	0,030-0,060
3,40	○	3,4	74	30,6	20,4	6	0,030-0,060
3,45	○	3,45	74	31,1	20,7	6	0,030-0,060
3,50	○	3,5	78	31,5	21	6	0,030-0,060
3,55	○	3,55	78	32	21,3	6	0,030-0,060
3,60	○	3,6	78	32,4	21,6	6	0,030-0,060
3,65	○	3,65	78	32,9	21,9	6	0,030-0,060
3,70	○	3,7	78	33,3	22,2	6	0,030-0,060
3,75	○	3,75	78	33,8	22,5	6	0,030-0,060
3,80	○	3,8	78	34,2	22,8	6	0,030-0,060
3,85	○	3,85	78	34,7	23,1	6	0,030-0,060
3,90	○	3,9	78	35,1	23,4	6	0,030-0,060
3,95	○	3,95	78	35,6	23,7	6	0,030-0,060
4,00	○	4	78	36	24	6	0,040-0,080
4,10	○	4,1	80	36,9	24,6	6	0,040-0,080
4,20	○	4,2	80	37,8	25,2	6	0,040-0,080
4,30	○	4,3	80	38,7	25,8	6	0,040-0,080
4,40	○	4,4	80	39,6	26,4	6	0,040-0,080
4,50	○	4,5	80	40,5	27	6	0,040-0,080
4,60	○	4,6	80	41,4	27,6	6	0,040-0,080
4,70	○	4,7	84	42,3	28,2	6	0,040-0,080
4,80	○	4,8	84	43,2	28,8	6	0,040-0,080
4,90	○	4,9	84	44,1	29,4	6	0,040-0,080
5,00	○	5	84	45	30	6	0,050-0,100
5,10	○	5,1	84	45,9	30,6	6	0,050-0,100
5,20	○	5,2	84	46,8	31,2	6	0,050-0,100
5,30	○	5,3	84	47,7	31,8	6	0,050-0,100
5,40	○	5,4	88	48,6	32,4	6	0,050-0,100
5,50	○	5,5	88	49,5	33	6	0,050-0,100
5,60	○	5,6	88	50,4	33,6	6	0,050-0,100
5,70	○	5,7	88	51,3	34,2	6	0,050-0,100
5,80	○	5,8	88	52,2	34,8	6	0,050-0,100
5,90	○	5,9	88	53,1	35,4	6	0,050-0,100
6,00	○	6	88	54	36	6	0,060-0,120

Twist drill SC Universal

PREMUS®

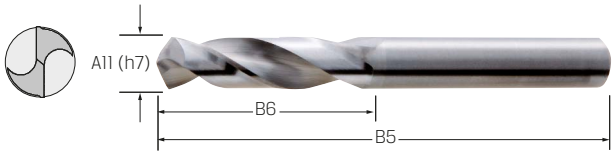
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
102615	⟨1200	⟨48	⟨850	⟨300	Titanium ⟨1200	Magnesium, alu ⟨600	Bronze, Copper ⟨600
	vc = m/min.						
102615	50-80	2-3	22-25	70-90	15-20	70-85	120-180

SC | DIN 6539 | Typ N | 3 × A11 | Teeth 2 | 118° | Straight shank

UNI

Design:
- relived cone
- blank

Use:
For automatic and turret lathes For cast steel, grey cast iron, chilled casting, manganese hardening steel, bronzes, abrasive materials, fibre-reinforced plastics



N° article	102615 3× A11	A11 mm	B5 mm	B6 mm	f mm/rev
1,00	●	1	26	6	0,014-0,018
1,10	●	1,1	28	7	0,014-0,018
1,20	●	1,2	30	8	0,014-0,018
1,30	●	1,3	30	8	0,014-0,018
1,40	●	1,4	32	9	0,014-0,018
1,50	●	1,5	32	9	0,014-0,018
1,60	●	1,6	34	10	0,014-0,018
1,70	●	1,7	34	10	0,014-0,018
1,80	●	1,8	36	11	0,014-0,018
1,90	●	1,9	36	11	0,014-0,018
2,00	●	2	38	12	0,040-0,063
2,10	●	2,1	38	12	0,040-0,063
2,20	●	2,2	40	13	0,040-0,063
2,30	●	2,3	40	13	0,040-0,063
2,40	●	2,4	43	14	0,040-0,063
2,50	●	2,5	43	14	0,050-0,080
2,60	●	2,6	43	14	0,050-0,080
2,70	●	2,7	46	16	0,050-0,080
2,80	●	2,8	46	16	0,050-0,080
2,90	●	2,9	46	16	0,050-0,080
3,00	●	3	46	16	0,050-0,080
3,10	●	3,1	49	18	0,050-0,080
3,20	●	3,2	49	18	0,063-0,100
3,30	●	3,3	49	18	0,063-0,100
3,40	●	3,4	52	20	0,063-0,100
3,50	●	3,5	52	20	0,063-0,100
3,60	●	3,6	52	20	0,063-0,100
3,70	●	3,7	52	20	0,063-0,100
3,80	●	3,8	55	22	0,063-0,100

N° article	102615 3× A11	A11 mm	B5 mm	B6 mm	f mm/rev
3,90	●	3,9	55	22	0,063-0,100
4,00	●	4	55	22	0,080-0,125
4,10	●	4,1	55	22	0,080-0,125
4,20	●	4,2	55	22	0,080-0,125
4,30	●	4,3	58	24	0,080-0,125
4,40	●	4,4	58	24	0,080-0,125
4,50	●	4,5	58	24	0,080-0,125
4,60	●	4,6	58	24	0,080-0,125
4,70	●	4,7	58	24	0,080-0,125
4,80	●	4,8	62	26	0,080-0,125
4,90	●	4,9	62	26	0,080-0,125
5,00	●	5	62	26	0,080-0,125
5,10	●	5,1	62	26	0,080-0,125
5,20	●	5,2	62	26	0,080-0,125
5,30	●	5,3	62	26	0,080-0,125
5,40	●	5,4	66	28	0,080-0,125
5,50	●	5,5	66	28	0,080-0,125
5,60	●	5,6	66	28	0,080-0,125
5,70	●	5,7	66	28	0,080-0,125
5,80	●	5,8	66	28	0,080-0,125
5,90	●	5,9	66	28	0,080-0,125
6,00	●	6	66	28	0,080-0,125
6,10	●	6,1	70	31	0,080-0,125
6,20	●	6,2	70	31	0,080-0,125
6,30	●	6,3	70	31	0,100-0,160
6,40	●	6,4	70	31	0,100-0,160
6,50	●	6,5	70	31	0,100-0,160
6,60	●	6,6	70	31	0,100-0,160
6,70	●	6,7	70	31	0,100-0,160

N° article	102615 3× A11	A11 mm	B5 mm	B6 mm	f mm/rev
6,80	●	6,8	74	34	0,100-0,160
6,90	●	6,9	74	34	0,100-0,160
7,00	●	7	74	34	0,100-0,160
7,10	●	7,1	74	34	0,100-0,160
7,20	●	7,2	74	34	0,100-0,160
7,30	○	7,3	74	34	0,100-0,160
7,40	○	7,4	74	34	0,100-0,160
7,50	●	7,5	74	34	0,100-0,160
7,80	●	7,8	79	37	0,100-0,160
8,00	●	8	79	37	0,125-0,200
8,10	●	8,1	79	37	0,125-0,200
8,20	○	8,2	79	37	0,125-0,200
8,40	○	8,4	79	37	0,125-0,200
8,50	●	8,5	79	37	0,125-0,200
8,60	○	8,6	84	40	0,125-0,200
8,70	●	8,7	84	40	0,125-0,200
8,80	●	8,8	84	40	0,125-0,200
9,00	●	9	84	40	0,125-0,200
9,50	●	9,5	84	40	0,125-0,200
10,00	●	10	89	43	0,160-0,250
10,20	●	10,2	89	43	0,160-0,250
10,50	●	10,5	89	43	0,160-0,250
11,00	●	11	95	47	0,160-0,250
11,50	●	11,5	95	47	0,160-0,250
12,00	●	12	102	51	0,160-0,250
13,00	●	13	102	51	0,160-0,250
14,00	○	14	107	54	0,160-0,250
15,00	○	15	111	56	0,160-0,250
16,00	●	16	115	58	0,200-0,315

Twist drill SC Universal

PREMUS

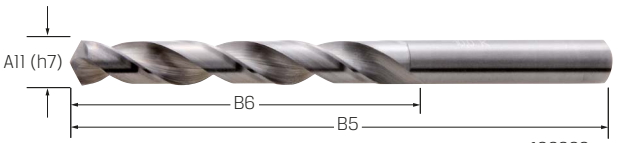
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
102620	⟨1620	⟨48	⟨1000	⟨300	Titanium ⟨1200	Magnesium, brass, alu ⟨600	Plastics, GRP, CRP
102625							
vc = m/min.							
102620	25-80	18-20	22-25	60-90	15-20	120-180	40-80
102625	30-100	22-25	28-30	80-115	20-25	155-260	50-100

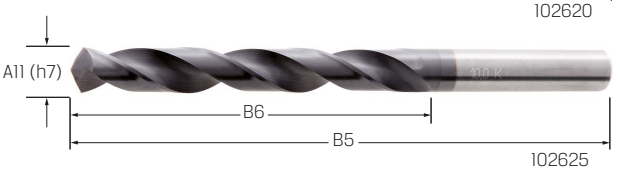
SC | Factory standard | Typ N | 5 × A11 | Teeth 2 | 118° | Straight shank

UNI

Design:
- relived cone
- point thinning from 2 mm
- blank / TiAlN coating

Use:
Universal standard drill with the same nominal and shank Ø





N° article	102620 5× A11	102625 5×A11, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev		N° article	102620 5× A11	102625 5×A11, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev		N° article	102620 5× A11	102625 5×A11, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev	
1,00	●	●	1	34	12	0,008-0,016	1	4,00	●	●	4	75	43	0,050-0,100	1	7,00	●	●	7	109	69	0,063-0,125	1
1,10	●	●	1,1	36	14	0,008-0,016	1	4,10	●	●	4,1	75	43	0,050-0,100	1	7,20	●	–	7,2	109	69	0,063-0,125	1
1,20	●	●	1,2	38	16	0,008-0,016	1	4,20	●	●	4,2	75	43	0,050-0,100	1	7,30	●	○	7,3	109	69	0,063-0,125	1
1,30	●	●	1,3	38	16	0,008-0,016	1	4,30	●	●	4,3	80	47	0,050-0,100	1	7,40	–	●	7,4	109	69	0,063-0,125	1
1,40	●	●	1,4	40	18	0,008-0,016	1	4,40	●	●	4,4	80	47	0,050-0,100	1	7,50	●	○	7,5	109	69	0,063-0,125	1
1,50	●	●	1,5	40	18	0,008-0,016	1	4,50	●	●	4,5	80	47	0,050-0,100	1	7,80	●	●	7,8	117	75	0,063-0,125	1
1,60	●	●	1,6	43	20	0,008-0,016	1	4,60	●	●	4,6	80	47	0,050-0,100	1	7,90	●	–	7,9	117	75	0,063-0,125	1
1,70	●	●	1,7	43	20	0,008-0,016	1	4,70	●	●	4,7	80	47	0,050-0,100	1	8,00	●	●	8	117	75	0,080-0,160	1
1,80	●	●	1,8	46	22	0,008-0,016	1	4,80	●	●	4,8	86	52	0,050-0,100	1	8,10	–	○	8,1	117	75	0,080-0,160	1
1,90	●	●	1,9	46	22	0,008-0,016	1	4,90	●	●	4,9	86	52	0,050-0,100	1	8,20	●	○	8,2	117	75	0,080-0,160	1
2,00	●	●	2	49	22	0,025-0,050	1	5,00	●	●	5	86	52	0,050-0,100	1	8,40	–	○	8,4	117	75	0,080-0,160	1
2,10	●	●	2,1	49	24	0,025-0,050	1	5,10	●	●	5,1	86	52	0,050-0,100	1	8,50	●	●	8,5	117	75	0,080-0,160	1
2,20	●	●	2,2	53	27	0,025-0,050	1	5,20	●	●	5,2	86	52	0,050-0,100	1	8,60	○	–	8,6	125	81	0,080-0,160	1
2,30	●	●	2,3	53	27	0,025-0,050	1	5,30	●	●	5,3	86	52	0,050-0,100	1	8,70	●	–	8,7	125	81	0,080-0,160	1
2,40	●	●	2,4	57	30	0,025-0,050	1	5,40	●	●	5,4	93	57	0,050-0,100	1	8,80	●	●	8,8	125	81	0,080-0,160	1
2,50	●	●	2,5	57	30	0,032-0,063	1	5,50	●	●	5,5	93	57	0,050-0,100	1	9,00	●	●	9	125	81	0,080-0,160	1
2,60	●	●	2,6	57	30	0,032-0,063	1	5,60	●	●	5,6	93	57	0,050-0,100	1	9,10	●	–	9,1	125	81	0,080-0,160	1
2,70	●	●	2,7	61	33	0,032-0,063	1	5,70	●	–	5,7	93	57	0,050-0,100	1	9,20	●	–	9,2	125	81	0,080-0,160	1
2,80	●	●	2,8	61	33	0,032-0,063	1	5,80	●	●	5,8	93	57	0,050-0,100	1	9,30	●	–	9,3	125	81	0,080-0,160	1
2,90	●	●	2,9	61	33	0,032-0,063	1	5,90	●	●	5,9	93	57	0,050-0,100	1	9,40	○	–	9,4	125	81	0,080-0,160	1
3,00	●	●	3	61	33	0,032-0,063	1	6,00	●	●	6	93	57	0,050-0,100	1	9,50	●	○	9,5	125	81	0,080-0,160	1
3,10	●	●	3,1	65	36	0,032-0,063	1	6,10	●	●	6,1	101	63	0,050-0,100	1	9,60	●	–	9,6	133	87	0,080-0,160	1
3,20	●	●	3,2	65	36	0,040-0,080	1	6,20	●	●	6,2	101	63	0,050-0,100	1	9,80	●	●	9,8	133	87	0,080-0,160	1
3,30	●	●	3,3	65	36	0,040-0,080	1	6,30	●	○	6,3	101	63	0,063-0,125	1	9,90	●	–	9,9	133	87	0,080-0,160	1
3,40	●	●	3,4	70	39	0,040-0,080	1	6,40	●	●	6,4	101	63	0,063-0,125	1	10,00	●	●	10	133	87	0,100-0,200	1
3,50	●	●	3,5	70	39	0,040-0,080	1	6,50	●	●	6,5	101	63	0,063-0,125	1	10,20	●	●	10,2	133	87	0,100-0,200	1
3,60	●	●	3,6	70	39	0,040-0,080	1	6,60	●	●	6,6	101	63	0,063-0,125	1	10,50	●	●	10,5	133	87	0,100-0,200	1
3,70	●	●	3,7	70	39	0,040-0,080	1	6,70	●	–	6,7	101	63	0,063-0,125	1	11,00	●	●	11	142	94	0,100-0,200	1
3,80	●	●	3,8	75	43	0,040-0,080	1	6,80	●	●	6,8	109	69	0,063-0,125	1	11,50	●	–	11,5	142	94	0,100-0,200	1
3,90	●	●	3,9	75	43	0,040-0,080	1	6,90	●	–	6,9	109	69	0,063-0,125	1	12,00	●	●	12	151	101	0,100-0,200	1

Twist drill HM Universal

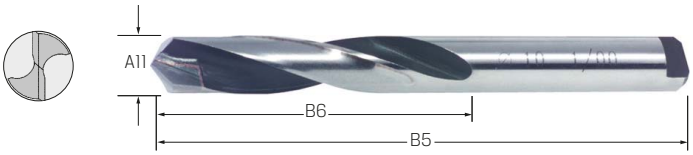
PREMUS

	P N/mm²	H HRC	K HB	N N/mm²
102650	⟨850	⟨60	⟨350	Brass ⟨600
vc = m/min.				
102650	70-80	10-20	10-90	160-180

Carbide cutting edge | DIN 8037 | Teeth 2 | 118° | Driver DIN 1809

UNI

Design:
- steam tempered, with solid, brazed-on carbide tool tips, ground, with high concentricity
- with tang to DIN 1809
- intermediate sizes available on request



N° article	102650	A11 mm	B5 mm	B6 mm	f mm/rev		N° article	102650	A11 mm	B5 mm	B6 mm	f mm/rev		N° article	102650	A11 mm	B5 mm	B6 mm	f mm/rev
3,00	●	3	50	20	0,032-0,050		6,00	●	6	71	32	0,050-0,080		10,00	●	10	100	56	0,100-0,160
3,20	●	3,2	56	25	0,040-0,063		6,50	●	6,5	71	32	0,063-0,100		10,50	●	10,5	100	56	0,100-0,160
3,50	●	3,5	56	25	0,040-0,063		6,80	○	6,8	80	40	0,063-0,100		11,00	●	11	100	56	0,100-0,160
4,00	●	4	56	25	0,050-0,080		7,00	●	7	80	40	0,063-0,100		12,00	●	12	112	63	0,100-0,160
4,20	●	4,2	63	28	0,050-0,080		7,50	○	7,5	80	40	0,063-0,100		13,00	●	13	112	63	0,100-0,160
4,50	●	4,5	63	28	0,050-0,080		8,00	●	8	80	40	0,080-0,125		14,00	○	14	125	71	0,100-0,160
4,80	○	4,8	63	28	0,050-0,080		8,50	●	8,5	90	50	0,080-0,125		15,00	○	15	125	71	0,100-0,160
5,00	●	5	63	28	0,050-0,080		9,00	●	9	90	50	0,080-0,125		16,00	○	16	140	80	0,125-0,200
5,50	●	5,5	71	32	0,050-0,080		9,50	●	9,5	90	50	0,080-0,125							

High-performance drill SC Steel

PRETEC

	P N/mm²	K HB
102632	〈1200	〈750
vc = m/min.		
102632	85-130	155-210

SC | coated | DIN 6537 | 3 × A11 | Teeth 2 | 140° | 6535 HB shank

P K

Design:
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip breaking, even at larger drilling depths
- high concentricity
- accurate drilling properties



N° article	102632 3×A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	62	20	6	0,100-0,140
3,10	●	3,1	62	20	6	0,100-0,140
3,20	●	3,2	62	20	6	0,100-0,140
3,30	●	3,3	62	20	6	0,100-0,140
3,40	●	3,4	62	20	6	0,100-0,140
3,50	●	3,5	62	20	6	0,100-0,140
3,60	●	3,6	62	20	6	0,100-0,140
3,70	●	3,7	62	20	6	0,100-0,140
3,80	●	3,8	62	20	6	0,100-0,140
3,90	●	3,9	66	24	6	0,100-0,140
4,00	●	4	66	24	6	0,110-0,160
4,10	●	4,1	66	24	6	0,110-0,160
4,20	●	4,2	66	24	6	0,110-0,160
4,30	●	4,3	66	24	6	0,110-0,160
4,40	●	4,4	66	24	6	0,110-0,160
4,50	●	4,5	66	24	6	0,110-0,160
4,60	●	4,6	66	24	6	0,110-0,160
4,70	●	4,7	66	24	6	0,110-0,160
4,80	●	4,8	66	28	6	0,110-0,160
4,90	●	4,9	66	28	6	0,110-0,160
5,00	●	5	66	28	6	0,130-0,200
5,10	●	5,1	66	28	6	0,130-0,200
5,20	●	5,2	66	28	6	0,130-0,200
5,30	●	5,3	66	28	6	0,130-0,200
5,40	●	5,4	66	28	6	0,130-0,200
5,50	●	5,5	66	28	6	0,130-0,200
5,60	●	5,6	66	28	6	0,130-0,200
5,70	●	5,7	66	28	6	0,130-0,200
5,80	●	5,8	66	28	6	0,130-0,200
5,90	●	5,9	66	28	6	0,130-0,200
6,00	●	6	66	28	6	0,140-0,230
6,10	●	6,1	79	34	8	0,140-0,230
6,20	●	6,2	79	34	8	0,140-0,230
6,30	●	6,3	79	34	8	0,140-0,230
6,40	●	6,4	79	34	8	0,140-0,230
6,50	●	6,5	79	34	8	0,140-0,230
6,60	●	6,6	79	34	8	0,140-0,230
6,70	●	6,7	79	34	8	0,140-0,230
6,80	●	6,8	79	34	8	0,140-0,230
6,90	●	6,9	79	34	8	0,140-0,230
7,00	●	7	79	34	8	0,150-0,250
7,10	●	7,1	79	41	8	0,150-0,250
7,20	●	7,2	79	41	8	0,150-0,250
7,30	●	7,3	79	41	8	0,150-0,250
7,40	●	7,4	79	41	8	0,150-0,250
7,50	●	7,5	79	41	8	0,150-0,250
7,60	●	7,6	79	41	8	0,150-0,250
7,70	●	7,7	79	41	8	0,150-0,250
7,80	●	7,8	79	41	8	0,150-0,250
7,90	●	7,9	79	41	8	0,150-0,250
8,00	●	8	79	41	8	0,180-0,270
8,10	●	8,1	89	47	10	0,180-0,270
8,20	●	8,2	89	47	10	0,180-0,270
8,30	●	8,3	89	47	10	0,180-0,270
8,40	●	8,4	89	47	10	0,180-0,270
8,50	●	8,5	89	47	10	0,180-0,270
8,60	●	8,6	89	47	10	0,180-0,270
8,70	●	8,7	89	47	10	0,180-0,270
8,80	●	8,8	89	47	10	0,180-0,270
8,90	●	8,9	89	47	10	0,180-0,270
9,00	●	9	89	47	10	0,190-0,280
9,10	●	9,1	89	47	10	0,190-0,280
9,20	●	9,2	89	47	10	0,190-0,280
9,30	●	9,3	89	47	10	0,190-0,280
9,40	●	9,4	89	47	10	0,190-0,280
9,50	●	9,5	89	47	10	0,190-0,280
9,60	●	9,6	89	47	10	0,190-0,280
9,70	●	9,7	89	47	10	0,190-0,280
9,80	●	9,8	89	47	10	0,190-0,280
9,90	●	9,9	89	47	10	0,190-0,280
10,00	●	10	89	47	10	0,200-0,300
10,10	●	10,1	102	55	12	0,200-0,300
10,20	●	10,2	102	55	12	0,200-0,300
10,30	●	10,3	102	55	12	0,200-0,300
10,40	●	10,4	102	55	12	0,200-0,300
10,50	●	10,5	102	55	12	0,200-0,300
10,60	●	10,6	102	55	12	0,200-0,300
10,70	●	10,7	102	55	12	0,200-0,300
10,80	●	10,8	102	55	12	0,200-0,300
10,90	●	10,9	102	55	12	0,200-0,300
11,00	●	11	102	55	12	0,200-0,300
11,10	●	11,1	102	55	12	0,200-0,300
11,20	●	11,2	102	55	12	0,200-0,300
11,30	●	11,3	102	55	12	0,200-0,300
11,40	●	11,4	102	55	12	0,200-0,300
11,50	●	11,5	102	55	12	0,200-0,300
11,60	●	11,6	102	55	12	0,200-0,300
11,70	●	11,7	102	55	12	0,200-0,300
11,80	●	11,8	102	55	12	0,200-0,300
11,90	●	11,9	102	55	12	0,200-0,300
12,00	●	12	102	55	12	0,200-0,320
12,20	●	12,2	107	60	14	0,200-0,320
12,50	●	12,5	107	60	14	0,200-0,320
12,80	●	12,8	107	60	14	0,200-0,320
13,00	●	13	107	60	14	0,200-0,320
13,50	●	13,5	107	60	14	0,200-0,320
13,80	●	13,8	107	60	14	0,200-0,320
14,00	●	14	107	60	14	0,220-0,350
14,20	●	14,2	115	65	16	0,220-0,350
14,50	●	14,5	115	65	16	0,220-0,350
14,80	●	14,8	115	65	16	0,220-0,350
15,00	●	15	115	65	16	0,220-0,350
15,50	●	15,5	115	65	16	0,220-0,350
15,80	●	15,8	115	65	16	0,220-0,350
16,00	●	16	115	65	16	0,250-0,370
16,50	●	16,5	123	73	18	0,250-0,370
17,00	●	17	123	73	18	0,250-0,370
17,50	●	17,5	123	73	18	0,250-0,370
18,00	●	18	123	73	18	0,270-0,400
18,50	●	18,5	131	79	20	0,270-0,400
19,00	●	19	131	79	20	0,270-0,400
19,50	●	19,5	131	79	20	0,270-0,400
19,80	●	19,8	131	79	20	0,270-0,400
20,00	●	20	131	79	20	0,270-0,400

High-performance drill SC Steel

PREMUS GP

	P N/mm²	K HB
102731	<1200	<200
102732		
vc = m/min.		
102731	105-120	120
102732		

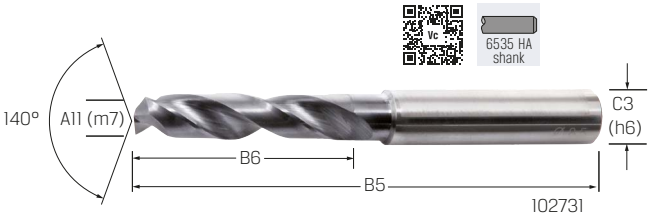
SC | coated | DIN 6537 | 3 × A11 | Teeth 2 | 140° | P | K | CAD

Design:
- latest TiAlN coating technology
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip breaking, even at larger drilling depths
- very wide application range even under suboptimal conditions
- the best results in rotating and stationary use
- high concentricity
- accurate drilling properties

Note:
Effective length = B6 - 1.5x A11

GP







N° article	102731 GP, 3× A11, TiAlN, HA	102732 GP, 3× A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
1,00	●	–	1	45	7	4	0,050-0,080
1,10	●	–	1,1	45	7	4	0,050-0,080
1,20	●	–	1,2	45	7	4	0,050-0,080
1,30	●	–	1,3	45	7	4	0,050-0,080
1,40	●	–	1,4	45	7	4	0,050-0,080
1,50	●	–	1,5	55	14	4	0,050-0,080
1,60	●	–	1,6	55	14	4	0,050-0,080
1,70	●	–	1,7	55	14	4	0,050-0,080
1,80	●	–	1,8	55	14	4	0,050-0,080
1,85	●	–	1,85	55	14	4	0,050-0,080
1,90	●	–	1,9	55	14	4	0,050-0,080
2,00	●	–	2	55	20	4	0,050-0,100
2,10	●	–	2,1	55	20	4	0,050-0,100
2,15	●	–	2,15	55	20	4	0,050-0,100
2,20	●	–	2,2	55	20	4	0,050-0,100
2,30	●	–	2,3	55	20	4	0,050-0,100
2,40	●	–	2,4	55	20	4	0,050-0,100
2,50	●	–	2,5	55	20	4	0,050-0,100
2,60	●	–	2,6	55	20	4	0,050-0,100
2,65	●	–	2,65	55	20	4	0,050-0,100
2,70	●	–	2,7	55	20	4	0,050-0,100
2,80	●	–	2,8	55	20	4	0,050-0,100
2,85	●	–	2,85	55	20	4	0,050-0,100
2,90	●	–	2,9	55	20	4	0,050-0,100
3,00	●	●	3	62	20	6	0,100-0,140
3,10	●	●	3,1	62	20	6	0,100-0,140
3,20	●	●	3,2	62	20	6	0,100-0,140
3,25	●	●	3,25	62	20	6	0,100-0,140
3,30	●	●	3,3	62	20	6	0,100-0,140
3,40	●	●	3,4	62	20	6	0,100-0,140
3,50	●	●	3,5	62	20	6	0,100-0,140
3,60	●	●	3,6	62	20	6	0,100-0,140
3,70	●	●	3,7	62	20	6	0,100-0,140
3,80	●	●	3,8	66	24	6	0,100-0,140
3,90	●	●	3,9	66	24	6	0,100-0,140
4,00	●	●	4	66	24	6	0,110-0,160
4,10	●	●	4,1	66	24	6	0,110-0,160
4,20	●	●	4,2	66	24	6	0,110-0,160
4,30	●	●	4,3	66	24	6	0,110-0,160
4,40	●	●	4,4	66	24	6	0,110-0,160
4,50	●	●	4,5	66	24	6	0,110-0,160
4,60	●	●	4,6	66	24	6	0,110-0,160
4,65	●	●	4,65	66	24	6	0,110-0,160
4,70	●	●	4,7	66	24	6	0,110-0,160
4,80	●	●	4,8	66	28	6	0,110-0,160
4,90	●	●	4,9	66	28	6	0,110-0,160
5,00	●	●	5	66	28	6	0,130-0,200
5,10	●	●	5,1	66	28	6	0,130-0,200
5,20	●	●	5,2	66	28	6	0,130-0,200
5,30	●	●	5,3	66	28	6	0,130-0,200

N° article	102731 GP, 3× A11, TiAlN, HA	102732 GP, 3× A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
5,40	●	●	5,4	66	28	6	0,130-0,200
5,50	●	●	5,5	66	28	6	0,130-0,200
5,55	●	●	5,55	66	28	6	0,130-0,200
5,60	●	●	5,6	66	28	6	0,130-0,200
5,70	●	●	5,7	66	28	6	0,130-0,200
5,80	●	●	5,8	66	28	6	0,130-0,200
5,90	●	●	5,9	66	28	6	0,130-0,200
6,00	●	●	6	66	28	6	0,140-0,230
6,10	●	●	6,1	79	34	8	0,140-0,230
6,20	●	●	6,2	79	34	8	0,140-0,230
6,30	●	●	6,3	79	34	8	0,140-0,230
6,40	●	●	6,4	79	34	8	0,140-0,230
6,50	●	●	6,5	79	34	8	0,140-0,230
6,60	●	●	6,6	79	34	8	0,140-0,230
6,70	●	●	6,7	79	34	8	0,140-0,230
6,80	●	●	6,8	79	34	8	0,140-0,230
6,90	●	●	6,9	79	34	8	0,140-0,230
7,00	●	●	7	79	34	8	0,150-0,250
7,10	●	●	7,1	79	41	8	0,150-0,250
7,20	●	●	7,2	79	41	8	0,150-0,250
7,30	●	●	7,3	79	41	8	0,150-0,250
7,40	●	●	7,4	79	41	8	0,150-0,250
7,45	●	●	7,45	79	41	8	0,150-0,250
7,50	●	●	7,5	79	41	8	0,150-0,250
7,55	●	●	7,55	79	41	8	0,150-0,250
7,60	●	●	7,6	79	41	8	0,150-0,250
7,70	●	●	7,7	79	41	8	0,150-0,250
7,80	●	●	7,8	79	41	8	0,150-0,250
7,90	●	●	7,9	79	41	8	0,150-0,250
8,00	●	●	8	79	41	8	0,180-0,270
8,10	●	●	8,1	89	47	10	0,180-0,270
8,20	●	●	8,2	89	47	10	0,180-0,270
8,30	●	●	8,3	89	47	10	0,180-0,270
8,40	●	●	8,4	89	47	10	0,180-0,270
8,50	●	●	8,5	89	47	10	0,180-0,270
8,60	●	●	8,6	89	47	10	0,180-0,270
8,70	●	●	8,7	89	47	10	0,180-0,270
8,80	●	●	8,8	89	47	10	0,180-0,270
8,90	●	●	8,9	89	47	10	0,180-0,270
9,00	●	●	9	89	47	10	0,190-0,280
9,10	●	●	9,1	89	47	10	0,190-0,280
9,20	●	●	9,2	89	47	10	0,190-0,280
9,30	●	●	9,3	89	47	10	0,190-0,280
9,35	●	●	9,35	89	47	10	0,190-0,280
9,40	●	●	9,4	89	47	10	0,190-0,280
9,50	●	●	9,5	89	47	10	0,190-0,280
9,55	●	●	9,55	89	47	10	0,190-0,280
9,60	●	●	9,6	89	47	10	0,190-0,280
9,70	●	●	9,7	89	47	10	0,190-0,280
9,80	●	●	9,8	89	47	10	0,190-0,280

N° article	102731 GP, 3× A11, TiAlN, HA	102732 GP, 3× A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
9,90	●	●	9,9	89	47	10	0,190-0,280
10,00	●	●	10	89	47	10	0,200-0,300
10,10	●	●	10,1	102	55	12	0,200-0,300
10,20	●	●	10,2	102	55	12	0,200-0,300
10,30	●	●	10,3	102	55	12	0,200-0,300
10,40	●	●	10,4	102	55	12	0,200-0,300
10,50	●	●	10,5	102	55	12	0,200-0,300
10,60	●	●	10,6	102	55	12	0,200-0,300
10,70	●	●	10,7	102	55	12	0,200-0,300
10,80	●	●	10,8	102	55	12	0,200-0,300
10,90	●	●	10,9	102	55	12	0,200-0,300
11,00	●	●	11	102	55	12	0,200-0,300
11,10	●	●	11,1	102	55	12	0,200-0,300
11,20	●	●	11,2	102	55	12	0,200-0,300
11,30	●	●	11,3	102	55	12	0,200-0,300
11,40	●	●	11,4	102	55	12	0,200-0,300
11,50	●	●	11,5	102	55	12	0,200-0,300
11,60	●	●	11,6	102	55	12	0,200-0,300
11,70	●	●	11,7	102	55	12	0,200-0,300
11,80	●	●	11,8	102	55	12	0,200-0,300
11,90	●	●	11,9	102	55	12	0,200-0,300
12,00	●	●	12	102	55	12	0,200-0,320
12,20	●	●	12,2	107	60	14	0,200-0,320
12,50	●	●	12,5	107	60	14	0,200-0,320
12,80	●	●	12,8	107	60	14	0,200-0,320
13,00	●	●	13	107	60	14	0,200-0,320
13,50	●	●	13,5	107	60	14	0,200-0,320
13,80	●	●	13,8	107	60	14	0,200-0,320
14,00	●	●	14	107	60	14	0,220-0,350
14,20	●	●	14,2	115	65	16	0,220-0,350
14,50	●	●	14,5	115	65	16	0,220-0,350
14,80	●	●	14,8	115	65	16	0,220-0,350
15,00	●	●	15	115	65	16	0,220-0,350
15,30	●	●	15,3	115	65	16	0,220-0,350
15,50	●	●	15,5	115	65	16	0,220-0,350
15,80	●	●	15,8	115	65	16	0,220-0,350
16,00	●	●	16	115	65	16	0,250-0,370
16,50	●	●	16,5	123	73	18	0,250-0,370
16,80	●	●	16,8	123	73	18	0,250-0,370
17,00	●	●	17	123	73	18	0,250-0,370
17,50	●	●	17,5	123	73	18	0,250-0,370
17,70	●	●	17,7	123	73	18	0,250-0,370
17,80	●	●	17,8	123	73	18	0,250-0,370
18,00	●	●	18	123	73	18	0,270-0,400
18,50	●	●	18,5	131	79	20	0,270-0,400
18,80	●	●	18,8	131	79	20	0,270-0,400
19,00	●	●	19	131	79	20	0,270-0,400
19,50	●	●	19,5	131	79	20	0,270-0,400
19,80	●	●	19,8	131	79	20	0,270-0,400
20,00	●	●	20	131	79	20	0,300-0,450

High-performance drill SC Universal

PRETEC

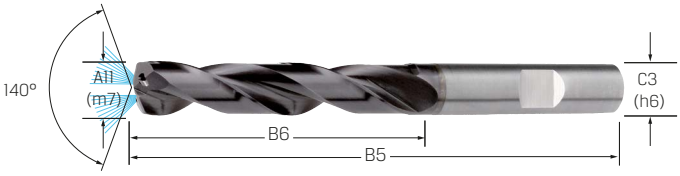
	P N/mm²	M N/mm²	K HB	N N/mm²	
102637	‹1200	‹750	‹850	Aluminium	bronze
	vc = m/min.				
102637	85-170	45-60	130-210	220-310	80-125

SC | coated | DIN 6537 | 3 × A11 | Teeth 2 | 140° | 6535 HB shank

ICS | UNI | Vc

Design:
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip breaking, even at larger drilling depths
- very wide application range even under suboptimal conditions
- high concentricity
- accurate drilling properties
- with twisted cooling ducts





N° article	102637 3× A11, TiAlN HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	62	20	6	0,060-0,140
3,10	●	3,1	62	20	6	0,060-0,140
3,20	●	3,2	62	20	6	0,060-0,140
3,30	●	3,3	62	20	6	0,060-0,140
3,40	●	3,4	62	20	6	0,060-0,140
3,50	●	3,5	62	20	6	0,060-0,140
3,60	●	3,6	62	20	6	0,060-0,140
3,70	●	3,7	62	20	6	0,060-0,140
3,80	●	3,8	62	20	6	0,060-0,140
3,90	●	3,9	66	24	6	0,060-0,140
4,00	●	4	66	24	6	0,080-0,160
4,10	●	4,1	66	24	6	0,080-0,160
4,20	●	4,2	66	24	6	0,080-0,160
4,30	●	4,3	66	24	6	0,080-0,160
4,40	●	4,4	66	24	6	0,080-0,160
4,50	●	4,5	66	24	6	0,080-0,160
4,60	●	4,6	66	24	6	0,080-0,160
4,70	●	4,7	66	24	6	0,080-0,160
4,80	●	4,8	66	24	6	0,080-0,160
4,90	●	4,9	66	28	6	0,080-0,160
5,00	●	5	66	28	6	0,090-0,200
5,10	●	5,1	66	28	6	0,090-0,200
5,20	●	5,2	66	28	6	0,090-0,200
5,30	●	5,3	66	28	6	0,090-0,200
5,40	●	5,4	66	28	6	0,090-0,200
5,50	●	5,5	66	28	6	0,090-0,200
5,60	●	5,6	66	28	6	0,090-0,200
5,70	●	5,7	66	28	6	0,090-0,200
5,80	●	5,8	66	28	6	0,090-0,200
5,90	●	5,9	66	28	6	0,090-0,200
6,00	●	6	66	28	6	0,100-0,230
6,10	●	6,1	79	34	8	0,100-0,230
6,20	●	6,2	79	34	8	0,100-0,230
6,30	●	6,3	79	34	8	0,100-0,230
6,40	●	6,4	79	34	8	0,100-0,230

N° article	102637 3× A11, TiAlN HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,50	●	6,5	79	34	8	0,100-0,230
6,60	●	6,6	79	34	8	0,100-0,230
6,70	●	6,7	79	34	8	0,100-0,230
6,80	●	6,8	79	34	8	0,100-0,230
6,90	●	6,9	79	34	8	0,100-0,230
7,00	●	7	79	34	8	0,110-0,250
7,10	●	7,1	79	41	8	0,110-0,250
7,20	●	7,2	79	41	8	0,110-0,250
7,30	●	7,3	79	41	8	0,110-0,250
7,40	●	7,4	79	41	8	0,110-0,250
7,50	●	7,5	79	41	8	0,110-0,250
7,60	●	7,6	79	41	8	0,110-0,250
7,70	●	7,7	79	41	8	0,110-0,250
7,80	●	7,8	79	41	8	0,110-0,250
7,90	●	7,9	79	41	8	0,110-0,250
8,00	●	8	79	41	8	0,110-0,270
8,10	●	8,1	89	47	10	0,110-0,270
8,20	●	8,2	89	47	10	0,110-0,270
8,30	●	8,3	89	47	10	0,110-0,270
8,40	●	8,4	89	47	10	0,110-0,270
8,50	●	8,5	89	47	10	0,110-0,270
8,60	●	8,6	89	47	10	0,110-0,270
8,70	●	8,7	89	47	10	0,110-0,270
8,80	●	8,8	89	47	10	0,110-0,270
8,90	●	8,9	89	47	10	0,110-0,270
9,00	●	9	89	47	10	0,120-0,280
9,10	●	9,1	89	47	10	0,120-0,280
9,20	●	9,2	89	47	10	0,120-0,280
9,30	●	9,3	89	47	10	0,120-0,280
9,40	●	9,4	89	47	10	0,120-0,280
9,50	●	9,5	89	47	10	0,120-0,280
9,60	●	9,6	89	47	10	0,120-0,280
9,70	●	9,7	89	47	10	0,120-0,280
9,80	●	9,8	89	47	10	0,120-0,280
9,90	●	9,9	89	47	10	0,120-0,280

N° article	102637 3× A11, TiAlN HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,00	●	10	89	47	10	0,130-0,300
10,20	●	10,2	102	55	12	0,130-0,300
10,30	●	10,3	102	55	12	0,130-0,300
10,50	●	10,5	102	55	12	0,130-0,300
10,80	●	10,8	102	55	12	0,130-0,300
11,00	●	11	102	55	12	0,140-0,320
11,20	●	11,2	102	55	12	0,140-0,320
11,50	●	11,5	102	55	12	0,140-0,320
11,80	●	11,8	102	55	12	0,140-0,320
12,00	●	12	102	55	12	0,150-0,320
12,20	●	12,2	107	60	14	0,150-0,320
12,50	●	12,5	107	60	14	0,150-0,320
12,80	●	12,8	107	60	14	0,150-0,320
13,00	●	13	107	60	14	0,150-0,320
13,50	●	13,5	107	60	14	0,150-0,320
13,80	●	13,8	107	60	14	0,150-0,320
14,00	●	14	107	60	14	0,160-0,350
14,20	●	14,2	115	65	16	0,160-0,350
14,50	●	14,5	115	65	16	0,160-0,350
14,80	●	14,8	115	65	16	0,160-0,350
15,00	●	15	115	65	16	0,160-0,350
15,50	●	15,5	115	65	16	0,160-0,350
15,80	●	15,8	115	65	16	0,160-0,350
16,00	●	16	115	65	16	0,170-0,370
16,50	●	16,5	123	73	18	0,170-0,370
17,00	●	17	123	73	18	0,170-0,370
17,50	●	17,5	123	73	18	0,170-0,370
17,80	●	17,8	123	73	18	0,170-0,370
18,00	●	18	123	73	18	0,180-0,400
18,50	●	18,5	131	79	20	0,180-0,400
18,80	●	18,8	131	79	20	0,180-0,400
19,00	●	19	131	79	20	0,180-0,400
19,50	●	19,5	131	79	20	0,180-0,400
19,80	●	19,8	131	79	20	0,180-0,400
20,00	●	20	131	79	20	0,200-0,450

High-performance drill SC Universal

PREMUS GP

	P N/mm²	M N/mm²	K HB
102736			
102737	⟨1200	⟨750	⟨250
vc = m/min.			
102736	105-120	50	120
102737			

SC | coated | DIN 6537 | 3 × A11 | Teeth 2 | 140° | ICS

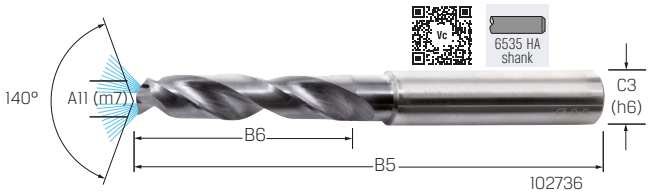
UNI | CAD

Design:
- latest TiAlN coating technology
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip breaking, even at larger drilling depths
- very wide application range even under suboptimal conditions
- the best results in rotating and stationary use
- high concentricity
- accurate drilling properties
- with twisted cooling ducts

Note:
Effective length = B6-1.5x A11

GP







N° article	102736 GP, 3× A11, TiAlN, HA, ICS	102737 GP, 3× A11, TiAlN, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
2,00	●	–	2	55	20	4	0,040-0,100
2,10	●	–	2,1	55	20	4	0,040-0,100
2,15	●	–	2,15	55	20	4	0,040-0,100
2,20	●	–	2,2	55	20	4	0,040-0,100
2,30	●	–	2,3	55	20	4	0,040-0,100
2,40	●	–	2,4	55	20	4	0,040-0,100
2,50	●	–	2,5	55	20	4	0,040-0,100
2,60	●	–	2,6	55	20	4	0,040-0,100
2,65	●	–	2,65	55	20	4	0,040-0,100
2,70	●	–	2,7	55	20	4	0,040-0,100
2,80	●	–	2,8	55	20	4	0,040-0,100
2,85	●	–	2,85	55	20	4	0,040-0,100
2,90	●	–	2,9	55	20	4	0,040-0,100
3,00	●	●	3	62	20	6	0,060-0,140
3,10	●	●	3,1	62	20	6	0,060-0,140
3,20	●	●	3,2	62	20	6	0,060-0,140
3,25	●	●	3,25	62	20	6	0,060-0,140
3,30	●	●	3,3	62	20	6	0,060-0,140
3,40	●	●	3,4	62	20	6	0,060-0,140
3,50	●	●	3,5	62	20	6	0,060-0,140
3,60	●	●	3,6	62	20	6	0,060-0,140
3,70	●	●	3,7	62	20	6	0,060-0,140
3,80	●	●	3,8	66	24	6	0,060-0,140
3,90	●	●	3,9	66	24	6	0,060-0,140
4,00	●	●	4	66	24	6	0,080-0,160
4,10	●	●	4,1	66	24	6	0,080-0,160
4,20	●	●	4,2	66	24	6	0,080-0,160
4,30	●	●	4,3	66	24	6	0,080-0,160
4,40	●	●	4,4	66	24	6	0,080-0,160
4,50	●	●	4,5	66	24	6	0,080-0,160
4,60	●	●	4,6	66	24	6	0,080-0,160
4,65	●	●	4,65	66	24	6	0,080-0,160
4,70	●	●	4,7	66	24	6	0,080-0,160
4,80	●	●	4,8	66	28	6	0,080-0,160
4,90	●	●	4,9	66	28	6	0,080-0,160
5,00	●	●	5	66	28	6	0,090-0,200
5,10	●	●	5,1	66	28	6	0,090-0,200
5,20	●	●	5,2	66	28	6	0,090-0,200
5,30	●	●	5,3	66	28	6	0,090-0,200
5,40	●	●	5,4	66	28	6	0,090-0,200
5,50	●	●	5,5	66	28	6	0,090-0,200
5,55	●	●	5,55	66	28	6	0,090-0,200
5,60	●	●	5,6	66	28	6	0,090-0,200
5,70	●	●	5,7	66	28	6	0,090-0,200
5,80	●	●	5,8	66	28	6	0,090-0,200
5,90	●	●	5,9	66	28	6	0,090-0,200
6,00	●	●	6	66	28	6	0,100-0,230
6,10	●	●	6,1	79	34	8	0,100-0,230
6,20	●	●	6,2	79	34	8	0,100-0,230
6,30	●	●	6,3	79	34	8	0,100-0,230
6,40	●	●	6,4	79	34	8	0,100-0,230
6,50	●	●	6,5	79	34	8	0,100-0,230
6,60	●	●	6,6	79	34	8	0,100-0,230
6,70	●	●	6,7	79	34	8	0,100-0,230
6,80	●	●	6,8	79	34	8	0,100-0,230
6,90	●	●	6,9	79	34	8	0,100-0,230
7,00	●	●	7	79	34	8	0,110-0,250
7,10	●	●	7,1	79	41	8	0,110-0,250
7,20	●	●	7,2	79	41	8	0,110-0,250
7,30	●	●	7,3	79	41	8	0,110-0,250
7,40	●	●	7,4	79	41	8	0,110-0,250
7,45	●	●	7,45	79	41	8	0,110-0,250
7,50	●	●	7,5	79	41	8	0,110-0,250
7,55	●	●	7,55	79	41	8	0,110-0,250
7,60	●	●	7,6	79	41	8	0,110-0,250
7,70	●	●	7,7	79	41	8	0,110-0,250
7,80	●	●	7,8	79	41	8	0,110-0,250
7,90	●	●	7,9	79	41	8	0,110-0,250
8,00	●	●	8	79	41	8	0,110-0,270
8,10	●	●	8,1	89	47	10	0,110-0,270
8,20	●	●	8,2	89	47	10	0,110-0,270
8,30	●	●	8,3	89	47	10	0,110-0,270
8,40	●	●	8,4	89	47	10	0,110-0,270
8,50	●	●	8,5	89	47	10	0,110-0,270
8,60	●	●	8,6	89	47	10	0,110-0,270
8,70	●	●	8,7	89	47	10	0,110-0,270
8,80	●	●	8,8	89	47	10	0,110-0,270
8,90	●	●	8,9	89	47	10	0,110-0,270
9,00	●	●	9	89	47	10	0,120-0,280
9,10	●	●	9,1	89	47	10	0,120-0,280
9,20	●	●	9,2	89	47	10	0,120-0,280
9,30	●	●	9,3	89	47	10	0,120-0,280
9,35	●	●	9,35	89	47	10	0,120-0,280
9,40	●	●	9,4	89	47	10	0,120-0,280
9,50	●	●	9,5	89	47	10	0,120-0,280
9,55	●	●	9,55	89	47	10	0,120-0,280
9,60	●	●	9,6	89	47	10	0,120-0,280
9,70	●	●	9,7	89	47	10	0,120-0,280
9,80	●	●	9,8	89	47	10	0,120-0,280
9,90	●	●	9,9	89	47	10	0,120-0,280
10,00	●	●	10	89	47	10	0,130-0,300
10,10	●	●	10,1	102	55	12	0,130-0,300
10,20	●	●	10,2	102	55	12	0,130-0,300
10,30	●	●	10,3	102	55	12	0,130-0,300
10,40	●	●	10,4	102	55	12	0,130-0,300
10,50	●	●	10,5	102	55	12	0,130-0,300
10,60	●	●	10,6	102	55	12	0,130-0,300
10,70	●	●	10,7	102	55	12	0,130-0,300
10,80	●	●	10,8	102	55	12	0,130-0,300
10,90	●	●	10,9	102	55	12	0,130-0,300
11,00	●	●	11	102	55	12	0,140-0,320
11,10	●	●	11,1	102	55	12	0,140-0,320
11,20	●	●	11,2	102	55	12	0,140-0,320
11,30	●	●	11,3	102	55	12	0,140-0,320
11,40	●	●	11,4	102	55	12	0,140-0,320
11,50	●	●	11,5	102	55	12	0,140-0,320
11,60	●	●	11,6	102	55	12	0,140-0,320
11,70	●	●	11,7	102	55	12	0,140-0,320
11,80	●	●	11,8	102	55	12	0,140-0,320
11,90	●	●	11,9	102	55	12	0,140-0,320
12,00	●	●	12	102	55	12	0,150-0,320
12,20	●	●	12,2	107	60	14	0,150-0,320
12,50	●	●	12,5	107	60	14	0,150-0,320
12,80	●	●	12,8	107	60	14	0,150-0,320
13,00	●	●	13	107	60	14	0,150-0,320
13,50	●	●	13,5	107	60	14	0,150-0,320
13,80	●	●	13,8	107	60	14	0,150-0,320
14,00	●	●	14	107	60	14	0,160-0,350
14,20	●	●	14,2	115	65	16	0,160-0,350
14,50	●	●	14,5	115	65	16	0,160-0,350
14,80	●	●	14,8	115	65	16	0,160-0,350
15,00	●	●	15	115	65	16	0,160-0,350
15,30	●	●	15,3	115	65	16	0,160-0,350
15,50	●	●	15,5	115	65	16	0,160-0,350
15,80	●	●	15,8	115	65	16	0,160-0,350
16,00	●	●	16	115	65	16	0,170-0,370
16,50	●	●	16,5	123	73	18	0,170-0,370
16,80	●	●	16,8	123	73	18	0,170-0,370
17,00	●	●	17	123	73	18	0,170-0,370
17,50	●	●	17,5	123	73	18	0,170-0,370
17,70	●	●	17,7	123	73	18	0,170-0,370
17,80	●	●	17,8	123	73	18	0,170-0,370
18,00	●	●	18	123	73	18	0,180-0,400
18,50	●	●	18,5	131	79	20	0,180-0,400
18,80	●	●	18,8	131	79	20	0,180-0,400
19,00	●	●	19	131	79	20	0,180-0,400
19,50	●	●	19,5	131	79	20	0,180-0,400
19,80	●	●	19,8	131	79	20	0,180-0,400
20,00	●	●	20	131	79	20	0,200-0,450

High-performance drill SC Steel

PREMUS

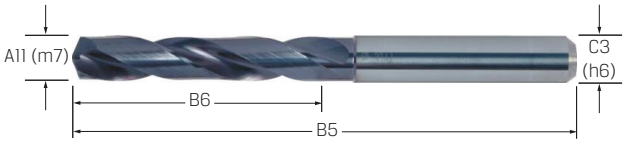
	P N/mm²	K HB
102810	⟨1200	⟨300
vc = m/min.		
102810	35-100	50-110

SC | coated | DIN 6537 | 5 × A11 | Teeth 2 | 140° | 6535 HA shank

P K Vc

Design:
- VHM micro grain 10 - 12 % Co
- carbide substrate with particularly tight tolerances
- TiAlN coating
- specific point geometry
- point angle 140°
- side rake angle 30°
- special chip flute geometry
- strengthened core thickness
- core taper normal

Use:
Ideal for machining of steel, because cutting edges and chip chambers have been optimised for this purpose. Therefore also very suitable for NC manufacturing



N° article	102810 5× A11, TiAlN HA	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00-HA	●	3	66	28	6	0,100-0,250
3,10-HA	○	3,1	66	28	6	0,100-0,250
3,20-HA	●	3,2	66	28	6	0,100-0,250
3,30-HA	●	3,3	66	28	6	0,100-0,250
3,40-HA	●	3,4	66	28	6	0,100-0,250
3,50-HA	○	3,5	66	28	6	0,100-0,250
3,60-HA	○	3,6	66	28	6	0,100-0,250
3,70-HA	●	3,7	66	28	6	0,100-0,250
3,80-HA	●	3,8	74	36	6	0,100-0,250
3,90-HA	●	3,9	74	36	6	0,100-0,250
4,00-HA	●	4	74	36	6	0,100-0,250
4,10-HA	○	4,1	74	36	6	0,100-0,250
4,20-HA	●	4,2	74	36	6	0,100-0,250
4,30-HA	●	4,3	74	36	6	0,100-0,250
4,40-HA	●	4,4	74	36	6	0,100-0,250
4,50-HA	●	4,5	74	36	6	0,100-0,250
4,60-HA	●	4,6	74	36	6	0,100-0,250
4,70-HA	●	4,7	74	36	6	0,100-0,250
4,80-HA	●	4,8	82	44	6	0,100-0,250
4,90-HA	○	4,9	82	44	6	0,100-0,250
5,00-HA	●	5	82	44	6	0,120-0,300
5,10-HA	●	5,1	82	44	6	0,120-0,300
5,20-HA	●	5,2	82	44	6	0,120-0,300
5,30-HA	●	5,3	82	44	6	0,120-0,300
5,40-HA	○	5,4	82	44	6	0,120-0,300
5,50-HA	●	5,5	82	44	6	0,120-0,300
5,60-HA	●	5,6	82	44	6	0,120-0,300
5,70-HA	○	5,7	82	44	6	0,120-0,300
5,80-HA	●	5,8	82	44	6	0,120-0,300
5,90-HA	○	5,9	82	44	6	0,120-0,300
6,00-HA	●	6	82	44	6	0,120-0,300
6,10-HA	○	6,1	91	53	8	0,120-0,300
6,20-HA	●	6,2	91	53	8	0,120-0,300
6,30-HA	○	6,3	91	53	8	0,120-0,300
6,40-HA	○	6,4	91	53	8	0,120-0,300
6,50-HA	●	6,5	91	53	8	0,120-0,300
6,60-HA	●	6,6	91	53	8	0,120-0,300

N° article	102810 5× A11, TiAlN HA	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,70-HA	○	6,7	91	53	8	0,120-0,300
6,80-HA	●	6,8	91	53	8	0,120-0,300
6,90-HA	●	6,9	91	53	8	0,120-0,300
7,00-HA	●	7	91	53	8	0,120-0,300
7,10-HA	●	7,1	91	53	8	0,120-0,300
7,20-HA	●	7,2	91	53	8	0,120-0,300
7,30-HA	○	7,3	91	53	8	0,120-0,300
7,40-HA	●	7,4	91	53	8	0,120-0,300
7,50-HA	●	7,5	91	53	8	0,120-0,300
7,60-HA	●	7,6	91	53	8	0,120-0,300
7,70-HA	○	7,7	91	53	8	0,120-0,300
7,80-HA	●	7,8	91	53	8	0,120-0,300
7,90-HA	○	7,9	91	53	8	0,120-0,300
8,00-HA	●	8	91	53	8	0,140-0,400
8,10-HA	●	8,1	103	61	10	0,140-0,400
8,20-HA	●	8,2	103	61	10	0,140-0,400
8,30-HA	●	8,3	103	61	10	0,140-0,400
8,40-HA	●	8,4	103	61	10	0,140-0,400
8,50-HA	●	8,5	103	61	10	0,140-0,400
8,60-HA	●	8,6	103	61	10	0,140-0,400
8,70-HA	●	8,7	103	61	10	0,140-0,400
8,80-HA	○	8,8	103	61	10	0,140-0,400
8,90-HA	○	8,9	103	61	10	0,140-0,400
9,00-HA	●	9	103	61	10	0,140-0,400
9,10-HA	○	9,1	103	61	10	0,140-0,400
9,20-HA	○	9,2	103	61	10	0,140-0,400
9,30-HA	●	9,3	103	61	10	0,140-0,400
9,40-HA	○	9,4	103	61	10	0,140-0,400
9,50-HA	●	9,5	103	61	10	0,140-0,400
9,60-HA	○	9,6	103	61	10	0,140-0,400
9,70-HA	○	9,7	103	61	10	0,140-0,400
9,80-HA	●	9,8	103	61	10	0,140-0,400
9,90-HA	○	9,9	103	61	10	0,140-0,400
10,00-HA	●	10	103	61	10	0,140-0,400
10,10-HA	●	10,1	118	71	12	0,140-0,400
10,20-HA	●	10,2	118	71	12	0,140-0,400
10,30-HA	●	10,3	118	71	12	0,140-0,400

N° article	102810 5× A11, TiAlN HA	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,40-HA	●	10,4	118	71	12	0,140-0,400
10,50-HA	●	10,5	118	71	12	0,140-0,400
10,60-HA	○	10,6	118	71	12	0,140-0,400
10,70-HA	○	10,7	118	71	12	0,140-0,400
10,80-HA	○	10,8	118	71	12	0,140-0,400
10,90-HA	○	10,9	118	71	12	0,140-0,400
11,00-HA	●	11	118	71	12	0,140-0,400
11,10-HA	○	11,1	118	71	12	0,140-0,400
11,20-HA	○	11,2	118	71	12	0,140-0,400
11,30-HA	●	11,3	118	71	12	0,140-0,400
11,40-HA	○	11,4	118	71	12	0,140-0,400
11,50-HA	○	11,5	118	71	12	0,140-0,400
11,60-HA	○	11,6	118	71	12	0,140-0,400
11,70-HA	●	11,7	118	71	12	0,140-0,400
11,80-HA	●	11,8	118	71	12	0,140-0,400
12,00-HA	●	12	118	71	12	0,160-0,450
12,50-HA	●	12,5	124	77	14	0,160-0,450
12,80-HA	●	12,8	124	77	14	0,160-0,450
13,00-HA	●	13	124	77	14	0,160-0,450
13,50-HA	●	13,5	124	77	14	0,160-0,450
13,80-HA	○	13,8	124	77	14	0,160-0,450
14,00-HA	●	14	124	77	14	0,160-0,450
14,50-HA	○	14,5	133	83	16	0,160-0,450
14,80-HA	○	14,8	133	83	16	0,160-0,450
15,00-HA	●	15	133	83	16	0,160-0,450
15,50-HA	○	15,5	133	83	16	0,160-0,450
15,80-HA	●	15,8	133	83	16	0,160-0,450
16,00-HA	○	16	133	83	16	0,180-0,500
16,50-HA	○	16,5	143	93	18	0,180-0,500
17,00-HA	●	17	143	93	18	0,180-0,500
17,50-HA	●	17,5	143	93	18	0,180-0,500
18,00-HA	●	18	143	93	18	0,180-0,500
18,50-HA	○	18,5	153	101	20	0,180-0,500
19,00-HA	○	19	153	101	20	0,180-0,500
19,50-HA	○	19,5	153	101	20	0,180-0,500
20,00-HA	●	20	153	101	20	0,180-0,500

High-performance drill SC Universal

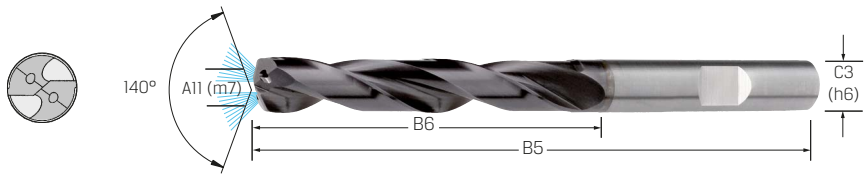
PRETEC

	P N/mm²	M N/mm²	K HB	N N/mm²	
102657	〈1200	〈750		Aluminium	bronze
	vc = m/min.				
102657	85-170	45-60	130-210	220-310	80-125

SC | coated | DIN 6537 | 5 × A11 | Teeth 2 | 140° | 6535 HB shank

ICS | UNI | Vc

Design:
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip breaking, even at larger drilling depths
- very wide application range even under suboptimal conditions
- high concentricity
- accurate drilling properties
- with twisted cooling ducts



N° article	102657 5× A11, TiAlN HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	66	28	6	0,060-0,140
3,10	●	3,1	66	28	6	0,060-0,140
3,20	●	3,2	66	28	6	0,060-0,140
3,30	●	3,3	66	28	6	0,060-0,140
3,40	●	3,4	66	28	6	0,060-0,140
3,50	●	3,5	66	28	6	0,060-0,140
3,60	●	3,6	66	28	6	0,060-0,140
3,70	●	3,7	66	28	6	0,060-0,140
3,80	●	3,8	74	36	6	0,060-0,140
3,90	●	3,9	74	36	6	0,060-0,140
4,00	●	4	74	36	6	0,080-0,160
4,10	●	4,1	74	36	6	0,080-0,160
4,20	●	4,2	74	36	6	0,080-0,160
4,30	●	4,3	74	36	6	0,080-0,160
4,40	●	4,4	74	36	6	0,080-0,160
4,50	●	4,5	74	36	6	0,080-0,160
4,60	●	4,6	74	36	6	0,080-0,160
4,70	●	4,7	74	36	6	0,080-0,160
4,80	●	4,8	82	44	6	0,080-0,160
4,90	●	4,9	82	44	6	0,080-0,160
5,00	●	5	82	44	6	0,090-0,200
5,10	●	5,1	82	44	6	0,090-0,200
5,20	●	5,2	82	44	6	0,090-0,200
5,30	●	5,3	82	44	6	0,090-0,200
5,40	●	5,4	82	44	6	0,090-0,200
5,50	●	5,5	82	44	6	0,090-0,200
5,60	●	5,6	82	44	6	0,090-0,200
5,70	●	5,7	82	44	6	0,090-0,200
5,80	●	5,8	82	44	6	0,090-0,200
5,90	●	5,9	82	44	6	0,090-0,200
6,00	●	6	82	44	6	0,100-0,230
6,10	●	6,1	91	53	8	0,100-0,230
6,20	●	6,2	91	53	8	0,100-0,230
6,30	●	6,3	91	53	8	0,100-0,230
6,40	●	6,4	91	53	8	0,100-0,230
6,50	●	6,5	91	53	8	0,100-0,230
6,60	●	6,6	91	53	8	0,100-0,230
6,70	●	6,7	91	53	8	0,100-0,230
6,80	●	6,8	91	53	8	0,100-0,230
6,90	●	6,9	91	53	8	0,100-0,230
7,00	●	7	91	53	8	0,110-0,250
7,10	●	7,1	91	53	8	0,110-0,250
7,20	●	7,2	91	53	8	0,110-0,250
7,30	●	7,3	91	53	8	0,110-0,250
7,40	●	7,4	91	53	8	0,110-0,250
7,45	●	7,45	91	53	8	0,110-0,250

N° article	102657 5× A11, TiAlN HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
7,50	●	7,5	91	53	8	0,110-0,250
7,60	●	7,6	91	53	8	0,110-0,250
7,70	●	7,7	91	53	8	0,110-0,250
7,80	●	7,8	91	53	8	0,110-0,250
7,90	●	7,9	91	53	8	0,110-0,250
8,00	●	8	91	53	8	0,110-0,270
8,10	●	8,1	103	61	10	0,110-0,270
8,20	●	8,2	103	61	10	0,110-0,270
8,30	●	8,3	103	61	10	0,110-0,270
8,40	●	8,4	103	61	10	0,110-0,270
8,50	●	8,5	103	61	10	0,110-0,270
8,60	●	8,6	103	61	10	0,110-0,270
8,70	●	8,7	103	61	10	0,110-0,270
8,80	●	8,8	103	61	10	0,110-0,270
8,90	●	8,9	103	61	10	0,110-0,270
9,00	●	9	103	61	10	0,120-0,280
9,10	●	9,1	103	61	10	0,120-0,280
9,20	●	9,2	103	61	10	0,120-0,280
9,30	●	9,3	103	61	10	0,120-0,280
9,40	●	9,4	103	61	10	0,120-0,280
9,50	●	9,5	103	61	10	0,120-0,280
9,60	●	9,6	103	61	10	0,120-0,280
9,70	●	9,7	103	61	10	0,120-0,280
9,80	●	9,8	103	61	10	0,120-0,280
9,90	●	9,9	103	61	10	0,120-0,280
10,00	●	10	103	61	10	0,130-0,300
10,10	●	10,1	118	71	12	0,130-0,300
10,20	●	10,2	118	71	12	0,130-0,300
10,30	●	10,3	118	71	12	0,130-0,300
10,40	●	10,4	118	71	12	0,130-0,300
10,50	●	10,5	118	71	12	0,130-0,300
10,80	●	10,8	118	71	12	0,130-0,300
11,00	●	11	118	71	12	0,140-0,320
11,20	●	11,2	118	71	12	0,140-0,320
11,50	●	11,5	118	71	12	0,140-0,320
11,80	●	11,8	118	71	12	0,140-0,320
12,00	●	12	118	71	12	0,150-0,320
12,20	●	12,2	124	77	14	0,150-0,320
12,50	●	12,5	124	77	14	0,150-0,320
12,80	●	12,8	124	77	14	0,150-0,320
13,00	●	13	124	77	14	0,150-0,320
13,50	●	13,5	124	77	14	0,150-0,320
13,80	●	13,8	124	77	14	0,150-0,320
14,00	●	14	124	77	14	0,160-0,350
14,20	●	14,2	133	83	16	0,160-0,350
14,50	●	14,5	133	83	16	0,160-0,350

N° article	102657 5× A11, TiAlN HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
14,80	●	14,8	133	83	16	0,160-0,350
15,00	●	15	133	83	16	0,160-0,350
15,50	●	15,5	133	83	16	0,160-0,350
15,80	●	15,8	133	83	16	0,160-0,350
16,00	●	16	133	83	16	0,170-0,370
16,50	●	16,5	143	93	18	0,170-0,370
17,00	●	17	143	93	18	0,170-0,370
17,50	●	17,5	143	93	18	0,170-0,370
17,80	●	17,8	143	93	18	0,170-0,370
18,00	●	18	143	93	18	0,180-0,400
18,50	●	18,5	153	101	20	0,180-0,400
18,80	●	18,8	153	101	20	0,180-0,400
19,00	●	19	153	101	20	0,180-0,400
19,50	●	19,5	153	101	20	0,180-0,400
19,80	●	19,8	153	101	20	0,180-0,400
20,00	●	20	153	101	20	0,200-0,450



SET

N° article	102657 5× A11, TiAlN HB, ICS	Contents
SET	●	Set 4-piece: 4.2 | 5 | 6.8 | 8.5 mm

High-performance drill SC Universal

PREMUS GP

	P N/mm²	M N/mm²	K HB	N N/mm²	
102756	<1200	<750	<250	Aluminium	bronze, copper
102757					
	vc = m/min.				
102756	105-120	50	120	120-320	120-180
102757					

SC | coated | DIN 6537 | 5 × A11 | Teeth 2 | 140° | ICS

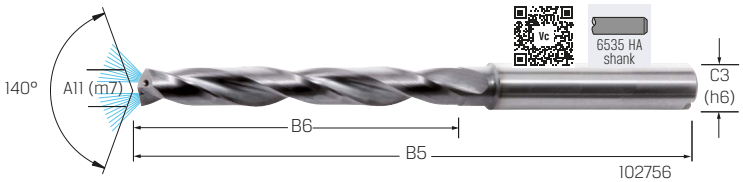
UNI | CAD

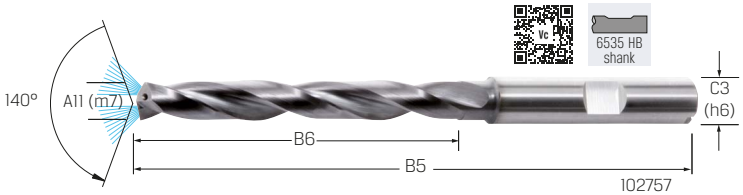
Design:
- latest TiAlN coating technology
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip breaking, even at larger drilling depths
- very wide application range even under suboptimal conditions
- the best results in rotating and stationary use
- high concentricity
- accurate drilling properties
- with twisted cooling ducts

Note:
effective length = B6 - 1.5x A1 1

GP







Nº article	102756 GP, 5× A11, TiAlN, HA, ICS	102757 GP, 5× A11, TiAlN, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
2,00	●	–	2	62	26	4	0,040 - 0,100
2,10	●	–	2,1	62	26	4	0,040 - 0,100
2,15	●	–	2,15	62	26	4	0,040 - 0,100
2,20	●	–	2,2	62	26	4	0,040 - 0,100
2,30	●	–	2,3	62	26	4	0,040 - 0,100
2,40	●	–	2,4	62	26	4	0,040 - 0,100
2,50	●	–	2,5	62	26	4	0,040 - 0,100
2,60	●	–	2,6	62	26	4	0,040 - 0,100
2,65	●	–	2,65	62	26	4	0,040 - 0,100
2,70	●	–	2,7	62	26	4	0,040 - 0,100
2,80	●	–	2,8	62	26	4	0,040 - 0,100
2,85	●	–	2,85	62	26	4	0,040 - 0,100
2,90	●	–	2,9	62	26	4	0,040 - 0,100
3,00	●	●	3	66	28	6	0,060 - 0,140
3,05	●	●	3,05	66	28	6	0,060 - 0,140
3,10	●	●	3,1	66	28	6	0,060 - 0,140
3,20	●	●	3,2	66	28	6	0,060 - 0,140
3,25	●	●	3,25	66	28	6	0,060 - 0,140
3,30	●	●	3,3	66	28	6	0,060 - 0,140
3,40	●	●	3,4	66	28	6	0,060 - 0,140
3,50	●	●	3,5	66	28	6	0,060 - 0,140
3,60	●	●	3,6	66	28	6	0,060 - 0,140
3,70	●	●	3,7	66	28	6	0,060 - 0,140
3,80	●	●	3,8	74	36	6	0,060 - 0,140
3,90	●	●	3,9	74	36	6	0,060 - 0,140
4,00	●	●	4	74	36	6	0,080 - 0,160
4,05	●	●	4,05	74	36	6	0,080 - 0,160
4,10	●	●	4,1	74	36	6	0,080 - 0,160
4,20	●	●	4,2	74	36	6	0,080 - 0,160
4,30	●	●	4,3	74	36	6	0,080 - 0,160
4,40	●	●	4,4	74	36	6	0,080 - 0,160
4,50	●	●	4,5	74	36	6	0,080 - 0,160
4,60	●	●	4,6	74	36	6	0,080 - 0,160
4,65	●	●	4,65	74	36	6	0,080 - 0,160
4,70	●	●	4,7	74	36	6	0,080 - 0,160
4,80	●	●	4,8	82	44	6	0,080 - 0,160
4,90	●	●	4,9	82	44	6	0,080 - 0,160
5,00	●	●	5	82	44	6	0,090 - 0,200
5,05	●	●	5,05	82	44	6	0,090 - 0,200
5,10	●	●	5,1	82	44	6	0,090 - 0,200
5,20	●	●	5,2	82	44	6	0,090 - 0,200
5,30	●	●	5,3	82	44	6	0,090 - 0,200
5,40	●	●	5,4	82	44	6	0,090 - 0,200
5,50	●	●	5,5	82	44	6	0,090 - 0,200
5,55	●	●	5,55	82	44	6	0,090 - 0,200
5,60	●	●	5,6	82	44	6	0,090 - 0,200
5,70	●	●	5,7	82	44	6	0,090 - 0,200
5,80	●	●	5,8	82	44	6	0,090 - 0,200
5,90	●	●	5,9	82	44	6	0,090 - 0,200

Nº article	102756 GP, 5× A11, TiAlN, HA, ICS	102757 GP, 5× A11, TiAlN, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,00	●	●	6	82	44	6	0,100 - 0,230
6,05	●	●	6,05	82	44	6	0,100 - 0,230
6,10	●	●	6,1	91	53	8	0,100 - 0,230
6,20	●	●	6,2	91	53	8	0,100 - 0,230
6,30	●	●	6,3	91	53	8	0,100 - 0,230
6,40	●	●	6,4	91	53	8	0,100 - 0,230
6,50	●	●	6,5	91	53	8	0,100 - 0,230
6,60	●	●	6,6	91	53	8	0,100 - 0,230
6,70	●	●	6,7	91	53	8	0,100 - 0,230
6,80	●	●	6,8	91	53	8	0,100 - 0,230
6,90	●	●	6,9	91	53	8	0,100 - 0,230
7,00	●	●	7	91	53	8	0,110 - 0,250
7,10	●	●	7,1	91	53	8	0,110 - 0,250
7,20	●	●	7,2	91	53	8	0,110 - 0,250
7,30	●	●	7,3	91	53	8	0,110 - 0,250
7,40	●	●	7,4	91	53	8	0,110 - 0,250
7,45	●	●	7,45	91	53	8	0,110 - 0,250
7,50	●	●	7,5	91	53	8	0,110 - 0,250
7,55	●	●	7,55	91	53	8	0,110 - 0,250
7,60	●	●	7,6	91	53	8	0,110 - 0,250
7,70	●	●	7,7	91	53	8	0,110 - 0,250
7,80	●	●	7,8	91	53	8	0,110 - 0,250
7,90	●	●	7,9	91	53	8	0,110 - 0,250
8,00	●	●	8	91	53	8	0,110 - 0,270
8,05	●	●	8,05	91	53	8	0,110 - 0,270
8,10	●	●	8,1	103	61	10	0,110 - 0,270
8,20	●	●	8,2	103	61	10	0,110 - 0,270
8,30	●	●	8,3	103	61	10	0,110 - 0,270
8,40	●	●	8,4	103	61	10	0,110 - 0,270
8,50	●	●	8,5	103	61	10	0,110 - 0,270
8,60	●	●	8,6	103	61	10	0,110 - 0,270
8,70	●	●	8,7	103	61	10	0,110 - 0,270
8,80	●	●	8,8	103	61	10	0,110 - 0,270
8,90	●	●	8,9	103	61	10	0,110 - 0,270
9,00	●	●	9	103	61	10	0,120 - 0,280
9,10	●	●	9,1	103	61	10	0,120 - 0,280
9,20	●	●	9,2	103	61	10	0,120 - 0,280
9,30	●	●	9,3	103	61	10	0,120 - 0,280
9,35	●	●	9,35	103	61	10	0,120 - 0,280
9,40	●	●	9,4	103	61	10	0,120 - 0,280
9,50	●	●	9,5	103	61	10	0,120 - 0,280
9,55	●	●	9,55	103	61	10	0,120 - 0,280
9,60	●	●	9,6	103	61	10	0,120 - 0,280
9,70	●	●	9,7	103	61	10	0,120 - 0,280
9,80	●	●	9,8	103	61	10	0,120 - 0,280
9,90	●	●	9,9	103	61	10	0,120 - 0,280
10,00	●	●	10	103	61	10	0,130 - 0,300
10,05	●	●	10,05	103	61	10	0,130 - 0,300
10,10	●	●	10,1	118	71	12	0,130 - 0,300

Nº article	102756 GP, 5× A11, TiAlN, HA, ICS	102757 GP, 5× A11, TiAlN, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,20	●	●	10,2	118	71	12	0,130 - 0,300
10,30	●	●	10,3	118	71	12	0,130 - 0,300
10,40	●	●	10,4	118	71	12	0,130 - 0,300
10,50	●	●	10,5	118	71	12	0,130 - 0,300
10,60	●	●	10,6	118	71	12	0,130 - 0,300
10,70	●	●	10,7	118	71	12	0,130 - 0,300
10,80	●	●	10,8	118	71	12	0,130 - 0,300
10,90	●	●	10,9	118	71	12	0,130 - 0,300
11,00	●	●	11	118	71	12	0,140 - 0,320
11,10	●	●	11,1	118	71	12	0,140 - 0,320
11,20	●	●	11,2	118	71	12	0,140 - 0,320
11,30	●	●	11,3	118	71	12	0,140 - 0,320
11,40	●	●	11,4	118	71	12	0,140 - 0,320
11,50	●	●	11,5	118	71	12	0,140 - 0,320
11,60	●	●	11,6	118	71	12	0,140 - 0,320
11,70	●	●	11,7	118	71	12	0,140 - 0,320
11,80	●	●	11,8	118	71	12	0,140 - 0,320
11,90	●	●	11,9	118	71	12	0,140 - 0,320
12,00	●	●	12	118	71	12	0,150 - 0,320
12,05	●	●	12,05	118	71	12	0,150 - 0,320
12,20	●	●	12,2	124	77	14	0,150 - 0,320
12,50	●	●	12,5	124	77	14	0,150 - 0,320
12,80	●	●	12,8	124	77	14	0,150 - 0,320
13,00	●	●	13	124	77	14	0,150 - 0,320
13,50	●	●	13,5	124	77	14	0,150 - 0,320
13,80	●	●	13,8	124	77	14	0,150 - 0,320
14,00	●	●	14	124	77	14	0,160 - 0,350
14,20	●	●	14,2	133	83	16	0,160 - 0,350
14,50	●	●	14,5	133	83	16	0,160 - 0,350
14,80	●	●	14,8	133	83	16	0,160 - 0,350
15,00	●	●	15	133	83	16	0,160 - 0,350
15,10	●	●	15,1	133	83	16	0,160 - 0,350
15,30	●	●	15,3	133	83	16	0,160 - 0,350
15,50	●	●	15,5	133	83	16	0,160 - 0,350
15,80	●	●	15,8	133	83	16	0,160 - 0,350
16,00	●	●	16	133	83	16	0,170 - 0,370
16,50	●	●	16,5	143	93	18	0,170 - 0,370
16,80	●	●	16,8	143	93	18	0,170 - 0,370
17,00	●	●	17	143	93	18	0,170 - 0,370
17,50	●	●	17,5	143	93	18	0,170 - 0,370
17,70	●	●	17,7	143	93	18	0,170 - 0,370
17,80	●	●	17,8	143	93	18	0,170 - 0,370
18,00	●	●	18	143	93	18	0,180 - 0,400
18,50	●	●	18,5	153	101	20	0,180 - 0,400
18,80	●	●	18,8	153	101	20	0,180 - 0,400
19,00	●	●	19	153	101	20	0,180 - 0,400
19,50	●	●	19,5	153	101	20	0,180 - 0,400
19,80	●	●	19,8	153	101	20	0,180 - 0,400
20,00	●	●	20	153	101	20	0,200 - 0,450

High-performance drill SC Universal

PREMUS GP

	P N/mm²	M N/mm²	K HB	N N/mm²	
102786	<1200	<850	<350	Aluminium	bronze, copper
	vc = m/min.				
102786	40-115	30-50	65-130	120-320	120-180

SC | coated | DIN 6537 | 8 × A11 | Teeth 2 | 140° | 6535 HA shank

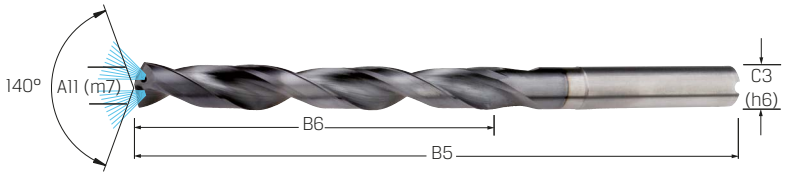
ICS | UNI | Vc | CAD

Design:
- latest AlTiN-based coating technology
- reinforced geometry for reliable processing
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good centring properties (in INOX materials, we recommend centring with a 142° NC tapping tool 106180-106185)
- short chips through straight main cutting edges with optimised edge fillet
- good chip removal, even with large drill depths due to special groove geometry
- very wide application range even under suboptimal conditions
- high concentricity
- accurate drilling properties
- with twisted cooling ducts

Note:
Effective length = B6 - 1.5x A11

GP





N° article	102786 GP, 8× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
2,80	●	2,8	66	30	4	0,040-0,100
3,00	●	3	72	34	6	0,060-0,140
3,10	●	3,1	72	34	6	0,060-0,140
3,20	●	3,2	72	34	6	0,060-0,140
3,30	●	3,3	72	34	6	0,060-0,140
3,40	●	3,4	72	34	6	0,060-0,140
3,50	●	3,5	72	34	6	0,060-0,140
3,60	●	3,6	72	34	6	0,060-0,140
3,70	●	3,7	72	34	6	0,060-0,140
3,80	●	3,8	81	43	6	0,060-0,140
3,90	●	3,9	81	43	6	0,060-0,140
4,00	●	4	81	43	6	0,080-0,160
4,10	●	4,1	81	43	6	0,080-0,160
4,20	●	4,2	81	43	6	0,080-0,160
4,30	●	4,3	81	43	6	0,080-0,160
4,40	●	4,4	81	43	6	0,080-0,160
4,50	●	4,5	81	43	6	0,080-0,160
4,60	●	4,6	81	43	6	0,080-0,160
4,70	●	4,7	81	43	6	0,080-0,160
4,80	●	4,8	95	57	6	0,080-0,160
4,90	●	4,9	95	57	6	0,080-0,160
5,00	●	5	95	57	6	0,090-0,200
5,10	●	5,1	95	57	6	0,090-0,200
5,20	●	5,2	95	57	6	0,090-0,200
5,30	●	5,3	95	57	6	0,090-0,200
5,40	●	5,4	95	57	6	0,090-0,200
5,50	●	5,5	95	57	6	0,090-0,200
5,60	●	5,6	95	57	6	0,090-0,200
5,70	●	5,7	95	57	6	0,090-0,200
5,80	●	5,8	95	57	6	0,090-0,200
5,90	●	5,9	95	57	6	0,090-0,200
6,00	●	6	95	57	6	0,100-0,230
6,10	●	6,1	114	76	8	0,100-0,230

N° article	102786 GP, 8× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,20	●	6,2	114	76	8	0,100-0,230
6,30	●	6,3	114	76	8	0,100-0,230
6,40	●	6,4	114	76	8	0,100-0,230
6,50	●	6,5	114	76	8	0,100-0,230
6,60	●	6,6	114	76	8	0,100-0,230
6,70	●	6,7	114	76	8	0,100-0,230
6,80	●	6,8	114	76	8	0,100-0,230
6,90	●	6,9	114	76	8	0,100-0,230
7,00	●	7	114	76	8	0,110-0,250
7,10	●	7,1	114	76	8	0,110-0,250
7,20	●	7,2	114	76	8	0,110-0,250
7,30	●	7,3	114	76	8	0,110-0,250
7,40	●	7,4	114	76	8	0,110-0,250
7,50	●	7,5	114	76	8	0,110-0,250
7,60	●	7,6	114	76	8	0,110-0,250
7,70	●	7,7	114	76	8	0,110-0,250
7,80	●	7,8	114	76	8	0,110-0,250
7,90	●	7,9	114	76	8	0,110-0,250
8,00	●	8	114	76	8	0,110-0,270
8,10	●	8,1	142	95	10	0,110-0,270
8,20	●	8,2	142	95	10	0,110-0,270
8,30	●	8,3	142	95	10	0,110-0,270
8,40	●	8,4	142	95	10	0,110-0,270
8,50	●	8,5	142	95	10	0,110-0,270
8,60	●	8,6	142	95	10	0,110-0,270
8,70	●	8,7	142	95	10	0,110-0,270
8,80	●	8,8	142	95	10	0,110-0,270
8,90	●	8,9	142	95	10	0,110-0,270
9,00	●	9	142	95	10	0,120-0,280
9,10	●	9,1	142	95	10	0,120-0,280
9,20	●	9,2	142	95	10	0,120-0,280
9,30	●	9,3	142	95	10	0,120-0,280
9,40	●	9,4	142	95	10	0,120-0,280

N° article	102786 GP, 8× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
9,50	●	9,5	142	95	10	0,120-0,280
9,60	●	9,6	142	95	10	0,120-0,280
9,70	●	9,7	142	95	10	0,120-0,280
9,80	●	9,8	142	95	10	0,120-0,280
9,90	●	9,9	142	95	10	0,120-0,280
10,00	●	10	142	95	10	0,130-0,300
10,20	●	10,2	162	114	12	0,130-0,300
10,30	●	10,3	162	114	12	0,130-0,300
10,50	●	10,5	162	114	12	0,130-0,300
10,80	●	10,8	162	114	12	0,130-0,300
11,00	●	11	162	114	12	0,140-0,320
11,20	●	11,2	162	114	12	0,140-0,320
11,50	●	11,5	162	114	12	0,140-0,320
11,60	●	11,6	162	114	12	0,140-0,320
11,80	●	11,8	162	114	12	0,140-0,320
12,00	●	12	162	114	12	0,150-0,320
12,10	●	12,1	178	133	14	0,150-0,320
12,20	●	12,2	178	133	14	0,150-0,320
12,50	●	12,5	178	133	14	0,150-0,320
12,80	●	12,8	178	133	14	0,150-0,320
13,00	●	13	178	133	14	0,150-0,320
13,50	●	13,5	178	133	14	0,150-0,320
13,80	●	13,8	178	133	14	0,150-0,320
14,00	●	14	178	133	14	0,160-0,350
14,20	●	14,2	203	152	16	0,160-0,350
14,50	●	14,5	203	152	16	0,160-0,350
14,80	●	14,8	203	152	16	0,160-0,350
15,00	●	15	203	152	16	0,160-0,350
15,50	●	15,5	203	152	16	0,160-0,350
15,80	●	15,8	203	152	16	0,160-0,350
16,00	●	16	203	152	16	0,170-0,370

THE PROCEDURE – QUICK AND EASY

CLIENT
Collecting the tools in the transport box

PRECITOOL®-DEALER
Shipping or collecting the transport box



SPECIALISED COMPANIES
fast and competent machining of the tools

PRECITOOL®-DEALER
Return of the finished tools

REGRINDING, COATING, REPAIRING IN ORIGINAL QUALITY!

Use the tool service of PRECITOOL for your economic production. Individual, fast, reliable.

- **flexible** You determine the time of dispatch and pick-up
- **economical:** short throughput times guarantee fast reutilisation
- **efficient:** simple handling, low effort

High-performance drill SC Double Speed V, Universal

PREMUS

Design:
- 3×A11, 5×A11 ad 8×A11
- special carbide substrate
- two cutting edges, three guide chamfers
- with twisted cooling ducts
- high performance coating

Use:
- applicable for steel, cast iron and stainless steels
- **allows double cutting speed**
- **up to 20 % higher feed rate possible**

Note:
Bore tolerance IT9 achievable.

SC | coated | DIN 6537 | Teeth 2 | 145° | 6535 HA shank | ICS

NEW

UNI



3 × A11

N° article	103144 3× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
3,00	○	3	20	62	14	6
3,10	○	3,1	20	62	14	6
3,50	○	3,5	20	62	14	6
3,70	○	3,7	20	62	14	6
3,80	○	3,8	24	66	17	6
3,90	○	3,9	24	66	17	6
4,00	○	4	24	66	17	6
4,10	○	4,1	24	66	17	6
4,20	○	4,2	24	66	17	6
4,50	○	4,5	24	66	17	6
4,65	○	4,65	24	66	17	6
4,70	○	4,7	24	66	17	6
4,80	○	4,8	28	66	20	6
5,00	○	5	28	66	20	6
5,10	○	5,1	28	66	20	6

N° article	103144 3× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
5,20	○	5,2	28	66	20	6
5,30	○	5,3	28	66	20	6
5,50	○	5,5	28	66	20	6
5,55	○	5,55	28	66	20	6
5,60	○	5,6	28	66	20	6
6,00	○	6	28	66	20	6
6,10	○	6,1	34	79	24	8
6,80	○	6,8	34	79	24	8
6,90	○	6,9	34	79	24	8
7,00	○	7	34	79	24	8
7,10	○	7,1	41	79	29	8
7,30	○	7,3	41	79	29	8
7,50	○	7,5	41	79	29	8
7,70	○	7,7	41	79	29	8
7,80	○	7,8	41	79	29	8

N° article	103144 3× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
8,00	○	8	41	79	29	8
8,20	○	8,2	47	89	35	10
8,50	○	8,5	47	89	35	10
8,60	○	8,6	47	89	35	10
8,80	○	8,8	47	89	35	10
9,00	○	9	47	89	35	10
9,20	○	9,2	47	89	35	10
9,50	○	9,5	47	89	35	10
10,00	○	10	47	89	35	10
10,10	○	10,1	55	102	40	12
10,20	○	10,2	55	102	40	12
10,30	○	10,3	55	102	40	12
10,50	○	10,5	55	102	40	12
10,80	○	10,8	55	102	40	12
11,00	○	11	55	102	40	12

N° article	103144 3× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
11,80	○	11,8	55	102	40	12
12,00	○	12	55	102	40	12
12,50	○	12,5	60	107	43	14
13,00	○	13	60	107	43	14
14,00	○	14	60	107	43	14
14,50	○	14,5	65	115	45	16
15,00	○	15	65	115	45	16
16,00	○	16	65	115	45	16
17,00	○	17	73	123	51	18
17,50	○	17,5	73	123	51	18
18,00	○	18	73	123	51	18
19,00	○	19	79	131	55	20
20,00	○	20	79	131	55	20

5 × A11

N° article	103146 5× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
3,00	○	3	28	66	23	6
3,30	○	3,3	28	66	23	6
3,50	○	3,5	28	66	23	6
3,70	○	3,7	28	66	23	6
3,80	○	3,8	36	74	29	6
3,90	○	3,9	36	74	29	6
4,00	○	4	36	74	29	6
4,10	○	4,1	36	74	29	6
4,20	○	4,2	36	74	29	6
4,30	○	4,3	36	74	29	6
4,50	○	4,5	36	74	29	6
4,80	○	4,8	44	82	35	6
5,00	○	5	44	82	35	6
5,10	○	5,1	44	82	35	6
5,20	○	5,2	44	82	35	6
5,50	○	5,5	44	82	35	6
5,60	○	5,6	44	82	35	6
5,80	○	5,8	44	82	35	6
5,90	○	5,9	44	82	35	6
6,00	○	6	44	82	35	6
6,10	○	6,1	53	91	43	8
6,20	○	6,2	53	91	43	8

N° article	103146 5× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
6,30	○	6,3	53	91	43	8
6,50	○	6,5	53	91	43	8
6,60	○	6,6	53	91	43	8
6,70	○	6,7	53	91	43	8
6,80	○	6,8	53	91	43	8
6,90	○	6,9	53	91	43	8
7,00	○	7	53	91	43	8
7,10	○	7,1	53	91	43	8
7,20	○	7,2	53	91	43	8
7,40	○	7,4	53	91	43	8
7,50	○	7,5	53	91	43	8
7,60	○	7,6	53	91	43	8
7,80	○	7,8	53	91	43	8
7,90	○	7,9	53	91	43	8
8,00	○	8	53	91	43	8
8,10	○	8,1	61	103	49	10
8,20	○	8,2	61	103	49	10
8,30	○	8,3	61	103	49	10
8,40	○	8,4	61	103	49	10
8,50	○	8,5	61	103	49	10
8,60	○	8,6	61	103	49	10
8,80	○	8,8	61	103	49	10

N° article	103146 5× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
8,90	○	8,9	61	103	49	10
9,00	○	9	61	103	49	10
9,10	○	9,1	61	103	49	10
9,30	○	9,3	61	103	49	10
9,60	○	9,6	61	103	49	10
9,80	○	9,8	61	103	49	10
10,00	○	10	61	103	49	10
10,10	○	10,1	71	118	56	12
10,20	○	10,2	71	118	56	12
10,30	○	10,3	71	118	56	12
10,50	○	10,5	71	118	56	12
10,60	○	10,6	71	118	56	12
10,80	○	10,8	71	118	56	12
11,00	○	11	71	118	56	12
11,10	○	11,1	71	118	56	12
11,20	○	11,2	71	118	56	12
11,30	○	11,3	71	118	56	12
11,40	○	11,4	71	118	56	12
11,50	○	11,5	71	118	56	12
11,60	○	11,6	71	118	56	12
11,80	○	11,8	71	118	56	12
12,00	○	12	71	118	56	12

N° article	103146 5× A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
12,50	○	12,5	77	124	60	14
13,00	○	13	77	124	60	14
13,50	○	13,5	77	124	60	14
13,80	○	13,8	77	124	60	14
14,00	○	14	77	124	60	14
14,50	○	14,5	83	133	63	16
14,80	○	14,8	83	133	63	16
15,00	○	15	83	133	63	16
15,50	○	15,5	83	133	63	16
15,80	○	15,8	83	133	63	16
16,00	○	16	83	133	63	16
16,50	○	16,5	93	143	71	18
16,80	○	16,8	93	143	71	18
17,00	○	17	93	143	71	18
17,50	○	17,5	93	143	71	18
17,80	○	17,8	93	143	71	18
18,00	○	18	93	143	71	18
18,50	○	18,5	101	153	77	20
18,80	○	18,8	101	153	77	20
19,00	○	19	101	153	77	20
19,50	○	19,5	101	153	77	20

8 × A11

N° article	103149 8×A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
3,00	○	3	34	72	29	6
3,10	○	3,1	34	72	29	6
3,30	○	3,3	34	72	29	6
3,50	○	3,5	34	72	29	6
3,70	○	3,7	34	72	29	6
3,80	○	3,8	43	81	36	6
3,90	○	3,9	43	81	36	6
4,00	○	4	43	81	36	6
4,10	○	4,1	43	81	36	6
4,20	○	4,2	43	81	36	6
4,30	○	4,3	43	81	36	6
4,50	○	4,5	43	81	36	6
4,60	○	4,6	43	81	36	6
4,65	○	4,65	43	81	36	6
4,80	○	4,8	57	95	48	6

N° article	103149 8×A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
4,90	○	4,9	57	95	48	6
5,00	○	5	57	95	48	6
5,20	○	5,2	57	95	48	6
5,30	○	5,3	57	95	48	6
5,50	○	5,5	57	95	48	6
5,55	○	5,55	57	95	48	6
5,60	○	5,6	57	95	48	6
5,80	○	5,8	57	95	48	6
5,90	○	5,9	57	95	48	6
6,00	○	6	57	95	48	6
6,20	○	6,2	76	114	64	8
6,60	○	6,6	76	114	64	8
6,80	○	6,8	76	114	64	8
6,90	○	6,9	76	114	64	8
7,00	○	7	76	114	64	8

N° article	103149 8×A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
7,10	○	7,1	76	114	64	8
7,50	○	7,5	76	114	64	8
7,70	○	7,7	76	114	64	8
7,80	○	7,8	76	114	64	8
8,00	○	8	76	114	64	8
8,10	○	8,1	95	142	80	10
8,50	○	8,5	95	142	80	10
8,80	○	8,8	95	142	80	10
9,00	○	9	95	142	80	10
9,10	○	9,1	95	142	80	10
9,70	○	9,7	95	142	80	10
9,80	○	9,8	95	142	80	10
10,00	○	10	95	142	80	10
10,10	○	10,1	114	162	96	12
10,30	○	10,3	114	162	96	12

N° article	103149 8×A11, HA, ICS	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm
10,50	○	10,5	114	162	96	12
10,70	○	10,7	114	162	96	12
11,00	○	11	114	162	96	12
11,10	○	11,1	114	162	96	12
11,30	○	11,3	114	162	96	12
11,80	○	11,8	114	162	96	12
12,50	○	12,5	133	178	112	14
13,00	○	13	133	178	112	14
14,00	○	14	133	178	112	14
15,00	○	15	152	203	128	16
15,80	○	15,8	152	203	128	16
16,00	○	16	152	203	128	16
17,50	○	17,5	171	222	144	18
19,00	○	19	190	243	160	20

High-performance drill SC Steel, with 4 guide chamfers

PREMUS

	P N/mm²	M N/mm²	K HB
103110	⟨1200	⟨850	⟨300
	vc = m/min.		
103110	40-100	30-50	60-90

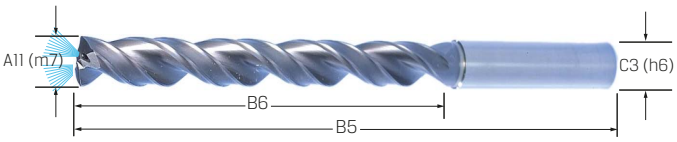
SC | coated | DIN 6537 | 5 × A11 | Teeth 2 | 140° | 6535 HA shank

ICS | P | K | vc

High-performance drill for maximum bore quality and alignment accuracy

Design:
- 2 cutting edges plus 4 guide chamfers
- VHM micro grain 10 - 12 % Co
- TiAlN coating
- special cut, point angle 140°
- side rake angle 30°
- special chip flute geometry
- strengthened core thickness
- core taper normal
- with twisted cooling ducts

Use:
For highest accuracy in the diameter range, maximum accuracy of alignment and positioning as well as concentricity. Ultra-smooth surface and very good chip flow through optimised coating. Specially suited for NC production



N° article	103110 5× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	66	28	6	0,060-0,250
3,10	○	3,1	66	28	6	0,060-0,250
3,20	○	3,2	66	28	6	0,060-0,250
3,30	○	3,3	66	28	6	0,060-0,250
3,40	●	3,4	66	28	6	0,060-0,250
3,50	○	3,5	66	28	6	0,060-0,250
3,60	○	3,6	66	28	6	0,060-0,250
3,70	○	3,7	66	28	6	0,060-0,250
3,80	●	3,8	74	36	6	0,060-0,250
3,90	○	3,9	74	36	6	0,060-0,250
4,00	●	4	74	36	6	0,060-0,250
4,10	○	4,1	74	36	6	0,060-0,250
4,20	●	4,2	74	36	6	0,060-0,250
4,30	●	4,3	74	36	6	0,060-0,250
4,40	○	4,4	74	36	6	0,060-0,250
4,50	●	4,5	74	36	6	0,060-0,250
4,60	○	4,6	74	36	6	0,060-0,250
4,70	○	4,7	74	36	6	0,060-0,250
4,80	○	4,8	82	44	6	0,060-0,250
4,90	○	4,9	82	44	6	0,060-0,250
5,00	●	5	82	44	6	0,080-0,350
5,10	○	5,1	82	44	6	0,080-0,350
5,20	○	5,2	82	44	6	0,080-0,350
5,30	○	5,3	82	44	6	0,080-0,350
5,40	○	5,4	82	44	6	0,080-0,350
5,50	○	5,5	82	44	6	0,080-0,350
5,60	○	5,6	82	44	6	0,080-0,350
5,70	○	5,7	82	44	6	0,080-0,350
5,80	○	5,8	82	44	6	0,080-0,350
5,90	○	5,9	82	44	6	0,080-0,350
6,00	●	6	82	44	6	0,080-0,350
6,10	○	6,1	91	53	8	0,080-0,350
6,20	○	6,2	91	53	8	0,080-0,350
6,30	○	6,3	91	53	8	0,080-0,350
6,40	○	6,4	91	53	8	0,080-0,350
6,50	●	6,5	91	53	8	0,080-0,350
6,60	○	6,6	91	53	8	0,080-0,350
6,70	○	6,7	91	53	8	0,080-0,350
6,80	●	6,8	91	53	8	0,080-0,350

N° article	103110 5× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,90	●	6,9	91	53	8	0,080-0,350
7,00	○	7	91	53	8	0,080-0,350
7,10	○	7,1	91	53	8	0,080-0,350
7,20	○	7,2	91	53	8	0,080-0,350
7,30	○	7,3	91	53	8	0,080-0,350
7,40	○	7,4	91	53	8	0,080-0,350
7,50	○	7,5	91	53	8	0,080-0,350
7,60	○	7,6	91	53	8	0,080-0,350
7,70	○	7,7	91	53	8	0,080-0,350
7,80	○	7,8	91	53	8	0,080-0,350
7,90	○	7,9	91	53	8	0,080-0,350
8,00	●	8	91	53	8	0,100-0,450
8,10	○	8,1	103	61	10	0,100-0,450
8,20	○	8,2	103	61	10	0,100-0,450
8,30	○	8,3	103	61	10	0,100-0,450
8,40	○	8,4	103	61	10	0,100-0,450
8,50	●	8,5	103	61	10	0,100-0,450
8,60	○	8,6	103	61	10	0,100-0,450
8,70	○	8,7	103	61	10	0,100-0,450
8,80	●	8,8	103	61	10	0,100-0,450
8,90	○	8,9	103	61	10	0,100-0,450
9,00	○	9	103	61	10	0,100-0,450
9,10	○	9,1	103	61	10	0,100-0,450
9,20	○	9,2	103	61	10	0,100-0,450
9,30	○	9,3	103	61	10	0,100-0,450
9,40	○	9,4	103	61	10	0,100-0,450
9,50	○	9,5	103	61	10	0,100-0,450
9,60	○	9,6	103	61	10	0,100-0,450
9,70	○	9,7	103	61	10	0,100-0,450
9,80	●	9,8	103	61	10	0,100-0,450
9,90	●	9,9	103	61	10	0,100-0,450
10,00	●	10	103	61	10	0,100-0,450
10,10	○	10,1	118	71	12	0,100-0,450
10,20	●	10,2	118	71	12	0,100-0,450
10,30	○	10,3	118	71	12	0,100-0,450
10,40	○	10,4	118	71	12	0,100-0,450
10,50	○	10,5	118	71	12	0,100-0,450
10,60	○	10,6	118	71	12	0,100-0,450
10,70	○	10,7	118	71	12	0,100-0,450

N° article	103110 5× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,80	○	10,8	118	71	12	0,100-0,450
10,90	○	10,9	118	71	12	0,100-0,450
11,00	○	11	118	71	12	0,100-0,450
11,10	○	11,1	118	71	12	0,100-0,450
11,20	○	11,2	118	71	12	0,100-0,450
11,30	○	11,3	118	71	12	0,100-0,450
11,40	○	11,4	118	71	12	0,100-0,450
11,50	○	11,5	118	71	12	0,100-0,450
11,60	○	11,6	118	71	12	0,100-0,450
11,70	○	11,7	118	71	12	0,100-0,450
11,80	○	11,8	118	71	12	0,100-0,450
11,90	○	11,9	118	71	12	0,100-0,450
12,00	●	12	118	71	12	0,100-0,500
12,50	○	12,5	124	77	14	0,100-0,500
12,80	○	12,8	124	77	14	0,100-0,500
13,00	●	13	124	77	14	0,100-0,500
13,50	●	13,5	124	77	14	0,100-0,500
13,80	○	13,8	124	77	14	0,100-0,500
14,00	●	14	124	77	14	0,100-0,500
14,50	○	14,5	133	83	16	0,100-0,500
14,80	○	14,8	133	83	16	0,100-0,500
15,00	○	15	133	83	16	0,100-0,500
15,50	○	15,5	133	83	16	0,100-0,500
15,80	○	15,8	133	83	16	0,100-0,500
16,00	●	16	133	83	16	0,150-0,550
16,50	○	16,5	143	93	18	0,150-0,550
16,80	○	16,8	143	93	18	0,150-0,550
17,00	○	17	143	93	18	0,150-0,550
17,50	○	17,5	143	93	18	0,150-0,550
17,80	○	17,8	143	93	18	0,150-0,550
18,00	○	18	143	93	18	0,150-0,550
18,50	○	18,5	153	101	20	0,150-0,550
18,80	○	18,8	153	101	20	0,150-0,550
19,00	○	19	153	101	20	0,150-0,550
19,50	○	19,5	153	101	20	0,150-0,550
19,80	○	19,8	153	101	20	0,150-0,550
20,00	○	20	153	101	20	0,150-0,550

High-performance drill SC Steel, with 4 guide chamfers

PREMUS

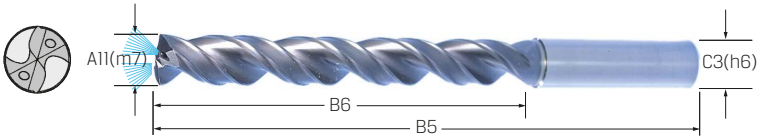
	P N/mm²	M N/mm²	K HB
103120	⟨1200	⟨850	⟨300
vc = m/min.			
103120	40-100	30-50	60-90

SC | coated | DIN 6537 | Teeth 2 | 140° | 6535 HA shank | ICS

UNI

High-performance drill for maximum bore quality and alignment accuracy

Design:
- 2 cutting edges plus 4 guide chamfers
- VHM micro grain 10 - 12 % Co
- TiAlN coating
- special cut, point angle 140°, side rake angle 30°
- special chip flute geometry
- strengthened core thickness, core taper normal
- with twisted cooling ducts



Use:
For highest accuracy in the diameter range, maximum accuracy of alignment and positioning as well as concentricity. Ultra-smooth surface and very good chip flow through optimised coating. Specially suited for NC production

8 × A11

N° article	103100 8× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	N° article	103100 8× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	72	34	6	0,060-0,250	8,80	●	8,8	142	95	10	0,100-0,450
3,10	●	3,1	72	34	6	0,060-0,250	8,90	●	8,9	142	95	10	0,100-0,450
3,20	○	3,2	72	34	6	0,060-0,250	9,00	●	9	142	95	10	0,100-0,450
3,30	●	3,3	72	34	6	0,060-0,250	9,10	○	9,1	142	95	10	0,100-0,450
3,40	○	3,4	72	34	6	0,060-0,250	9,20	○	9,2	142	95	10	0,100-0,450
3,50	○	3,5	72	34	6	0,060-0,250	9,30	○	9,3	142	95	10	0,100-0,450
3,60	○	3,6	72	34	6	0,060-0,250	9,40	○	9,4	142	95	10	0,100-0,450
3,70	○	3,7	72	34	6	0,060-0,250	9,50	○	9,5	142	95	10	0,100-0,450
3,80	○	3,8	81	43	6	0,060-0,250	9,60	○	9,6	142	95	10	0,100-0,450
3,90	○	3,9	81	43	6	0,060-0,250	9,70	○	9,7	142	95	10	0,100-0,450
4,00	●	4	81	43	6	0,060-0,250	9,80	○	9,8	142	95	10	0,100-0,450
4,10	○	4,1	81	43	6	0,060-0,250	9,90	●	9,9	142	95	10	0,100-0,450
4,20	●	4,2	81	43	6	0,060-0,250	10,00	●	10	142	95	10	0,100-0,450
4,30	●	4,3	81	43	6	0,060-0,250	10,10	○	10,1	162	114	12	0,100-0,450
4,40	○	4,4	81	43	6	0,060-0,250	10,20	●	10,2	162	114	12	0,100-0,450
4,50	●	4,5	81	43	6	0,060-0,250	10,30	○	10,3	162	114	12	0,100-0,450
4,60	○	4,6	81	43	6	0,060-0,250	10,40	○	10,4	162	114	12	0,100-0,450
4,70	○	4,7	81	43	6	0,060-0,250	10,50	●	10,5	162	114	12	0,100-0,450
4,80	○	4,8	95	57	6	0,060-0,250	10,60	○	10,6	162	114	12	0,100-0,450
4,90	●	4,9	95	57	6	0,060-0,250	10,70	○	10,7	162	114	12	0,100-0,450
5,00	●	5	95	57	6	0,080-0,350	10,80	○	10,8	162	114	12	0,100-0,450
5,10	●	5,1	95	57	6	0,080-0,350	10,90	○	10,9	162	114	12	0,100-0,450
5,20	○	5,2	95	57	6	0,080-0,350	11,00	○	11	162	114	12	0,100-0,450
5,30	●	5,3	95	57	6	0,080-0,350	11,10	○	11,1	162	114	12	0,100-0,450
5,40	●	5,4	95	57	6	0,080-0,350	11,20	○	11,2	162	114	12	0,100-0,450
5,50	○	5,5	95	57	6	0,080-0,350	11,30	○	11,3	162	114	12	0,100-0,450
5,60	○	5,6	95	57	6	0,080-0,350	11,40	○	11,4	162	114	12	0,100-0,450
5,70	○	5,7	95	57	6	0,080-0,350	11,50	●	11,5	162	114	12	0,100-0,450
5,80	○	5,8	95	57	6	0,080-0,350	11,60	○	11,6	162	114	12	0,100-0,450
5,90	○	5,9	95	57	6	0,080-0,350	11,70	○	11,7	162	114	12	0,100-0,450
6,00	●	6	95	57	6	0,080-0,350	11,80	○	11,8	162	114	12	0,100-0,450
6,10	●	6,1	114	76	8	0,080-0,350	11,90	○	11,9	162	114	12	0,100-0,450
6,20	○	6,2	114	76	8	0,080-0,350	12,00	●	12	162	114	12	0,100-0,500
6,30	○	6,3	114	76	8	0,080-0,350	12,50	○	12,5	178	133	14	0,100-0,500
6,40	○	6,4	114	76	8	0,080-0,350	12,80	○	12,8	178	133	14	0,100-0,500
6,50	●	6,5	114	76	8	0,080-0,350	13,00	○	13	178	133	14	0,100-0,500
6,60	○	6,6	114	76	8	0,080-0,350	13,50	○	13,5	178	133	14	0,100-0,500
6,70	○	6,7	114	76	8	0,080-0,350	13,80	○	13,8	178	133	14	0,100-0,500
6,80	●	6,8	114	76	8	0,080-0,350	14,00	○	14	178	133	14	0,100-0,500
6,90	○	6,9	114	76	8	0,080-0,350	14,50	○	14,5	203	152	16	0,100-0,500
7,00	●	7	114	76	8	0,080-0,350	14,80	○	14,8	203	152	16	0,100-0,500
7,10	○	7,1	114	76	8	0,080-0,350	15,00	○	15	203	152	16	0,100-0,500
7,20	○	7,2	114	76	8	0,080-0,350	15,50	○	15,5	203	152	16	0,100-0,500
7,30	○	7,3	114	76	8	0,080-0,350	15,80	○	15,8	203	152	16	0,100-0,500
7,40	○	7,4	114	76	8	0,080-0,350	16,00	○	16	203	152	16	0,150-0,550
7,50	○	7,5	114	76	8	0,080-0,350	16,50	○	16,5	222	171	18	0,150-0,550
7,60	○	7,6	114	76	8	0,080-0,350	16,80	○	16,8	222	171	18	0,150-0,550
7,70	○	7,7	114	76	8	0,080-0,350	17,00	●	17	222	171	18	0,150-0,550
7,80	○	7,8	114	76	8	0,080-0,350	17,50	○	17,5	222	171	18	0,150-0,550
7,90	●	7,9	114	76	8	0,080-0,350	17,80	○	17,8	222	171	18	0,150-0,550
8,00	●	8	114	76	8	0,100-0,450	18,00	○	18	222	171	18	0,150-0,550
8,10	○	8,1	142	95	10	0,100-0,450	18,50	○	18,5	243	190	20	0,150-0,550
8,20	○	8,2	142	95	10	0,100-0,450	18,80	○	18,8	243	190	20	0,150-0,550
8,30	○	8,3	142	95	10	0,100-0,450	19,00	○	19	243	190	20	0,150-0,550
8,40	○	8,4	142	95	10	0,100-0,450	19,50	○	19,5	243	190	20	0,150-0,550
8,50	●	8,5	142	95	10	0,100-0,450	19,80	○	19,8	243	190	20	0,150-0,550
8,60	○	8,6	142	95	10	0,100-0,450	20,00	○	20	243	190	20	0,150-0,550
8,70	●	8,7	142	95	10	0,100-0,450							

Note:
Drill pilot bore with 102736

12 × A11

N° article	103120 12× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	N° article	103120 12× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	92	54	6	0,060-0,250	8,80	●	8,8	162	120	10	0,100-0,450
3,10	○	3,1	92	54	6	0,060-0,250	8,90	○	8,9	162	120	10	0,100-0,450
3,20	●	3,2	92	54	6	0,060-0,250	9,00	●	9	162	120	10	0,100-0,450
3,30	●	3,3	92	54	6	0,060-0,250	9,10	○	9,1	162	120	10	0,100-0,450
3,40	○	3,4	92	54	6	0,060-0,250	9,20	○	9,2	162	120	10	0,100-0,450
3,50	○	3,5	92	54	6	0,060-0,250	9,30	○	9,3	162	120	10	0,100-0,450
3,60	○	3,6	92	54	6	0,060-0,250	9,40	○	9,4	162	120	10	0,100-0,450
3,70	○	3,7	92	54	6	0,060-0,250	9,50	●	9,5	162	120	10	0,100-0,450
3,80	○	3,8	102	64	6	0,060-0,250	9,60	○	9,6	162	120	10	0,100-0,450
3,90	○	3,9	102	64	6	0,060-0,250	9,70	○	9,7	162	120	10	0,100-0,450
4,00	●	4	102	64	6	0,060-0,250	9,80	○	9,8	162	120	10	0,100-0,450
4,10	○	4,1	102	64	6	0,060-0,250	9,90	○	9,9	162	120	10	0,100-0,450
4,20	●	4,2	102	64	6	0,060-0,250	10,00	○	10	162	120	10	0,100-0,450
4,30	●	4,3	102	64	6	0,060-0,250	10,10	○	10,1	204	156	12	0,100-0,450
4,40	○	4,4	102	64	6	0,060-0,250	10,20	○	10,2	204	156	12	0,100-0,450
4,50	●	4,5	102	64	6	0,060-0,250	10,30	○	10,3	204	156	12	0,100-0,450
4,60	○	4,6	102	64	6	0,060-0,250	10,40	○	10,4	204	156	12	0,100-0,450
4,70	○	4,7	102	64	6	0,060-0,250	10,50	○	10,5	204	156	12	0,100-0,450
4,80	○	4,8	116	78	6	0,060-0,250	10,60	○	10,6	204	156	12	0,100-0,450
4,90	○	4,9	116	78	6	0,060-0,250	10,70	○	10,7	204	156	12	0,100-0,450
5,00	●	5	116	78	6	0,080-0,350	10,80	○	10,8	204	156	12	0,100-0,450
5,10	○	5,1	116	78	6	0,080-0,350	10,90	○	10,9	204	156	12	0,100-0,450
5,20	○	5,2	116	78	6	0,080-0,350	11,00	○	11	204	156	12	0,100-0,450
5,30	●	5,3	116	78	6	0,080-0,350	11,10	○	11,1	204	156	12	0,100-0,450
5,40	○	5,4	116	78	6	0,080-0,350	11,20	○	11,2	204	156	12	0,100-0,450
5,50	○	5,5	116	78	6	0,080-0,350	11,30	○	11,3	204	156	12	0,100-0,450
5,60	○	5,6	116	78	6	0,080-0,350	11,40	○	11,4	204	156	12	0,100-0,450
5,70	○	5,7	116	78	6	0,080-0,350	11,50	○	11,5	204	156	12	0,100-0,450
5,80	○	5,8	116	78	6	0,080-0,350	11,60	○	11,6	204	156	12	0,100-0,450
5,90	○	5,9	116	78	6	0,080-0,350	11,70	○	11,7	204	156	12	0,100-0,450
6,00	●	6	116	78	6	0,080-0,350	11,80	○	11,8	204	156	12	0,100-0,450
6,10	●	6,1	146	108	8	0,080-0,350	11,90	○	11,9	204	156	12	0,100-0,450
6,20	○	6,2	146	108	8	0,080-0,350	12,00	○	12	204	156	12	0,100-0,500
6,30	○	6,3	146	108	8	0,080-0,350	12,50	○	12,5	230	182	14	0,100-0,500
6,40	○	6,4	146	108	8	0,080-0,350	12,80	○	12,8	230	182	14	0,100-0,500
6,50	●	6,5	146	108	8	0,080-0,350	13,00	○	13	230	182	14	0,100-0,500
6,60	○	6,6	146	108	8	0,080-0,350	13,50	○	13,5	230	182	14	0,100-0,500
6,70	○	6,7	146	108	8	0,080-0,350	13,80	○	13,8	230	182	14	0,100-0,500
6,80	●	6,8	146	108	8	0,080-0,350	14,00	○	14	230	182	14	0,100-0,500
6,90	○	6,9	146	108	8	0,080-0,350	14,50	○	14,5	260	208	16	0,100-0,500
7,00	●	7	146	108	8	0,080-0,350	14,80	○	14,8	260	208	16	0,100-0,500
7,10	○	7,1	146	108	8	0,080-0,350	15,00	○	15	260	208	16	0,100-0,500
7,20	○	7,2	146	108	8	0,080-0,350	15,50	○	15,5	260	208	16	0,100-0,500
7,30	○	7,3	146	108	8	0,080-0,350	15,80	○	15,8	260	208	16	0,100-0,500
7,40	○	7,4	146	108	8	0,080-0,350	16,00	○	16	260	208	16	0,150-0,550
7,50	○	7,5	146	108	8	0,080-0,350	16,50	○	16,5	285	234	18	0,150-0,550
7,60	○	7,6	146	108	8	0,080-0,350	16,80	○	16,8	285	234	18	0,150-0,550
7,70	○	7,7	146	108	8	0,080-0,350	17,00	○	17	285	234	18	0,150-0,550
7,80	○	7,8	146	108	8	0,080-0,350	17,50	○	17,5	285	234	18	0,150-0,550
7,90	○	7,9	146	108	8	0,080-0,350	17,80	○	17,8	285	234	18	0,150-0,550
8,00	●	8	146	108	8	0,100-0,450	18,00	○	18	285	234	18	0,150-0,550
8,10	○	8,1	162	120	10	0,100-0,450	18,50	○	18,5	310	258	20	0,150-0,550
8,20	●	8,2	162	120	10	0,100-0,450	18,80	○	18,8	310	258	20	0,150-0,550
8,30	○	8,3	162	120	10	0,100-0,450	19,00	○	19	310	258	20	0,150-0,550
8,40	○	8,4	162	120	10	0,100-0,450	19,50	○	19,5	310	258	20	0,150-0,550
8,50	●	8,5	162	120	10	0,100-0,450	19,80	○	19,8	310	258	20	0,150-0,550
8,60	○	8,6	162	120	10	0,100-0,450	20,00	○	20	310	258	20	0,150-0,550
8,70	○	8,7	162	120	10	0,100-0,450							

High-performance drill SC 180 degree, Universal

PREMUS

	P N/mm²	M N/mm²	K HB
103150 103160	⟩1000	⟨1000	⟩250
vc = m/min.			
103150 103160	40-95	25-45	60-110

SC | coated | Factory standard | Teeth 2 | 180° | 6535 HA shank | ICS

UNI

Design:
- shank form HA
- bore tolerance H9
- 4-chamfer geometry for better guidance
- polished flutes for optimal chip evacuation
- with twisted cooling ducts
- TiAlN coating
- 180° point angle



Use:
Production of blind holes, when a flat bottom is required;
spot-drilling on inclined surfaces

3 × A11

N° article	103150 3× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	N° article	103150 3× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	62	20	6	0,060-0,200	8,80	●	8,8	89	47	10	0,110-0,320
3,10	●	3,1	62	20	6	0,060-0,200	8,90	●	8,9	89	47	10	0,110-0,320
3,20	●	3,2	62	20	6	0,060-0,200	9,00	●	9	89	47	10	0,110-0,320
3,30	●	3,3	62	20	6	0,060-0,200	9,10	●	9,1	89	47	10	0,110-0,320
3,40	●	3,4	62	20	6	0,060-0,200	9,20	●	9,2	89	47	10	0,110-0,320
3,50	●	3,5	62	20	6	0,060-0,200	9,30	●	9,3	89	47	10	0,110-0,320
3,60	●	3,6	62	20	6	0,060-0,200	9,40	●	9,4	89	47	10	0,110-0,320
3,70	●	3,7	62	20	6	0,060-0,200	9,50	●	9,5	89	47	10	0,110-0,320
3,80	●	3,8	66	24	6	0,060-0,200	9,60	●	9,6	89	47	10	0,110-0,320
3,90	●	3,9	66	24	6	0,060-0,200	9,70	●	9,7	89	47	10	0,110-0,320
4,00	●	4	66	24	6	0,060-0,200	9,80	●	9,8	89	47	10	0,110-0,320
4,10	●	4,1	66	24	6	0,060-0,200	9,90	●	9,9	89	47	10	0,110-0,320
4,20	●	4,2	66	24	6	0,060-0,200	10,00	●	10	89	47	10	0,110-0,320
4,30	●	4,3	66	24	6	0,060-0,200	10,10	●	10,1	100	53	12	0,110-0,320
4,40	●	4,4	66	24	6	0,060-0,200	10,20	●	10,2	100	53	12	0,110-0,320
4,50	●	4,5	66	24	6	0,060-0,200	10,30	●	10,3	100	53	12	0,110-0,320
4,60	●	4,6	66	24	6	0,060-0,200	10,40	●	10,4	100	53	12	0,110-0,320
4,65	●	4,65	66	24	6	0,060-0,200	10,50	●	10,5	100	53	12	0,110-0,320
4,70	●	4,7	66	24	6	0,060-0,200	10,60	●	10,6	100	53	12	0,110-0,320
4,80	●	4,8	66	28	6	0,060-0,200	10,70	●	10,7	100	53	12	0,110-0,320
4,90	●	4,9	66	28	6	0,060-0,200	10,80	●	10,8	100	53	12	0,110-0,320
5,00	●	5	66	28	6	0,060-0,200	10,90	●	10,9	100	53	12	0,110-0,320
5,10	●	5,1	66	28	6	0,080-0,250	11,00	●	11	100	53	12	0,110-0,320
5,20	●	5,2	66	28	6	0,080-0,250	11,10	●	11,1	100	53	12	0,110-0,320
5,30	●	5,3	66	28	6	0,080-0,250	11,20	●	11,2	100	53	12	0,110-0,320
5,40	●	5,4	66	28	6	0,080-0,250	11,30	●	11,3	100	53	12	0,110-0,320
5,50	●	5,5	66	28	6	0,080-0,250	11,40	●	11,4	100	53	12	0,110-0,320
5,55	●	5,55	66	28	6	0,080-0,250	11,50	●	11,5	100	53	12	0,110-0,320
5,60	●	5,6	66	28	6	0,080-0,250	11,60	●	11,6	100	53	12	0,110-0,320
5,70	●	5,7	66	28	6	0,080-0,250	11,70	●	11,7	100	53	12	0,110-0,320
5,80	●	5,8	66	28	6	0,080-0,250	11,80	●	11,8	100	53	12	0,110-0,320
5,90	●	5,9	66	28	6	0,080-0,250	11,90	●	11,9	100	53	12	0,110-0,320
6,00	●	6	66	28	6	0,080-0,250	12,00	●	12	100	53	12	0,110-0,320
6,10	●	6,1	79	34	8	0,080-0,250	12,50	●	12,5	105	58	14	0,120-0,360
6,20	●	6,2	79	34	8	0,080-0,250	12,80	●	12,8	105	58	14	0,120-0,360
6,30	●	6,3	79	34	8	0,080-0,250	13,00	●	13	105	58	14	0,120-0,360
6,40	●	6,4	79	34	8	0,080-0,250	13,50	●	13,5	105	58	14	0,120-0,360
6,50	●	6,5	79	34	8	0,080-0,250	13,80	●	13,8	105	58	14	0,120-0,360
6,60	●	6,6	79	34	8	0,080-0,250	14,00	●	14	105	58	14	0,120-0,360
6,70	●	6,7	79	34	8	0,080-0,250	14,50	●	14,5	113	63	16	0,120-0,360
6,80	●	6,8	79	34	8	0,080-0,250	14,80	●	14,8	113	63	16	0,120-0,360
6,90	●	6,9	79	34	8	0,080-0,250	15,00	●	15	113	63	16	0,120-0,360
7,00	●	7	79	34	8	0,080-0,250	15,50	●	15,5	113	63	16	0,120-0,360
7,10	●	7,1	79	41	8	0,080-0,250	15,80	●	15,8	113	63	16	0,120-0,360
7,20	●	7,2	79	41	8	0,080-0,250	16,00	●	16	113	63	16	0,120-0,360
7,30	●	7,3	79	41	8	0,080-0,250	16,50	●	16,5	113	63	18	0,140-0,400
7,40	●	7,4	79	41	8	0,080-0,250	16,80	●	16,8	113	63	18	0,140-0,400
7,50	●	7,5	79	41	8	0,080-0,250	17,00	●	17	121	71	18	0,140-0,400
7,60	●	7,6	79	41	8	0,080-0,250	17,50	●	17,5	121	71	18	0,140-0,400
7,70	●	7,7	79	41	8	0,080-0,250	17,80	●	17,8	121	71	18	0,140-0,400
7,80	●	7,8	79	41	8	0,080-0,250	18,00	●	18	121	71	18	0,140-0,400
7,90	●	7,9	79	41	8	0,080-0,250	18,50	●	18,5	129	77	20	0,140-0,400
8,00	●	8	79	41	8	0,080-0,250	18,80	●	18,8	129	77	20	0,140-0,400
8,10	●	8,1	89	47	10	0,110-0,320	19,00	●	19	129	77	20	0,140-0,400
8,20	●	8,2	89	47	10	0,110-0,320	19,50	●	19,5	129	77	20	0,140-0,400
8,30	●	8,3	89	47	10	0,110-0,320	19,80	●	19,8	129	77	20	0,140-0,400
8,40	●	8,4	89	47	10	0,110-0,320	20,00	●	20	129	77	20	0,140-0,400
8,50	●	8,5	89	47	10	0,110-0,320							
8,60	●	8,6	89	47	10	0,110-0,320							
8,70	●	8,7	89	47	10	0,110-0,320							

5 × A11

N° article	103160 5× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev	N° article	103160 5× A11, TiAlN, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	66	28	6	0,060-0,200	8,80	●	8,8	103	61	10	0,110-0,320
3,10	●	3,1	66	28	6	0,060-0,200	8,90	●	8,9	103	61	10	0,110-0,320
3,20	●	3,2	66	28	6	0,060-0,200	9,00	●	9	103	61	10	0,110-0,320
3,30	●	3,3	66	28	6	0,060-0,200	9,10	●	9,1	103	61	10	0,110-0,320
3,40	●	3,4	66	28	6	0,060-0,200	9,20	●	9,2	103	61	10	0,110-0,320
3,50	●	3,5	66	28	6	0,060-0,200	9,30	●	9,3	103	61	10	0,110-0,320
3,60	●	3,6	66	28	6	0,060-0,200	9,40	●	9,4	103	61	10	0,110-0,320
3,70	●	3,7	66	28	6	0,060-0,200	9,50	●	9,5	103	61	10	0,110-0,320
3,80	●	3,8	74	36	6	0,060-0,200	9,60	●	9,6	103	61	10	0,110-0,320
3,90	●	3,9	74	36	6	0,060-0,200	9,70	●	9,7	103	61	10	0,110-0,320
4,00	●	4	74	36	6	0,060-0,200	9,80	●	9,8	103	61	10	0,110-0,320
4,10	●	4,1	74	36	6	0,060-0,200	9,90	●	9,9	103	61	10	0,110-0,320
4,20	●	4,2	74	36	6	0,060-0,200	10,00	●	10	103	61	10	0,110-0,320
4,30	●	4,3	74	36	6	0,060-0,200	10,10	●	10,1	116	69	12	0,110-0,320
4,40	●	4,4	74	36	6	0,060-0,200	10,20	●	10,2	116	69	12	0,110-0,320
4,50	●	4,5	74	36	6	0,060-0,200	10,30	●	10,3	116	69	12	0,110-0,320
4,60	●	4,6	74	36	6	0,060-0,200	10,40	●	10,4	116	69	12	0,110-0,320
4,65	●	4,65	74	36	6	0,060-0,200	10,50	●	10,5	116	69	12	0,110-0,320
4,70	●	4,7	74	36	6	0,060-0,200	10,60	●	10,6	116	69	12	0,110-0,320
4,80	●	4,8	82	44	6	0,060-0,200	10,70	●	10,7	116	69	12	0,110-0,320
4,90	●	4,9	82	44	6	0,060-0,200	10,80	●	10,8	116	69	12	0,110-0,320
5,00	●	5	82	44	6	0,060-0,200	10,90	●	10,9	116	69	12	0,110-0,320
5,10	●	5,1	82	44	6	0,080-0,250	11,00	●	11	116	69	12	0,110-0,320
5,20	●	5,2	82	44	6	0,080-0,250	11,10	●	11,1	116	69	12	0,110-0,320
5,30	●	5,3	82	44	6	0,080-0,250	11,20	●	11,2	116	69	12	0,110-0,320
5,40	●	5,4	82	44	6	0,080-0,250	11,30	●	11,3	116	69	12	0,110-0,320
5,50	●	5,5	82	44	6	0,080-0,250	11,40	●	11,4	116	69	12	0,110-0,320
5,55	●	5,55	82	44	6	0,080-0,250	11,50	●	11,5	116	69	12	0,110-0,320
5,60	●	5,6	82	44	6	0,080-0,250	11,60	●	11,6	116	69	12	0,110-0,320
5,70	●	5,7	82	44	6	0,080-0,250	11,70	●	11,7	116	69	12	0,110-0,320
5,80	●	5,8	82	44	6	0,080-0,250	11,80	●	11,8	116	69	12	0,110-0,320
5,90	●	5,9	82	44	6	0,080-0,250	11,90	●	11,9	116	69	12	0,110-0,320
6,00	●	6	82	44	6	0,080-0,250	12,00	●	12	116	69	12	0,110-0,320
6,10	●	6,1	91	53	8	0,080-0,250	12,50	●	12,5	122	75	14	0,120-0,360
6,20	●	6,2	91	53	8	0,080-0,250	12,80	●	12,8	122	75	14	0,120-0,360
6,30	●	6,3	91	53	8	0,080-0,250	13,00	●	13	122	75	14	0,120-0,360
6,40	●	6,4	91	53	8	0,080-0,250	13,50	●	13,5	122	75	14	0,120-0,360
6,50	●	6,5	91	53	8	0,080-0,250	13,80	●	13,8	122	75	14	0,120-0,360
6,60	●	6,6	91	53	8	0,080-0,250	14,00	●	14	122	75	14	0,120-0,360
6,70	●	6,7	91	53	8	0,080-0,250	14,50	●	14,5	131	81	16	0,120-0,360
6,80	●	6,8	91	53	8	0,080-0,250	14,80	●	14,8	131	81	16	0,120-0,360
6,90	●	6,9	91	53	8	0,080-0,250	15,00	●	15	131	81	16	0,120-0,360
7,00	●	7	91	53	8	0,080-0,250	15,50	●	15,5	131	81	16	0,120-0,360
7,10	●	7,1	91	53	8	0,080-0,250	15,80	●	15,8	131	81	16	0,120-0,360
7,20	●	7,2	91	53	8	0,080-0,250	16,00	●	16	131	81	16	0,120-0,360
7,30	●	7,3	91	53	8	0,080-0,250	16,50	●	16,5	141	91	18	0,140-0,400
7,40	●	7,4	91	53	8	0,080-0,250	16,80	●	16,8	141	91	18	0,140-0,400
7,50	●	7,5	91	53	8	0,080-0,250	17,00	●	17	141	91	18	0,140-0,400
7,60	●	7,6	91	53	8	0,080-0,250	17,50	●	17,5	141	91	18	0,140-0,400
7,70	●	7,7	91	53	8	0,080-0,250	17,80	●	17,8	141	91	18	0,140-0,400
7,80	●	7,8	91	53	8	0,080-0,250	18,00	●	18	141	91	18	0,140-0,400
7,90	●	7,9	91	53	8	0,080-0,250	18,50	●	18,5	151	99	20	0,140-0,400
8,00	●	8	91	53	8	0,080-0,250	18,80	●	18,8	151	99	20	0,140-0,400
8,10	●	8,1	103	61	10	0,110-0,320	19,00	●	19	151	99	20	0,140-0,400
8,20	●	8,2	103	61	10	0,110-0,320	19,50	●	19,5	151	99	20	0,140-0,400
8,30	●	8,3	103	61	10	0,110-0,320	19,80	●	19,8	151	99	20	0,140-0,400
8,40	●	8,4	103	61	10	0,110-0,320	20,00	●	20	151	99	20	0,140-0,400
8,50	●	8,5	103	61	10	0,110-0,320							
8,60	●	8,6	103	61	10	0,110-0,320							
8,70	●	8,7	103	61	10	0,110-0,320							

High-performance drill SC Triple Feed, UNI

PREMUS

Design:
- drilling depth 5×A11 and 8×A11
- three positive cutting edges, three guide chamfers
- special bevelling for perfect self-centring and positioning accuracy
- optimum stability and chip formation
- high-performance coating and twisted cooling channels for maximum performance

SC | coated | ICS | Factory standard | Teeth 3 | 6535 HA shank | UNI

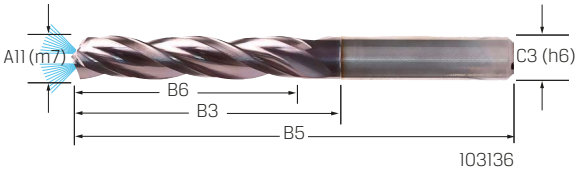
Use:
- universally applicable
- for difficult drilling operations
- ideally suited for inclined bore entry
- **up to 100 % higher feed rate possible in steel and cast steel**
- **up to 50 % higher feed rate possible in stainless steel**
- **up to 50 % longer tool life**

Note:
Bore tolerance IT9 achievable.

NEW

140°

5×A11

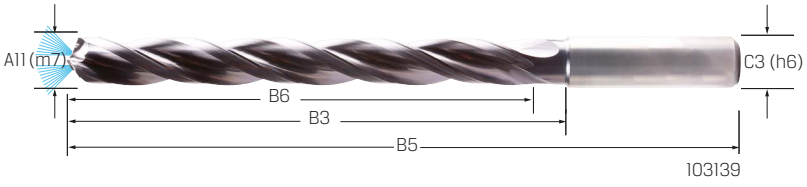


N° article	103136 5× A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm
5,00	○	5	82	35	6
5,10	○	5,1	82	35	6
5,20	○	5,2	82	35	6
5,30	○	5,3	82	35	6
5,40	○	5,4	82	35	6
5,50	○	5,5	82	35	6
5,55	○	5,55	82	35	6
5,60	○	5,6	82	35	6
5,70	○	5,7	82	35	6
5,80	○	5,8	82	35	6
5,90	○	5,9	82	35	6
6,00	○	6	82	35	6
6,10	○	6,1	91	43	8
6,20	○	6,2	91	43	8
6,30	○	6,3	91	43	8
6,40	○	6,4	91	43	8
6,50	○	6,5	91	43	8
6,60	○	6,6	91	43	8
6,70	○	6,7	91	43	8
6,80	○	6,8	91	43	8
6,90	○	6,9	91	43	8
7,00	○	7	91	43	8
7,20	○	7,2	91	43	8
7,30	○	7,3	91	43	8
7,40	○	7,4	91	43	8
7,50	○	7,5	91	43	8
7,70	○	7,7	91	43	8
7,80	○	7,8	91	43	8
7,90	○	7,9	91	43	8
8,00	○	8	91	43	8
8,10	○	8,1	103	49	10
8,20	○	8,2	103	49	10
8,30	○	8,3	103	49	10
8,50	○	8,5	103	49	10
8,60	○	8,6	103	49	10
8,70	○	8,7	103	49	10
8,80	○	8,8	103	49	10
9,00	○	9	103	49	10
9,10	○	9,1	103	49	10
9,20	○	9,2	103	49	10
9,30	○	9,3	103	49	10
9,40	○	9,4	103	49	10
9,50	○	9,5	103	49	10
9,70	○	9,7	103	49	10
9,80	○	9,8	103	49	10
9,90	○	9,9	103	49	10
10,00	○	10	103	49	10
10,10	○	10,1	118	56	12
10,20	○	10,2	118	56	12
10,30	○	10,3	118	56	12
10,40	○	10,4	118	56	12
10,50	○	10,5	118	56	12
10,80	○	10,8	118	56	12
11,00	○	11	118	56	12
11,10	○	11,1	118	56	12
11,20	○	11,2	118	56	12
11,30	○	11,3	118	56	12
11,50	○	11,5	118	56	12
11,60	○	11,6	118	56	12
11,80	○	11,8	118	56	12
11,90	○	11,9	118	56	12
12,00	○	12	118	56	12
12,50	○	12,5	124	60	14
13,00	○	13	124	60	14
13,50	○	13,5	124	60	14
13,80	○	13,8	124	60	14
14,00	○	14	124	60	14
14,50	○	14,5	133	63	16
14,80	○	14,8	133	63	16
15,00	○	15	133	63	16
15,50	○	15,5	133	63	16
15,80	○	15,8	133	63	16
16,00	○	16	133	63	16
16,50	○	16,5	143	71	18
17,00	○	17	143	71	18
17,50	○	17,5	143	71	18
18,00	○	18	143	71	18
18,50	○	18,5	153	77	20
19,00	○	19	153	77	20
19,50	○	19,5	153	77	20
19,80	○	19,8	153	77	20
20,00	○	20	153	77	20

NEW

135°

8×A11



N° article	103139 8× A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm
5,00	○	5	95	48	6
5,10	○	5,1	95	48	6
5,20	○	5,2	95	48	6
5,50	○	5,5	95	48	6
5,55	○	5,55	95	48	6
5,60	○	5,6	95	48	6
5,70	○	5,7	95	48	6
5,80	○	5,8	95	48	6
6,00	○	6	95	48	6
6,10	○	6,1	114	64	8
6,20	○	6,2	114	64	8
6,50	○	6,5	114	64	8
6,60	○	6,6	114	64	8
6,80	○	6,8	114	64	8
6,90	○	6,9	114	64	8
7,00	○	7	114	64	8
7,10	○	7,1	114	64	8
7,30	○	7,3	114	64	8
7,50	○	7,5	114	64	8
7,80	○	7,8	114	64	8
8,00	○	8	114	64	8
8,10	○	8,1	142	80	10
8,20	○	8,2	142	80	10
8,40	○	8,4	142	80	10
8,50	○	8,5	142	80	10
8,70	○	8,7	142	80	10
8,80	○	8,8	142	80	10
9,00	○	9	142	80	10
9,30	○	9,3	142	80	10
9,40	○	9,4	142	80	10
9,50	○	9,5	142	80	10
9,60	○	9,6	142	80	10
9,70	○	9,7	142	80	10
9,80	○	9,8	142	80	10
10,00	○	10	142	80	10
10,10	○	10,1	162	96	12
10,20	○	10,2	162	96	12
10,50	○	10,5	162	96	12
11,00	○	11	162	96	12
11,10	○	11,1	162	96	12
11,20	○	11,2	162	96	12
11,50	○	11,5	162	96	12
11,70	○	11,7	162	96	12
11,80	○	11,8	162	96	12
12,00	○	12	162	96	12
12,50	○	12,5	178	112	14
12,80	○	12,8	178	112	14
13,00	○	13	178	112	14
13,50	○	13,5	178	112	14
14,00	○	14	178	112	14
14,50	○	14,5	203	128	16
14,80	○	14,8	203	128	16
15,00	○	15	203	128	16
15,80	○	15,8	203	128	16
16,00	○	16	203	128	16
17,00	○	17	222	144	18
17,50	○	17,5	222	144	18
18,00	○	18	222	144	18

High-performance drill SC Steel

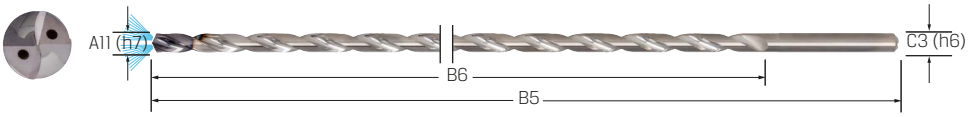
PREMUS

	P N/mm²	K HB
103271	<1200	<300
103273		
103275		
103277		
vc = m/min.		
103271	50-95	65-115
103273	50-95	
103275	45-90	60-105
103277		

SC | coated | Factory standard | Teeth 2 | 137° | 6535 HA shank | ICS

NEW

P K



High-performance drill especially for drilling deep holes in steel and cast iron

Design:
- innovative cutting edge geometry enables increased feed rates and controlled formation of short chips
- head coating to minimise heat input at the cutting edge
- optimised core run for maximum process reliability
- optimised guide accuracy thanks to 4 guide chamfers
- spiralised cooling channels with increased flow rate to maximise wear resistance

Use:
Ideally suited for the highly productive production of precise deep-hole drillings. The optimum combination of substrate, geometry and coating enables maximum cutting speeds and feed rates.

Note:
Drill pilot bore with 102736

15 × A11

N° article	103271 15 × A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	○	3	90	58	4	0,120-0,220
3,50	○	3,5	98	66	4	0,120-0,220
4,00	●	4	98	66	4	0,150-0,270
4,50	○	4,5	107	75	5	0,150-0,270
5,00	○	5	115	83	5	0,150-0,270
5,50	○	5,5	131	91	6	0,150-0,270
6,00	●	6	139	99	6	0,190-0,350
7,00	○	7	156	116	8	0,190-0,350
8,00	○	8	172	132	8	0,190-0,350
9,00	○	9	193	149	10	0,190-0,350
9,50	○	9,5	209	165	10	0,190-0,350
10,00	○	10	209	165	10	0,190-0,350
11,00	○	11	231	182	12	0,190-0,350
12,00	○	12	247	198	12	0,290-0,610
13,00	○	13	264	215	14	0,290-0,610
14,00	○	14	280	231	14	0,290-0,610
15,00	○	15	300	248	16	0,290-0,610
16,00	○	16	316	264	16	0,450-0,750

20 × A11

N° article	103273 20 × A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	108	76	4	0,120-0,220
3,50	○	3,5	118	86	4	0,120-0,220
4,00	○	4	118	86	4	0,150-0,270
5,50	○	5,5	159	119	6	0,150-0,270
6,00	●	6	169	129	6	0,190-0,350
7,00	○	7	191	151	8	0,190-0,350
8,00	●	8	212	172	10	0,190-0,350
9,00	●	9	238	194	10	0,190-0,350
10,00	○	10	259	215	10	0,190-0,350
11,00	○	11	286	237	12	0,190-0,350
12,00	○	12	307	258	12	0,290-0,610
13,00	○	13	329	280	14	0,290-0,610
14,00	○	14	350	301	14	0,290-0,610
15,00	○	15	375	323	16	0,290-0,610
16,00	○	16	396	344	16	0,450-0,750

25 × A11

N° article	103275 25 × A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	○	3	125	93	4	0,120-0,220
3,50	○	3,5	138	106	4	0,120-0,220
4,00	○	4	138	106	4	0,150-0,270
5,00	●	5	165	133	5	0,150-0,270
5,50	○	5,5	186	146	6	0,150-0,270
6,00	○	6	199	159	6	0,190-0,350
7,00	○	7	226	186	8	0,190-0,350
8,00	○	8	252	212	8	0,190-0,350
9,00	○	9	283	239	10	0,190-0,350
10,00	○	10	309	265	10	0,190-0,350
11,00	○	11	341	292	12	0,190-0,350
12,00	○	12	367	318	12	0,290-0,610
14,00	○	14	420	371	14	0,290-0,610

30 × A11

N° article	103277 30 × A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	○	3	143	111	4	0,120-0,220
4,00	○	4	158	126	4	0,150-0,270
4,50	○	4,5	174	142	5	0,150-0,270
5,00	○	5	190	158	5	0,150-0,270
5,50	○	5,5	214	174	6	0,150-0,270
6,00	○	6	229	189	6	0,190-0,350
7,00	○	7	261	221	8	0,190-0,350
8,00	○	8	292	252	8	0,190-0,350
9,00	○	9	328	284	10	0,190-0,350
10,00	○	10	359	315	10	0,190-0,350
11,00	○	11	396	347	12	0,190-0,350
12,00	○	12	427	378	12	0,290-0,610

Drill reamer SC Steel

PREMUS

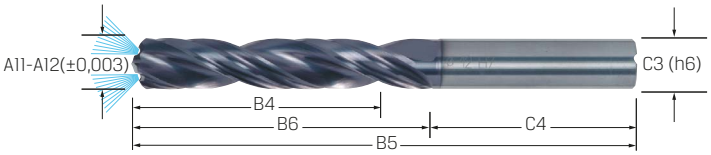
	P N/mm²	K HB	N N/mm²
103305	<1200	<300	Alu <600
103300			
vc = m/min.			
103305	40-90	45-90	80-120
103300			

High-performance drill reamer: Drilling and reaming in one operation

SC | coated | Factory standard | DIN 6537 | Teeth 2 | 140° | 6535 HA shank

ICS | K | P | CAD

Design:
- with 2 drilling and 4 reaming cutters
- specific point geometry
- point angle 140°
- side rake angle 30°
- VHM micro grain 10 - 12 % Co
- TiAlN coated
- with twisted cooling ducts



Use:
Drilling and reaming in one operation without sacrificing the reaming quality. The two cutting edges start machining into the solid material, the four reaming blades then complete the process. Excellent surface quality. Optimal roundness, maximum alignment accuracy and concentricity. For blind and through holes. Suited, for example, for location bores in cylinder heads, crankcases or gearboxes. Precisely regrindable.

3 × A11

N° article	103305 3× A11, TiAlN	A11 mm	A12 mm	B4 mm	B5 mm	B6 mm	C3 mm	C4 mm	f mm/rev
5,97	○	5,97	5,98	25,05	79	34	6	36	0,010 - 0,025
5,98	○	5,98	5,99	25,03	79	34	6	36	0,010 - 0,025
5,99	○	5,99	6	25,02	79	34	6	36	0,010 - 0,025
6,00	○	6	6,01	25	79	34	6	36	0,020 - 0,035
6,01	○	6,01	6,02	24,99	79	34	6	36	0,020 - 0,035
6,02	○	6,02	6,03	24,97	79	34	6	36	0,020 - 0,035
6,32	○	6,32	6,33	24,52	79	34	8	36	0,020 - 0,035
6,33	○	6,33	6,34	24,51	79	34	8	36	0,020 - 0,035
6,34	○	6,34	6,35	24,49	79	34	8	36	0,020 - 0,035
6,35	○	6,35	6,36	24,48	79	34	8	36	0,020 - 0,035
6,36	○	6,36	6,37	24,46	79	34	8	36	0,020 - 0,035
6,37	○	6,37	6,38	24,45	79	34	8	36	0,020 - 0,035
6H7	○	6	6,01	25	79	34	8	36	0,020 - 0,035
7,97	○	7,97	7,98	22,05	79	34	8	36	0,030 - 0,040
7,98	○	7,98	7,99	22,03	79	34	8	36	0,030 - 0,040
7,99	○	7,99	8	22,02	79	34	8	36	0,030 - 0,040
8,00	○	8	8,01	22	79	34	8	36	0,030 - 0,040
8,01	○	8,01	8,02	21,99	79	34	8	36	0,030 - 0,040
8,02	○	8,02	8,03	21,97	79	34	8	36	0,030 - 0,040
8H7	○	8	8,02	22	79	34	8	36	0,030 - 0,040
9,48	○	9,48	9,49	32,78	89	47	10	40	0,030 - 0,040
9,49	○	9,49	9,5	32,77	89	47	10	40	0,030 - 0,040
9,50	○	9,5	9,51	32,75	89	47	10	40	0,030 - 0,040
9,52	○	9,52	9,53	32,72	89	47	10	40	0,030 - 0,040

N° article	103305 3× A11, TiAlN	A11 mm	A12 mm	B4 mm	B5 mm	B6 mm	C3 mm	C4 mm	f mm/rev
9,53	○	9,53	9,54	32,71	89	47	10	40	0,030 - 0,040
9,54	○	9,54	9,55	32,69	89	47	10	40	0,030 - 0,040
9,97	○	9,97	9,98	32,05	89	47	10	40	0,030 - 0,040
9,98	○	9,98	9,99	32,03	89	47	10	40	0,030 - 0,040
9,99	○	9,99	10	32,02	89	47	10	40	0,030 - 0,040
10,00	○	10	10,01	32	89	47	10	40	0,010 - 0,025
10,01	○	10,01	10,02	31,99	89	47	10	40	0,010 - 0,025
10,02	○	10,02	10,03	31,97	89	47	10	40	0,010 - 0,025
10H7	○	10	10,02	32	89	47	10	40	0,010 - 0,025
11,97	○	11,97	11,98	37,05	102	55	12	45	0,010 - 0,025
11,98	○	11,98	11,99	37,03	102	55	12	45	0,010 - 0,025
11,99	○	11,99	12	37,02	102	55	12	45	0,010 - 0,025
12,00	○	12	12,01	37	102	55	12	45	0,010 - 0,025
12,01	○	12,01	12,02	36,99	102	55	12	45	0,010 - 0,025
12,02	○	12,02	12,03	36,97	102	55	12	45	0,010 - 0,025
12H7	○	12	12,02	37	102	55	12	45	0,010 - 0,025
12,67	○	12,67	12,68	41	107	60	14	45	0,010 - 0,025
12,68	○	12,68	12,69	40,98	107	60	14	45	0,010 - 0,025
12,69	○	12,69	12,7	40,97	107	60	14	45	0,010 - 0,025
12,70	○	12,7	12,71	40,95	107	60	14	45	0,010 - 0,025
12,71	○	12,71	12,72	40,94	107	60	14	45	0,010 - 0,025
12,72	○	12,72	12,73	40,92	107	60	14	45	0,010 - 0,025
14H7	○	14	14,02	39	107	60	14	45	0,010 - 0,025
16H7	○	16	16,02	41	115	65	16	48	0,010 - 0,025

5 × A11

N° article	103300 5× A11, TiAlN	A11 mm	A12 mm	B4 mm	B5 mm	B6 mm	C3 mm	C4 mm	f mm/rev
4H7	○	4	4,01	30	74	36	6	36	0,060 - 0,060
5,97	○	5,97	5,98	44,05	91	53	6	36	0,060 - 0,060
5,98	○	5,98	5,99	44,03	91	53	6	36	0,060 - 0,060
5,99	○	5,99	10	44,02	91	53	6	36	0,060 - 0,060
5H7	○	5	5,01	45,5	91	53	6	36	0,060 - 0,060
6,00	○	6	6,01	44	91	53	6	36	0,068 - 0,068
6,01	○	6,01	6,02	43,99	91	53	6	36	0,068 - 0,068
6,02	○	6,02	6,03	43,97	91	53	6	36	0,120 - 0,350
6,32	○	6,32	6,33	43,52	91	53	8	36	0,120 - 0,350
6,33	○	6,33	6,34	43,51	91	53	8	36	0,120 - 0,350
6,34	○	6,34	6,35	43,49	91	53	8	36	0,120 - 0,350
6,35	○	6,35	6,36	43,48	91	53	8	36	0,120 - 0,350
6,36	○	6,36	6,37	43,46	91	53	8	36	0,120 - 0,350
6,37	○	6,37	6,38	43,45	91	53	8	36	0,120 - 0,350
7H7	○	7	7,01	42,5	91	53	8	36	0,120 - 0,350
6H7	○	6	6,01	44	91	53	8	40	0,120 - 0,350
7,97	○	7,97	7,98	41,05	91	53	8	36	0,120 - 0,350
7,98	○	7,98	7,99	41,03	91	53	8	36	0,120 - 0,350
7,99	○	7,99	8	41,02	91	53	8	36	0,120 - 0,350
8,00	○	8	8,01	41	91	53	8	36	0,140 - 0,450
8,01	○	8,01	8,01	40,99	91	53	8	36	0,140 - 0,450
8,02	○	8,02	8,02	40,97	91	53	8	36	0,140 - 0,450
8H7	○	8	8,02	41	91	53	8	36	0,140 - 0,450
9H7	○	9	9,02	47,5	103	61	10	40	0,140 - 0,450
9,48	○	9,48	9,49	46,78	103	61	10	40	0,140 - 0,450
9,49	○	9,49	9,53	46,77	103	61	10	40	0,140 - 0,450

N° article	103300 5× A11, TiAlN	A11 mm	A12 mm	B4 mm	B5 mm	B6 mm	C3 mm	C4 mm	f mm/rev
9,50	○	9,5	9,51	46,75	103	61	10	40	0,140 - 0,450
9,52	○	9,52	9,53	46,72	103	61	10	40	0,140 - 0,450
9,53	○	9,53	9,54	46,71	103	61	10	40	0,140 - 0,450
9,54	○	9,54	9,55	46,69	103	61	10	40	0,140 - 0,450
9,97	○	9,97	9,98	46,05	103	61	10	40	0,140 - 0,450
9,98	○	9,98	9,99	46,03	103	61	10	40	0,140 - 0,450
9,99	○	9,99	10	46,02	103	61	10	40	0,140 - 0,450
10,00	○	10	10,01	46	103	61	10	40	0,140 - 0,450
10,01	○	10,01	10,02	45,99	103	61	10	40	0,140 - 0,450
10,02	○	10,02	10,03	45,97	103	61	10	40	0,140 - 0,450
10H7	○	10	10,02	46	103	61	10	40	0,140 - 0,450
11,97	○	11,97	11,98	53,05	118	71	12	45	0,140 - 0,450
11,98	○	11,98	11,99	53,03	118	71	12	45	0,140 - 0,450
11,99	○	11,99	12	53,02	118	71	12	45	0,140 - 0,450
12,00	○	12	12,01	53	118	71	12	45	0,160 - 0,500
12,01	○	12,01	12,02	52,99	118	71	12	45	0,160 - 0,500
12,02	○	12,02	12,03	52,97	118	71	12	45	0,160 - 0,500
12H7	○	12	12,02	53	118	71	12	45	0,160 - 0,500
12,67	○	12,67	12,68	58	124	77	14	45	0,160 - 0,500
12,68	○	12,68	12,69	57,98	124	77	14	45	0,160 - 0,500
12,69	○	12,69	12,7	57,97	124	77	14	45	0,160 - 0,500
12,70	○	12,7	12,71	57,95	124	77	14	45	0,160 - 0,500
12,71	○	12,71	12,72	57,94	124	77	14	45	0,160 - 0,500
12,72	○	12,72	12,73	57,92	124	77	14	45	0,160 - 0,500
14H7	○	14	14,02	56	124	77	14	45	0,160 - 0,500
16H7	○	16	16,02	59	133	83	16	48	0,160 - 0,500

High-performance drill SC INOX

PREMUS GP

	M N/mm²
103431	‹850
103432	
vc = m/min.	
103431	25-35
103432	

SC | coated | DIN 6537 | 3 × A11 | Teeth 2 | 140° | M

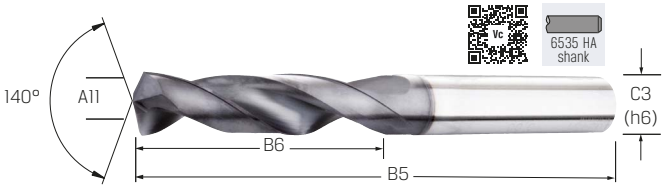
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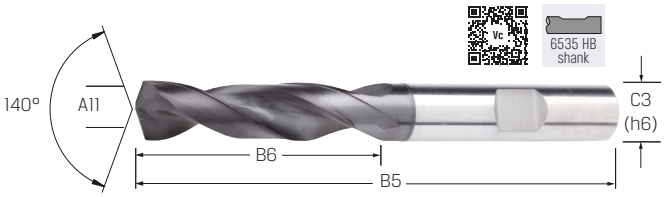
Use:
Efficient drilling of stainless materials if there is no internal coolant supply

Note:
Recommended chip removal cycle 0,5-1× A11
Effective length = B6-1.5.5x A11

GP







N° article	103431 GP, 3× A11, TiAlN, HA	103432 GP, 3× A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
1,00	●	–	1	45	7	4	0,020 - 0,030
1,10	●	–	1,1	45	7	4	0,020 - 0,030
1,20	●	–	1,2	45	7	4	0,020 - 0,030
1,30	●	–	1,3	45	7	4	0,020 - 0,030
1,40	●	–	1,4	45	7	4	0,020 - 0,030
1,50	●	–	1,5	55	14	4	0,020 - 0,030
1,60	●	–	1,6	55	14	4	0,020 - 0,030
1,70	●	–	1,7	55	14	4	0,020 - 0,030
1,80	●	–	1,8	55	14	4	0,020 - 0,030
1,90	●	–	1,9	55	14	4	0,020 - 0,030
2,00	●	–	2	55	20	4	0,040 - 0,050
2,10	●	–	2,1	55	20	4	0,040 - 0,050
2,15	●	–	2,15	55	20	4	0,040 - 0,050
2,20	●	–	2,2	55	20	4	0,040 - 0,050
2,30	●	–	2,3	55	20	4	0,040 - 0,050
2,40	●	–	2,4	55	20	4	0,040 - 0,050
2,50	●	–	2,5	55	20	4	0,040 - 0,050
2,60	●	–	2,6	55	20	4	0,040 - 0,050
2,65	●	–	2,65	55	20	4	0,040 - 0,050
2,70	●	–	2,7	55	20	4	0,040 - 0,050
2,80	●	–	2,8	55	20	4	0,040 - 0,050
2,85	●	–	2,85	55	20	4	0,040 - 0,050
2,90	●	–	2,9	55	20	4	0,040 - 0,050
3,00	●	●	3	62	20	6	0,050 - 0,060
3,10	●	●	3,1	62	20	6	0,050 - 0,060
3,20	●	●	3,2	62	20	6	0,050 - 0,060
3,25	●	●	3,25	62	20	6	0,050 - 0,060
3,30	●	●	3,3	62	20	6	0,050 - 0,060
3,40	●	●	3,4	62	20	6	0,050 - 0,060
3,50	●	●	3,5	62	20	6	0,050 - 0,060
3,60	●	●	3,6	62	20	6	0,050 - 0,060
3,70	●	●	3,7	62	20	6	0,050 - 0,060
3,80	●	●	3,8	66	24	6	0,050 - 0,060
3,90	●	●	3,9	66	24	6	0,050 - 0,060
4,00	●	●	4	66	24	6	0,060 - 0,070
4,10	●	●	4,1	66	24	6	0,060 - 0,070
4,20	●	●	4,2	66	24	6	0,060 - 0,070
4,30	●	●	4,3	66	24	6	0,060 - 0,070
4,40	●	●	4,4	66	24	6	0,060 - 0,070
4,50	●	●	4,5	66	24	6	0,060 - 0,070
4,60	●	●	4,6	66	24	6	0,060 - 0,070
4,65	●	●	4,65	66	24	6	0,060 - 0,070
4,70	●	●	4,7	66	24	6	0,060 - 0,070
4,80	●	●	4,8	66	28	6	0,060 - 0,070
4,90	●	●	4,9	66	28	6	0,060 - 0,070
5,00	●	●	5	66	28	6	0,070 - 0,080
5,10	●	●	5,1	66	28	6	0,070 - 0,080
5,20	●	●	5,2	66	28	6	0,070 - 0,080
5,30	●	●	5,3	66	28	6	0,070 - 0,080
5,40	●	●	5,4	66	28	6	0,070 - 0,080

N° article	103431 GP, 3× A11, TiAlN, HA	103432 GP, 3× A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
5,50	●	●	5,5	66	28	6	0,070 - 0,080
5,55	●	●	5,55	66	28	6	0,070 - 0,080
5,60	●	●	5,6	66	28	6	0,070 - 0,080
5,70	●	●	5,7	66	28	6	0,070 - 0,080
5,80	●	●	5,8	66	28	6	0,070 - 0,080
5,90	●	●	5,9	66	28	6	0,070 - 0,080
6,00	●	●	6	66	28	6	0,080 - 0,090
6,10	●	●	6,1	79	34	8	0,080 - 0,090
6,20	●	●	6,2	79	34	8	0,080 - 0,090
6,30	●	●	6,3	79	34	8	0,080 - 0,090
6,40	●	●	6,4	79	34	8	0,080 - 0,090
6,50	●	●	6,5	79	34	8	0,080 - 0,090
6,60	●	●	6,6	79	34	8	0,080 - 0,090
6,70	●	●	6,7	79	34	8	0,080 - 0,090
6,80	●	●	6,8	79	34	8	0,080 - 0,090
6,90	●	●	6,9	79	34	8	0,080 - 0,090
7,00	●	●	7	79	34	8	0,080 - 0,090
7,10	●	●	7,1	79	41	8	0,080 - 0,090
7,20	●	●	7,2	79	41	8	0,080 - 0,090
7,30	●	●	7,3	79	41	8	0,080 - 0,090
7,40	●	●	7,4	79	41	8	0,080 - 0,090
7,45	●	●	7,45	79	41	8	0,080 - 0,090
7,50	●	●	7,5	79	41	8	0,080 - 0,090
7,55	●	●	7,55	79	41	8	0,080 - 0,090
7,60	●	●	7,6	79	41	8	0,080 - 0,090
7,70	●	●	7,7	79	41	8	0,080 - 0,090
7,80	●	●	7,8	79	41	8	0,080 - 0,090
7,90	●	●	7,9	79	41	8	0,080 - 0,090
8,00	●	●	8	79	41	8	0,090 - 0,100
8,10	●	●	8,1	89	47	10	0,090 - 0,100
8,20	●	●	8,2	89	47	10	0,090 - 0,100
8,30	●	●	8,3	89	47	10	0,090 - 0,100
8,40	●	●	8,4	89	47	10	0,090 - 0,100
8,50	●	●	8,5	89	47	10	0,090 - 0,100
8,60	●	●	8,6	89	47	10	0,090 - 0,100
8,70	●	●	8,7	89	47	10	0,090 - 0,100
8,80	●	●	8,8	89	47	10	0,090 - 0,100
8,90	●	●	8,9	89	47	10	0,090 - 0,100
9,00	●	●	9	89	47	10	0,100 - 0,110
9,10	●	●	9,1	89	47	10	0,100 - 0,110
9,20	●	●	9,2	89	47	10	0,100 - 0,110
9,30	●	●	9,3	89	47	10	0,100 - 0,110
9,35	●	●	9,35	89	47	10	0,100 - 0,110
9,40	●	●	9,4	89	47	10	0,100 - 0,110
9,50	●	●	9,5	89	47	10	0,100 - 0,110
9,55	●	●	9,55	89	47	10	0,100 - 0,110
9,60	●	●	9,6	89	47	10	0,100 - 0,110
9,70	●	●	9,7	89	47	10	0,100 - 0,110
9,80	●	●	9,8	89	47	10	0,100 - 0,110
9,90	●	●	9,9	89	47	10	0,100 - 0,110

N° article	103431 GP, 3× A11, TiAlN, HA	103432 GP, 3× A11, TiAlN, HB,	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,00	●	●	10	89	47	10	0,110 - 0,120
10,10	●	●	10,1	102	55	12	0,110 - 0,120
10,20	●	●	10,2	102	55	12	0,110 - 0,120
10,30	●	●	10,3	102	55	12	0,110 - 0,120
10,40	●	●	10,4	102	55	12	0,110 - 0,120
10,50	●	●	10,5	102	55	12	0,110 - 0,120
10,60	●	●	10,6	102	55	12	0,110 - 0,120
10,70	●	●	10,7	102	55	12	0,110 - 0,120
10,80	●	●	10,8	102	55	12	0,110 - 0,120
10,90	●	●	10,9	102	55	12	0,110 - 0,120
11,00	●	●	11	102	55	12	0,110 - 0,120
11,10	●	●	11,1	102	55	12	0,110 - 0,120
11,20	●	●	11,2	102	55	12	0,110 - 0,120
11,30	●	●	11,3	102	55	12	0,110 - 0,120
11,40	●	●	11,4	102	55	12	0,110 - 0,120
11,50	●	●	11,5	102	55	12	0,110 - 0,120
11,60	●	●	11,6	102	55	12	0,110 - 0,120
11,70	●	●	11,7	102	55	12	0,110 - 0,120
11,80	●	●	11,8	102	55	12	0,110 - 0,120
11,90	●	●	11,9	102	55	12	0,110 - 0,120
12,00	●	●	12	102	55	12	0,130 - 0,140
12,20	●	●	12,2	107	60	14	0,130 - 0,140
12,50	●	●	12,5	107	60	14	0,130 - 0,140
12,70	●	–	12,7	107	60	14	0,130 - 0,140
12,80	●	●	12,8	107	60	14	0,130 - 0,140
13,00	●	●	13	107	60	14	0,130 - 0,140
13,50	●	●	13,5	107	60	14	0,130 - 0,140
13,80	●	●	13,8	107	60	14	0,130 - 0,140
14,00	●	●	14	107	60	14	0,130 - 0,140
14,20	●	●	14,2	115	65	16	0,130 - 0,140
14,50	●	●	14,5	115	65	16	0,130 - 0,140
14,80	●	●	14,8	115	65	16	0,130 - 0,140
15,00	●	●	15	115	65	16	0,130 - 0,140
15,30	●	●	15,3	115	65	16	0,130 - 0,140
15,50	●	●	15,5	115	65	16	0,130 - 0,140
15,80	●	●	15,8	115	65	16	0,130 - 0,140
16,00	●	●	16	115	65	16	0,140 - 0,150
16,50	●	●	16,5	123	73	18	0,140 - 0,150
16,80	●	●	16,8	123	73	18	0,140 - 0,150
17,00	●	●	17	123	73	18	0,140 - 0,150
17,50	●	●	17,5	123	73	18	0,140 - 0,150
17,70	●	●	17,7	123	73	18	0,140 - 0,150
17,80	●	●	17,8	123	73	18	0,140 - 0,150
18,00	●	●	18	123	73	18	0,140 - 0,150
18,50	●	●	18,5	131	79	20	0,140 - 0,150
18,80	●	●	18,8	131	79	20	0,140 - 0,150
19,00	●	●	19	131	79	20	0,140 - 0,150
19,50	●	●	19,5	131	79	20	0,140 - 0,150
19,80	●	●	19,8	131	79	20	0,140 - 0,150
20,00	●	●	20	131	79	20	0,150 - 0,170

High-performance drill SC INOX

PREMUS GP

	M N/mm²	S N/mm²	
103436	<850	heat-resistant super alloys	Titanium
103437			
vc = m/min.			
103436	50-80	40	35
103437			

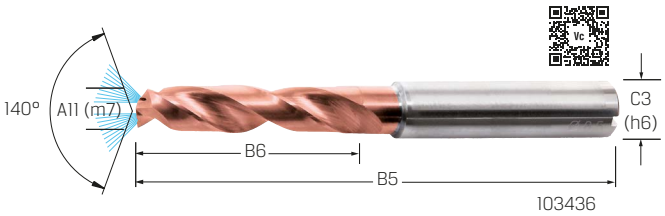
SC | coated | DIN 6537 | 3 × A11 | Teeth 2 | 140° | 6535 HA shank

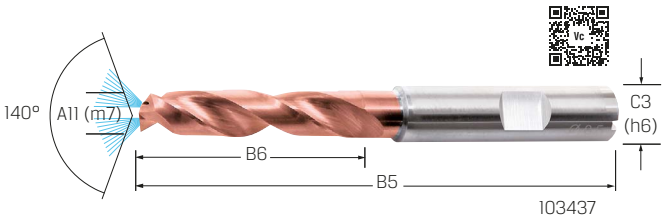
6535 HB shank | ICS | M | S | CAD

Design:
- latest AlCrN-based coating technology
- first choice for drilling in VA, Duplex, high-temperature and titanium alloys
- optimised geometry for reliable processing
- particularly burr-free bore outlet in through holes
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip formation through special profile
- good chip evacuation through post-treated chip channels
- very wide application range even under suboptimal conditions
- high concentricity
- accurate drilling properties
- with twisted cooling ducts

Note:
effective length = B6 - 1.5x A11







N° article	103436 GP, 3× A11, Helica, HA, ICS	103437 GP, 3× A11, Helica, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
2,00	●	–	2	55	20	4	0,030-0,060
2,10	●	–	2,1	55	20	4	0,030-0,060
2,15	●	–	2,15	55	20	4	0,030-0,060
2,20	●	–	2,2	55	20	4	0,030-0,060
2,30	●	–	2,3	55	20	4	0,030-0,060
2,40	●	–	2,4	55	20	4	0,030-0,060
2,50	●	–	2,5	55	20	4	0,040-0,070
2,60	●	–	2,6	55	20	4	0,040-0,070
2,65	●	–	2,65	55	20	4	0,040-0,070
2,70	●	–	2,7	55	20	4	0,040-0,070
2,80	●	–	2,8	55	20	4	0,040-0,070
2,85	●	–	2,85	55	20	4	0,040-0,070
2,90	●	–	2,9	55	20	4	0,040-0,070
3,00	●	●	3	62	20	6	0,040-0,080
3,10	●	●	3,1	62	20	6	0,040-0,080
3,20	●	●	3,2	62	20	6	0,040-0,080
3,25	●	●	3,25	62	20	6	0,040-0,080
3,30	●	●	3,3	62	20	6	0,040-0,080
3,40	●	●	3,4	62	20	6	0,040-0,080
3,50	●	●	3,5	62	20	6	0,040-0,080
3,60	●	●	3,6	62	20	6	0,040-0,080
3,70	●	●	3,7	62	20	6	0,040-0,080
3,80	●	●	3,8	66	24	6	0,040-0,080
3,90	●	●	3,9	66	24	6	0,040-0,080
4,00	●	●	4	66	24	6	0,060-0,100
4,10	●	●	4,1	66	24	6	0,060-0,100
4,20	●	●	4,2	66	24	6	0,060-0,100
4,30	●	●	4,3	66	24	6	0,060-0,100
4,40	●	●	4,4	66	24	6	0,060-0,100
4,50	●	●	4,5	66	24	6	0,060-0,100
4,60	●	●	4,6	66	24	6	0,060-0,100
4,65	●	●	4,65	66	24	6	0,060-0,100
4,70	●	●	4,7	66	24	6	0,060-0,100
4,80	●	●	4,8	66	28	6	0,060-0,100
4,90	●	●	4,9	66	28	6	0,060-0,100
5,00	●	●	5	66	28	6	0,070-0,120
5,10	●	●	5,1	66	28	6	0,070-0,120
5,20	●	●	5,2	66	28	6	0,070-0,120
5,30	●	●	5,3	66	28	6	0,070-0,120
5,40	●	●	5,4	66	28	6	0,070-0,120
5,50	●	●	5,5	66	28	6	0,070-0,120
5,55	●	●	5,55	66	28	6	0,070-0,120
5,60	●	●	5,6	66	28	6	0,070-0,120
5,70	●	●	5,7	66	28	6	0,070-0,120
5,80	●	●	5,8	66	28	6	0,070-0,120
5,90	●	●	5,9	66	28	6	0,070-0,120
6,00	●	●	6	66	28	6	0,080-0,140

N° article	103436 GP, 3× A11, Helica, HA, ICS	103437 GP, 3× A11, Helica, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,10	●	●	6,1	79	34	8	0,080-0,140
6,20	●	●	6,2	79	34	8	0,080-0,140
6,30	●	●	6,3	79	34	8	0,080-0,140
6,40	●	●	6,4	79	34	8	0,080-0,140
6,50	●	●	6,5	79	34	8	0,080-0,140
6,60	●	●	6,6	79	34	8	0,080-0,140
6,70	●	●	6,7	79	34	8	0,080-0,140
6,80	●	●	6,8	79	34	8	0,080-0,140
6,90	●	●	6,9	79	34	8	0,080-0,140
7,00	●	●	7	79	34	8	0,090-0,150
7,10	●	●	7,1	79	41	8	0,090-0,150
7,20	●	●	7,2	79	41	8	0,090-0,150
7,30	●	●	7,3	79	41	8	0,090-0,150
7,40	●	●	7,4	79	41	8	0,090-0,150
7,45	●	●	7,45	79	41	8	0,090-0,150
7,50	●	●	7,5	79	41	8	0,090-0,150
7,55	●	●	7,55	79	41	8	0,090-0,150
7,60	●	●	7,6	79	41	8	0,090-0,150
7,70	●	●	7,7	79	41	8	0,090-0,150
7,80	●	●	7,8	79	41	8	0,090-0,150
7,90	●	●	7,9	79	41	8	0,090-0,150
8,00	●	●	8	79	41	8	0,090-0,160
8,10	●	●	8,1	89	47	10	0,090-0,160
8,20	●	●	8,2	89	47	10	0,090-0,160
8,30	●	●	8,3	89	47	10	0,090-0,160
8,40	●	●	8,4	89	47	10	0,090-0,160
8,50	●	●	8,5	89	47	10	0,090-0,160
8,60	●	●	8,6	89	47	10	0,090-0,160
8,70	●	●	8,7	89	47	10	0,090-0,160
8,80	●	●	8,8	89	47	10	0,090-0,160
8,90	●	●	8,9	89	47	10	0,090-0,160
9,00	●	●	9	89	47	10	0,100-0,170
9,10	●	●	9,1	89	47	10	0,100-0,170
9,20	●	●	9,2	89	47	10	0,100-0,170
9,30	●	●	9,3	89	47	10	0,100-0,170
9,35	●	●	9,35	89	47	10	0,100-0,170
9,40	●	●	9,4	89	47	10	0,100-0,170
9,50	●	●	9,5	89	47	10	0,100-0,170
9,55	●	●	9,55	89	47	10	0,100-0,170
9,60	●	●	9,6	89	47	10	0,100-0,170
9,70	●	●	9,7	89	47	10	0,100-0,170
9,80	●	●	9,8	89	47	10	0,100-0,170
9,90	●	●	9,9	89	47	10	0,100-0,170
10,00	●	●	10	89	47	10	0,100-0,180
10,10	●	●	10,1	102	55	12	0,100-0,180
10,20	●	●	10,2	102	55	12	0,100-0,180
10,30	●	●	10,3	102	55	12	0,100-0,180

N° article	103436 GP, 3× A11, Helica, HA, ICS	103437 GP, 3× A11, Helica, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,40	●	●	10,4	102	55	12	0,100-0,180
10,50	●	●	10,5	102	55	12	0,100-0,180
10,60	●	●	10,6	102	55	12	0,100-0,180
10,70	●	●	10,7	102	55	12	0,100-0,180
10,80	●	●	10,8	102	55	12	0,100-0,180
10,90	●	●	10,9	102	55	12	0,100-0,180
11,00	●	●	11	102	55	12	0,100-0,180
11,10	●	●	11,1	102	55	12	0,100-0,180
11,20	●	●	11,2	102	55	12	0,100-0,180
11,30	●	●	11,3	102	55	12	0,100-0,180
11,40	●	●	11,4	102	55	12	0,100-0,180
11,50	●	●	11,5	102	55	12	0,100-0,180
11,60	●	●	11,6	102	55	12	0,100-0,180
11,70	●	●	11,7	102	55	12	0,100-0,180
11,80	●	●	11,8	102	55	12	0,100-0,180
11,90	●	●	11,9	102	55	12	0,100-0,180
12,00	●	●	12	102	55	12	0,120-0,200
12,20	●	●	12,2	107	60	14	0,120-0,200
12,50	●	●	12,5	107	60	14	0,120-0,200
12,80	●	●	12,8	107	60	14	0,120-0,200
13,00	●	●	13	107	60	14	0,120-0,200
13,50	●	●	13,5	107	60	14	0,120-0,200
13,80	●	●	13,8	107	60	14	0,120-0,200
14,00	●	●	14	107	60	14	0,130-0,220
14,20	●	●	14,2	115	65	16	0,130-0,220
14,50	●	●	14,5	115	65	16	0,130-0,220
14,80	●	●	14,8	115	65	16	0,130-0,220
15,00	●	●	15	115	65	16	0,130-0,220
15,30	●	●	15,3	115	65	16	0,130-0,220
15,50	●	●	15,5	115	65	16	0,130-0,220
15,80	●	●	15,8	115	65	16	0,130-0,220
16,00	●	●	16	115	65	16	0,140-0,230
16,50	●	●	16,5	123	73	18	0,140-0,230
16,80	●	●	16,8	123	73	18	0,140-0,230
17,00	●	●	17	123	73	18	0,140-0,230
17,50	●	●	17,5	123	73	18	0,140-0,230
17,70	●	●	17,7	123	73	18	0,140-0,230
17,80	●	●	17,8	123	73	18	0,140-0,230
18,00	●	●	18	123	73	18	0,150-0,250
18,50	●	●	18,5	131	79	20	0,150-0,250
18,80	●	●	18,8	131	79	20	0,150-0,250
19,00	●	●	19	131	79	20	0,150-0,250
19,50	●	●	19,5	131	79	20	0,150-0,250
19,80	●	●	19,8	131	79	20	0,150-0,250
20,00	●	●	20	131	79	20	0,160-0,260

High-performance drill SC INOX

PREMUS GP

	M N/mm²	S N/mm²	
103456	<850	heat-resistant super alloys	Titanium
103457			
vc = m/min.			
103456	50-80	40	35
103457			

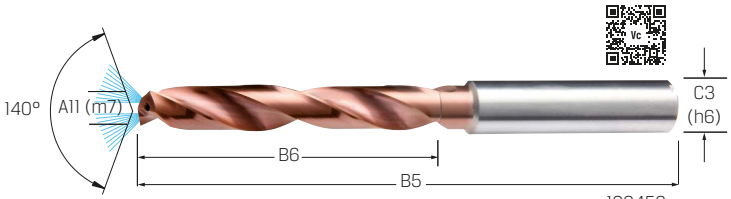
SC | coated | DIN 6537 | 5 × A11 | Teeth 2 | 140° | 6535 HA shank

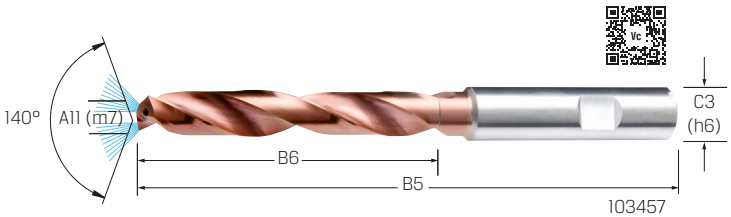
6535 HB shank | ICS | M | S | CAD

Design:
- latest AlCrN-based coating technology
- first choice for drilling in VA, Duplex, high-temperature and titanium alloys
- optimised geometry for reliable processing
- particularly burr-free bore outlet in through holes
- outstanding tool life through careful selection of the carbide (quality ultra-fine grain)
- good self-centring
- optimal chip formation through special profile
- good chip evacuation through post-treated chip channels
- very wide application range even under suboptimal conditions
- high concentricity
- accurate drilling properties
- with twisted cooling ducts

Note:
effective length = B6 - 1.5x A11







N° article	103456 GP, 5× A11, Helica, HA, ICS	103457 GP, 5× A11, Helica, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
2,00	●	–	2	62	26	4	0,030-0,060
2,10	●	–	2,1	62	26	4	0,030-0,060
2,15	●	–	2,15	62	26	4	0,030-0,060
2,20	●	–	2,2	62	26	4	0,030-0,060
2,30	●	–	2,3	62	26	4	0,030-0,060
2,40	●	–	2,4	62	26	4	0,030-0,060
2,50	●	–	2,5	62	26	4	0,040-0,070
2,60	●	–	2,6	62	26	4	0,040-0,070
2,65	●	–	2,65	62	26	4	0,040-0,070
2,70	●	–	2,7	62	26	4	0,040-0,070
2,80	●	–	2,8	62	26	4	0,040-0,070
2,85	●	–	2,85	62	26	4	0,040-0,070
2,90	●	–	2,9	62	26	4	0,040-0,070
3,00	●	●	3	66	28	6	0,040-0,080
3,10	●	●	3,1	66	28	6	0,040-0,080
3,20	●	●	3,2	66	28	6	0,040-0,080
3,25	●	●	3,25	66	28	6	0,040-0,080
3,30	●	●	3,3	66	28	6	0,040-0,080
3,40	●	●	3,4	66	28	6	0,040-0,080
3,50	●	●	3,5	66	28	6	0,040-0,080
3,60	●	●	3,6	66	28	6	0,040-0,080
3,70	●	●	3,7	66	28	6	0,040-0,080
3,80	●	●	3,8	74	36	6	0,040-0,080
3,90	●	●	3,9	74	36	6	0,040-0,080
4,00	●	●	4	74	36	6	0,060-0,100
4,10	●	●	4,1	74	36	6	0,060-0,100
4,20	●	●	4,2	74	36	6	0,060-0,100
4,30	●	●	4,3	74	36	6	0,060-0,100
4,40	●	●	4,4	74	36	6	0,060-0,100
4,50	●	●	4,5	74	36	6	0,060-0,100
4,60	●	●	4,6	74	36	6	0,060-0,100
4,65	●	●	4,65	74	36	6	0,060-0,100
4,70	●	●	4,7	74	36	6	0,060-0,100
4,80	●	●	4,8	82	44	6	0,060-0,100
4,90	●	●	4,9	82	44	6	0,060-0,100
5,00	●	●	5	82	44	6	0,070-0,120
5,10	●	●	5,1	82	44	6	0,070-0,120
5,20	●	●	5,2	82	44	6	0,070-0,120
5,30	●	●	5,3	82	44	6	0,070-0,120
5,40	●	●	5,4	82	44	6	0,070-0,120
5,50	●	●	5,5	82	44	6	0,070-0,120
5,55	●	●	5,55	82	44	6	0,070-0,120
5,60	●	●	5,6	82	44	6	0,070-0,120
5,70	●	●	5,7	82	44	6	0,070-0,120
5,80	●	●	5,8	82	44	6	0,070-0,120
5,90	●	●	5,9	82	44	6	0,070-0,120
6,00	●	●	6	82	44	6	0,080-0,140

N° article	103456 GP, 5× A11, Helica, HA, ICS	103457 GP, 5× A11, Helica, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,10	●	●	6,1	91	53	8	0,080-0,140
6,20	●	●	6,2	91	53	8	0,080-0,140
6,30	●	●	6,3	91	53	8	0,080-0,140
6,40	●	●	6,4	91	53	8	0,080-0,140
6,50	●	●	6,5	91	53	8	0,080-0,140
6,60	●	●	6,6	91	53	8	0,080-0,140
6,70	●	●	6,7	91	53	8	0,080-0,140
6,80	●	●	6,8	91	53	8	0,080-0,140
6,90	●	●	6,9	91	53	8	0,080-0,140
7,00	●	●	7	91	53	8	0,090-0,150
7,10	●	●	7,1	91	53	8	0,090-0,150
7,20	●	●	7,2	91	53	8	0,090-0,150
7,30	●	●	7,3	91	53	8	0,090-0,150
7,40	●	●	7,4	91	53	8	0,090-0,150
7,45	●	●	7,45	91	53	8	0,090-0,150
7,50	●	●	7,5	91	53	8	0,090-0,150
7,55	●	●	7,55	91	53	8	0,090-0,150
7,60	●	●	7,6	91	53	8	0,090-0,150
7,70	●	●	7,7	91	53	8	0,090-0,150
7,80	●	●	7,8	91	53	8	0,090-0,150
7,90	●	●	7,9	91	53	8	0,090-0,150
8,00	●	●	8	91	53	8	0,090-0,160
8,10	●	●	8,1	103	61	10	0,090-0,160
8,20	●	●	8,2	103	61	10	0,090-0,160
8,30	●	●	8,3	103	61	10	0,090-0,160
8,40	●	●	8,4	103	61	10	0,090-0,160
8,50	●	●	8,5	103	61	10	0,090-0,160
8,60	●	●	8,6	103	61	10	0,090-0,160
8,70	●	●	8,7	103	61	10	0,090-0,160
8,80	●	●	8,8	103	61	10	0,090-0,160
8,90	●	●	8,9	103	61	10	0,090-0,160
9,00	●	●	9	103	61	10	0,100-0,170
9,10	●	●	9,1	103	61	10	0,100-0,170
9,20	●	●	9,2	103	61	10	0,100-0,170
9,30	●	●	9,3	103	61	10	0,100-0,170
9,35	●	●	9,35	103	61	10	0,100-0,170
9,40	●	●	9,4	103	61	10	0,100-0,170
9,50	●	●	9,5	103	61	10	0,100-0,170
9,55	●	●	9,55	103	61	10	0,100-0,170
9,60	●	●	9,6	103	61	10	0,100-0,170
9,70	●	●	9,7	103	61	10	0,100-0,170
9,80	●	●	9,8	103	61	10	0,100-0,170
9,90	●	●	9,9	103	61	10	0,100-0,170
10,00	●	●	10	103	61	10	0,100-0,180
10,10	●	●	10,1	118	71	12	0,100-0,180
10,20	●	●	10,2	118	71	12	0,100-0,180
10,30	●	●	10,3	118	71	12	0,100-0,180

N° article	103456 GP, 5× A11, Helica, HA, ICS	103457 GP, 5× A11, Helica, HB, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,40	●	●	10,4	118	71	12	0,100-0,180
10,50	●	●	10,5	118	71	12	0,100-0,180
10,60	●	●	10,6	118	71	12	0,100-0,180
10,70	●	●	10,7	118	71	12	0,100-0,180
10,80	●	●	10,8	118	71	12	0,100-0,180
10,90	●	●	10,9	118	71	12	0,100-0,180
11,00	●	●	11	118	71	12	0,100-0,180
11,10	●	●	11,1	118	71	12	0,100-0,180
11,20	●	●	11,2	118	71	12	0,100-0,180
11,30	●	●	11,3	118	71	12	0,100-0,180
11,40	●	●	11,4	118	71	12	0,100-0,180
11,50	●	●	11,5	118	71	12	0,100-0,180
11,60	●	●	11,6	118	71	12	0,100-0,180
11,70	●	●	11,7	118	71	12	0,100-0,180
11,80	●	●	11,8	118	71	12	0,100-0,180
11,90	●	●	11,9	118	71	12	0,100-0,180
12,00	●	●	12	118	71	12	0,120-0,200
12,20	●	●	12,2	124	77	14	0,120-0,200
12,50	●	●	12,5	124	77	14	0,120-0,200
12,80	●	●	12,8	124	77	14	0,120-0,200
13,00	●	●	13	124	77	14	0,120-0,200
13,50	●	●	13,5	124	77	14	0,120-0,200
13,80	●	●	13,8	124	77	14	0,120-0,200
14,00	●	●	14	124	77	14	0,130-0,220
14,20	●	●	14,2	133	83	16	0,130-0,220
14,50	●	●	14,5	133	83	16	0,130-0,220
14,80	●	●	14,8	133	83	16	0,130-0,220
15,00	●	●	15	133	83	16	0,130-0,220
15,10	●	●	15,1	133	83	16	0,130-0,220
15,30	●	●	15,3	133	83	16	0,130-0,220
15,50	●	●	15,5	133	83	16	0,130-0,220
15,80	●	●	15,8	133	83	16	0,130-0,220
16,00	●	●	16	133	83	16	0,140-0,230
16,50	●	●	16,5	143	93	18	0,140-0,230
16,80	●	●	16,8	143	93	18	0,140-0,230
17,00	●	●	17	143	93	18	0,140-0,230
17,50	●	●	17,5	143	93	18	0,140-0,230
17,70	●	●	17,7	143	93	18	0,140-0,230
17,80	●	●	17,8	143	93	18	0,140-0,230
18,00	●	●	18	143	93	18	0,150-0,250
18,50	●	●	18,5	153	101	20	0,150-0,250
18,80	●	●	18,8	153	101	20	0,150-0,250
19,00	●	●	19	153	101	20	0,150-0,250
19,50	●	●	19,5	153	101	20	0,150-0,250
19,80	●	●	19,8	153	101	20	0,150-0,250
20,00	●	●	20	153	101	20	0,160-0,260

High-performance drill SC INOX

PREMUS

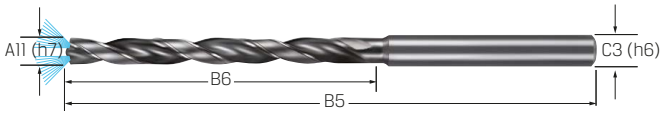
	M N/mm²
103715	〈1000
103721	
vc = m/min.	
103715	30-55
103721	30-50

SC | coated | Factory standard | Teeth 2 | 135° | 6535 HA shank | ICS

M

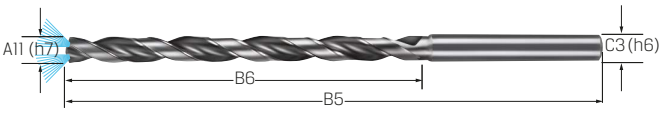
Design:
- VHM ultrafine grain
- four facets
- straight main edge
- double guiding chamfer
- point angle 135°
- with twisted cooling ducts

8 × A11



Note:
Drill pilot bore with 103436.

12 × A11



N° article	103715 8× A11, TiAlN HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00-HA	○	3	72	34	6	0,070 - 0,080
3,10-HA	○	3,1	72	34	6	0,070 - 0,080
3,20-HA	○	3,2	72	34	6	0,070 - 0,080
3,30-HA	○	3,3	72	34	6	0,070 - 0,080
3,40-HA	○	3,4	72	34	6	0,070 - 0,080
3,50-HA	○	3,5	72	34	6	0,070 - 0,080
3,60-HA	○	3,6	72	34	6	0,070 - 0,080
3,70-HA	○	3,7	72	34	6	0,070 - 0,080
3,80-HA	○	3,8	81	43	6	0,070 - 0,080
3,90-HA	○	3,9	81	43	6	0,070 - 0,080
4,00-HA	○	4	81	43	6	0,070 - 0,080
4,10-HA	○	4,1	81	43	6	0,070 - 0,080
4,20-HA	○	4,2	81	43	6	0,070 - 0,080
4,30-HA	○	4,3	81	43	6	0,070 - 0,080
4,40-HA	○	4,4	81	43	6	0,070 - 0,080
4,50-HA	○	4,5	81	43	6	0,070 - 0,080
4,60-HA	○	4,6	81	43	6	0,070 - 0,080
4,70-HA	○	4,7	81	43	6	0,070 - 0,080
4,80-HA	○	4,8	95	57	6	0,070 - 0,080
4,90-HA	○	4,9	95	57	6	0,070 - 0,080
5,00-HA	●	5	95	57	6	0,080 - 0,090
5,10-HA	○	5,1	95	57	6	0,080 - 0,090
5,20-HA	○	5,2	95	57	6	0,080 - 0,090
5,30-HA	○	5,3	95	57	6	0,080 - 0,090
5,40-HA	○	5,4	95	57	6	0,080 - 0,090
5,50-HA	○	5,5	95	57	6	0,080 - 0,090
5,60-HA	○	5,6	95	57	6	0,080 - 0,090
5,70-HA	○	5,7	95	57	6	0,080 - 0,090
5,80-HA	○	5,8	95	57	6	0,080 - 0,090
5,90-HA	○	5,9	95	57	6	0,080 - 0,090
6,00-HA	●	6	95	57	8	0,100 - 0,110
6,10-HA	○	6,1	114	76	8	0,100 - 0,110
6,20-HA	○	6,2	114	76	8	0,100 - 0,110
6,30-HA	○	6,3	114	76	8	0,100 - 0,110
6,40-HA	○	6,4	114	76	8	0,100 - 0,110
6,50-HA	○	6,5	114	76	8	0,100 - 0,110
6,60-HA	○	6,6	114	76	8	0,100 - 0,110
6,70-HA	○	6,7	114	76	8	0,100 - 0,110
6,80-HA	○	6,8	114	76	8	0,100 - 0,110
6,90-HA	○	6,9	114	76	8	0,100 - 0,110
7,00-HA	○	7	114	76	8	0,110 - 0,120
7,10-HA	○	7,1	114	76	8	0,110 - 0,120
7,20-HA	○	7,2	114	76	8	0,110 - 0,120
7,30-HA	○	7,3	114	76	8	0,110 - 0,120
7,40-HA	○	7,4	114	76	8	0,110 - 0,120
7,50-HA	○	7,5	114	76	8	0,110 - 0,120
7,60-HA	○	7,6	114	76	8	0,110 - 0,120
7,70-HA	○	7,7	114	76	8	0,110 - 0,120
7,80-HA	○	7,8	114	76	8	0,110 - 0,120
7,90-HA	○	7,9	114	76	8	0,110 - 0,120
8,00-HA	●	8	114	76	8	0,120 - 0,130
8,10-HA	○	8,1	142	95	10	0,120 - 0,130
8,20-HA	○	8,2	142	95	10	0,120 - 0,130
8,30-HA	○	8,3	142	95	10	0,120 - 0,130
8,40-HA	○	8,4	142	95	10	0,120 - 0,130

N° article	103715 8× A11, TiAlN HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
8,50-HA	○	8,5	142	95	10	0,120 - 0,130
8,60-HA	○	8,6	142	95	10	0,120 - 0,130
8,70-HA	○	8,7	142	95	10	0,120 - 0,130
8,80-HA	○	8,8	142	95	10	0,120 - 0,130
8,90-HA	○	8,9	142	95	10	0,120 - 0,130
9,00-HA	○	9	142	95	10	0,130 - 0,140
9,10-HA	○	9,1	142	95	10	0,130 - 0,140
9,20-HA	○	9,2	142	95	10	0,130 - 0,140
9,30-HA	○	9,3	142	95	10	0,130 - 0,140
9,40-HA	○	9,4	142	95	10	0,130 - 0,140
9,50-HA	○	9,5	142	95	10	0,130 - 0,140
9,60-HA	○	9,6	142	95	10	0,130 - 0,140
9,70-HA	○	9,7	142	95	10	0,130 - 0,140
9,80-HA	○	9,8	142	95	10	0,130 - 0,140
9,90-HA	○	9,9	142	95	10	0,130 - 0,140
10,00-HA	○	10	142	95	10	0,140 - 0,150
10,10-HA	○	10,1	162	114	12	0,140 - 0,150
10,20-HA	○	10,2	162	114	12	0,140 - 0,150
10,30-HA	○	10,3	162	114	12	0,140 - 0,150
10,40-HA	○	10,4	162	114	12	0,140 - 0,150
10,50-HA	●	10,5	162	114	12	0,140 - 0,150
10,60-HA	○	10,6	162	114	12	0,140 - 0,150
10,70-HA	○	10,7	162	114	12	0,140 - 0,150
10,80-HA	○	10,8	162	114	12	0,140 - 0,150
10,90-HA	○	10,9	162	114	12	0,140 - 0,150
11,00-HA	○	11	162	114	12	0,150 - 0,160
11,10-HA	○	11,1	162	114	12	0,150 - 0,160
11,20-HA	○	11,2	162	114	12	0,150 - 0,160
11,30-HA	○	11,3	162	114	12	0,150 - 0,160
11,40-HA	○	11,4	162	114	12	0,150 - 0,160
11,50-HA	○	11,5	162	114	12	0,150 - 0,160
11,60-HA	○	11,6	162	114	12	0,150 - 0,160
11,70-HA	○	11,7	162	114	12	0,150 - 0,160
11,80-HA	○	11,8	162	114	12	0,150 - 0,160
12,00-HA	●	12	162	114	12	0,160 - 0,170
12,50-HA	○	12,5	178	133	14	0,160 - 0,170
12,80-HA	○	12,8	178	133	14	0,160 - 0,170
13,00-HA	○	13	178	133	14	0,170 - 0,180
13,50-HA	○	13,5	178	133	14	0,170 - 0,180
13,80-HA	○	13,8	178	133	14	0,170 - 0,180
14,00-HA	○	14	203	133	14	0,180 - 0,190
14,50-HA	○	14,5	203	152	16	0,180 - 0,190
14,80-HA	○	14,8	203	152	16	0,180 - 0,190
15,00-HA	○	15	203	152	16	0,190 - 0,200
15,50-HA	○	15,5	203	152	16	0,190 - 0,200
15,80-HA	○	15,8	203	152	16	0,190 - 0,200
16,00-HA	○	16	203	152	16	0,200 - 0,210
16,50-HA	○	16,5	222	171	18	0,200 - 0,210
17,00-HA	○	17	222	171	18	0,210 - 0,220
17,50-HA	○	17,5	222	171	18	0,210 - 0,220
18,00-HA	○	18	222	171	18	0,220 - 0,230
18,50-HA	○	18,5	243	190	20	0,220 - 0,230
19,00-HA	○	19	243	190	20	0,230 - 0,240
19,50-HA	○	19,5	243	190	20	0,230 - 0,240
20,00-HA	○	20	243	190	20	0,240 - 0,250

N° article	103721 12× A11, TiAlN HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00-HA	○	3	92	54	6	0,030 - 0,040
3,10-HA	○	3,1	92	54	6	0,030 - 0,040
3,20-HA	○	3,2	92	54	6	0,030 - 0,040
3,30-HA	○	3,3	92	54	6	0,030 - 0,040
3,40-HA	○	3,4	92	54	6	0,030 - 0,040
3,50-HA	○	3,5	92	54	6	0,030 - 0,040
3,60-HA	○	3,6	92	54	6	0,030 - 0,040
3,70-HA	○	3,7	92	54	6	0,030 - 0,040
3,80-HA	○	3,8	102	64	6	0,030 - 0,040
3,90-HA	○	3,9	102	64	6	0,030 - 0,040
4,00-HA	●	4	102	64	6	0,050 - 0,060
4,10-HA	○	4,1	102	64	6	0,050 - 0,060
4,20-HA	○	4,2	102	64	6	0,050 - 0,060
4,30-HA	○	4,3	102	64	6	0,050 - 0,060
4,40-HA	○	4,4	102	64	6	0,050 - 0,060
4,50-HA	○	4,5	102	64	6	0,050 - 0,060
4,60-HA	○	4,6	102	64	6	0,050 - 0,060
4,70-HA	○	4,7	102	64	6	0,050 - 0,060
4,80-HA	○	4,8	116	78	6	0,050 - 0,060
4,90-HA	○	4,9	116	78	6	0,050 - 0,060
5,00-HA	●	5	116	78	6	0,060 - 0,070
5,10-HA	○	5,1	116	78	6	0,060 - 0,070
5,20-HA	○	5,2	116	78	6	0,060 - 0,070
5,30-HA	○	5,3	116	78	6	0,060 - 0,070
5,40-HA	○	5,4	116	78	6	0,060 - 0,070
5,50-HA	○	5,5	116	78	6	0,060 - 0,070
5,60-HA	○	5,6	116	78	6	0,060 - 0,070
5,70-HA	○	5,7	116	78	6	0,060 - 0,070
5,80-HA	○	5,8	116	78	6	0,060 - 0,070
5,90-HA	○	5,9	116	78	6	0,060 - 0,070
6,00-HA	●	6	116	78	6	0,070 - 0,080
6,10-HA	○	6,1	146	108	8	0,070 - 0,080
6,20-HA	○	6,2	146	108	8	0,070 - 0,080
6,30-HA	○	6,3	146	108	8	0,070 - 0,080
6,40-HA	○	6,4	146	108	8	0,070 - 0,080
6,50-HA	●	6,5	146	108	8	0,070 - 0,080
6,60-HA	○	6,6	146	108	8	0,070 - 0,080
6,70-HA	○	6,7	146	108	8	0,070 - 0,080
6,80-HA	○	6,8	146	108	8	0,070 - 0,080
6,90-HA	○	6,9	146	108	8	0,070 - 0,080
7,00-HA	○	7	146	108	8	0,080 - 0,090
7,10-HA	○	7,1	146	108	8	0,080 - 0,090
7,20-HA	○	7,2	146	108	8	0,080 - 0,090
7,30-HA	○	7,3	146	108	8	0,080 - 0,090
7,40-HA	○	7,4	146	108	8	0,080 - 0,090
7,50-HA	○	7,5	146	108	8	0,080 - 0,090
7,60-HA	○	7,6	146	108	8	0,080 - 0,090
7,70-HA	○	7,7	146	108	8	0,080 - 0,090
7,80-HA	○	7,8	146	108	8	0,080 - 0,090
7,90-HA	○	7,9	146	108	8	0,080 - 0,090
8,00-HA	○	8	146	108	8	0,090 - 0,100
8,10-HA	○	8,1	162	120	10	0,090 - 0,100
8,20-HA	○	8,2	162	120	10	0,090 - 0,100
8,30-HA	○	8,3	162	120	10	0,090 - 0,100
8,40-HA	○	8,4	162	120	10	0,090 - 0,100

N° article	103721 12× A11, TiAlN HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
8,50-HA	○	8,5	162	120	10	0,090 - 0,100
8,60-HA	○	8,6	162	120	10	0,090 - 0,100
8,70-HA	○	8,7	162	120	10	0,090 - 0,100
8,80-HA	○	8,8	162	120	10	0,090 - 0,100
8,90-HA	○	8,9	162	120	10	0,090 - 0,100
9,00-HA	○	9	162	120	10	0,100 - 0,110
9,10-HA	○	9,1	162	120	10	0,100 - 0,110
9,20-HA	○	9,2	162	120	10	0,100 - 0,110
9,30-HA	○	9,3	162	120	10	0,100 - 0,110
9,40-HA	○	9,4	162	120	10	0,100 - 0,110
9,50-HA	○	9,5	162	120	10	0,100 - 0,110
9,60-HA	○	9,6	162	120	10	0,100 - 0,110
9,70-HA	○	9,7	162	120	10	0,100 - 0,110
9,80-HA	○	9,8	162	120	10	0,100 - 0,110
9,90-HA	○	9,9	162	120	10	0,100 - 0,110
10,00-HA	●	10	162	120	10	0,110 - 0,120
10,10-HA	○	10,1	204	156	12	0,110 - 0,120
10,20-HA	○	10,2	204	156	12	0,110 - 0,120
10,30-HA	○	10,3	204	156	12	0,110 - 0,120
10,40-HA	○	10,4	204	156	12	0,110 - 0,120
10,50-HA	○	10,5	204	156	12	0,110 - 0,120
10,60-HA	○	10,6	204	156	12	0,110 - 0,120
10,70-HA	○	10,7	204	156	12	0,110 - 0,120
10,80-HA	○	10,8	204	156	12	0,110 - 0,120
10,90-HA	○	10,9	204	156	12	0,110 - 0,120
11,00-HA	○	11	204	156	12	0,120 - 0,130
11,10-HA	○	11,1	204	156	12	0,120 - 0,130
11,20-HA	○	11,2	204	156	12	0,120 - 0,130
11,30-HA	○	11,3	204	156	12	0,120 - 0,130
11,40-HA	○	11,4	204	156	12	0,120 - 0,130
11,50-HA	○	11,5	204	156	12	0,120 - 0,130
11,60-HA	○	11,6	204	156	12	0,120 - 0,130
11,70-HA	○	11,7	204	156	12	0,120 - 0,130
11,80-HA	○	11,8	204	156	12	0,120 - 0,130
12,00-HA	○	12	204	156	12	0,130 - 0,140
12,50-HA	○	12,5	230	182	14	0,130 - 0,140
12,80-HA	○	12,8	230	182	14	0,130 - 0,140
13,00-HA	○	13	230	182	14	0,140 - 0,150
13,50-HA	○	13,5	230	182	14	0,140 - 0,150
13,80-HA	○	13,8	230	182	14	0,140 - 0,150
14,00-HA	○	14	230	182	14	0,150 - 0,160
14,50-HA	○	14,5	260	208	16	0,150 - 0,160
14,80-HA	○	14,8	260	208	16	0,150 - 0,160
15,00-HA	○	15	260	208	16	0,160 - 0,170
15,50-HA	○	15,5	260	208	16	0,160 - 0,170
15,80-HA	○	15,8	260	208	16	0,160 - 0,170
16,00-HA	○	16	260	208	16	0,170 - 0,180
16,50-HA	○	16,5	285	234	18	0,170 - 0,180
17,00-HA	○	17	285	234	18	0,180 - 0,190
17,50-HA	○	17,5	285	234	18	0,180 - 0,190
18,00-HA	○	18	285	234	18	0,190 - 0,200
18,50-HA	○	18,5	310	258	20	0,190 - 0,200
19,00-HA	○	19	310	258	20	0,200 - 0,210
19,50-HA	○	19,5	310	258	20	0,200 - 0,210
20,00-HA	○	20	310	258	20	0,210 - 0,220

High-performance drill SC Aluminium

PREMUS

	N N/mm²	
103222	Alu ⟩600	Copper, brass, bronze
	vc = m/min.	
103222	90-400	70-300

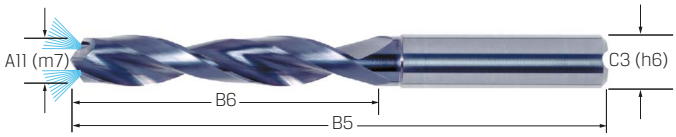
SC | DIN 6537 | 5 × A11 | Teeth 2 | 140° | 6535 HA shank | ICS

N

High-performance drill, especially for aluminium machining

Design:
- 2 cutting edges, spiral fluted
- VHM micro grain 10 - 12 % Co
- specific point geometry
- point angle 140°
- side rake angle 30°
- special flute geometry (large flute)
- core thickness special
- core taper normal, uncoated

Use:
Due to large chip spaces and special point geometry ideal for machining aluminium and particularly for the NC manufacturing



N° article	103222 5×A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
3,00	●	3	66	28	6	0,070 - 0,250
3,20	○	3,2	66	28	6	0,070 - 0,250
3,30	●	3,3	66	28	6	0,070 - 0,250
3,40	○	3,4	66	28	6	0,070 - 0,250
3,50	○	3,5	66	28	6	0,070 - 0,250
3,60	○	3,6	66	28	6	0,070 - 0,250
3,70	○	3,7	66	28	6	0,070 - 0,250
3,80	○	3,8	74	36	6	0,070 - 0,250
3,90	○	3,9	74	36	6	0,070 - 0,250
4,00	○	4	74	36	6	0,070 - 0,250
4,10	○	4,1	74	36	6	0,070 - 0,250
4,20	●	4,2	74	36	6	0,070 - 0,250
4,30	○	4,3	74	36	6	0,070 - 0,250
4,40	○	4,4	74	36	6	0,070 - 0,250
4,50	○	4,5	74	36	6	0,070 - 0,250
4,60	○	4,6	74	36	6	0,070 - 0,250
4,65	●	4,65	74	36	6	0,070 - 0,250
4,70	○	4,7	74	36	6	0,070 - 0,250
4,80	○	4,8	82	44	6	0,070 - 0,250
4,90	○	4,9	82	44	6	0,070 - 0,250
5,00	●	5	82	44	6	0,120 - 0,350
5,10	○	5,1	82	44	6	0,120 - 0,350
5,20	○	5,2	82	44	6	0,120 - 0,350
5,30	○	5,3	82	44	6	0,120 - 0,350
5,40	○	5,4	82	44	6	0,120 - 0,350
5,50	●	5,5	82	44	6	0,120 - 0,350
5,55	●	5,55	82	44	6	0,120 - 0,350
5,60	○	5,6	82	44	6	0,120 - 0,350
5,70	○	5,7	82	44	6	0,120 - 0,350
5,80	○	5,8	82	44	6	0,120 - 0,350
5,90	○	5,9	82	44	6	0,120 - 0,350
6,00	●	6	82	44	6	0,120 - 0,350

N° article	103222 5×A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,10	○	6,1	91	53	8	0,120 - 0,350
6,20	○	6,2	91	53	8	0,120 - 0,350
6,30	○	6,3	91	53	8	0,120 - 0,350
6,40	○	6,4	91	53	8	0,120 - 0,350
6,50	●	6,5	91	53	8	0,120 - 0,350
6,60	●	6,6	91	53	8	0,120 - 0,350
6,70	○	6,7	91	53	8	0,120 - 0,350
6,80	○	6,8	91	53	8	0,120 - 0,350
6,90	○	6,9	91	53	8	0,120 - 0,350
7,00	○	7	91	53	8	0,120 - 0,350
7,10	○	7,1	91	53	8	0,120 - 0,350
7,20	○	7,2	91	53	8	0,120 - 0,350
7,30	○	7,3	91	53	8	0,120 - 0,350
7,40	○	7,4	91	53	8	0,120 - 0,350
7,45	●	7,45	91	53	8	0,120 - 0,350
7,50	○	7,5	91	53	8	0,120 - 0,350
7,60	●	7,6	91	53	8	0,120 - 0,350
7,70	○	7,7	91	53	8	0,120 - 0,350
7,80	○	7,8	91	53	8	0,120 - 0,350
7,90	○	7,9	91	53	8	0,120 - 0,350
8,00	○	8	91	53	8	0,200 - 0,450
8,10	○	8,1	103	61	10	0,200 - 0,450
8,20	○	8,2	103	61	10	0,200 - 0,450
8,30	○	8,3	103	61	10	0,200 - 0,450
8,40	○	8,4	103	61	10	0,200 - 0,450
8,50	●	8,5	103	61	10	0,200 - 0,450
8,60	○	8,6	103	61	10	0,200 - 0,450
8,70	○	8,7	103	61	10	0,200 - 0,450
8,80	○	8,8	103	61	10	0,200 - 0,450
8,90	○	8,9	103	61	10	0,200 - 0,450
9,00	●	9	103	61	10	0,200 - 0,450
9,10	○	9,1	103	61	10	0,200 - 0,450

N° article	103222 5×A11, HA, ICS	A11 mm	B5 mm	B6 mm	C3 mm	f mm/rev
9,20	○	9,2	103	61	10	0,200 - 0,450
9,30	○	9,3	103	61	10	0,200 - 0,450
9,40	○	9,4	103	61	10	0,200 - 0,450
9,50	○	9,5	103	61	10	0,200 - 0,450
9,60	●	9,6	103	61	10	0,200 - 0,450
9,70	○	9,7	103	61	10	0,200 - 0,450
9,80	○	9,8	103	61	10	0,200 - 0,450
9,90	○	9,9	103	61	10	0,200 - 0,450
10,00	○	10	103	61	10	0,200 - 0,450
10,10	○	10,1	118	71	12	0,200 - 0,450
10,20	○	10,2	118	71	12	0,200 - 0,450
10,30	○	10,3	118	71	12	0,200 - 0,450
10,40	○	10,4	118	71	12	0,200 - 0,450
10,50	○	10,5	118	71	12	0,200 - 0,450
10,60	○	10,6	118	71	12	0,200 - 0,450
10,70	○	10,7	118	71	12	0,200 - 0,450
10,80	○	10,8	118	71	12	0,200 - 0,450
10,90	○	10,9	118	71	12	0,200 - 0,450
11,00	●	11	118	71	12	0,200 - 0,450
11,20	●	11,2	118	71	12	0,200 - 0,450
11,50	○	11,5	118	71	12	0,200 - 0,450
12,00	○	12	118	71	12	0,250 - 0,500
12,50	○	12,5	124	77	14	0,250 - 0,500
13,00	○	13	124	77	14	0,250 - 0,500
13,50	○	13,5	124	77	14	0,250 - 0,500
14,00	○	14	124	77	14	0,250 - 0,500
14,50	○	14,5	133	83	16	0,250 - 0,500
14,80	○	14,8	133	83	16	0,250 - 0,500
15,00	○	15	133	83	16	0,250 - 0,500
15,50	○	15,5	133	83	16	0,250 - 0,500
15,80	○	15,8	133	83	16	0,250 - 0,500
16,00	○	16	133	83	16	0,250 - 0,500

Subland drill HSS Steel, 90°

PREMUS

	P N/mm²	K HB
104000	<850	<300
vc = m/min.		
104000	16-32	20-32

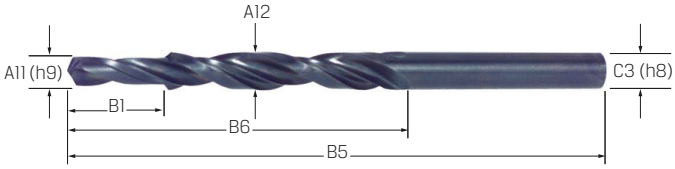
HSS | DIN 8378 | Typ N

118° | 90° | Straight shank

P | K | vc

Design:
- relived cone
- point thinning from 2.50 mm
- steam tempered

Use:
For core bores to DIN 336, through bores to DIN EN 20273 and free countersinking 90°



N° article	104000 Core drilling	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	M3	2,5	3,4	8,8	70	39	3,4	0,025-0,040
M4	●	M4	3,3	4,5	11,4	80	47	4,5	0,040-0,063
M5	●	M5	4,2	5,5	13,6	93	57	5,5	0,050-0,080
M6	●	M6	5	6,6	16,5	101	63	6,6	0,050-0,080
M8	●	M8	6,8	9	21	125	81	9	0,063-0,100
M10	○	M10	8,5	11	25,5	142	94	11	0,080-0,125
M12	○	M12	10,2	13,5	30	160	108	13,5	0,100-0,160

	P N/mm²	K HB
104050	<850	<300
vc = m/min.		
104050	16-32	20-32

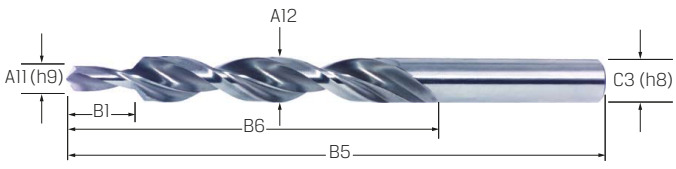
HSS | DIN 8374 | Typ N

118° | 90° | Straight shank

P | K | vc

Design:
- relived cone
- point thinning from 3.20 mm
- steam tempered

Use:
Countersink fine, for through holes to DIN EN 20273 and screw-head countersinks 90°



N° article	104050 fine	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	M3	3,2	6	9	93	57	6	0,040-0,063
M4	●	M4	4,3	8	11	117	75	8	0,050-0,080
M5	●	M5	5,3	10	13	133	87	10	0,050-0,080
M6	●	M6	6,4	11,5	15	142	94	11,5	0,063-0,100
M8	○	M8	8,4	15	19	169	114	15	0,080-0,125
M10	○	M10	10,5	19	23	198	135	19	0,100-0,160

Subland drill HSS Steel, 180°

PREMUS

	P N/mm²	K HB
104100	<850	<300
vc = m/min.		
104100	16-32	20-32

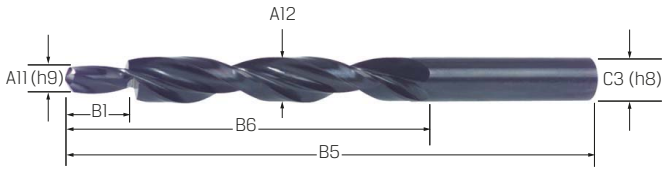
HSS | DIN 8376 | Typ N

118° | 180° | Straight shank

P | K | vc

Design:
- relived cone
- point thinning from 3.40 mm
- steam tempered

Use:
Countersink medium, for through bores to DIN EN 20273, screw-head counterbores 180° to DIN 974-1 and screws to DIN 6912, 7513, 7984



N° article	104100 medium	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	M3	3,4	6	9	93	57	6	0,040-0,063
M4	●	M4	4,5	8	11	117	75	8	0,050-0,080
M5	●	M5	5,5	10	13	133	87	10	0,050-0,080
M6	●	M6	6,6	11	15	142	94	11	0,063-0,100
M8	●	M8	9	15	19	169	114	15	0,080-0,125
M10	○	M10	11	18	23	191	130	18	0,100-0,160

	P N/mm²	K HB
104150	<850	<300
vc = m/min.		
104150	16-32	20-32

HSS | DIN 8377 | Typ N

118° | 180° | MK shank

P | K | vc

Design:
- relived cone
- point thinning from 5.50 mm
- steam tempered

Use:
Countersink medium, for through bores to DIN EN 20273, screw-head counterbores 180° to DIN 974-1 and screws to DIN 6912, 7513, 7984



N° article	104150 medium	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C2	f mm/rev
M5	○	M5	5,5	10	13	168	87	MK1	0,050-0,080
M6	●	M6	6,6	11	15	175	94	MK1	0,063-0,100
M8	●	M8	9	15	19	212	114	MK2	0,080-0,125
M10	●	M10	11	18	23	228	130	MK2	0,100-0,160
M12	●	M12	13,5	20	27	238	140	MK2	0,100-0,160
M16	●	M16	17,5	26	35	286	165	MK3	0,125-0,200
M20	○	M20	22	33	43	334	186	MK4	0,160-0,250

Short step drill HSS Steel, 90°

PREMUS

	P N/mm²	K HB
104410	<850	<300
104412		
vc = m/min.		
104410	16-32	20-32
104412	32-45	30-40

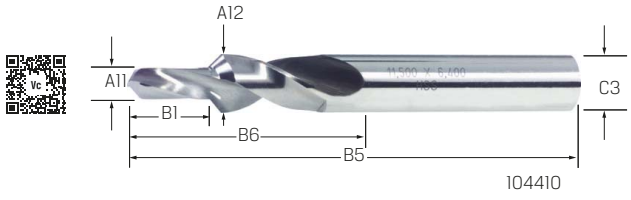
HSS | Factory standard | Typ N

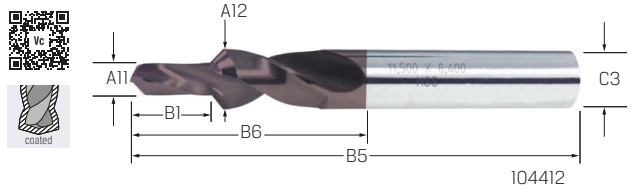
118° | 90° | Straight shank

P | K

Design:
- point geometry to DIN 1412 form A
- point thinning from 3.20 mm
- blank (104410)
- TiAlN coating (104412)

Use:
For CNC and NC machines.
Countersink fine, for efficient manufacture of through holes to DIN EN 20273 and screw-head counterbores 90°. Form A and B to DIN 74, part 1, for screws to DIN 963 and DIN 964





N° article	104410 fine	104412 fine, TiAlN	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	●	M3	3,2	6	9	66	28	6	0,040-0,063
M4	●	●	M4	4,3	8	11	79	37	8	0,050-0,080
M5	●	●	M5	5,3	10	13	89	43	10	0,050-0,080
M6	●	●	M6	6,4	11,5	15	95	47	11,5	0,063-0,100
M8	●	○	M8	8,4	15	19	111	56	15	0,080-0,125
M10	●	○	M10	10,5	19	23	127	64	19	0,100-0,160

	P N/mm²	K HB
104420	<850	<300
vc = m/min.		
104420	16-32	20-32

HSS | Factory standard | Typ N

118° | 90° | Straight shank

P | K

Design:
- point geometry to DIN 1412 form A
- point thinning from 3.40 mm
- blank

Use:
For CNC and NC machines. Countersink medium, for efficient manufacture of through holes to DIN EN 20273 and screw-head counterbores 90°. Form A and B to DIN 74, part 1, for screws to DIN 7991.



N° article	104420 medium	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	M3	3,4	6,6	9	70	31	6,6	0,040-0,063
M4	●	M4	4,5	9	11	84	40	9	0,050-0,080
M5	●	M5	5,5	11	13	95	47	11	0,050-0,080
M6	●	M6	6,6	13	15	102	51	13	0,063-0,100
M8	●	M8	9	17,2	19	123	62	17,2	0,080-0,125
M10	●	M10	11	21,5	23	141	70	21,5	0,100-0,160

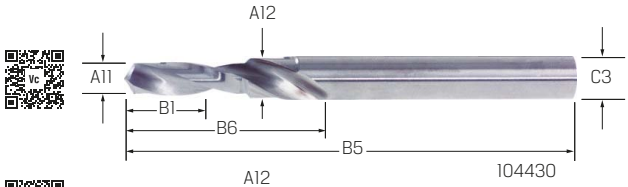
	P N/mm²	K HB
104430	<850	<300
104432		
vc = m/min.		
104430	16-32	20-32
104432	32-45	30-40

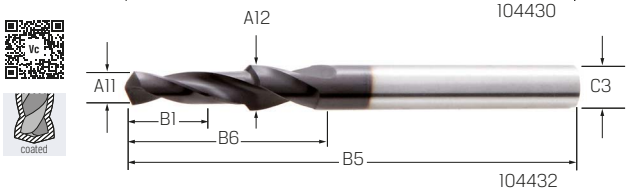
HSS | Factory standard | Typ N | 118° | 90°

Straight shank | P | K

Design:
- point geometry to DIN 1412 form A
- point thinning from 2.50 mm
- blank (104430)
- TiAlN coating (104432)

Use:
For CNC and NC machines. For core hole drillings to DIN 336, free countersinking 90° to DIN 20273





N° article	104430 Core drilling	104432 Core drilling, TiAlN	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	●	M3	2,5	3,4	8,8	52	20	3,4	0,040-0,063
M4	●	●	M4	3,3	4,5	11,4	58	24	4,5	0,050-0,080
M5	●	●	M5	4,2	5,5	13,6	66	28	5,5	0,050-0,080
M6	●	●	M6	5	6,6	16,5	70	31	6,6	0,063-0,100
M8	●	●	M8	6,8	9	21	84	40	9	0,080-0,125
M10	●	●	M10	8,5	11	25,5	95	47	11	0,080-0,125
M12	●	●	M12	10,2	13,5	30	107	54	13,5	0,100-0,160

Short step drill HSS Steel, 180°

PREMUS

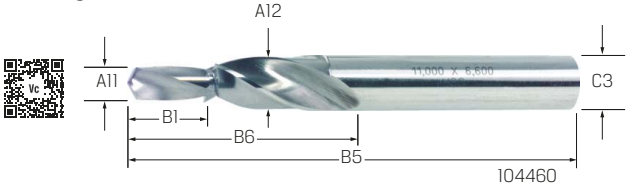
	P N/mm²	K HB
104460	<850	<300
104462		
vc = m/min.		
104460	16-32	20-32
104462	32-45	30-40

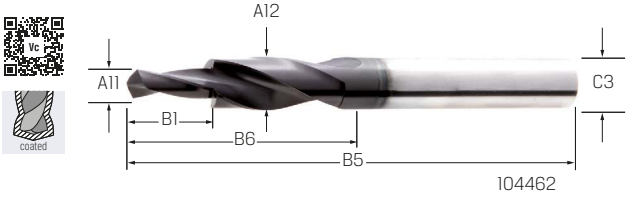
HSS | Factory standard | Typ N | 118° | 180°

Straight shank | P | K

Design:
- point geometry to DIN 1412 form A
- point thinning from 3.40 mm
- blank (104460)
- TiAlN coating (104462)

Use:
For CNC and NC machines. For through bores to DIN EN 20273, screw-head counterbores 180° to DIN 974-1 and screws to DIN 6912, 7513, 7984





N° article	104460 Through hole	104462 Through-hole, TiAlN	for threads	A11 mm	A12 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	●	M3	3,4	6	9	66	28	6	0,040-0,063
M4	●	●	M4	4,5	8	11	79	37	8	0,050-0,080
M5	●	●	M5	5,5	10	13	89	43	10	0,050-0,080
M6	●	●	M6	6,6	11	15	95	47	11	0,063-0,100
M8	●	●	M8	9	15	19	111	56	15	0,080-0,125
M10	●	●	M10	11	18	23	127	64	18	0,100-0,160

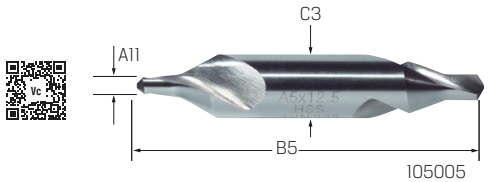
Centre drill HSS Universal, 60°

PREMUS

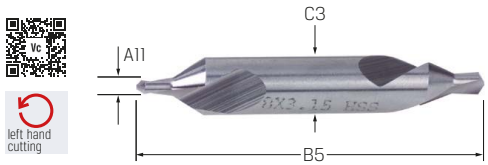
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
105005 105010	⟨1200	⟨850	⟨300	Titanium ⟨700	Alu ⟨600	Plastics
vc = m/min.						
105005 105010	10-45	6-10	15-25	6-10	150-200	110-130

HSS | DIN 333 A | 60° A | UNI

Sizes 0.50 and 0.80 mm only as single-end version available
105010 left-hand cutting



105005



105010

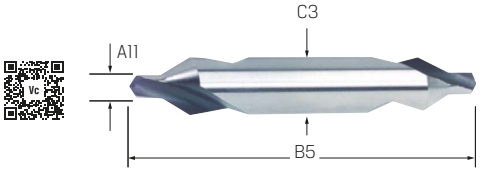
N° article	105005	105010 left-hand cutting	A11 mm	B5 mm	C3 mm	f mm/rev
0,50	●	–	0,5	25	3,15	0,004 - 0,007
0,80	●	–	0,8	25	3,15	0,004 - 0,007
1,00	●	○	1	31,5	3,15	0,006 - 0,012
1,25	●	●	1,25	31,5	3,15	0,006 - 0,012
1,60	●	●	1,6	35,5	4	0,006 - 0,012
2,00	●	●	2	40	5	0,020 - 0,032
2,50	●	●	2,5	45	6,3	0,025 - 0,040
3,15	●	●	3,15	50	8	0,032 - 0,050
4,00	●	●	4	56	10	0,040 - 0,063
5,00	●	○	5	63	12,5	0,040 - 0,063
6,30	●	–	6,3	71	16	0,050 - 0,080
8,00	●	–	8	80	20	0,063 - 0,100
10,00	●	–	10	100	25	0,080 - 0,125

Centre drill HSS-Co Universal, 60°

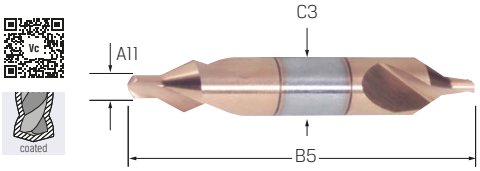
PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
105200 105220	⟨1200	⟨850	⟨300	Titanium ⟨700	Alu ⟨600	Plastics
vc = m/min.						
105200	10-45	6-10	15-25	6-10	150-200	110-130
105220	25-90	12-16	35-45	10-16	350-450	200-260

HSS-Co | DIN 333 A | 60° A | UNI



105200

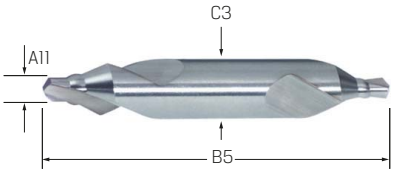


105220

N° article	105200	105220 TiN	A11 mm	B5 mm	C3 mm	f mm/rev
1,00	●	●	1	31,5	3,15	0,006 - 0,012
1,60	●	●	1,6	35,5	4	0,006 - 0,012
2,00	●	●	2	40	5	0,020 - 0,032
2,50	●	●	2,5	45	6,3	0,025 - 0,040
3,15	●	●	3,15	50	8	0,032 - 0,050
4,00	●	●	4	56	10	0,040 - 0,063

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
105050	⟨1200	⟨850	⟨300	Titanium ⟨700	Alu ⟨600	Plastics
vc = m/min.						
105050	10-45	6-10	15-25	6-10	150-200	110-130

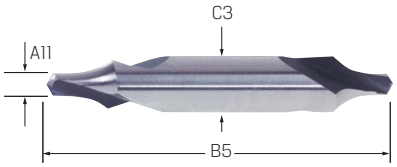
HSS | DIN 333 A Bead | 60° A | UNI



N° article	105050 with bulge	A11 mm	B5 mm	C3 mm	f mm/rev
1,00	●	1	31,5	3,15	0,006 - 0,012
1,60	●	1,6	35,5	4	0,006 - 0,012
2,00	●	2	40	5	0,020 - 0,032
2,50	●	2,5	45	6,3	0,025 - 0,040
3,15	●	3,15	50	8	0,032 - 0,050
4,00	●	4	56	10	0,040 - 0,063
5,00	●	5	63	12,5	0,040 - 0,063

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
105080	⟨1200	⟨850	⟨300	Titanium ⟨700	Alu ⟨600	Plastics
vc = m/min.						
105080	10-45	6-10	15-25	6-10	150-200	110-130

HSS | DIN 333 R | 60° R | UNI



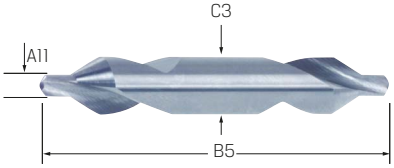
N° article	105080	A11 mm	B5 mm	C3 mm	f mm/rev
1,00	●	1	31,5	3,15	0,006 - 0,012
1,25	●	1,25	31,5	3,15	0,006 - 0,012
1,60	●	1,6	35,5	4	0,006 - 0,012
2,00	●	2	40	5	0,020 - 0,032
2,50	●	2,5	45	6,3	0,025 - 0,040
3,15	●	3,15	50	8	0,032 - 0,050
4,00	●	4	56	10	0,040 - 0,063
5,00	●	5	63	12,5	0,040 - 0,063

Centre drill SC Universal, 60°

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
105240	⟨1200	⟨850	⟨300	Titanium ⟨700	Alu ⟨600	Plastics
vc = m/min.						
105240	50-120	22-30	60-80	22-30	600-800	370-480

SC | DIN 333 A | 60° A | UNI



N° article	105240	A11 mm	B5 mm	C3 mm	f mm/rev
0,80	●	0,8	25	3,15	0,004 - 0,007
1,00	●	1	31,5	3,15	0,006 - 0,012
1,25	●	1,25	31,5	3,15	0,006 - 0,012
1,60	●	1,6	35,5	4	0,006 - 0,012
2,00	●	2	40	5	0,020 - 0,032
2,50	●	2,5	45	6,3	0,025 - 0,040
3,15	●	3,15	50	8	0,032 - 0,050
4,00	●	4	56	10	0,040 - 0,063
5,00	●	5	63	12,5	0,040 - 0,063

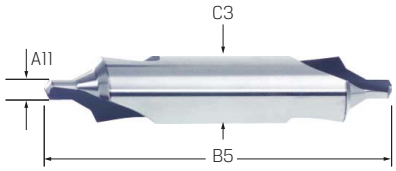
Centre drill HSS Universal, 60°

PREMUS

	P N/mm²	K HB	N N/mm²	
105300	⟨1200	⟨300	Alu ⟨600	Plastics
	vc = m/min.			
105300	10-45	15-25	150-200	110-130

HSS | DIN 333 B | 120° 60° B | UNI

Design:
With protective countersink 120°



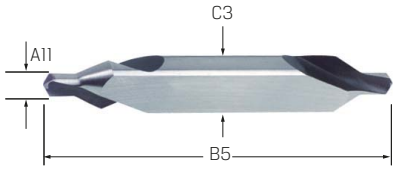
N° article	105300 with protective countersink	A11 mm	B5 mm	C3 mm	f mm/rev
1,00	●	1	35	4	0,006 - 0,012
1,60	●	1,6	45	6,3	0,006 - 0,012
2,00	●	2	50	8	0,020 - 0,032
2,50	●	2,5	56	10	0,025 - 0,040
3,15	●	3,15	60	11,2	0,032 - 0,050
4,00	●	4	67	14	0,040 - 0,063
5,00	●	5	75	18	0,040 - 0,063
6,30	●	6,3	80	20	0,050 - 0,080

	P N/mm²	K HB	N N/mm²	
105500	⟨1200	⟨300	Alu ⟨600	Plastics
	vc = m/min.			
105500	10-45	15-25	150-200	110-130

HSS | Factory standard | 60° A | UNI

Design:
With flat at shank, 15° offset to countersink edge

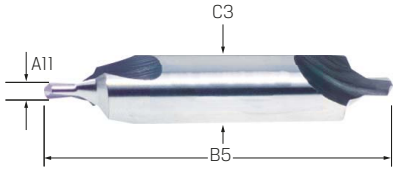
Use:
For use on centring and cutting-to-length machines, where centring and planing the face is done in one step



N° article	105500 with flat	A11 mm	B5 mm	C3 mm	f mm/rev
2,00	●	2	40	5	0,020 - 0,032
2,50	●	2,5	45	6,3	0,025 - 0,040
3,15	●	3,15	50	8	0,032 - 0,050
4,00	●	4	55	10	0,040 - 0,063
5,00	●	5	63	12,5	0,040 - 0,063
6,30	●	6,3	71	16	0,050 - 0,080

	P N/mm²	K HB	N N/mm²	
105550	⟨1200	⟨300	Alu ⟨600	Plastics
	vc = m/min.			
105550	10-45	15-25	150-200	110-130

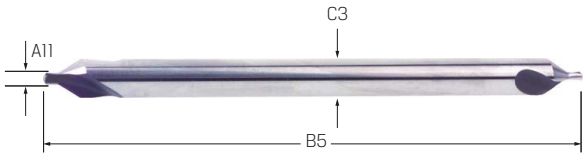
HSS | Factory standard | 120° 60° B | UNI



N° article	105550 with protective countersink and flat	A11 mm	B5 mm	C3 mm	S mm	f mm/rev
1,60	●	1,6	45	6,3	5,35	0,006 - 0,012
2,00	●	2	50	8	6,95	0,020 - 0,032
2,50	●	2,5	55	10	6,4	0,025 - 0,040
3,15	●	3,15	63	11,2	10	0,032 - 0,050
4,00	●	4	69	14	12,65	0,040 - 0,063
5,00	○	5	87	18	16,4	0,040 - 0,063
6,30	○	6,3	80	20	17,9	0,050 - 0,080

	P N/mm²	K HB	N N/mm²	
105600				
105602	⟨1200	⟨300	Alu ⟨600	Plastics
105604				
	vc = m/min.			
105600				
105602	10-45	15-25	150-200	110-130
105604				

HSS | Factory standard | 60° A | UNI



N° article	105600 long	A11 mm	B5 mm	C3 mm	f mm/rev
1,00	●	1	120	4	0,006-0,012
1,60	●	1,6	120	5	0,006-0,012
2,00	●	2	120	6	0,020-0,032
2,50	●	2,5	120	8	0,025-0,040
3,15	●	3,15	120	10	0,032-0,050

N° article	105602 overlong	A11 mm	B5 mm	C3 mm	f mm/rev
1,00	●	1	150	4	0,006-0,012
1,50	●	1,5	150	5	0,006-0,012
2,00	●	2	150	6	0,020-0,032
2,50	●	2,5	150	8	0,025-0,040
3,00	●	3	150	8	0,025-0,040
4,00	●	4	150	10	0,040-0,063

N° article	105604 extra long	A11 mm	B5 mm	C3 mm	f mm/rev
2,00	●	2	200	5	0,020-0,032
2,50	○	2,5	200	6,3	0,025-0,040
3,15	●	3,15	200	8	0,032-0,050

Step drill HSS Universal

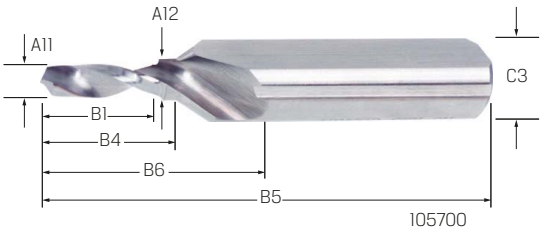
PREMUS

	P N/mm²	K HB	N N/mm²	
105700	<1200	<300	Alu <600	Plastics
105750				
vc = m/min.				
105700	10-45	15-25	150-200	110-130
105750				

HSS | Factory standard | 60° D | UNI

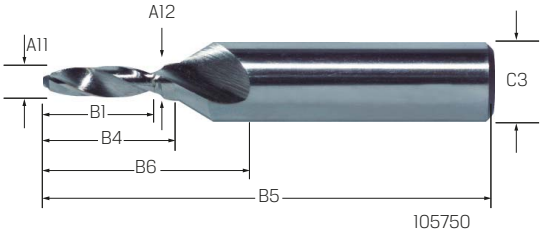
Design 105700:
- HSS step drill with cylindrical shank, flat and cooling ducts
- type D
- point angle 118°
- countersink angle 90°/60°
- centring angle 60°

Use 105700:
For core hole centring. Simultaneous, perfectly aligned setting of centring holes, pilot hole for the tap drill and tapping drill hole



Design 105750:
- HSS, for core hole centring DIN 332 page 2
- type D
- point angle 118°
- countersink angle 90°/60°
- form D for centring bores 60°

Use 105750:
Simultaneous, perfectly aligned setting of centring holes, pilot hole for the tap drill and tapping drill hole



N° article	105700 with flat, for core hole	105750 with parallel shank, for core hole	for threads	A11 mm	A12 mm	B1 mm	B4 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M4	○	●	M4	3,3	4,3	11	12,6	63	23	8	0,032-0,050
M5	●	●	M5	4,2	5,3	13	15,15	67	27	11	0,040-0,063
M6	●	●	M6	5	6,4	16	18,9	71	33	12,5	0,040-0,063
M8	●	●	M8	6,8	8,4	19,5	23	88	41	14	0,050-0,080
M10	●	●	M10	8,5	10,5	23	27,7	94	47	16	0,063-0,100
M12	●	–	M12	10,2	13	28	34,5	105	59	20	0,080-0,125
M16	●	–	M16	14	17	67	41,3	132	67	25	0,080-0,125

Step drill SC Universal

PREMUS

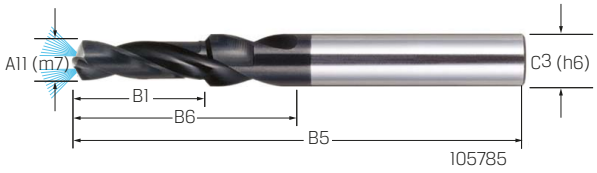
	P N/mm²	K HB
105780	<1200	<300
105785	<1620	
vc = m/min.		
105780	40-105	83-95
105785	60-90	70-100

SC | coated | DIN 6537 | 140° | 90° | 6535 HA shank | ICS

UNI

Design:
- with and without internal cooling, for efficient high-performance drilling
- special point, point angle 140°, side rake angle 30°
- special chip flute geometry
- strengthened core thickness
- core taper normal
- carbide micro grain 10-12 % Co
- TiAlN coated

Use:
Specially suited for NC production Suitable for grey cast iron, malleable iron, steel, cast steel, chrome and nickel materials, high-temperature steels, titanium and titanium alloys.



Shank form HB/HE available on request

N° article	105780 TiAlN	105785 TiAlN, ICS	for threads	A11 mm	B1 mm	B5 mm	B6 mm	C3 mm	f mm/rev
M3	●	●	M3	2,5	8,8	62	20	6	0,032-0,050
M4	●	●	M4	3,3	11,4	62	24	6	0,040-0,063
M5	●	●	M5	4,2	13,6	66	28	6	0,040-0,063
M6	●	●	M6	5	16,5	79	34	8	0,050-0,080
M8	●	●	M8	6,8	21	89	47	10	0,050-0,080
M10	●	●	M10	8,5	25,5	102	55	12	0,063-0,100
M12	●	●	M12	10,2	30	107	60	14	0,080-0,125
M16	●	●	M16	14	38,5	123	73	18	0,025-0,040

NC spotting drill Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²	
106000 106100				<300	Titanium	Nickel	Copper, brass, Alu <600	Plastics
106020 106120	<1200		<850					
106040 106130		<54		<300	Nickel		Alu <600	Copper, brass, bronze
vc = m/min.								
106000 106100	10-45		6-10	15-25	6-10	5-6	40-200	110-130
106020 106120	25-90		12-16		12-16		80-120	
106040 106130	30-120	15-20	15-24	50-65	15-20		120-170	110-150

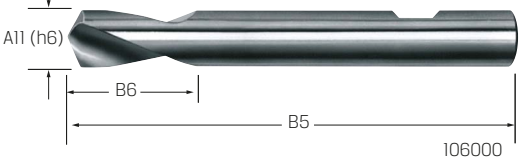
Use:
- accurate positioning of spot-drilling on NC machines
- centring and chamfering in a single operation
- not apt for deep holes
- up to Ø 5.0 mm **with cylindrical shank**
- from Ø 6.0 mm **with clamping flat, shank DIN 1835 B**

N° article	106000 120°	106020 120°, TiN	106040 120°, TiAlN	106100 90°	106120 90°, TiN	106130 90°, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev
3,0	●	●	●	●	●	●	3	46	12	0,030 - 0,100
4,0	●	●	●	●	●	●	4	55	12	0,030 - 0,100
5,0	●	●	●	●	●	●	5	62	14	0,030 - 0,100
6,0	●	●	●	●	●	●	6	66	16	0,050 - 0,200
8,0	●	●	●	●	●	●	8	79	21	0,050 - 0,200
10,0	●	●	●	●	●	●	10	89	25	0,070 - 0,400
12,0	●	●	●	●	●	●	12	102	30	0,070 - 0,400
16,0	●	●	●	●	●	●	16	115	37,5	0,100 - 0,500
20,0	●	●	●	●	●	●	20	131	45	0,100 - 0,500

HSS-Co | ISO 10898 | Typ N | 120° | 90° | Straight shank | 1835 B shank

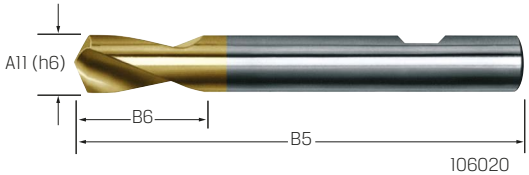
UNI

106000 106020 106040 106100 106120 106130



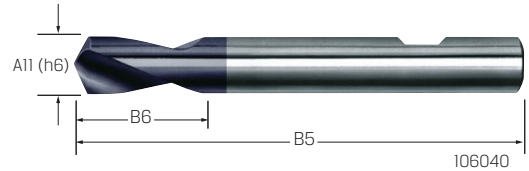
106000

coated



106020

coated



106040

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²	
106050 106070					Titanium	Nickel	Copper, brass, Alu <600	Plastics
106060 106080	<1200	<54	<850	<300	Nickel		Alu <600	Copper, brass, bronze
vc = m/min.								
106050 106070	10-45		6-10	15-25	6-10	5-6	40-200	110-130
106060 106080	30-120	15-20	15-24	50-65	15-20		120-170	110-150

N° article	106050 120°, long	106060 120°, long, TiAlN	106070 90°, long	106080 90°, long, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev
4,0	○	●	●	●	4	100	12	0,030 - 0,100
5,0	○	○	●	●	5	120	15	0,030 - 0,100
6,0	●	●	●	●	6	140	20	0,050 - 0,200
8,0	○	●	●	●	8	140	25	0,050 - 0,200
10,0	●	●	●	●	10	170	25	0,070 - 0,400
12,0	●	○	●	●	12	170	30	0,070 - 0,400
16,0	○	○	●	●	16	200	35	0,100 - 0,500
20,0	○	○	●	○	20	200	40	0,100 - 0,500

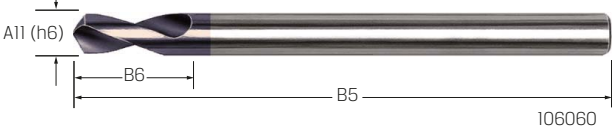
HSS-Co | ISO 10898 | Typ N | 120° | 90° | Straight shank | UNI

106050 106060 106070 106080



106050

coated



106060

NC spotting drill VHM Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
106140 106170 106180		<54					Plastics
106160 106185 106190	<1200	<62	<850	<300	Titanium, Nickel	Alu <600	Copper, brass, bronze
vc = m/min.							
106140 106170 106180	35-140	19-25	22-30	60-80	19-25	200-800	370-480
106160 106190 106185	45-180	15-20	28-40	75-85	24-30	160-330	140-200

Use:
- accurate positioning of spot-drilling on NC machines
- centring and chamfering in a single operation
- not apt for deep holes
- up to Ø 5 mm **with cylindrical shank**
- from Ø 6 mm **with clamping flat, shank DIN 1835 B**

N° article	106170 90°	106190 90°, TiAlN	106140 120°	106160 120°, TiAlN	106180 142°	106185 142°, TiAlN	A11 mm	B5 mm	B6 mm	f mm/rev
3,0	●	●	●	●	–	–	3	46	12	0,080 - 0,220
4,0	●	●	●	●	–	–	4	55	12	0,080 - 0,220
5,0	●	●	●	●	–	–	5	62	14	0,080 - 0,220
6,0	●	●	●	●	●	●	6	66	16	0,120 - 0,490
8,0	●	●	●	●	●	●	8	79	21	0,120 - 0,390
10,0	●	●	●	●	●	●	10	89	25	0,170 - 0,440
12,0	●	●	●	●	○	●	12	102	30	0,170 - 0,440
16,0	●	●	●	●	○	●	16	115	37,5	0,240 - 0,610
20,0	●	●	●	●	○	○	20	131	45	0,240 - 0,610

SC | ISO 10898 | Typ N | 90° | 120° | 142° | Straight shank

1835 B shank | UNI

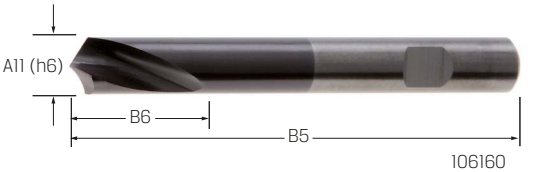
106170 106190 106140 106160 106180

106185



106140

coated



106160

Twist drill HSS (Body drill)

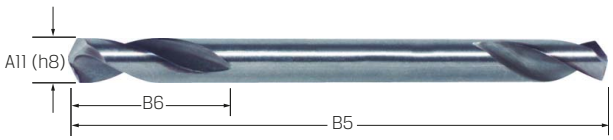
PRETEC

HSS | 118° | Straight shank

Use:
For all sheet metals in body and metal construction

Note:
For drilling without centre punching. Low drilling pressure prevents material deformation

N° article	106500 Double-ended	A11 mm	B5 mm	B6 mm
3,00	●	3	46	9,5
3,10	●	3,1	49	9,5
3,20	●	3,2	49	9,5
3,30	●	3,3	49	9,5
4,00	●	4	55	13
4,10	●	4,1	55	13
4,20	●	4,2	55	13
4,50	○	4,5	58	16
5,00	●	5	62	16
6,00	●	6	66	16



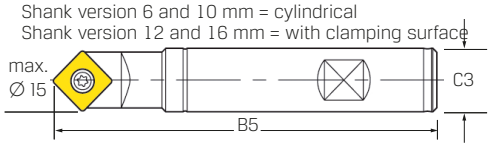
Indexable insert for NC spotting drill

Design:
- universal NC spotting drill for patented, exchangeable indexable inserts

Types of indexable inserts:
NC10: High-positive and all-round ground indexable insert for Al, Al alloys, non-ferrous metals and stainless steels
NC40: For unhardened steels and cast iron
NC2071: K20F, TiN, indexable insert with 2-sided cutting edge for unalloyed and alloyed steel and cast iron
NC9076: High-positive geometry and special basic cut, DLC coated, for Al, Al alloys, copper, brass and bronze. 2 cutting edges
NC60: Cermet indexable insert for hardened steels up to 55 HRC

Use:
Allows multiple applications such as engraving, centring, chamfering, countersinking and radii milling

Note:
Shank version 6 and 10 mm = cylindrical
Shank version 12 and 16 mm = with clamping surface





N° article	106300 90°	B5 mm	C3 mm	Indexable insert type
6,00	●	35	6	N9MT05T1CT-...
10,00	●	90	10	N9MT0802...-...
12,00	●	100	12	N9MT11T3...-...
16,00	●	100	16	N9MT11T3...-...

N° article	106305 Indexable insert	D max.	Degree °	T max.	Quality, coating	for holder Ø mm
N9MT05T1CT-NC2071	●	6	90	3.5	K20F, TiN	6
N9MT05T1CT-NC9076	●	6	90	3.5	K20F, DLC	6
N9MT080201W-NC40	●	2	90	0.9	K20F, TiN	10
N9MT080201W-60-NC40	●	1.1	60	0.8	K20F, TiAlN	10
N9MT080208CT2T-H-NC40	●	10	90	4.0	K20F, TiN	10
N9MT080208CT2T-H-NC9076	●	10	90	4.0	K20E, DLC	10
N9MT080208CT-NC40	●	10	90	4.0	K20F, TiN	10
N9MT080204-NC40	●	10	90	4.0	K20F, TiN	10
N9MT080204-NC10	●	10	90	4.0	K20F, TiAlN	10
N9MT11T3CT2T-H-NC40	●	15	90	7.0	K20F, TiN	12/16
N9MT11T3CT2T-H-NC9076	●	15	90	7.0	K20E, DLC	12/16
N9MT11T3CT-NC40	●	15	90	7.0	P35, TiN	12/16
N9MT11T3CT-NC10	●	15	90	7.0	K10F, TiAlN	12/16
N9MT11T3CT-NC60	●	15	90	7.0	Cermet	12/16
N9MT11T3P60-NC40	●	6.2	60	4.0	P35, TiN	12/16

N° article	106309 indexable insert for radii	G1 mm	Quality, coating	G3 mm	G4 mm	Re mm	for holder Ø mm
N9MT11T3RC10/NC40	●	1	K20F, TiN	11.11	3.97	1	12/16
N9MT11T3RC15/NC40	●	1.5	K20F, TiN	11.11	3.97	1.5	12/16
N9MT11T3RC20/NC40	●	2	K20F, TiN	11.11	3.97	2	12/16
N9MT11T3RC30/NC40	●	3	K20F, TiN	11.11	3.97	3	12/16

Sheet drill

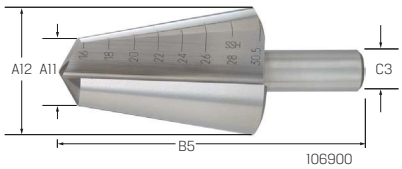
PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²
106900						
107000	⟨850	⟨700	⟨300	Titanium ⟨850	Nickel ⟨500	Alu ⟨600
107020						

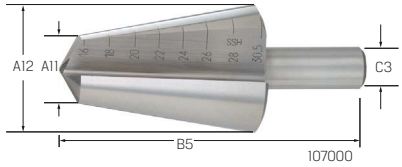
Use:
For burr-free drilling and reaming of sheet steel, tubes and profiles

Straight shank

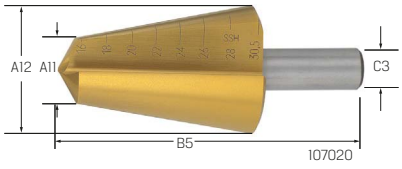
Design:
- cone drills for sheet metal are a useful supplement to twist drills
- especially for thin-walled materials
- no centre punching
- holes are largely burr-free
- inside the flutes the hole ∅ is laser-marked
- the hole ∅ can be read in the bore
- with TiN coating low tendency for cold welding



106900 — HSS



107000 — HSS-Co



107020 — HSS-Co, coated

N° article	106900 HSS	107000 HSS-Co	107020 HSS-Co, TiN	A11 mm	A12 mm	B5 mm	C3 mm
3-14	●	●	●	3	14	60	6
8-20	●	●	●	8	20	62	8
16-30,5	●	●	●	16	30,5	72	10
26-40	●	●	●	26	40	83	12
36-50	●	●	○	36	50	87	13
46-60	○	○	○	46	60	96	13
4-30,5	●	●	●	4	30,5	100	10

Tube and sheet drill set

PREMUS

Design:
107040: Set in plastic case compiled of sheet metal drills 106900
107050: Set in plastic case compiled of sheet metal drills 107000
107060: Set in plastic case compiled of sheet metal drills 107020

HSS | HSS-Co | Straight shank

107040 | 107050 | 107060




coated

N° article	107040 HSS	107050 HSS-Co	107060 HSS-Co, TiN	Contents
3-30,5	●	●	●	3-30.5

Accessories for sheet drills

PRETEC

N° article	107080 Drilling paste	Design
BOHRPASTE	●	Drilling paste



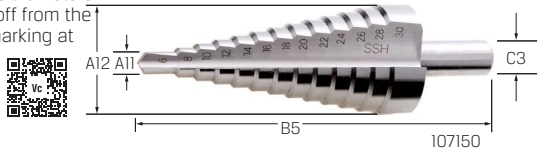
Step drill HSS

PREMUS

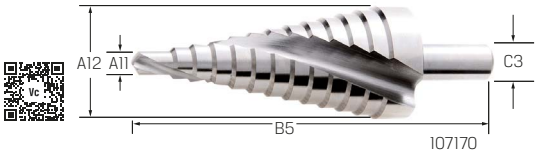
	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²
107150						
107170	⟨850	⟨700	⟨300	Titanium ⟨850	Nickel ⟨500	Alu ⟨600

HSS | Straight shank

Design and use:
- with 2 cutting edges and fixed centring point
- CBN creep-feed ground
- for burr-free drilling and reaming of sheet metal, tubes and profiled sections in materials up to 6 mm, deburring up to 1.5 mm material thickness
- no centre punching required, drills do not run off centre
- deburring through subsequent diameters
- achieved hole diameters can be read off from the laser scale marking at the tool



107150



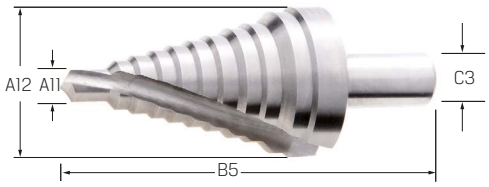
107170

N° article	107150 straight flute	107170 Spiral groove	A11 mm	A12 mm	B5 mm	C3 mm	∅ of the individual boring steps
4-12	●	●	4	12	79	6	4|5|6|7|8|9|10|11|12
6-20	●	●	6	20	70	9	6|8|10|12|14|16|18|20
6-30	●	●	6	30	100	10	6|8|10|12|14|16|18|20|22|24|26|28|30

	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²
107190	⟨850	⟨700	⟨300	Titanium ⟨850	Nickel ⟨500	Alu ⟨600

HSS | Straight shank

Design and use:
- with two ground spiral grooves and deburring zone for cable glands
- the PG series is replaced by the metric series
- step increment 4 mm, 3 flats at shank, with spot drill
- drills all core holes and through holes for metric threads M12-M32



N° article	107190 for cable glands	A11 mm	A12 mm	B5 mm	C3 mm
10,5-32,5	●	10,5	32,5	85	12

Step drill set HSS

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²
107155						
107175	⟨850	⟨700	⟨300	Titanium ⟨850	Nickel ⟨500	Alu ⟨600

HSS | Straight shank

Design:
107155:
Set in plastic case compiled of step drills 107150
107175:
Set in plastic case compiled of step drills 107170



107155



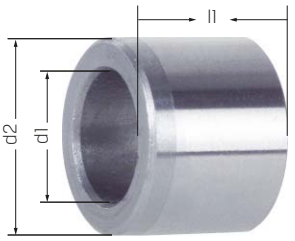
107175

N° article	107155 straight flute	107175 Spiral groove
4-30	●	●

Drill bush

Design:
- made of special steel, hardened
- bore and OD ground to tolerances
- alignment ISO bore F7, OD n6
- hole radiused at one end

Note:
Prices depend on quantity! For larger quantities, please ask for an offer!
Other versions (long drill bushes, larger diameters, form B etc.) available on request



DIN 179

d_1 mm	107900 Shape A, short	l_1 mm	d_2 mm
1,9 - 2,6	○	6	5
2,7 - 3,3	○	8	6
3,4 - 4,0	○	8	7
4,1 - 5,0	●	8	8
5,1 - 6,0	●	10	10
6,1 - 8,0	●	10	12
8,1 - 10,0	●	12	15

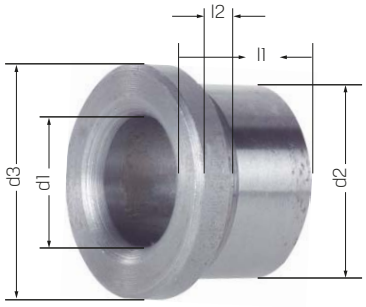
d_1 mm	107900 Shape A, short	l_1 mm	d_2 mm
10,1 - 12,0	●	12	18
12,1 - 15,0	●	16	22
15,5 - 18,0	○	16	26
18,5 - 22,0	○	20	30
22,5 - 26,0	○	20	35
26,5 - 30,0	○	25	42

d_1 mm	107920 form A, medium	l_1 mm	d_2 mm
1,9 - 2,6	○	9	5
2,7 - 3,3	○	12	6
3,4 - 4,0	○	12	7
4,1 - 5,0	●	12	8
5,1 - 6,0	○	16	10
6,1 - 8,0	○	16	12
8,1 - 10,0	○	20	15

d_1 mm	107920 form A, medium	l_1 mm	d_2 mm
10,1 - 12,0	○	20	18
12,1 - 15,0	○	28	22
15,5 - 18,0	○	28	26
18,5 - 22,0	○	36	30
22,5 - 26,0	○	36	35
26,5 - 30,0	○	45	42

Note:
Prices depend on quantity! For larger quantities, please ask for an offer!
Other versions (long drill bushes, larger diameters, form B etc.) available on request

DIN 172



d_1 mm	107980 with collar, form A, short	l_1 mm	l_2 mm	d_2 mm	d_3 mm
1,9 - 2,6	○	6	2	5	8
2,7 - 3,3	○	8	2,5	6	9
3,4 - 4,0	○	8	2,5	7	10
4,1 - 5,0	●	8	2,5	8	11
5,1 - 6,0	●	10	3	10	13
6,1 - 8,0	●	10	3	12	15
8,1 - 10,0	●	12	3	15	18

d_1 mm	107980 with collar, form A, short	l_1 mm	l_2 mm	d_2 mm	d_3 mm
10,1 - 12,0	●	12	4	18	22
12,1 - 15,0	○	16	4	22	26
15,5 - 18,0	●	16	4	26	30
18,5 - 22,0	○	20	5	30	34
22,5 - 26,0	○	20	5	35	39
26,5 - 30,0	○	25	5	42	46

d_1 mm	107990 with collar, form A, medium	l_1 mm	l_2 mm	d_2 mm	d_3 mm
1,9 - 2,6	○	9	2	5	8
2,7 - 3,3	○	12	2,5	6	9
3,4 - 4,0	○	12	2,5	7	10
4,1 - 5,0	○	12	2,5	8	11
5,1 - 6,0	○	16	3	10	13
6,1 - 8,0	○	16	3	12	15
8,1 - 10,0	○	20	3	15	18

d_1 mm	107990 with collar, form A, medium	l_1 mm	l_2 mm	d_2 mm	d_3 mm
10,1 - 12,0	●	20	4	18	22
12,1 - 15,0	○	28	4	22	26
15,5 - 18,0	○	28	4	26	30
18,5 - 22,0	○	36	5	30	34
22,5 - 26,0	○	36	5	35	39
26,5 - 30,0	○	45	5	42	46

Circle cutter

Design:
For metalworking, the blades work in draw cut, i.e. these cutters are always clamped in an inclined holder

Use:
Cutting depths: Sheet steel (max. 850 N/mm²) 5 mm.
Sheet steel above 5 mm only with circle cutter 00A in conjunction with tool holder 108070.
With additional blade holder 108050-108060 straight blades can be mounted for "non-drawing" cut. This allows the machining of materials like soft plastics, plastic generally, rubber, leather, sealing material, acrylic glass up to 5 mm thickness. Hard plastics, polyamides, laminates up to 20 mm

Delivery:
Incl. one blade for steel machining



N° article	108000	Area mm	A11 mm	C2	C3 mm
LILIPUT	●	18 - 80	5	–	10
00/12	○	30-200	6	–	12
00/MK2	○	30-200	6	MK2	–
00/MK3	○	30-200	6	MK3	–
00A/MK3	○	30-400	8	MK3	–
00 A/MK4	○	30-400	8	MK4	–

Blade holder for circle cutters

For circle cutter 108000

N° article	108050 for straight cut metal	108060 for straight cut plastic	108070 for drawing cut
00A	○	○	○
00	○	○	–



Blade for circle cutters

For circle cutter 108000

108100 to 108240: PU = 5 pieces
108250: PU = 2 pieces

Spare blades for left-hand cutting and TiN coated blades available on request

HSS-Co | Carbide tipped

N° article	108100 HSS-Co, inclined, for sheet material up to 5 mm	108140 carbide-tipped, for sheet material up to 5 mm	108150 HSS-Co, inclined, left, for sheet material up to 5 mm	108180 HSS-Co for rubber and leather up to 10 mm	108200 HSS-Co for plastics 2 - 30 mm	108240 Carbide-tipped, for plastics 2 - 30 mm	108250 HSS-Co, extra wide for thick sheets 2 - 12 mm (∅ ⟨ 150 mm)	Design
00-00A	●	●	○	○	○	○	●	only for size 00A and combined with holder 108070, for sheets 2 to 12 mm and up to 150 mm ∅
LILIPUT	●	○	○	○	●	○	–	for thin sheets up to 5 mm

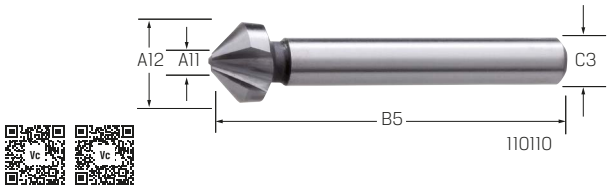
Countersink

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110110	⟨850		⟨250		Copper, brass, Alu ⟨600	Plastics
110120	⟨1200	⟨750	⟨200	Titanium		Plastics, graphite
vc = m/min.						
110110	18-28		8 - 20		10-80	10-80
110120	12-45	4 - 10	20 - 40	4-10	30-60	35-100

HSS | HSS-Co | DIN 335 | Form C | 90° | Straight shank | UNI

Design:
- all diameters in flute-ground quality
- 3 cutting edges and radial relief ground



N° article	110110 HSS	110120 HSS-Co	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev	for countersinks according to DIN 75 Af	DIN 75 Bf	DIN 74 Af	DIN 74 Bf
4,3	●	–	1,3	4,3	40	4	0,030-0,100	M 2	–	–	–
5,0	●	–	1,5	5	40	4	0,040-0,120	–	–	M 2.5	–
5,3	●	–	1,5	5,3	40	4	0,040-0,120	M 2.6	M 2.6	–	–
5,8	●	–	1,5	5,8	40	5	0,040-0,120	M 3	–	–	–
6,0	●	–	1,5	6	45	5	0,040-0,120	–	–	M 3	–
6,3	●	●	1,5	6,3	45	5	0,040-0,120	M 3.5	M 3	–	M3
7,0	●	–	1,8	7	50	6	0,040-0,120	–	–	M 3.5	–
7,3	●	–	1,8	7,3	50	6	0,040-0,120	M 4	M 3.5	–	–
8,0	●	–	2	8	50	6	0,060-0,140	–	–	M 4	–
8,3	●	●	2	8,3	50	6	0,060-0,140	–	M 4	–	M 4
9,4	●	–	2,2	9,4	50	6	0,060-0,140	M 4	–	–	–
10,0	●	–	2,5	10	50	6	0,060-0,140	–	–	M 5	–
10,4	●	●	2,5	10,4	50	6	0,060-0,140	M 6	M 5	–	M 5
11,5	●	–	2,8	11,5	56	8	0,060-0,140	–	–	M 6	–
12,4	●	●	2,8	12,4	56	8	0,070-0,180	–	M 6	–	M 6
13,4	●	–	2,9	13,4	56	8	0,070-0,180	M 8	–	–	–
15,0	●	●	3,2	15	60	10	0,070-0,180	–	–	M 8	–
16,5	●	●	3,2	16,5	60	10	0,080-0,200	M 10	M 8	–	M 8
19,0	●	–	3,5	19	63	10	0,080-0,200	–	–	M 10	–
20,5	●	●	3,5	20,5	63	10	0,090-0,240	–	M 10	–	M 10
23,0	●	–	3,8	23	67	10	0,090-0,240	–	–	M 12	–
25,0	●	●	3,8	25	67	10	0,120-0,300	–	M 12	–	M 12
31,0	●	●	4,2	31	71	12	0,120-0,300	–	M 16	–	–

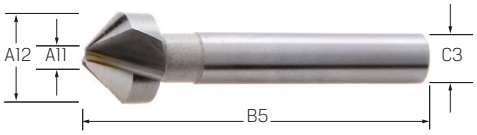
Countersink

PREMUS

	P N/mm²	High HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
110140	⟨1200	⟨63	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.							
110140	18-60	6-8	14 - 16	18 - 25	14-16	50-75	45-50

SC | DIN 335 | Form C | 90° | Straight shank | UNI

Design:
- right hand cutting, with 3 cutting edges, radial relief ground
- tough and yet highly wear-resistant carbide
- optimised cutting edge geometry for higher processing data
- sturdy one-piece VHM version without solder joints



N° article	110140 SC	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev	for countersinks according to DIN 75 Af	for countersinks according to DIN 75 Bf	for countersinks according to DIN 74 Bf
6,3	●	1,5	6,3	45	5	0,040-0,120	M 3.5	M 3	M 3
8,3	●	2	8,3	50	6	0,050-0,140	–	M 4	M 4
10,4	●	2,5	10,4	50	6	0,060-0,140	M 6	M 5	M 5
12,4	●	2,8	12,4	56	8	0,060-0,180	–	M 6	M 6
16,5	●	3,2	16,5	60	10	0,080-0,200	M 10	M 8	M 8
20,5	●	3,5	20,5	63	10	0,090-0,240	–	M 10	M 10
25,0	●	3,8	25	67	10	0,120-0,300	–	M 12	M 12

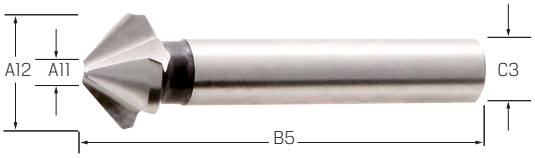
Countersink Inox

PREMUS

	M N/mm²	S N/mm²
110160	⟨1000	Hastelloy, Inconel
vc = m/min.		
110160	14 - 16	14-16

PM | DIN 335 | Form C | 90° | Straight shank | M

Design:
- with 3 cutting edges
- suited for VA steel, Hardox and premium steel (Incl. high-alloyed ones)



N° article	110160 ASP30	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
6,3	●	1,5	6,3	45	5	0,040-0,120
8,3	●	2	8,3	50	6	0,050-0,140
10,4	●	2,5	10,4	50	6	0,050-0,140
12,4	●	2,8	12,4	56	8	0,060-0,180
16,5	●	3,2	16,5	60	10	0,080-0,200
20,5	●	3,5	20,5	63	10	0,090-0,240
25,0	●	3,8	25	67	10	0,120-0,300

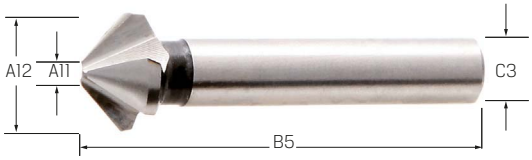
Countersink Aluminium

PREMUS

	N N/mm²	
110165	Alu ⟨600	Copper, brass, bronze
vc = m/min.		
110165	20-100	40-90

HSS | DIN 335 | Form C | 90° | Straight shank | N

Design:
- 3 cutting edges
- radial relief ground
- with strong relief



N° article	110165 HSS	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
6,3	●	1,5	6,3	45	5	0,040-0,120
8,3	●	2	8,3	50	6	0,050-0,140
10,4	●	2,5	10,4	50	6	0,050-0,140
12,4	●	2,8	12,4	56	8	0,060-0,180
16,5	●	3,2	16,5	60	10	0,080-0,200
20,5	●	3,5	20,5	63	10	0,090-0,240
25,0	●	3,8	25	67	10	0,120-0,300

Countersink

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110180	⟨1000	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
110195	⟨1200		⟨300			
vc = m/min.						
110180 110195	18-28	4 - 10	8 - 20	4-10	10-80	10-80

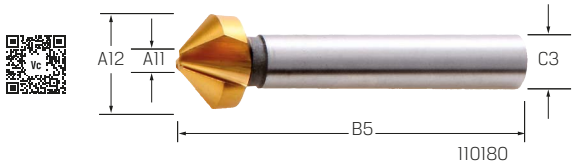
HSS | coated | DIN 335

Form C | 90° | Straight shank

UNI

Design:
- with 3 cutting edges
- radial relief ground

TiN coating: Universal coating for longer service life
TiAlN coating: High-performance coating for increased tool life, esp. in steel and cast iron materials





N° article	110180 HSS, 90°, TiN	110195 HSS, 90°, TiAlN	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
5,0	●	–	1,5	5	40	4	0,040-0,120
6,0	●	●	1,5	6	45	5	0,040-0,120
6,3	●	●	1,5	6,3	45	5	0,040-0,120
7,0	●	–	1,8	7	50	6	0,040-0,120
8,0	●	●	2	8	50	6	0,050-0,140
8,3	●	●	2	8,3	50	6	0,050-0,140
10,0	●	●	2,5	10	50	6	0,050-0,140
10,4	●	●	2,5	10,4	50	6	0,050-0,140
11,5	●	●	2,8	11,5	56	8	0,050-0,140
12,4	●	●	2,8	12,4	56	8	0,060-0,180
15,0	●	●	3,2	15	60	10	0,060-0,180
16,5	●	●	3,2	16,5	60	10	0,080-0,200
19,0	●	●	3,5	19	63	10	0,080-0,200
20,5	●	●	3,5	20,5	63	10	0,090-0,240
23,0	●	–	3,8	23	67	10	0,090-0,240
25,0	●	●	3,8	25	67	10	0,120-0,300
31,0	●	●	4,2	31	71	12	0,120-0,300

Countersink
with ground-in chip breakers

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110197	⟨850	⟨750	⟨850	Titanium	Copper, brass	Plastics
vc = m/min.						
110197	18-23	20 - 25	15 - 20	5-10	40-60	20-40

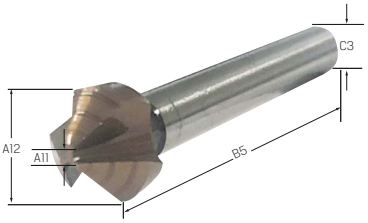
HSS | coated | DIN 335

Form C | 90° | Straight shank

UNI

Design:
- TiAlN coated
- right-hand cutting, with 3 edges
- **extremely uneven division**
- **with ground-in chip breakers**

Use:
For machining of steel, cast and non-ferrous metals



N° article	110197 HSS, 90°, TiAlN	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
6,3	●	1,5	6,3	45	5	0,040-0,120
8,3	●	2	8,3	50	6	0,040-0,120
10,4	●	2,5	10,4	50	6	0,040-0,120
12,4	●	2,8	12,4	56	8	5,050-0,160
16,5	●	3,2	16,5	60	10	5,050-0,160
20,5	●	3,5	20,5	63	10	0,060-0,210
25,0	●	3,8	25	67	10	0,060-0,210
31,0	●	4,2	31	71	12	0,080-0,220



N° article	110197 HSS, 90°, TiAlN	Contents
SET	●	6.3 | 10.4 | 16.5 | 20.5 | 25

Countersink Universal

BECK MAPAL GROUP

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
110187	⟨1,200	⟨55	⟨700	⟨250	Titanium	Alloys with copper, zinc and magnesium, aluminium	Plastics
110188							
	vc = m/min.						
110187	12-36	5	10	12 - 14	10	30-42	42
110188							

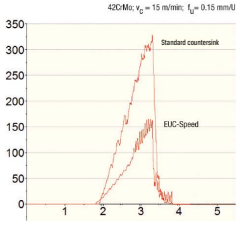
HSS | coated | DIN 335 | Form C | 90° | Straight shank | UNI

Design:
- HSS special coated
- right-hand cutting, with 3 edges
- **extremely uneven division**
- radial relief ground

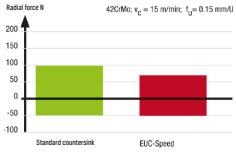
110188:
with 3 clamping flats at the shank

Use:
For machining of steel, cast and non-ferrous metals

Reason no. 1
Reduced axial force... by 50 %



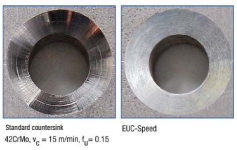
Reason no. 2
Reduced radial force by 25 %

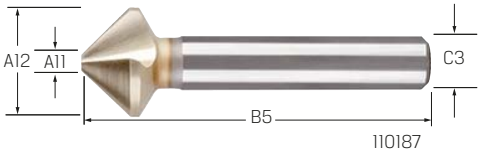


Reason no. 3
Extreme uneven division

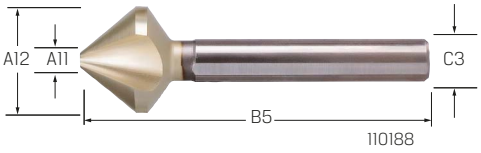


Reason no. 4
Optimised countersink





110187



110188

N° article	110187 HSS	110188 HSS with clamping flat	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
4,30	●	●	1,3	4,3	40	4	0,030-0,100
6,00	●	●	1,5	6	45	5	0,040-0,120
6,30	●	●	1,5	6,3	45	5	0,040-0,120
8,00	●	●	2	8	50	6	0,060-0,140
8,30	●	●	2,3	8,3	50	6	0,060-0,140
10,00	●	●	2,5	10	50	6	0,060-0,140
10,40	●	●	2,5	10,4	50	6	0,060-0,140
11,50	●	●	2,8	11,5	56	8	0,060-0,140
12,40	●	●	2,8	12,4	56	8	0,070-0,180
15,00	●	●	3,2	15	56	10	0,070-0,180
16,50	●	●	3,2	16,5	60	10	0,080-0,200
19,00	●	●	3,5	19	63	10	0,080-0,200
20,50	●	●	3,5	20,5	63	10	0,090-0,240
23,00	●	●	3,8	23	67	10	0,090-0,240
25,00	●	●	3,8	25	67	10	0,120-0,300
31,00	●	●	4,2	31	71	12	0,120-0,300



110187 SET



110188 SET

N° article	110187 HSS, set, 5 parts	110188 HSS with clamping surface, set, 5 pieces	Contents
SET	●	●	6.3 | 10.4 | 16.5 | 20.5 | 25 mm

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²
110189	⟨1,200	⟨63	⟨850	⟨450	Titanium	Copper, brass, alu ⟩ 7 %
	vc = m/min.					
110189	18-60	8	16	25	16	50-65

SC | coated | DIN 335 | Form C | 90° | Straight shank | UNI

Design:
- SC special coated
- right-hand cutting, with 3 edges
- **extremely uneven division**
- radial relief ground

Use:
For machining of almost all materials

N° article	110189 SC	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
6,30	●	1,5	6,3	45	5	0,040-0,120
8,30	●	2	8,3	50	6	0,060-0,140
10,40	●	2,5	10,4	50	6	0,060-0,140
12,40	●	2,8	12,4	56	8	0,070-0,180
16,50	●	3,2	16,5	60	10	0,080-0,200
20,50	●	3,5	20,5	63	10	0,090-0,240
25,00	●	3,8	25	67	10	0,120-0,300
31,00	●	4,2	31	71	12	0,120-0,300



Hand deburrer

PREMUS

Use:
- for neat, manual deburring and countersinking of bores, mainly during assembly work
- fit for all materials
- with 3 cutting edges, radial relief ground

HSS | 90°



N° article	110200 Plastic handle	A11 mm	A12 mm	B5 mm	N° article	110200 Plastic handle	A11 mm	A12 mm	B5 mm
12,4	●	2,8	12,4	133	20,5	●	3,5	20,5	138
16,5	●	3,2	16,5	135	25,0	●	3,8	25	142

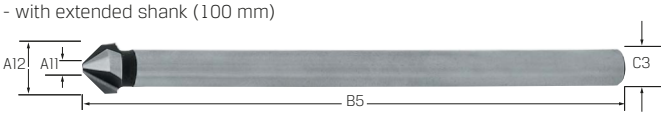
Countersink Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110210	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
110210	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | Form C | 90° | Straight shank | UNI | Vc

Design:
- 3 cutting edges, radial relief ground
- with extended shank (100 mm)



N° article	110210	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev	N° article	110210	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
8,3	●	2	8,3	105	6	0,050-0,140	16,5	●	3,2	16,5	111	10	0,080-0,200
10,4	●	2,5	10,4	107	6	0,050-0,140	20,5	●	3,5	20,5	114	10	0,090-0,240
12,4	●	2,8	12,4	108	8	0,060-0,180							

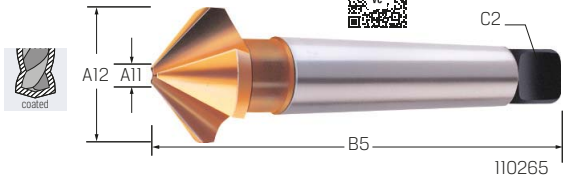
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110260	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
110265	⟨1000					
vc = m/min.						
110260 110265	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | DIN 335 | Form D | 90° | MK shank | UNI | Vc

Design:
- 3 cutting edges, radial relief ground
- 110265 TiN coated to increase cutting performance and tool life



110260



110265

N° article	110260 90°	110265 90°, TiN	A11 mm	A12 mm	B5 mm	C2	f mm/rev	for countersunk screws DIN 7991	for countersunk screws DIN 963/964/965/966
16,5	●	–	3,2	16,5	85	MK1	0,080-0,200	–	M 8
20,5	●	–	3,5	20,5	100	MK2	0,090-0,240	–	M 10
25,0	●	●	3,8	25	106	MK2	0,120-0,300	–	M 12
28,0	●	–	4	28	106	MK2	0,120-0,300	–	M 14
30,0	●	–	4,2	30	106	MK2	0,120-0,300	M 16	–
31,0	●	●	4,2	31	106	MK2	0,120-0,300	–	M 16
34,0	●	–	4,5	34	118	MK2	0,120-0,300	M 18	M 18
37,0	●	●	4,8	37	118	MK2	0,120-0,300	M 20	M 20
40,0	●	●	10	40	140	MK3	0,140-0,400	–	–
50,0	●	●	14	50	150	MK3	0,140-0,400	–	–
63,0	●	●	16	63	180	MK4	0,140-0,400	–	–
80,0	●	–	22	80	190	MK4	0,140-0,400	–	–

Countersink Universal

PREMUS

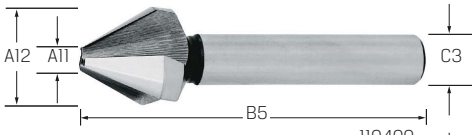
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110400 110420 110430	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
110400 110420 110430	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | DIN 334 | similar DIN 347 | Form C | Straight shank | UNI | Vc

110400 110420 110430

Design:
- with 3 cutting edges
- radial relief ground

60°



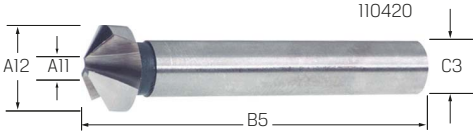
110400

75°



110420

120°



110430

N° article	110400 60°	110420 75°	110430 120°	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
6,3	●	●	●	1,6	6,3	45	5	0,040-0,120
8,0	●	–	–	2	8	50	6	0,050-0,140
8,3	–	●	●	2	8,3	50	6	0,050-0,140
10,0	●	–	–	2,5	10	53	6	0,050-0,140
10,4	–	●	●	2,5	10,4	53	6	0,050-0,140
12,5	●	–	–	3,2	12,5	56	8	0,060-0,180
12,4	–	●	●	3,2	12,4	56	8	0,060-0,140
16,0	●	–	–	4	16	63	10	0,080-0,200
16,5	–	●	●	4	16,5	63	10	0,080-0,200
20,0	●	–	–	5	20	67	10	0,090-0,240
20,5	–	●	●	5	20,5	67	10	0,090-0,240
25,0	●	●	●	6,3	25	71	10	0,120-0,300

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110450	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
110450	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | DIN 334 | Form D | 60° | MK shank | UNI | Vc

Design:
- with 3 cutting edges
- radial relief ground



N° article	110450 60°	A11 mm	A12 mm	B5 mm	C2	f mm/rev
25,0	●	6,3	25	112	MKMK2	0,120-0,300
31,5	●	10	31,5	118	MKMK2	0,120-0,300
40,0	●	12,5	40	150	MKMK3	0,140-0,400
50,0	●	16	50	160	MKMK3	0,140-0,400
63,0	●	20	63	190	MK4	0,140-0,400

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
110480	⟨1000	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
110480	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS-E | 90° | Straight shank | UNI | Vc



N° article	110480 Transverse hole	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
1/4	●	1	4	45	6,35	0,040-0,120
2/5	●	2	5	46	6	0,050-0,140
5/10	●	5	10	55	8	0,060-0,180
10/15	●	10	15	65	10	0,090-0,240
15/20	●	15	20	85	12	0,120-0,300
20/25	●	20	25	95	15	0,120-0,300

Countersink set Universal

PREMUS

Design:
Compiled of countersinks 110110

Delivery:
In plastic case

HSS | DIN 335 | Form C | 90° | Straight shank | UNI | Vc



N° article	110310	Contents
6,3-20,5	●	6.3 | 8.3 | 10 | 12.4 | 16.5 | 20.5
6,0-25,0	●	6 | 8 | 10 | 11.5 | 15 | 19 | 25

Design:
- the countersinks are flute-ground quality
- with 3 cutting edges, radial relief ground

Delivery:
In plastic case

HSS | coated | DIN 335 | Form C | 90° | Straight shank | UNI | Vc 110320 | Vc 110322 | Vc 110324



110322

N° article	110320	110322 TiN	110324 TiAlN	Contents
6,3-25,0	●	●	●	6.3 | 10.4 | 16.5 | 20.5 | 25

Delivery:
In plastic case

HSS-E | 90° | Straight shank | UNI | Vc



N° article	110580 Transverse hole	Contents
4	●	2-5 | 5-10 | 10-15 | 15-20

Countersink bit

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		HSS	DIN 335	Form C
110620	<850	<750	<250	Titanium	Copper, brass, Alu <600	Plastics	90°	hexagonal	
110622									

Design:
With 1/4" hex drive and 3 cutting edges

Set 110622 contains:
- 1 bit each size 6.3/8.3/10.4/12.4/16.5/20.5 mm
- all-round holder (for machining and as extension)
- boring paste
- handle with 1/4" hex socket seat

Use:
For use on portable power tools, screw drivers and cordless power tools

Delivery:
In plastic case (110622)



N° article	110620 1/4" hex drive	110622 set	A12 mm	Diameter range mm
6,3	●	–	6,3	–
8,3	●	–	8,3	–
10,4	●	–	10,4	–
12,4	●	–	12,4	–
16,5	●	–	16,5	–
20,5	●	–	20,5	–
6,3-20,5	–	●	–	6.3 - 20.5

External deburrer AE Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		HSS	90°	Straight shank
110650	<850	<750	<250	Titanium	Copper, brass, Alu <600	Plastics	UNI	Vc	
	vc = m/min.								
110650	18-28	4 - 10	8 - 20	4-10	10-80	10-80			

Use:
Adjustable cutting depth for chatterless machining. Easy resharpening by removal of the blade and grinding by hand on a grinder



N° article	110650	Deburring range for outer tube from-to mm	C3 mm
AE10	●	4 - 8	12
AE18	●	6 - 16	10
AE26	●	8 - 22	12
AE36	●	20 - 32	15

Flat countersink Universal

PREMUS

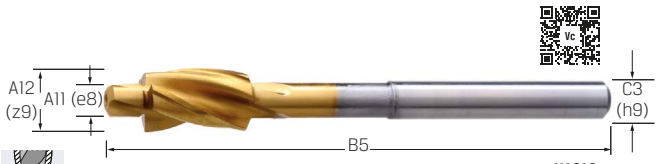
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
111000	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
111010	⟨1000					
vc = m/min.						
111000 111010	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | DIN 373 fine | 180° | Straight shank | UNI

TiN coating: Universal coating for longer tool life

Use:
For countersinking hexagon socket head screws DIN 912, DIN 6912, DIN 7984 and slotted cheese head screws DIN 84





coated

N° article	111000 Through hole fine	111010 Through hole fine, TiN	for screws ∅	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
M3	●	●	M3	3,2	6,5	71	5	0,040-0,120
M4	●	●	M5	4,3	8	71	5	0,050-0,140
M5	●	●	M5	5,3	10	80	8	0,050-0,140
M6	●	●	M6	6,4	11	80	8	0,050-0,140
M8	●	●	M8	8,4	15	100	12,5	0,060-0,180
M10	●	●	M10	10,5	18	100	12,5	0,080-0,200
M12	●	●	M12	13	20	100	12,5	0,090-0,240

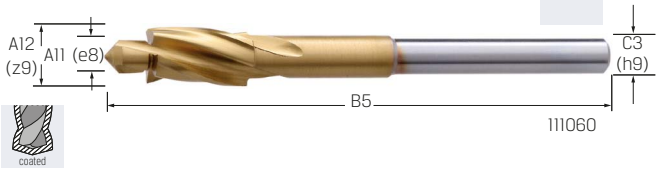
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
111050	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
111060	⟨1000					
vc = m/min.						
111050 111060	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | 180° | Straight shank | UNI

TiN coating: Universal coating for longer tool life

Use:
For countersinking hexagon socket head screws DIN 912, DIN 6912, DIN 7984 and slotted cheese head screws DIN 84





coated

N° article	111050 Through hole medium	111060 Through hole medium, TiN	for screws ∅	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
M3	●	●	M3	3,4	6,5	71	5	0,040-0,120
M4	●	●	M5	4,5	8	71	5	0,050-0,140
M5	●	●	M5	5,5	10	80	8	0,050-0,140
M6	●	●	M6	6,6	11	80	8	0,050-0,140
M8	●	●	M8	9	15	100	12,5	0,060-0,180
M10	●	●	M10	11	18	100	12,5	0,080-0,200
M12	●	●	M12	13,5	20	100	12,5	0,090-0,240

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
111100	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
111100	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | DIN 373 | 180° | Straight shank | UNI | Vc



N° article	111100 Core hole	for screws ∅	A11 mm	A12 mm	B5 mm	C3 mm	f mm/rev
M3	●	M3	2,5	6,5	71	5	0,040-0,120
M4	●	M5	3,3	8	71	5	0,050-0,140
M5	●	M5	4,2	10	80	8	0,050-0,140
M6	●	M6	5	11	80	8	0,050-0,140
M8	●	M8	6,8	15	100	12,5	0,060-0,180
M10	●	M10	8,5	18	100	12,5	0,080-0,200
M12	●	M12	10,2	20	100	12,5	0,090-0,240

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
112300	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
112300	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | Factory standard | 180° | MK shank | UNI | Vc

Design:
- with MT shank and rigid guide pin
- grade fine for through hole
- for countersinks to DIN 74 (sheet 2 form H, J and K)



N° article	112300 Through hole fine	for screws ∅	A11 mm	A12 mm	B5 mm	C2	f mm/rev
M10	●	M10	10,5	18	150	MK2	0,080-0,200
M12	●	M12	13	20	150	MK2	0,090-0,240
M14	●	M14	15	24	160	MK2	0,090-0,240
M16	●	M16	17	26	190	MK3	0,120-0,300
M18	○	M18	19	30	190	MK3	0,120-0,300
M20	●	M20	21	33	190	MK3	0,120-0,300
M24	○	M24	25	40	205	MK3	0,120-0,300

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
112350	⟨850	⟨750	⟨250	Titanium	Copper, brass, Alu ⟨600	Plastics
vc = m/min.						
112350	18-28	4 - 10	8 - 20	4-10	10-80	10-80

HSS | Factory standard | 180° | MK shank | UNI | Vc

Design:
- with MT shank and rigid guide pin
- grade medium for through hole
- for countersinks to DIN 74 (sheet 2 form H, J and K)



N° article	112350 Through hole medium	for screws ∅	A11 mm	A12 mm	B5 mm	C2	f mm/rev
M10	●	M10	11	18	150	MK2	0,080-0,200
M12	●	M12	13,5	20	150	MK2	0,090-0,240
M14	●	M14	15,5	24	160	MK2	0,090-0,240
M16	●	M16	17,5	26	190	MK3	0,120-0,300
M18	●	M18	20	30	190	MK3	0,120-0,300
M20	●	M20	22	33	190	MK3	0,120-0,300
M24	●	M20	26	40	205	MK3	0,120-0,300

Flat countersink set

PREMUS

Design:
112000: Set of countersinks, 111000
112050: Depending on assortment, the set includes countersinks from 111050 or 111060
112100: Set of countersinks, 111100

HSS | coated | DIN 373

180° | Straight shank

Delivery:
In plastic case



112000 7K



112050 7K/TIN

N° article	112000 fine	112050 medium	112100 Core hole	1 countersink each M3/M4/M5/M6/M8/M10
7K	●	●	●	HSS in case M3-M10
7K/TIN	–	●	–	HSS/TiN in case M3 - M10

Piloted counterbore combi system

afs

Design:
- holder for all sizes
- within one size range all countersinks can be combined with all guide pins
- the range from 5 mm to 85 mm diameter is covered in four sizes
- holders with Weldon shank are as a standard with internal coolant supply


0/10


1/20


MK2

Note:
Countersinks size 2 can be used, too (from Ø 16 mm).

N° article	112001 Holder	Shank Ø	Countersink Ø from-to mm
01/10	○	10 mm	5 - 16
0/10	●	10 mm	7 - 24
0/MK1	○	MK 1	7 - 24
1/12	○	12 mm	10 - 38
1/MK2	○	MK 2	10 - 38
1/20	○	Weldon 20	10 - 38
2/MK2	○	MK 2	16 - 58
2/MK3	○	MK 3	16 - 58
2/25	○	Weldon 25	16 - 58
2/MK4	○	MK 4	60 - 85
2/MK5	○	MK 5	60 - 85
2/32	○	Weldon 32	60 - 85

Piloted counterbore combi system Universal

afs

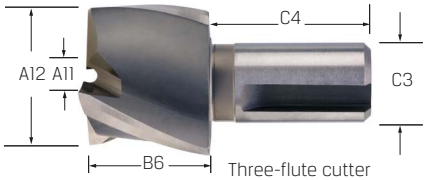
HSS | UNI

	P N/mm²	M N/mm²	K HB	N N/mm²	
112002	⟨1000	⟨800	⟨200	Brass ⟨600	Alu ⟨600
	vc = m/min.				
112002	5-35	6 - 15	10 - 20	20-60	40-80

Design:
- 2-edged countersink type U, size 0: Ø 7 - 9.5 mm; size 01: Ø 5 - 16 mm
- 3-edged countersink type U, size 0: Ø 10 - 24 mm; size 1: Ø 10 - 27.5 mm; size 2: Ø 16 - 33 mm
- 4-edged countersink type U, size 1: Ø 28 - 38 mm; size 2: Ø 34 - 58 mm
- gradation: 0.50 mm

Size	2-cutting edged Ø in mm	3-cutting edged Ø in mm	4-cutting edged Ø in mm
01	5 - 16	—	—
0	7 - 9.5	10 - 24	—
1	—	10 - 27.5	28 - 38
2	—	16 - 33	34 - 85


Two-flute cutter



Three-flute cutter

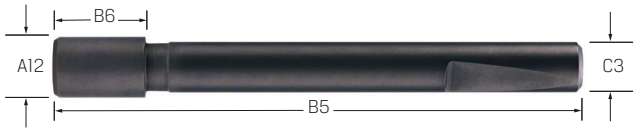

Four-flute cutter

Size from - to/ A12 mm	112002 Flat countersink	A11 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
01/5,0 - 01/9,5	○	2,4	28	9	7	28	2	0,100-0,120
01/10,0 - 01/12,0	○	2,4	28	9	7	28	2	0,100-0,120
0/8,0 - 0/8,5	○	4	40	19	10	40	3	0,100-0,120
0/9,0 - 0/10,5	○	4	40	19	10	40	3	0,100-0,120
0/11,0 - 0/12,5	○	4	40	19	10	40	3	0,100-0,120
0/13,0 - 0/14,5	○	4	40	19	10	40	3	0,100-0,120
0/15,0 - 0/16,5	○	4	40	19	10	40	3	0,100-0,120
0/17,0 - 0/18,5	○	4	40	19	10	40	3	0,120-0,150
0/19,0 - 0/20,0	○	4	40	19	10	40	3	0,120-0,150
1/14,0 - 1/15,5	○	6	50	22	14	50	3	0,100-0,120
1/16,0 - 1/17,5	○	6	50	22	14	50	3	0,120-0,150
1/18,0 - 1/19,5	○	6	50	22	14	50	3	0,120-0,150
1/20,0 - 1/21,5	○	6	50	22	14	50	3	0,120-0,150
1/22,0 - 1/23,5	○	6	50	22	14	50	3	0,120-0,150
1/24,0 - 1/25,0	○	6	50	22	14	50	3	0,120-0,150

Size from - to/ A12 mm	112002 Flat countersink	A11 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
1/26,0 - 1/27,0	○	6	50	22	14	50	3	0,150-0,200
1/28,0 - 1/29,0	○	6	50	22	14	50	3	0,150-0,200
1/30,0	○	6	50	22	14	50	3	0,150-0,200
2/24,0 - 2/25,0	○	10	60	27	22	60	4	0,150-0,200
2/26,0 - 2/27,0	○	10	60	27	22	60	4	0,150-0,200
2/28,0 - 2/29,0	○	10	60	27	22	60	4	0,150-0,200
2/30,0 - 2/32,0	○	10	60	27	22	60	4	0,150-0,200
2/33,0 - 2/36,0	○	10	60	27	22	60	4	0,150-0,200
2/37,0 - 2/40,0	○	10	60	27	22	60	4	0,150-0,200
2/42,0 - 2/44,0	○	10	60	27	22	60	4	0,150-0,200
2/45,0 - 2/48,0	○	10	60	27	22	60	4	0,150-0,200
2/50,0	○	10	60	27	22	60	4	0,150-0,200
2/52,0	○	10	60	27	22	60	4	0,150-0,200
2/54,0 - 2/56,0	○	10	60	27	22	60	4	0,150-0,200
2/58,0	○	10	60	27	22	60	4	0,150-0,200

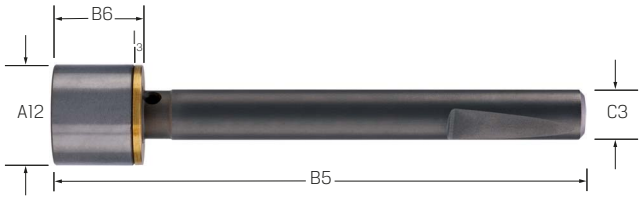
Piloted counterbore combi system

Design:
- fixed pilot pins guide the piloted counterbore inside the pilot hole
- inside the bore they rotate together with the countersink
- with fixed pilot pins no internal coolant supply possible



Size from - to/ A12 mm	112003 fixed	B5 mm	B6 mm	C3 mm	Size from - to/ A12 mm	112003 fixed	B5 mm	B6 mm	C3 mm
0/4,0 - 0/5,3	○	59	9	4	01/2,4 - 01/4,5	○	40	9	2,4
0/5,5 - 0/6,8	○	59	9	4	1/6,6 - 1/7,5	○	79	9	6
0/7,0 - 0/9,0	○	59	9	4	1/8,0 - 1/8,4	○	79	9	6
0/9,5 - 0/11,0	○	59	9	4	2/10,0 - 2/13,5	○	105	9	10

Design:
- rotating guide pins guide the piloted counterbore into the pilot hole
- guide roller stands still inside the bore, while the countersink rotates
- with rotating guide pin internal coolant supply is possible in combination with Weldon shank holders



Size from - to/ A12 mm	112004 rotating	B5 mm	B6 mm	l_3 mm	C3 mm	Size from - to/ A12 mm	112004 rotating	B5 mm	B6 mm	l_3 mm	C3 mm
1/8,5 - 1/9,5	○	79	15	1.5	6	2/19,0 - 2/21,0	○	105	18	1.5	10
1/9,9 - 1/12,0	○	79	15	1.5	6	2/22,0 - 2/23,0	○	105	18	1.5	10
1/12,5 - 1/15,0	○	79	15	1.5	6	2/24,0 - 2/25,0	○	105	18	1.5	10
1/16,0 - 1/18,0	○	105	18	1.5	10	2/26,0	○	105	18	1.5	10
1/19,0 - 1/20,0	○	105	18	1.5	10	2/27,0 - 2/30,0	○	105	18	1.5	10
2/14,0 - 2/16,0	○	105	18	1.5	10	2/32,0 - 2/35,0	○	105	18	1.5	10
2/17,0 - 2/18,0	○	105	18	1.5	10	2/40,0	○	105	18	1.5	10

Countersink combination system set

HSS

Design:
- sets consist of one holder with wrench, countersinks and guide pins
- the compilation of the sets varies according to size

Delivery:
In wooden base



N° article	112005	Countersink ∅ mm	Sizeguide pin mm
01/10,0	○	5 | 5.5 | 6 | 6.5 | 7 | 8 | 9	2.4 | 2.5 | 2.7 | 3 | 3.3 | 3.5 | 4 | 4.5
0/MK1	○	8.5 | 9.5 | 10.5 | 11.5 | 13.5 | 16.5	4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5
0/10,0	○	8.5 | 9.5 | 10.5 | 11.5 | 13.5 | 16.5	4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5
1/MK2	○	14.5 | 16.5 | 18.5 | 20.5 | 22.5 | 24.5	7 | 7.5 | 8 | 8.8 | 9 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 13 | 14 | 15
1/12,0	○	14.5 | 16.5 | 18.5 | 20.5 | 22.5 | 24.5	7 | 7.5 | 8 | 8.8 | 9 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 13 | 14 | 15
2/MK2	○	26 | 28 | 30 | 32 | 33 | 34 | 36	12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25
2/MK3	○	26 | 28 | 30 | 32 | 33 | 34 | 36	12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

Piloted counterbore combi system

H. BILZ

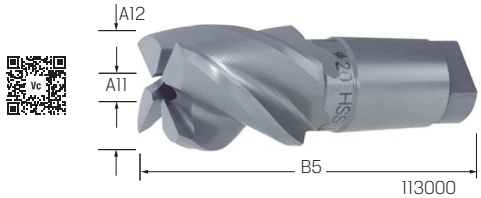
HSS | Carbide cutting edge | k8 | 180°

	P N/mm²	M N/mm²	K HB	N N/mm²
113000	<850	<750		Alu <600
113050			<250	
vc = m/min.				
113000	17-27	8 - 12		50-100
113050	40-90	20 - 50	40 - 100	60-150

Design:
The BILZ countersink system is a 3-piece combination of **countersink - pin - holder**. All parts are manufactured with very high precision resulting in a reliable working tool with high true running.
The countersinks have a through hole for a free-running corresponding guide pin. It is secured by 2 locknuts.
The guide pinis therefore movable without losing the required stability. The respective reference values are suitable for all countersinks of the appropriate size. This allows a great number of possible combinations. Countersink and pin are inserted into holders. Due to the conical taper (Taper lock) the whole tool gets a stable cohesion of all parts.

Size = Fitting guide pin (see 113800)
Fitting holder (see 113900 et seqq.)

[1] For carbide countersinks, **113050**, a spacer is required between guide pin and carbide cutting edge.



113000


113050

N° article	113000 HSS	113050 Carbide[1]	Size guide pin	A11 mm	A12 mm	B5 mm	for holder sizes	f mm/rev
5,0	○	–	GZ00	1,7	5	35	0	0,060-0,200
6,0	○	–	GZ01	2	6	35	0	0,060-0,200
6,5	●	–	GZ01	2	6,5	35	0	0,060-0,200
7,0	○	–	GZ02	2,5	7	35	0	0,060-0,200
7,4	○	–	GZ02	2,5	7,4	35	0	0,060-0,200
8,0	○	–	GZ02	2,5	8	35	0	0,060-0,200
8,5	●	–	GZ02	2,5	8,5	35	0	0,060-0,200
9,0	●	–	GZ1	3	9	40	1	0,090-0,300
9,5	○	–	GZ1	3	9,5	40	1	0,090-0,300
10,0	●	○	GZ1	3	10	40	1	0,090-0,300
10,5	–	○	GZ1	3	10,5	40	1	0,100-0,200
11,0	●	○	GZ1	3	11	40	1	0,090-0,300
11,5	–	○	GZ1	3	11,5	0	1	0,100-0,200
12,0	●	○	GZ1	3	12	40	1	0,090-0,300
12,5	○	○	GZ1	3	12,5	40	1	0,090-0,300
13,0	●	○	GZ2	4	13	48	2	0,150-0,400
13,5	–	○	GZ2	4	13,5	0	2	0,100-0,300
14,0	●	○	GZ2	4	14	48	2	0,150-0,400
14,5	○	–	GZ2	4	14,5	48	2	0,150-0,400
15,0	●	○	GZ2	4	15	48	2	0,150-0,400
16,0	●	○	GZ2	4	16	48	2	0,150-0,400
17,0	○	○	GZ2	4	17	48	2	0,150-0,400
17,5	–	○	GZ2	4	17,5	48	2	0,100-0,300
18,0	○	○	GZ3	5	18	56	3	0,150-0,400

N° article	113000 HSS	113050 Carbide[1]	Size guide pin	A11 mm	A12 mm	B5 mm	for holder sizes	f mm/rev
18,5	○	–	GZ3	5	18,5	56	3	0,150-0,400
19,0	○	○	GZ3	5	19	56	3	0,150-0,400
20,0	●	○	GZ3	5	20	56	3	0,150-0,400
21,0	○	○	GZ3	5	21	56	3	0,150-0,400
22,0	●	●	GZ3	5	22	56	3	0,150-0,400
22,5	○	–	GZ3	5	22,5	56	3	0,150-0,400
23,0	●	○	GZ4	6	23	61	4	0,200-0,500
24,0	●	●	GZ4	6	24	61	4	0,200-0,500
25,0	●	○	GZ4	6	25	61	4	0,200-0,500
26,0	●	○	GZ4	6	26	61	4	0,200-0,500
27,0	○	–	GZ4	6	27	61	4	0,200-0,500
28,0	●	○	GZ4	6	28	61	4	0,200-0,500
29,0	○	–	GZ4	6	29	61	4	0,200-0,500
30,0	●	○	GZ4	6	30	61	4	0,200-0,500
32,0	●	○	GZ4	6	32	61	4	0,200-0,500
33,0	●	○	GZ4	6	33	61	4	0,200-0,500
34,0	○	–	GZ5	8	34	67	5	0,200-0,500
35,0	○	–	GZ5	8	35	67	5	0,200-0,500
36,0	○	–	GZ5	8	36	67	5	0,200-0,500
38,0	○	–	GZ5	8	38	67	5	0,200-0,500
40,0	●	○	GZ5	8	40	67	5	0,200-0,500
42,0	○	○	GZ5	8	42	67	5	0,200-0,500
45,0	○	○	GZ5	8	45	67	5	0,200-0,500

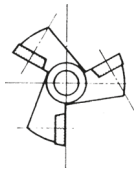
Countersinking and re-boring tool

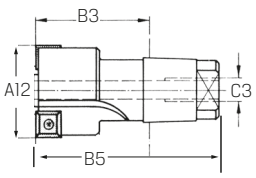
H. BILZ

±0,05 | 180° | Bilz Taper

Design:
- combines boring and countersinking with indexable inserts of carbide
- version with 3 cutting edges
- for high chipping capacity
- fit for all machine types

Use:
Fit for use on machining centres and automatically operating production machines, as high repeatability is warranted by indexable inserts and a higher cutting performance is given by a specially developed cutting edge geometry in the insert. Suited for countersinking and boring in all materials







N° article	113500 without indexable inserts	A12 mm	C3 mm mm	B3 mm	B5 mm	Size	Insert size
20,0	○	20	5	35	57	3	06
30,0	○	30	6	39	62	4	09
40,0	○	40	8	40	68	5	12

Piloted counterbore combi system

H. BILZ

Design:
- there are 3 types of Bilz guide pins
- they are adapted to the specific reference values:
  1) for countersinks size 0, one-piece version with lateral screw clamp
  2) for countersinks size 1 - 5 a one-piece version with lock nut
  3) for countersinks sizes 2 - 5 a two-piece version with retaining screw, guide sleeve and lock nut

Use:
The guide pins guarantee accurate work of the countersinks. The specified sizes are compatible with each countersink of the corresponding reference size. This gives you a wide range of possible combinations.

Mounting:
Grease guide pin at seat, insert it into the bore of the countersink, screw on nuts, adjust play and lock nuts. The guide pin has to rotate easily when mounted. Under normal conditions the play should be 0.1 mm. In carbide countersinks (**113050**), a spacer is required between guide pin and HM cutting edge!

Delivery:
With spacer

Ordering example: 5 pieces 113800 GZ2/4.0

Note:
Intermediate dimensions available on request.





N° article	113800	Size guide pin	A12 mm	B5 mm	B6 mm	C3 mm	G	AF mm	GZ parts
GZ00/2,0	○	GZ00	2	28	5	1,7	–	0	1
GZ00/3,0	○	GZ00	3	28	5	1,7	–	0	1
GZ01/3,0	○	GZ01	3	28	5	2	–	0	1
GZ01/4,0	○	GZ01	4	28	5	2	–	0	1
GZ02/3,0	○	GZ02	3	28	5	2,5	–	0	1
GZ02/4,0	○	GZ02	4	28	5	2,5	–	0	1
GZ02/5,0	○	GZ02	5	28	5	2,5	–	0	1
GZ1/3,0	○	GZ1	3	60	7	3	M3	5	1
GZ1/5,0	●	GZ1	5	60	7	3	M3	5	1
GZ1/6,0	●	GZ1	6	60	7	3	M3	5	1
GZ1/7,0	●	GZ1	7	60	7	3	M3	5	1
GZ1/8,0	○	GZ1	8	60	7	3	M3	5	1
GZ1/9,0	○	GZ1	9	60	7	3	M3	5	1
GZ1/10,0	○	GZ1	10	60	7	3	M3	5	1
GZ2/4,0	○	GZ2	4	71	10	4	M4	6	1

N° article	113800	Size guide pin	A12 mm	B5 mm	B6 mm	C3 mm	G	AF mm	GZ parts
GZ3/7,0	○	GZ3	7	81	10	5	M5	8	1
GZ3/8,0	○	GZ3	8	81	10	5	M5	8	1
GZ3/9,0	●	GZ3	9	81	10	5	M5	8	1
GZ3/10,0	○	GZ3	10	81	10	5	M5	8	1
GZ4/6,0	○	GZ4	6	88	12	6	M6	9	1
GZ4/8,0	●	GZ4	8	88	12	6	M6	9	1
GZ4/9,0	○	GZ4	9	88	12	6	M6	9	1
GZ4/10,0	●	GZ4	10	88	12	6	M6	9	1
GZ4/11,0	○	GZ4	11	88	12	6	M6	9	1
GZ4/12,0	●	GZ4	12	88	12	6	M6	9	1
GZ4/13,0	●	GZ4	13	88	12	6	M6	9	1
GZ5/17,0	●	GZ5	17	103	18	8	M8	11	1
GZ3/2/11,0	○	GZ3/2	11	81	10	5	M5	8	2
GZ3/2/12,0	●	GZ3/2	12	81	10	5	M5	8	2
GZ3/2/13,0	●	GZ3/2	13	81	10	5	M5	8	2

N° article	113800	Size guide pin	A12 mm	B5 mm	B6 mm	C3 mm	G	AF mm	GZ parts
GZ3/2/14,0	○	GZ3/2	14	81	10	5	M5	8	2
GZ3/2/15,0	○	GZ3/2	15	81	10	5	M5	8	2
GZ3/2/16,0	○	GZ3/2	16	81	10	5	M5	8	2
GZ3/2/20,0	○	GZ3/2	20	81	10	5	M5	8	2
GZ4/2/15,0	○	GZ4/2	15	88	12	6	M6	9	2
GZ4/2/16,0	○	GZ4/2	16	88	12	6	M6	9	2
GZ4/2/17,0	●	GZ4/2	17	88	12	6	M6	9	2
GZ4/2/18,0	●	GZ4/2	18	88	12	6	M6	9	2
GZ4/2/19,0	○	GZ4/2	19	88	12	6	M6	9	2
GZ4/2/20,0	○	GZ4/2	20	88	12	6	M6	9	2
GZ4/2/22,0	○	GZ4/2	22	88	12	6	M6	9	2
GZ5/2/20,0	○	GZ5/2	20	103	18	8	M8	11	2
GZ5/2/21,0	○	GZ5/2	21	103	18	8	M8	11	2
GZ5/2/22,0	○	GZ5/2	22	103	18	8	M8	11	2
GZ5/2/25,0	○	GZ5/2	25	103	18	8	M8	11	2

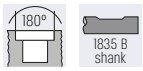
Screw head countersink

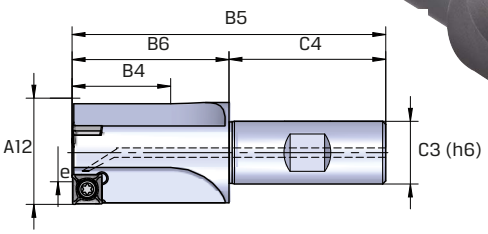
H. BILZ

	P N/mm²	K HB
113730	⟨2,000	⟨1,100
vc = m/min.		
113730	60-200	60 - 200

Design:
- the protruding side cutting edge nose protects the main cutting edge with a lesser diameter from wear and tear
- 180° screw head countersink for M5 to M36

Use:
- universally suited for steel and cast iron
- suitable for rigid machines without guide pins





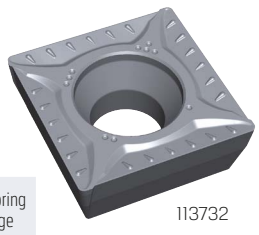


N° article	113730 1× A11, type UNWE	A12 mm	B4 mm	B5 mm	B6 mm	e mm	C3 mm	C4 mm	D1	f mm/rev
10,0	○	10	6	75	30	4.5	12	45	1	0,060-0,150
15,0	○	15	13	75	30	5	12	45	2	0,120-0,250
18,0	○	18	15	80	32	8	16	48	2	0,120-0,250
20,0	○	20	20	85	37	10	16	48	2	0,120-0,250
26,0	○	26	21	100	40	10	20	50	2	0,150-0,300
30,0	○	30	31	100	50	14	20	50	3	0,200-0,500
33,0	○	33	31	100	50	17	20	50	3	0,200-0,500
36,0	○	36	31	110	54	20	25	56	3	0,200-0,500
40,0	○	40	36	115	55	24	32	60	3	0,200-0,500

Carbide WPL

PU
10 pieces

Note:
Indexable inserts are only in packaging units of **10 pieces** available! Price per piece.

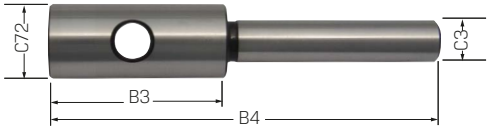

113732

N° article	113732 Indexable inserts	Indexable insert type	for boring range mm
SCMX06	●	SCMX06	10 - 20
SCMX09	●	SCMX09	24 - 46
SCMX12	○	SCMX12	50 - 58

Piloted counterbore combi system H. BILZ

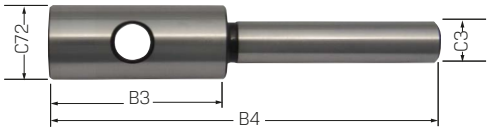
Use:
For mounting counterbores 113000 and 113500. The conical shank (taper mounting) centres and locates the tool. Special ejectors (114120) facilitate the release of the tool

Bilz Taper | Straight shank



N° article	113900 Holder short, with parallel shank	C72 mm	B3 mm	B4 mm	C3 mm
H0	●	9	24	59	6
H1	●	12,5	36	76	8
H2	●	17	41	91	10
H3	●	21	49	109	12
H4	●	28	52	112	14
H5	●	32	65	125	16

Bilz Taper | Straight shank



N° article	113920 Holder long, with parallel shank	C72 mm	B3 mm	B4 mm	C3 mm
H1	○	12,5	74	115	8

Bilz Taper | MK shank



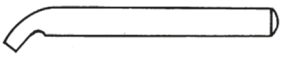
N° article	113950 Holder short, with MT shank	C72 mm	B3 mm	B4 mm	C2
H1	○	12,5	42	104	MK1
H2	○	17	47	109	MK1
H3	●	21	57	132	MK2
H4	●	28	61	155	MK3
H5	●	32	74	168	MK3
H5-1/2-MK3	○	37	84	178	MK3
H5-1/2-MK4	○	37	85	203	MK4
H6-MK4	○	42	87	205	MK4

Bilz Taper | MK shank



N° article	113960 Holder long, with MT shank	C72 mm	B3 mm	B4 mm	C2
H3	○	21	110	185	MK2
H4	●	28	116	210	MK4
H5	○	32	141	235	MK4

Drill drifts for ejecting BILZ countersinks H. BILZ



N° article	114120 Type H with guide pin
H1	○
H2	●
H3	●
H4	●
H5	○

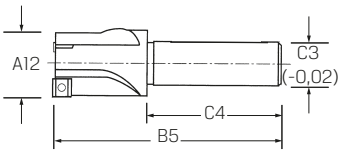
Drilling and circular milling tool H. BILZ

Design and use:
- chamfering, deep countersinking, re-boring, circular milling
- suitable for rigid machines without guide pins
- for all materials
- high chipping performance
- universal applications with HSSE, carbide, Cermet, PCD or CBN indexable inserts
- narrow bore tolerances (IT9-11) and chatter-free machining due to ground indexable inserts with guide lands

±0,05

113760: Reinforced shank, longer effective length.

Delivery:
Without indexable inserts.





N° article	113750 short, type UNW	113760 long, type UNW	113750B5 B5 mm	113750B5 C3 mm	113750B5 C4 mm	113760B5 B5 mm	113760B5 C3 mm	113760B5 C4 mm	A12 mm	Insert size
15,0	●	○	75	12	45	90	16	48	15	06
18,0	○	○	85	16	50	115	20	50	18	06
20,0	○	○	85	16	50	115	20	50	20	06
26,0	○	○	100	20	60	150	25	56	26	06

Indexable insert carbide for Bilz tools H. BILZ

Use:
Quality P5-P15 TiN for steel, cast steel, long-chipping malleable iron
Quality K1-K15 for grey cast iron, short-chipping malleable iron.
Quality S6-HSSE-TiN for steel, stainless steel, cast steel, machining steel

PU
10 pieces

Note:
For use in BILZ boring and circular milling tools. Indexable inserts are only in packaging units of **10 pieces** available! Price per piece



N° article	113762 P5/P15 TiN	113764 K1/K15	113766 S6/HSS-E-TiN	Table top design
0006	●	●	●	SCHX 06 02 04 FRZ
0009	●	●	○	SCHX 09 03 04 FRZ
0012	●	●	○	SCHX 12 04 04 FRZ

N° article	113768 Spare screws for indexable inserts	Screw size	für for indexable insert size	fitting screwdriver TX
0005	○	–	05	208
0006	●	M2,5× 5,0	06	9
0009	●	M3,5× 9,5	09	15
0012	○	M4,5×11,5	12	15

Reverse countersink system Universal

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	P N/mm²	M N/mm²	N N/mm²
114300	⟨850	⟨750	Alu ⟨600
	vc = m/min.		
114300	15-22	8 - 12	20-70

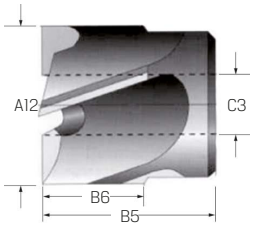
HSS



UNI

Design:
- flat bayonet for quick and reliable manual changing
- large cutting widths
- numerous diameter combinations of various countersinks and holders with the same mounting diameter C3
- good chip removal
- guidance in the workpiece bore ensures reliable machining of difficult workpiece contours

Use:
Manual reverse machining, spotting, countersinking in depth and drilling





N° article	114300 Type TU	A12 mm	B5 mm	B6 mm	C3 mm	f mm/rev
10,0	●	10	28	15	5	0,090 - 0,200
11,0	●	11	28	15	5	0,090 - 0,200
14,0	○	14	30	16	6	0,090 - 0,200
15,0	●	15	30	16	6	0,090 - 0,200
16,0	○	16	32	18	8	0,090 - 0,200
17,0	○	17	32	18	8	0,090 - 0,200
18,0	●	18	32	18	8	0,090 - 0,200
20,0	●	20	32	18	8	0,090 - 0,200
21,0	○	21	22	–	9	0,150 - 0,300
22,0	●	22	22	–	9	0,150 - 0,300
24,0	●	24	22	–	9	0,150 - 0,300
25,0	○	25	24	–	11	0,150 - 0,300
26,0	●	26	24	–	11	0,150 - 0,300
28,0	●	28	24	–	11	0,150 - 0,300
30,0	●	30	24	–	11	0,150 - 0,300
32,0	●	32	26	–	13	0,150 - 0,300
33,0	●	33	26	–	13	0,150 - 0,300
36,0	●	36	26	–	13	0,150 - 0,300
38,0	●	38	28	–	17	0,250 - 0,400
40,0	●	40	28	–	17	0,250 - 0,400
48,0	●	48	32	–	19	0,250 - 0,400

Reverse boring bar

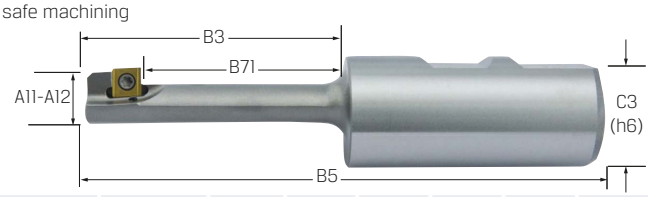
H. BILZ

Design and use:
- for Bilz indexable inserts
- automatic reverse machining Counterboring Countersinking Deep countersinking Reboring
- on programme-controlled machine tools with spindle orientation (after off-centre positioning rebore from centre with drawing cut)
- on rigid machines for all materials
- for countersinks up to the 1.6-fold of the bore diameter
- for workpiece thicknesses up to the 4-fold of the bore diameter
- universal applications with HSS, carbide or PCD inserts
- safe machining
- compact construction
- many special designs for larger cutting widths in heavy or solid carbide
- adjustable for tight fits, radii or grooves
- internal cooling RBU from Ø 18
- left rotating



1835 B shank

Delivery:
without indexable inserts



N° article	114351 RBU	A11 mm	A12 mm	B3 mm	B5 mm	B71 mm	C3 mm
15	○	9	15	45	95	35	20
18	○	10,5	18	52	102	40	20
20	○	13	20	57	107	45	20
24	○	15	24	67	123	55	25
26	○	17	26	67	123	55	25
30	○	19	30	77	133	65	25
33	○	21	33	85	145	70	32
36	○	23	36	90	150	75	32
40	○	25	40	100	160	85	32
43	○	30	43	115	175	90	32
46	○	30	46	115	175	90	32
48	○	33	48	130	190	105	32
50	○	33	50	130	190	105	32

Indexable insert
for Bilz reverse boring bar

H. BILZ

Use:
For employment in BILZ reverse boring bar 114351

Carbide WPL

PU 10 pieces

Note:
Indexable inserts are only in packaging units of 10 pieces!

N° article	114370 P20-P25/steel	114380 K10-K15/cast	Indexable insert type	for boring range mm
MCMT060204EN	●	●	MCMT060204EN	18 | 20 | 24 | 26 | 30
MCMT090304EN	●	○	MCMT090304EN	33 | 36 | 40 | 43 | 48

Reverse countersink system

H. BILZ

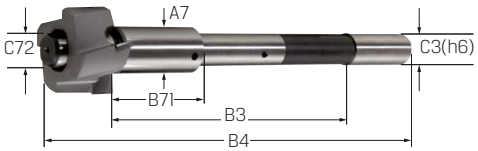
Design:
Reversal protection lock prevents disjointing of the countersink when machining vertically or on machines with motor brakes. Guide in the workpiece bore ensures reliable machining of difficult contours. Wide driving surfaces enable transmission of large torques. From shank size MK3 the holder can be secured via the cross-wedge slot

MK shank



N° article	114320 Holder type TUH	C72 mm	A7 mm	B3 mm	B4 mm	MT
5×6,6	●	5	6,6	105	167	1
6×9,0	●	6	9	105	167	1
8×11,0	●	8	11	125	200	2
8×14,0	○	8	14	125	200	2
9×11,0	●	9	11	145	220	2
9×12,0	○	9	12	145	220	2
9×13,0	○	9	13	145	220	2
11×13,0	○	11	13	165	259	3
11×14,0	○	11	14	165	259	3
11×15,0	●	11	15	165	259	3
11×18,0	○	11	18	165	259	3
13×18,0	●	13	18	186	280	3
13×22,0	●	13	22	186	280	3
17×22,0	●	17	22	207	301	3
17×26,0	○	17	26	207	301	3
19×22,0	○	19	22	227	321	3
19×26,0	○	19	26	227	321	3

Holder for type TUHW, 2-piece, bush optional



N° article	114330 Holder, type TUHW 2-piece, Bush optional	C72 mm	A7 mm	B3 mm	B4 mm	B71 mm	C3 mm
9×12,0	○	9	12	107	185	30	12
11×11,0	○	11	11	130	205	35	12
13×13,0	○	13	13	150	230	40	16
17×22,0	○	17	22	207	301	50	20
19×22,0	○	19	22	183	272	50	20

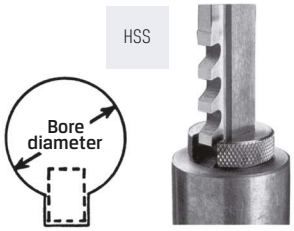
Keyway broach

Design:
- tooth form and relief grinding ensure a clean surface
- tolerance JS 9
- delivery complete with calibrated shims (e.g. for 3 strokes with 2 shims)
- guide bushes see 115700

115600: Fitting shim

Use:
For the production of keyways to DIN 6885. Operated on mechanical arbor presses or hydraulic presses

HSS





HSS

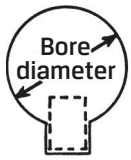
N° article	115500	Keyway width mm	Wedge size mm	Back width mm	Length mm	Bore ∅ from-to mm	Broaching length mm	Broaching force N	Cycles	Number of shims
2/1	○	2	2× 2	3,18	133	6 - 10	6 - 30	2300	1	0
3/1	●	3	3× 3	3,18	133	6 - 10	6 - 30	3300	2	1
4/2	●	4	4× 4	6,35	178	11 - 19	8 - 43	5200	2	1
5/2	●	5	5× 5	6,35	178	11 - 19	8 - 43	9300	2	1
5/3	○	5	5× 5	9,53	302	17 - 36	10 - 64	7600	2	1
6/3	●	6	6× 6	9,53	302	17 - 36	10 - 64	8600	2	1
8/3	●	8	8× 7	9,53	302	17 - 36	10 - 64	18000	2	1
10/4	●	10	10× 8	14,29	352	32 - 56	20 - 150	36000	3	2
12/4	●	12	12× 8	14,29	352	32 - 56	20 - 150	48000	3	2
14/4	●	14	14× 9	14,29	352	32 - 56	20 - 150	50000	3	2
16/5	○	16	16×10	19,05	387	52 - 72	20 - 150	52000	4	3
18/5	○	18	18×11	19,05	387	52 - 72	20 - 150	55000	4	3

N° article	115600 Spare shim	Keyway width mm	Thickness of the inserts mm
3/1	●	3	0,787
4/2	●	4	0,965
5/2	●	5	1,27
5/3	○	5	1,194
6/3	●	6	1,575
8/3	●	8	1,981
10/4	○	10	1,422
12/4	○	12	1,422
14/4	○	14	1,575
16/5	○	16	1,575
18/5	○	18	1,575

Keyway broach

Design:
- made of steel
- up to and including type 3 with collar
- type 4 without collar
- bore tolerance H7

Use:
For keyway broaches 115500.





N° article	115700 Guide bush	Bore ∅ mm	Length mm	N° article	115700 Guide bush	Bore ∅ mm	Length mm	N° article	115700 Guide bush	Bore ∅ mm	Length mm
10/1	○	10	32	17/3	○	17	65	25/3	●	25	65
11/2	○	11	46	18/2	○	18	46	26/3	○	26	65
12/2	●	12	46	18/3	○	18	65	27/3	○	27	65
13/2	○	13	46	19/2	○	19	46	28/3	○	28	65
14/2	○	14	46	19/3	○	19	65	30/3	●	30	65
15/2	○	15	46	20/3	●	20	65	32/3	○	32	65
16/2	●	16	46	22/3	○	22	65	32/4	○	32	102
17/2	○	17	46	24/3	○	24	65				

Keyway broach set

Delivery:
- in shock-resistant plastic box
- assortment to DIN 6885



HSS



N° article	115800	Broach size, cat. no. 115500	Guide bush size, cat. no. 115700
10	○	2/1 | 3/1	6/1 | 7/1 | 8/1 | 9/1 | 10/1
18	○	4/2 | 5/2 | 6/3 | 8/3	12/2 | 14/2 | 15/2 | 16/2 | 18/3 | 20/3 | 22/3 | 24/3 | 25/3
40	○	2/1 | 3/1 | 4/2 | 5/2 | 6/3 | 8/3	8/1 | 10/1 | 12/2 | 14/2 | 15/2 | 16/2 | 18/3 | 20/3 | 22/3 | 24/3 | 25/3 | 28/3 | 30/3

Fitting Table

for 1/100 Machine Reamers Similar to DIN 212

Bore ∅ in mm	C 8	C 9	C 10	C 11	CD 7	D 7	D 8	D 9	D 10	D 11	D 12	E 7	E 8	E 9	EF 8	F 7	F 8
1.0	1.07	1.07	1.08	1.10	1.04	1.02	1.03	-	1.04	1.06	1.08	1.02	1.02	1.03	1.02	1.01	1.01
2.0	2.07	2.07	2.08	2.10	2.04	2.02	2.03	-	2.04	2.06	2.08	2.02	2.02	2.03	2.02	2.01	2.01
3.0	3.07	3.07	3.08	3.10	3.04	3.02	3.03	-	3.04	3.06	3.08	3.02	3.02	3.03	3.02	3.01	3.01
4.0	4.08	4.09	-	-	4.05	4.04	4.04	4.05	4.06	4.08	4.10	-	4.03	4.04	4.03	-	4.02
5.0	5.08	5.09	-	-	5.05	5.04	5.04	5.05	5.06	5.08	5.10	-	5.03	5.04	5.03	-	5.02
6.0	6.08	6.09	-	-	6.05	6.04	6.04	6.05	6.06	6.08	6.10	-	6.03	6.04	6.03	-	6.02
7.0	7.09	7.10	-	-	7.06	7.05	7.05	7.06	7.08	7.10	-	7.03	7.04	7.05	7.03	7.02	7.03
8.0	8.09	8.10	-	-	8.06	8.05	8.05	8.06	8.08	8.10	-	8.03	8.04	8.05	8.03	8.02	8.03
9.0	9.09	9.10	-	-	9.06	9.05	9.05	9.06	9.08	9.10	-	9.03	9.04	9.05	9.03	9.02	9.03
10.0	10.09	10.10	-	-	10.06	10.05	10.05	10.06	10.08	10.10	-	10.03	10.04	10.05	10.03	10.02	10.03
11.0	-	-	-	-	-	11.06	-	11.08	11.10	-	-	11.04	11.05	11.06	-	-	11.03
12.0	-	-	-	-	-	12.06	-	12.08	12.10	-	-	12.04	12.05	12.06	-	-	12.03

Bore ∅ in mm	F 9	F 10	G 6	G 7	H 5	H 6	H 7	H 8	H 9	H 10	H 11	H 12	H 13	J 6	J 7	J 8	JS 7
1.0	1.02	-	-	1.01	1.00	1.00	-	1.01	-	1.02	1.04	1.06	1.09	1.00	1.00	1.00	1.00
2.0	2.02	-	-	2.01	2.00	2.00	-	2.01	-	2.02	2.04	2.06	2.09	2.00	2.00	2.00	2.00
3.0	3.02	-	-	3.01	3.00	3.00	-	3.01	-	3.02	3.04	3.06	3.09	3.00	3.00	3.00	3.00
4.0	4.03	4.04	4.01	4.01	4.00	4.00	-	4.01	4.02	4.03	4.05	4.08	-	4.00	4.00	4.00	4.00
5.0	5.03	5.04	5.01	5.01	5.00	5.00	-	5.01	5.02	5.03	5.05	5.08	-	5.00	5.00	5.00	5.00
6.0	6.03	6.04	6.01	6.01	6.00	6.00	-	6.01	6.02	6.03	6.05	6.08	-	6.00	6.00	6.00	6.00
7.0	-	7.05	7.01	7.01	7.00	7.00	7.01	7.01	7.02	7.04	7.06	7.10	-	7.00	7.00	7.00	7.00
8.0	-	8.05	8.01	8.01	8.00	8.00	8.01	8.01	8.02	8.04	8.06	8.10	-	8.00	8.00	8.00	8.00
9.0	-	9.05	9.01	9.01	9.00	9.00	9.01	9.01	9.02	9.04	9.06	9.10	-	9.00	9.00	9.00	9.00
10.0	-	10.05	10.01	10.01	10.00	10.00	10.01	10.02	10.02	10.04	10.06	10.10	-	10.00	10.00	10.00	10.00
11.0	11.04	11.06	11.01	-	11.00	-	11.01	11.02	11.03	11.05	11.07	-	-	11.00	11.00	11.00	11.00
12.0	12.04	12.06	12.01	-	12.00	-	12.01	12.02	12.03	12.05	12.07	-	-	12.00	12.00	12.00	12.00

Bore ∅ in mm	JS 8	JS 9	K 6	K 7	K 8	M 6	M 7	M 8	N 6	N 7	N 8	P 6	P 7	P 8	R 6	R 7	S 6
1.0	1.00	1.00	-	-	0.99	-	-	0.99	0.99	0.99	0.99	0.99	0.99	0.99	-	-	0.98
2.0	2.00	2.00	-	-	1.99	-	-	1.99	1.99	1.99	1.99	1.99	1.99	1.99	-	-	1.98
3.0	3.00	3.00	-	-	2.99	-	-	2.99	2.99	2.99	2.99	2.99	2.99	2.99	-	-	2.98
4.0	4.00	4.00	4.00	4.00	4.00	3.99	-	3.99	3.99	3.99	3.99	-	-	3.98	-	-	3.98
5.0	5.00	5.00	5.00	5.00	5.00	4.99	-	4.99	4.99	4.99	4.99	-	-	4.98	-	-	4.98
6.0	6.00	6.00	6.00	6.00	6.00	5.99	-	5.99	5.99	5.99	5.99	-	-	5.98	-	-	5.98
7.0	7.00	-	-	7.00	7.00	6.99	6.99	6.99	-	6.99	6.99	-	-	-	6.98	6.98	-
8.0	8.00	-	-	8.00	8.00	7.99	7.99	7.99	-	7.99	7.99	-	-	-	7.98	7.98	-
9.0	9.00	-	-	9.00	9.00	8.99	8.99	8.99	-	8.99	8.99	-	-	-	8.98	8.98	-
10.0	10.00	-	-	10.00	10.00	9.99	9.99	9.99	-	9.99	9.99	-	-	-	9.98	9.98	
11.0	11.00	-	-	11.00	11.00	10.99	10.99	10.99	-	10.99	10.99	10.98	10.98	10.97	-	-	10.97
12.0	12.00	-	-	12.00	12.00	11.99	11.99	11.99	-	11.99	11.99	11.98	11.98	11.97	-	-	11.97

Bore ∅ in mm	S 7	U 6	U 7	X 7	X 8	X 9	Z 7	Z 8	Z 9	Z 10	ZA 7	ZA 8	ZA 9	ZB 8	ZB 9		
1.0	0.98	0.98	0.98	-	0.97	0.97	0.97	0.97	-	0.96	0.96	-	-	0.95	0.95		
2.0	1.98	1.98	1.98	-	1.97	1.97	1.97	1.97	-	1.96	1.96	-	-	1.95	1.95		
3.0	2.98	2.98	2.98	-	2.97	2.97	2.97	2.97	-	2.96	2.96	-	-	2.95	2.95		
4.0	3.98	-	-	3.97	-	3.96	3.96	3.96	3.95	3.95	3.96	-	-	3.94	3.94		
5.0	4.98	-	-	4.97	-	4.96	4.96	4.96	4.95	4.95	4.96	-	-	4.94	4.94		
6.0	5.98	-	-	5.97	-	5.96	5.96	5.96	5.95	5.95	5.96	-	-	5.94	5.94		
7.0	-	6.97	6.97	-	6.96	6.95	6.96	6.95	-	6.94	6.94	6.94	-	-	6.92		
8.0	-	7.97	7.97	-	7.96	7.95	7.96	7.95	-	7.94	7.94	7.94	-	-	7.92		
9.0	-	8.97	8.97	-	8.96	8.95	8.96	8.95	-	8.94	8.94	8.94	-	-	8.92		
10.0	-	9.97	9.97	-	9.96	9.95	9.96	9.95	-	9.94	9.94	9.94	-	-	9.92		
11.0	10.97	-	-	10.06	10.95	-	10.95	10.94	-	10.93	-	10.93	-	10.90	10.90		
12.0	11.97	-	-	11.96	11.95	-	11.95	11.94	-	11.93	-	11.93	-	11.90	11.90		

Shell reamer

PREMUS

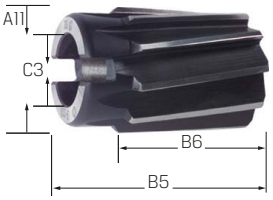
	P N/mm²	K HB	N N/mm²	
121000	⟨850	⟨150	Alu ⟨600	Copper, brass
	vc = m/min.			
121000	8-12	10 - 14	14-20	15-30

HSS-Co | H7 | DIN 219 B

Chamfer form B | Receiving hole 1:30 | Left twist 7°

Design:
With conical hole 1:30 for mounting to holder 121050

Use:
For reaming of through holes, as the chips are pushed in the cutting direction. Due to short lead it can be used in some blind hole applications.



N° article	121000	A11 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
25,0	●	25	45	32	13	8	0.200 - 0.300
26,0	○	26	45	32	13	8	0.200 - 0.300
28,0	○	28	45	32	13	8	0.200 - 0.300
30,0	●	30	45	32	13	8	0.300 - 0.500
32,0	○	32	50	36	16	10	0.300 - 0.500
34,0	○	34	50	36	16	10	0.300 - 0.500
35,0	●	35	50	36	16	10	0.300 - 0.500
36,0	○	36	56	40	19	10	0.300 - 0.500
38,0	○	38	56	40	19	10	0.300 - 0.500
40,0	●	40	56	40	19	10	0.300 - 0.500
42,0	○	42	56	40	19	10	0.300 - 0.500
44,0	●	44	63	45	22	12	0.300 - 0.500
45,0	○	45	63	45	22	12	0.300 - 0.500
50,0	●	50	63	45	22	12	0.300 - 0.500
52,0	○	52	71	50	27	12	0.300 - 0.500
55,0	●	55	71	50	27	12	0.300 - 0.500
60,0	●	60	71	50	27	12	0.300 - 0.500

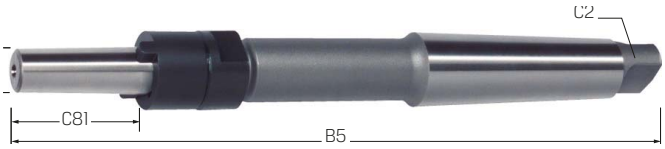
Arbors and accessories

PREMUS

Design:
- with short, conical mounting mandrel, taper 1:30
- complete with tang and ejector nut
- the entire holder is hardened and therefore extra strong

DIN 217 | Mounting mandrel 1:30 | MK shank

Use:
Arbor for shell reamers 121000



N° article	121050 short	C72 mm	C81 mm	B5 mm	C2
13	●	13	45	250	MK3
16	●	16	50	261	MK3
19	●	19	56	298	MK4
22	●	22	63	312	MK4
27	●	27	71	359	MK5

N° article	121060 Replacement tang	121070 Spare woodruff key	C72 mm
13	○	○	13
16	○	●	16
19	○	○	19
22	○	○	22
27	○	●	27

Hand reamer

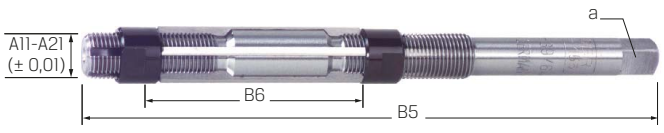
BECK MAPAL GROUP

	P N/mm²	K HB	N N/mm²	
122500	⟨850	⟨150	Alu ⟨600	Copper, brass
122550				

HSS | Factory standard | Straight shank with square

Design:
- blades HSS steel
- with large range of adjustment
- fine setting by using ring gauges or by use of a micrometer
- blades with conical chamfer, cutting edges curved relief ground and precisely rounded

Use:
Particularly suited for repairs that do not require close fit tolerances and for intermediate sizes. 122550 spare blades are finish-ground. Before inserting the blades, the blade grooves must be carefully cleaned



N° article	122500 adjustable	122550 Spare blade set	A11 mm	A21 mm	B5 mm	B6 mm	D1	a mm
6,4-7,2	○	○	6,4	7,2	110	32	4	3
7,2-8,0	○	○	7,2	8	110	32	4	3,4
8-9	●	○	8	9	115	34	5	3,8
9-10	●	○	9	10	115	34	5	4,3
10-11	●	○	10	11	115	34	5	4,9
11-12	●	○	11	12	125	35	5	4,9
12-13,5	●	○	12	13,5	135	41	5	6,2
13,5-15,5	●	○	13,5	15,5	146	50	5	7
15,5-18	●	○	15,5	18	166	60	5	8
18-21	●	○	18	21	178	65	5	9
21-24	○	○	21	24	195	76	5	11
24-27,5	●	○	24	27,5	218	82	5	12
27,5-31,5	●	○	27,5	31,5	245	86	5	14,5
31,5-37	○	○	31,5	37	280	98	6	18
37-45	●	○	37	45	325	108	6	20
45-55	○	○	45	55	370	118	6	26

Hand reamer

PREMUS

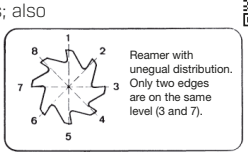
	P N/mm²	K HB	N N/mm²	
123000	⟨850	⟨150	Alu ⟨600	Copper, brass

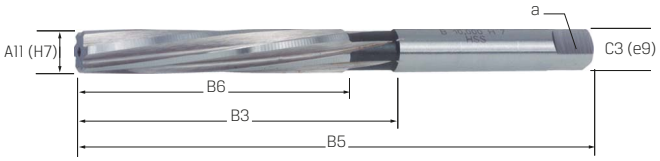
HSS | H7 | DIN 206

Chamfer form B | Left twist 7° | Straight shank with square

Design:
- with 7° left-hand flute and long chamfer

Use:
For manual or machine reaming. For through holes. Easy cutting thanks to spiral cutting edges; also suited for interrupted drillings





N° article	123000	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	a mm
2,0	●	2	–	50	25	2	4	1,6
2,5	●	2,5	–	58	29	2,5	4	2
3,0	●	3	–	62	31	3	6	2,4
3,5	○	3,5	47	71	35	3,5	6	2,7
4,0	●	4	50	76	38	4	6	3
4,5	●	4,5	53	81	41	4,5	6	3,4
5,0	●	5	56	87	44	5	6	3,8
5,5	●	5,5	59	93	47	5,5	6	4,3
6,0	●	6	59	93	47	6	6	4,3
7,0	●	7	66	107	54	7	6	5,5
8,0	●	8	70	115	58	8	6	6,2
9,0	●	9	75	124	62	9	6	7
10,0	●	10	80	133	66	10	6	8
11,0	●	11	86	142	71	11	6	9
12,0	●	12	91	152	76	12	6	9
13,0	●	13	91	152	76	13	6	10
14,0	●	14	97	163	81	14	8	11

N° article	123000	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	a mm
15,0	●	15	97	163	81	15	8	12
16,0	●	16	105	175	87	16	8	12
17,0	●	17	105	175	87	17	8	13
18,0	●	18	112	188	93	18	8	14,5
19,0	●	19	112	188	93	19	8	14,5
20,0	●	20	119	201	100	20	8	16
22,0	●	22	129	215	107	22	8	18
24,0	●	24	137	231	115	24	8	18
25,0	●	25	137	231	115	25	8	20
26,0	○	26	137	231	115	26	8	20
28,0	●	28	149	247	124	28	10	22
30,0	●	30	149	247	124	30	10	22
32,0	○	32	160	265	133	32	10	24
35,0	○	35	169	284	142	35	10	26
38,0	○	38	183	305	152	38	10	29
40,0	●	40	183	305	152	40	10	32

Taper pin hand reamer

PREMUS

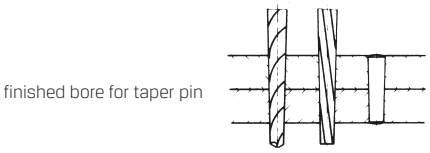
	P N/mm²	K HB	N N/mm²	
123800	<850	<150	Alu <600	Copper, brass

HSS | DIN 9 | Chamfer form B | Left twist 7° | 1:50 | Straight shank with square

Design:
- with parallel shank and square, right-hand cutting with taper 1:50
- helically fluted (approx. 7°) conical cutting edges (per 50 mm length by 1 mm)
- helically fluted and flute-ground quality

Use:
For reaming conically pre-drilled holes by hand. For taper pins DIN 1, DIN 258, DIN 7977 and DIN 7978. The output bore is best done with pinhole taper drills 101530

Note:
Pre-drill conically with pin hole taper drill 101530 (or stepwise with normal twist drills)





Nº article	123800	Nominal Ø mm	A11 mm	A21 mm	B5 mm	B6 mm	D1	C3 mm	a mm
3,0	●	3	2,9	4,06	80	58	5	4	3.15
4,0	●	4	3,9	5,26	93	68	5	5	4
5,0	●	5	4,9	6,36	100	73	5	6,3	5
6,0	●	6	5,9	8	135	105	6	8	6.3
8,0	●	8	7,9	10,8	180	145	6	10	8
10,0	●	10	9,9	13,4	215	175	6	12,5	10
12,0	●	12	11,8	16	255	210	8	14	11.2
16,0	●	16	15,8	20,4	280	230	8	18	14.5
20,0	●	20	19,8	24,8	310	250	8	22,4	18

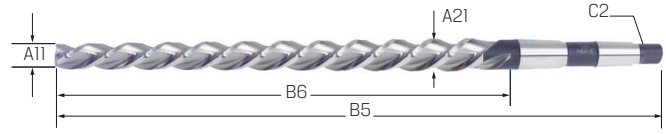
Taper pin reamer

PREMUS

	P N/mm²	K HB	N N/mm²	
124100	<850	<150	Alu <600	Copper, brass
	vc = m/min.			
124100	8-15	10 - 14	14-20	15-30

HSS-Co | DIN 2180 | Left twist 45° | 1:50 | MK shank

Use:
Machine reamer for reaming conical through-holes for taper pins to DIN 1, DIN 258, DIN 7977 and DIN 7978. Especially for long-chipping material. The peeling twist method of the machine taper pin reamer requires a large chip removal (do not pre-drill too large!). For pre-drilling, we recommend pin hole conical drill 101530



Nº article	124100	Nominal Ø mm	A11 mm	A21 mm	B5 mm	B6 mm	D1	C2	f mm/rev
8,0	○	8	7,9	10,8	227	145	3	MK1	0.100 - 0.200
10,0	●	10	9,9	13,4	257	175	3	MK1	0.100 - 0.200
12,0	●	12	11,8	16	315	210	3	MK2	0.200 - 0.300
16,0	●	16	15,8	20,4	335	230	3	MK2	0.200 - 0.300
20,0	○	20	19,8	24,8	375	250	5	MK3	0.200 - 0.300

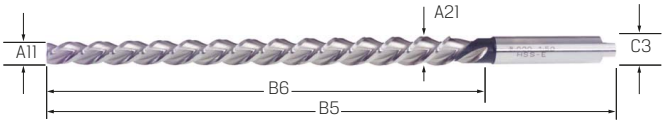
Taper pin reamer

PREMUS

	P N/mm²	K HB	N N/mm²	
124000	<850	<150	Alu <600	Copper, brass
	vc = m/min.			
124000	8-15	10 - 14	14-20	15-30

HSS-Co | DIN 2179 | Left twist 45° | 1:50 | Driver DIN 1809

Use:
Machine reamer for reaming conical through-holes for taper pins to DIN 1, DIN 258, DIN 7977 and DIN 7978. Especially for long-chipping material. The peeling twist method of the machine taper pin reamer requires a large chip removal (do not pre-drill too large!).
For pre-drilling, we recommend pin hole conical drill 101530



Nº article	124000	Nominal Ø mm	A11 mm	A21 mm	B5 mm	B6 mm	D1	C3 mm	f mm/rev
2,0	●	2	1,9	2,86	86	48	3	3,15	0.100 - 0.160
2,5	○	2,5	2,4	3,36	86	48	3	3,15	0.100 - 0.160
3,0	●	3	2,9	4,06	100	58	3	4	0.100 - 0.160
4,0	●	4	3,9	5,26	112	68	3	5	0.100 - 0.160
5,0	●	5	4,9	6,36	122	73	3	6,3	0.100 - 0.200
6,0	●	6	5,9	8	160	105	3	8	0.100 - 0.200
8,0	●	8	7,9	10,8	207	145	3	10	0.100 - 0.200
10,0	●	10	9,9	13,4	245	175	3	12,5	0.100 - 0.200
12,0	○	12	11,8	16	290	210	3	16	0.200 - 0.300

Rivet hole reamer

PREMUS

	P N/mm²	K HB	N N/mm²	
124500	<850	<150	Alu <600	Copper, brass
	vc = m/min.			
124500	8-15	10 - 14	14-20	15-30

HSS | DIN 311 | Left twist 25° | 1:10 | MK shank

Design:
- reamer with conical increasing lead (taper 1:10 to lead length)
- the strong web and the curved body make this reamer a robust tool
- due to its helical flute it operates using a soft, shearing cut

Use:
At mounting of components when displaced bores have to be aligned with one another or reamed or when rivet holes have to be enlarged. In boiler construction bridge reamers are used on compressed air portable drills



Nº article	124500	Nominal Ø mm	A11 mm	B3 mm	B5 mm	B6 mm	D1	C2	f mm/rev
8,4	○	8,4	5,9	95,5	161	85	3	MK1	0.100 - 0.200
10,0	○	10	7	105,5	171	95	4	MK1	0.100 - 0.200
12,0	●	12	8,1	119	199	105	4	MK2	0.200 - 0.300
13,0	●	13	9,1	119	199	105	4	MK2	0.200 - 0.300
14,0	●	14	9,8	129	209	115	4	MK2	0.200 - 0.300
15,0	○	15	10,5	139	219	125	4	MK2	0.200 - 0.300
16,0	●	16	11,2	149	229	135	4	MK2	0.200 - 0.300
17,0	●	17	11,9	152	251	135	4	MK3	0.200 - 0.300
18,0	●	18	12,2	162	261	145	4	MK3	0.200 - 0.300
19,0	○	19	13,2	162	261	145	4	MK3	0.200 - 0.300
20,0	○	20	13,8	172	271	155	4	MK3	0.200 - 0.300
21,0	○	21	14,8	172	271	155	4	MK3	0.200 - 0.300
22,0	●	22	15,4	182	281	165	4	MK3	0.200 - 0.300
23,0	○	23	16,4	182	281	165	4	MK3	0.200 - 0.300
24,0	○	24	16,8	197	296	180	4	MK3	0.200 - 0.300
25,0	○	25	17,8	197	296	180	4	MK3	0.200 - 0.300
26,0	○	26	18,8	197	296	180	4	MK3	0.200 - 0.300

Machine taper pin reamer

PREMUS®

	P N/mm²	N N/mm²	
125030	⟨850	Alu ⟨600	Copper, brass
	vc = m/min.		
125030	8-15	14-20	15-30

HSS-Co | H7 | DIN 212-1 | DIN 212-2 | Form C | Left twist 45° | Straight shank | UNI | CAD | vc

Use:
For reaming through holes in long-chipping materials. Not suitable for blind holes, as the chips are pushed into cutting direction and the first cut is very long Helix and flute geometry of this tool demand large chip removal.
Up to Ø 3.00 mm with centre points on both sides.
From Ø 4.00 mm with centre hole



N° article	125030	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
1,0	○	1	15	34	5,5	1	2	0.100 - 0.160
1,5	○	1,5	18	40	8	1,5	2	0.100 - 0.160
2,0	○	2	24	49	11	2	3	0.100 - 0.160
2,5	○	2,5	28	57	14	2,5	3	0.100 - 0.160
3,0	○	3	32	61	15	3	3	0.100 - 0.160
4,0	●	4	43	75	19	4	3	0.100 - 0.160
5,0	●	5	52	86	23	5	3	0.100 - 0.200
6,0	●	6	57	93	26	5,6	3	0.100 - 0.200
7,0	○	7	69	109	31	7,1	3	0.100 - 0.200
8,0	●	8	75	117	33	8	3	0.100 - 0.200
9,0	●	9	81	125	36	9	3	0.100 - 0.200
10,0	●	10	87	133	38	10	3	0.100 - 0.200
12,0	●	12	105	151	44	10	3	0.200 - 0.300
14,0	○	14	110	160	47	12,5	3	0.200 - 0.300
15,0	○	15	112	162	50	12,5	3	0.200 - 0.300
16,0	○	16	120	170	52	12,5	3	0.200 - 0.300

Machine reamer

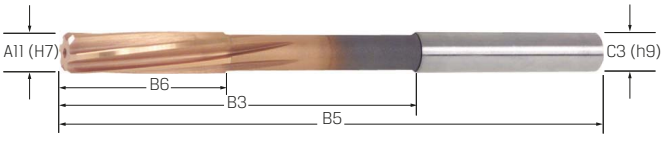
PREMUS®

	P N/mm²	K HB	N N/mm²	
125050	⟨1000	⟨200	Copper, brass	
	vc = m/min.			
125050	8-15	10 - 14	15-30	

HSS-E | coated | H7 | DIN 212-1 | Form B | Left twist | Straight shank | UNI | vc

Design:
With long cutting edges and left-hand spiral. Even number of teeth and uneven tooth pitch.

Use:
For reaming through holes, as the chips are pushed in the cutting direction.

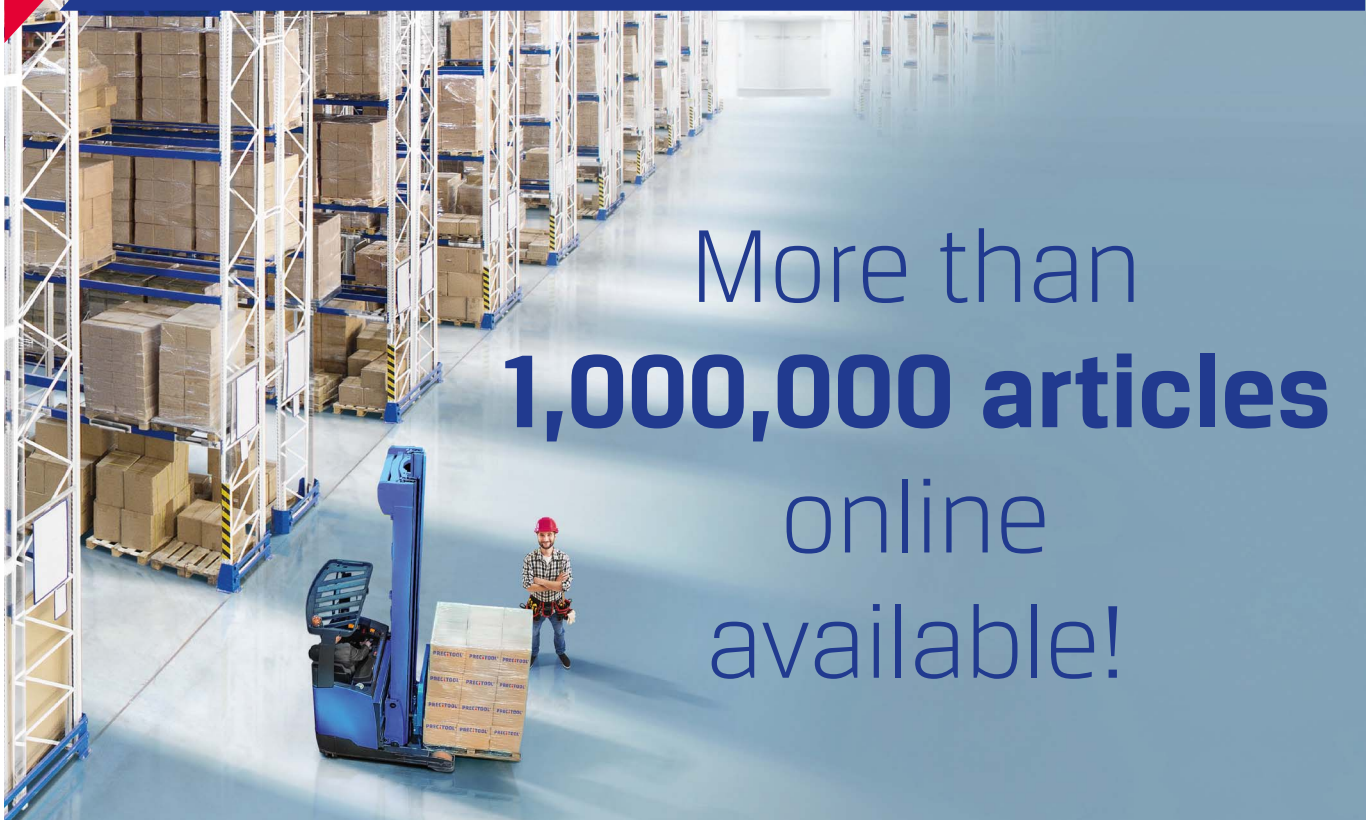


N° article	125050 TiN	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
4,0	●	4	43	75	19	4	6	0.100 - 0.160
5,0	●	5	52	86	23	5	6	0.100 - 0.200
6,0	●	6	57	93	26	5,6	6	0.100 - 0.200
7,0	○	7	69	109	31	7,1	6	0.100 - 0.200
8,0	●	8	75	117	33	8	6	0.100 - 0.200
9,0	○	9	81	125	36	9	6	0.100 - 0.200
10,0	●	10	87	133	38	10	6	0.100 - 0.200
11,0	○	11	96	142	41	10	6	0.100 - 0.200
12,0	●	12	105	151	44	10	6	0.200 - 0.300
13,0	○	13	105	151	44	10	6	0.200 - 0.300
14,0	●	14	110	160	47	12,5	8	0.200 - 0.300
15,0	○	15	112	162	50	12,5	8	0.200 - 0.300
16,0	●	16	120	170	52	12,5	8	0.200 - 0.300

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NC machine reamer

BECK MAPAL GROUP

	P N/mm²	K HB	N N/mm²	
125100	<850	<150	Alu <600	Copper, brass
	vc = m/min.			
125100	8-15	10 - 14	14-20	15-30

HSS-Co | DIN 212-3 | Form B | Left twist | 6535 HA shank | UNI | CAD | Vc

Design:
- with straight shank dimensions
- up to Ø 3.75 mm with centring tips on both sides
- from Ø 3.76 mm with centre holes on both ends

Manufacturing tolerances of integer Ø and 1/10 dimensions for tolerance field H 7 of the reamed hole
1/100 dimensions
Nominal dimensions from 0.95 up to 5.5 mm = +0.004/0
Nominal dimensions from 5.51 up to 6 mm = +0.005/0

Use:
For standardised mounting to hydraulic expansion chucks and high-precision chucks. For through holes, as the chips are pushed in the cutting direction. Due to L.H. helix only conditionally fit for blind holes



N° article	125100 straight shank dimension	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
1	●	1	15	34	5,5	1	3	0.100 - 0.160
1,01	○	1,01	15	34	5,5	1	3	0.100 - 0.160
1,02	●	1,02	15	34	5,5	1	3	0.100 - 0.160
1,5	●	1,5	18	40	8	2	3	0.100 - 0.160
1,51	●	1,51	20	43	9	2	3	0.100 - 0.160
1,52	○	1,52	20	43	9	2	3	0.100 - 0.160
1,6	●	1,6	20	43	9	2	3	0.100 - 0.160
1,7	●	1,7	20	43	9	2	3	0.100 - 0.160
1,8	●	1,8	22	46	10	2	4	0.100 - 0.160
1,9	○	1,9	22	46	10	2	4	0.100 - 0.160
1,97	○	1,97	24	49	11	2	4	0.100 - 0.160
1,98	●	1,98	24	49	11	2	4	0.100 - 0.160
1,99	●	1,99	24	49	11	2	4	0.100 - 0.160
2	●	2	24	49	11	2	4	0.100 - 0.160
2,01	●	2,01	24	49	11	2	4	0.100 - 0.160
2,02	●	2,02	24	49	11	2	4	0.100 - 0.160
2,1	●	2,1	24	49	11	2	4	0.100 - 0.160
2,2	●	2,2	25	53	12	3	4	0.100 - 0.160
2,3	●	2,3	25	53	12	3	4	0.100 - 0.160
2,4	●	2,4	28	57	14	3	4	0.100 - 0.160
2,48	●	2,48	28	57	14	3	4	0.100 - 0.160
2,49	○	2,49	28	57	14	3	4	0.100 - 0.160
2,5	●	2,5	28	57	14	3	4	0.100 - 0.160
2,51	○	2,51	28	57	14	3	4	0.100 - 0.160
2,52	●	2,52	28	57	14	3	4	0.100 - 0.160
2,6	●	2,6	28	57	14	3	4	0.100 - 0.160
2,7	●	2,7	32	61	15	3	6	0.100 - 0.160
2,8	●	2,8	32	61	15	3	6	0.100 - 0.160
2,9	○	2,9	32	61	15	3	6	0.100 - 0.160
2,97	●	2,97	32	61	15	3	6	0.100 - 0.160
2,98	●	2,98	32	61	15	3	6	0.100 - 0.160
2,99	●	2,99	32	61	15	3	6	0.100 - 0.160
3	●	3	32	61	15	3	6	0.100 - 0.160
3,01	●	3,01	32	61	15	3	6	0.100 - 0.160
3,02	●	3,02	32	61	15	3	6	0.100 - 0.160
3,1	●	3,1	35	65	16	4	6	0.100 - 0.160
3,2	●	3,2	35	65	16	4	6	0.100 - 0.160
3,3	●	3,3	35	65	16	4	6	0.100 - 0.160
3,4	●	3,4	40	70	18	4	6	0.100 - 0.160
3,5	●	3,5	40	70	18	4	6	0.100 - 0.160
3,6	●	3,6	40	70	18	4	6	0.100 - 0.160
3,7	●	3,7	40	70	18	4	6	0.100 - 0.160
3,8	●	3,8	43	75	19	4	6	0.100 - 0.160
3,9	●	3,9	43	75	19	4	6	0.100 - 0.160
3,97	○	3,97	43	75	19	4	6	0.100 - 0.160
3,98	●	3,98	43	75	19	4	6	0.100 - 0.160
3,99	●	3,99	43	75	19	4	6	0.100 - 0.160
4	●	4	43	75	19	4	6	0.100 - 0.160
4,01	●	4,01	43	75	19	4	6	0.100 - 0.160

N° article	125100 straight shank dimension	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
4,02	●	4,02	43	75	19	4	6	0.100 - 0.160
4,1	●	4,1	43	75	19	4	6	0.100 - 0.160
4,2	●	4,2	43	75	19	4	6	0.100 - 0.160
4,3	●	4,3	47	80	21	5	6	0.100 - 0.160
4,4	○	4,4	47	80	21	5	6	0.100 - 0.160
4,5	●	4,5	47	80	21	5	6	0.100 - 0.160
4,6	●	4,6	47	80	21	5	6	0.100 - 0.160
4,7	○	4,7	47	80	21	5	6	0.100 - 0.160
4,8	●	4,8	52	86	23	5	6	0.100 - 0.160
4,9	●	4,9	52	86	23	5	6	0.100 - 0.160
4,97	○	4,97	52	86	23	5	6	0.100 - 0.160
4,98	●	4,98	52	86	23	5	6	0.100 - 0.160
4,99	●	4,99	52	86	23	5	6	0.100 - 0.160
5	●	5	52	86	23	5	6	0.100 - 0.200
5,01	●	5,01	52	86	23	5	6	0.100 - 0.200
5,02	●	5,02	52	86	23	5	6	0.100 - 0.200
5,1	●	5,1	52	86	23	5	6	0.100 - 0.200
5,2	●	5,2	52	86	23	5	6	0.100 - 0.200
5,3	●	5,3	52	86	23	5	6	0.100 - 0.200
5,4	○	5,4	57	93	26	6	6	0.100 - 0.200
5,5	●	5,5	57	93	26	6	6	0.100 - 0.200
5,6	○	5,6	57	93	26	6	6	0.100 - 0.200
5,7	●	5,7	57	93	26	6	6	0.100 - 0.200
5,8	●	5,8	57	93	26	6	6	0.100 - 0.200
5,9	○	5,9	57	93	26	6	6	0.100 - 0.200
5,97	●	5,97	57	93	26	6	6	0.100 - 0.200
5,98	●	5,98	57	93	26	6	6	0.100 - 0.200
5,99	●	5,99	57	93	26	6	6	0.100 - 0.200
6	●	6	57	93	26	6	6	0.100 - 0.200
6,01	●	6,01	57	93	26	6	6	0.100 - 0.200
6,02	●	6,02	57	93	26	6	6	0.100 - 0.200
6,1	●	6,1	63	101	28	6	6	0.100 - 0.200
6,2	●	6,2	63	101	28	6	6	0.100 - 0.200
6,3	●	6,3	63	101	28	6	6	0.100 - 0.200
6,4	●	6,4	63	101	28	6	6	0.100 - 0.200
6,5	●	6,5	63	101	28	6	6	0.100 - 0.200
6,6	●	6,6	63	101	28	6	6	0.100 - 0.200
6,7	○	6,7	63	101	28	6	6	0.100 - 0.200
6,8	○	6,8	69	109	31	8	6	0.100 - 0.200
6,9	○	6,9	69	109	31	8	6	0.100 - 0.200
7	●	7	69	109	31	8	6	0.100 - 0.200
7,1	○	7,1	69	109	31	8	6	0.100 - 0.200
7,2	○	7,2	69	109	31	8	6	0.100 - 0.200
7,3	○	7,3	69	109	31	8	6	0.100 - 0.200
7,4	○	7,4	69	109	31	8	6	0.100 - 0.200
7,5	●	7,5	69	109	31	8	6	0.100 - 0.200
7,6	○	7,6	75	117	33	8	6	0.100 - 0.200
7,7	○	7,7	75	117	33	8	6	0.100 - 0.200
7,8	○	7,8	75	117	33	8	6	0.100 - 0.200

N° article	125100 straight shank dimension	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
7,9	○	7,9	75	117	33	8	6	0.100 - 0.200
7,97	●	7,97	75	117	33	8	6	0.100 - 0.200
7,98	●	7,98	75	117	33	8	6	0.100 - 0.200
7,99	●	7,99	75	117	33	8	6	0.100 - 0.200
8	●	8	75	117	33	8	6	0.100 - 0.200
8,01	●	8,01	75	117	33	8	6	0.100 - 0.200
8,02	●	8,02	75	117	33	8	6	0.100 - 0.200
8,1	●	8,1	75	117	33	8	6	0.100 - 0.200
8,2	●	8,2	75	117	33	8	6	0.100 - 0.200
8,3	○	8,3	75	117	33	8	6	0.100 - 0.200
8,4	○	8,4	75	117	33	8	6	0.100 - 0.200
8,5	●	8,5	75	117	33	8	6	0.100 - 0.200
8,6	○	8,6	81	125	36	8	6	0.100 - 0.200
8,7	○	8,7	81	125	36	10	6	0.100 - 0.200
8,8	●	8,8	81	125	36	10	6	0.100 - 0.200
8,9	○	8,9	81	125	36	10	6	0.100 - 0.200
9	●	9	81	125	36	10	6	0.100 - 0.200
9,01	○	9,01	81	125	36	10	6	0.100 - 0.200
9,02	○	9,02	81	125	36	10	6	0.100 - 0.200
9,1	○	9,1	81	125	36	10	6	0.100 - 0.200
9,2	○	9,2	81	125	36	10	6	0.100 - 0.200
9,3	○	9,3	81	125	36	10	6	0.100 - 0.200
9,4	○	9,4	81	125	36	10	6	0.100 - 0.200
9,5	●	9,5	81	125	36	10	6	0.100 - 0.200
9,6	●	9,6	87	133	38	10	6	0.100 - 0.200
9,7	○	9,7	87	133	38	10	6	0.100 - 0.200
9,8	○	9,8	87	133	38	10	6	0.100 - 0.200
9,9	○	9,9	87	133	38	10	6	0.100 - 0.200
9,97	●	9,97	87	133	38	10	6	0.100 - 0.200
9,98	●	9,98	87	133	38	10	6	0.100 - 0.200
9,99	●	9,99	87	133	38	10	6	0.100 - 0.200
10	●	10	87	133	38	10	6	0.100 - 0.200
10,01	●	10,01	87	133	38	10	6	0.100 - 0.200
10,02	●	10,02	87	133	38	10	6	0.100 - 0.200
11	●	11	96	142	41	10	6	0.100 - 0.200
11,97	○	11,97	105	151	44	10	6	0.100 - 0.200
11,98	●	11,98	105	151	44	10	6	0.100 - 0.200
11,99	●	11,99	105	151	44	10	6	0.100 - 0.200
12	●	12	105	151	44	10	6	0.200 - 0.300
13	●	13	105	151	44	10	6	0.200 - 0.300
14	●	14	110	160	47	14	8	0.200 - 0.300
15	●	15	112	162	50	14	8	0.200 - 0.300
16	●	16	120	170	52	14	8	0.200 - 0.300
17	●	17	123	175	54	14	8	0.200 - 0.300
18	●	18	130	182	56	14	8	0.200 - 0.300
19	○	19	131	189	58	16	8	0.200 - 0.300
20	●	20	137	195	60	16	8	0.200 - 0.300

High performance reamer HNC

BECK MAPAL GROUP

	P N/mm²	K HB
125150	〈1500	〈800
125152		
vc = m/min.		
125150	15-45	15 - 40
125152		

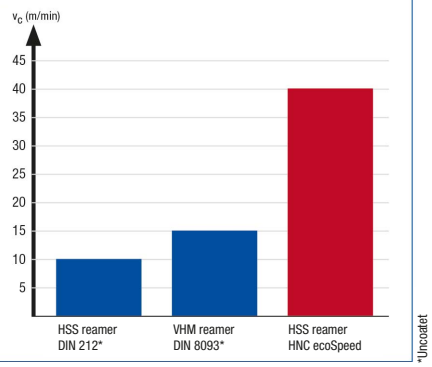
HSS | coated | H7 | Factory standard | Through hole | Blind hole | 6535 HA shank

ICS | HPC | P | CAD

Design:
- with internal coolant supply
- HPC geometry, EU division
- straight grooved
- TiAlN coated
- with cylindrical NC shank for mounting in hydraulic, shrink-fit and high-precision chucks
- type DL = through hole
- type SL = blind hole

REASON NO. 1

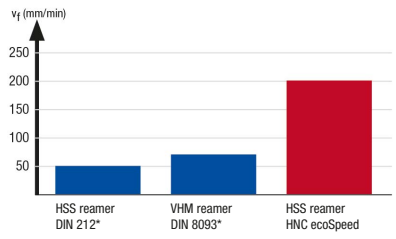
Four times higher cutting speed through internal cooling.



*Uncoatet

REASON NO. 2

Four times higher feed through HNC geometry.

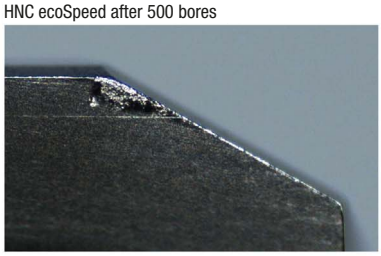


*Uncoatet

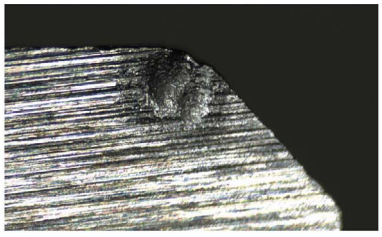
REASON NO. 3

Double tool life.

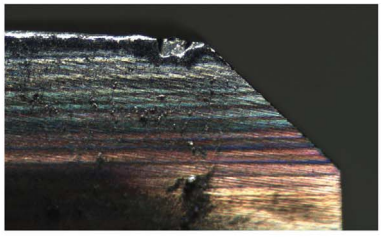
HNC ecoSpeed after 500 bores

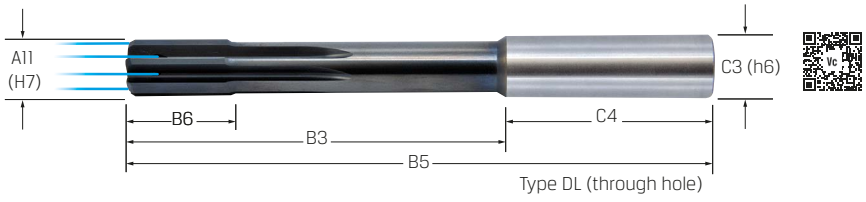


HSS reamer DIN 212 after 250 bores

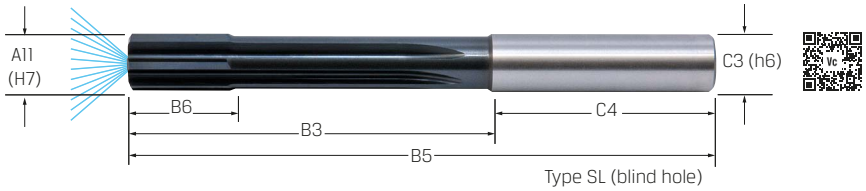


VHM reamer DIN 8093 after 250 bores





Type DL (through hole)



Type SL (blind hole)

N° article	125150 TiAlN, type DL	125152 TiAlN, type SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
6,00	○	○	6	64	100	16	8	36	6	0.120 - 0.150
7,00	○	○	7	64	100	16	8	36	6	0.120 - 0.150
8,00	○	○	8	64	100	16	8	36	6	0.120 - 0.150
9,00	○	○	9	60	100	20	10	40	6	0.150 - 0.200
10,00	○	○	10	80	120	20	10	40	6	0.150 - 0.200
11,00	○	○	11	75	120	20	12	45	6	0.180 - 0.250
12,00	○	○	12	75	120	20	12	45	6	0.180 - 0.250
13,00	○	○	13	85	130	22	14	45	6	0.180 - 0.250
14,00	○	○	14	85	130	22	14	45	6	0.180 - 0.250
15,00	○	○	15	82	130	22	16	48	6	0.250 - 0.300
16,00	○	○	16	102	150	25	16	48	6	0.250 - 0.300
17,00	○	○	17	102	150	25	18	48	8	0.250 - 0.300

N° article	125150 TiAlN, type DL	125152 TiAlN, type SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
18,00	○	○	18	102	150	25	18	48	8	0.250 - 0.300
19,00	○	○	19	100	150	25	20	50	8	0.250 - 0.300
20,00	○	○	20	100	150	25	20	50	8	0.250 - 0.300
22,00	○	○	22	110	160	25	20	50	8	0.300 - 0.400
24,00	○	○	24	130	180	25	20	50	8	0.300 - 0.400
25,00	○	○	25	130	180	25	20	50	8	0.300 - 0.400
28,00	○	○	28	124	180	25	25	56	8	0.400 - 0.500
30,00	○	○	30	144	200	25	25	56	8	0.400 - 0.500
32,00	○	○	32	144	200	25	25	56	8	0.450 - 0.600
36,00	○	○	36	144	200	25	25	56	8	0.450 - 0.600
40,00	○	○	40	144	200	25	25	56	8	0.450 - 0.600

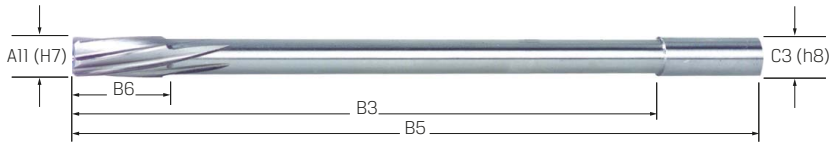
Machine reamer

PREMUS

	P N/mm²	K HB	N N/mm²	
125200	<850	<150	Alu <600	
	vc = m/min.			
125200	8-15	10 - 14	14-20	14-20

HSS-Co | H7 | Factory standard | Form D | Teeth 6 | Left twist 10° | Straight shank | UNI

Use:
Specially for mould making, for reaming deep or hard-to-reach bores



N° article	125200 long	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	f mm/rev
1,5	○	1,5	35	55	12	1,5	0.100 - 0.160
2,0	●	2	45	65	14	2	0.100 - 0.160
2,5	●	2,5	55	75	14	2,5	0.100 - 0.160
3,0	●	3	70	90	14	3	0.100 - 0.160
4,0	●	4	80	105	16	4	0.100 - 0.160
5,0	●	5	90	115	16	5	0.100 - 0.200
6,0	●	6	100	130	16	6	0.100 - 0.200

N° article	125200 long	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	f mm/rev
6,5	●	6,5	100	130	16	6	0.100 - 0.200
7,0	●	7	110	140	18	7	0.100 - 0.200
8,0	●	8	130	160	18	8	0.100 - 0.200
9,0	○	9	140	175	18	9	0.100 - 0.200
10,0	●	10	150	190	20	100	0.100 - 0.200
12,0	●	12	160	210	20	12	0.100 - 0.200

Machine reamer

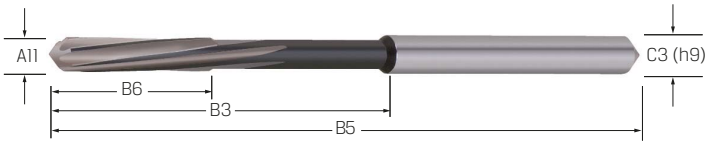
PREMUS

	P N/mm²	K HB	N N/mm²	
125500	<850	<150	Alu <600	Copper, brass
	vc = m/min.			
125500	8-15	10 - 14	14-20	15-30

HSS-Co | DIN 212-1 | DIN 212-2 | Form B | Left twist 10° | Straight shank | UNI

Use:
For tool-making and mechanical engineering to ream holes with tolerances out of fit H7.
Ø up to 3.75 with centre point on both sides
Ø from 3.76 mm with centring hole and tang

Manufacturing tolerances:
Ø 0.95 - 5.50 +0.004/0
Ø 5.51 - 12.05 +0.005/0



A11 mm von - bis (0,01 stgd.)	125500 1/100 steigend	B3 mm	B5 mm	B6 mm	C3 mm	Z	f mm/rev
0,95 - 1,06	29,80	15	34	5,5	1	3	0,100 - 0,160
1,07 - 1,18	29,80	15,5	36	6,5	1,1	3	0,100 - 0,160
1,19 - 1,32	29,80	16,5	38	7,5	1,2	3	0,100 - 0,160
1,33 - 1,39	29,80	18	40	8	1,4	3	0,100 - 0,160
1,40 - 1,41	27,65	18	40	8	1,4	3	0,100 - 0,160
1,42 - 1,49	27,65	18	40	8	1,5	3	0,100 - 0,160
1,50	25,95	18	40	8	1,5	3	0,100 - 0,160
1,51 - 1,70	25,95	20	43	9	1,6	3	0,100 - 0,160
1,71 - 1,90	25,95	22	46	10	1,8	4	0,100 - 0,160
1,91 - 1,99	25,95	24	49	11	2	4	0,100 - 0,160
2,00 - 2,09	24,50	24	49	11	2	4	0,100 - 0,160
2,10 - 2,12	28,05	24	49	11	2	4	0,100 - 0,160
2,13 - 2,36	28,05	25	53	12	2,2	4	0,100 - 0,160
2,37 - 2,49	28,05	29	57	14	2,5	4	0,100 - 0,160
2,50 - 2,59	24,20	29	57	14	2,5	4	0,100 - 0,160
2,60 - 2,65	28,75	29	57	14	2,5	4	0,100 - 0,160
2,66 - 2,99	28,75	33	61	15	3	6	0,100 - 0,160
3,00 - 3,03	21,35	33	61	15	3	6	0,100 - 0,160
3,04 - 3,09	21,35	37	65	16	3,2	6	0,100 - 0,160
3,10 - 3,35	27,65	37	65	16	3,2	6	0,100 - 0,160
3,36 - 3,49	27,65	42	70	18	3,5	6	0,100 - 0,160

A11 mm von - bis (0,01 stgd.)	125500 1/100 steigend	B3 mm	B5 mm	B6 mm	C3 mm	Z	f mm/rev
3,50 - 3,59	24,20	42	70	18	3,5	6	0,100 - 0,160
3,60 - 3,75	30,15	42	70	18	3,5	6	0,100 - 0,160
3,76 - 3,81	30,15	47	75	19	4	6	0,100 - 0,160
3,82 - 4,20	23,80	47	75	19	4	6	0,100 - 0,160
4,21 - 4,25	28,35	47	75	19	4	6	0,100 - 0,160
4,26 - 4,75	28,35	52	80	21	4,5	6	0,100 - 0,160
4,76 - 5,20	25,60	58	86	23	5	6	0,100 - 0,160
5,21 - 5,30	28,05	58	86	23	5	6	0,100 - 0,200
5,31 - 6,03	28,05	57	93	26	5,6	6	0,100 - 0,200
6,04 - 6,11	28,05	65	101	28	6,3	6	0,100 - 0,200
6,12 - 6,70	30,15	65	101	28	6,3	6	0,100 - 0,200
6,71 - 7,50	30,15	73	109	31	7,1	6	0,100 - 0,200
7,51 - 8,20	30,15	81	117	33	8	6	0,100 - 0,200
8,21 - 8,50	38,55	81	117	33	8	6	0,100 - 0,200
8,51 - 9,50	38,55	85	125	36	9	6	0,100 - 0,200
9,52 - 10,20	38,55	93	133	38	10	6	0,100 - 0,200
10,21 - 10,60	49,75	93	133	38	10	6	0,100 - 0,200
10,61 - 11,20	49,75	102	142	41	10	6	0,100 - 0,200
11,21 - 11,80	56,40	102	142	41	10	6	0,100 - 0,200
11,81 - 12,05	56,40	111	151	44	10	6	0,100 - 0,200

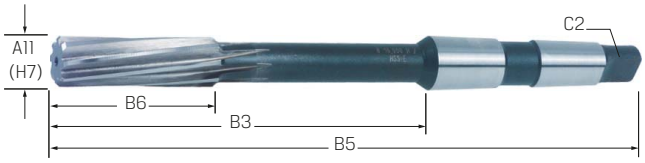
Machine reamer

PREMUS

	P N/mm²	K HB	N N/mm²	
128000	⟨850	⟨150	Alu ⟨600	Copper, brass
	vc = m/min.			
128000	8-15	10 - 14	14-20	15-30

HSS-Co | H7 | DIN 208 | Form B | Left twist | MK shank | UNI

Use:
For reaming of through holes, as the chips are guided through the left-hand helical grooves in the cutting direction



N° article	128000	A11 mm	B3 mm	B5 mm	B6 mm	D1	C2	f mm/rev
5,0	●	5	67,5	133	23	6	MK1	0.100 - 0.200
6,0	●	6	72,5	138	26	6	MK1	0.100 - 0.200
7,0	○	7	84,5	150	31	6	MK1	0.100 - 0.200
8,0	●	8	90,5	156	33	6	MK1	0.100 - 0.200
9,0	○	9	96,5	162	36	6	MK1	0.100 - 0.200
10,0	●	10	102,5	168	38	6	MK2	0.100 - 0.200
11,0	●	11	109,5	175	41	6	MK1	0.100 - 0.200
12,0	●	12	116,5	182	44	6	MK1	0.200 - 0.300
13,0	●	13	116,5	182	44	6	MK1	0.200 - 0.300
14,0	●	14	123,5	189	47	8	MK1	0.200 - 0.300
15,0	●	15	124	204	50	8	MK2	0.200 - 0.300
16,0	●	16	130	210	52	8	MK2	0.200 - 0.300
17,0	●	17	134	214	54	8	MK2	0.200 - 0.300
18,0	●	18	139	219	56	8	MK2	0.200 - 0.300
19,0	●	19	143	223	58	8	MK2	0.200 - 0.300
20,0	●	20	148	228	60	8	MK2	0.200 - 0.300
21,0	●	21	152	232	62	8	MK2	0.200 - 0.300
22,0	●	22	157	237	64	8	MK2	0.200 - 0.300

N° article	128000	A11 mm	B3 mm	B5 mm	B6 mm	D1	C2	f mm/rev
23,0	●	23	161	241	66	8	MK2	0.200 - 0.300
24,0	●	24	169	268	68	8	MK3	0.200 - 0.300
25,0	●	25	169	268	68	8	MK3	0.200 - 0.300
26,0	●	26	174	273	70	8	MK3	0.200 - 0.300
27,0	●	27	178	277	71	10	MK3	0.200 - 0.300
28,0	●	28	178	277	71	10	MK3	0.200 - 0.300
29,0	○	29	182	281	73	10	MK3	0.200 - 0.300
30,0	●	30	182	281	73	10	MK3	0.300 - 0.500
32,0	●	32	193	317	77	10	MK4	0.300 - 0.500
34,0	●	34	197	321	78	10	MK4	0.300 - 0.500
35,0	●	35	197	321	78	10	MK4	0.300 - 0.500
36,0	●	36	201	325	79	10	MK4	0.300 - 0.500
38,0	●	38	205	329	81	10	MK4	0.300 - 0.500
40,0	●	40	205	329	81	10	MK4	0.300 - 0.500
42,0	●	42	209	333	82	10	MK4	0.300 - 0.500
45,0	●	45	212	336	83	12	MK4	0.300 - 0.500
48,0	○	48	220	344	86	12	MK4	0.300 - 0.500
50,0	●	50	220	344	86	12	MK4	0.300 - 0.500

Machine reamer

PREMUS

	P N/mm²	K HB	N N/mm²	
128200	⟨850	⟨150	Alu ⟨600	Copper, brass
	vc = m/min.			
128200	8-15	10 - 14	14-20	15-30

HSS-Co | H7 | Factory standard | Form D | Left twist 10° | MK shank | UNI

Use:
Especially for tool and mould making, for reaming deep or difficult to access bores



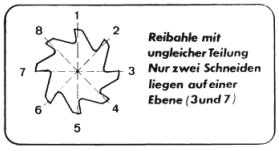
N° article	128200 long	A11 mm	B3 mm	B5 mm	B6 mm	D1	C2	f mm/rev
13,0	○	13	180	245	22	8	MK1	0.200 - 0.350
14,0	●	14	180	245	22	8	MK1	0.200 - 0.350
15,0	●	15	180	260	22	8	MK2	0.200 - 0.350
16,0	●	16	180	260	25	8	MK2	0.200 - 0.350
18,0	○	18	180	260	25	8	MK2	0.200 - 0.350
20,0	●	20	190	270	28	8	MK2	0.200 - 0.350
22,0	○	22	200	280	28	8	MK2	0.200 - 0.350
24,0	○	24	200	300	32	8	MK3	0.200 - 0.350
25,0	●	25	200	320	32	8	MK3	0.200 - 0.350
26,0	○	26	200	330	32	10	MK3	0.200 - 0.350
28,0	○	28	240	340	32	10	MK3	0.200 - 0.350
30,0	○	30	250	350	36	10	MK3	0.300 - 0.500
32,0	○	32	250	375	36	10	MK4	0.300 - 0.500
34,0	○	34	250	375	36	10	MK4	0.300 - 0.500
36,0	○	36	250	375	40	10	MK4	0.300 - 0.500
38,0	○	38	270	395	40	10	MK4	0.300 - 0.500
40,0	○	40	270	395	40	12	MK4	0.300 - 0.500
42,0	○	42	280	405	40	12	MK4	0.300 - 0.500
45,0	○	45	280	405	45	12	MK4	0.300 - 0.500
50,0	○	50	290	415	45	12	MK4	0.300 - 0.500

	P N/mm²	K HB	N N/mm²	
128540	⟨1200	⟨300	Copper, brass, Alu ⟨600	Plastics
	vc = m/min.			
128540	8-20	10 - 20	20-60	10-50

Carbide cutting edge | H7 | DIN 8094 | Form B | Left twist | MK shank | UNI

Use:
With carbide inserts K10, for use on highly abrasive materials, e.g. grey cast iron, chilled cast iron, non-ferrous metals, plastics etc. Carbide reamers last substantially longer with dimensional accuracy!

Prerequisite:
Rigid, well supported machines





N° article	128540	A11 mm	B3 mm	B5 mm	B6 mm	D1	C2	f mm/rev
10,0	●	10	102,5	168	38	6	MK1	0.150 - 0.200
12,0	●	12	116,5	182	44	6	MK1	0.200 - 0.300
14,0	●	14	123,5	189	47	6	MK1	0.200 - 0.300
15,0	●	15	124	204	50	6	MK2	0.200 - 0.300
16,0	●	16	130	210	52	6	MK2	0.200 - 0.400
17,0	●	17	134	214	54	6	MK2	0.200 - 0.400
18,0	●	18	139	219	56	6	MK2	0.200 - 0.400
19,0	○	19	143	223	58	6	MK2	0.200 - 0.400
20,0	●	20	148	228	60	6	MK2	0.200 - 0.400
22,0	●	22	157	237	64	6	MK2	0.200 - 0.400
24,0	●	24	169	268	68	8	MK3	0.200 - 0.400
25,0	●	25	169	268	68	8	MK3	0.200 - 0.400
26,0	○	26	174	273	70	8	MK3	0.200 - 0.400
30,0	●	30	182	281	73	8	MK3	0.200 - 0.400
40,0	○	40	205	329	81	8	MK4	0.500

Micro precision reamer

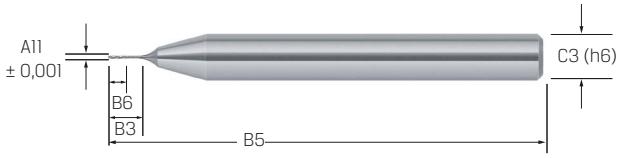
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
126300	⟨1300	⟨850	⟨180	⟨1200	⟨600
	vc = m/min.				
126300	10-20	5	10 - 15	5	20

SC | Factory standard | Form B | Teeth 4 | Left twist | Through hole | Straight shank

right hand cutting | UNI

Design:
- increment by 0.005 mm
- Ø tolerance ± 0.001
- 20° left hand helix, right-hand cutting
- reinforced shank Ø 3 h6
- surface blank

Use:
For the reaming of through holes



A11 mm from - to (0.01 incr.)	126300	B3 mm	B5 mm	B6 mm	C3 mm	f mm/rev
0,200 - 0,245	○	2	39	0,9	3	0.010
0,250 - 0,295	○	2,5	39	1,1	3	0.010
0,300 - 0,345	○	3	39	1,4	3	0.010
0,350 - 0,395	○	3,5	39	1,7	3	0.015
0,400 - 0,495	○	4	39	2	3	0.015
0,500 - 0,595	○	5	39	2,3	3	0.020
0,60 - 0,69	○	6	39	2,6	3	0.050
0,70 - 0,79	○	7	39	3	3	0.050
0,80 - 0,89	○	8,5	39	3,8	3	0.070
0,90 - 0,94	○	8,5	39	3,8	3	0.070
0,95 - 1,05	○	8,5	39	3,8	3	0.070

A11 mm from - to (0.01 incr.)	126300	B3 mm	B5 mm	B6 mm	C3 mm	f mm/rev
1,06 - 1,15	○	10,5	50	4,7	3	0.100
1,16 - 1,25	○	10,5	50	4,7	3	0.100
1,26 - 1,35	○	12	50	5,5	3	0.100
1,36 - 1,45	○	12	50	5,5	3	0.100
1,46 - 1,55	○	14	50	6,3	3	0.100
1,56 - 1,65	○	14	50	6,3	3	0.120
1,66 - 1,75	○	16	50	7	3	0.120
1,76 - 1,85	○	16	50	7	3	0.120
1,86 - 1,94	○	17,5	50	8	3	0.150
1,96 - 2,05	○	17,5	50	8	3	0.150

Machine reamer

PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
125600	⟨1500	⟨850	⟨300	Alu ⟨600	Copper, brass
	vc = m/min.				
125600	10-20	12 - 20	10 - 18	15-60	20-40

SC | similar DIN 212 | Form B | Form D | Left twist 10° | Straight shank | Through hole

UNI

Design and use:
- precision reamer made of carbide, increment about 0.01 mm
- from Ø 13.97 mm with brazed-on solid-carbide tip
- surface blank
- left-hand flute, right-hand cutting
- chip removal in cutting direction predisposes the tool for reaming of through holes
- C3 = ≤ 3.76 form B
- C3 = ≥ 3.76 form D

Manufacturing tolerances:
up to Ø 3,00 0/+0.003
up to Ø 6,00 0/+0.004
from Ø 6.01 0/+0.005



A11 mm from - to (0.01 incr.)	125600 1/100 increasing	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
0,60 - 0,69	○	17	33	7	–	4	0.05
0,70 - 0,79	○	17	33	7	–	4	0.05
0,80 - 0,89	○	22	38	7	–	4	0.07
0,90 - 0,94	○	22	38	7	–	4	0.07
0,95 - 1,05	○	22	38	7	–	4	0.100 - 0.160
1,06 - 1,44	○	24	40	10	–	4	0.100 - 0.160
1,45 - 1,55	○	24	40	10	–	4	0.100 - 0.160
1,56 - 1,79	○	26	43	11	–	4	0.100 - 0.160
1,80 - 1,94	○	31	49	12	–	4	0.100 - 0.160
1,95 - 2,05	○	31	49	12	–	4	0.100 - 0.160
2,06 - 2,36	●	31	49	12	–	6	0.100 - 0.160
2,37 - 2,94	○	38	57	18	–	6	0.100 - 0.160
2,95 - 3,05	○	38	57	18	–	6	0.100 - 0.160
3,06 - 3,35	●	38	57	18	–	6	0.100 - 0.160
3,36 - 3,55	○	38	57	18	–	6	0.100 - 0.160
3,56 - 3,75	○	38	57	18	–	6	0.100 - 0.160
3,76 - 4,25	○	51	75	19	4	6	0.100 - 0.160
4,26 - 4,75	○	55	80	21	4	6	0.100 - 0.160
4,76 - 5,30	○	60	86	23	5	6	0.100 - 0.160
5,31 - 5,80	○	66	93	26	5	6	0.100 - 0.200
5,81 - 5,94	○	73	101	28	6	6	0.100 - 0.200
5,95 - 6,05	○	73	101	28	6	6	0.100 - 0.200

A11 mm from - to (0.01 incr.)	125600 1/100 increasing	B3 mm	B5 mm	B6 mm	C3 mm	D1	f mm/rev
6,06 - 6,70	●	73	101	28	6	6	0.100 - 0.200
6,71 - 7,55	○	80	109	31	7	6	0.100 - 0.200
7,56 - 7,94	○	86	117	33	8	6	0.100 - 0.200
7,95 - 7,96	○	86	117	33	8	6	0.100 - 0.200
7,97 - 8,05	○	86	117	33	8	6	0.100 - 0.200
8,06 - 8,55	●	86	117	33	8	6	0.100 - 0.300
8,56 - 9,55	○	91	125	36	9	6	0.100 - 0.300
9,56 - 9,94	○	99	133	38	10	6	0.100 - 0.300
9,95 - 9,96	○	99	133	38	10	6	0.100 - 0.300
9,97 - 10,05	○	99	133	38	10	6	0.100 - 0.300
10,06 - 11,05	○	99	133	38	10	6	0.100 - 0.300
11,06 - 11,30	○	99	133	38	10	6	0.100 - 0.300
11,31 - 11,94	○	106	151	44	12	6	0.100 - 0.300
11,95 - 11,96	○	106	151	44	12	6	0.100 - 0.300
11,97 - 12,05	○	106	151	44	12	6	0.100 - 0.300
12,06 - 13,05	○	106	151	44	12	6	0.200 - 0.350
13,97 - 14,05	○	110	160	47	14	8	0.200 - 0.350
14,97 - 15,05	○	112	162	50	14	8	0.200 - 0.350
15,97 - 16,05	○	117	170	52	16	8	0.200 - 0.350
17,97 - 18,05	○	129	182	56	16	8	0.200 - 0.400
19,97 - 20,00	○	142	195	60	16	8	0.200 - 0.400

NC machine reamer

PREMUS®

	P N/mm²	K HB	N N/mm²	
126380	<1200	<300	Alu <600	Copper, brass
126381				
	vc = m/min.			
126380	12-20	10 - 18	25-40	30
126381	15-30	20 - 30		

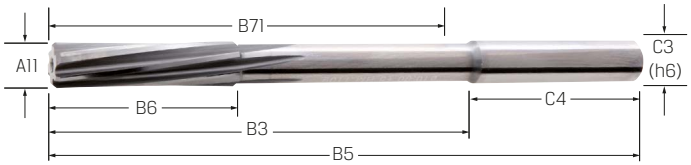
SC | coated | DIN 8093-2 B | Left twist | 6535 HA shank | Through hole | UNI

CAD

Design:
- increment about 0.01 mm with straight shank dimensions
- with parallel shank
- form A for standardised mounting into hydro chucks and high-precision chucks
- right-hand cutting, helically fluted
- asymmetrical or EU partition

Preference series:
Ø 0.980 - 3.750 mm made of solid carbide with centre points on both sides
Ø 3.751 - 13.200 mm made of solid carbide (with inside centre)
Ø 13.201 - 20.000 mm with soldered carbide cutting inserts and steel shank

Manufacturing tolerances:
- **integer Ø and 1/10 dimensions** with tolerance **H7**
- **1/100 mm** dimension with tolerance **= 0.004**



N° article	126380	126381 TiAlN	A11 mm	B3 mm	B5 mm	B6 mm	B71 mm	C3 mm	C4 mm	D1	126380 f mm/rev	126381 f mm/rev
0,60	○	–	0,6	–	45	5	7,5	3	28	4	-	–
0,70	●	–	0,7	–	45	5	7,5	3	28	4	0.100 - 0.150	–
0,80	○	–	0,8	–	45	6	8	3	28	4	0.100 - 0.150	–
0,90	○	–	0,9	–	45	6	8	3	28	4	0.100 - 0.150	–
0,98	○	–	0,98	22	50	6	17,5	3	28	3	0.100 - 0.150	–
0,99	○	–	0,99	22	50	6	17,5	3	28	3	0.100 - 0.150	–
1,00	●	○	1	22	50	6	17,5	3	28	3	0.100 - 0.150	0.100 - 0.200
1,01	○	–	1,01	22	50	6	17,5	3	28	3	0.100 - 0.150	–
1,02	○	–	1,02	22	50	6	17,5	3	28	3	0.100 - 0.150	–
1,03	○	–	1,03	22	50	6	17,5	3	28	3	0.100 - 0.150	–
1,10	○	–	1,1	22	50	9	17,5	3	28	3	0.100 - 0.150	–
1,20	●	○	1,2	22	50	9	17,5	3	28	3	0.100 - 0.150	0.100 - 0.200
1,48	○	–	1,48	22	50	9	18	3	28	3	0.100 - 0.150	–
1,49	○	–	1,49	22	50	9	18	3	28	3	0.100 - 0.150	–
1,50	●	●	1,5	22	50	9	18	3	28	3	0.100 - 0.150	0.100 - 0.200
1,51	●	–	1,51	22	50	10	18	3	28	3	0.100 - 0.150	–
1,52	○	–	1,52	22	50	10	18	3	28	3	0.100 - 0.150	–
1,53	●	–	1,53	22	50	10	18	3	28	3	0.100 - 0.150	–
1,60	●	○	1,6	22	50	10	18	3	28	3	0.100 - 0.150	0.100 - 0.200
1,80	●	●	1,8	22	50	11	18,5	3	28	4	0.100 - 0.150	0.100 - 0.200
1,98	●	–	1,98	22	50	12	18,5	3	28	4	0.100 - 0.150	–
1,99	○	–	1,99	22	50	12	18,5	3	28	4	0.100 - 0.150	–
2,00	●	●	2	22	50	12	18,5	3	28	4	0.100 - 0.150	0.100 - 0.200
2,01	●	–	2,01	22	50	12	18,5	3	28	4	0.100 - 0.150	–
2,02	●	–	2,02	22	50	12	18,5	3	28	4	0.100 - 0.150	–
2,03	●	–	2,03	22	50	12	18,5	3	28	4	0.100 - 0.150	–
2,20	○	○	2,2	22	50	12	18,5	3	28	4	0.100 - 0.150	0.100 - 0.200
2,48	●	–	2,48	32	60	16	29	3	28	4	0.100 - 0.150	–
2,49	○	–	2,49	32	60	16	29	3	28	4	0.100 - 0.150	–
2,50	●	○	2,5	32	60	16	29	3	28	4	0.100 - 0.150	0.100 - 0.200
2,51	○	–	2,51	32	60	16	29	3	28	4	0.100 - 0.150	–
2,52	○	–	2,52	32	60	16	29	3	28	4	0.100 - 0.150	–
2,53	○	–	2,53	32	60	16	29	3	28	4	0.100 - 0.150	–
2,97	○	–	2,97	37	65	17	33	3	28	6	0.100 - 0.150	–
2,98	○	–	2,98	37	65	17	33	3	28	6	0.100 - 0.150	–
2,99	●	–	2,99	37	65	17	33	3	28	6	0.100 - 0.150	–
3,00	●	●	3	37	65	17	33	4	28	6	0.100 - 0.150	0.100 - 0.200
3,01	●	–	3,01	37	65	17	33	3	28	6	0.100 - 0.150	–
3,02	●	–	3,02	37	65	17	33	3	28	6	0.100 - 0.150	–
3,03	●	–	3,03	37	65	17	33	3	28	6	0.100 - 0.150	–
3,20	●	○	3,2	37	65	18	33	4	28	6	0.100 - 0.150	0.100 - 0.200
3,50	●	○	3,5	47	75	18	43	4	28	6	0.100 - 0.150	0.100 - 0.200
3,97	○	–	3,97	47	75	19	43	4	28	6	0.100 - 0.150	–
3,98	○	–	3,98	47	75	19	43	4	28	6	0.100 - 0.150	–
3,99	○	–	3,99	47	75	19	43	4	28	6	0.100 - 0.150	–
4,00	●	●	4	47	75	19	43	4	28	6	0.100 - 0.150	0.100 - 0.200
4,01	●	–	4,01	47	75	19	43	4	28	6	0.100 - 0.150	–
4,02	●	–	4,02	47	75	19	43	4	28	6	0.100 - 0.150	–
4,03	●	–	4,03	47	75	19	43	4	28	6	0.100 - 0.150	–
4,50	●	○	4,5	44	80	21	39	6	36	6	0.100 - 0.150	0.100 - 0.200
4,97	○	–	4,97	57	93	23	52	6	36	6	0.100 - 0.150	–
4,98	○	–	4,98	57	93	23	52	6	36	6	0.100 - 0.150	–
4,99	○	–	4,99	57	93	23	52	6	36	6	0.100 - 0.150	–
5,00	●	●	5	57	93	23	52	6	36	6	0.150 - 0.200	0.100 - 0.300

N° article	126380	126381 TiAlN	A11 mm	B3 mm	B5 mm	B6 mm	B71 mm	C3 mm	C4 mm	D1	126380 f mm/rev	126381 f mm/rev
5,01	○	–	5,01	57	93	23	52	6	36	6	0.150 - 0.200	–
5,02	●	–	5,02	57	93	23	52	6	36	6	0.150 - 0.200	–
5,03	●	–	5,03	57	93	23	52	6	36	6	0.150 - 0.200	–
5,50	●	○	5,5	57	93	26	53	6	36	6	0.150 - 0.200	0.100 - 0.300
5,97	○	–	5,97	57	93	26	53	6	36	6	0.150 - 0.200	–
5,98	○	–	5,98	57	93	26	53	6	36	6	0.150 - 0.200	–
5,99	○	–	5,99	57	93	26	53	6	36	6	0.150 - 0.200	–
6,00	●	●	6	57	93	26	53	6	36	6	0.150 - 0.200	0.100 - 0.300
6,01	●	–	6,01	57	93	26	53	6	36	6	0.150 - 0.200	–
6,02	●	–	6,02	57	93	26	53	6	36	6	0.150 - 0.200	–
6,03	●	–	6,03	57	93	26	53	6	36	6	0.150 - 0.200	–
6,50	○	○	6,5	65	101	28	61	6	36	6	0.150 - 0.200	0.100 - 0.300
7,00	●	○	7	73	109	31	68	8	36	6	0.150 - 0.200	0.100 - 0.300
7,50	○	○	7,5	73	109	31	68	8	36	6	0.150 - 0.200	0.100 - 0.300
7,97	○	–	7,97	81	117	33	77	8	36	6	0.150 - 0.200	–
7,98	○	–	7,98	81	117	33	77	8	36	6	0.150 - 0.200	–
7,99	●	–	7,99	81	117	33	77	8	36	6	0.150 - 0.200	–
8,00	●	●	8	81	117	33	77	8	36	6	0.200 - 0.300	0.150 - 0.800
8,01	●	–	8,01	81	117	33	77	8	36	6	0.200 - 0.300	–
8,02	●	–	8,02	81	117	33	77	8	36	6	0.200 - 0.300	–
8,03	●	–	8,03	81	117	33	77	8	36	6	0.200 - 0.300	–
8,04	○	–	8,04	81	117	33	77	8	36	6	0.200 - 0.300	–
8,50	●	○	8,5	81	117	33	77	8	36	6	0.200 - 0.300	0.150 - 0.800
9,00	●	○	9	85	125	36	80	10	40	6	0.200 - 0.300	0.150 - 0.800
9,50	○	○	9,5	85	125	36	80	10	40	6	0.200 - 0.300	0.150 - 0.800
9,97	○	–	9,97	93	133	38	88	10	40	6	0.200 - 0.300	–
9,98	○	–	9,98	93	133	38	88	10	40	6	0.200 - 0.300	–
9,99	○	–	9,99	93	133	38	88	10	40	6	0.200 - 0.300	–
10,00	●	●	10	93	133	38	88	10	40	6	0.200 - 0.300	0.150 - 0.800
10,01	●	–	10,01	93	133	38	88	10	40	6	0.200 - 0.300	–
10,02	●	–	10,02	93	133	38	88	10	40	6	0.200 - 0.300	–
10,03	○	–	10,03	93	133	38	88	10	40	6	0.200 - 0.300	–
10,04	○	–	10,04	93	133	38	88	10	40	6	0.200 - 0.300	–
10,05	○	–	10,05	93	133	38	88	10	40	6	0.200 - 0.300	–
10,50	○	○	10,5	93	133	38	88	10	40	6	0.200 - 0.300	0.150 - 0.800
11,00	●	○	11	102	142	41	97	10	40	6	0.200 - 0.300	0.150 - 0.800
11,97	○	–	11,97	106	151	44	100	12	45	6	0.200 - 0.300	–
11,98	○	–	11,98	106	151	44	100	12	45	6	0.200 - 0.300	–
11,99	○	–	11,99	106	151	44	100	12	45	6	0.200 - 0.300	–
12,00	●	●	12	106	151	44	100	12	45	6	0.250 - 0.300	0.200 - 1.100
12,01	●	–	12,01	106	151	44	100	12	45	6	0.250 - 0.300	–
12,02	●	–	12,02	106	151	44	100	12	45	6	0.250 - 0.300	–
12,03	○	–	12,03	106	151	44	100	12	45	6	0.250 - 0.300	–
12,04	○	–	12,04	106	151	44	100	12	45	6	0.250 - 0.300	–
12,05	○	–	12,05	106	151	44	100	12	45	6	0.250 - 0.300	–
13,00	●	●	13	106	151	44	100	12	45	6	0.250 - 0.300	0.200 - 1.100
14,00	●	●	14	112	160	47	106	16	48	8	0.250 - 0.300	0.200 - 1.100
15,00	●	○	15	114	162	50	108	16	48	8	0.250 - 0.300	0.200 - 1.100
16,00	●	●	16	122	170	52	116	16	48	8	0.300 - 0.400	0.200 - 1.500
17,00	○	○	17	127	175	52	121	18	48	8	0.300 - 0.400	0.200 - 1.500
18,00	○	○	18	134	182	52	128	18	48	8	0.300 - 0.400	0.200 - 1.500
19,00	○	○	19	139	189	52	133	20	50	8	0.300 - 0.400	0.200 - 1.500
20,00	●	○	20	145	195	52	140	20	50	8	0.300 - 0.400	0.200 - 1.500

High performance reamers HNC

Top performance with SC for highly economical processing of various materials.



This series, especially suitable for high-performance machining, impresses with its high performance, the high achievable cutting results and the resulting high productivity. An outstanding feature is the special design, which ensures a targeted coolant supply directly to the cutting edge. Also the continuous production from solid carbide with different highly stressable coatings makes this series an interesting solution for the processing of various materials.

Advantages of the HNC reamers:

- Outstanding in the field of steel and casting processing.
- Processing of aluminium, GRP, CRP, VA or hard machining with special cutting geometry and coating is also possible.
- Especially economical in diameters between 3 and 20 mm. Intermediate diameters and special tolerances available at short notice.

From now on new in the program: HNC-TI

Top performance with consistent price-performance ratio in titanium and Inconel.

The machining of titanium, titanium alloys or other highly heat-resistant materials such as, for example, nickel-based alloys or Inconel present a great problem for the machining industry. Above all, the ratio of price and performance of most of the tools on the market for this type of metal processing is particularly striking. BECK responded to the many inquiries from the manufacturing industry. The specialists from Winterlingen developed within a very short time a tool solution in which the demanding requirements from industry and tooling trade could be absorbed and even surpassed. With this new variant, BECK is once again expanding its high-performance reaming range in the area of high-performance reaming.

Further advantages of the HNC-TI

- SC specialist for titanium and Inconel.
- Enables economical processing of problematic materials.

High performance reamer HNC-Plus PK

BECK MAPAL GROUP

	P N/mm²	K HB
126400	〈 1500	〈 800
vc = m/min.		
126400	140-180	100

SC | coated | Factory standard | Through hole | Blind hole | 6535 HA shank | ICS

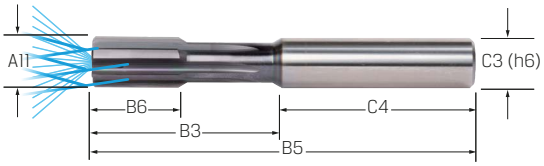
HPC | P | K | CAD | Vc

Design:
- with internal coolant supply
- with patented round bevel
- BPK coated
- lower storage costs, as universally applicable for through or blind holes
- 45° chamfer

Manufacturing tolerances:
- full and half Ø = tolerance field H7 to DIN 1420
- hundredth Ø = +0.005/0

Use:
For through and blind hole drilling

ONLY ONE TOOL FOR THROUGH AND BLIND HOLE DRILLING



Note:
Further diameters available on request

N° article	126400 Type DL/SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	Z
3,97	○	3,97	22	50	12	4	28	4
3,98	○	3,98	22	50	12	4	28	4
3,99	○	3,99	22	50	12	4	28	4
4,00	○	4	22	50	12	4	28	4
4,01	○	4,01	22	50	12	4	28	4
4,02	○	4,02	22	50	12	4	28	4
4,03	○	4,03	22	50	12	4	28	4
4,50	○	4,5	22	50	12	4	28	4
4,97	○	4,97	22	50	12	4	28	4
4,98	○	4,98	22	50	12	4	28	4
4,99	○	4,99	22	50	12	4	28	4
5,00	○	5	22	50	12	4	28	4
5,01	○	5,01	22	50	12	4	28	4
5,02	○	5,02	22	50	12	4	28	4
5,03	○	5,03	22	50	12	4	28	4
5,50	○	5,5	28	64	12	6	36	4
5,97	○	5,97	28	64	12	6	36	6
5,98	○	5,98	28	64	12	6	36	6
5,99	○	5,99	28	64	12	6	36	6
6,00	○	6	28	64	12	6	36	6
6,01	○	6,01	28	64	12	6	36	6
6,02	○	6,02	28	64	12	6	36	6
6,03	○	6,03	28	64	12	6	36	6
6,50	○	6,5	34	70	16	6	36	6
7,00	○	7	34	70	16	6	36	6
7,50	○	7,5	34	70	16	6	36	6
7,97	○	7,97	39	75	16	8	36	6
7,98	○	7,98	39	75	16	8	36	6
7,99	○	7,99	39	75	16	8	36	6
8,00	○	8	39	75	16	8	36	6
8,01	○	8,01	39	75	16	8	36	6

N° article	126400 Type DL/SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	Z
8,02	○	8,02	39	75	16	8	36	6
8,03	○	8,03	39	75	16	8	36	6
8,50	○	8,5	39	75	20	8	36	6
9,00	○	9	44	80	20	8	36	6
9,50	○	9,5	44	80	20	8	36	6
9,97	○	9,97	40	80	20	10	40	6
9,98	○	9,98	40	80	20	10	40	6
9,99	○	9,99	40	80	20	10	40	6
10,00	○	10	40	80	20	10	40	6
10,01	○	10,01	40	80	20	10	40	6
10,02	○	10,02	40	80	20	10	40	6
10,03	○	10,03	40	80	20	10	40	6
10,50	○	10,5	40	80	20	10	40	6
11,00	○	11	45	85	20	10	40	6
11,50	○	11,5	45	85	20	10	40	6
11,97	○	11,97	45	90	20	12	45	6
11,98	○	11,98	45	90	20	12	45	6
11,99	○	11,99	45	90	20	12	45	6
12,00	●	12	45	90	20	12	45	6
12,01	○	12,01	45	90	20	12	45	6
12,02	○	12,02	45	90	20	12	45	6
12,03	○	12,03	45	90	20	12	45	6
13,00	○	13	45	90	22	12	45	6
14,00	○	14	50	95	22	14	45	6
15,00	○	15	55	100	22	14	45	6
16,00	○	16	57	105	25	16	48	6
17,00	○	17	62	110	25	16	48	6
18,00	○	18	62	110	25	18	48	6
19,00	○	19	62	110	25	18	48	6
20,00	○	20	65	115	25	20	50	6



High performance reamer HNC-Speed

BECK MAPAL GROUP

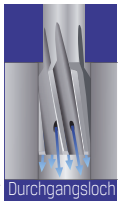
	P N/mm²	K HB	N N/mm²
126422	<1200	<300	Plastics
126425			
vc = m/min.			
126422	120-250	60 - 250	80-200
126425			

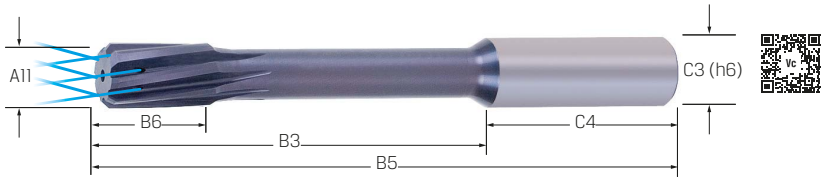
SC | coated | Factory standard | Through hole | Blind hole | 6335 HA shank | ICS

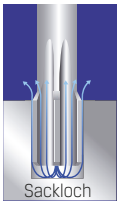
HPC | P | CAD

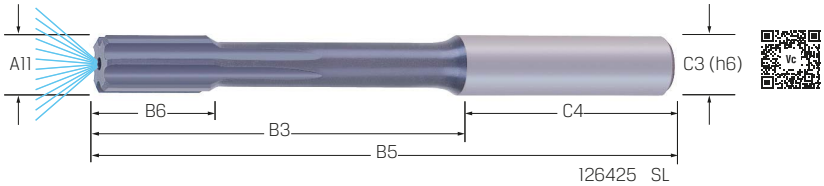
Design:
- with internal coolant supply
- base material is a SC body made of a high-quality, wear-resistant ultra-fine grain carbide with cooling duct
- by combining application know-how, high-quality materials and the employed fabrication technology, a tool has been created that can cover a wide range of materials
- through a sintered cooling duct, the blades are supplied with coolant also in deep holes
- the EU partition also ensures optimum round bores
- the SC body gives an optimum rigidity during production, which is the prerequisite for a uniform roundness of the tool over blade, round bevel and shank
- with parallel NC shank for mounting in hydraulic expansion, shrink and other high-precision chucks
- type DL = through hole
- type SL = blind hole

Manufacturing tolerances:
Full and half ∅ = tolerance field H7 to DIN 1420
Hundredth ∅ = +0.004/0









Nº article	126422 TiAlN, type DL	126425 TiAlN, type SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	Z DL/SL	f mm/rev
3,97	○	○	3,97	39	75	12	6	36	4/4	0.300 - 0.500
3,98	○	○	3,98	39	75	12	6	36	4/4	0.300 - 0.500
3,99	○	○	3,99	39	75	12	6	36	4/4	0.300 - 0.500
4,00	○	○	4	39	75	12	6	36	4/4	0.300 - 0.500
4,01	○	○	4,01	39	75	12	6	36	4/4	0.300 - 0.500
4,02	○	○	4,02	39	75	12	6	36	4/4	0.300 - 0.500
4,03	○	○	4,03	39	75	12	6	36	4/4	0.300 - 0.500
4,50	○	○	4,5	39	75	12	6	36	4/4	0.300 - 0.500
4,97	○	○	4,97	39	75	12	6	36	4/4	0.300 - 0.500
4,98	○	○	4,98	39	75	12	6	36	4/4	0.300 - 0.500
4,99	○	○	4,99	39	75	12	6	36	4/4	0.300 - 0.500
5,00	○	○	5	39	75	12	6	36	4/4	0.400 - 1.000
5,01	○	○	5,01	39	75	12	6	36	4/4	0.400 - 1.000
5,02	○	○	5,02	39	75	12	6	36	4/4	0.400 - 1.000
5,03	○	○	5,03	39	75	12	6	36	4/4	0.400 - 1.000
5,50	○	○	5,5	39	75	12	6	36	4/4	0.400 - 1.000
5,97	○	○	5,97	39	75	12	6	36	4/4	0.400 - 1.000
5,98	○	○	5,98	39	75	12	6	36	4/4	0.400 - 1.000
5,99	○	○	5,99	39	75	12	6	36	4/4	0.400 - 1.000
6,00	○	●	6	39	75	12	6	36	4/4	0.400 - 1.000
6,01	○	○	6,01	39	75	12	6	36	4/4	0.400 - 1.000
6,02	○	○	6,02	39	75	12	6	36	4/4	0.400 - 1.000
6,03	○	○	6,03	39	75	12	6	36	4/4	0.400 - 1.000
6,50	○	○	6,5	64	100	16	8	36	6/6	0.400 - 1.000
7,00	○	○	7	64	100	16	8	36	6/6	0.400 - 1.000
7,50	○	○	7,5	64	100	16	8	36	6/6	0.400 - 1.000
7,97	○	○	7,97	64	100	16	8	36	6/6	0.400 - 1.000
7,98	○	○	7,98	64	100	16	8	36	6/6	0.400 - 1.000
7,99	○	○	7,99	64	100	16	8	36	6/6	0.400 - 1.000
8,00	○	●	8	64	100	16	8	36	6/6	0.600 - 1.400
8,01	○	○	8,01	64	100	16	8	36	6/6	0.600 - 1.400

Nº article	126422 TiAlN, type DL	126425 TiAlN, type SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	Z DL/SL	f mm/rev
8,02	○	○	8,02	64	100	16	8	36	6/6	0.600 - 1.400
8,03	○	○	8,03	64	100	16	8	36	6/6	0.600 - 1.400
8,50	○	○	8,5	60	100	20	10	40	6/6	0.600 - 1.400
9,00	○	○	9	60	100	20	10	40	6/6	0.600 - 1.400
9,50	○	○	9,5	80	120	20	10	40	6/6	0.600 - 1.400
9,97	○	○	9,97	80	120	20	10	40	6/6	0.600 - 1.400
9,98	○	○	9,98	80	120	20	10	40	6/6	0.600 - 1.400
9,99	○	○	9,99	80	120	20	10	40	6/6	0.600 - 1.400
10,00	○	○	10	80	120	20	10	40	6/6	0.600 - 1.400
10,01	○	○	10,01	80	120	20	10	40	6/6	0.600 - 1.400
10,02	○	○	10,02	80	120	20	10	40	6/6	0.600 - 1.400
10,03	○	○	10,03	80	120	20	10	40	6/6	0.600 - 1.400
10,50	○	○	10,5	75	120	20	12	45	6/6	0.600 - 1.400
11,00	○	○	11	75	120	20	12	45	6/6	0.600 - 1.400
11,50	○	○	11,5	75	120	20	12	45	6/6	0.600 - 1.400
11,97	○	○	11,97	75	120	20	12	45	6/6	0.600 - 1.400
11,98	○	○	11,98	75	120	20	12	45	6/6	0.600 - 1.400
11,99	○	○	11,99	75	120	20	12	45	6/6	0.600 - 1.400
12,00	○	○	12	75	120	20	12	45	6/6	0.800 - 2.200
12,01	○	○	12,01	75	120	20	12	45	6/6	0.800 - 2.200
12,02	○	○	12,02	75	120	20	12	45	6/6	0.800 - 2.200
12,03	○	○	12,03	75	120	20	12	45	6/6	0.800 - 2.200
13,00	○	○	13	85	130	22	14	45	6/6	0.800 - 2.200
14,00	○	○	14	85	130	22	14	45	6/6	0.800 - 2.200
15,00	○	○	15	82	130	22	16	48	6/6	0.800 - 2.200
16,00	○	○	16	102	150	25	16	48	6/6	0.800 - 2.200
17,00	○	○	17	102	150	25	18	48	8/6	0.800 - 2.200
18,00	○	○	18	102	150	25	18	48	8/6	0.800 - 2.200
19,00	○	○	19	100	150	25	20	50	8/6	0.800 - 2.200
20,00	○	○	20	100	150	25	20	50	8/6	0.800 - 2.200

High performance reamer HNC INOX

BECK MAPAL GROUP

	M N/mm²
126440	〈1000
126430	
vc = m/min.	
126440	20 - 60
126430	

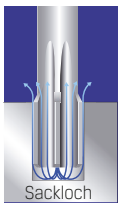
SC | coated | Factory standard | Through hole | Blind hole | 6535 HA shank | ICS

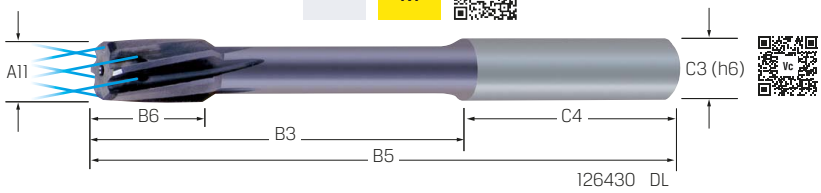
HPC | M | CAD

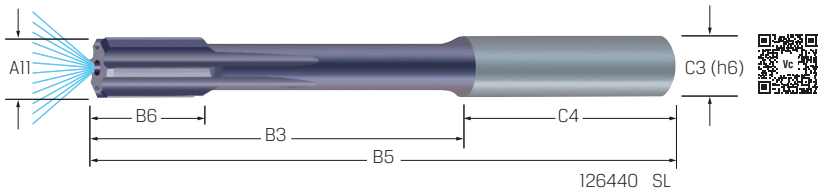
Design:
- with internal coolant supply, for INOX machining
- with special cutting edge geometry
- TiAlN coated
- with cylindrical NC shank for mounting in hydraulic, shrink-fit and high-precision chucks
- type DL = through hole
- type SL = blind hole

Manufacturing tolerances:
Full and half Ø = tolerance field H7 to DIN 1420
Hundredth Ø = 0.004/0









Nº article	126430 TiAlN, type DL	126440 TiAlN, type SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	Z DL/SL	f mm/rev
3,97	○	○	3,97	39	75	12	6	36	4/4	0.100 - 0.150
3,98	○	○	3,98	39	75	12	6	36	4/4	0.100 - 0.150
3,99	○	○	3,99	39	75	12	6	36	4/4	0.100 - 0.150
4,00	○	○	4	39	75	12	6	36	4/4	0.100 - 0.150
4,01	○	○	4,01	39	75	12	6	36	4/4	0.100 - 0.150
4,02	○	○	4,02	39	75	12	6	36	4/4	0.100 - 0.150
4,03	○	○	4,03	39	75	12	6	36	4/4	0.100 - 0.150
4,50	○	○	4,5	39	75	12	6	36	4/4	0.100 - 0.150
4,97	○	○	4,97	39	75	12	6	36	4/4	0.100 - 0.150
4,98	○	○	4,98	39	75	12	6	36	4/4	0.100 - 0.150
4,99	○	○	4,99	39	75	12	6	36	4/4	0.100 - 0.150
5,00	○	○	5	39	75	12	6	36	4/4	0.150 - 0.200
5,01	○	○	5,01	39	75	12	6	36	4/4	0.150 - 0.200
5,02	○	○	5,02	39	75	12	6	36	4/4	0.150 - 0.200
5,03	○	○	5,03	39	75	12	6	36	4/4	0.150 - 0.200
5,50	○	○	5,5	39	75	12	6	36	4/4	0.150 - 0.200
5,97	○	○	5,97	39	75	12	6	36	4/4	0.150 - 0.200
5,98	○	○	5,98	39	75	12	6	36	4/4	0.150 - 0.200
5,99	○	○	5,99	39	75	12	6	36	4/4	0.150 - 0.200
6,00	○	○	6	39	75	12	6	36	4/4	0.150 - 0.200
6,01	○	○	6,01	39	75	12	6	36	4/4	0.150 - 0.200
6,02	○	○	6,02	39	75	12	6	36	4/4	0.150 - 0.200
6,03	○	○	6,03	39	75	12	6	36	4/4	0.150 - 0.200
6,50	○	○	6,5	64	100	16	8	36	6/6	0.150 - 0.200
7,00	○	○	7	64	100	16	8	36	6/6	0.150 - 0.200
7,50	○	○	7,5	64	100	16	8	36	6/6	0.150 - 0.200
7,97	○	○	7,97	64	100	16	8	36	6/6	0.150 - 0.200
7,98	○	○	7,98	64	100	16	8	36	6/6	0.150 - 0.200
7,99	○	○	7,99	64	100	16	8	36	6/6	0.150 - 0.200
8,00	○	○	8	64	100	16	8	36	6/6	0.300 - 0.500
8,01	○	○	8,01	64	100	16	8	36	6/6	0.300 - 0.500

Nº article	126430 TiAlN, type DL	126440 TiAlN, type SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	Z DL/SL	f mm/rev
8,02	○	○	8,02	64	100	16	8	36	6/6	0.300 - 0.500
8,03	○	○	8,03	64	100	16	8	36	6/6	0.300 - 0.500
8,50	○	○	8,5	60	100	20	10	40	6/6	0.300 - 0.500
9,00	○	○	9	60	100	20	10	40	6/6	0.300 - 0.500
9,50	○	○	9,5	80	120	20	10	40	6/6	0.300 - 0.500
9,97	○	○	9,97	80	120	20	10	40	6/6	0.300 - 0.500
9,98	○	○	9,98	80	120	20	10	40	6/6	0.300 - 0.500
9,99	○	○	9,99	80	120	20	10	40	6/6	0.300 - 0.500
10,00	○	○	10	80	120	20	10	40	6/6	0.300 - 0.500
10,01	○	○	10,01	80	120	20	10	40	6/6	0.300 - 0.500
10,02	○	○	10,02	80	120	20	10	40	6/6	0.300 - 0.500
10,03	○	○	10,03	80	120	20	10	40	6/6	0.300 - 0.500
10,50	○	○	10,5	75	120	20	12	45	6/6	0.300 - 0.500
11,00	○	○	11	75	120	20	12	45	6/6	0.300 - 0.500
11,50	○	○	11,5	75	120	20	12	45	6/6	0.300 - 0.500
11,97	○	○	11,97	75	120	20	12	45	6/6	0.300 - 0.500
11,98	○	○	11,98	75	120	20	12	45	6/6	0.300 - 0.500
11,99	○	○	11,99	75	120	20	12	45	6/6	0.300 - 0.500
12,00	○	○	12	75	120	20	12	45	6/6	0.400 - 0.600
12,01	○	○	12,01	75	120	20	12	45	6/6	0.400 - 0.600
12,02	○	○	12,02	75	120	20	12	45	6/6	0.400 - 0.600
12,03	○	○	12,03	75	120	20	12	45	6/6	0.400 - 0.600
13,00	○	○	13	85	130	22	14	45	6/6	0.400 - 0.600
14,00	○	○	14	85	130	22	14	45	6/6	0.400 - 0.600
15,00	○	○	15	82	130	22	16	48	6/6	0.400 - 0.600
16,00	○	○	16	102	150	25	16	48	6/6	0.500 - 1.000
17,00	○	○	17	102	150	25	18	48	8/6	0.500 - 1.000
18,00	○	○	18	102	150	25	18	48	8/6	0.500 - 1.000
19,00	○	○	19	100	150	25	20	50	8/6	0.500 - 1.000
20,00	○	○	20	100	150	25	20	50	8/6	0.500 - 1.000

High performance reamer HNC Short

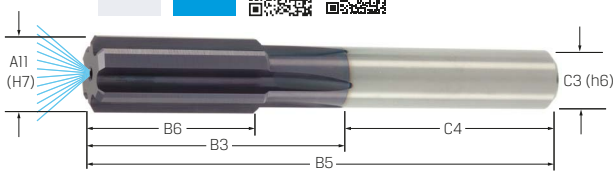
BECK MAPAL GROUP

	P N/mm²	K HB	N N/mm²
126428	〈1200	〈300	Plastics
vc = m/min.			
126428	120-250	60 - 250	80-200

SC | coated | H7 | Factory standard | Blind hole | 6535 HA shank | ICS

HPC | P | CAD | Vc

Design:
- with special HPC geometry and coating
- for blind hole
- right-hand cutting
- straight fluted
- short version
- for use with hydraulic expansion, shrink fit and high-precision chucks



Nº article	126428 TiAlN, SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
3,00	○	3	28	56	12	4	28	4	0.300 - 0.500
3,20	○	3,2	28	56	12	4	28	4	0.300 - 0.500
3,50	○	3,5	28	56	12	4	28	4	0.300 - 0.500
4,00	○	4	28	56	12	4	28	4	0.300 - 0.500
4,50	○	4,5	28	64	12	6	36	4	0.300 - 0.500
5,00	○	5	28	64	12	6	36	4	0.400 - 1.000
5,50	○	5,5	28	64	12	6	36	4	0.400 - 1.000
6,00	○	6	28	64	12	6	36	4	0.400 - 1.000
6,50	○	6,5	39	75	16	8	36	6	0.400 - 1.000
7,00	○	7	39	75	16	8	36	6	0.400 - 1.000

Nº article	126428 TiAlN, SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
7,50	○	7,5	39	75	16	8	36	6	0.400 - 1.000
8,00	○	8	39	75	16	8	36	6	0.600 - 1.400
8,50	○	8,5	39	75	20	8	36	6	0.600 - 1.400
9,00	○	9	39	75	20	8	36	6	0.600 - 1.400
9,50	○	9,5	39	75	20	8	36	6	0.600 - 1.400
10,00	○	10	39	75	20	8	36	6	0.600 - 1.400
10,50	○	10,5	40	80	20	10	40	6	0.600 - 1.400
11,00	○	11	40	80	20	10	40	6	0.600 - 1.400
11,50	○	11,5	40	80	20	10	40	6	0.600 - 1.400
12,00	○	12	45	90	22	12	45	6	0.800 - 2.200

Nº article	126428 TiAlN, SL	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	C4 mm	D1	f mm/rev
13,00	○	13	45	90	22	12	45	6	0.800 - 2.200
14,00	○	14	45	90	22	14	45	6	0.800 - 2.200
15,00	○	15	45	90	22	14	45	6	0.800 - 2.200
16,00	○	16	52	100	25	16	48	8	0.800 - 2.200
17,00	○	17	52	100	25	16	48	8	0.800 - 2.200
18,00	○	18	52	100	25	16	48	8	0.800 - 2.200
19,00	○	19	52	100	25	18	48	8	0.800 - 2.200
20,00	○	20	52	100	25	18	48	8	0.800 - 2.200

Modular head reamers XR 06

One replaceable head made of SC?! Protects the environment, lowers costs, withstands the highest demands.



The modular counterpart to the best-known high-performance reamers HNC from BECK is now XR 06. To the previous versions of the XR 01 series, with soldered inserts, this variant made of solid carbide, with and without coating, represents a useful extension of the high-performance spectrum The main argument for the XR 06 is the considerable price advantage compared to monobloc tools. Especially in the case of diameters above 20 mm, there is a high potential for savings in material costs. Thus valuable resources and hard cash can be saved. The optimum design of the joint and the cutting head allows the XR 06 to use the same cutting values as are possible with monobloc versions. The basic characteristics and advantages of the replaceable head reamer system is of course also the basis for the solid carbide variants.

The tools are initially offered in coated version for high-performance machining mainly of steel and cast materials in diameter range 8 or 10 - 40 mm for through holes and blind holes.
Further variants, such as for the machining of VA, hardened materials, aluminium, CRP/GRP are successively included in the program.

Further advantages of the XR 06 replaceable head:

- SC specialist for steel and cast
- particularly economical from ∅ 20 mm
- reduces tooling costs and set-up cost
- Low processing costs due to enormously high cutting data quantity

Overview of tap drills

Product line 13

Cat. no.	Brand	Thread type	⌀ mm	Page	Material	Cut (Type)	Cutting material	Coating	Tolerance	Thread type	DIN	Tap drill
130050	RETEC	M Metric thread	M1-M30	13/130	P		HSS		6H		DIN 352	
130140	RETEC	M left Metric left thread	M3-M20	13/130	P		HSS		6H		left hand cutting	
130150	RETEC	M Metric thread	M2-M20	13/130	M		HSS-Co		6H		DIN 352	
130330	RETEC	MF Metric fine thread	M3×0,35-M30×2	13/130	P		HSS		6H		DIN 2181	
130420	RETEC	G Cylindrical pipe thread	1/8-28-1 - 11	13-131	P		HSS				DIN 5157 DIN ISO 228	
130430	RETEC	UNC american UNIFIED coarse thread	6-32-3/4-10	13/131	P		HSS		2B		DIN 2184-2	
130435	RETEC	UNF american UNIFIED fine thread	10-32-5/8-18	13/131	P		HSS		2B		DIN 2184-2	
132020	RETEC	M Metric thread	M3-M12	13/132	P	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 352	
132120	RETEC	M Metric thread	M3-M12	13/132	P	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 352	
132200	PREMUS	M Metric thread	M3-M24	13/133	UNI	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 371 DIN 376 ab M12	
132210	PREMUS	M Metric thread	M3-M30	13/133	UNI	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6HX	Through hole	DIN 371 DIN 376 ab M12	
132212	PREMUS	M Metric thread	M6-M20	13/133	UNI	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6HX	Through hole	DIN 371 DIN 376 ab M12	
132215	PREMUS	M Metric thread	M2-M20	13/133	UNI	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6HX	Through hole	Typ Synchro	
132225	PREMUS GP	M Metric thread	M3-M24	13/133	UNI	Chamfer form B 4-5 threads	HSS-E	coated	6H	Through hole	DIN 371 DIN 376 ab M12	
132250	PREMUS	M Metric thread	M3-M24	13/134	UNI	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 371 DIN 376 ab M12	
132255	PREMUS GP	M Metric thread	M3-M24	13/135	UNI	Chamfer form C 2-3 threads	HSS-E	coated	6H	Blind hole	DIN 371 DIN 376 ab M12	
132260	PREMUS	M Metric thread	M2-M30	13/134	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	DIN 371 DIN 376 ab M12	
132262	PREMUS	M Metric thread	M3-M20	13/134	UNI	Anschnittform E 1,5-2 Gang	HSS-Co PM	coated	6HX	Blind hole	DIN 371 DIN 376 ab M12	
132263	PREMUS	M Metric thread	M3-M20	13/134	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6GX	Blind hole	DIN 371 DIN 376 ab M12	
132264	PREMUS	M Metric thread	M6-M20	13/134	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	DIN 371 DIN 376 ab M12	
132265	PREMUS	M Metric thread	M2-M20	13/135	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	Typ Synchro	
132267	PREMUS	M Metric thread	M5-M20	13/135	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	Typ Synchro	
132270	PREMUS	MF Metric fine thread	M3×0,35-M24×1.5	13/135	UNI	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6HX	Through hole	DIN 374	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	Thread type	⌀ mm	Page	Material	Cut (Type)	Cutting material	Coating	Tolerance	Thread type	DIN	Tap drill
132275	PREMUS GP	MF Metric fine thread	M6×0,75-M24×2	13/136	UNI	Chamfer form B 4-5 threads	HSS-E	coated	6H	Through hole	DIN 13	
132280	PREMUS	MF Metric fine thread	M3×0,35-M24×1.5	13/136	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	DIN 374	
132285	PREMUS GP	MF Metric fine thread	M6×0,75-M24×2	13/136	UNI	Chamfer form C 2-3 threads	HSS-E	coated	6H	Blind hole	DIN 13	
132290	PREMUS	G Whitworth pipe thread	G1/8×28-G1/-11	13/137	UNI	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6HX	Through hole	DIN 5156 DIN ISO 228	
132295	PREMUS	G Whitworth pipe thread	G1/8×28-G1/-11	13/137	UNI	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	DIN 5156 DIN ISO 228	
132310	PRETEC	M Metric thread	M2-M10	13/139	P	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 371	
132410	PRETEC	M Metric thread	M3-M36	13/139	P	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 376	
132420	PREMUS	M Metric thread	M1-M36	13/139	P	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 371 DIN 376 ab M12	
132422	PREMUS	M Metric thread	M2-M20	13/139	P	Chamfer form B 3,5-5 threads	HSS-E V3		6G	Through hole	DIN 371 DIN 376 ab M12	
132425	PREMUS	M Metric thread	M2-M20	13/139	P	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 371 DIN 376 ab M12	
132427	PREMUS	M left Metric left thread	M3LH-M20LH	13/140	P	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	left hand cutting	
132429	PREMUS	M Metric thread	M3-M10	13/140	P	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	Werks-norm	
132671	PREMUS	M Metric thread	M2-M16	13/137	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6HX	Through hole Blind hole	DIN 2174	
132672	PREMUS	M Metric thread	M6-M16	13/137	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6HX	Through hole Blind hole	DIN 2174	
132673	PREMUS	M Metric thread	M2-M10	13/137	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6GX	Through hole Blind hole	DIN 2174	
132674	PREMUS	M Metric thread	M6-M10	13/137	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6GX	Through hole Blind hole	DIN 2174	
132680	PREMUS	M Metric thread	M1-M30	13/138	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6HX	Through hole Blind hole	DIN 2174	
132682	PREMUS	M Metric thread	M6-M45	13/138	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6HX	Through hole Blind hole	DIN 2174	
132684	PREMUS	M Metric thread	M3-M16	13/138	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6GX	Through hole Blind hole	DIN 2174	
132695	PREMUS	MF Metric fine thread	M3×0,35-M16×1,50	13/138	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated	6HX	Through hole Blind hole	DIN 2174	
132697	PREMUS	G Whitworth pipe thread	1/8-3/8	13/138	UNI	Chamfer form C 2-3 threads	HSS-E-Co	coated		Through hole Blind hole	DIN 2189 DIN ISO 228	
132911	PRETEC	MF Metric fine thread	M3×0,35-M36×2,00	13/144	P	Chamfer form B 4-6 threads	HSS-Co		6H	Through hole	DIN 374	
133010	PRETEC	M Metric thread	M3-M10	13/140	P	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 371	

Overview of tap drills

Product line 13

Cat. no.	Brand	Thread type	⌀ mm	Page	Material	Cut (Type)	Cutting material	Coating	Tolerance	Thread type	DIN	Tap drill
133030	PRETEC	M Metric thread	M3–M10	13/140	P	Chamfer form C 2-3 threads	HSS-Co	coated	6H	Blind hole	DIN 371	
133050	PRETEC	M Metric thread	M3–M10	13/141	P	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 371	
133070	PRETEC	M Metric thread	M3–M10	13/141	P	Chamfer form C 2-3 threads	HSS-Co	coated	6H	Blind hole	DIN 371	
133110	PRETEC	M Metric thread	M4–M20	13/140	P	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 376	
133130	PRETEC	M Metric thread	M4–M20	13/140	P	Chamfer form C 2-3 threads	HSS-Co	coated	6H	Blind hole	DIN 376	
133150	PRETEC	M Metric thread	M4–M20	13/141	P	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 376	
133161	PREMUS	M Metric thread	M3–M10	13/141	P	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 371	
133163	PREMUS	M Metric thread	M3–M36	13/141	P	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 376	
133166	PREMUS	M Metric thread	M3–M20	13/142	P	Chamfer form C 2-3 threads	HSS-E V3		6G	Blind hole	DIN 371	
133170	PRETEC	M Metric thread	M4–M20	13/141	P	Chamfer form C 2-3 threads	HSS-Co	coated	6H	Blind hole	DIN 376	
133180	PREMUS	M left Metric left thread	M3–M20	13/142	P	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 371 DIN 376 ab M12	
133182	PREMUS	M Metric thread	M3–M20	13/142	P	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	Werks-norm	
133205	PREMUS	MF Metric fine thread	M3×0,35–M52×1,50	13/144	P	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 374	
133211	PRETEC	MF Metric fine thread	M4×0,50–M30×2,0	13/145	P	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 374	
133225	PREMUS	MF Metric fine thread	M3×0,35–M30×2.0	13/145	P	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 374	
133311	PREMUS	UNC american UNIFIED coarse thread	2-56– 1-8	13/145	P	Chamfer form B 3,5-5 threads	HSS-E V3			Through hole	DIN 2184-1	
133331	PREMUS	UNC american UNIFIED coarse thread	2-56 – 1-8	13/146	P	Chamfer form C 2-3 threads	HSS-E V3		2B	Blind hole	DIN 2184-1	
133371	PREMUS	UNF american UNIFIED fine thread	0-80– 1.1/2-12	13/146	P	Chamfer form B 3,5-5 threads	HSS-E V3		2B	Through hole	DIN 2184-1	
133391	PREMUS	UNF american UNIFIED fine thread	3-56 – 1-12	13/146	P	Chamfer form C 2-3 threads	HSS-E V3		2B	Blind hole	DIN 2184-1	
133411	PREMUS	G Whitworth pipe thread	1/8-28– 1.1/2-11	13/147	P	Chamfer form B 3,5-5 threads	HSS-E V3			Through hole	DIN 5156 DIN ISO 228	
133431	PREMUS	G Whitworth pipe thread	1/8-28– 1.1/2-11	13/147	P	Chamfer form C 2-3 threads	HSS-E V3			Blind hole	DIN 5156 DIN 5128	
133455	PREMUS	Pg Conduit thread	7-20– 29 - 16	13-147	P	Chamfer form C 2-3 threads	HSS-E V3			Through hole	DIN 40432 DIN 40430	
133458	PREMUS	NPT Conical pipe thread	1/8-27– 1 - 11.5	13-147	P	Chamfer form C 2-3 threads	HSS-E V3			Through hole	Werks-norm	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	Thread type	⌀ mm	Page	Material	Cut (Type)	Cutting material	Coating	Tolerance	Thread type	DIN	Tap drill
133510	PRETEC	M Metric thread	M3-M16	13/147	P		HSS			Through hole	DIN 357	
135010	PRETEC	M Metric thread	M3-M10	13/148	M	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 371	
135020	PREMUS	M Metric thread	M2-M10	13/148	M	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 371	
135030	PREMUS	M Metric thread	M3-M36	13/148	M	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 376	
135035	PREMUS	M Metric thread	M2-M20	13/149	M	Chamfer form B 3,5-5 threads	HSS-E V3		6G	Through hole	DIN 371 / DIN 376 ab M12	
135036	PREMUS	M Metric thread	M2-M20	13/149	M	Chamfer form B 3,5-5 threads	HSS-E V3	coated	6G	Through hole	DIN 371 / DIN 376 ab M12	
135085	PREMUS	M Metric thread	M3-M20	13/149	M	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6H	Through hole	DIN 371 / DIN 376 ab M12	
135110	PRETEC	M Metric thread	M5-M30	13/148	M	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 376	
135410	PRETEC	M Metric thread	M3-M10	13/149	M	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 371	
135430	PREMUS	M Metric thread	M1-M20	13/149	M	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 371	
135435	PREMUS	M Metric thread	M3-M36	13/150	M	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 376	
135485	PREMUS	M Metric thread	M3-M30	13/150	M	Chamfer form C 2-3 threads	HSS-Co PM	coated	6H	Blind hole	DIN 371 / DIN 376 ab M12	
135490	PREMUS	M Metric thread	M2-M30	13/150	M	Chamfer form C 2-3 threads	HSS-E V3		6G	Blind hole	DIN 371 / DIN 376 ab M12	
135491	PREMUS	M Metric thread	M2-M20	13/150	M	Chamfer form C 2-3 threads	HSS-E V3	coated	6G	Blind hole	DIN 371 / DIN 376 ab M12	
135495	PREMUS	M Metric thread	M6-M30	13/150	M	Chamfer form C 2-3 threads	HSS-Co PM	coated	6H	Blind hole	DIN 371 / DIN 376 ab M12	
135510	PRETEC	M Metric thread	M6-M24	13/150	M	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 376	
135630	PRETEC	MF Metric fine thread	M4×0,5-M24×1,5	13/151	M	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 374	
135640	PREMUS	MF Metric fine thread	M3×0,25-M24×1,50	13/151	M	Chamfer form B 3,5-5 threads	HSS-E V3		6H	Through hole	DIN 374	
135670	PRETEC	MF Metric fine thread	M3x0,35-M30x1,5	13/151	M	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 371 bis M6 / DIN 374 ab M8	
135680	PREMUS	MF Metric fine thread	M3x0,35-M30x1,5	13/151	M	Chamfer form C 2-3 threads	HSS-Co PM		6H	Blind hole	DIN 374	
135730	PRETEC	G Whitworth pipe thread	1/8-28 - 1-11	13/152	M	Chamfer form B 3,5-5 threads	HSS-Co			Through hole	DIN 5156 / DIN ISO 228	
135740	PREMUS	G Whitworth pipe thread	1/8-28 - 1-11	13/152	M	Chamfer form B 3,5-5 threads	HSS-E V3			Through hole	DIN 5156 / DIN ISO 228	
135770	PRETEC	G Whitworth pipe thread	1/8-28-3/4-14	13/152	M	Chamfer form C 2-3 threads	HSS-Co			Blind hole	DIN 5156 / ISO 5969	

Overview of tap drills

Product line 13

Cat. no.	Brand	Thread type	⌀ mm	Page	Material	Cut (Type)	Cutting material	Coating	Tolerance	Thread type	DIN	Tap drill
135775	PREMUS	G Whitworth pipe thread	1/8-28-1.1/2-11	13/152	M	Chamfer form C 2-3 threads	HSS-E V3			Blind hole	DIN 5156 DIN ISO 228	
137280	PRETEC	M Metric thread	M4-M10	13/153	K	Chamfer form C 2-3 threads	HSS-Co	coated	6HX	Through hole	DIN 371	
137310	PRETEC	M Metric thread	M6-M30	13/153	K	Chamfer form C 2-3 threads	HSS-Co	coated	6HX	Through hole	DIN 376	
137410	PRETEC	MF Metric fine thread	M3×0,35-M22×1,5	13/153	K	Chamfer form C 2-3 threads	HSS-Co	coated	6HX	Through hole Blind hole	DIN 374	
137510	PRETEC	G Whitworth pipe thread	1/8-28 - 1-11	13/153	K	Chamfer form C 2-3 threads	HSS-Co	coated	6HX	Through hole Blind hole	DIN 5156 DIN ISO 228	
137560	PREMUS	M Metric thread	M3-M24	13/142	P	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6HX	Through hole	DIN 371 DIN 376 ab M12	
137580	PREMUS	M Metric thread	M3-M24	13/142	P	Chamfer form C 2-3 threads	HSS-Co PM	coated	6HX	Blind hole	DIN 371 DIN 376 ab M12	
137600	PREMUS	M Metric thread	M2,5-M30	13/143	P	Chamfer form B 3,5-5 threads	HSS-Co PM	coated	6H	Through hole	DIN 371 DIN 376 ab M12	
137613	PRETEC	M Metric thread	M3-M20	13/154	N	Chamfer form B 3,5-5 threads	HSS-Co		6H	Through hole	DIN 371 DIN 376 ab M12	
137650	PREMUS	M Metric thread	M2,5-M30	13/143	P	Chamfer form C 2-3 threads	HSS-Co PM	coated	6H	Blind hole	DIN 371 DIN 376 ab M12	
137708	PREMUS	M Metric thread	M3-M20	13/154	N	Chamfer form C 2-3 threads	HSS-Co		6H	Blind hole	DIN 371 DIN 376 ab M12	
137711	PREMUS	M Metric thread	M2-M20	13/154	N	Chamfer form C 2-3 threads	HSS-E V3		6H	Blind hole	DIN 371 DIN 376 ab M12	
137802	PREMUS	M Metric thread	M3-M20	13/155	S	Chamfer form B 3,5-5 threads	HSS-Co PM		6HX	Through hole	DIN 371 DIN 376 ab M12	
137812	PREMUS	M Metric thread	M3-M20	13/155	S	Chamfer form C 2-3 threads	HSS-Co PM		6H	Blind hole	DIN 371 DIN 376 ab M12	
138923	JBO	UNC UNF	UNC 1-UNC 1/4	13/158	UNI		SC	coated		2 × A21	DIN 13	
138933	JBO	M Metric thread	M6-M20	13/159	UNI		SC	coated		2 × A21	DIN 13	
138935	JBO	MF Metric fine thread	M6-M12	13/159	UNI		SC	coated		2 × A21	DIN 13	
138938	JBO	G Whitworth pipe thread	G1/8-G3/8	13/159	UNI		SC	coated		2 × A21	DIN 228	
138941	JBO	UNC american UNIFIED coarse thread	UNC 1/4-UNC1/2	13/160	UNI		SC	coated		2 × A22	ASME B1.1	
138944	JBO	UNF american UNIFIED fine thread	UNF 1/4-UNF 1/2	13/160	UNI		SC	coated		2 × A22	ASME B1.1	
138948	JBO	NPT Conical pipe thread	NPT 1/16-NPT 1/2	13/160	UNI		SC	coated		2 × A22	ASME B1.20.1 1:16	
138949	JBO	M Metric thread	M4-M20	13/161	UNI		SC	coated		1,5 × A21	DIN 13	
138950	JBO	M Metric thread	M4-M20	13/161	UNI		SC	coated		2 × A21	DIN 13	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

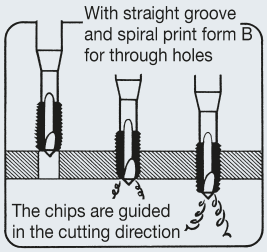
The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	Thread type	⌀ mm	Page	Material	Cut (Type)	Cutting material	Coating	Tolerance	Thread type	DIN	Tap drill
138951	JBO	M Metric thread	M4 - M20	13/161	UNI		SC	coated		2,5 × A21	DIN 13	
138953	JBO	MF Metric fine thread	M4-M16	13/161	UNI		SC	coated		1,5 × A21	DIN 13	
138956	JBO	MF Metric fine thread	M4-M16	13/161	UNI		SC	coated		2 × A21	DIN 13	
138957	JBO	M Metric thread MF Metric fine thread	M8-M20	13/162	UNI		SC	coated			DIN 13	
138958	JBO	G Whitworth pipe thread	G1./4-G1.1/2	13/162	UNI		SC	coated			DIN 228	
138959	JBO	M Metric thread	M2-M8	13/163	H		SC	coated		2 × A21	DIN 13	
138964	JBO	M Metric thread	M4-M12	13/163	H		SC	coated		2 × A21	DIN 13	
138970 - 72	JBO	M Metric thread MF Metric fine thread	2,30-13,40	13/162	UNI		SC			2,5 × A21	DIN 13	
138980	JBO	M Metric thread	M4-M16	13/163	N		SC	coated		1,5 × A21	DIN 13	
138982	JBO	M Metric thread	M4-M16	13/163	N		SC	coated		2 × A21	DIN 13	

Choice of the correct tap type

Through hole

Starting cut:
Form B = with spiral point

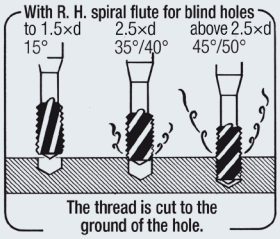


The spiral point guides the chips in the cutting direction.



Blind hole

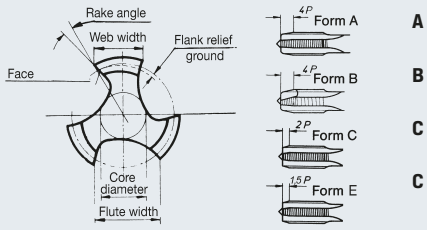
Starting cut:
Form C, right hand spiral flute



The spiral grooves guide the chips upwards out of the bore.

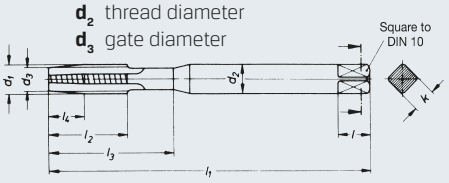


Tap overview



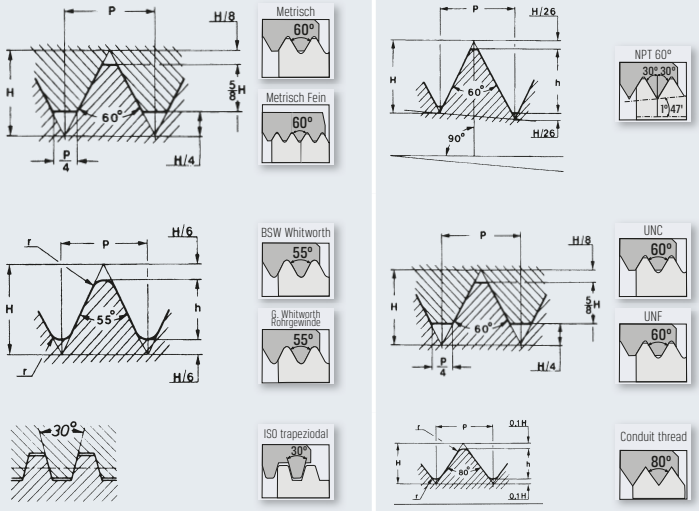
A with long section for through holes
B with spiral point for through holes
C with short section for blind holes
C with extra short section for blind holes

d_1 thread diameter
d_2 thread diameter
d_3 gate diameter



l_1 total length
l_2 thread length
l_3 useful length
l_4 section length
l Square length
k Square dimension (to DIN 10, part 1)

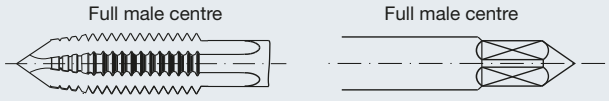
Thread types (selection series)



Tap (centring)

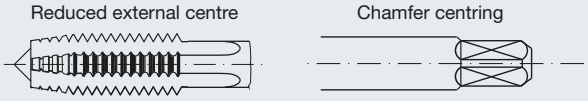
Centring:

M3 ÷ M6	DIN 371
M3 ÷ M6	DIN 376
M3 ÷ M6	DIN 374
M3 ÷ M6	DIN 352
M3 ÷ M6	DIN 2181
M3 ÷ M6	DIN 357
M3 ÷ M10	DIN 2174



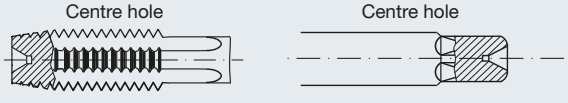
Centring:

M8; M10	DIN 371
M12	DIN 376



Centring:

M7; M9	DIN 371
M7 ÷ M10	DIN 376
≥ M14	DIN 376
≥ M7	DIN 374
≥ M7	DIN 352
≥ M7	DIN 2181
≥ M7	DIN 357
≥ M12	DIN 2174



Core hole table for tabs and thread formers



Metric ISO standard thread (M)

d_1	P	Core hole Ø	
		MGB	Former
M 1	0.25	0.75	0.9
M 1.1	0.25	0.85	1.0
M 1.2	0.25	0.95	1.1
M 1.4	0.3	1.1	1.28
M 1.6	0.35	1.25	1.47
M 1.7	0.35	1.35	1.57
M 1.8	0.35	1.45	1.67
M 2	0.4	1.6	1.85
M 2.2	0.45	1.75	2
M 2.3	0.4	1.9	2.15
M 2.5	0.45	2.05	2.3
M 2.6	0.45	2.15	2.4
M 3	0.5	2.5	2.8
M 3.5	0.6	2.9	3.25
M 4	0.7	3.3	3.7
M 4.5	0.75	3.8	4.2
M 5	0.8	4.2	4.65
M 6	1	5	5.55
M 7	1	6	6.6
M 8	1.25	6.8	7.45
M 9	1.25	7.8	8.45
M 10	1.5	8.5	9.35
M 11	1.5	9.5	–
M 12	1.75	10.2	11.20
M 14	2	12	13.00
M 16	2	14	15.00
M 18	2.5	15.5	16.80
M 20	2.5	17.5	18.80
M 22	2.5	19.5	–
M 24	3	21	22.65
M 27	3	24	–
M 30	3.5	26.5	28.4
M 33	3.5	29.5	31.4
M 36	4	32	34.15
M 39	4	35	–
M 42	4.5	37.5	39.9
M 45	4.5	40.5	42.9
M 48	5	43	45.68
M 52	5	47	–



Metric ISO fine thread (MF)

d_1	P	Core hole Ø	d_1	P	Core hole ☒
M 2	0.25	1.75	M 24	1	23
M 2.2	0.25	1.95	M 24	1.5	22.5
M 2.3	0.25	2.05	M 24	2	22
M 2.5	0.35	2.15	M 25	1.5	23.5
M 2.6	0.35	2.25	M 26	1.5	24.5
M 3	0.35	2.65	M 27	1.5	25.5
M 3.5	0.35	3.15	M 27	2	25
M 4	0.35	3.65	M 28	1.5	26.5
M 4	0.5	3.5	M 30	1	29
M 5	0.5	4.5	M 30	1.5	28.5
M 6	0.5	5.5	M 30	2	28
M 6	0.75	5.2	M 32	1.5	30.5
M 7	0.75	6.2	M 33	1.5	31
M 8	0.5	7.5	M 33	2	31
M 8	0.75	7.2	M 34	1.5	32.5
M 8	1	7	M 35	1.5	33.5
M 9	1	8	M 36	1.5	34.5
M 10	0.75	9.2	M 36	2	34
M 10	1	9	M 36	3	33
M 10	1.25	8.8	M 38	1.5	36.5
M 11	1	10	M 39	2	37
M 12	1	11	M 39	3	36
M 12	1.25	10.8	M 40	1.5	38.5
M 12	1.5	10.5	M 40	2	38
M 14	1	13	M 40	3	37
M 14	1.25	12.8	M 42	1.5	40.5
M 14	1.5	12.5	M 42	2	40
M 15	1	14	M 42	3	39
M 15	1.5	13.5	M 45	1.5	43.5
M 16	1	15	M 45	2	43
M 16	1.5	14.5	M 45	3	42
M 18	1	17	M 48	1.5	46.5
M 18	1.5	16.5	M 48	2	46
M 18	2	16	M 48	3	45
M 20	1	19	M 50	1.5	48.5
M 20	1.5	18.5	M 50	2	48
M 20	2	18	M 50	3	47
M 22	1	21	M 52	1.5	50.5
M 22	1.5	20.5	M 52	2	50
M 22	2	20	M 52	3	49



Unified coarse thread (UNC)

d_1	Core hole Ø
1 – 64	1.55
2 – 56	1.85
3 – 48	2.1
4 – 40	2.35
5 – 40	2.65
6 – 32	2.85
8 – 32	3.5
10 – 24	3.9
12 – 24	4.5
1/4 – 20	5.1
5/16 – 18	6.6
3/8 – 16	8
7/16 – 14	9.4
1/2 – 13	10.8
9/16 – 12	12.2
5/8 – 11	13.5
3/4 – 10	16.5
7/8 – 9	19.5
1 – 8	22.25
1 1/8 – 7	25
1 1/4 – 7	28
1 3/8 – 6	30.75
1 1/2 – 6	34
1 3/4 – 5	39.5
2 – 4	45



Whitworth pipe thread (G)

d_1	P*	Core hole Ø
G 1/8	28	8.8
G 1/4	19	11.8
G 3/8	19	15.25
G 1/2	14	19
G 5/8	14	21
G 3/4	14	24.5
G 7/8	14	28.25
G 1	11	30.75
G 1 1/8	11	35.5
G 1 1/4	11	39.5
G 1 3/8	11	42
G 1 1/2	11	45
G 1 3/4	11	51
G 2	11	57
G 2 1/4	11	63.1
G 2 1/2	11	72.6
G 2 3/4	11	78.9
G 3	11	85.3



Whitworth thread (BSW)

d_1	P*	Core hole Ø
W 1/16	60	1.2
W 3/32	48	1.9
W 1/8	40	2.5
W 5/32	32	3.2
W 3/16	24	3.6
W 7/32	24	4.5
W 1/4	20	5.1
W 5/16	18	6.5
W 3/8	16	7.9
W 7/16	14	9.25
W 1/2	12	10.5
W 9/16	12	12
W 5/8	11	13.5
W 3/4	10	16.5
W 7/8	9	19.25
W 1	8	22
W 1 1/8	7	24.75
W 1 1/4	7	28
W 1 3/8	6	30.5
W 1 1/2	6	33.5
W 1 5/8	5	35.5
W 1 3/4	5	39
W 1 7/8	4 1/2	41.5
W 2	4 1/2	44.5

P* = Threads per inch



Unified fine thread (UNF)

d_1	Core hole Ø
0 – 80	1.25
1 – 72	1.55
2 – 64	1.9
3 – 56	2.15
4 – 48	2.4
5 – 44	2.7
6 – 40	2.95
8 – 36	3.5
10 – 32	4.1
12 – 28	4.7
1/4 – 28	5.5
5/16 – 24	6.9
3/8 – 24	8.5
7/16 – 20	9.9
1/2 – 20	11.5
9/16 – 18	12.9
5/8 – 18	14.5
3/4 – 16	17.5
7/8 – 14	20.4
1 – 12	23.25
1 1/8 – 12	26.5
1 1/4 – 12	29.55
1 3/8 – 12	32.75
1 1/2 – 12	36.0



American tapered pipe thread (NPT)

d_1	P*	Core hole Ø
1/16	27	6.3
1/8	27	8.5
1/4	18	11.1
3/8	18	14.5
1/2	14	17.75
3/4	14	23
1	11.5	29
1 1/4	11.5	38
1 1/2	11.5	44
2	11.5	56

P* = Threads per inch



Steel armoured pipe thread (PG)

d_1	P*	Core hole Ø
Pg 7	20	11.4
Pg 9	18	14
Pg 11	18	17.25
Pg 13.5	18	19
Pg 16	18	21.25
Pg 21	16	27
Pg 29	16	35.5
Pg 36	16	45.5
Pg 42	16	52.5
Pg 48	16	58

P* = Threads per inch

Hand tap HSS

PRETEC

	P N/mm²	K HB	N N/mm²	
130050	<850	<150	Alu <600	Copper
130140			Copper <600	Alu <600

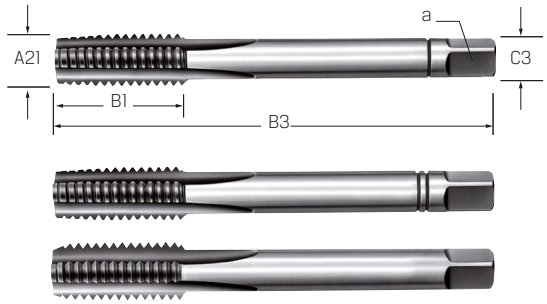
M Metric thread | HSS | DIN 352

Metric 60° | DIN 13 | 6H

left hand cutting | P

Design:
- 3-piece set with taper tap, second tap and bottoming tap
- thread profile ground from the solid
- flank ground and relief ground

Starting cut:
Taper 6 - 8 threads, form A; second tap 3 - 5 threads, form D; bottoming tap 2 - 3 threads, form C for blind hole and through-hole threads



N° article	130050 metric	130140 left-hand cutting	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
M1	○	–	M1	0,25	5,5	32	2,5	2,1	0,75
M1,4	○	–	M1.4	0,3	7	32	2,5	2,1	1,1
M1,6	●	–	M1.6	0,35	8	32	2,5	2,1	1,25
M2	●	–	M2	0,4	8	36	2,8	2,1	1,6
M2,3	○	–	M2.3	0,4	9	36	2,8	2,1	1,9
M2,5	●	–	M2.5	0,45	9	40	2,8	2,1	2,05
M3	●	○	M3	0,5	9	40	3,5	2,7	2,5
M3,5	●	–	M3.5	0,6	11	45	4	3	2,9
M4	●	○	M4	0,7	12	45	4,5	3,4	3,3
M4,5	●	–	M4.5	0,75	13	50	6	4,9	3,7
M5	●	○	M5	0,8	13	50	6	4,9	4,2
M6	●	○	M6	1	15	56	6	4,9	5
M7	●	–	M7	1	15	56	6	4,9	6
M8	●	○	M8	1,25	18	63	6	4,9	6,8
M9	○	–	M9	1,25	17	63	7	5,5	7,8
M10	●	○	M10	1,5	20	70	7	5,5	8,5
M12	●	○	M12	1,75	23	75	9	7	10,2
M14	●	○	M14	2	25	80	11	9	12
M16	●	○	M16	2	25	80	12	9	14
M18	●	–	M18	2,5	30	95	14	11	15,5
M20	●	○	M20	2,5	30	95	16	12	17,5
M22	●	–	M22	2,5	30	100	18	14,5	19,5
M24	●	–	M24	3	34	110	18	14,5	21
M27	●	–	M27	3	34	110	20	16	24
M30	●	–	M30	3,5	40	125	22	18	26,5

Hand tap HSS-Co Inox

PRETEC

	M N/mm²
130150	<1000

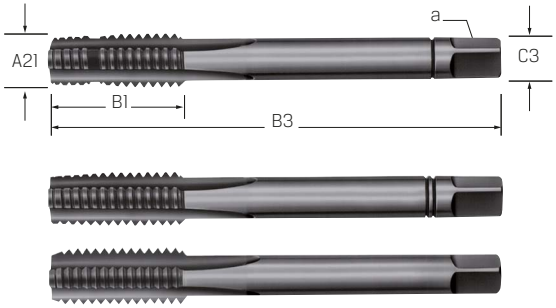
M Metric thread | HSS-Co | DIN 352

Metric 60° | DIN 13 | 6H

M

Design:
- 3-piece set with taper tap, second tap and bottoming tap
- thread profile ground from the solid
- flank ground and relief ground
- **steam tempered**

Starting cut:
Taper 6 - 8 threads, form A; second tap 3 - 5 threads, form D; bottoming tap 2 - 3 threads, form C for blind hole and through-hole threads



N° article	130150 metric	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
M2	●	M2	0,4	8	36	2,8	2,1	1,6
M2,5	●	M2.5	0,45	9	40	2,8	2,1	2,05
M3	●	M3	0,5	9	40	3,5	2,7	2,5
M4	●	M4	0,7	11	45	4,5	3,4	3,3
M5	●	M5	0,8	13	50	6	4,9	4,2
M6	●	M6	1	15	56	6	4,9	5
M8	●	M8	1,25	19	63	6	4,9	6,8
M10	●	M10	1,5	22	70	7	5,5	8,5
M12	●	M12	1,75	25	75	9	7	10,2
M14	○	M14	2	25	80	11	9	12
M16	●	M16	2	25	80	12	9	14
M18	○	M18	2,5	32	95	14	11	15,5
M20	●	M20	2,5	32	95	16	12	17,5

Handgewindebohrer HSS

PRETEC

	P N/mm²	K HB	N N/mm²	
130330	<850	<150	Alu <600	Copper

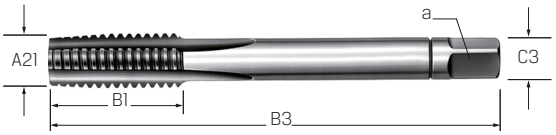
MF Metric fine thread | HSS | DIN 2181

Metric fine 60° | DIN 13 | 6H | P

Design:
- two-piece set with taper tap and bottoming tap
- thread profile ground from the solid
- flank ground and relief ground

Starting cut:
Taper tap 3.5-5 threads, form D;
bottoming tap 2-3 threads
Form C for blind hole and through-hole threads





N° article	130330 metric-fine	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
M3×0,35	26,65	M3	0,35	9	40	3,5	2,7	2,65
M3,5×0,35	76,40	M3,5	0,35	10	45	4	3	3,15
M4×0,35	26,65	M4	0,35	9	45	4,5	3,4	3,65
M4×0,50	26,65	M4	0,5	9	45	4,5	3,4	3,5
M5×0,5	25,95	M5	0,5	13	50	6	4,9	4,5
M6×0,5	26,65	M6	0,5	15	56	6	4,9	5,5
M6×0,75	32,35	M6	0,75	11	56	6	4,9	5,2
M7×0,75	39,30	M7	0,75	11	56	6	4,9	6,2
M8×0,5	34,15	M8	0,5	19	63	6	4,9	7,5
M8×0,75	31,20	M8	0,75	19	63	6	4,9	7,2
M8×1	29,75	M8	1	19	63	6	4,9	7
M9×1	51,05	M9	1	18	63	7	5,5	8
M10×0,75	42,95	M10	0,75	20	63	7	5,5	9,2
M10×1	34,85	M10	1	20	63	7	5,5	9
M10×1,25	34,85	M10	1,25	22	70	7	5,5	8,8

N° article	130330 metric-fine	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
M11×1	51,70	M11	1	18	63	8	6,2	10
M12×1	40,25	M12	1	20	70	9	7	11
M12×1,25	40,70	M12	1,25	20	70	9	7	10,8
M12×1,5	39,75	M12	1,5	20	70	9	7	10,5
M14×1	58,10	M14	1	20	70	11	9	13
M14×1,25	56,95	M14	1,25	20	70	11	9	12,8
M14×1,5	50,20	M14	1,5	20	70	11	9	12,5
M15×1	74,00	M15	1	20	70	12	9	14
M16×1	67,80	M16	1	20	70	12	9	15
M16×1,5	61,25	M16	1,5	20	70	12	9	14,5
M18×1	82,80	M18	1	20	80	14	11	17
M18×1,5	72,50	M18	1,5	22	80	14	11	16,5
M18×2	95,65	M18	2	22	80	14	11	16
M20×1	86,10	M20	1	20	80	16	12	19
M20×1,5	79,00	M20	1,5	22	80	16	12	18,5

N° article	130330 metric-fine	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
M20×2	114,60	M20	2	22	80	16	12	18
M22×1	124,40	M22	1	22	80	18	14,5	21
M22×1,5	101,10	M22	1,5	22	80	18	14,5	20,5
M22×2	105,90	M22	2	22	80	18	14,5	20
M24×1	213,70	M24	1	22	90	18	14,5	23
M24×1,5	81,85	M24	1,5	22	90	18	14,5	22,5
M24×2	124,50	M24	2	22	90	18	14,5	22
M25×1,5	153,90	M25	1,5	22	90	18	14,5	23,5
M27×1,5	159,00	M27	1,5	22	90	20	16	25,5
M27×2	171,30	M27	2	22	90	20	16	25
M28×1,5	165,10	M28	1,5	22	90	20	16	26,5
M30×1	213,30	M30	1	22	90	22	18	29
M30×1,5	180,90	M30	1,5	22	90	22	18	28,5
M30×2	210,50	M30	2	22	90	22	18	28

Hand tap HSS

PRETEC

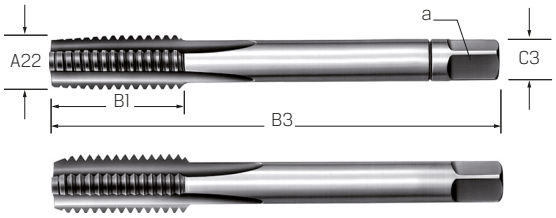
	P N/mm²	K HB	N N/mm²	
130420	<850	<150	Alu <600	Copper

G Whitworth pipe thread | HSS | DIN 5157

BSW Whitworth 55° | DIN ISO 228 | P

Design:
- two-piece set with taper tap and bottoming tap
- thread profile ground from the solid
- flank ground and relief ground

Starting cut:
Taper tap 3.5-5 threads, form D; bottoming tap 2-3 threads
Form C for blind hole and through-hole threads



N° article	130420 G (WWR/ BSPT)	A22 inch	TPI	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
1/8-28	●	G 1/8	28	20	63	7	5,5	8,8
1/4-19	●	G 1/4	19	20	70	11	9	11,8
3/8-19	●	G 3/8	19	20	70	12	9	15,25
1/2-14	●	G 1/2	14	22	80	16	12	19
5/8-14	○	G 5/8	14	22	80	18	14,5	21
3/4-14	●	G 3/4	14	22	90	20	16	24,5
1-11	●	G 1	11	25	100	22	18	30,75

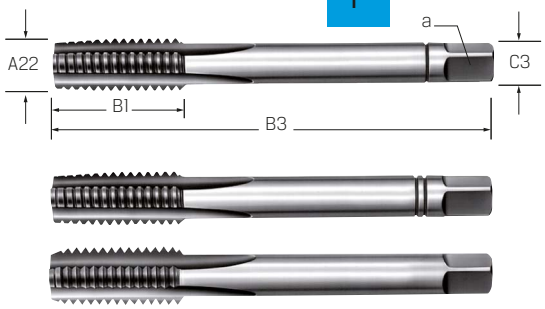
	P N/mm²	K HB	N N/mm²	
130430	<850	<150	Copper <600	Alu <600

UNC american UNIFIED coarse thread | HSS | DIN 2184-2

UNC 60° | ANSI B1.1 | 2B

P

Design:
- 3-piece set with taper tap, second tap and bottoming tap
- thread profile ground from the solid
- flank ground and relief ground



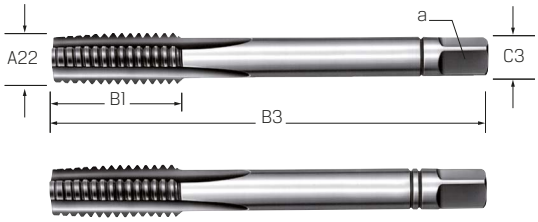
N° article	130430 UNC	A22 inch	TPI	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
6-32	○	UNC 6	32	11	45	4	3	2,85
8-32	○	UNC 8	32	12	45	4,5	3,4	3,5
10-24	○	UNC 10	24	14	50	6	4,9	3,9
12-24	○	UNC 12	24	16	56	6	4,9	4,5
1/4-20	○	UNC 1/4	20	16	56	6	4,9	5,2
5/16-18	○	UNC 5/16	18	20	63	6	4,9	6,6
3/8-16	○	UNC 3/8	16	22	70	7	5,5	8
7/16-14	○	UNC 7/16	14	22	70	8	6,2	9,4
1/2-13	○	UNC 1/2	13	25	75	9	7	10,75
5/8-11	○	UNC 5/8	11	27	80	12	9	13,5
3/4-10	○	UNC 3/4	10	32	95	14	11	16,5

	P N/mm²	K HB	N N/mm²	
130435	<850	<150	Copper <600	Alu <600

UNF american UNIFIED fine thread | HSS | DIN 2184-2

UNF 60° | ANSI B1.1 | 2B | P

Design:
- two-piece set with taper tap and bottoming tap
- thread profile ground from the solid
- flank ground and relief ground



N° article	130435 UNF	A22 inch	TPI	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
10-32	○	UNF 10	32	14	50	6	4,9	4,65
1/4-28	○	UNF 1/4	28	16	56	6	4,9	5,5
5/16-24	○	UNF 5/16	24	18	63	6	4,9	6,9
3/8-24	○	UNF 3/8	24	18	63	7	5,5	8,5

N° article	130435 UNF	A22 inch	TPI	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
7/16-20	○	UNF 7/16	20	20	70	8	6,2	9,9
1/2-20	○	UNF 1/2	20	20	70	9	7	11,5
9/16-18	○	UNF 9/16	18	20	70	11	9	12,9
5/8-18	○	UNF 5/8	18	20	70	12	9	14,5

Hand tap set HSS

PRETEC

Design:
- compiled of 3-piece tap sets 130050
- opening the cassette automatically brings the taps into an upright position
- orderly and protected keeping
- ideal as equipment for installation

Delivery:
In plastic case



M Metric thread | HSS | DIN 352

Metric 60° | DIN 13 | 6H

P

N° article	131020 metric, set	Contents
M3-M12	●	1 set each hand taps 130050 M3 | M4 | M5 | M6 | M8 | M10 | M12

Design:
Compiled from hand taps 130050 and twist drills 100010

Delivery:
In plastic case



M Metric thread | HSS | DIN 352

DIN 338 | Metric 60° | DIN 13

6H | P

N° article	131220 metric, set with core drill	Contents
M3-M12	●	1 set each hand taps 130050 M3 | M4 | M5 | M6 | M8 | M10 | M12 and 1 tap drill each ∅ 2.5 | 3.3 | 4.2 | 5.0 | 6.8 | 8.5 | 10.2 mm

Threading tool set HSS

PRETEC

Design:
Taps and tap wrenches, dies, die stocks and operating tools of HSS supplied in a metal case

M Metric thread | HSS | DIN 352 | DIN EN 22568 | Metric 60° | DIN 13 | 6H

Delivered in case

N° article	131400 metric, set	Contents
M3-M12	●	1 set each hand taps DIN 352 (three-piece) and 1 die each DIN 22568 M3 | M4 | M5 | M6 | M8 | M10 | M12 1 die holder DIN 225 each 20×5 | 20×7 | 25×9 | 30×11 | 38×14 1 adjustable tap wrench DIN 1814 each size 1 and 2 Thread gauge Screw driver 4.5 mm
M3-M20	●	1 set each hand taps DIN 352 (three-piece) plus 1 die each M3 | M4 | M5 | M6 | M8 | M10 | M12 | M14 | M16 | M18 | M20 1 piece each die holder DIN 225 20×5 | 20×7 | 25×9 | 30×11 | 38×14 | 45×18 1 adjustable tap wrench DIN 1814 each size 1 and 3 Thread gauge Screw driver 4.5 mm



Combi tap
with 1/4" bit drive

PRETEC

	P N/mm²
131900	⟨850

M Metric thread | HSS | DIN 352

Chamfer form B 3,5-5 threads | P

Use:
Core hole drilling, threading and deburring in one operation. For use on power drills with clockwise and anti-clockwise rotation, cordless drills for field work, repair of damaged threads
Important: The tool must be able to float for self-centring. Not fit for materials with nominal thread above Ø (M6 = 6 mm material thickness)

N° article	131900 metric	A21 metric	Thread pitch mm	B3 mm
M3	●	M3	0,5	36
M4	●	M4	0,7	39
M5	●	M5	0,8	41
M6	●	M6	1	41
M8	●	M8	1,25	50
M10	●	M10	1,5	59



Combination tap set
with 1/4" bit drive

PRETEC

Contents:
- 1 bit each M3 - M10
- plus adapter

Delivery:
In plastic case

M Metric thread | HSS | DIN 352 | Chamfer form B 3,5-5 threads



N° article	131906 metric, set	A21 metric
M3-M10	●	M3, M4, M5, M6, M8, M10

Machine tap Steel

PRETEC

	P N/mm²	K HB	N N/mm²
132020	⟨850	⟨150	Alu ⟨600
	vc = m/min.		
132020	10-14	4 - 7	14-20

M Metric thread | HSS-Co | DIN 352

Chamfer form B 3,5-5 threads | Metric 60° | DIN 13

6H Through hole | P



N° article	132020 metric	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	M3	0,5	9	40	3,5	6	2,7	2,5
M4	●	M4	0,7	11	45	4,5	6	3,4	3,3
M5	●	M5	0,8	13	50	6	8	4,9	4,2
M6	●	M6	1	15	50	6	8	4,9	5
M8	●	M8	1,25	19	63	6	8	4,9	6,8
M10	●	M10	1,5	22	70	7	8	5,5	8,5
M12	●	M12	1,75	25	75	9	10	7	10,2

	P N/mm²	K HB	N N/mm²
132120	⟨850	⟨150	Alu ⟨600
	vc = m/min.		
132120	10-14	4 - 7	14-20

M Metric thread | HSS-Co | DIN 352

40° Twist | Chamfer form C 2-3 threads | Metric 60°

DIN 13 | 6H Blind hole

P



N° article	132120 metric, RSP40	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	M3	0,5	5	40	3,5	6	2,7	2,5
M4	●	M4	0,7	7	45	4,5	6	3,4	3,3
M5	●	M5	0,8	8	50	6	8	4,9	4,2
M6	●	M6	1	10	56	6	8	4,9	5
M8	●	M8	1,25	13	63	6	8	4,9	6,8
M10	●	M10	1,5	15	70	7	8	5,5	8,5
M12	●	M12	1,75	18	75	9	10	7	10,2

Machine tap Universal

PREMUS GP

	P N/mm²	M N/mm²	K HB	N N/mm²
132225	⟨1100		⟨350	⟨600
	vc = m/min.			
132225	5-45	2 - 12	5 - 25	10-40

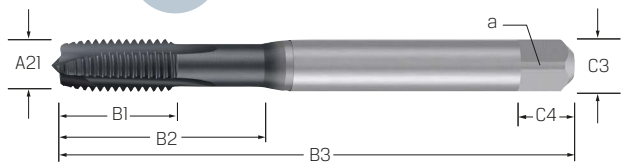
M Metric thread | HSS-E | coated
DIN 371 | DIN 376 from M12 | Chamfer form B, 4-5 threads
Metric 60° | DIN 13 | 6H
3 × A21 | Through hole | UNI
CAD | Vc

Design:
- chamfer form B, 4-5 threads
- made of high-performance high-speed steel with cobalt content
- coated with hard material layer with sliding top layer

OUR VERY BEST

Use:
For universal application

GP



N° article	132225 HSS-E metric, GLD	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M4	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	15	25	70	6	8	4,9	4,2
M6	●	M6	1	17	30	80	6	8	4,9	5
M8	●	M8	1,25	20	35	90	8	9	6,2	6,8
M10	●	M10	1,5	22	–	100	10	11	8	8,5
M12	●	M12	1,75	24	–	110	9	10	7	10,2
M16	●	M16	2	27	–	110	12	12	9	14
M20	●	M20	2,5	32	–	140	16	15	12	17,5
M24	●	M24	3	34	–	160	18	17	14,5	21

Machine tap Synchro, Universal

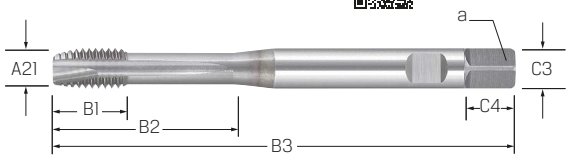
PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	Plastics N/mm²
132215	⟨1100		⟨350	Brass, bronze, alu ⟨600	Thermoplastics, CFRP, GFRP
	vc = m/min.				
132215	5-45	2 - 12	5 - 25	10-40	30-50

M Metric thread | HSS-Co PM | coated
Factory standard | Typ Synchro | 1835 B shank
Chamfer form B, 3,5-5 threads | Metric 60° | DIN 13
6HX | Through hole | UNI
Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of powder metallurgical HSS
- TiCN coated

Use:
In Weldon chucks or synchro tapping chucks, e.g. 240680



N° article	132215 metric, Synchro, HSS-Co PM TiCN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2	●	M2	0,4	4	13	70	6	8	4,9	1,6
M2,5	●	M2.5	0,45	5	14	70	6	8	4,9	2,05
M3	●	M3	0,5	5	18	70	6	8	4,9	2,5
M4	●	M4	0,7	7	21	70	6	8	4,9	3,3
M5	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	M6	1	10	30	80	6	8	4,9	5
M8	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	M12	1,75	18	44	110	12	12	9	10,2
M14	●	M14	2	20	44	110	14	14	11	12
M16	●	M16	2	20	44	110	16	15	12	14
M20	○	M20	2,5	25	56	140	16	15	12	17,5

Machine tap Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		Plastics N/mm²	
132200	⟨1100	⟨800	⟨850	Titanium ⟨900	Nickel ⟨900		Thermoset	GRP/CRP/ ARP
132210	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600		Thermoplastics, CFRP, GFRP	
132212				Titanium ⟨900	Copper ⟨900	Alu ⟨500	Thermoset	GRP/CRP/ ARP
	vc = m/min.							
132200	8-10	6 - 8	10 - 12	2-4	2-4		8-10	8-10
132210	10-17	8 - 10	15 - 22		32-60		15-26	
132212		10 - 15	15 - 18		10-12	50-60	15-18	15-18

Design 132200:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- vaporised

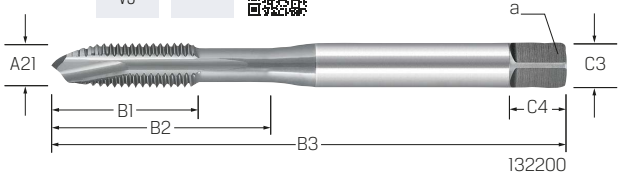
Design 132210:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of powder metallurgical HSS
- Hardlube coated

Design 132212:
- for through-hole threads
- chamfer form B, 3-5 threads
- made of powder metallurgical HSS
- Hardlube coated
- with internal coolant supply

Use 132200 to 132212:
For universal application

M Metric thread | DIN 371 | DIN 376 from M12 | Chamfer form B, 3,5-5 threads
Metric 60° | DIN 13 | Through hole | Vc

HSS-E V3 | 6H | Vc



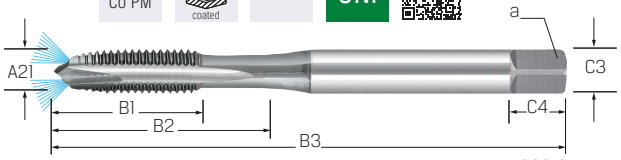
132200

HSS-Co PM | coated | 6HX | Vc



132210

HSS-Co PM | coated | 6HX | UNI | Vc



132212

N° article	132200 metric, HSSE-V3, vaporised	132210 metric, HSS-CoPM, Hardlube	132212 metric, HSS-Co PM, Hardlube, ICS	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2	–	●	–	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	–	●	–	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	●	–	M3	0,5	11	18	56	3,5	6	2,7	2,5
M4	●	●	–	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	●	–	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	●	●	M6	1	19	30	80	6	8	4,9	5
M8	●	●	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	●	●	M10	1,5	24	39	100	10	11	8	8,5
M12	●	●	●	M12	1,75	28	–	110	9	10	7	10,2
M14	–	●	–	M14	2	30	–	110	11	12	9	12
M16	●	●	●	M16	2	32	–	110	12	12	9	14
M20	●	●	○	M20	2,5	34	–	140	16	15	12	17,5
M24	●	●	–	M24	3	38	–	160	18	17	14,5	21
M27	–	●	–	M27	3	38	–	160	20	19	16	24
M30	–	●	–	M30	3,5	45	–	180	22	21	18	26,5

Machine tap Universal

PREMUS

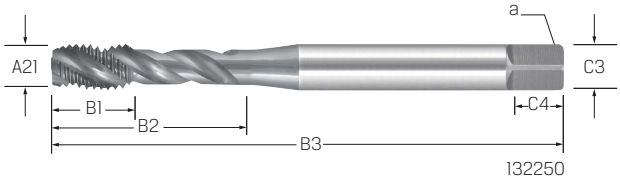
M Metric thread | DIN 371 | DIN 376 from M12 | Metric 60° | DIN 13 | Blind hole | UNI

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		Plastics N/mm²	
132250	⟨1100	⟨800	⟨850	Titanium ⟨900	Nickel ⟨900		Thermoset	GRP/CRP/ ARP
132260	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600		Thermo-plastics, CFRP, GFRP	
132262								
132263							Thermoplastics	GRP / CRP
132264					Nickel ⟨900	Alu ⟨500		
vc = m/min.								
132250	6-8	5 - 6	8 - 10	2-4	2-4		8-10	8-10
132260	10-17	8 - 10	15 - 22	2-3	32-60		15-26	
132262								
132263								15-26
132264	12-15	10 - 12			5-6	32-40	32-40	15-22

Use 132250 - 132264:
For universal application

Design 132250:
- for blind-hole threads
- chamfer form C, 40 degree RSP, 2-3 threads
- high-speed steel with vanadium content
- vaporised

HSS-E V3 | 40° Twist | Chamfer form C 2-3 threads | 6H | 2,5 × A21 | Vc



132250

Design 132260:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- made of powder metallurgical HSS (PS55)
- Hardlube coated

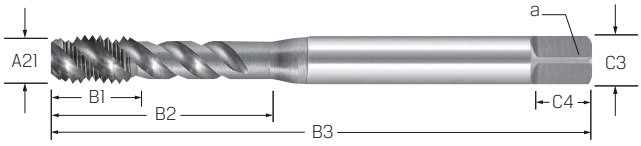
HSS-Co PM | coated | 50° Twist | Chamfer form C 2-3 threads | 6HX | 3 × A21 | Vc



132260

Design 132262:
- for blind-hole threads
- chamfer form E, 1.5-2 threads, 50 degrees RSP
- made of powder metallurgical HSS (PS55)
- Hardlube coated

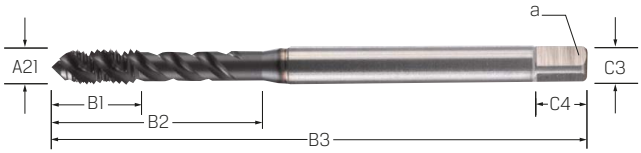
HSS-Co PM | coated | 50° Twist | Chamfer form E 1,5-2 threads | 6HX | 3 × A21 | Vc



132262

Design 132263:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- tolerance class 6GX
- made of powder metallurgical HSS (PS55)
- Hardlube coated

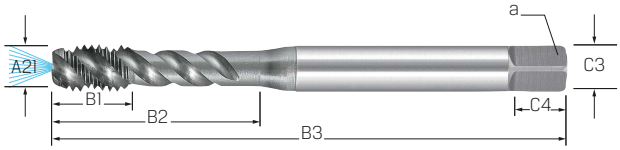
HSS-Co PM | coated | 50° Twist | Chamfer form C 2-3 threads | 6GX | 3 × A21 | Vc



132263

Design 132264:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- with internal coolant supply
- made of powder metallurgical HSS (PS55)
- Hardlube coated

HSS-Co PM | coated | 50° Twist | Chamfer form C 2-3 threads | 6HX | 3 × A21 | ICS | Vc



132264

N° article	132250 metric, HSSE-V3 vaporised	132260 metric, HSS-Co PM, Hardlube, 6HX	132262 metric, HSS-Co PM, Hardlube, 6HX	132263 metric, HSS-Co PM, Hardlube, 6HX	132264 metric, HSS-Co PM, Hardlube, 6HX, ICS	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M2	–	●	–	–	–	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	–	●	–	–	–	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	●	●	●	–	M3	0,5	5	18	56	3,5	6	2,7	2,5
M4	●	●	●	●	–	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	●	●	●	–	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	●	●	●	●	M6	1	10	30	80	6	8	4,9	5
M8	●	●	●	●	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	●	●	●	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	●	●	●	●	M12	1,75	18	–	110	9	10	7	10,2
M14	–	●	–	–	–	M14	2	20	–	110	11	12	9	12
M16	●	●	●	○	●	M16	2	20	–	110	12	12	9	14
M20	●	●	●	●	●	M20	2,5	25	–	140	16	15	12	17,5
M24	●	●	–	–	–	M24	3	30	–	160	18	17	14,5	21
M27	–	●	–	–	–	M27	3	30	–	160	20	19	16	24
M30	–	●	–	–	–	M30	3,5	35	–	180	22	21	18	26,5

Machine tap Universal Synchro

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		Plastics N/mm²
132265	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600		Thermoplastics, CFRP, GFRP
132267					Nickel ⟨900	Alu ⟨500	Thermoplastics
vc = m/min.							
132265	12-50	10 - 15	10 - 30	6-20	20-70		20-40
132267					4-20	20-70	

M Metric thread · HSS-Co PM · coated · Factory standard · Typ Synchro · 1835 B shank · 50° Twist

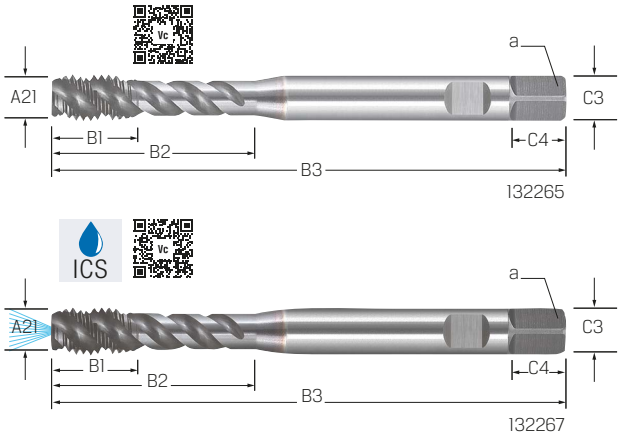
Chamfer form C 2-3 threads · Metric 60° · DIN 13 · 6HX · Blind hole · 3 × A21 · UNI

Design 132265:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- made of powder metallurgical HSS (PS55)
- TiCN coated

Design 132267:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- made of powder metallurgical HSS (PS55)
- TiCN coated
- with internal coolant supply

Use 132265 and +132267:
In Weldon chucks or synchro tapping chucks, e.g. 240680

N° article	132265 metric, synchro	132267 metric, synchro, ICS	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M2	●	–	M2	0,4	4	13	70	6	8	4,9	1,6
M2,5	●	–	M2.5	0,45	5	14	70	6	8	4,9	2,05
M3	●	–	M3	0,5	5	18	70	6	8	4,9	2,5
M4	●	–	M4	0,7	7	21	70	6	8	4,9	3,3
M5	●	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	●	M6	1	10	30	80	6	8	4,9	5
M8	●	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	●	M12	1,75	18	44	110	12	12	9	10,2
M14	●	●	M14	2	20	44	110	14	14	11	12
M16	●	●	M16	2	20	44	110	16	15	12	14
M20	●	●	M20	2,5	25	56	140	16	15	12	17,5



Machine tap Universal

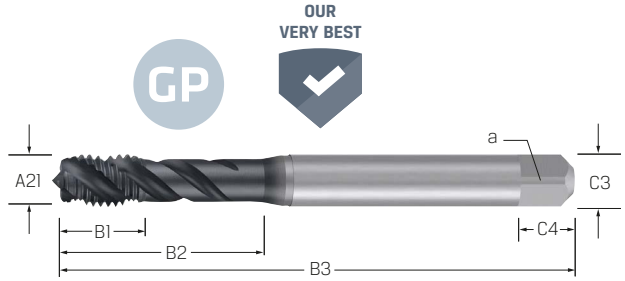
PREMUS GP

	P N/mm²	M N/mm²	K HB	N N/mm²
132255	⟨1100		⟨350	⟨600
vc = m/min.				
132255	5-45	2 - 12	5 - 25	10-40

M Metric thread · HSS-E · coated · DIN 371 · DIN 376 from M12 · 45° Twist · Chamfer form C 2-3 threads · Metric 60° · DIN 13 · 6H · Blind hole · 2,5 × A21 · UNI · CAD · Vc

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads
- metric ISO thread
- 45° RSP
- made of high-performance high-speed steel with cobalt content
- coated with hard material layer with sliding top layer

Use:
For universal application



N° article	132255 metric, HSS-E GLD	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M4	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	15	25	70	6	8	4,9	4,2
M6	●	M6	1	17	30	80	6	8	4,9	5
M8	●	M8	1,25	20	35	90	8	9	6,2	6,8
M10	●	M10	1,5	22	39	100	10	11	8	8,5
M12	●	M12	1,75	24	–	110	9	10	7	10,2
M16	●	M16	2	27	–	110	12	12	9	14
M20	●	M20	2,5	32	–	140	16	15	12	17,5
M24	●	M24	3	34	–	160	18	17	14,5	21

Machine tap Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	Plastics N/mm²
132270	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600	Thermoplastics, CFRP, GFRP
vc = m/min.						
132270	10-17	8 - 10	15 - 22	2-3	32-60	15-26

MF Metric fine thread · HSS-Co PM · coated · DIN 374 · Chamfer form B 3,5-5 threads · Metric fine 60° · DIN 13 · 6HX · Through hole · UNI · Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- metric ISO fine thread (MF)
- made of powder metallurgical HSS (PS55)
- Hardlube coated

Use:
For universal application



N° article	132270 metric-fine, HSS-Co PM, Hardlube	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	NEW ●	M3	0,35	8	56	2,2	–	–	2,65
M4×0,5	NEW ●	M4	0,5	10	63	2,8	5	2,1	3,5
M5×0,5	NEW ●	M5	0,5	12	70	3,5	6	2,7	4,5
M6×0,5	NEW ●	M6	0,5	14	80	4,5	6	3,4	5,5
M6×0,75	NEW ●	M6	0,75	14	80	4,5	6	3,4	5,25
M8×0,75	NEW ●	M8	0,75	18	80	6	8	4,9	7,25
M8×1	●	M8	1	22	90	6	8	4,9	7
M10×1	●	M10	1	20	90	7	8	5,5	9
M10×1,25	●	M10	1,25	24	100	7	8	5,5	8,8
M12×1	●	M12	1	22	100	9	10	7	11
M12×1,25	●	M12	1,25	22	100	9	10	7	10,8
M12×1,5	●	M12	1,5	22	100	9	10	7	10,5
M14×1,5	●	M14	1,5	22	100	11	12	9	12,5
M16×1,5	●	M16	1,5	22	100	12	12	9	14,5
M18×1,5	●	M18	1,5	25	110	14	14	11	16,5
M20×1,5	●	M20	1,5	25	125	16	15	12	18,5
M22×1,5	NEW ●	M22	1,5	25	125	17	15	14,5	20,5
M24×1,5	NEW ●	M24	1,5	28	140	17	15	14,5	22,5

Machine tap HSS-E, Universal

PREMUS GP

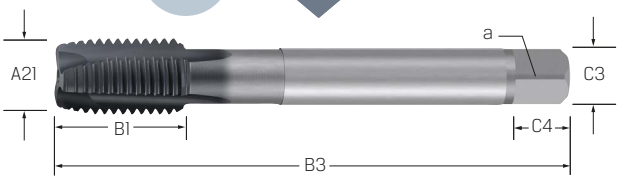
	P N/mm²	M N/mm²	K HB	N N/mm²
132275	⟨1100		⟨350	⟨600
vc = m/min.				
132275	5-45	2 - 12	5 - 25	10-40

MF Metric fine thread | HSS-E | coated
DIN 374 | Chamfer form B, 4-5 threads | Metric fine 60°
DIN 13 | 6H | Through hole
3 × A21 | UNI | CAD | Vc

Design:
- for through-hole threads
- chamfer form B, 4-5 threads
- metric ISO fine thread
- made of high-performance high-speed steel with cobalt content
- coated with hard material layer with sliding top layer

Use:
For universal application

OUR VERY BEST



N° article	132275 metric-fine, HSS-E, GLD	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M6×0,75	●	M6	0,75	13	80	4,5	6	3,4	5,2
M8×1	●	M8	1	17	90	6	8	4,9	7
M10×1	●	M10	1	18	90	7	8	5,5	9
M10×1,25	●	M10	1,25	22	100	7	8	5,5	8,8
M12×1	●	M12	1	18	100	9	10	7	11
M12×1,25	●	M12	1,25	22	100	9	10	7	10,8
M12×1,5	●	M12	1,5	22	100	9	10	7	10,5
M14×1,5	●	M14	1,5	22	100	11	12	9	12,5
M16×1,5	●	M16	1,5	22	100	12	12	9	14,5
M20×1,5	●	M20	1,5	25	125	16	15	12	18,5
M24×1,5	●	M24	1,5	27	140	18	17	14,5	22,5
M24×2	●	M24	2	27	140	18	17	14,5	22

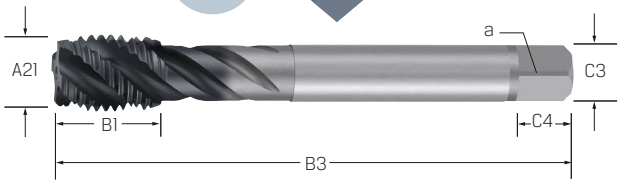
	P N/mm²	M N/mm²	K HB	N N/mm²
132285	⟨1100		⟨350	⟨600
vc = m/min.				
132285	5-45	2-12	5-25	10-40

MF Metric fine thread | HSS-E | coated
DIN 374 | 45° Twist | Chamfer form C, 2-3 threads
Metric fine 60° | DIN 13 | 6H
Blind hole | 2,5 × A21 | UNI | Vc | CAD

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads
- metric ISO fine thread
- 45 °C RSP
- made of high-performance high-speed steel with cobalt content
- coated with hard material layer with sliding top layer

Use:
For universal application

OUR VERY BEST



N° article	132285 metric-fine, HSS-E, GLD	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M6×0,75	●	M6	0,75	13	80	4,5	6	3,4	5,2
M8×1	●	M8	1	17	90	6	8	4,9	7
M10×1	●	M10	1	18	90	7	8	5,5	9
M10×1,25	●	M10	1,25	22	100	7	8	5,5	8,8
M12×1	●	M12	1	18	100	9	10	7	11
M12×1,25	●	M12	1,25	22	100	9	10	7	10,8
M12×1,5	●	M12	1,5	22	100	9	10	7	10,5
M14×1,5	●	M14	1,5	22	100	11	12	9	12,5
M16×1,5	●	M16	1,5	22	100	12	12	9	14,5
M20×1,5	●	M20	1,5	25	125	16	15	12	18,5
M24×1,5	●	M24	1,5	27	140	18	17	14,5	22,5
M24×2	●	M24	2	27	140	18	17	14,5	22

Machine tap Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	Plastics N/mm²
132280	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600	Thermoplastics, CFRP, GFRP
vc = m/min.						
132280	10-17	8 - 10	15 - 22	2-3	32-60	15-26

MF Metric fine thread | HSS-Co PM | coated | DIN 374 | 50° Twist | Chamfer form C, 2-3 threads | Metric fine 60°
DIN 13 | 6HX | Blind hole | 3 × A21 | UNI | Vc

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- metric ISO fine thread (MF)
- made of powder metallurgical HSS (PS55)
- Hardlube coated

Use:
For universal application



N° article	132280 metric-fine, HSS-Co PM, Hardlube	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	NEW ●	M3	0,35	4	56	2,2	–	–	2,65
M4×0,5	NEW ●	M4	0,5	6	63	2,8	5	2,1	3,5
M5×0,5	NEW ●	M5	0,5	7	70	3,5	6	2,7	4,5
M6×0,5	NEW ●	M6	0,5	8	80	4,5	6	3,4	5,5
M6×0,75	NEW ●	M6	0,75	8	80	4,5	6	3,4	5,25
M8×0,75	NEW ●	M8	0,75	10	80	6	8	4,9	7,25
M8×1	●	M8	1	10	90	6	8	4,9	7
M10×1	●	M10	1	12	90	7	8	5,5	9
M10×1,25	●	M10	1,25	12	100	7	8	5,5	8,8
M12×1	●	M12	1	14	100	9	10	7	11
M12×1,25	●	M12	1,25	14	100	9	10	7	10,8
M12×1,5	●	M12	1,5	14	100	9	10	7	10,5
M14×1,5	●	M14	1,5	16	100	11	12	9	12,5
M16×1,5	●	M16	1,5	16	100	12	12	9	14,5
M18×1,5	●	M18	1,5	20	110	14	14	11	16,5
M20×1,5	●	M20	1,5	20	125	16	15	12	18,5
M22×1,5	NEW ●	M22	1,5	20	125	17	15	14,5	20,5
M24×1,5	NEW ●	M24	1,5	24	140	17	15	14,5	22,5

Machine tap Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	Plastics N/mm²
132290	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600	Thermoplastics, CFRP, GFRP
	vc = m/min.					
132290	10-17	8 - 10	15 - 22	2-3	32-60	15-26

G Whitworth pipe thread | HSS-Co PM | coated | DIN 5156 | Chamfer form B, 3,5-5 threads | G. Whitworth pipe thread, 55° | DIN ISO 228 | 6HX | Through hole | UNI | Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- Whitworth pipe thread (G)
- made of powder metallurgical HSS (PS55)
- Hardlube coated

Use:
For universal application



N° article	132290 G (WWR/BSPT), HSS-Co PM, Hardlube	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
G1/8 - 28	●	G 1/8	28	9,73	20	90	7	8	5,5	8,8
G1/4 - 19	●	G 1/4	19	13,16	21	100	11	12	9	11,8
G3/8 - 19	●	G 3/8	19	16,66	21	100	12	12	9	15,25
G1/2 - 14	●	G 1/2	14	20,96	24	125	16	15	12	19
G5/8 - 14	●	G 5/8	14	22,91	24	125	18	17	14,5	21
G3/4 - 14	●	G 3/4	14	26,44	26	140	20	19	16	24,5
G1 - 11	●	G 1	11	33,25	28	160	25	23	20	30,75

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	Plastics N/mm²
132295	⟨1200	⟨900	⟨300	⟨1000	Brass, bronze, alu ⟨600	Thermoplastics, CFRP, GFRP
	vc = m/min.					
132295	10-17	8 - 10	15 - 22	2-3	32-60	15-26

G Whitworth pipe thread | HSS-Co PM | coated | DIN 5156 | 50° Twist, 2-3 threads | G. Whitworth pipe thread, 55° | DIN ISO 228 | 6HX | Blind hole | 3 × A22 | UNI | Vc

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50 degrees RSP
- Whitworth pipe thread (G)
- made of powder metallurgical HSS (PS55)
- Hardlube coated

Use:
For universal application



N° article	132295 G (WWR/BSPT), HSS-Co PM, Hardlube	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
G1/8 - 28	●	G 1/8	28	9,73	12	90	7	8	5,5	8,8
G1/4 - 19	●	G 1/4	19	13,16	15	100	11	12	9	11,8
G3/8 - 19	●	G 3/8	19	16,66	15	100	12	12	9	15,25
G1/2 - 14	●	G 1/2	14	20,96	18	125	16	15	12	19
G5/8 - 14	●	G 5/8	14	22,91	18	125	18	17	14,5	21
G3/4 - 14	●	G 3/4	14	26,44	20	140	20	19	16	24,5
G1 - 11	●	G 1	11	33,25	22	160	25	23	20	30,75

Machine form tap Universal

PREMUS

	P N/mm²	M N/mm²	N N/mm²		Plastics N/mm²
132671	⟨1300	⟨800	Copper ⟨900	Alu ⟨600	Thermoplastics
132672	⟨1000				
132673					
132674					
	vc = m/min.				
132671	18-28	10 - 15	18-26	32-60	32-60
132672	22-32	12 - 20	22-32	40-70	40-70
132673	18-28	10 - 15	18-26	32-60	32-60
132674	22-32	12 - 20	22-32	40-70	40-70

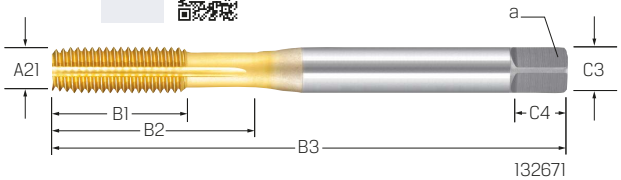
M Metric thread | HSS-E-Co | coated | DIN 2174 | Chamfer form C, 2-3 threads | Metric, 60° | DIN 13 | 6HX | 6GX | Through hole | Blind hole | 3 × A21 | UNI

Design:
- for blind-hole and through-hole threads
- chamfer form C, 2-3 threads
- made of HSSE with 5 % cobalt content
- TiN coated
- with lubrication groove
- for 132671 and 132673 up to M10 with solid tip

Use:
For universal application

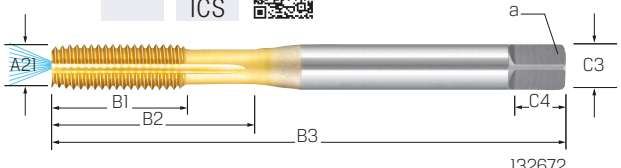
Note:
Tap without ICS up to M10 with solid tip

6HX | Vc



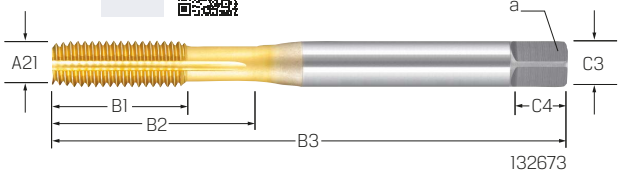
132671

6HX | ICS | Vc



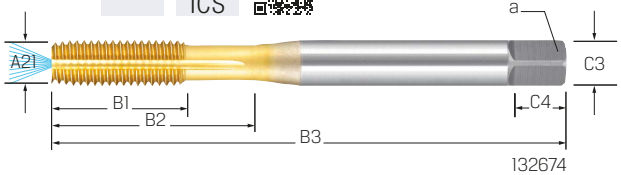
132672

6GX | Vc



132673

6GX | ICS | Vc



132674

N° article	132671 metric, HSSE-Co, TiN	132672 metric, HSSE-Co, TiN, ICS	132673 metric, HSSE-Co, TiN, 6GX	132674 metric, HSSE-Co, TiN, ICS, 6GX	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M2	●	–	●	–	M2	0,4	8	–	45	2,8	5	2.1	1,85
M2,5	●	–	●	–	M2.5	0,45	9	–	50	2,8	5	2.1	2,3
M3	●	–	●	–	M3	0,5	11	18	56	3,5	6	2.7	2,8
M3,5	●	–	●	–	M3.5	0,6	11	18	56	4	5	3	3,25
M4	●	–	●	–	M4	0,7	13	21	63	4,5	6	3.4	3,7
M5	●	–	●	–	M5	0,8	16	25	70	6	8	4.9	4,65
M6	●	●	●	●	M6	1	19	30	80	6	8	4.9	5,55
M8	●	●	●	●	M8	1,25	22	35	90	8	9	6.2	7,45
M10	●	●	●	○	M10	1,5	24	39	100	10	11	8	9,35
M12	●	●	●	–	M12	1,75	28	–	110	9	10	7	11,2
M14	●	○	○	–	M14	2	30	–	110	11	12	9	13
M16	●	○	●	–	M16	2	32	–	110	12	12	9	15

Machine form tap Universal

PREMUS

	P N/mm²	M N/mm²	N N/mm²	
132680				
132682	⟨1300	⟨800	Copper	Alu ⟨600
132684				
vc = m/min.				
132680				
132682	8-30	15 - 22	15-22	20-40
132684				

Design:
- for blind-hole and through-hole threads
- chamfer form C, 2-3 threads
- made of HSSE with 8 % cobalt content
- TiCN coated
- with lubrication grooves from M3

Use:
For universal application

Note:
Tap without ICS up to M10 with solid tip

M Metric thread | HSS-E-Co | coated | DIN 2174 | Chamfer form C 2-3 threads | Metric 60° | DIN 13

6HX | 6GX | Through hole | Blind hole | 3 × A21 | UNI

N° article	132680 metric, HSSE-Co, TiCN	132682 metric, HSSE-Co, TiCN, ICS	132684 metric, HSSE-Co, TiCN, 6GX	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M1	●	–	–	M1	0,25	5,5	–	40	2,5	5	2.1	0,9
M1,2	●	–	–	M1.2	0,25	5,5	–	40	2,5	5	2.1	1,1
M1,4	●	–	–	M1.4	0,3	7	–	40	2,5	5	2.1	1,27
M1,6	●	–	–	M1.6	0,35	8	–	40	2,5	5	2.1	1,45
M2	●	–	–	M2	0,4	8	–	45	2,8	5	2.1	1,85
M2,5	●	–	–	M2.5	0,45	9	–	50	2,8	5	2.1	2,33
M3	●	–	●	M3	0,5	8	18	56	3,5	6	2.7	2,8
M4	●	–	●	M4	0,7	11	21	63	4,5	6	3.4	3,7
M5	●	–	●	M5	0,8	12	25	70	6	8	4.9	4,65
M6	●	●	●	M6	1	10	30	80	6	8	4.9	5,55
M8	●	●	●	M8	1,25	12	35	90	8	9	6.2	7,4
M10	●	●	●	M10	1,5	15	39	100	10	11	8	9,3
M12	●	●	●	M12	1,75	17	–	110	9	10	7	11,2
M14	●	●	○	M14	2	20	–	110	11	12	9	13
M16	●	●	○	M16	2	20	–	110	12	12	9	15
M18	○	○	–	M18	2,5	20	–	125	14	14	11	16,8
M20	●	●	–	M20	2,5	20	–	140	16	15	12	18,8
M22	○	○	–	M22	2,5	20	–	140	18	17	14.5	20,8
M24	○	○	–	M24	3	24	–	160	18	17	14.5	22,5
M27	○	○	–	M27	3	18	–	160	20	19	16	25,5
M30	○	○	–	M30	3	21	–	180	22	21	18	28,2
M33	–	○	–	M33	3,5	21	–	180	25	23	20	31,2
M36	–	○	–	M36	4	24	–	200	28	25	22	33,9
M39	–	○	–	M39	4	24	–	200	32	27	24	36,9
M42	–	○	–	M42	4,5	27	–	200	32	27	24	39,6
M45	–	○	–	M45	4,5	27	–	220	36	32	29	42,6







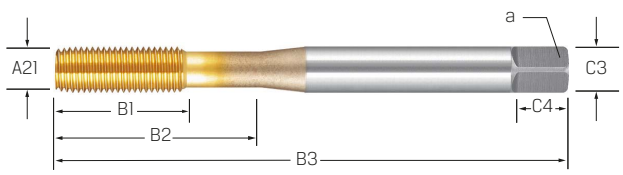
	P N/mm²	M N/mm²	N N/mm²		Plastics N/mm²
132695	⟨1000	⟨800	Copper ⟨900	Alu ⟨600	Thermoplastics
vc = m/min.					
132695	18-28	10 - 15	18-26	32-60	32-60

MF Metric fine thread | HSS-E-Co | coated | DIN 2174 | Chamfer form C 2-3 threads | Metric fine 60° | DIN 13 | 6HX | Through hole | Blind hole | 3 × A21 | UNI

Design:
- for blind-hole and through-hole threads
- chamfer form C, 2-3 threads
- made of HSSE with 5 % cobalt content
- TiN coated
- with lubrication groove
- 132695 to M10 with solid tip

Use:
For universal application

Note:
Tap without ICS up to M10 with solid tip



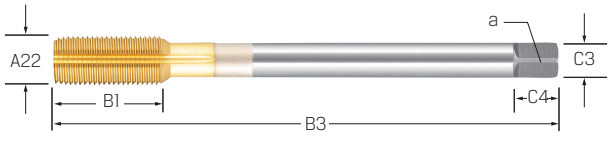
N° article	132695 metric-fine, HSSE-Co, TiN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3×0,35	●	M3	0,35	8	18	56	3,5	6	2.7	2,85
M4×0,50	●	M4	0,5	10	21	63	4,5	6	3.4	3,9
M5×0,50	●	M5	0,5	12	25	70	6	8	4.9	4,8
M6×0,75	●	M6	0,75	14	30	80	6	8	4.9	5,7
M8×1,00	●	M8	1	22	35	90	8	9	6.2	7,55
M10×1,00	●	M10	1	20	35	90	10	11	8	9,55
M12×1,50	●	M12	1,5	22	–	100	9	10	7	11,3
M16×1,50	●	M16	1,5	22	–	100	12	12	9	15,3

	P N/mm²	M N/mm²	N N/mm²		Plastics N/mm²
132697	⟨1000	⟨800	Copper ⟨900	Alu ⟨600	Thermoplastics
vc = m/min.					
132697	18-28	10 - 15	18-26	32-60	32-60

G Whitworth pipe thread | HSS-E-Co | coated | DIN 2189 | Chamfer form C 2-3 threads | G. Whitworth pipe thread 55° | DIN ISO 228 | 6HX | Through hole | Blind hole | 3 × A22 | UNI

Design:
- for blind-hole and through-hole threads
- chamfer form C, 2-3 threads
- made of HSSE with 5 % cobalt content
- TiN coated
- with lubrication groove

Use:
For universal application



N° article	132697 G (WWR/BSPT), HSSE-Co, TiN	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
1/8 - 28	●	G 1/8	28	9,73	20	90	7	8	5.5	9,25
1/4 - 19	●	G 1/4	19	13,16	22	100	11	12	9	12,5
3/8 - 19	●	G 3/8	19	16,66	22	100	12	12	9	16

Machine tap Steel

PRETEC

	P N/mm²	N N/mm²	
132310	⟨850	Alu ⟨600	Zinc
vc = m/min.			
132310	6-10	12-20	8-10

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- metric ISO thread
- made of high-performance high-speed steel with cobalt content
- steam tempered

M Metric thread | HSS-Co | Chamfer form B 3,5-5 threads | Metric 60° | DIN 13 | 6H | Through hole | P

DIN 371 | Vc | Tip



N° article	132310 metric, HSS-Co steam tempered	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2	●	M2	0,4	8	–	45	2,8	–	2,1	1,6
M2,5	●	M2.5	0,45	9	–	50	2,8	–	2,1	2,05
M3	●	M3	0,5	9	18	56	3,5	6	2,7	2,5
M4	●	M4	0,7	12	21	63	4,5	6	3,3	3,3
M5	●	M5	0,8	13	25	70	6	8	4,2	4,2
M6	●	M6	1	15	30	80	6	8	5	5
M8	●	M8	1,25	18	35	90	8	9	6,8	6,8
M10	●	M10	1,5	20	39	100	10	11	8	8,5

DIN 376 | Vc | Tip



N° article	132410 metric, HSS-Co steam tempered	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	M3	0,5	9	56	2,2	4	–	2,5
M4	●	M4	0,7	12	63	2,8	5	2,1	3,3
M5	●	M5	0,8	13	70	3,5	6	2,7	4,2
M6	●	M6	1	15	80	4,5	6	3,4	5
M8	●	M8	1,25	18	90	6	8	4,9	6,8
M10	●	M10	1,5	20	100	7	8	5,5	8,5
M12	●	M12	1,75	23	110	9	10	7	10,2
M14	●	M14	2	25	110	11	12	9	12
M16	●	M16	2	25	110	12	12	9	14
M18	●	M18	2,5	30	125	14	14	11	15,5
M20	●	M20	2,5	30	140	16	15	12	17,5
M22	●	M22	2,5	30	140	18	17	14,5	19,5
M24	●	M24	3	36	160	18	17	14,5	21
M27	●	M27	3	36	160	20	19	16	24
M30	●	M30	3,5	40	180	22	21	18	26,5
M33	○	M33	3,5	42	180	25	–	20	29,5
M36	●	M36	4	50	200	28	–	22	32

Machine tap Steel

PREMUS

	P N/mm²	M N/mm²	S N/mm²	N N/mm²		Plastics N/mm²
132420	⟨900					
132422						
132425	⟨1100	⟨800	Titanium ⟨900	Copper ⟨900	Alu ⟨600	Thermoplastics
vc = m/min.						
132420	10-15					
132422	10-18			10-15	18-32	
132425	8-12	6 - 10	4-20	12-18	22-26	22-26

Design 132420:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- metric ISO thread
- made of high-performance high-speed steel with vanadium content
- vaporised

Use 132420 and 132422:
For easy to machine materials

Design 132422:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- metric ISO thread
- made of high-performance high-speed steel with vanadium content
- vaporised
- tolerance class 6GX

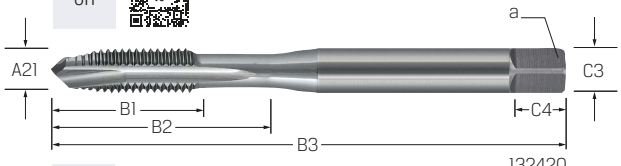
Design 132425:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- metric ISO thread
- made of high-performance high-speed steel with vanadium content
- vaporised
- with interrupted thread

Use 132425:
For steels with higher strength and stainless steel materials

M Metric thread | HSS-E V3 | DIN 371 | Chamfer form B 3,5-5 threads | Metric 60° | DIN 13 | Through hole | P

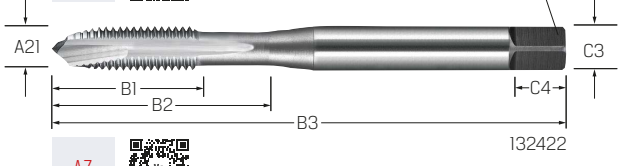
N° article	132420 metric, HSSE-V3, vaporised	132422 metric, HSSE-V3, vaporised, 6G	132425 metric, HSSE-V3, vaporised, AZ	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M1	●	–	–	M1	0,25	5,5	–	40	2,5	5	2,1	0,75
M1,2	●	–	–	M1.2	0,25	5,5	–	40	2,5	5	2,1	0,95
M1,4	●	–	–	M1.4	0,3	7	–	40	2,5	5	2,1	1,1
M1,6	●	–	–	M1.6	0,35	8	–	40	2,5	5	2,1	1,25
M2	●	●	●	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,3	○	–	–	M2.3	0,4	9	–	45	2,8	5	2,1	1,9
M2,5	●	●	–	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M2,6	●	–	–	M2,6	0,45	9	–	50	2,8	5	2,1	2,1
M3	●	●	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M3,5	●	–	–	M3.5	0,6	12	20	56	4	6	3	2,9
M4	●	●	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	●	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	●	●	M6	1	19	30	80	6	8	4,9	5
M7	●	–	–	M7	1	19	30	80	7	8	5,5	6
M8	●	●	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	●	●	M10	1,5	24	39	100	10	11	8	8,5
M12	●	●	●	M12	1,75	28	–	110	9	10	7	10,2
M14	●	–	–	M14	2	30	–	110	11	12	9	12
M16	●	●	●	M16	2	32	–	110	12	12	9	14
M18	●	–	–	M18	2,5	34	–	125	14	14	11	15,5
M20	●	○	●	M20	2,5	34	–	140	16	15	12	17,5
M22	●	–	–	M22	2,5	34	–	140	18	17	14,5	19,5
M24	●	–	–	M24	3	38	–	160	18	17	14,5	21
M27	○	–	–	M27	3	38	–	160	20	19	16	24
M30	●	–	–	M30	3,5	45	–	180	22	21	18	26,5
M33	○	–	–	M33	3,5	50	–	180	25	23	20	29,5
M36	●	–	–	M36	4	56	–	200	28	25	22	32

6H | Vc



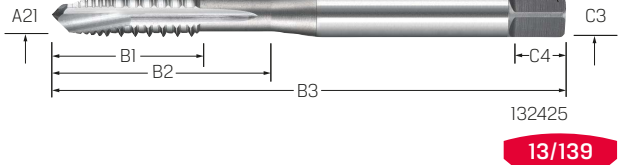
132420

6G | Vc



132422

AZ | Vc



132425

Machine tap Steel

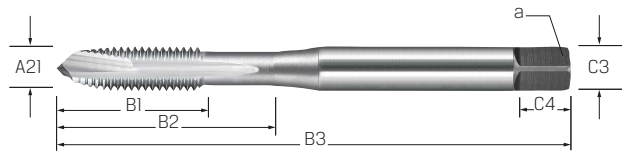
PREMUS

	P N/mm²	N N/mm²		Plastics N/mm²
132427	⟨900	Copper ⟨900	Alu ⟨600	Thermoplastics
	vc = m/min.			
132427	10-18	10-15	18-22	18-22

M left (Metric left thread) | HSS-E V3 | DIN 371
DIN 376 from M12 (Chamfer form B, 3,5-5 threads; Metric 60°) | DIN 13 (Through hole) | 6H
left hand cutting | P | Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- left-hand cutting

Use:
For easy to machine materials



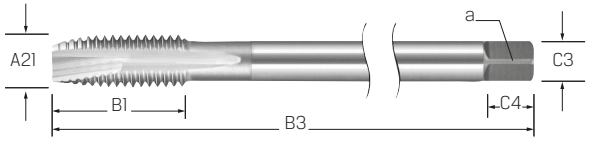
N° article	132427 metric,HSSE-V3 left-hand cutting	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3LH	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M4LH	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5LH	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6LH	●	M6	1	19	30	80	6	8	4,9	5
M8LH	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10LH	●	M10	1,5	24	39	100	10	11	8	8,5
M12LH	●	M12	1,75	28	–	110	9	10	7	10,2
M16LH	●	M16	2	32	–	110	12	12	9	14
M20LH	●	M20	2,5	34	–	140	16	15	12	17,5

	P N/mm²	N N/mm²		Plastics N/mm²
132429	⟨900	Copper ⟨900	Alu ⟨600	Thermoplastics
	vc = m/min.			
132429	10-18	10-15	18-22	18-22

M (Metric thread) | HSS-E V3 | Factory standard
(Chamfer form B, 3,5-5 threads; Metric 60°) | DIN 13 (Through hole) | 6H | P
Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- extra long

Use:
For easy to machine materials



N° article	132429 metric, HSSE-V3, extra long	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	M3	0,5	11	112	2,2	–	–	2,5
M4	●	M4	0,7	13	126	2,8	5	2,1	3,3
M5	●	M5	0,8	16	140	3,5	6	2,7	4,2
M6	●	M6	1	19	160	4,5	6	3,4	5
M8	●	M8	1,25	22	180	6	8	4,9	6,8
M10	●	M10	1,5	24	200	7	8	5,5	8,5
M12	●	M12	1,75	28	220	9	10	7	10,2
M14	●	M14	2	30	220	11	12	9	12
M16	●	M16	2	32	220	12	12	9	14
M20	●	M20	2,5	34	280	16	15	12	17,5

Machine tap Steel

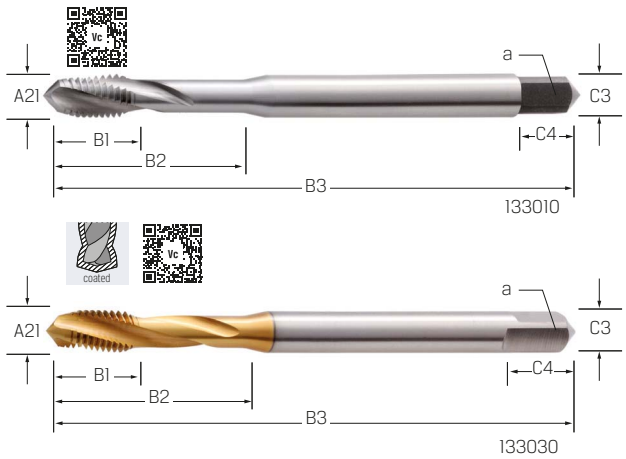
PRETEC

	P N/mm²	N N/mm²
133010	⟨850	Copper
133030		
	vc = m/min.	
133010	10-18	10-15
133030	8-12	12-20

M (Metric thread) | HSS-Co | DIN 371
15° Twist | (Chamfer form C, 2-3 threads; Metric 60°) | DIN 13 (Blind hole) | 6H
1,5 × A21 | P

Note:
Especially suitable for horizontal use

Design:
- for blind-hole threads
- chamfer form C, 2 - 3 threads, 15 degrees RSP
- made of HSSE with 7.5 % cobalt content

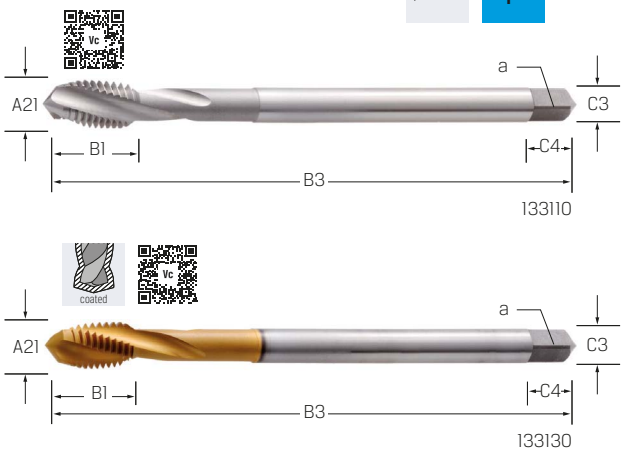


N° article	133010 metric, HSS-Co	133030 metric, HSS-Co, TiN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	●	M3	0,5	6	18	56	3,5	6	2,7	2,5
M3,5	●	●	M3.5	0,6	6,5	20	56	4	6	3	2,9
M4	●	●	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	●	M6	1	10	30	80	6	8	4,9	5
M8	●	●	M8	1,25	12	35	90	8	9	6,2	6,8
M10	●	●	M10	1,5	15	39	100	10	11	8	8,5

	P N/mm²	N N/mm²
133110	⟨850	Copper
133130		
	vc = m/min.	
133110	10-18	10-15
133130	8-12	12-20

M (Metric thread) | HSS-Co | DIN 376
15° Twist | (Chamfer form C, 2-3 threads; Metric 60°) | DIN 13 (Blind hole) | 6H
1,5 × A21 | P

Note:
Especially suitable for horizontal use



N° article	133110 metric, HSS-Co	133130 metric, HSS-Co, TiN	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M4	●	●	M4	0,7	12	63	2,8	5	2,1	3,3
M5	●	●	M5	0,8	13	70	3,5	6	2,7	4,2
M6	●	●	M6	1	15	80	4,5	6	3,4	5
M8	●	●	M8	1,25	18	90	6	8	4,9	6,8
M10	●	●	M10	1,5	20	100	7	8	5,5	8,5
M12	●	●	M12	1,75	23	110	9	10	7	10,2
M14	●	○	M14	2	25	110	11	12	9	12
M16	●	●	M16	2	25	110	12	12	9	14
M18	○	○	M18	2,5	30	125	14	14	11	15,5
M20	●	○	M20	2,5	30	140	16	15	12	17,5

Machine tap Steel

PREMUS PRETEC

M Metric thread | DIN 371 | 40°Twist | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | P

	P N/mm²	K HB	N N/mm²	
133050	<850		Alu <600	Zinc
133070		<200		Copper
133161	<900			
vc = m/min.				
133050	6-10		12-20	8-10
133070	12-15	6 - 8	15-30	10-15
133161	10-15			

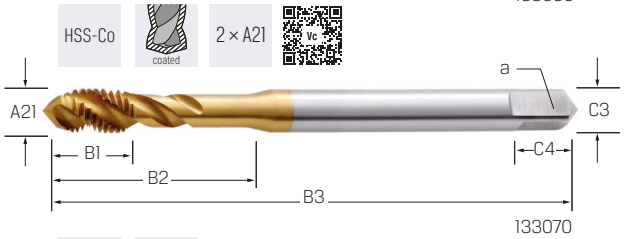
Design 133050:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- made of HSSE with 5 % cobalt content
- steam tempered

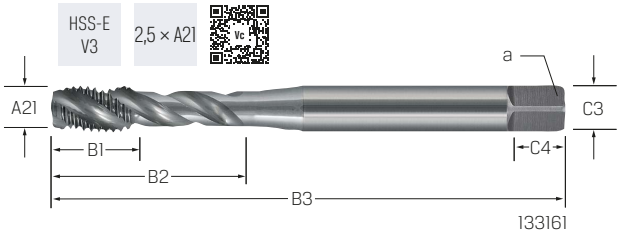
Design 133161:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- high-performance high-speed steel with vanadium content
- vaporised

Design 133070:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- made of HSSE with 5 % cobalt content
- TiN coated

Use:
For easy to machine materials







N° article	133050 PRETEC metric, HSS-Co, steam tempered	133070 PRETEC metric, HSS-Co, TiN	133161 PREMUS metric, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	●	●	M3	0,5	6	18	56	3,5	6	2,7	2,5
M4	●	●	●	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	●	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	●	●	M6	1	10	30	80	6	8	4,9	5
M8	●	●	●	M8	1,25	12	35	90	8	9	6,2	6,8
M10	●	●	●	M10	1,5	15	39	100	10	11	8	8,5

Machine tap Steel

PREMUS PRETEC

M Metric thread | DIN 376 | 40°Twist | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | P

	P N/mm²	K HB	N N/mm²	
133150	<850		Alu <600	Zinc
133170		<200		Copper
133163	<900			
vc = m/min.				
133150	6-10		12-20	8-10
133170	12-15	6 - 8	15-30	10-15
133163	10-15			

Design 133150:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- made of HSSE with 5 % cobalt content

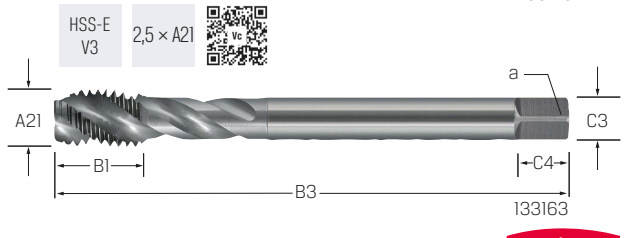
Design 133170:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- made of HSSE with 5 % cobalt content
- TiN coated

Design 133163:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- high-performance high-speed steel with vanadium content
- vaporised

Use:
For easy to machine materials







N° article	133150 PRETEC metric, HSS-Co, steam tempered	133163 PREMUS metric, HSSE-V3, vaporised	133170 PRETEC metric, HSS-Co, TiN	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M4	●	●	●	M4	0,7	7	63	2,8	5	2,1	3,3
M5	●	●	●	M5	0,8	8	70	3,5	6	2,7	4,2
M6	●	●	●	M6	1	10	80	4,5	6	3,4	5
M8	●	●	●	M8	1,25	13	90	6	8	4,9	6,8
M10	●	●	●	M10	1,5	15	100	7	8	5,5	8,5
M12	●	●	●	M12	1,75	16	110	9	10	7	10,2
M14	●	●	●	M14	2	20	110	11	12	9	12
M16	●	●	●	M16	2	20	110	12	12	9	14
M18	●	●	○	M18	2,5	25	125	14	14	11	15,5
M20	●	●	●	M20	2,5	25	140	16	15	12	17,5
M3	–	●	–	M3	0,5	5	56	2,2	–	–	2,5
M22	–	●	–	M22	2,5	25	140	18	17	14,5	19,5
M24	–	●	–	M24	3	30	160	18	17	14,5	21
M27	–	●	–	M27	3	30	160	20	19	16	24
M30	–	●	–	M30	3,5	35	180	22	21	18	26,5
M33	–	●	–	M33	3,5	35	180	25	23	20	29,5
M36	–	●	–	M36	4	40	200	28	25	22	32

Machine tap Steel

PREMUS

	P N/mm²	N N/mm²		Plastics N/mm²
133166	⟨900			
133180		Copper ⟨900	Alu ⟨500	Thermoplastics
vc = m/min.				
133166	10-15			
133180	6-10	8-12	18-26	18-26

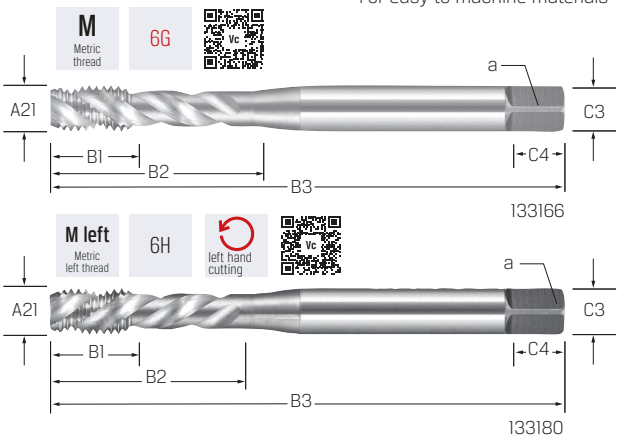
HSS-E V3 | DIN 371 | DIN 376 from M12

40° Twist | Chamfer form C, 2-3 threads | Metric 60° | DIN 13 | Blind hole | 2,5 × A21 | P

Design 133166:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- made of high-speed steel with vanadium content
- vaporised
- tolerance 6G

Design 133180:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- made of high-speed steel with vanadium content
- vaporised
- left-hand cutting

Use 133166 and +133180:
For easy to machine materials



N° article	133166 metric, HSSE-V3, 6G	133180 metric, HSSE-V3, left-hand cutting	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	●	M3	0,5	5	18	56	3,5	6	2,7	2,5
M4	●	●	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	●	M6	1	10	30	80	6	8	4,9	5
M8	●	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	●	M12	1,75	18	–	110	9	10	7	10,2
M16	●	●	M16	2	20	–	110	12	12	9	14
M20	●	●	M20	2,5	25	–	140	16	15	12	17,5

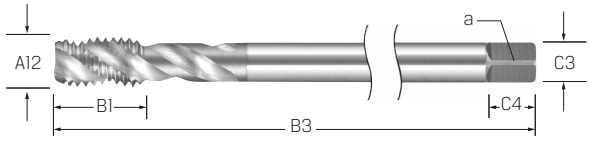
	P N/mm²	N N/mm²		Plastics N/mm²
133182	⟨900	Copper ⟨900	Alu ⟨500	Thermoplastics
vc = m/min.				
133182	6-10	8-12	18-26	18-26

M Metric thread | HSS-E V3 | Factory standard

40° Twist | Chamfer form C, 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | 2,5 × A21 | P

Design:
- for blind-hole threads
- form C, 2-3 threads, 40 degrees RSP
- made of high-speed steel with vanadium content
- extra long

Use:
For easy to machine materials



N° article	133182 metric, HSSE-V3, extra long	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	M3	0,5	5	112	3,5	6	2,7	2,5
M4	●	M4	0,7	7	126	4,5	6	3,4	3,3
M5	●	M5	0,8	8	140	6	8	4,9	4,2
M6	●	M6	1	10	160	6	8	4,9	5
M8	●	M8	1,25	13	180	6	8	4,9	6,8
M10	●	M10	1,5	15	200	7	8	5,5	8,5
M12	●	M12	1,75	18	220	9	10	7	10,2
M14	●	M14	2	20	220	11	12	9	12
M16	●	M16	2	20	220	12	12	9	14
M20	●	M20	2,5	25	280	16	15	12	17,5

Machine tap for high-strength steels

PREMUS

	P N/mm²
137560	⟨1400
137580	
vc = m/min.	
137560	4-8
137580	5-10

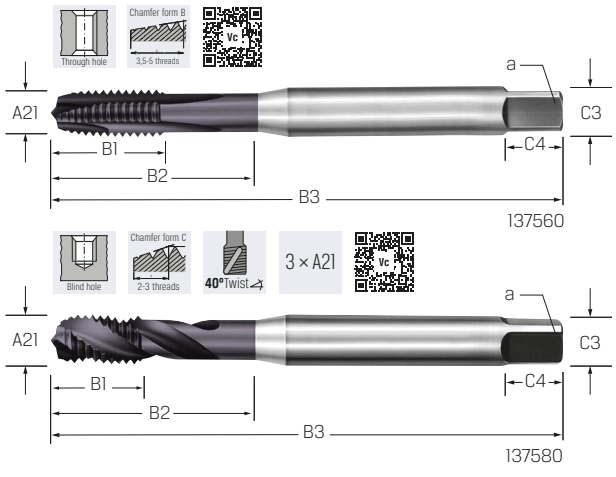
Design 137560:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of powder metallurgical high performance high speed steel
- TiAlN coated

Design 137580:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- made of powder metallurgic high performance steel
- TiAlN coated

Use 137560 and 137580:
For high-alloyed and tempered steels

M Metric thread | HSS-Co PM | coated | DIN 371 | DIN 376 from M12

Metric 60° | DIN 13 | 6HX | P



N° article	137560 metric, HSS-Co PM, TiAlN	137580 metric, HSS-Co PM, TiAlN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	●	M3	0,5	9	18	56	3,5	6	2,7	2,5
M4	●	●	M4	0,7	12	21	63	4,5	6	3,4	3,3
M5	●	●	M5	0,8	13	25	70	6	8	4,9	4,2
M6	●	●	M6	1	15	30	80	6	8	4,9	5
M8	●	●	M8	1,25	18	35	90	8	9	6,2	6,8
M10	●	●	M10	1,5	20	39	100	10	11	8	8,5
M12	●	●	M12	1,75	23	–	110	9	10	7	10,2
M14	○	○	M14	2	20	–	110	11	12	9	12
M16	●	●	M16	2	20	–	110	12	12	9	14
M20	○	○	M20	2,5	25	–	140	16	15	12	17,5
M24	○	○	M24	3	30	–	160	18	17	14,5	21

Machine tap for hard, short-chipping materials

PREMUS

	P N/mm²
137600	⟨1500
vc = m/min.	
137600	4-6

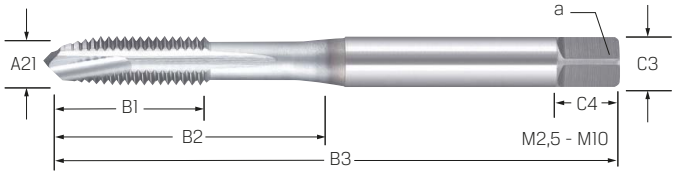
M Metric thread | HSS-Co PM | coated | DIN 371 | DIN 376 from M12 | Chamfer form B, 3.5-5 threads | Metric 60° | DIN 13 | 6H | Through hole | P | Vc

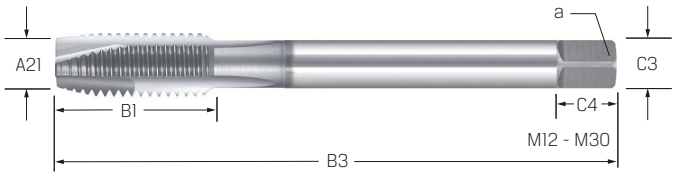
Design and use:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of powder metallurgic high performance steel
- TiCN coated
- for short-chipping, hard materials

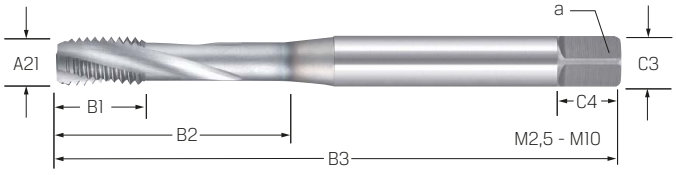
	P N/mm²
137650	⟨1500
vc = m/min.	
137650	6-8

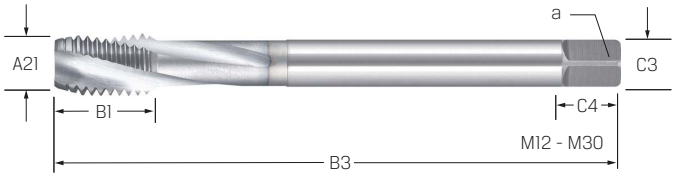
M Metric thread | HSS-Co PM | coated | DIN 371 | DIN 376 from M12 | 15° Twist | Chamfer form C, 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | 1,5 × A21 | P | Vc

Design and use:
- for blind-hole threads
- chamfer form C, 2-3 threads, 15° RSP
- made of powder metallurgic high performance steel
- TiCN coated
- for short-chipping, hard materials









N° article	137600 metric, HSS-Co PM TiCN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2,5	●	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M3,5	○	M3.5	0,6	12	20	56	4	6	3	2,9
M4	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	M6	1	19	30	80	6	8	4,9	5
M8	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	M10	1,5	24	39	100	10	11	8	8,5
M12	●	M12	1,75	28	–	110	9	10	7	10,2
M14	●	M14	2	30	–	110	11	12	9	12
M16	●	M16	2	32	–	110	12	12	9	14
M18	●	M18	2,5	34	–	125	14	14	11	15,5
M20	●	M20	2,5	34	–	140	16	15	12	17,5
M22	○	M22	2,5	34	–	140	18	17	14,5	19,5
M24	●	M24	3	38	–	160	18	17	14,5	21
M27	○	M27	3	38	–	160	20	19	16	24
M30	○	M30	3,5	45	–	180	22	21	18	26,5

N° article	137650 metric, HSS-Co PM TiCN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2,5	●	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	M3	0,5	5	18	56	3,5	6	2,7	2,5
M3,5	○	M3.5	0,6	6	20	56	4	6	3	2,9
M4	●	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	M6	1	10	30	80	6	8	4,9	5
M8	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	M12	1,75	18	–	110	9	10	7	10,2
M14	○	M14	2	20	–	110	11	12	9	12
M16	●	M16	2	20	–	110	12	12	9	14
M18	○	M18	2,5	25	–	125	14	14	11	15,5
M20	●	M20	2,5	25	–	140	16	15	12	17,5
M24	●	M24	3	30	–	160	18	17	14,5	21
M27	○	M27	3	30	–	160	20	19	16	24
M30	●	M30	3,5	35	–	180	22	21	18	26,5

Machine tap Steel

PREMUS® PRETEC®

	P N/mm²	N N/mm²		Plastics N/mm²
132911	<850	Alu <600	Zinc	
133205	<900	Copper <900	Alu <500	Thermoplastics
	vc = m/min.			
132911	10-15	12-20	10-12	
133205	6-10	8-12	18-26	18-26

MF Metric fine thread | DIN 374 | Chamfer form B 3,5-5 threads | Metric fine 60° | DIN 13 | 6H | Through hole

P

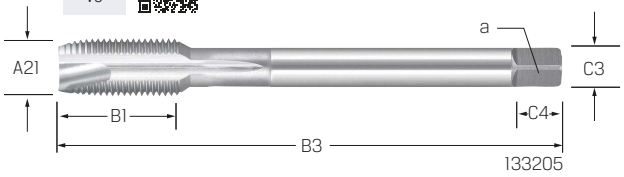
Design and use:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- metric ISO fine thread
- for easy to machine materials

HSS-Co

Tip



HSS-E V3



N° article	132911 PRETEC metric-fine, HSS-Co, steam tempered	133205 PREMUS metric-fine, HSSE-V3	132911 B1 mm	133205 B1 mm	A21 metric	Thread pitch mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	○	●	8	8	M3	0,35	56	2,2	–	–	2,65
M4×0,50	○	●	12	10	M4	0,5	63	2,8	5	2,1	3,5
M5×0,50	●	●	13	12	M5	0,5	70	3,5	6	2,7	4,5
M6×0,50	–	●	–	14	M6	0,5	80	4,5	6	3,4	5,5
M6×0,75	●	●	15	14	M6	0,75	80	4,5	6	3,4	5,2
M7×0,75	●	●	15	14	M7	0,75	80	5,5	7	4,3	6,2
M8×0,50	–	●	–	18	M8	0,5	80	6	8	4,9	7,5
M8×0,75	●	●	15	18	M8	0,75	80	6	8	4,9	7,2
M8×1,00	●	●	18	22	M8	1	90	6	8	4,9	7
M9×1,00	–	●	–	22	M9	1	90	7	8	5,5	8
M10×0,75	●	○	20	20	M10	0,75	90	7	8	5,5	9,2
M10×1,00	●	●	20	20	M10	1	90	7	8	5,5	9
M10×1,25	●	●	20	24	M10	1,25	100	7	8	5,5	8,8
M11×1,00	–	●	–	20	M11	1	90	8	9	6,2	10
M12×1,00	●	●	21	22	M12	1	100	9	10	7	11
M12×1,25	●	●	21	22	M12	1,25	100	9	10	7	10,8
M12×1,50	●	●	21	22	M12	1,5	100	9	10	7	10,5
M14×1,00	●	●	21	22	M14	1	100	11	12	9	13
M14×1,25	–	●	–	22	M14	1,25	100	11	12	9	12,75
M14×1,50	●	●	21	22	M14	1,5	100	11	12	9	12,5
M15×1,00	–	●	–	22	M15	1	100	12	12	9	14
M15×1,50	–	●	–	22	M15	1,5	100	12	12	9	13,5
M16×1,00	●	●	21	22	M16	1	100	12	12	9	15
M16×1,50	●	●	21	22	M16	1,5	100	12	12	9	14,5
M18×1,00	●	●	24	25	M18	1	110	14	14	11	17
M18×1,50	●	●	24	25	M18	1,5	110	14	14	11	16,5
M18×2,00	–	●	–	34	M18	2	125	14	14	11	16
M20×1,00	●	○	24	25	M20	1	125	16	15	12	19

N° article	132911 PRETEC metric-fine, HSS-Co, steam tempered	133205 PREMUS metric-fine, HSSE-V3	132911 B1 mm	133205 B1 mm	A21 metric	Thread pitch mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M20×1,50	●	●	24	25	M20	1,5	125	16	15	12	18,5
M20×2,00	–	●	–	34	M20	2	140	16	15	12	18
M22×1,00	–	○	–	25	M22	1	125	18	17	14,5	21
M22×1,50	●	●	24	25	M22	1,5	125	18	17	14,5	20,5
M22×2,00	–	●	–	34	M22	2	140	18	17	14,5	20
M24×1,00	–	●	–	28	M24	1	140	18	17	14,5	23
M24×1,50	●	●	26	28	M24	1,5	140	18	17	14,5	22,5
M24×2,00	●	●	26	28	M24	2	140	18	17	14,5	22
M25×1,50	–	●	–	28	M25	1,5	140	18	17	14,5	23,5
M26×1,50	–	●	–	28	M26	1,5	140	18	17	14,5	24,5
M27×1,50	○	●	26	28	M27	1,5	140	20	19	16	25,5
M27×2,00	●	●	26	28	M27	2	140	20	19	16	25
M28×1,50	●	○	26	28	M28	1,5	140	20	19	16	26,5
M30×1,00	–	●	–	28	M30	1	150	22	21	18	29
M30×1,50	●	●	28	28	M30	1,5	150	22	21	18	28,5
M30×2,00	●	●	28	28	M30	2	150	22	21	18	28
M32×1,50	–	●	–	28	M32	1,5	150	22	21	18	30,5
M33×1,50	–	●	–	30	M33	1,5	160	25	23	20	31,5
M34×1,50	–	○	–	30	M34	1,5	170	28	25	22	32,5
M35×1,50	–	●	–	30	M35	1,5	170	28	25	22	33,5
M36×1,50	○	●	30	30	M36	1,5	170	28	25	22	34,5
M36×2,00	○	–	30	–	M36	2	170	28	25	22	34
M38×1,50	–	●	–	30	M38	1,5	170	28	25	22	36,5
M40×1,50	–	●	–	30	M40	1,5	170	32	27	24	38,5
M42×1,50	–	○	–	30	M42	1,5	170	32	27	24	40,5
M45×1,50	–	●	–	32	M45	1,5	180	36	32	29	43,5
M48×1,50	–	○	–	32	M48	1,5	190	36	32	29	46,5
M50×1,50	–	●	–	32	M50	1,5	190	36	32	29	48,5

Machine tap Steel

PREMUS® PRETEC®

	P N/mm²	N N/mm²		Plastics N/mm²
133211	⟨850	Alu ⟨600	Zinc	
133225	⟨900	Copper ⟨900	Alu ⟨500	Thermoplastics
	vc = m/min.			
133211	6-10	12-20	8-10	
133225	8-12	8-12	18-26	18-26

Design and use:
- for blind-hole threads
- metric ISO fine thread
- for easy to machine materials

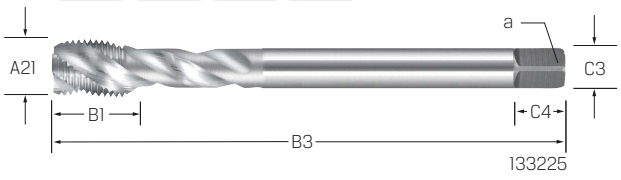
MF Metric fine thread | DIN 374 | Metric fine 60° | DIN 13 | 6H | Blind hole | P

Tip

HSS-Co | 35° Twist | 1,5 × A21 | Chamfer form C 2,5 threads | Vc



HSS-E V3 | 40° Twist | 2,5 × A21 | Chamfer form C 2-3 threads | Vc



N° article	133211 PRETEC® metric-fine, HSS-Co, steam tempered	133225 PREMUS® metric-fine, HSSE-V3	133225 B1 mm	133211 B1 mm	A21 metric	Thread pitch mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	–	●	4	–	M3	0,35	56	2,2	–	–	2,65
M4×0,50	●	●	6	7	M4	0,5	63	2,8	5	2,1	3,5
M5×0,50	●	●	7	8	M5	0,5	70	3,5	6	2,7	4,5
M6×0,50	–	●	8	–	M6	0,5	80	4,5	6	3,4	5,5
M6×0,75	●	●	8	10	M6	0,75	80	4,5	6	3,4	5,2
M8×0,75	●	●	10	10	M8	0,75	80	6	8	4,9	7,2
M8×1,00	●	●	10	13	M8	1	90	6	8	4,9	7
M10×1,00	●	●	12	12	M10	1	90	7	8	5,5	9
M10×1,25	●	●	12	15	M10	1,25	100	7	8	5,5	8,8
M12×1,00	●	●	14	14	M12	1	100	9	10	7	11
M12×1,25	●	●	14	14	M12	1,25	100	9	10	7	10,8
M12×1,50	●	●	14	14	M12	1,5	100	9	10	7	10,5
M14×1,00	●	●	16	16	M14	1	100	11	12	9	13
M14×1,25	●	●	16	16	M14	1,25	100	11	12	9	12,8
M14×1,50	●	●	16	16	M14	1,5	100	11	12	9	12,5
M16×1,00	●	●	16	16	M16	1	100	12	12	9	15
M16×1,50	●	●	16	16	M16	1,5	100	12	12	9	14,5
M18×1,00	●	●	20	20	M18	1	110	14	14	11	17
M18×1,50	●	●	20	20	M18	1,5	110	14	14	11	16,5
M20×1,00	●	●	20	20	M20	1	125	16	15	12	19
M20×1,50	●	●	20	20	M20	1,5	125	16	15	12	18,5
M22×1,50	●	●	20	20	M22	1,5	125	18	17	14,5	20,5
M24×1,50	●	●	24	22	M24	1,5	140	18	17	14,5	22,5
M24×2,00	●	●	24	22	M24	2	140	18	17	14,5	22
M25×1,50	–	●	24	–	M25	1,5	140	18	17	14,5	23,5
M26×1,50	●	●	24	22	M26	1,5	140	18	17	14,5	24,5
M27×1,50	–	○	24	–	M27	1,5	140	20	19	16	25,5
M27×2,00	–	●	24	–	M27	2	140	20	19	16	25
M28×1,50	–	●	24	–	M28	1,5	140	20	19	16	26,5
M30×1,50	●	●	28	26	M30	1,5	150	22	21	18	28,5
M30×2,00	●	●	28	26	M30	2	150	22	21	18	28

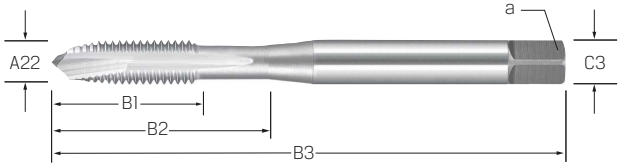
	P N/mm²	N N/mm²		Plastics N/mm²
133311	⟨900	Copper ⟨900	Alu ⟨500	Thermoplastics
	vc = m/min.			
133311	6-10	8-12	18-26	18-26

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high-speed steel with vanadium content

Use:
For easy to machine materials

UNC american UNIFIED coarse thread | HSS-E V3 | DIN 2184-1 | Chamfer form B 3,5-5 threads | UNC 60° | ANSI B1.1 | Through hole

2B | P | Vc



N° article	133311 PREMUS® UNC, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B2 mm	B3 mm	C3 mm	a mm	Core Ø mm
2-56	●	UNC 2	56	2,18	9	10	50	2,8	2,1	1,85
3-48	○	UNC 3	48	2,52	9	10	50	2,8	2,1	2,1
4-40	●	UNC 4	40	2,85	11	18	56	3,5	2,7	2,35
5-40	○	UNC 5	40	3,18	11	18	56	3,5	2,7	2,65
6-32	●	UNC 6	32	3,51	13	19	56	4	3	2,85
8-32	●	UNC 8	32	4,17	13	19	63	4,5	3,4	3,5
10-24	●	UNC 10	24	4,83	16	20	70	6	4,9	3,9
12-24	○	UNC 12	24	5,49	17	29	80	6	4,9	4,5
1/4-20	●	UNC 1/4	20	6,35	19	30	80	7	5,5	5,2

N° article	133311 PREMUS® UNC, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B2 mm	B3 mm	C3 mm	a mm	Core Ø mm
5/16-18	●	UNC 5/16	18	7,94	22	34	90	8	6,2	6,6
3/8-16	●	UNC 3/8	16	9,53	22	35	90	9	7	8
7/16-14	●	UNC 7/16	14	11,11	24	–	100	8	6,2	9,4
1/2-13	●	UNC 1/2	13	12,7	29	–	110	9	7	10,8
9/16-12	○	UNC 9/16	12	14,29	30	–	110	11	12,25	12,25
5/8-11	●	UNC 5/8	11	15,88	32	–	110	12	9	13,5
3/4-10	●	UNC 3/4	10	19,05	34	–	125	14	11	16,5
7/8-9	○	UNC 7/8	9	22,23	34	–	140	18	14,5	19,5
1-8	○	UNC 1	8	25,4	38	–	160	18	14,5	22,25

Machine tap Steel

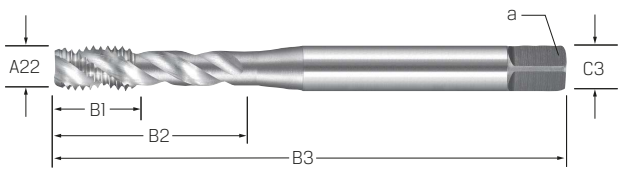
PREMUS

	P N/mm²	N N/mm²		Plastics N/mm²
133331	<900	Copper <900	Alu <500	Thermoplastics
	vc = m/min.			
133331	6-10	8-12	18-26	18-26

UNC american UNIFIED coarse thread | HSS-E V3 | DIN 2184-1 | 40° Twist
Chamfer form C 2-3 threads | UNC 60° | ANSI B1.1 | 2B
Blind hole | 2,5 × A22 | P | Vc

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- made of high-speed steel with vanadium content

Use:
For easy to machine materials



N° article	133331 UNC, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B2 mm	B3 mm	C3 mm	a mm	Core Ø mm
2-56	●	UNC 2	56	2,18	9	10	50	2,8	2,1	1,85
3-48	○	UNC 3	48	2,52	9	10	50	2,8	2,1	2,1
4-40	●	UNC 4	40	2,85	11	18	56	3,5	2,7	2,35
5-40	●	UNC 5	40	3,18	7	18	56	3,5	2,7	2,65
6-32	●	UNC 6	32	3,51	8	19	56	4	3	2,85
8-32	●	UNC 8	32	4,17	8	19	63	4,5	3,4	3,5
10-24	●	UNC 10	24	4,83	11	20	70	6	4,9	3,9
12-24	○	UNC 12	24	5,49	11	29	80	6	4,9	4,5
1/4-20	●	UNC 1/4	20	6,35	13	30	80	7	5,5	5,2

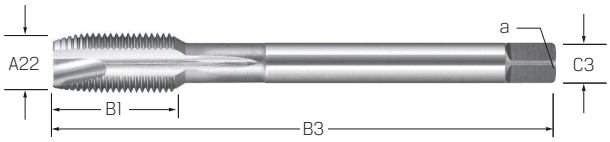
N° article	133331 UNC, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B2 mm	B3 mm	C3 mm	a mm	Core Ø mm
5/16-18	●	UNC 5/16	18	7,94	15	34	90	8	6,2	6,6
3/8-16	●	UNC 3/8	16	9,53	16	35	90	9	7	8
7/16-14	●	UNC 7/16	14	11,11	22	–	100	8	6,2	9,4
1/2-13	●	UNC 1/2	13	12,7	23	–	110	9	7	10,8
9/16-12	○	UNC 9/16	12	14,29	25	–	110	11	9	12,25
5/8-11	●	UNC 5/8	11	15,88	28	–	110	12	9	13,5
3/4-10	●	UNC 3/4	10	19,05	30	–	125	14	11	16,5
7/8-9	●	UNC 7/8	9	22,23	34	–	140	18	14,5	19,5
1-8	●	UNC 1	8	25,4	38	–	160	18	14,5	22,25

	P N/mm²	N N/mm²		Plastics N/mm²
133371	<900	Copper <900	Alu <500	Thermoplastics
	vc = m/min.			
133371	6-10	8-12	18-26	18-26

UNF american UNIFIED fine thread | HSS-E V3 | DIN 2184-1 | Chamfer form B 3,5-5 threads
UNF 60° | ANSI B1.1 | 2B | Through hole
P | Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high-speed steel with vanadium content

Use:
For easy to machine materials



N° article	133371 UNF, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
0-80	●	UNF 0	80	1,52	8	40	1,2	–	1,25
1-72	○	UNF 1	72	1,85	8	50	1,4	–	1,55
2-64	○	UNF 2	64	2,18	9	50	1,6	–	1,85
3-56	●	UNF 3	56	2,52	9	50	1,8	–	2,15
4-48	○	UNF 4	48	2,85	11	56	2,2	–	2,4
5-44	○	UNF 5	44	3,18	11	56	2,2	–	2,7
6-40	○	UNF 6	40	3,51	13	56	2,5	2,1	2,95
8-36	○	UNF 8	36	4,17	13	63	2,8	2,1	3,5
10-32	●	UNF 10	32	4,83	16	70	3,5	2,7	4,1
12-28	○	UNF 12	28	5,49	17	80	4	3	4,6
1/4-28	●	UNF 1/4	28	6,35	19	80	4,5	3,4	5,5
5/16-24	●	UNF 5/16	24	7,94	22	90	6	4,9	6,9

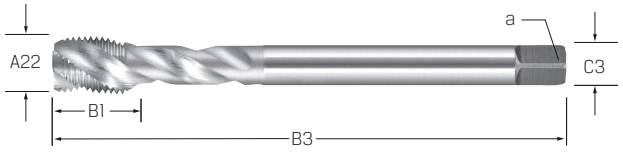
N° article	133371 UNF, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
3/8-24	●	UNF 3/8	24	9,53	22	90	7	5,5	8,5
7/16-20	●	UNF 7/16	20	11,11	20	100	8	6,2	9,9
1/2-20	●	UNF 1/2	20	12,7	22	100	9	7	11,5
9/16-18	●	UNF 9/16	18	14,29	22	100	11	9	12,9
5/8-18	●	UNF 5/8	18	15,88	22	100	12	9	14,5
3/4-16	●	UNF 3/4	16	19,05	25	110	14	11	17,5
7/8-14	●	UNF 7/8	14	22,23	25	125	18	14,5	20,4
1-12	○	UNF 1	12	25,4	25	125	18	14,5	23,25
1.1/8-12	○	UNF 1.1/8	12	28,58	28	150	22	18	26,5
1.1/4-12	○	UNF 1.1/2	12	31,75	28	150	22	18	29,5
1.3/8-12	○	UNF 1.3/8	12	34,93	30	170	28	22	32,75
1.1/2-12	○	UNF 1.1/2	12	38,1	30	170	32	24	36

	P N/mm²	N N/mm²		Plastics N/mm²
133391	<900	Copper <900	Alu <500	Thermoplastics
	vc = m/min.			
133391	6-10	8-12	18-26	18-26

UNF american UNIFIED fine thread | HSS-E V3 | DIN 2184-1 | 40° Twist
Chamfer form C 2-3 threads | UNF 60° | ANSI B1.1 | 2B
Blind hole | 2,5 × A22 | P | Vc

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- made of high-speed steel with vanadium content

Use:
For easy to machine materials



N° article	133391 UNF, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
3-56	●	UNF 3	56	2,52	7	50	1,8	–	2,15
4-48	○	UNF 4	48	2,85	7	56	2,2	–	2,4
5-44	○	UNF 5	44	3,18	7	56	2,2	–	2,7
6-40	○	UNF 6	40	3,51	7	56	2,5	2,1	3
8-36	●	UNF 8	36	4,17	7	63	2,8	2,1	3,5
10-32	●	UNF 10	32	4,83	9	70	3,5	2,7	4,1
12-28	○	UNF 12	28	5,49	9	80	4	3	4,6
1/4-28	●	UNF 1/4	28	6,35	11	80	4,5	–	5,5
5/16-24	●	UNF 5/16	24	7,94	12	90	6	4,9	6,9

N° article	133391 UNF, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
3/8-24	●	UNF 3/8	24	9,53	13	90	7	5,5	8,5
7/16-20	●	UNF 7/16	20	11,11	15	100	8	6,2	9,9
1/2-20	●	UNF 1/2	20	12,7	16	100	9	7	11,5
9/16-18	●	UNF 9/16	18	14,29	17	100	11	9	12,9
5/8-18	●	UNF 5/8	18	15,88	19	100	12	9	14,5
3/4-16	●	UNF 3/4	16	19,05	21	110	14	11	17,5
7/8-14	●	UNF 7/8	14	22,23	23	125	18	14,5	20,4
1-12	○	UNF 1	12	25,4	25	125	18	14,5	23

Machine tap Steel

PREMUS®

	P N/mm²	N N/mm²		Plastics N/mm²
133411	<900	Copper <900	Alu <500	Thermoplastics
133431				
vc = m/min.				
133411	6-10	8-12	18-26	18-26
133431				

G Whitworth pipe thread | HSS-E V3 | DIN 5156

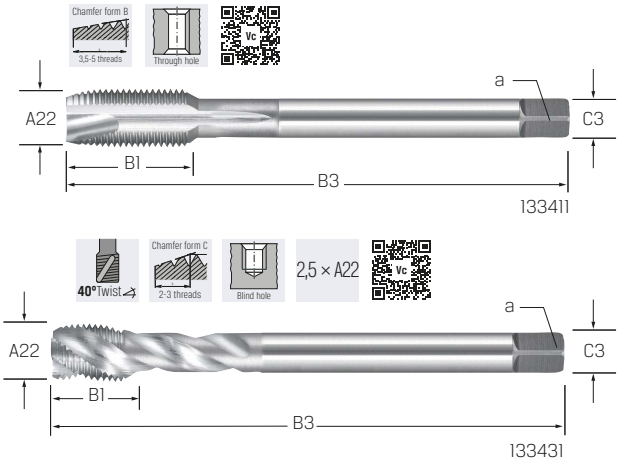
G, Whitworth pipe thread 55° | DIN ISO 228 | DIN 5128

P

Design 133411:
- for through-hole threads
- form B 3,5-5 thread
- made of high-speed steel with vanadium content

Design 133431:
- for blind-hole threads
- form C, 2-3 threads, 40 degrees RSP
- made of high-speed steel with vanadium content

Use 133411 and 132231:
For easy to machine materials



N° article	133411 G (WWR/BSPT), HSSE-V3	133431 G (WWR/BSPT), HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
1/8-28	●	●	G 1/8	28	9,73	20	90	7	5,5	8,8
1/4-19	●	●	G 1/4	19	13,16	22	100	11	9	11,8
3/8-19	●	●	G 3/8	19	16,66	22	100	12	9	15,25
1/2-14	●	●	G 1/2	14	20,96	25	125	16	12	19
5/8-14	○	○	G 5/8	14	22,91	25	125	18	14,5	21
3/4-14	●	●	G 3/4	14	26,44	28	140	20	16	24,5
7/8-14	○	○	G 7/8	14	30,2	28	150	22	18	28,25
1-11	●	●	G 1	11	33,25	30	160	25	20	30,75
1.1/4-11	●	●	G 1.1/4	11	41,91	30	170	32	24	39,25
1.1/2-11	●	●	G 1.1/2	11	47,8	32	190	36	29	45,25

	P N/mm²	N N/mm²		Plastics N/mm²
133455	<900	Copper <900	Alu <500	Thermoplastics
vc = m/min.				
133455	6-10	8-12	18-26	18-26

Pg Conduit threat | HSS-E V3 | DIN 40432

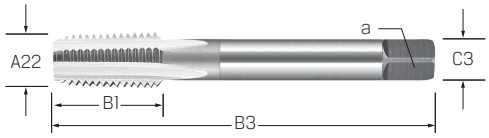
Chamfer form C 2-3 threads | Conduit thread 80° | DIN 40430

Through hole | Blind hole | 2,5 × A22

P | Vc

Design:
- for through-hole threads
- form C 2-3 thread
- made of high-speed steel with vanadium content

Use:
For easy to machine materials



Art.-Nr.	133455 PG, HSSE-V3	A22 Inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
7-20	65,60	Pg 7	20	12,5	22	70	9	7	11,4
9-18	83,75	Pg 9	18	15,2	22	70	12	9	14
11-18	94,45	Pg 11	18	18,6	22	80	14	11	17,25
13,5-18	105,00	Pg 13,5	18	20,4	22	80	16	12	19
16-18	123,10	Pg 16	18	22,5	22	80	18	14,5	21,25
21-16	186,90	Pg 21	16	28,3	22	90	22	18	27
29-16	278,40	Pg 29	16	37	25	100	28	22	35,5

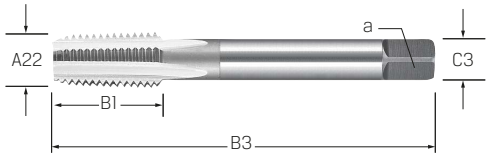
	P N/mm²	N N/mm²		Plastics N/mm²
133458	<900	Copper <900	Alu <500	Thermoplastics
vc = m/min.				
133458	6-10	8-12	18-26	18-26

NPT Conical pipe thread | HSS-E V3 | Factory standard

Chamfer form C 2-3 threads | NPT 60° 30°30° | ANSI B1.1

Through hole | Blind hole | 2,5 × A22

P | Vc



N° article	133458 NPT, HSSE-V3	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core Ø mm
1/8-27	●	NPT 1/8	27	10,07	15	63	7	5,5	8,7
1/4-18	●	NPT 1/4	18	13,37	21	63	11	9	11,4
3/8-18	●	NPT 3/8	18	16,81	21	70	12	9	14,7
1/2-14	●	NPT 1/2	14	20,95	27	80	16	12	18,3
3/4-14	●	NPT 3/4	14	26,29	27	100	20	16	23,7
1-11,5	●	NPT 1	11,5	32,91	32	110	25	20	29,7

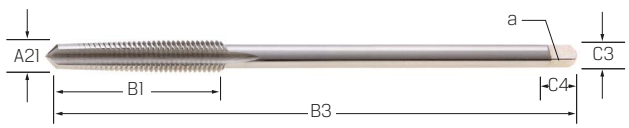
Nut tap Steel

PRETEC®

	P N/mm²	N N/mm²	
133510	<800	Alu <600	Copper

M Metric thread | HSS | DIN 357 | Typ N | Metric 60° | DIN 13 | Through hole | P | Vc

N° article	133510 metric, HSS-Co	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	M3	0,5	22	70	2,2	2,5	–	2,5
M4	●	M4	0,7	25	90	2,8	3,3	2,1	3,3
M5	●	M5	0,8	28	100	3,5	4,2	2,7	4,2
M6	●	M6	1	32	110	4,5	5	3,5	5
M8	●	M8	1,25	40	125	6	6,8	4,9	6,8
M10	●	M10	1,5	45	140	7	8,5	5,5	8,5
M12	●	M12	1,75	50	180	9	10,2	7	10,2
M14	●	M14	2	56	200	11	12	9	12
M16	●	M16	2	63	200	12	14	9	14



Machine tap Inox

PRETEC

	M N/mm²
135010	⟨1000
vc = m/min.	
135010	3 - 7

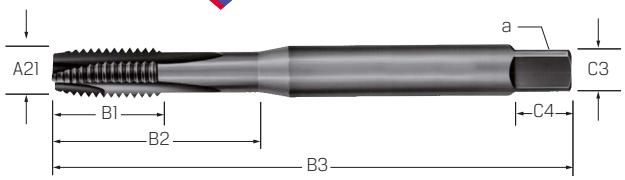
M Metric thread | HSS-Co | DIN 371

Chamfer form B 3,5-5 threads | Metric 60° | DIN 13

6H | Through hole | M

Design and use:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high-performance high-speed steel with cobalt content
- steam tempered
- for stainless steels

Tip



N° article	135010 metric, HSS-Co, steam tempered	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	●	M3	0,5	9	18	56	3,5	6	2,7	2,5
M3,5	●	M3.5	0,6	11	–	56	4	6	3	2,9
M4	●	M4	0,7	12	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	13	25	70	6	8	4,9	4,2
M6	●	M6	1	15	30	80	6	8	4,9	5
M8	●	M8	1,25	18	35	90	8	9	6,2	6,8
M10	●	M10	1,5	20	35	100	10	11	8	8,5

Machine tap Inox

PREMUS

	P N/mm²	M N/mm²	S N/mm²
135020	⟨1100	⟨800	Titanium ⟨900
vc = m/min.			
135020	8-12	6 - 8	2-4

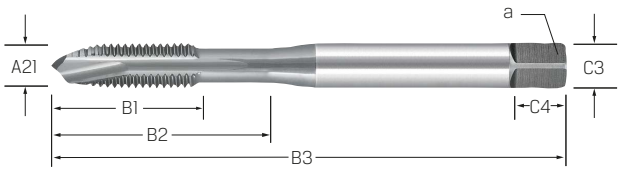
M Metric thread | HSS-E V3 | DIN 371

Chamfer form B 3,5-5 threads | Metric 60° | DIN 13

6H | Through hole | M

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels



N° article	135020 metric, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M2	●	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	●	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M3,5	●	M3.5	0,6	12	20	56	4	6	3	2,9
M4	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	M6	1	19	30	80	6	8	4,9	5
M8	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	M10	1,5	24	39	100	10	11	8	8,5

Machine tap Inox

PRETEC PREMUS

	P N/mm²	M N/mm²	S N/mm²
135110		⟨1000	
135030	⟨1100	⟨800	Titanium ⟨900
vc = m/min.			
135110		3 - 7	
135030	8-12	6 - 8	2-4

M Metric thread | DIN 376 | Chamfer form B 3,5-5 threads

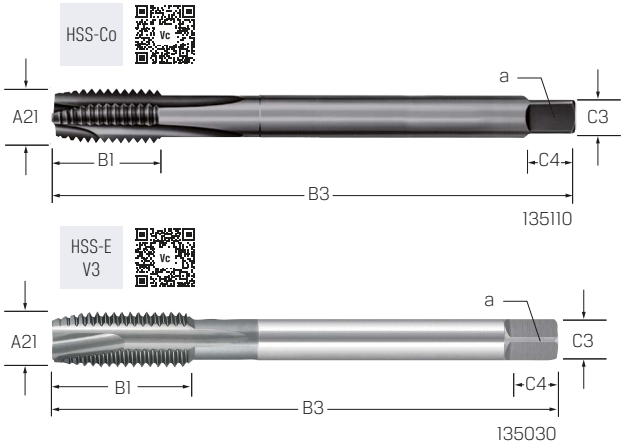
Metric 60° | DIN 13 | 6H

Through hole | M

Design 135110:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high-performance high-speed steel with cobalt content
- steam tempered

Design 135030:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels



N° article	135110 PRETEC metric, HSS-Co, steam tempered	135030 PREMUS metric, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3	–	●	M3	0,5	11	56	2,2	–	–	2,5
M4	–	●	M4	0,7	13	63	2,8	5	2,1	3,3
M5	●	●	M5	0,8	16	70	3,5	6	2,7	4,2
M6	●	●	M6	1	19	80	4,5	6	3,4	5
M8	●	●	M8	1,25	22	90	6	8	4,9	6,8
M10	●	●	M10	1,5	24	100	7	8	5,5	8,5
M12	●	●	M12	1,75	29	110	9	10	7	10,2
M14	●	●	M14	2	30	110	11	12	9	12
M16	●	●	M16	2	32	110	12	12	9	14
M18	●	○	M18	2,5	34	125	14	14	11	15,5
M20	●	●	M20	2,5	34	140	16	15	12	17,5
M22	–	●	M22	2,5	34	140	18	17	14,5	19,5
M24	●	●	M24	3	38	160	18	17	14,5	21
M27	○	●	M27	3	38	160	20	19	16	24
M30	●	○	M30	3,5	45	180	22	21	18	26,5
M36	–	●	M36	4	56	200	28	25	22	32

Machine tap Inox

PREMUS®

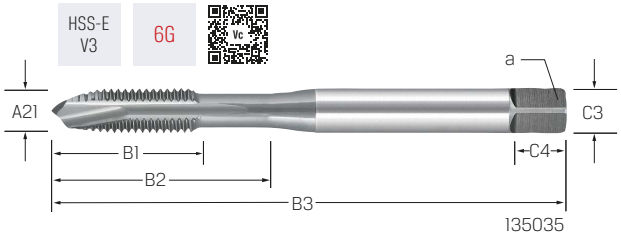
M Metric thread | DIN 371 | DIN 376 from M12 | Chamfer form B 3,5-5 threads
Metric 60° | DIN 13 | Through hole | M

	P N/mm²	M N/mm²	S N/mm²	N N/mm²	Plastics N/mm²
135035	⟨1100	⟨800	Titanium ⟨900		
135036	⟨1200			Nickel ⟨900	
135085		⟨1300		Brass, bronze, alu ⟨600	Thermoplastics, CFRP, GFRP
vc = m/min.					
135035	8-12	6 - 8	2-4		
135036	6-8			2-4	
135085		8 - 10		32-60	15-26

Versions 135035 and +135036:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- vaporised or TiCN coated
- tolerance 6G

Design 135085:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of powder metallurgical HSS (PS55)
- TiCN coated

Use:
Especially for stainless steels







N° article	135035 metric, HSSE-V3, vaporised 6G	135036 metric, HSSE-V3, TiCN, 6G	135085 metric, HSS-Co PM, TiCN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2	●	●	–	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	●	–	–	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	●	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M3,5	●	–	–	M3.5	0,6	12	20	56	4	6	3	2,9
M4	●	●	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	●	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	●	●	M6	1	19	30	80	6	8	4,9	5
M8	●	●	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	●	●	M10	1,5	24	39	100	10	11	8	8,5
M12	●	●	●	M12	1,75	28	–	110	9	10	7	10,2
M14	●	–	–	M14	2	30	–	110	11	12	9	12
M16	●	●	●	M16	2	32	–	110	12	12	9	14
M18	○	–	–	M18	2,5	34	–	125	14	14	11	15,5
M20	●	●	○	M20	2,5	34	–	140	16	15	12	17,5

Machine tap Inox

PREMUS® PRETEC®

M Metric thread | DIN 371 | Chamfer form C 2-3 threads | Metric 60°
DIN 13 | 6H | Blind hole | M

	P N/mm²	M N/mm²	S N/mm²	N N/mm²
135410		⟨1000		
135430	⟨1100	⟨800	Titanium ⟨900	Nickel ⟨900
vc = m/min.				
135410		3 - 7		
135430	6-8	6 - 8	2-4	2-4

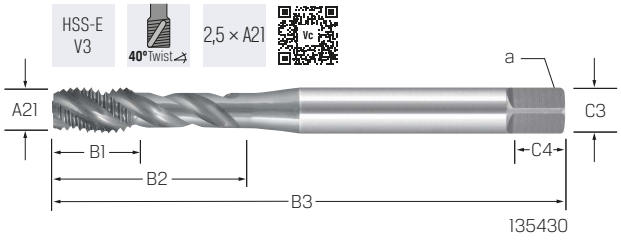
Design 135410:
- for blind-hole threads
- chamfer form C, 2-3 threads, 35 degrees RSP
- made of high-performance high-speed steel with cobalt content
- steam tempered

Design 135430:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- high-performance high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels

Tip





N° article	135410 PRETEC metric, HSS-Co, steam tempered	135430 PREMUS metric, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2	–	28,70	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	–	27,75	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	13,00	20,70	M3	0,5	5	18	56	3,5	6	2,7	2,5
M3,5	14,30	25,80	M3.5	0,6	6	20	56	4	6	3	2,9
M4	13,00	21,25	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	13,45	22,00	M5	0,8	8	25	70	6	8	4,9	4,2
M6	13,45	22,75	M6	1	10	30	80	6	8	4,9	5
M8	17,10	26,65	M8	1,25	13	35	90	8	9	6,2	6,8
M10	20,65	32,50	M10	1,5	15	39	100	10	11	8	8,5

Machine tap Inox

PREMUS® PRETEC®

	P N/mm²	M N/mm²	S N/mm²	N N/mm²
135510		⟨1000		
135435	⟨1100	⟨800	Titanium ⟨900	Nickel ⟨900
vc = m/min.				
135510		3 - 7		
135435	6-8	6 - 8	2-4	2-4

M Metric thread | DIN 376 | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | M

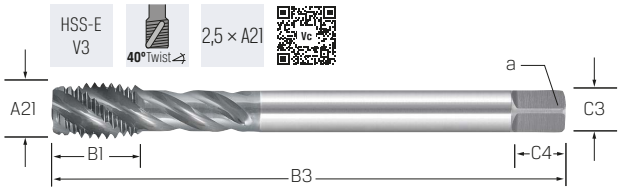
Design 135435:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40 degrees RSP
- high-performance high-speed steel with vanadium content
- vaporised

Design 135510:
- for blind-hole threads
- chamfer form C, 2-3 threads, 35 degrees RSP
- made of high-performance high-speed steel with cobalt content
- steam tempered

Use:
Especially for stainless steels

N° article	135510 PRETEC® metric, HSS-Co, steam tempered	135435 PREMUS® metric, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M6	●	●	M6	1	10	80	4,5	6	3,4	5
M8	●	●	M8	1,25	13	90	6	8	4,9	6,8
M10	●	●	M10	1,5	15	100	7	8	5,5	8,5
M12	●	●	M12	1,75	18	110	9	10	7	10,2
M14	●	●	M14	2	20	110	11	12	9	12
M16	●	●	M16	2	20	110	12	12	9	14
M18	●	●	M18	2,5	25	125	14	14	11	15,5
M20	●	●	M20	2,5	25	140	16	15	12	17,5
M22	○	●	M22	2,5	25	140	18	17	14,5	19,5
M24	●	●	M24	3	30	160	18	17	14,5	21
M3	–	●	M3	0,5	5	56	2,2	–	–	2,5
M4	–	●	M4	0,7	7	63	2,8	5	2,1	3,3
M5	–	●	M5	0,8	8	70	3,5	6	2,7	4,2
M27	–	●	M27	3	30	160	20	19	16	24
M30	–	●	M30	3,5	35	180	22	21	18	26,5
M36	–	●	M36	4	40	200	28	25	22	32





Machine tap Inox

PREMUS®

	P N/mm²	M N/mm²	S N/mm²	N N/mm²		Plastics N/mm²	
135485		⟨1300		Brass, bronze, alu ⟨600		Thermoplastics	CFK, GFK
135490	⟨1100	⟨800	Titanium ⟨900	Nickel ⟨900		Thermoset	CFK, GFK, AFK
135491							
135495	⟨1300		Titanium ⟨1300	Brass, bronze, alu ⟨600	Copper ⟨900		
vc = m/min.							
135485		8 - 10	2-4	32-60		15-26	15-26
135490	6-8	6 - 8		2-4			
135491							
135495	10-15	10 - 18	3-6	32-60	22-40	15-22	15-22

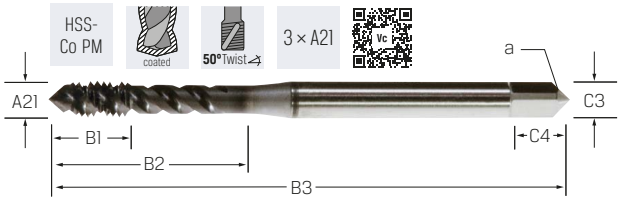
M Metric thread | DIN 371 | DIN 376 from M12 | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | M

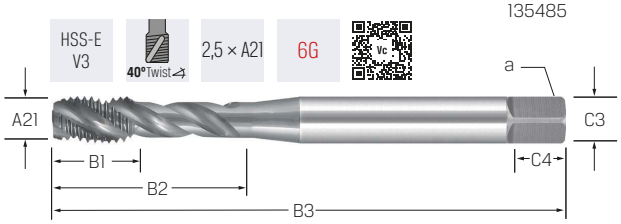
Design 135485 + 135495:
- for blind-hole threads
- chamfer form C, 2-3 threads, 50° RSP
- made of powder metallurgical HSS (PS55)
- TiCN coated
- with internal coolant supply (only 135495)

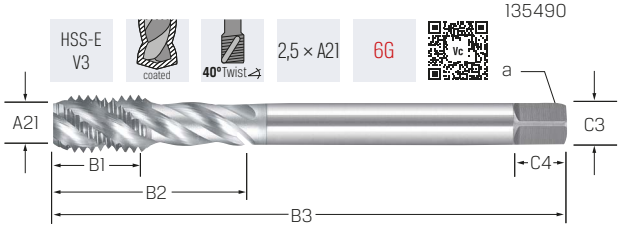
Design 135490+135491:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- high-speed steel with vanadium content
- vaporised or TiCN coated
- tolerance 6G

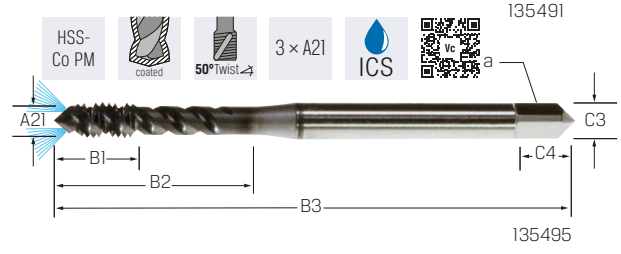
Use:
Especially for stainless steels

N° article	135485 metric, HSS-Co PM, RSP50, TiCN	135490 metric, HSSE-V3, vaporised 6G	135491 metric, HSSE-V3, TiCN, 6G	135495 metric, HSS-Co PM, RSP50, TiCN, ICS	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M2	–	●	●	–	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	–	●	–	–	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	●	●	–	M3	0,5	5	18	56	3,5	6	2,7	2,5
M4	●	●	●	–	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	●	●	–	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	●	●	●	M6	1	10	30	80	6	8	4,9	5
M8	●	●	●	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	●	●	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	●	●	●	M12	1,75	18	–	110	9	10	7	10,2
M14	●	●	–	●	M14	2	20	–	110	11	12	9	12
M16	●	●	●	●	M16	2	20	–	110	12	12	9	14
M18	○	○	–	○	M18	2,5	25	–	125	14	14	11	15,5
M20	●	●	●	○	M20	2,5	25	–	140	16	15	12	17,5
M22	○	–	–	○	M22	2,5	25	–	140	18	17	14,5	19,5
M24	●	●	–	○	M24	3	30	–	160	18	17	14,5	21
M27	○	○	–	○	M27	3	30	–	160	20	19	16	24
M30	○	●	–	○	M30	3,5	35	–	180	22	21	18	26,5









Machine tap Inox

PRETEC

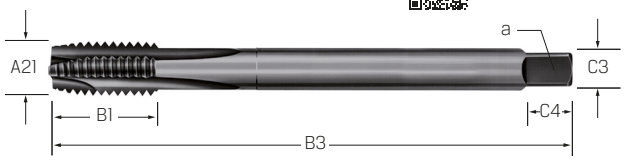
	M N/mm²
135630	⟨1000
vc = m/min.	
135630	3-7

MF Metric fine thread | HSS-Co | DIN 374

Chamfer form B 3,5-5 threads | Metric fine 60° | DIN 13

6H | Through hole | M

Design and use:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high-performance high-speed steel with cobalt content
- steam tempered
- for stainless steels



N° article	135630 metric-fine, HSS-Co, steam tempered	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M4×0,5	●	M4	0,5	12	63	2,8	5	2,1	3,5
M5×0,5	●	M5	0,5	13	70	3,5	6	2,7	4,5
M6×0,5	●	M6	0,5	15	80	4,5	6	3,4	5,5
M6×0,75	●	M6	0,75	15	80	4,5	6	3,4	5,2
M8×0,75	●	M8	0,75	15	80	6	8	4,9	7,2
M8×1	●	M8	1	18	80	6	8	4,9	7
M10×1	●	M10	1	20	90	7	8	5,5	9
M12×1	●	M12	1	21	100	9	10	7	11
M12×1,5	●	M12	1,5	21	100	9	10	7	10,5
M14×1,5	●	M14	1,5	21	100	11	12	9	12,5
M16×1,5	●	M16	1,5	21	100	12	12	9	14,5
M18×1,5	●	M18	1,5	24	110	14	14	11	16,5
M20×1,5	●	M20	1,5	24	125	16	15	12	18,5
M22×1,5	○	M22	1,5	24	125	18	17	14,5	20,5
M24×1,5	●	M24	1,5	26	140	18	17	14,5	22,5

	M N/mm²
135670	⟨1000
vc = m/min.	
135670	3 - 7

MF Metric fine thread | HSS-Co | DIN 371 up to M6 | DIN 374 from M8

35° Twist | Chamfer form C 2-3 threads | Metric fine 60° | DIN 13

6H | Blind hole | 2 × A21 | M

Design and use:
- for blind-hole threads
- chamfer form C, 2-3 threads, 35 degrees RSP
- made of high-performance high-speed steel with cobalt content
- steam tempered
- for stainless steels



N° article	135670 metric-fine, HSS-Co, steam tempered	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	●	M3	0,35	4	18	56	2,2	–	–	2,65
M4×0,5	●	M4	0,5	7	21	63	2,8	5	2,1	3,5
M5×0,5	●	M5	0,5	8	25	70	3,5	6	2,7	4,5
M6×0,5	●	M6	0,5	10	30	80	4,5	6	3,4	5,5
M6×0,75	●	M6	0,75	10	30	80	4,5	6	3,4	5,25
M8×0,75	●	M8	0,75	10	–	80	6	8	4,9	7,25
M8×1	●	M8	1	13	–	90	6	8	4,9	7
M10×1	●	M10	1	12	–	90	7	8	5,5	9
M12×1	●	M12	1	13	–	100	9	10	7	11
M12×1,5	●	M12	1,5	21	–	100	9	10	7	10,5
M14×1,5	●	M14	1,5	21	–	100	11	12	9	12,5
M16×1,5	●	M16	1,5	21	–	100	12	12	9	14,5
M18×1,5	●	M18	1,5	24	–	110	14	14	11	16,5
M20×1,5	●	M20	1,5	24	–	125	16	15	12	18,5
M22×1,5	●	M22	1,5	24	–	125	18	17	14,5	20,5
M24×1,5	●	M24	1,5	26	–	140	18	17	14,5	22,5
M27×1,5	○	M27	1,5	26	–	140	20	19	16	25,5
M30×1,5	○	M30	1,5	26	–	150	22	21	18	28,5

Machine tap Inox

PREMUS

	P N/mm²	M N/mm²	S N/mm²
135640	⟨1100	⟨800	Titanium ⟨900
vc = m/min.			
135640	8-12	6 - 8	2-4

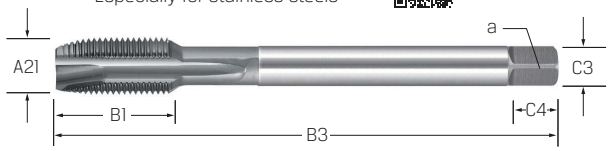
MF Metric fine thread | HSS-E V3 | DIN 374

Chamfer form B 3,5-5 threads | Metric fine 60° | DIN 13

6H | Through hole | M

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels



N° article	135640 metric-fine, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	●	M3	0,35	8	56	2,2	–	–	2,65
M4×0,50	●	M4	0,5	10	63	2,8	5	2,1	3,5
M5×0,50	●	M5	0,5	12	70	3,5	6	2,7	4,5
M6×0,50	●	M6	0,5	14	80	4,5	6	3,4	5,5
M6×0,75	●	M6	0,75	14	80	4,5	6	3,4	5,25
M8×0,75	●	M8	0,75	18	80	6	8	4,9	7,25
M8×1,00	●	M8	1	22	90	6	8	4,9	7
M10×1,00	●	M10	1	20	90	7	8	5,5	9
M12×1,00	●	M12	1	22	100	9	10	7	11
M12×1,50	●	M12	1,5	22	100	9	10	7	10,5
M14×1,50	●	M14	1,5	22	100	11	12	9	12,5
M16×1,50	●	M16	1,5	22	100	12	12	9	14,5
M18×1,50	●	M18	1,5	25	110	14	14	11	16,5
M20×1,50	●	M20	1,5	25	125	16	15	12	18,5
M22×1,50	○	M22	1,5	25	125	18	17	14,5	20,5
M24×1,50	●	M24	1,5	28	140	18	17	14,5	22,5

	P N/mm²	M N/mm²	S N/mm²	N N/mm²
135680	⟨1100	⟨800	Titanium ⟨900	Nickel ⟨900
vc = m/min.				
135680	6-8	6 - 8	2-4	2-4

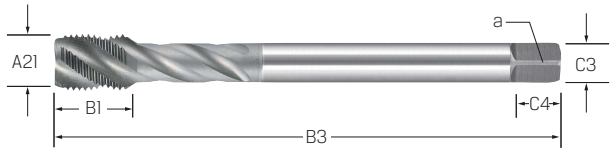
MF Metric fine thread | HSS-E V3 | DIN 374

40° Twist | Chamfer form C 2-3 threads | Metric fine 60° | DIN 13

6H | Blind hole | 2,5 × A21 | M

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 40° RSP
- high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels



N° article	135680 metric-fine, HSSE-V3, vaporised	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	●	M3	0,35	4	56	2,2	–	–	2,65
M4×0,50	●	M4	0,5	6	63	2,8	5	2,1	3,5
M5×0,50	●	M5	0,5	7	70	3,5	6	2,7	4,5
M6×0,50	●	M6	0,5	8	80	4,5	6	3,4	5,5
M6×0,75	●	M6	0,75	8	80	4,5	6	3,4	5,3
M8×0,75	●	M8	0,75	10	80	6	8	4,9	7,3
M8×1,00	●	M8	1	10	90	6	8	4,9	7
M10×1,00	●	M10	1	12	90	7	8	5,5	9
M12×1,00	●	M12	1	14	100	9	10	7	11
M12×1,50	●	M12	1,5	14	100	9	10	7	10,5
M14×1,50	●	M14	1,5	16	100	11	12	9	12,5
M16×1,50	●	M16	1,5	16	100	12	12	9	14,5
M18×1,50	●	M18	1,5	20	110	14	14	11	16,5
M20×1,50	●	M20	1,5	20	125	16	15	12	18,5
M22×1,50	○	M22	1,5	20	125	18	17	14,5	20,5
M24×1,50	●	M24	1,5	24	140	18	17	14,5	22,5
M27×1,50	○	M27	1,5	24	140	20	19	16	25,5
M30×1,50	●	M30	1,5	28	150	22	21	18	28,5

Machine tap Inox

PRETEC

	M N/mm²
135730	⟨1000
vc = m/min.	
135730	3 - 7

G Whitworth pipe thread | HSS-Co | DIN 5156

Chamfer form B | G. Whitworth pipe thread 55° | DIN ISO 228

Through hole | M | Vc

Design and use:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high-performance high-speed steel with cobalt content
- steam tempered
- for stainless steels



N° article	135730 G (WWR/BSPT), HSS-Co, steam tempered	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
1/8 - 28	●	G1/8"	28	9,73	20	90	7	8	12	8,8
1/4 - 19	●	G1/4"	19	13,16	21	100	11	12	9	11,8
3/8 - 19	●	G3/8"	19	16,66	21	100	12	12	16	15,25
1/2 - 14	●	G1/2"	14	20,95	24	125	16	15	9	19
5/8 - 14	○	G5/8"	14	22,91	24	125	18	17	20	21
3/4 - 14	●	G3/4"	14	26,44	26	140	20	19	14,5	24,5
1 - 11	●	G1"	11	33,25	28	140	25	23	5,5	30,75

	M N/mm²
135770	⟨1000
vc = m/min.	
135770	3 - 7

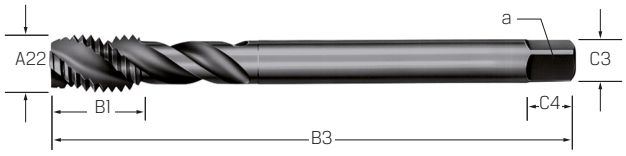
G Whitworth pipe thread | HSS-Co | DIN 5156

35°Twist | Chamfer form C 2-3 threads | G. Whitworth pipe thread 55°

ISO 5969 | Blind hole | 2 × A22

M | Vc

Design and use:
- for blind-hole threads
- chamfer form C, 2-3 threads
- made of high-performance high-speed steel with cobalt content
- steam tempered
- for stainless steels



N° article	135770 G (WWR/BSPT), HSS-Co, steam tempered	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
1/8 - 28	●	G1/8"	28	9,73	12	90	7	8	5,5	8,8
1/4 - 19	●	G1/4"	19	13,16	15	100	11	12	9	11,8
3/8 - 19	●	G3/8"	19	16,66	15	100	12	12	9	15,25
1/2 - 14	●	G1/2"	14	20,95	18	125	16	15	12	19
3/4 - 14	●	G3/4"	14	26,44	20	140	20	19	16	24,5

Machine tap Inox

PREMUS

	P N/mm²	M N/mm²	S N/mm²
135740	⟨1100	⟨800	Titanium ⟨900
vc = m/min.			
135740	8-12	6 - 8	2-4

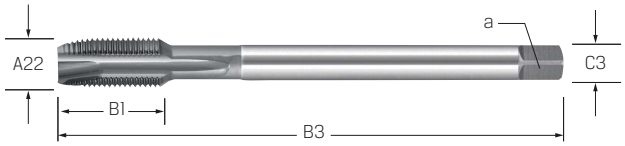
G Whitworth pipe thread | HSS-E V3 | DIN 5156

Chamfer form B | G. Whitworth pipe thread 55° | DIN ISO 228

Through hole | M | Vc

Design:
- for through-hole threads
- form B 3,5-5 thread
- high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels



N° article	135740 G (WWR/BSPT), HSS-V3, vaporised	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
1/8 - 28	●	G 1/8	28	9,73	20	90	7	9	8,8
1/4 - 19	●	G 1/4	19	13,16	22	100	11	9	11,8
3/8 - 19	●	G 3/8	19	16,66	22	100	12	14,5	15,25
1/2 - 14	●	G 1/2	14	20,96	25	125	16	5,5	19
5/8 - 14	●	G 5/8	14	22,91	25	125	18	16	21
3/4 - 14	●	G 3/4	14	26,44	28	140	20	12	24,5
7/8 - 14	○	G 7/8	14	30,2	28	150	22	18	28,25
1 - 11	●	G 1	11	33,25	30	160	25	20	30,75

	P N/mm²	M N/mm²	S N/mm²	N N/mm²
135775	⟨1100	⟨800	Titanium ⟨900	Nickel ⟨900
vc = m/min.				
135775	6-8	6 - 8	2-4	2-4

G Whitworth pipe thread | HSS-E V3 | DIN 5156

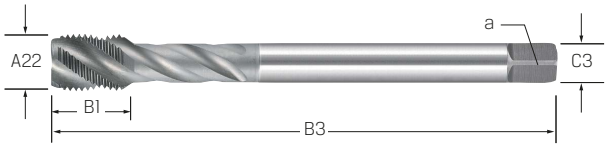
40°Twist | Chamfer form C 2-3 threads | G. Whitworth pipe thread 55°

DIN ISO 228 | Blind hole | 2,5 × A22

M | Vc

Design:
- for blind-hole threads
- form C, 2-3 threads, 40 degrees RSP
- high-speed steel with vanadium content
- vaporised

Use:
Especially for stainless steels



N° article	135775 G (WWR/BSPT), HSS-V3, vaporised	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	a mm	Core ∅ mm
1/8 - 28	●	G 1/8	28	9,73	20	90	7	5,5	8,8
1/4 - 19	●	G 1/4	19	13,16	22	100	11	9	11,8
3/8 - 19	●	G 3/8	19	16,66	22	100	12	9	15,25
1/2 - 14	●	G 1/2	14	20,96	25	125	16	12	19
5/8 - 14	○	G 5/8	14	22,91	25	125	18	14,5	21
3/4 - 14	●	G 3/4	14	26,44	28	140	20	16	24,5
7/8 - 14	○	G 7/8	14	30,2	28	150	22	18	28,25
1 - 11	●	G 1	11	33,25	30	160	25	20	30,75
1.1/4 - 11	●	G 1.1/4	11	41,91	30	170	32	24	39,25
1.1/2 - 11	●	G 1.1/2	11	47,8	32	190	29	29	45,25

Machine tap Cast iron

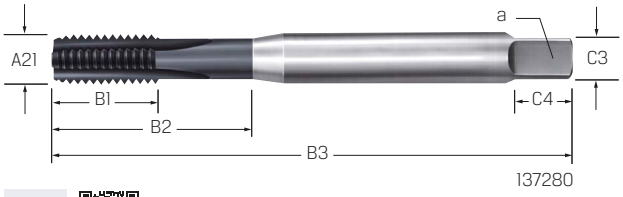
PRETEC

	K HB
137280	<300
137310	
vc = m/min.	
137280	15 - 20
137310	

Design and use:
- for through-hole threads
- chamfer form C, 2-3 threads
- made of high performance high speed steel with cobalt content
- TiCN coated
- for cast materials

M Metric thread | HSS-Co | coated | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6HX | Through hole | K

DIN 371



137280

DIN 376



137310

N° article	137280 metric, HSS-Co, TiCN	137310 metric, HSS-Co, TiCN	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M4	●	–	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	–	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	●	M6	1	19	30	80	6	8	4,9	5
M8	●	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	●	M10	1,5	24	39	100	10	11	8	8,5
M12	–	●	M12	1,75	23	–	110	9	10	7	10,2
M14	–	○	M14	2	25	–	110	11	12	9	12
M16	–	●	M16	2	25	–	110	12	12	9	14
M18	–	○	M18	2,5	30	–	125	14	14	11	15,5
M20	–	○	M20	2,5	30	–	140	16	15	12	17,5
M22	–	○	M22	2,5	30	–	140	18	17	14,5	19,5
M24	–	○	M24	3	36	–	160	18	17	14,5	21
M27	–	○	M27	3	36	–	160	20	19	16	24
M30	–	○	M30	3,5	42	–	180	22	21	18	26,5

	K HB
137410	<300
vc = m/min.	
137410	15 - 20

Design and use:
- for through-hole threads
- chamfer form C, 2-3 threads
- made of high performance high speed steel with cobalt content
- TiCN coated
- for cast materials

MF Metric fine thread | HSS-Co | coated | DIN 374 | Chamfer form C 2-3 threads | Metric fine 60° | DIN 13 | 6HX | Through hole | Blind hole | 2 × A21 | K



N° article	137410 metric-fine, HSS-Co, TiCN	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
M3×0,35	○	M3	0,35	10	56	2,5	–	–	2,65
M4×0,5	○	M4	0,5	12	63	2,8	5	2,1	3,5
M5×0,5	○	M5	0,5	13	70	3,5	6	2,7	4,5
M6×0,5	○	M6	0,5	15	80	4,5	6	3,4	5,5
M6×0,75	○	M6	0,75	15	80	4,5	6	3,4	5,2
M8×0,75	○	M8	0,75	15	80	6	8	4,9	7,2
M8×1	●	M8	1	18	90	6	8	4,9	7
M10×1	●	M10	1	20	90	7	8	5,5	9
M12×1	○	M12	1	21	100	9	10	7	11
M12×1,5	●	M12	1,5	21	100	9	10	7	10,5
M14×1,5	●	M14	1,5	21	100	11	12	9	12,5
M16×1,5	●	M16	1,5	21	100	12	12	9	14,5
M18×1,5	●	M18	1,5	24	110	14	14	11	16,5
M20×1,5	●	M20	1,5	24	125	16	15	12	18,5
M22×1,5	○	M22	1,5	24	125	18	17	14,5	20,5

	K HB
137510	<300
vc = m/min.	
137510	15 - 20

Design and use:
- for through-hole threads
- chamfer form C, 2-3 threads
- made of high performance high speed steel with cobalt content
- TiCN coated
- for cast materials

G Whitworth pipe thread | HSS-Co | coated | DIN 5156 | Chamfer form C 2-3 threads | G. Whitworth pipe thread 55° | DIN ISO 228 | Through hole | Blind hole | 2 × A22 | K



N° article	137510 G (WWR/BSPT), HSS-Co, TiCN	A22 inch	TPI	A22 mm	B1 mm	B3 mm	C3 mm	C4 mm	a mm	Core Ø mm
1/8 - 28	●	G 1/8	28	9,73	20	90	7	8	5,5	8,8
1/4 - 19	●	G 1/4	19	13,16	21	100	11	12	9	11,8
3/8 - 19	●	G 3/8	19	16,66	21	100	12	12	9	15,25
1/2 - 14	○	G 1/2	14	20,95	24	125	16	15	12	19
5/8 - 14	○	G 5/8	14	22,91	24	125	18	17	14,5	21
3/4 - 14	○	G 3/4	14	26,44	26	140	20	19	16	24,5
1 - 11	○	G 1	11	33,25	28	140	25	23	20	30,75

Machine tap Aluminium

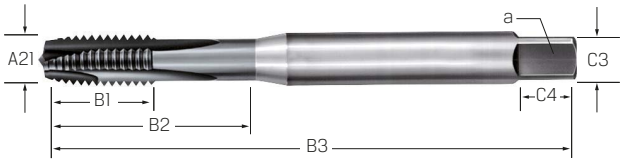
PRETEC

	N N/mm²
137613	Alu ⟨600
vc = m/min.	
137613	15-35

Design and use:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of high performance high speed steel with cobalt content
- TiB2 coated
- for aluminium

M Metric thread | HSS-Co | coated | DIN 371 | DIN 376 from M12 | Chamfer form B 3,5-5 threads | Metric 60° | DIN 13 | 6H | Through hole | N | Vc

N° article	137613 metric, HSS-Co, TiB2	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	M3	0,5	9	18	56	3,5	6	2,7	2,5
M4	●	M4	0,7	12	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	13	25	70	6	8	4,9	4,2
M6	●	M6	1	15	30	80	6	8	4,9	5
M8	●	M8	1,25	18	35	90	8	9	6,2	6,8
M10	●	M10	1,5	20	39	100	10	11	8	8,5
M12	●	M12	1,75	23	–	110	9	10	7	10,2
M14	●	M14	2	25	–	110	11	12	9	12
M16	○	M16	2	25	–	110	12	12	9	14
M20	○	M20	2,5	25	–	140	16	15	12	17,5



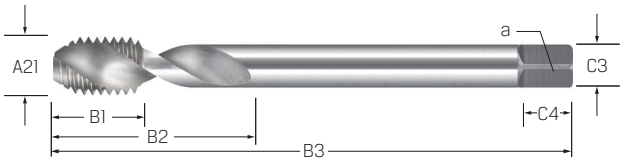
Machine tap Aluminium

PREMUS

	N N/mm²	
137708	Alu ⟨600	Plastics
vc = m/min.		
137708	18-22	18-22

Design and use:
- for blind-hole threads
- chamfer form C, 2-3 threads, 45° RSP
- made of high performance high speed steel with cobalt content
- 2-3 teeth
- for aluminium and plastic

M Metric thread | HSS-Co | Teeth 2-3 | DIN 371 | DIN 376 from M12 | 45° Twist | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | 3 × A21 | N | Vc



137708

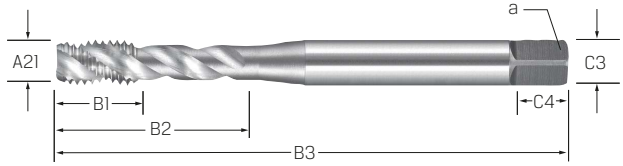
N° article	137708 metric, HSS-Co	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	a mm	Core ∅ mm
M3	●	M3	0,5	5	18	56	3,5	6	2	2,7	2,5
M4	●	M4	0,7	7	21	63	4,5	6	2	3,4	3,3
M5	●	M5	0,8	8	25	70	6	8	2	4,9	4,2
M6	●	M6	1	10	30	80	6	8	2	4,9	5
M8	●	M8	1,25	13	35	90	8	9	2	6,2	6,8
M10	●	M10	1,5	15	39	100	10	11	2	8	8,5
M12	●	M12	1,75	18	–	110	9	10	2	7	10,2
M14	○	M14	2	20	–	110	11	12	2	9	12
M16	●	M16	2	20	–	110	12	12	2	9	14
M18	○	M18	2,5	25	–	125	14	14	3	11	15,5
M20	○	M20	2,5	25	–	140	16	15	3	12	17,5

	N N/mm²		Plastics N/mm²
137711	Copper ⟨600	Alu ⟨600	Thermoplastics
vc = m/min.			
137711	15-26	18-32	18-32

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 45° RSP
- high-speed steel with vanadium content

Use:
Especially for aluminium and copper.
Also suitable for thermoplastics.

M Metric thread | HSS-E V3 | DIN 371 | DIN 376 from M12 | 45° Twist | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | 3 × A21 | N | Vc



137711

N° article	137711 metric, HSSE-V3,	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M2	●	M2	0,4	8	–	45	2,8	5	2,1	1,6
M2,5	●	M2.5	0,45	9	–	50	2,8	5	2,1	2,05
M3	●	M3	0,5	5	18	56	3,5	6	2,7	2,5
M3,5	●	M3.5	0,6	6	20	56	4	6	3	2,9
M4	●	M4	0,7	7	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	8	25	70	6	8	4,9	4,2
M6	●	M6	1	10	30	80	6	8	4,9	5
M8	●	M8	1,25	13	35	90	8	9	6,2	6,8
M10	●	M10	1,5	15	39	100	10	11	8	8,5
M12	●	M12	1,75	18	–	110	9	10	7	10,2
M16	●	M16	2	20	–	110	12	12	9	14
M20	○	M20	2,5	25	–	140	16	15	12	17,5

Machine tap Titanium

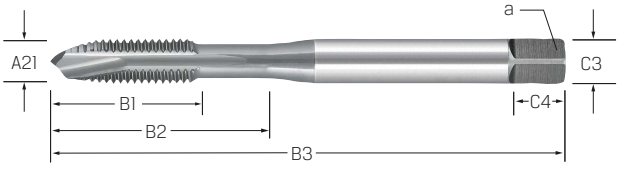
PREMUS

	S N/mm²	N N/mm²
137802	Titanium ⟨1400	Ceramics
	vc = m/min.	
137802	5-8	5-8

M Metric thread | HSS-Co PM | DIN 371 | DIN 376 from M12 | Chamfer form B 3,5-5 threads | Metric 60° | DIN 13 | 6H | Through hole | S | Vc

Design:
- for through-hole threads
- chamfer form B, 3.5-5 threads
- made of powder metallurgical high performance steel
- vaporised

Use:
Especially for titanium materials



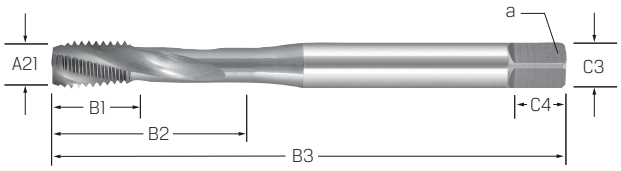
N° article	137802 metric, HSS-Co PM, vaporised	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M4	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	M6	1	19	30	80	6	8	4,9	5
M8	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	M10	1,5	24	39	100	10	11	8	8,5
M12	●	M12	1,75	28	–	110	9	10	7	10,2
M16	●	M16	2	32	–	110	12	12	9	14
M20	○	M20	2,5	34	–	140	16	15	12	17,5

	S N/mm²	N N/mm²
137812	Titanium ⟨1400	Ceramics
	vc = m/min.	
137812	3-6	3-6

M Metric thread | HSS-Co PM | DIN 371 | DIN 376 from M12 | 15° Twist | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | 1,5 × A21 | S | Vc

Design:
- for blind-hole threads
- chamfer form C, 2-3 threads, 15° RSP
- made of powder metallurgical high performance steel
- vaporised

Use:
Especially for titanium materials



N° article	137812 metric, HSS-Co PM, vaporised, RSP15	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm	Core ∅ mm
M3	●	M3	0,5	11	18	56	3,5	6	2,7	2,5
M4	●	M4	0,7	13	21	63	4,5	6	3,4	3,3
M5	●	M5	0,8	16	25	70	6	8	4,9	4,2
M6	●	M6	1	19	30	80	6	8	4,9	5
M8	●	M8	1,25	22	35	90	8	9	6,2	6,8
M10	●	M10	1,5	24	39	100	10	11	8	8,5
M12	●	M12	1,75	28	–	110	9	10	7	10,2
M16	●	M16	2	32	–	110	12	12	9	14
M20	○	M20	2,5	34	–	140	16	15	12	17,5

Machine tap set Steel

PRETEC

Design:
- set in plastic case
- compiled of machine taps, type ST/OX, 132310/132410 and twist drills, type N, CBN ground

M Metric thread | HSS-Co | DIN 371 | DIN 376 from M12 | Chamfer form B 3,5-5 threads | Metric 60° | DIN 13 | 6H | Through hole | P

N° article	137940 with core drill	Contents
M3-M12	●	Machine tap 132310 M3-M10 Machine tap 132410 M12 Twist drill 100020 ∅ 2.5 | 3.3 | 4.2 | 5 | 6.8 | 8.5 | 10.2 mm



Design:
- set in plastic case
- compiled from machine taps 133050/133150 and twist drills 100020

M Metric thread | HSS-Co | DIN 371 | DIN 376 from M12 | 40° Twist | Chamfer form C 2-3 threads | Metric 60° | DIN 13 | 6H | Blind hole | 2 × A21 | P

N° article	137950 RSP40, with core drill	Contents
M3-M12	●	Machine tap 133050 M3-M10 Machine tap 133150 M12 Twist drill 100020 ∅ 2.5 | 3.3 | 4.2 | 5 | 6.8 | 8.5 | 10.2 mm



Machine tap set Inox

PRETEC

Design:
- set in plastic case
- composed of machine taps and twist drills

M Metric thread | HSS-Co | DIN 371 | DIN 376 from M12 | Chamfer form B 3,5-5 threads
Metric 60° | DIN 13 | 6H | Through hole | M



N° article	137980 with core drill	Contents
M3-M12	●	Machine tap 135010 M3-M10 Machine tap 135110 M12 Twist drill 100420 ∅ 2.5 | 3.3 | 4.2 | 5 | 6.8 | 8.5 | 10.2 mm

Design:
- set in plastic case
- compiled from machine taps 135410/135510 and twist drills 100420

M Metric thread | HSS-Co | DIN 371 | DIN 376 from M12 | 35° Twist | Chamfer form C 2-3 threads
Metric 60° | DIN 13 | 6H | Blind hole | 2 × A21 | M



N° article	137990 RSP35, with core drill	Contents
M3-M12	●	Machine tap 135410 M3-M10 Machine tap 135510 M12 Twist drill 100420 ∅ 2.5 | 3.3 | 4.2 | 5 | 6.8 | 8.5 | 10.2 mm

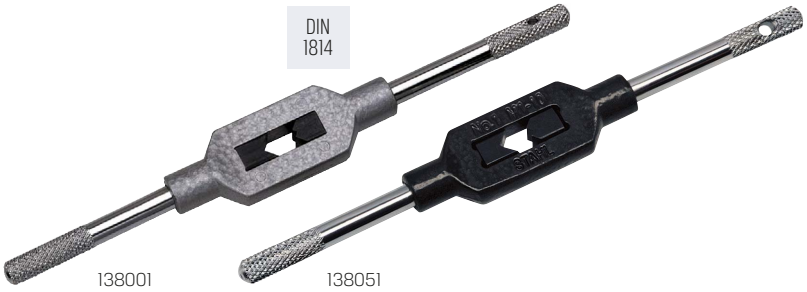
Tap wrenches adjustable

PRETEC

Design:
- with detachable handle and hardened, burnished jaws
- handles zinc coated
- made of die casting for normal load
- 138051 made of steel, forged, for heavy load

Use:
For square end tools (e.g. taps or reamers)

DIN 1814



138001 138051

N° article	138001 Standard version	138051 Steel version	Clamping width from-to mm	For hand taps DIN 352	B3 mm
0	●	–	2 - 5	M1-M8	130
1	●	●	2 - 6,3	M1-M10	176
1.1/2	●	–	2,1 - 8	M1-M12	176
2	●	●	3 - 9	M4-M12	280
3	●	●	4,9 - 12	M5-M20	380
4	●	●	5,5 - 16	M11-M27	505
5	●	●	7 - 20	M13-M32	700
6	–	●	11 - 24	M18-M42	1000
7	–	●	16 - 32	M25-M52	1250

Tool Holder with ratchet

PRETEC

Design:
- with two-jaw chuck, for clamping tools with square shank end
- slidable transverse handle
- the ratchet can be switched to clockwise and anti-clockwise operation
- chromium-plated all-steel housing with knurled clamping nut



N° article	138501 short/long	138571 Spare clamping jaw set with spring	for taps	B3 mm	B3 mm
1	●	●	M3-M10	85	85
2	●	●	M5-M12	100	100
10	●	–	M3-M10	250	250
20	●	–	M5-M12	300	300

Tap extension

PRETEC

DIN 377

Design:
- same-size external and internal square
- hardened and zinc coated, square to DIN 10

Use:
For extending tools with square shank ends (taps, reamers etc.)

Note:
Tap extensions with morse taper shank on request

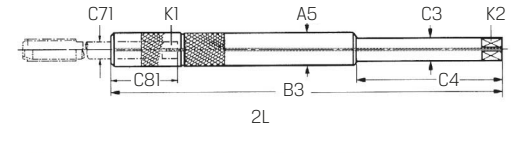


N° article	138601	C71 mm	A5 mm	B3 mm	N° article	138601	C71 mm	A5 mm	B3 mm	N° article	138601	C71 mm	A5 mm	B3 mm
2,1	●	2,1	6	60	5,5	●	5,5	12	115	12	●	12	25	155
2,7	●	2,7	7	80	6,2	●	6,2	14	120	14,5	●	14,5	29	175
3,0	●	3	7	90	7,0	●	7	15	125	16	●	16	30	180
3,4	●	3,4	8	95	8,0	●	8	17	125	18	●	18	33	200
3,8	●	3,8	9	100	9,0	●	9	19	130	20	●	20	33	220
4,3	●	4,3	10	105	10	●	10	21	140	22	●	22	40	220
4,9	●	4,9	11	110	11	●	11	23	150	24	●	24	42	235

Design:
- long or overlong version; the **front end** of the extension is designed as a collet chuck
- by tightening the knurled clamping nut the collet and the tap are united
- torque transmission is achieved via a square
- the **rear end** of the extension follows DIN, allowing the extension to be mounted like a tap

Use:
In quick-change tap inserts or tap ER collets with square. For thread-cutting at inaccessible places such as sunken recesses, ledges, hindering edges, extremely deep internal threads or close to cast walls

Note:
138605: Suited for shrink fit and hydraulic extension chucks



2L




5



N° article	138603 TE	138604 TE, with internal cooling	138605 TE, with internal cooling, h6	138603 C3 mm	K2 mm	138604 C3 mm	K2 mm	138605 C3 mm	K2 mm	Nominal thread ∅ DIN 371	Nominal thread ∅ DIN 374/376	C71 mm	Square K1 mm	C81 mm	A5 mm	C4 mm	B3 mm
1	○	○	–	6	4.9	6	4.9	–	–	M2 - M2.6	M4	2,8	2.1	22	6,1	60	130
1L	○	–	–	6	4.9	–	–	–	–	M2 - M2.6	M4	2,8	2.1	22	6,1	70	230
2	●	○	○	6	4.9	6	4.9	6	4.9	M3	M4.5 - M5	3,5	2.7	23	7,5	60	130
2L	○	–	–	6	4.9	–	–	–	–	M3	M4.5 - M5	3,5	2.7	23	7,5	70	230
3	●	○	●	6	4.9	6	4.9	6	4.9	M4	M6	4,5	3.4	23	8,4	60	130
3L	○	–	–	6	4.9	–	–	–	–	M4	M6	4,5	3.4	23	8,4	70	230
4	●	○	●	7	5.5	7	5.5	8	6.2	M4.5 - M6	–	6	4.9	26	12,1	60	130
4L	○	○	○	7	5.5	7	5.5	8	6.2	M4.5 - M6	–	6	4.9	26	12,1	70	230
5	●	○	○	7	5.5	7	5.5	8	6.2	M7	M9 - M10	7	5.5	26	12,1	60	130
5L	○	○	○	7	5.5	7	5.5	8	6.2	M7	M9 - M10	7	5.5	26	12,1	70	230
6	●	○	○	8	6.2	8	6.2	8	6.2	M8	M11	8	6.2	30	13	60	130
6L	○	○	○	8	6.2	8	6.2	8	6.2	M8	M11	8	6.2	30	13	80	230
7	●	○	●	9	7	9	7	10	8	M9	M12	9	7	31	15	60	130
7L	○	○	○	9	7	9	7	10	8	M9	M12	9	7	31	15	80	230
8	●	○	●	10	8	10	8	10	8	M10	–	10	8	33	15	60	130
8L	○	○	○	10	8	10	8	10	8	M10	–	10	8	33	15	80	230
9	○	○	○	11	9	11	9	12	9	–	M14	11	9	36	18	90	130
9L	○	○	○	11	9	11	9	12	9	–	M14	11	9	36	18	90	230
10	●	○	●	12	9	12	9	12	9	–	M16	12	9	36	18	90	130
10L	○	○	○	12	9	12	9	12	9	–	M16	12	9	36	18	90	230
11	○	○	○	14	11	14	11	14	11	–	M18	14	11	42	22	90	200
11L	○	○	○	14	11	14	11	14	11	–	M18	14	11	42	22	90	330
12	○	○	○	16	12	16	12	16	12	–	M20	16	12	42	22	90	200
12L	○	○	○	16	12	16	12	16	12	–	M20	16	12	42	22	90	330
13	○	○	○	18	14.5	18	14.5	18	14.5	–	M22 - M24	18	14.5	43	26	100	200
13L	○	○	○	18	14.5	18	14.5	18	14.5	–	M22 - M24	18	14.5	43	26	100	330

Thread milling cutter SC Universal

	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²	
138929	⟨1200	⟨1100	⟨800	Ti ⟨1200	Ni ⟨1400	Copper ⟨700	Alu ⟨600
vc = m/min.							
138929	55-160	30 - 65	85 - 140	20-55	10-50	250-295	250-490

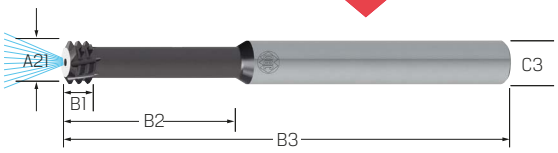
M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 4-6 | 3 × A21 | 6535 HA shank | ICS | UNI | Vc

Design:
- three-fluted thread milling cutter for female threads
- 3× A21
- left-hand helical grooves
- 3 full thread profiles
- AlTiCrN coated

Use:
- high dimensional accuracy and cylindricity of the thread
- low radial cutting pressure
- universally applicable tool for cost-efficient production of internal threads up to 44 HRC
- high number of teeth
- uneven spiral pitch
- low vibration

Note:
≥M4 with coolant duct

NEW



N° article	138929 GFT Shark, 3× A21, metric	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0001	●	M1.2	0,25	0,75	3,9	39	3	4	0,020 - 0,210
0002	●	M1.4	0,3	0,9	4,5	39	3	4	0,020 - 0,210
0004	●	M1.6	0,35	1,05	5,2	39	3	4	0,020 - 0,210
0006	○	M1.8	0,35	1,05	5,8	39	3	4	0,020 - 0,210
0008	●	M2	0,4	1,2	6,4	39	3	4	0,020 - 0,210
0010	○	M2.2	0,45	1,35	7,1	39	3	4	0,020 - 0,210
0012	●	M2.5	0,45	1,35	8	39	3	4	0,020 - 0,210
0014	●	M3	0,5	1,5	9,5	39	3	4	0,020 - 0,210
0016	○	M3.5	0,6	1,8	11,1	39	3	6	0,020 - 0,210
0018	●	M4	0,7	2,1	12,7	54	6	6	0,020 - 0,210
0020	●	M5	0,8	2,4	15,8	54	6	6	0,020 - 0,210
0022	●	M6	1	3	19	54	6	6	0,020 - 0,210
0024	●	M8	1,25	3,75	25,4	68	8	6	0,040 - 0,300
0026	●	M10	1,5	4,5	31,7	75	10	6	0,040 - 0,300
0028	○	M12	1,75	5,25	38	82	10	6	0,040 - 0,300
0030	○	M14/16	2	6	50	100	12	6	0,040 - 0,300
0032	○	M18/20	2,5	7,5	62	115	16	6	0,040 - 0,300

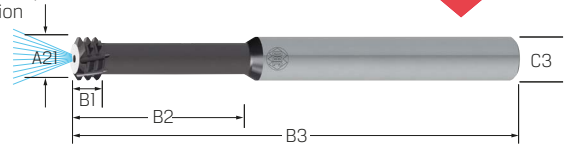
	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²	
138923	⟨1400	⟨1100	⟨800	Ti ⟨1200	Ni ⟨1400	Copper ⟨700	Alu ⟨600
vc = m/min.							
138923	40-160	30 - 65	85 - 140	20-55	10-50	250-295	365-490

UNC american UNIFIED coarse thread | UNF american UNIFIED fine thread | SC | coated | UNC 60° | UNF 60° | ANSI B1.1 | Teeth 4-6 | 2,5-3 × A22 | 6535 HA shank | ICS | UNI | Vc

Design:
- three-fluted thread milling cutter for female threads
- 3×A22
- left-hand helical grooves
- 3 full thread profiles
- AlTiCrN coated
- ≥ UNC8 with cooling duct
- UNC 24-10/12 to 2,5 x A22
- UNF 64-2, 56-3 & 40-6 to 2,5 x A22

Use:
- high dimensional accuracy and cylindricity of the thread
- low radial cutting pressure
- universally applicable tool for cost-efficient production of internal threads up to 44 HRC
- high number of teeth
- uneven spiral pitch
- low vibration

NEW



N° article	138923 GFT Shark, UNC/UNF	A22 inch	TPI	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0002	○	UNC 1 | UNF 2	64	1,15	5,8	39	3	4	0,020 - 0,210
0004	○	UNC 2 | UNF	56	1,31	6,8	39	3	4	0,020 - 0,210
0006	○	UNC 4	40	1,84	9	39	3	4	0,020 - 0,210
0008	○	UNC 5 | UNF 6	40	1,84	10	39	3	4	0,020 - 0,210
0010	○	UNC 6	32	2,3	11	39	3	4	0,020 - 0,210
0012	○	UNC 8	32	2,3	13	54	6	6	0,020 - 0,210
0014	○	UNF 10	32	2,3	15	54	6	6	0,020 - 0,210
0016	○	UNF 1/4	28	2,66	19,6	58	6	6	0,020 - 0,210
0018	○	UNC 10/12	24	3,06	15,2	54	6	6	0,020 - 0,210
0020	○	UNC 1/4	20	3,68	19,7	58	6	6	0,020 - 0,210

	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²	
138931	⟨1200	⟨1100	⟨800	Ti ⟨1200	Ni ⟨1400	Copper ⟨700	Alu ⟨600
vc = m/min.							
138931	55-160	30 - 65	85 - 140	20-55	10-50	250-295	250-490

M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 4-6 | 2 × A21 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- 2× A21
- high number of teeth
- with coolant duct
- left-hand helical grooves
- uneven spiral pitch
- low vibration
- AlTiCrN coated

Use:
- universally applicable tool for cost-efficient production of internal threads
- applicable up to 44 HRC

Note:
Can also be used for EG metric ISO thread DIN 8140-2 and metric ISO fine thread DIN 13 from standard thread diameter.

N° article	138931 GF Shark, 2× A21 metric, ICS	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0002	●	M3	0,5	6,75	54	6	4	0,020 - 0,210
0004	●	M4	0,7	8,75	54	6	6	0,020 - 0,210
0006	●	M5	0,8	10,75	58	6	6	0,020 - 0,210
0008	●	M6	1	13,45	58	6	6	0,020 - 0,210
0010	●	M8	1,25	18,1	68	8	6	0,020 - 0,210
0012	●	M10	1,5	21,7	80	10	6	0,040 - 0,300
0014	●	M12	1,75	25,4	82	10	6	0,040 - 0,300
0016	●	M14	2	31,1	92	12	6	0,040 - 0,300

NEW



Thread milling cutter SC Universal

	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²	
138955	⟨1200	⟨1100	⟨800	Ti ⟨1200	Ni ⟨1400	Copper ⟨700	Alu ⟨600
	vc = m/min.						
138955	55-160	30 - 65	85 - 140	20-55	10-50	250-295	250-490

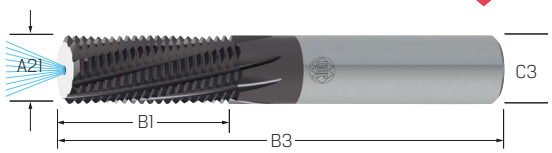
M Metric thread | MF Metric fine thread | SC | coated | Metric 60° | Metric fine 60° | DIN 13 | Teeth 6-8 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- high number of teeth
- with coolant duct
- left-hand helical grooves
- uneven spiral pitch
- low vibration
- AlTiCrN coated

Use:
- universally applicable tool for cost-efficient production of internal threads
- covers a wide range of thread diameters with a defined pitch
- applicable up to 44 HRC

Note:
Note the smallest millable thread diameter D≥

NEW



N° article	138955 GFM Shark, M/MF, ICS	A21 mm	Thread pitch mm	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth	D≥ mm
0002	○	12	1	31,45	92	12	6	0,050 - 0,290	14
0004	●	12	1,5	32,2	92	12	6	0,050 - 0,290	16
0006	○	12	2	30,95	92	12	6	0,050 - 0,290	16
0008	○	16	1	40,45	106	16	8	0,050 - 0,290	18
0010	●	16	1,5	41,2	106	16	8	0,050 - 0,290	20
0012	○	16	2	40,95	106	16	8	0,050 - 0,290	20
0014	○	20	1,5	51,7	120	20	8	0,050 - 0,290	24
0016	○	20	2	50,9	120	20	8	0,050 - 0,290	26
0018	○	20	3	52,35	120	20	8	0,050 - 0,290	27

Milling cutter Universal

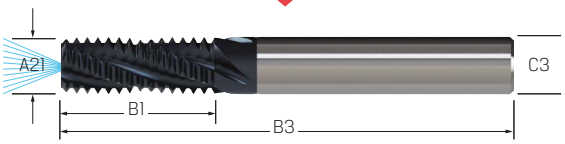
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138933	⟨1400	⟨1100	⟨1000	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138933	30-200	30 - 120	80 - 200	30-80	100-350	100-350

M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 3-4 | 2 × A21 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- 2× A21
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for cost-efficient production of internal threads
- machining of materials up to 44 HRC possible

NEW



N° article	138933 GF, metric, ICS	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0028	○	M6	1	13,5	54	6	3	0,010 - 0,060
0030	○	M8	1,25	18,1	54	6	3	0,020 - 0,200
0032	○	M10	1,5	21,7	64	8	4	0,020 - 0,200
0034	○	M12	1,75	27,1	74	10	4	0,020 - 0,200
0036	○	M14	2	30,9	74	10	4	0,020 - 0,200
0038	○	M16	2	34,9	80	12	4	0,020 - 0,200
0040	○	M18/20	2,5	41,1	90	14	4	0,020 - 0,200

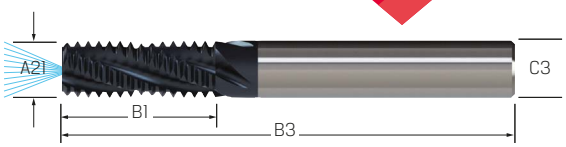
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138935	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138935	30-200	30 - 120	80 - 200	30-80	100-350	100-350

MF Metric fine thread | SC | coated | Metric fine 60° | DIN 13 | Teeth 3-4 | 2 × A21 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- 2× A21
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for cost-efficient production of internal threads
- machining of materials up to 44 HRC possible

NEW



N° article	138935 GF, metric fine, ICS	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0012	○	M6	0,5	12,7	54	6	3	0,010 - 0,060
0013	○	M6	0,75	13,1	54	6	3	0,010 - 0,060
0016	○	M8	0,5	17,7	54	6	3	0,020 - 0,200
0017	○	M8	0,75	16,8	54	6	3	0,020 - 0,200
0018	○	M8	1	17,5	54	6	3	0,020 - 0,200
0022	○	M10	1	21,5	64	8	4	0,020 - 0,200
0023	○	M10	1,25	21,8	64	8	4	0,020 - 0,200
0029	○	M12	1	25,5	74	10	4	0,020 - 0,200
0031	○	M12	1,5	26,2	74	10	4	0,020 - 0,200

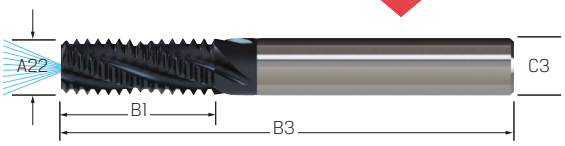
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138938	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138938	30-200	30 - 120	80 - 200	30-80	100-350	100-350

G Whitworth pipe thread | SC | coated | G Whitworth pipe thread 55° | DIN 228 | Teeth 4 | 2 × A22 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for internal and external threads
- 2× A22
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for cost-efficient production of internal threads
- machining of materials up to 44 HRC possible
- usable for both Rp and DIN 2999

NEW



N° article	138938 GF, G (WWR/BSPT), ICS	A22 inch	TPI	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0002	○	G1/8	28	21,3	64	8	4	0,020 - 0,200
0004	○	G1/4	19	28,7	74	10	4	0,020 - 0,200
0006	○	G3/8	19	35,5	90	14	4	0,020 - 0,200

Milling cutter Universal

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138941	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138941	30-200	30 - 120	80 - 200	30-80	100-350	100-350

UNC american UNIFIED coarse thread | SC | coated | UNC 60° | ANSI B1.1 | Teeth 3-4 | 2 × A22 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- 2× A22
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for cost-efficient production of internal threads
- machining of materials up to 44 HRC possible

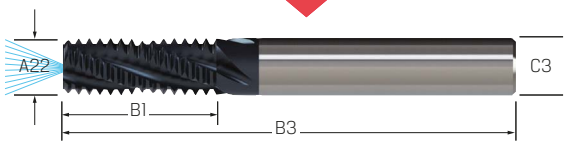
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138944	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138944	30-200	30 - 120	80 - 200	30-80	100-350	100-350

UNF american UNIFIED fine thread | SC | coated | UNF 60° | ANSI B1.1 | Teeth 3-4 | 2 × A22 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- 2× A22
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

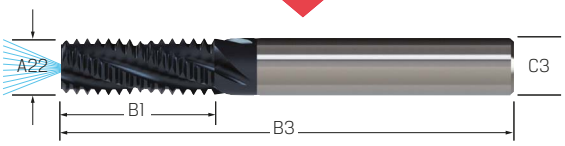
Use:
- universally applicable tool for cost-efficient production of internal threads
- machining of materials up to 44 HRC possible

NEW



Nº article	138941 GF, UNC, ICS	A22 inch	TPI	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0004	○	UNC 1/4	20	14,5	54	6	3	0,010 - 0,060
0006	○	UNC 5/16	18	17,6	54	6	3	0,010 - 0,060
0008	○	UNC 3/8	16	21,4	64	8	4	0,020 - 0,200
0010	○	UNC 7/16	14	24,4	64	8	4	0,020 - 0,200
0012	○	UNC 1/2	13	28,3	74	10	4	0,020 - 0,200

NEW



Nº article	138944 GF, UNF, ICS	A22 inch	TPI	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0004	○	UNF 1/4	28	14	54	6	3	0,010 - 0,060
0006	○	UNF 5/16	24	17,4	54	6	3	0,010 - 0,060
0008	○	UNF 3/8	24	20,6	64	8	4	0,020 - 0,200
0010	○	UNF 7/16	20	24,7	64	8	4	0,020 - 0,200
0012	○	UNF 1/2	20	27,3	74	10	4	0,020 - 0,200

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138948	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138948	30-200	30 - 120	80 - 200	30-80	100-350	100-350

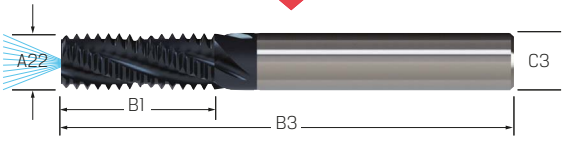
NPT Conical pipe thread | SC | coated | NPT 60° 30° 30° 47° | ANSI B1.20.1 | Teeth 3-4 | 2 × A22 | 6535 HA shank | ICS | UNI | Vc

Design:
- thread milling cutter for female threads
- 2× A22
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for cost-efficient production of internal threads
- machining of materials up to 44 HRC possible
- cone 1:16
- for threads with sealant

Nº article	138948 GF, NPT, ICS	A22 inch	TPI	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0002	○	NPT 1/16	27	9,86	64	8	3	0,020 - 0,200
0004	○	NPT 1/8	27	9,86	64	8	4	0,020 - 0,200
0006	○	NPT 1/4	18	18,98	72	12	4	0,020 - 0,200
0008	○	NPT 3/8	18	14,82	80	14	4	0,020 - 0,200
0010	○	NPT 1/2	14	19,05	80	14	4	0,020 - 0,200

NEW



Milling cutter Universal, with countersink step

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138949						
138950	<1400	<1100	<300	<1250	Copper <700	Alu <600
138951						
	vc = m/min.					
138949	30-200	30-120	80-200	30-80	100-350	100-350
138950	30-200	30-120	80-200	30-80	100-350	100-350
138951	30-200	30-120	80-200	30-80	100-350	100-350

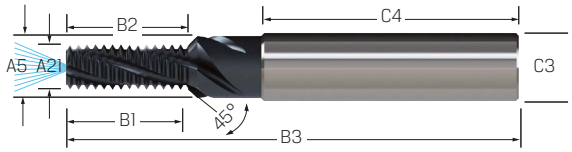
Design:
- thread milling cutter for female threads
- 1.5× A21 / 2× A21 / 2.5× A21
- 45° chamfer
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 3-4 | 6535 HA shank | ICS | UNI

Use:
- universally applicable tool for cost-effective combined production of internal threads with countersink
- increased productivity by countersinking and thread milling in one operation without tool change
- machining of materials up to 44 HRC

1,5 × A21

NEW



N° article	138949 GFS, 1.5× A21, metric, ICS	A21 metric	Thread pitch mm	A5 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0026	○	M4	0,7	4.2	7,35	7,9	48	6	36	3	0,010 - 0,080
0027	○	M5	0,8	5.3	9,15	9,9	54	6	36	3	0,010 - 0,080
0028	○	M6	1	6.3	10,45	11,3	62	8	36	3	0,010 - 0,080
0030	○	M8	1,25	8.4	13,1	14,1	74	10	40	3	0,020 - 0,200
0032	○	M10	1,5	10.5	17,2	18,4	80	12	45	4	0,020 - 0,200
0034	○	M12	1,75	12.6	20,05	21,5	90	14	45	4	0,020 - 0,200
0036	○	M14	2	14.7	24,95	26,5	102	16	48	4	0,020 - 0,200
0038	○	M16	2	16.8	26,95	28,6	102	18	48	4	0,020 - 0,200
0040	○	M18/20	2,5	21	33,65	36,7	125	20	50	4	0,020 - 0,200

2,5 × A21

N° article	138951 GFS, 2.5× A21, metric, ICS	A21 metric	Thread pitch mm	A5 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0026	○	M4	0,7	4.2	10,85	11,4	48	6	36	3	0,010 - 0,080
0027	○	M5	0,8	5.3	13,15	13,9	54	6	36	3	0,010 - 0,080
0028	○	M6	1	6.3	16,45	17,3	62	8	36	3	0,010 - 0,080
0030	○	M8	1,25	8.4	21,85	22,8	74	10	40	3	0,020 - 0,200
0032	○	M10	1,5	10.5	26,2	27,4	80	12	45	4	0,020 - 0,200
0034	○	M12	1,75	12.6	32,3	33,7	90	14	45	4	0,020 - 0,200
0036	○	M14	2	14.7	36,95	38,5	102	16	48	4	0,020 - 0,200
0038	○	M16	2	16.8	42,95	44,6	102	18	48	4	0,020 - 0,200
0040	○	M18/20	2,5	21	48,65	51,7	125	20	50	4	0,020 - 0,200

2 × A21

N° article	138950 GFS, 2× A21, metric, ICS	A21 metric	Thread pitch mm	A5 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0026	○	M4	0,7	4.2	8,75	9,3	48	6	36	3	0,010 - 0,080
0027	○	M5	0,8	5.3	10,75	11,5	54	6	36	3	0,010 - 0,080
0028	○	M6	1	6.3	13,45	14,3	62	8	36	3	0,010 - 0,080
0030	○	M8	1,25	8.4	18,1	19,1	74	10	40	3	0,020 - 0,200
0032	○	M10	1,5	10.5	21,7	22,9	80	12	45	4	0,020 - 0,200
0034	○	M12	1,75	12.6	25,3	26,7	90	14	45	4	0,020 - 0,200
0036	○	M14	2	14.7	30,95	32,5	102	16	48	4	0,020 - 0,200
0038	○	M16	2	16.8	34,95	36,6	102	18	48	4	0,020 - 0,200
0040	○	M18/20	2,5	21	41,15	44,2	125	20	50	4	0,020 - 0,200

Milling cutter Universal, with countersink step

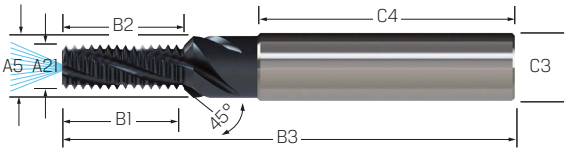
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138953						
138956	<1400	<1100	<300	<1250	Copper <700	Alu <600
	vc = m/min.					
138953	30-200	30-120	80-200	30-80	100-350	100-350
138956						

Design:
- thread milling cutter for female threads
- 1.5× A21 / 2× A21
- 45° chamfer
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for cost-effective combined production of internal threads with countersink
- increased productivity by countersinking and thread milling in one operation without tool change
- machining of materials up to 44 HRC possible

MF Metric fine thread | SC | coated | Metric fine 60° | DIN 13 | Teeth 3-4 | 6535 HA shank | ICS | UNI

NEW



1,5 × A21

N° article	138953 GFS, 1.5×A21, metric-fine, ICS	A21 metric	Thread pitch mm	A5 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0008	○	M4	0,5	4.2	7,25	7,7	48	6	36	3	0,010 - 0,080
0010	○	M5	0,5	5.3	8,75	9,3	54	6	36	3	0,010 - 0,080
0012	○	M6	0,5	6.3	9,75	10,4	62	8	36	3	0,010 - 0,080
0013	○	M6	0,75	6.3	10,1	10,8	62	8	36	3	0,010 - 0,080
0016	○	M8	0,5	8.4	12,75	13,5	74	10	40	3	0,020 - 0,200
0017	○	M8	0,75	8.4	13,1	13,9	74	10	40	3	0,020 - 0,200
0018	○	M8	1	8.4	13,45	14,4	74	10	40	3	0,020 - 0,200
0022	○	M10	1	10.5	16,45	17,5	80	12	45	4	0,020 - 0,200
0023	○	M10	1,25	10.5	16,85	20,6	80	12	45	4	0,020 - 0,200
0029	○	M12	1	12.6	19,45	20,6	90	14	45	4	0,020 - 0,200
0031	○	M12	1,5	12.6	20,2	21,5	90	14	45	4	0,020 - 0,200
0035	○	M14	1,5	14.7	23,2	24,6	102	16	48	4	0,020 - 0,200
0041	○	M16	1,5	16.8	26,2	27,7	102	18	48	4	0,020 - 0,200

2 × A21

N° article	138956 GFS, 2×A21, metric-fine, ICS	A21 metric	Thread pitch mm	A5 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0008	○	M4	0,5	4.2	8,75	9,2	48	6	36	3	0,010 - 0,080
0010	○	M5	0,5	5.3	10,75	11,3	54	6	36	3	0,010 - 0,080
0012	○	M6	0,5	6.3	12,75	13,4	62	8	36	3	0,010 - 0,080
0013	○	M6	0,75	6.3	13,1	13,8	62	8	36	3	0,010 - 0,080
0016	○	M8	0,5	8.4	17,75	18,5	74	10	40	3	0,020 - 0,200
0017	○	M8	0,75	8.4	16,85	17,7	74	10	40	3	0,020 - 0,200
0018	○	M8	1	8.4	17,45	18,4	74	10	40	3	0,020 - 0,200
0022	○	M10	1	10.5	21,45	22,5	80	12	45	4	0,020 - 0,200
0023	○	M10	1,25	10.5	21,85	22,9	80	12	45	4	0,020 - 0,200
0029	○	M12	1	12.6	25,45	26,6	90	14	45	4	0,020 - 0,200
0031	○	M12	1,5	12.6	26,2	27,5	90	14	45	4	0,020 - 0,200
0035	○	M14	1,5	14.7	30,7	32,1	102	16	48	4	0,020 - 0,200
0041	○	M16	1,5	16.8	33,7	35,2	102	18	48	4	0,020 - 0,200

Milling cutter Universal

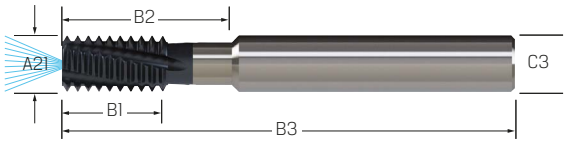
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138957	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138957	30-200	30-120	80-200	30-80	100-350	100-350

M Metric thread · MF Metric fine thread · SC coated · DIN 13 · Teeth 4-5 · 6535 HA shank · ICS · UNI

Design:
- thread milling cutter for female threads
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for the production of a wide thread Ø range with defined pitch
- machining of materials up to 44 HRC possible

NEW



N° article	138957 GFM, M/MF, ICS	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0016	○	M8	0,5	16	16	64	8	4	0,030 - 0,200
0017	○	M8	0,75	16	16	64	8	4	0,030 - 0,200
0021	○	M10	0,75	16	25	70	10	4	0,030 - 0,200
0022	○	M10	1	16	25	70	10	4	0,030 - 0,200
0023	○	M10	1,25	16	25	70	10	4	0,030 - 0,200
0024	○	M10	1,5	16	25	70	10	4	0,030 - 0,200
0026	○	M12	0,5	20	31	80	12	4	0,030 - 0,200
0027	○	M12	0,75	20	31	80	12	4	0,030 - 0,200
0029	○	M12	1	20	31	80	12	4	0,030 - 0,200
0030	○	M12	1,25	20	31	80	12	4	0,030 - 0,200
0031	○	M12	1,5	20	31	80	12	4	0,030 - 0,200
0032	○	M12	2	20	31	80	12	4	0,030 - 0,200
0040	○	M16	1	25	40	90	16	5	0,030 - 0,200
0041	○	M16	1,5	25	40	90	16	5	0,030 - 0,200
0042	○	M16	2	25	40	90	16	5	0,030 - 0,200
0043	○	M16	2,5	25	40	90	16	5	0,030 - 0,200
0048	○	M18	3	33	50	102	18	5	0,030 - 0,200
0052	○	M20	1	33	50	105	20	5	0,030 - 0,200
0053	○	M20	1,5	33	50	105	20	5	0,030 - 0,200
0054	○	M20	2	33	50	105	20	5	0,030 - 0,200
0055	○	M20	2,5	33	50	105	20	5	0,030 - 0,200
0056	○	M20	3	33	50	105	20	5	0,030 - 0,200
0057	○	M20	3,5	33	50	105	20	5	0,030 - 0,200
0058	○	M20	4	33	50	105	20	5	0,030 - 0,200

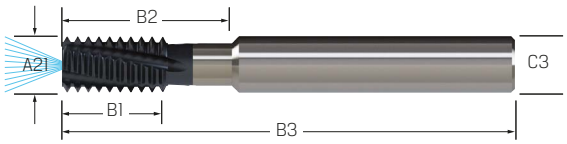
	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
138958	⟨1400	⟨1100	⟨300	⟨1250	Copper ⟨700	Alu ⟨600
	vc = m/min.					
138958	30-200	30-120	80-200	30-80	100-350	100-350

G Whitworth pipe thread · SC coated · DIN 228 · Teeth 4-6 · 6535 HA shank · ICS · UNI

Design:
- thread milling cutter for internal and external threads
- **TiCN coated**
- shank design HA
- with cooling duct and right-hand spiral grooves

Use:
- universally applicable tool for the production of a wide thread Ø range with defined pitch
- machining of materials up to 44 HRC possible
- also usable for W, Rp and DIN 2999

NEW



N° article	138958 GFM, G (WWR/BSPT), ICS	A21 mm	A22 inch	TPI	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0002	○	10	G1/4	19	16	25	70	10	4	0,030 - 0,200
0004	○	16	G 1/2	14	25	40	90	16	5	0,030 - 0,200
0006	○	20	G1	11	33	50	105	20	5	0,030 - 0,200
0008	○	25	G1.1/2	11	40	57	115	25	6	0,030 - 0,200

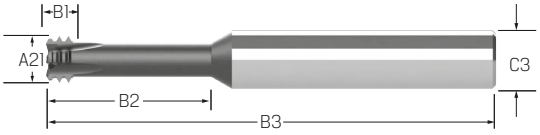
Circular drilling tap SC Universal

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²
138970	⟨1200	⟨66	⟨1100	⟨260	⟨1200
138972	⟨1800				
	vc = m/min.				
138970	60-85	30-55	30-45	75-85	40-50
138972					

Use:
Universally applicable tool to produce internal threads.
Machining of materials up to 66 HRC possible.

SC coated · Metric 60° · DIN 13 · Teeth 4 · 2,5 × A21 · 6535 HA shank · left hand cutting · UNI

Design:
- circular drilling tap for internal threads
- 2.5× A21
- shank design HA
- left-hand cutting
- straight grooved
- AlTiSiN coated



M Metric thread · MF Metric fine thread

N° article	138970 BGFS, 2.5×A21, metric	A21 mm	Thread pitch mm	Area	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0020	●	2,3	0,5	M 3 - M 4×0.5	1,5	8,2	58	6	4	0,007 - 0,017
0024	●	3,1	0,7	M 4 - M 5×0.7	2,1	11,2	58	6	4	0,011 - 0,019
0026	●	3,9	0,8	M 5 - M 6×0.8	2,4	13,7	58	6	4	0,014 - 0,024
0028	●	4,7	1	M 6 - M 8× 1	3	17,6	58	6	4	0,017 - 0,030
0030	●	6,4	1,25	M8- M 10×1.25	3,8	22	62	8	4	0,023 - 0,038
0032	●	8,1	1,5	M 10 - M 12×1.5	4,5	27,5	76	10	4	0,028 - 0,045
0033	●	9,8	1,75	M 12 - M 14×1.75	5,2	32,8	76	10	4	0,033 - 0,055
0034	●	11,5	2	M 14 - M 16× 2	6	38,2	88	12	4	0,037 - 0,060
0035	●	13,4	2	M 16 - M 18× 2	6	43,2	92	14	4	0,041 - 0,064

N° article	138972 BGFS, metric-fine	A21 mm	Thread pitch mm	Area	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0015	●	6,8	0,75	M 8×0.75 - M 10×0.75	2,2	22	62	8	4	0,027 - 0,038
0017	●	8,5	1	M 10×1 - M 12× 1	3	27,5	76	10	4	0,032 - 0,045

Milling cutter HRC

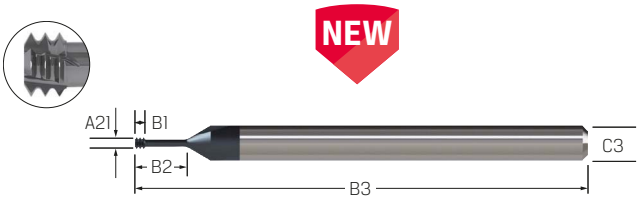
	H HRC
138959	≤ 63
vc = m/min.	
138959	30-60

Design:
- three-fluted thread milling cutter for female threads
- 2× A21
- **TiCN coated**
- shank design HA
- left-hand cutting with left spiral

Use:
- for tempered and hardened steels 54-63 HRC
- high dimensional accuracy and cylindricity of the thread
- low radial cutting pressure

M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 3 | 2 × A21
6535 HA shank | left hand cutting | H | Vc | video

N° article	138959 GFT-H, 2×A21, metric	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	D1	fz mm/tooth
0012	○	M2	0,4	1,2	4,4	54	6	3	0,005 - 0,015
0018	○	M2.5	0,45	1,35	5,5	54	6	3	0,005 - 0,025
0020	○	M3	0,5	1,5	6,6	54	6	3	0,005 - 0,025
0022	○	M3.5	0,6	1,8	7,7	54	6	3	0,005 - 0,025
0024	○	M4	0,7	2,1	8,8	54	6	3	0,005 - 0,025
0026	○	M5	0,8	2,4	11	54	6	3	0,005 - 0,025
0028	○	M6	1	3	13,2	54	6	3	0,005 - 0,025
0030	○	M8	1,25	3,75	17,5	58	6	3	0,005 - 0,025



Milling cutter HRC

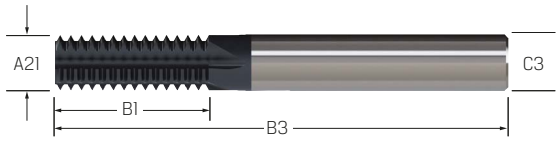
	H HRC
138964	≤ 63
vc = m/min.	
138964	30-60

Design:
- thread milling cutter for female threads
- 2× A21
- TiAlN coated
- shank design HA

Use:
Specialised variant of thread-milling cutter for the production of internal threads in cured or hardened steels of HRC 54-63

M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 4-5 | 2 × A21
6535 HA shank | H | Vc

N° article	138964 GFH, 2× A21, metric	A21 metric	Thread pitch mm	B1 mm	B3 mm	C3 mm	D1	fz mm/tooth
0024	○	M4	0,7	8,7	48	6	4	0,005 - 0,015
0026	○	M5	0,8	11,6	54	6	4	0,005 - 0,025
0028	○	M6	1	13,5	64	8	4	0,005 - 0,025
0030	○	M8	1,25	18,1	64	8	5	0,005 - 0,025
0032	○	M10	1,5	21,7	80	12	5	0,005 - 0,025
0034	○	M12	1,75	27,1	80	12	5	0,005 - 0,025



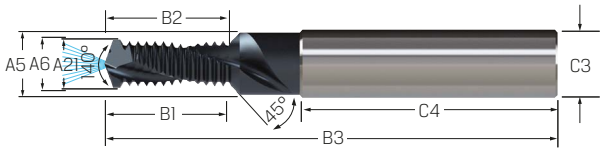
Thread milling cutter Aluminium, with ICS

	K HB	N N/mm²	
138980	≤ 300	Alu alloy ≤ 600	Copper ≤ 700
138982			
vc = m/min.			
138980	100 - 200	150-300	100-350
138982			

Design:
- thread milling cutter for female threads
- 1.5× A21 / 2× A21
- 45° chamfer
- TiAlN coated
- shank design HA
- right-hand spiral grooves

Use:
- tool for the combined production of internal threads with bore and countersink
- maximum productivity by reducing non-productive time, since no tool change is required
- specifically for machining of non-ferrous metals and grey cast iron

M Metric thread | SC | coated | Metric 60° | DIN 13 | Teeth 2 | 6535 HA shank
ICS | K | N | video



Vc | 1,5 × A21

N° article	138980 BGF, 1.5× A21, metric, ICS	A21 metric	Thread pitch mm	A5 mm	A6 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0024	○	M4	0,7	4.2	3,3	6,85	7,4	48	6	36	2	0,030 - 0,070
0026	○	M5	0,8	5.3	4,2	8,7	9,4	54	6	36	2	0,030 - 0,070
0028	○	M6	1	6.3	5	10,85	11,6	62	8	36	2	0,030 - 0,070
0030	○	M8	1,25	8.4	6,75	13,65	14,6	74	10	40	2	0,040 - 0,150
0032	○	M10	1,5	10.5	8,5	17,95	19,2	80	12	45	2	0,040 - 0,150
0033	○	M12	1,75	12.6	10,25	20,75	22,2	90	14	45	2	0,040 - 0,150
0034	○	M14	2	14.7	12	23,55	25,2	102	16	48	2	0,040 - 0,150
0035	○	M16	2	16.8	14	25,9	27,6	102	18	48	2	0,040 - 0,150

Vc | 2 × A21

N° article	138982 BGF, 2× A21, metric, ICS	A21 metric	Thread pitch mm	A5 mm	A6 mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	D1	fz mm/tooth
0024	○	M4	0,7	4.2	3,3	8,95	9,5	48	6	36	2	0,030 - 0,070
0026	○	M5	0,8	5.3	4,2	11,1	11,8	54	6	36	2	0,030 - 0,070
0028	○	M6	1	6.3	5	13,85	14,6	62	8	36	2	0,030 - 0,070
0030	○	M8	1,25	8.4	6,75	18,65	19,6	74	10	40	2	0,040 - 0,150
0032	○	M10	1,5	10.5	8,5	22,45	23,7	80	12	45	2	0,040 - 0,150
0033	○	M14	1,75	12.6	10,25	26	27,4	90	14	45	2	0,040 - 0,150
0034	○	M14	2	14.7	12	31,55	33,2	102	16	48	2	0,040 - 0,150
0035	○	M16	2	16.8	14	35,9	37,6	102	18	48	2	0,040 - 0,150

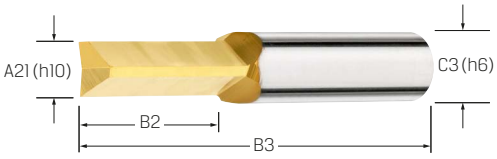
Tap extractor

PREMUS

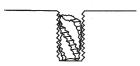
Use:
For boring out broken tap drills. Speed 1,500-3,500 rpm. (dry) A firm clamping of the workpiece is pre-condition to avoid displacements during the high-speed operation. In case of diagonally broken taps centring needs to be made by repeated approach. Remove the chips continuously.

SC	coated	Factory standard
Teeth 3	6535 HA shank	CAD

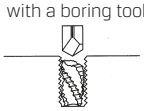
Note:
Feed 0.01 mm/rev



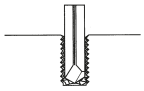
Grind diagonally broken taps flat for good centring



Reach the centring through repeated approach with a boring tool



Drilling out with even feed. Repeated chip removal



Clean the bore and remove the remains with a pointed object



N° article	139815 TiN, 3 cutting edges	A21 metric	B2 mm	B3 mm	C3 mm
M3	●	M3	12	50	6
M4	●	M4	15	50	6
M5	●	M5	15	50	6
M6	●	M6	15	50	6
M8	●	M8	20	60	8
M10	●	M10	25	70	10
M12	●	M12	30	75	12
M14	●	M14	30	75	12
M16	●	M16	40	100	14
M20	●	M20	50	100	18

Thread repair

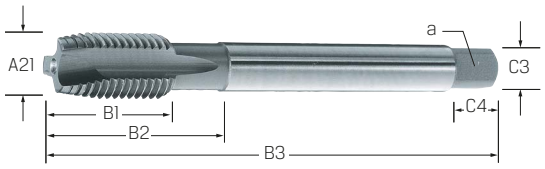
HeliCoil plus made by BOLLHOFF

	P N/mm²
139840	⟨850
vc = m/min.	
139840	6-15

EGM (Metric insert thread) | HSS-Co | DIN 40435

Metric 60° | Chamfer form B 3,5-5 threads | 6H

Through hole | P | vc



N° article	139840 Tap drills	A21 metric	Thread pitch mm	B1 mm	B2 mm	B3 mm	C3 mm	C4 mm	a mm
EGM2	○	M2	0,4	8	–	50	2,8	5	2.1
EGM2,5	○	M2.5	0,45	11	18	56	3,5	6	2.7
EGM3	●	M3	0,5	13	20	56	4	6	2.7
EGM4	●	M4	0,7	16	25	70	6	8	4.9
EGM5	●	M5	0,8	17	30	80	6	8	4.9
EGM6	●	M6	1	20	35	90	8	9	6.2
EGM8	●	M8	1,25	20	39	100	10	11	8
EGM8×1	○	M8	1	20	35	90	9	10	7
EGM10	●	M10	1,5	24	–	110	9	10	7
EGM10×1	○	M10	1	22	–	100	9	10	7
EGM12	●	M12	1,75	26	–	110	11	12	9
EGM12×1,5	○	M12	1,5	22	–	100	11	12	9
EGM14	○	M14	2	28	–	110	12	12	9
EGM14×1,5	○	M14	1,5	22	–	100	12	12	9
EGM16	○	M16	2	34	–	125	14	14	11
EGM16×1,5	○	M16	1,5	25	–	110	14	14	11

Thread repair kit HELICOIL®Plus

Design:
- metric ISO thread
- stainless steel A2

M Metric thread

Contents:
- HELICOIL®plus thread inserts in three lengths
- twist drills up to M12
- HELICOIL®plus hand tap made of HSS
- HELICOIL®plus installation mandrel
- tang breakers up to M12



N° article	139831 set	A21 metric	Thread pitch mm	Contents
M2	○	M2	0,4	20 each M2×2 | M2×3 | M2×4
M2,5	○	M2	0,45	20 each M2.5×2.5 | M2.5×3.75 | M2.5×5
M3	●	M3	0,5	20 each M3×3 | M3×4.5 | M3×6
M4	●	M4	0,7	20 each M4×4 | M4×6 | M4×8
M5	●	M5	0,8	20 each M5×5 | M5×7.5 | M5×10
M6	●	M6	1	20 each M6×6 | M6×9 | M6×12
M8	●	M8	1,25	10 each M8×8 | M8×12 | M8×16
M8×1	○	M8	1	10 each M8×1×8 | M8×1×12 | M8×1×16
M10	●	M10	1,5	10 each M10×10 | M10×15 | M10×20
M10×1	○	M10	1	10 each M10×1×10 | M10×1×15 | M10×1×20
M12	●	M12	1,75	10 each M12×12 | M12×18 | M12×24
M12×1,5	○	M12	1,5	10 each M12×1.5×12 | M12×1.5×18 | M12×1.5×24
M14	○	M14	2	10 each M14×14 | M14×21 | M14×28
M14×1,5	○	M14	1,5	10 each M14×1.5×14 | M14×1.5×21 | M14×1.5×28
M16	●	M16	2	10 each M16×16 | M16×24 | M16×32
M16×1,5	○	M16	1,5	10 each M16×1.5×16 | M16×1.5×24 | M16×1.5×32

Thread repair assortment HELICOIL®Plus

Design:
- metric ISO thread
- stainless steel A2

M Metric thread

Contents:
- HELICOIL®plus thread inserts of different diameters and lengths
- twist drill
- HELICOIL®plus hand tap made of HSS
- HELICOIL®plus installation mandrel
- chip breaker



N° article	139832 set	Number of parts	Contents
320	○	320	M2.5-M6
260	○	260	M4.0-M10
230	●	230	M5.0-M12

Thread repair HELICOIL®Plus

Design:
Refill packs for thread repair sets HELICOIL®plus

N° article	139836 Refill pack	A21 metric	Thread pitch mm	B3 mm	Pack content piece
0010	○	M2	0,4	2	20
0012	○	M2	0,4	3	20
0014	○	M2	0,4	4	20
0016	○	M2.5	0,45	2,5	20
0018	○	M2.5	0,45	3,75	20
0020	○	M2.5	0,45	5	20
0022	●	M3	0,5	3	20
0024	○	M3	0,5	4,5	20
0026	●	M3	0,5	6	20
0028	●	M4	0,7	4	20
0030	●	M4	0,7	6	20
0032	●	M4	0,7	8	20
0034	●	M5	0,8	5	20
0036	●	M5	0,8	7,5	20
0038	●	M5	0,8	10	20
0040	●	M6	1	6	20
0042	●	M6	1	9	20
0044	●	M6	1	12	20
0046	●	M8	1	8	10
0048	○	M8	1	12	10
0050	●	M8	1	16	10
0052	●	M8	1,25	8	10
0054	●	M8	1,25	12	10
0056	●	M8	1,25	16	10

N° article	139836 Refill pack	A21 metric	Thread pitch mm	B3 mm	Pack content piece
0058	○	M10	1	10	10
0060	○	M10	1	15	10
0062	●	M10	1	20	10
0064	●	M10	1,5	10	10
0066	●	M10	1,5	15	10
0068	●	M10	1,5	20	10
0070	○	M12	1,5	12	10
0072	●	M12	1,5	18	10
0074	○	M12	1,5	24	10
0076	●	M12	1,75	12	10
0078	●	M12	1,75	18	10
0080	●	M12	1,75	24	10
0082	○	M14	1,5	14	10
0084	○	M14	1,5	21	10
0086	○	M14	1,5	28	10
0088	○	M14	2	14	10
0090	○	M14	2	21	10
0092	○	M14	2	28	10
0094	○	M16	1,5	16	10
0096	○	M16	1,5	24	10
0098	○	M16	1,5	32	10
0100	○	M16	2	16	10
0102	●	M16	2	24	10
0104	●	M16	2	32	10



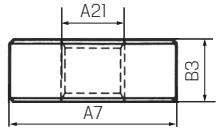
Die HSS

	P N/mm²
140000	⟨850
140020	
vc = m/min.	
140000	8-14
140020	

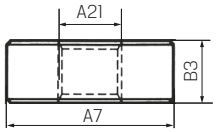
Design:
- form B closed
- with spiral point from M3
- ≤ M1.4 tol.6h

Use:
For manual and machine use, to machine steel up to about 800 N/mm² and diverse materials. The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point

M Metric thread | HSS | DIN EN 22568 | Spiral point | Metric 60° | DIN 13 16g | P









N° article	140000 JBO	140020 PREMUS	A21 metric	A3	A7 mm	B3 mm
M1	○	–	M1	0,25	16	5
M1,2	○	–	M1.2	0,25	16	5
M1,4	●	–	M1.4	0,3	16	5
M1,6	●	–	M1.6	0,35	16	5
M1,7	○	–	M1.7	0,35	16	5
M2	●	●	M2	0,4	16	5
M2,3	○	–	M2.3	0,4	16	5
M2,5	●	●	M2.5	0,45	16	5
M2,6	○	–	M2,6	0,45	16	5
M3	●	●	M3	0,5	20	5
M3,5	●	–	M3.5	0,6	20	5

N° article	140000 JBO	140020 PREMUS	A21 metric	A3	A7 mm	B3 mm
M4	●	●	M4	0,7	20	5
M5	●	●	M5	0,8	20	7
M6	●	●	M6	1	20	7
M7	●	–	M7	1	25	9
M8	●	●	M8	1,25	25	9
M9	●	–	M9	1,25	25	9
M10	●	●	M10	1,5	30	11
M11	○	–	M11	1,5	30	11
M12	●	●	M12	1,75	38	14
M14	●	●	M14	2	38	14
M16	●	●	M16	2	45	18

N° article	140000 JBO	140020 PREMUS	A21 metric	A3	A7 mm	B3 mm
M18	●	●	M18	2,5	45	18
M20	●	●	M20	2,5	45	18
M22	○	●	M22	2,5	55	22
M24	●	●	M24	3	55	22
M27	○	●	M27	3	65	25
M30	●	●	M30	3,5	65	25
M33	○	–	M33	3,5	65	25
M36	●	–	M36	4	65	25
M42	○	–	M42	4,5	75	30

	P N/mm²
140150	⟨850
vc = m/min.	
140150	8-14

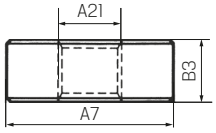
Design:
- form B closed
- with spiral point from M3
- left-hand cutting

M Metric thread | HSS | DIN EN 22568 | Spiral point | Metric 60° | DIN 13 16g | left hand cutting

P

N° article	140150 JBO left-hand cutting	A21 metric	A3	A7 mm	B3 mm
M2LH	○	M2	0,4	16	5
M3LH	●	M3	0,5	20	5
M4LH	●	M4	0,7	20	5
M5LH	●	M5	0,8	20	7
M6LH	●	M6	1	20	7
M8LH	●	M8	1,25	25	9
M10LH	●	M10	1,5	30	11

N° article	140150 JBO left-hand cutting	A21 metric	A3	A7 mm	B3 mm
M12LH	●	M12	1,75	38	14
M14LH	○	M14	2	38	14
M16LH	●	M16	2	45	18
M18LH	○	M18	2,5	45	18
M20LH	●	M20	2,5	45	18
M22LH	○	M22	2,5	55	22
M24LH	●	M24	3	55	22





Die HSS-Co INOX

	M N/mm²	S N/mm²
140050	⟨1100	Titanium
vc = m/min.		
140050	4 - 6	5-8

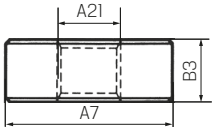
Design:
- form B closed
- with spiral point
- lapped, from M3 nitrided
- very fine chips due to a greater number of clearance holes and thus an increased number of cutting edges plus a prolonged bevel 2.25 P

M Metric thread | HSS-Co | DIN EN 22568 | Spiral point | Metric 60° | DIN 13 16g | M

Use:
To machine rust and acid resistant steel, Q & T steel, case hardening steel etc. up to 1,200 N/mm² and aluminium alloys short-chipping.
The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point.

N° article	140050	A21 metric	A3	A7 mm	B3 mm
M2	●	M2	0,4	16	5
M2,5	●	M2.5	0,45	16	5
M3	●	M3	0,5	20	5
M3,5	○	M3.5	0,6	20	5
M4	●	M4	0,7	20	5
M5	●	M5	0,8	20	7
M6	●	M6	1	20	7
M8	●	M8	1,25	25	9

N° article	140050	A21 metric	A3	A7 mm	B3 mm
M10	●	M10	1,5	30	11
M12	●	M12	1,75	38	14
M14	●	M14	2	38	14
M16	●	M16	2	45	18
M18	●	M18	2,5	45	18
M20	●	M20	2,5	45	18
M22	○	M22	2,5	55	22
M24	●	M24	3	55	22





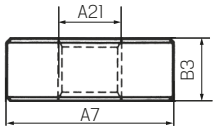
Die HSS

	P N/mm²
140200	‹850
140220	
vc = m/min.	
140200	8-14
140220	

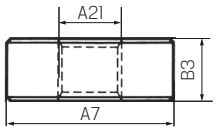
Design:
- form B closed
- with spiral point

MF Metric fine thread | HSS | DIN EN 22568 | Spiral point | Metric fine 60° | DIN 13 16g | P

Use:
For manual and machine use, to machine steel up to about 800 N/mm² and diverse materials. The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point







P



N° article	140200	140220 left-hand cutting	A21 metric	A3	A7 mm	B3 mm
M3×0,35	○	–	M3	0,35	20	5
M3,5×0,35	○	–	M3.5	0,35	20	5
M4×0,35	●	–	M4	0,35	20	5
M4×0,5	●	–	M4	0,5	20	5
M4×0,5LH	–	○	M4	0,5	20	5
M5×0,5	●	–	M5	0,5	20	5
M5×0,5LH	–	○	M5	0,5	20	5
M6×0,5	●	–	M6	0,5	20	5
M6×0,5LH	–	○	M6	0,5	20	5
M6×0,75	●	–	M6	0,75	20	7
M6×0,75LH	–	○	M6	0,75	20	7
M7×0,75	●	–	M7	0,75	25	9
M8×0,5	●	–	M8	0,5	25	9
M8×0,5LH	–	○	M8	0,5	25	9
M8×0,75	●	–	M8	0,75	25	9
M8×0,75LH	–	○	M8	0,75	25	9
M8×1	●	–	M8	1	25	9
M8×1LH	–	●	M8	1	25	9
M9×1	●	–	M9	1	25	9
M10×0,75	●	–	M10	0,75	30	11
M10×1	●	–	M10	1	30	11
M10×1LH	–	●	M10	1	30	11
M10×1,25	●	–	M10	1,25	30	11
M10×1,25LH	–	○	M10	1,25	30	11
M11×1	●	–	M11	1	30	11

N° article	140200	140220 left-hand cutting	A21 metric	A3	A7 mm	B3 mm
M12×1	●	–	M12	1	38	10
M12×1LH	–	●	M12	1	38	10
M12×1,25	●	–	M12	1,25	38	10
M12×1,5	●	–	M12	1,5	38	10
M12×1,5LH	–	○	M12	1,5	38	10
M14×1	●	–	M14	1	38	10
M14×1,25	●	–	M14	1,25	38	10
M14×1,25LH	–	○	M14	1,25	38	10
M14×1,5	●	–	M14	1,5	38	10
M14×1,5LH	–	●	M14	1,5	38	10
M15×1	●	–	M15	1	38	10
M15×1,5	○	–	M15	1,5	38	10
M16×1	●	–	M16	1	45	14
M16×1LH	–	○	M16	1	45	14
M16×1,5	●	–	M16	1,5	45	14
M16×1,5LH	–	●	M16	1,5	45	14
M18×1	●	–	M18	1	45	14
M18×1,5	●	–	M18	1,5	45	14
M20×1	●	–	M20	1	45	14
M20×1,5	●	–	M20	1,5	45	14
M20×1,5LH	–	●	M20	1,5	45	14
M20×2	●	–	M20	2	45	14
M20×2LH	–	○	M20	2	45	14
M22×1	○	–	M22	1	55	16
M22×1,5	●	–	M22	1,5	55	16

N° article	140200	140220 left-hand cutting	A21 metric	A3	A7 mm	B3 mm
M22×2	○	–	M22	2	55	16
M24×1	●	–	M24	1	55	16
M24×1,5	●	–	M24	1,5	55	16
M24×2	●	–	M24	2	55	16
M25×1,5	●	–	M25	1,5	55	16
M26×1,5	●	–	M26	1,5	55	16
M27×1,5	●	–	M27	1,5	65	18
M27×2	●	–	M27	2	65	18
M28×1,5	●	–	M28	1,5	65	18
M30×1	○	–	M30	1	65	18
M30×1,5	●	–	M30	1,5	65	18
M30×2	●	–	M30	2	65	18
M32×1,5	●	–	M32	1,5	65	18
M33×1,5	○	–	M33	1,5	65	18
M33×2	○	–	M33	2	65	18
M34×1,5	○	–	M34	1,5	65	18
M35×1,5	●	–	M35	1,5	65	18
M36×1,5	●	–	M36	1,5	65	18
M36×2	●	–	M36	2	65	18
M36×3	○	–	M36	3	65	25
M40×1,5	●	–	M40	1,5	75	20
M40×2	○	–	M40	2	75	20
M42×1,5	○	–	M42	1,5	75	20
M42×2	○	–	M42	2	75	20

	P N/mm²
140320	‹850
vc = m/min.	
140320	8-14

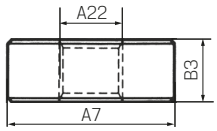
Design:
- form B closed
- with spiral point
- tolerance field A

G Whitworth pipe thread | HSS | DIN EN 24231

Spiral point | G Whitworth pipe thread 55° | DIN ISO 228

Tolerance field A | P

Use:
For manual and machine use, to machine steel up to about 800 N/mm² and diverse materials. The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point





N° article	140320	A22 inch	A3	A7 mm	B3 mm
G1/8	●	G1/8"	28	30	11
G1/4	●	G1/4"	19	38	10
G3/8	●	G3/8"	19	45	14
G1/2	●	G1/2"	14	45	14

N° article	140320	A22 inch	A3	A7 mm	B3 mm
G5/8	○	G5/8"	14	55	16
G3/4	●	G3/4"	14	55	16
G7/8	○	G7/8"	14	65	18
G1	●	G1"	11	65	18

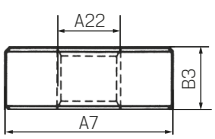
	P N/mm²
140400	‹850
vc = m/min.	
140400	8-14

Design:
- form B closed
- with spiral point
- cone 1:16
- for threads with sealant

NPT Conical pipe thread | HSS | Spiral point

NPT 60° 30°-30° 1°47' | ANSI B1.20.1 | P

Use:
For manual and machine use, for machining steel up to about 800 N/mm² and diverse materials. The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point





N° article	140400 tapered	A22 inch	A3	A7 mm	B3 mm
1/16	○	NPT 1/16	27	25	9
1/8	●	NPT 1/8	27	30	11
1/4	●	NPT 1/4	18	38	14
3/8	●	NPT 3/8	18	45	14

N° article	140400 tapered	A22 inch	A3	A7 mm	B3 mm
1/2	●	NPT 1/2	14	45	18
3/4	●	NPT 3/4	14	55	22
1	○	NPT 1	11,5	65	25
1.1/4	○	NPT 1.1/4	11,5	75	26

Die HSS

	P N/mm²
140450	⟨850
vc = m/min.	
140450	8-14

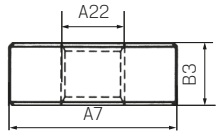
Design:
- form B closed
- with spiral point from 5 - 40
- tolerance field 2A

UNC american UNIFIED coarse thread | HSS | DIN EN 22568

Spiral point | UNC 60° | ANSI B1.1

Tolerance field 2A | P

Use:
For manual and machine use, for machining steel up to about 800 N/mm² and diverse materials. The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point





N° article	140450	A22 inch	A3	A7 mm	B3 mm
4-40	●	UNC 4	40	16	5
5-40	○	UNC 5	40	20	5
6-32	○	UNC 6	32	20	7
8-32	○	UNC 8	32	20	7
10-24	○	UNC 10	24	20	7
12-24	○	UNC 12	24	20	7
1/4-20	●	UNC 1/4	20	20	7
5/16-18	●	UNC 5/16	18	25	9
3/8-16	●	UNC 3/8	16	30	11
7/16-14	●	UNC 7/16	14	30	11
1/2-13	●	UNC 1/2	13	38	14
5/8-11	○	UNC 5/8	11	45	18
3/4-10	○	UNC 3/4	10	45	18
1-8	○	UNC 1	8	55	22
1.1/4-7	○	UNC 1.1/4	7	65	25
1.1/2-6	○	UNC 1.1/2	6	75	30

	P N/mm²
140480	⟨850
vc = m/min.	
140480	8-14

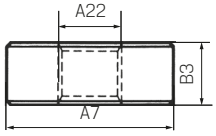
Design:
- form B closed
- with spiral point
- tolerance field 2A

UNF american UNIFIED fine thread | HSS | DIN EN 22568

Spiral point | UNF 60° | ANSI B1.1

Tolerance field 2A | P

Use:
For manual and machine use, to machine steel up to about 800 N/mm² and diverse materials. The spiral point causes a free flow of the chips forward and a reduction of the average cutting torque. Chip clogging in the holes is avoided. An improved surface quality in the cut threads and longer service life is achieved. All dies used on machines must therefore be equipped with a spiral point





N° article	140480	A22 inch	A3	A7 mm	B3 mm
10-32	●	UNF 10	32	20	7
12-28	○	UNF 12	28	20	7
1/4-28	●	UNF 1/4	28	20	7
5/16-24	●	UNF 5/16	24	25	9
3/8-24	●	UNF 3/8	24	30	11
7/16-20	●	UNF 7/16	20	30	11
1/2-20	●	UNF 1/2	20	38	10
9/16-18	●	UNF 9/16	18	38	10
5/8-18	●	UNF 5/8	18	45	14
3/4-16	●	UNF 3/4	16	45	14
7/8-14	○	UNF 7/8	14	55	16
1-12	○	UNF 1	12	55	16

Thread rolling die HSS

	P N/mm²
140560	⟨850
140580	

M Metric thread | HSS | Metric 60° | DIN 13 16g | P

Preparation of workpiece:
The workpiece to be rolled has to be manufactured to the pre-machining diameter. Due to the diversity of the rolled materials, this is a guideline and, if necessary, is increased in steps of 0.01 mm until the thread is fully formed. A further increase in diameter could do harm to the tool by overload.

Rolling speed:
We recommend a rolling speed of 20 to 50 m/min. Non-ferrous metals are to be rolled in the upper speed range, machining steel in the medium and difficult-to-machine steel in the lower cutting speed range. Sufficient lubrication with cutting fluid is required.

Rollable materials
JBO thread rolling dies are fit for cold forming
materials with min. extension of approx. 8% and up to approx. 900 N/mm² strength. The workpiece needs a chamfer of 15 - 20° for the material to start rolling easily. Chamfer and pre-machining (blank) diameter need to run concentrically

N° article	140560 rigid	A21 metric	A3	A7 mm	B3 mm	Workpiece ∅ mm
M1,6	○	M1.6	0,35	12	6	1,31
M2	○	M2	0,4	12	6	1,67
M2,5	○	M2.5	0,45	12	8	2,13
M3	●	M3	0,5	21,5	11	2,6

N° article	140560 rigid	A21 metric	A3	A7 mm	B3 mm	Workpiece ∅ mm
M4	●	M4	0,7	21,5	11	3,46
M5	○	M5	0,8	25	13	4,39
M6	●	M6	1	29,5	16	5,25


140560 (RS)

N° article	140580 adjustable	A21 metric	A3	A7 mm	B3 mm	Workpiece ∅ mm
M1,6	○	M1.6	0,35	14	6	1,31
M2	○	M2	0,4	14	6	1,67
M2,5	●	M2.5	0,45	16	8	2,13
M3	○	M3	0,5	25	11	2,6

N° article	140580 adjustable	A21 metric	A3	A7 mm	B3 mm	Workpiece ∅ mm
M4	○	M4	0,7	25	11	3,46
M5	●	M5	0,8	26,7	13	4,39
M6	○	M6	1	31,75	16	5,25

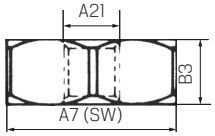

140580 (RSV)

Hexagonal die HSS (Screwing dies)

	P N/mm²
140500	‹850

M Metric thread | HSS | DIN 382

Metric 60° | DIN 13 16g | P





N° article	140500	A21 metric	A3	A7 mm	B3 mm
M3	●	M3	0,5	18	5
M4	●	M4	0,7	18	5
M5	●	M5	0,8	18	7
M6	●	M6	1	18	7
M8	●	M8	1,25	21	9
M10	●	M10	1,5	27	11
M12	●	M12	1,75	36	14
M14	○	M14	2	36	14
M16	●	M16	2	41	18
M18	○	M18	2,5	41	18
M20	○	M20	2,5	41	18
M22	○	M22	2,5	50	22
M24	○	M24	3	50	22
M27	○	M27	3	60	25
M30	○	M30	3,5	60	25

Machine die HSS

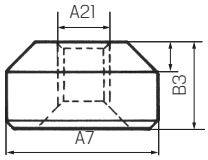
	P N/mm²
140600	‹850

M Metric thread | HSS | Spiral point

Metric 60° | DIN 13 16g | P

Design:
- the entering end is conically tapered, which holds the flute open even when the die is in contact with the workpiece
- the chips always flow away easily
- with boreholes and notch on the circumference, for locking in the machine
- with spiral point from M3

Use:
For threading on automatic machines and when the thread has to be cut close to a collar.





N° article	140600 Bell shape	A21 metric	A3	A7 mm	B3 mm
M2×16×8	○	M2	0,4	16	8
M2,5×16×8	○	M2.5	0,45	16	8
M3×16×8	●	M3	0,5	16	8
M4×16×9,5	○	M4	0,7	16	9,5
M4×20×9,5	○	M4	0,7	20	9,5
M5×16×9,5	○	M5	0,8	16	9,5
M5×20×9,5	○	M5	0,8	20	9,5
M6×16×9,5	●	M6	1	16	9,5
M6×20×9,5	○	M6	1	20	9,5
M8×25×14	○	M8	1,25	25	14

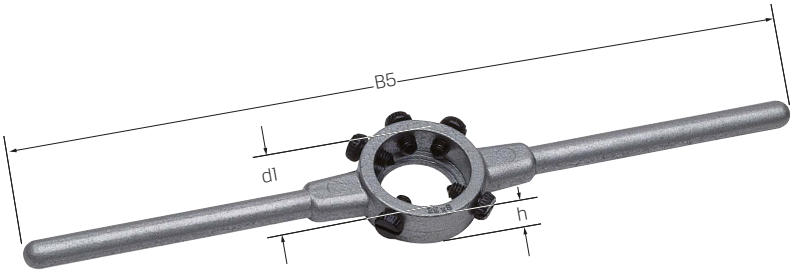
Die holders

PRETEC

DIN 225

Design:
- die cast housing
- with hardened screws for mounting the die
- handles made of zinc coated free-cutting steel

Use:
For use with round dies to DIN EN 22568



N° article	148801 Standard	d_1 mm	h mm	l1 mm
16×5	●	16	5	160
20×5	●	20	5	200
20×7	●	20	7	200
25×9	●	25	9	224
30×11	●	30	11	280
38×10	●	38	10	315
38×14	●	38	14	315
45×14	●	45	14	450

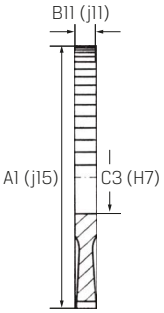
N° article	148801 Standard	d_1 mm	h mm	l1 mm
45×18	●	45	18	450
55×16	●	55	16	560
55×22	●	55	22	560
65×18	●	65	18	630
65×25	●	65	25	630
75×20	●	75	20	800
90×36	●	90	36	900

Circular saw blade HSS

Use:
Versatile usage for cutting, slitting etc. Due to fine toothing and small teeth this blade is well-suited for hard, brittle and general short-chipping materials. For easy to medium cut (thin-walled material)

HSS | DIN 1837 A | fine





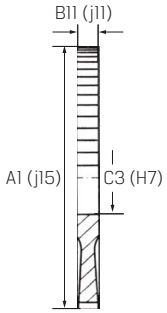


N° article	150000 fine A	A1 mm	B11 mm	C3 mm	F21
20×0,2×5	○	20	0,2	5	80
20×0,25×5	○	20	0,25	5	64
20×0,3×5	●	20	0,3	5	64
20×0,4×5	●	20	0,4	5	64
20×0,5×5	●	20	0,5	5	48
20×0,6×5	○	20	0,6	5	48
20×0,8×5	●	20	0,8	5	48
20×1,0×5	●	20	1	5	40
20×1,2×5	○	20	1,2	5	40
20×1,6×5	●	20	1,6	5	40
20×2,0×5	●	20	2	5	32
20×3,0×5	○	20	3	5	32
20×4,0×5	○	20	4	5	24
20×6,0×5	○	20	6	5	24
25×0,2×8	○	25	0,2	8	80
25×0,25×8	○	25	0,25	8	80
25×0,3×8	○	25	0,3	8	80
25×0,4×8	○	25	0,4	8	64
25×0,5×8	●	25	0,5	8	64
25×0,6×8	○	25	0,6	8	64
25×0,8×8	●	25	0,8	8	48
25×1,0×8	●	25	1	8	48
25×1,2×8	●	25	1,2	8	48
25×1,6×8	●	25	1,6	8	40
25×2,0×8	●	25	2	8	40
25×2,5×8	○	25	2,5	8	40
25×3,0×8	●	25	3	8	32
25×4,0×8	○	25	4	8	32
25×5,0×8	○	25	5	8	32
25×6,0×8	○	25	6	8	24
32×0,2×8	●	32	0,2	8	100
32×0,25×8	●	32	0,25	8	100
32×0,3×8	○	32	0,3	8	80
32×0,4×8	●	32	0,4	8	80
32×0,5×8	●	32	0,5	8	80
32×0,6×8	●	32	0,6	8	64
32×0,8×8	●	32	0,8	8	64
32×1,0×8	●	32	1	8	64
32×1,2×8	○	32	1,2	8	48
32×1,6×8	●	32	1,6	8	48
32×2,0×8	●	32	2	8	48
32×3,0×8	○	32	3	8	40
32×4,0×8	○	32	4	8	40
32×5,0×8	○	32	5	8	32
32×6,0×8	○	32	6	8	32
40×0,2×10	●	40	0,2	10	128
40×0,25×10	○	40	0,25	10	100
40×0,3×10	○	40	0,3	10	100
40×0,4×10	●	40	0,4	10	100
40×0,5×10	●	40	0,5	10	80
40×0,6×10	○	40	0,6	10	80
40×0,8×10	●	40	0,8	10	80
40×1,0×10	●	40	1	10	64
40×1,2×10	●	40	1,2	10	64
40×1,6×10	○	40	1,6	10	64
40×2,0×10	●	40	2	10	48
40×2,5×10	○	40	2,5	10	48
40×3,0×10	●	40	3	10	48
40×4,0×10	○	40	4	10	40
40×5,0×10	○	40	5	10	40
50×0,2×13	○	50	0,2	13	128
50×0,3×13	○	50	0,3	13	128
50×0,4×13	○	50	0,4	13	100
50×0,5×13	○	50	0,5	13	100
50×0,6×13	○	50	0,6	13	100
50×0,8×13	○	50	0,8	13	80
50×1,0×13	●	50	1	13	80
50×1,2×13	○	50	1,2	13	80
50×1,6×13	○	50	1,6	13	64
50×2,0×13	●	50	2	13	64
50×3,0×13	○	50	3	13	48
50×4,0×13	○	50	4	13	48
50×6,0×13	○	50	6	13	40
63×0,25×16	○	63	0,25	16	160
63×0,3×16	○	63	0,3	16	128
63×0,4×16	●	63	0,4	16	128
63×0,5×16	●	63	0,5	16	128
63×0,6×16	●	63	0,6	16	100
63×0,8×16	●	63	0,8	16	100
63×1,0×16	●	63	1	16	100
63×1,2×16	●	63	1,2	16	80
63×1,6×16	●	63	1,6	16	80
63×2,0×16	●	63	2	16	80
63×2,5×16	●	63	2,5	16	64
63×3,0×16	●	63	3	16	64
63×4,0×16	○	63	4	16	64
63×6,0×16	○	63	6	16	48
80×0,3×22	●	80	0,3	22	160
80×0,4×22	●	80	0,4	22	160
80×0,5×22	●	80	0,5	22	128
80×0,6×22	○	80	0,6	22	128
80×0,8×22	●	80	0,8	22	128
80×1,0×22	●	80	1	22	100
80×1,2×22	●	80	1,2	22	100
80×1,6×22	●	80	1,6	22	100
80×2,0×22	●	80	2	22	80
80×2,5×22	○	80	2,5	22	80
80×3,0×22	●	80	3	22	80
80×4,0×22	○	80	4	22	64
80×5,0×22	●	80	5	22	64
100×0,5×22	○	100	0,5	22	160
100×0,6×22	○	100	0,6	22	160
100×0,8×22	●	100	0,8	22	128
100×1,0×22	●	100	1	22	128
100×1,2×22	●	100	1,2	22	128
100×1,6×22	●	100	1,6	22	100
100×2,0×22	●	100	2	22	100
100×2,5×22	●	100	2,5	22	100
100×3,0×22	●	100	3	22	80
100×4,0×22	●	100	4	22	80
100×5,0×22	○	100	5	22	80
100×6,0×22	○	100	6	22	64
125×1,0×22	●	125	1	22	160
125×1,2×22	●	125	1,2	22	128
125×1,6×22	●	125	1,6	22	128
125×2,0×22	●	125	2	22	128
125×2,5×22	●	125	2,5	22	100
125×3,0×22	●	125	3	22	100
125×5,0×22	○	125	5	22	80
125×6,0×22	○	125	6	22	80
160×1,0×32	●	160	1	32	160
160×1,2×32	○	160	1,2	32	160
160×1,6×32	●	160	1,6	32	160
160×2,0×32	●	160	2	32	128
160×3,0×32	●	160	3	32	128
160×4,0×32	○	160	4	32	100
200×1,2×32	○	200	1,2	32	200
200×1,6×32	○	200	1,6	32	160
200×2,0×32	●	200	2	32	160
200×2,5×32	○	200	2,5	32	160
200×3,0×32	○	200	3	32	128
200×4,0×32	○	200	4	32	128

HSS | DIN 1838 B | DIN 1838 C

coarse







N° article	150100 coarse B	150200 coarse C	A1 mm	B11 mm	C3 mm	F21
50×0,5×13	○	–	50	0,5	13	48
50×0,6×13	○	–	50	0,6	13	48
50×0,8×13	○	–	50	0,8	13	40
50×1,0×13	●	○	50	1	13	40
50×1,2×13	○	○	50	1,2	13	40
50×1,6×13	○	○	50	1,6	13	32
50×2,0×13	○	○	50	2	13	32
50×2,5×13	○	○	50	2,5	13	32
50×4,0×13	○	○	50	4	13	24
50×5,0×13	○	○	50	5	13	24
50×6,0×13	○	○	50	6	13	20
63×0,5×16	○	–	63	0,5	16	64
63×0,6×16	○	–	63	0,6	16	48
63×0,8×16	●	–	63	0,8	16	48
63×1,0×16	●	○	63	1	16	48
63×2,0×16	●	●	63	2	16	40
63×2,5×16	○	○	63	2,5	16	32
63×3,0×16	●	○	63	3	16	32
63×4,0×16	○	○	63	4	16	32
80×0,5×22	○	–	80	0,5	22	64
80×0,6×22	○	–	80	0,6	22	64
80×0,8×22	○	–	80	0,8	22	64
80×1,0×22	●	○	80	1	22	48
80×1,2×22	●	○	80	1,2	22	48
80×1,6×22	●	●	80	1,6	22	48
80×2,0×22	●	●	80	2	22	40
80×2,5×22	○	●	80	2,5	22	40
80×3,0×22	○	○	80	3	22	40
80×4,0×22	○	○	80	4	22	32
80×5,0×22	○	○	80	5	22	32
100×0,5×22	●	–	100	0,5	22	64
100×0,8×22	○	–	100	0,8	22	64
100×1,0×22	●	●	100	1	22	64
100×1,2×22	○	○	100	1,2	22	64
100×1,6×22	●	○	100	1,6	22	48
100×2,0×22	●	●	100	2	22	48
100×2,5×22	○	○	100	2,5	22	40
100×3,0×22	○	●	100	3	22	40
100×4,0×22	○	○	100	4	22	40
100×5,0×22	○	○	100	5	22	32
100×6,0×22	○	○	100	6	22	80
125×0,8×22	○	–	125	0,8	22	80
125×1,0×22	○	○	125	1	22	80
125×1,2×22	●	○	125	1,2	22	64
125×1,6×22	○	●	125	1,6	22	64
125×2,0×22	●	●	125	2	22	64
125×2,5×22	–	○	125	2,5	22	48
125×3,0×22	○	●	125	3	22	48
125×4,0×22	–	○	125	4	22	48
125×5,0×22	–	○	125	5	22	40
125×6,0×22	○	–	125	6	22	80
160×1,0×32	○	○	160	1	32	80
160×1,2×32	○	○	160	1,2	32	80
160×1,6×32	○	○	160	1,6	32	64
160×2,0×32	●	○	160	2	32	64
160×2,5×32	○	○	160	2,5	32	64
160×3,0×32	○	○	160	3	32	48
160×4,0×32	○	–	160	4	32	48
160×5,0×32	○	○	160	5	32	48
160×6,0×32	○	–	160	6	32	80
200×1,6×32	○	○	200	1,6	32	80
200×2,0×32	○	●	200	2	32	80
200×2,5×32	○	○	200	2,5	32	64
200×3,0×32	○	○	200	3	32	64
200×4,0×32	○	○	200	4	32	64

Circular saw blade SC

PREMUS

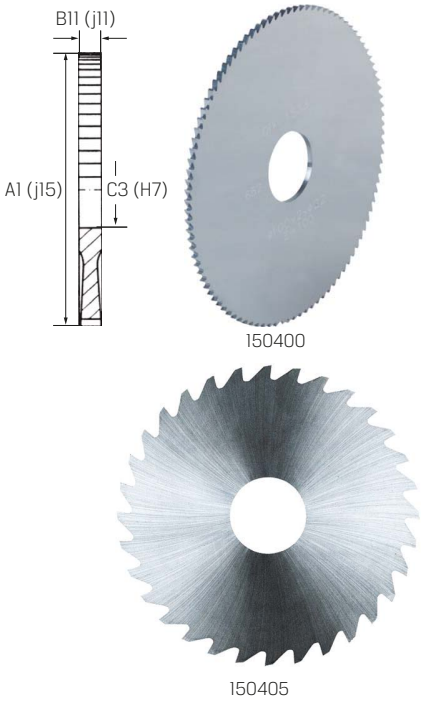
Design:
Ground from the full SC blank

SC | DIN 1837 A | DIN 1838 B | fine | coarse | +5°

Use:
For slitting and sawing as well as milling with utmost precision and surface quality. Compared to saw blades made of HSS the use of SC blades offer as a rule of thumb a 3-5-fold cutting speed and a 10-20-fold tool life. The basic prerequisites for this are stable and vibration-free machines that precise and backlash-free bearing support of the working spindle with high concentricity accuracy as well as compact clamping of the workpiece and fixture

N° article	150400 fine	150405 coarse	150400 F21	150405 F21	A1 mm	B11 mm	C3 mm
20×0,3×5	●	○	64	20	20	0.3	5
20×0,4×5	●	○	64	20	20	0.4	5
20×0,5×5	●	●	48	20	20	0.5	5
20×1,0×5	●	○	40	20	20	1	5
20×1,2×5	○	○	40	20	20	1.2	5
20×1,6×5	●	○	40	20	20	1.6	5
25×0,2×8	○	○	80	20	25	0.2	8
25×0,3×8	●	●	80	20	25	0.3	8
25×0,5×8	●	●	64	20	25	0.5	8
25×0,6×8	○	○	64	20	25	0.6	8
25×0,8×8	●	○	48	20	25	0.8	8
25×1,0×8	●	○	48	20	25	1	8
25×2,0×8	●	○	40	20	25	2	8
30×0,3×8	○	○	80	30	30	0.3	8
30×0,4×8	○	○	80	30	30	0.4	8
30×0,5×8	–	○	–	24	30	0.5	8
30×0,8×8	●	○	64	24	30	0.8	8
30×1,0×8	●	○	64	24	30	1	8
30×1,2×8	●	●	48	24	30	1.2	8
30×1,6×8	○	●	48	24	30	1.6	8
30×1,8×8	○	○	48	24	30	1.8	8
30×2,0×8	●	○	48	24	30	2	8
30×2,5×8	●	○	40	24	30	2.5	8
40×0,3×10	●	○	100	40	40	0.3	10
40×0,4×10	●	●	100	40	40	0.4	10
40×0,5×10	●	○	80	40	40	0.5	10
40×0,6×10	●	○	80	40	40	0.6	10
40×0,8×10	●	○	80	32	40	0.8	10
40×1,0×10	●	●	64	32	40	1	10
40×1,2×10	●	●	64	32	40	1.2	10
40×1,6×10	●	○	64	32	40	1.6	10
40×1,8×10	○	○	48	32	40	1.8	10
40×2,0×10	●	○	48	32	40	2	10
40×3,0×10	●	○	48	32	40	3	10
50×0,3×13	●	–	128	–	50	0.3	13
50×0,5×13	●	○	100	48	50	0.5	13

N° article	150400 fine	150405 coarse	150400 F21	150405 F21	A1 mm	B11 mm	C3 mm
50×0,6×13	○	○	100	48	50	0.6	13
50×0,8×13	○	○	80	40	50	0.8	13
50×1,0×13	●	○	80	40	50	1	13
50×1,6×13	●	–	64	–	50	1.6	13
50×2,0×13	●	○	64	32	50	2	13
50×3,0×13	●	●	48	24	50	3	13
63×0,5×16	●	○	128	64	63	0.5	16
63×0,6×16	○	○	100	48	63	0.6	16
63×0,8×16	●	●	100	48	63	0.8	16
63×1,0×16	●	●	100	48	63	1	16
63×1,2×16	●	○	80	40	63	1.2	16
63×1,6×16	●	●	80	40	63	1.6	16
63×1,8×16	○	○	80	40	63	1.8	16
63×2,0×16	●	●	80	40	63	2	16
63×2,5×16	–	●	–	32	63	2.5	16
63×3,0×16	●	○	64	32	63	3	16
80×0,5×22	–	○	–	64	80	0.5	22
80×0,8×22	●	○	128	64	80	0.8	22
80×1,0×22	●	○	100	48	80	1	22
80×1,2×22	●	○	100	48	80	1.2	22
80×1,6×22	●	○	100	48	80	1.6	22
80×2,0×22	●	●	80	40	80	2	22
80×3,0×22	●	○	80	40	80	3	22
100×1,0×22	●	○	128	64	100	1	22
100×1,2×22	●	○	128	64	100	1.2	22
100×1,6×22	●	○	100	48	100	1.6	22
100×2,0×22	●	●	100	48	100	2	22
100×2,5×22	●	○	100	48	100	2.5	22
100×3,0×22	–	○	–	40	100	3	22
125×0,8×22	–	○	–	80	125	0.8	22
125×1,0×22	–	○	–	80	125	1	22
125×1,2×22	–	○	–	64	125	1.2	22
125×1,6×22	–	○	–	64	125	1.6	22
125×2,0×22	–	○	–	64	125	2	22
125×2,5×22	–	○	–	48	125	2.5	22
125×3,0×22	–	○	–	48	125	3	22



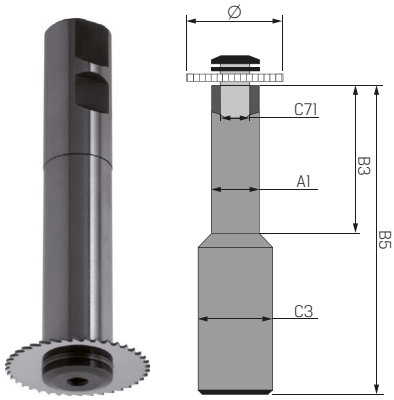
Saw blade mount DIN 1835

PREMUS

Design and use:
For holding circular metal cutting saw blades 150000 - 150405. Easy, secure and fast clamping of the blade, self-locking. Any saw blade thicknesses clampable. Very precise concentricity

1835 B shank

N° article	246418	C3 mm	C71 mm	A1 mm	B3 mm	B5 mm	Saw blade Ø mm
20	●	20	5	10	30	94	20
25	●	20	8	13	42	104	25
32	●	20	8	16	53	110	32
40	●	20	10	19,5	60	114	40
50	●	25	13	24,5	77	141	50
63	●	25	16	24,5	77	141	63
80	●	25	22	34	92	160	80
100	●	25	22	39,5	92	160	100





N° article	246418 6-piece, in case	Design
SATZ	●	consisting of saw blade holder Ø20 to 63 mm

Selection Table for Tooth Division

Product Information

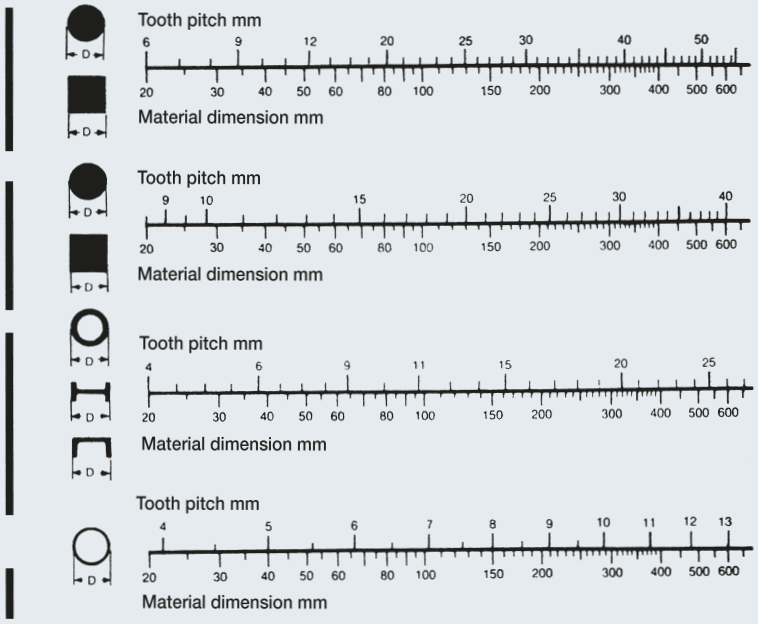
Selection table for the tooth distribution in HSS circular saw blades

Materials
Stainless steels
15 Cr 3, 15 Cr Ni 6,
18 Cr Ni 8, 16 Mn Cr 5
20 Mn Cr 5, 25 Cr Mo 4,
50 Cr Mo 4, 34 Cr Ni Mo 6,
St 00 – St 70, C 15 – C 60
Light metal, copper, cast steel

High-speed steels,
alloyed tool steels,
brass, bronze
GG 14 – GG 22

Thick-walled tubes and profile steel

Thin-walled tubes and profile steel



Selection table for clamping and clearance angle, cutting speed

Materials	Tensile trength Nm/mm²	Rake and clearance angle	Saw blade peripheral speed (m/min.)
Unalloyed steels			
St 33, St 34, St 37	330 – 450	18 – 20/8	24 – 60
St 42, St 50, St 52	450 – 600	18/8	18 – 32
C 10 G, C 15 G, C 22 N, C 35 N	450 – 600	18/8	18 – 32
St 60, St 70, C 45 N, C 60 N,	600 – 850	15/8	14 – 22
Alloyed steels			
15 Cr 3	500 – 700	15/8	
16 Mn Cr 5, 20 Mn Cr 5	600 – 800	15/6	12 – 24
37 Mn St 5, 42 Mn V 7	750 – 850	15/6	
50 Cr V 3, 35 Ni Cr 18	800 – 900		
14 Ni Cr 14	600 – 700	15/6	10 – 16
34 Cr Ni Mo 6, 22 Ni Cr 14	700 – 800		
Special steels			
with high strength	1,000 – 1,200		5 – 8
High speed steels	800 – 900	12/6	8 – 12
Stainless steels	500 – 700		6 – 10
Rolled sections			
DIN 1024/25/26	340 – 450	18/8	24 – 36
Steel tubes	500 – 600	15/8	18 – 36
Cast steel DIN 1681			
GS 38, GS 45	380 – 450	18/8	14 – 22
GS 52, GS 60	520 – 600	15/8	8 – 16
Cast iron DIN 1691			
GG 12, GG 30	120 – 300	15/6	14 – 25
Non-ferrous metals			
Copper		20/10	200 – 400
Zinc alloys		25/10	100 – 200
bronze	up to 600	5 – 10/10	40 – 120
Brass		10 – 15/8	200 – 300
Nickel silver (Alpaca)		20/10	20 – 75
Al alloys		25/10	500 – 2,000
Mg alloys			

The above data correspond to average values which have been determined in practical experience in the use of different sawing machines. Depending on the machine manufacturer, tooth distributions and circumferential speeds can change slightly.

Secondary holes for various sawing machines

Saw manufacturer	Saw blade Ø mm	Bore	required Secondary holes
Adige	200 – 250	32	2/9/50+2/8/45
	300 – 315	32	2/9/50+2/11/63
	315 – 350	40	2/8/55+4/12/64
	400 – 425	50	4/15/80
Baier	175 – 250	32	4 offset keyways
Berg & Schmidt	225 – 315	32	without
	250 – 350	32	2/12/64
	315 – 350	40	2/12/64
BEWO	225 – 300	32	2/8/45
	315 – 350	40	2/8/55+4/12/64
Eisele	210 – 275	32	2/8/45
	210 – 275	40	2/8/55
	300 – 350	40	2/8/55+4/12/64
	400 – 425	40	2/15/80+4/12/64
Häberle	225 – 350	40	2/8/55
I.B.P.	200 – 350	32	2/11/63
Kaltenbach	250	32	without
	350 – 400	50	4/15//80
MEP	200 – 355	32	2/11/63
Trennjäger	250	32	2/9/50
	250 – 275	40	4/11/63
	315 – 400	50	4/14/85+4/15/80
	400 – 460	60	8/16/90
Ulmia	250	32	without
	250 – 400	40	4/11/63
Wagner	210 – 275	32	4/9/50
	315	40	4/11/63
Wahlen	250 – 350	40	2/8/55–4/11/63
Weidmann	225 – 300	32	2/8/45
	275 – 350	40	2/8/55+4/12/64

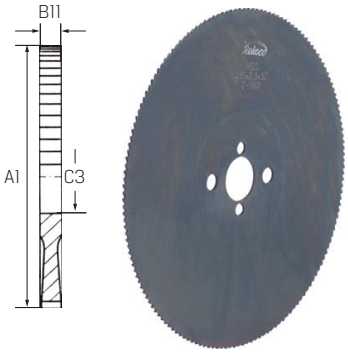
Circular saw blade HSS

Design:
- for cold circular saws (i.a. Eisele, Trennjäger, Kaltenbach)

Toothing:
BW Curved tooth with reciprocal chamfering
HZ: High-performance toothing with first and second cutting edge

Secondary holes:
Number/hole∅/centre-to-centre distance
(4/9/50)*: Please specify if desired.

HSS | fine | medium | coarse



N° article	152040 fine, BW, tooth pitch 4	152050 medium, BW, tooth pitch 5	152060 medium, HZ, tooth pitch 6	152080 coarse, HZ, tooth pitch 8	152090 coarse, HZ, tooth pitch 9/10	152040 F21	152050 F21	152060 F21	152080 F21	152090 F21	A1 mm	B11 mm	C3 mm	Secondary holes
225×2,0×32	●	○	○	–	–	180	150	120	–	–	225	2	32	2/8/45 + 2/11/63 + (4/9/50)*
250×2,0×32	●	●	●	–	–	200	160	128	–	–	250	2	32	2/8/45 + 2/11/63 + (4/9/50)*
250×2,0×40	●	–	–	○	–	200	–	–	100	–	250	2	40	2/8/55 + 4/12/64
250×2,5×32	–	○	–	–	–	–	160	–	–	–	250	2.5	32	2/8/45 + 2/11/63 + (4/9/50)*
250×2,5×40	–	●	○	–	–	–	160	128	–	–	250	2.5	40	2/8/55 + 4/12/64
275×2,5×40	●	●	●	●	–	220	180	144	110	–	275	2.5	40	2/8/55 + 4/12/64
275×3,0×40	○	–	○	○	–	220	–	144	110	–	275	3	40	2/8/55 + 4/12/64
300×2,5×32	–	–	○	○	–	–	–	160	120	–	300	2.5	32	2/8/45 + 2/11/63 + (4/9/50)*
300×2,5×40	○	○	●	○	–	240	200	160	120	–	300	2.5	40	2/8/55 + 4/12/64
315×2,5×32	○	○	●	○	–	250	200	160	120	–	315	2.5	32	2/8/45 + 2/11/63 + (4/9/50)*
315×2,5×40	●	–	●	○	–	250	–	160	120	–	315	2.5	40	2/8/55 + 4/12/64
315×3,0×40	–	●	–	–	–	–	200	–	–	–	315	3	40	2/8/55 + 4/12/64
350×3,0×32	–	–	●	○	–	–	–	180	140	–	350	3	32	2/8/45 + 2/11/63 + 2/12/75
350×3,0×40	–	●	–	●	○	–	220	–	140	110	350	3	40	2/8/55 + 4/12/64
350×3,0×50	–	–	–	○	–	–	–	–	160	–	350	3	50	4/15/80 + 4/14/85
370×3,0×50	–	○	–	–	–	–	220	–	–	–	370	3	50	4/15/80 + 4/14/85
400×3,5×50	–	–	–	○	○	–	–	–	180	140	400	3.5	50	4/15/80 + 4/14/85

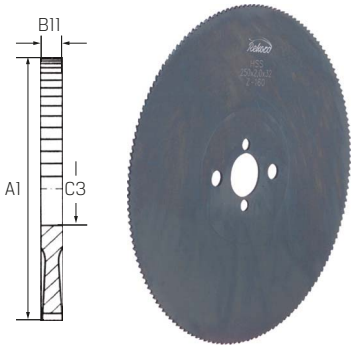
Circular saw blade HSS-Co

Design:
- for cold circular saws (i.a. Eisele, Trennjäger, Kaltenbach)

Toothing:
BW Curved tooth with reciprocal chamfering
HZ: High-performance toothing with first and second cutting edge

Secondary holes:
Number/hole ∅/centre-to-centre distance
(4/9/50)*: Please specify if desired.

HSS-Co | fine | medium | coarse



N° article	152340 fine, BW, tooth pitch 4	152360 medium, HZ, tooth pitch 6	152380 coarse, HZ, tooth pitch 8	152340 F21	152360 F21	152380 F21	A1 mm	B11 mm	C3 mm	Secondary holes
250×2,0×32	○	○	–	200	128	–	250	2	32	2/8/45 + 2/11/63 + (4/9/50)*
250×2,0×40	○	–	–	200	–	–	250	2	40	2/8/55 + 4/12/64
275×2,5×32	–	●	○	–	144	110	275	2.5	32	2/8/45 + 2/11/63 + (4/9/50)*
275×2,5×40	●	●	○	220	144	110	275	2.5	40	2/8/55 + 4/12/64
300×2,5×32	○	○	–	240	160	–	300	2.5	32	2/8/45 + 2/11/63 + (4/9/50)*
300×2,5×40	–	○	–	–	160	–	300	2.5	40	2/8/55 + 4/12/64
315×2,5×32	–	○	–	–	160	–	315	2.5	32	2/8/45 + 2/11/63 + (4/9/50)*
315×2,5×40	○	●	○	250	160	120	315	2.5	40	2/8/55 + 4/12/64

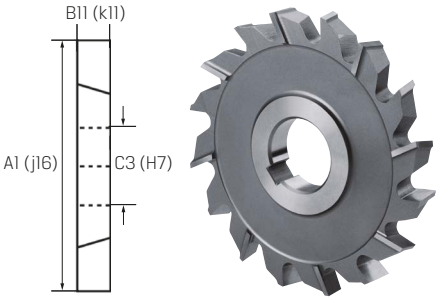
Side milling cutter

PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
153531	⟨1200	⟨750	⟨240	Alu ⟨600	Copper, zinc
	vc = m/min.				
153531	18-37	10 - 12	17 - 25	160-250	60-100

HSS-Co | DIN 885 A | Typ N | 10° Twist | Cross toothing | UNI

Design:
- similar to DIN 885
- stagger-toothed
- diameter tolerance +/- 0.1
- without collar, can therefore be used in a set (Please use milling arbor ring)



Nº article	153531 stagger-toothed, without collar	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
50×4,0×16	○	50	4	16	12	0,050-0,055
50×5,0×16	●	50	5	16	12	0,050-0,055
50×6,0×16	○	50	6	16	12	0,050-0,055
50×8,0×16	○	50	8	16	12	0,050-0,055
50×10,0×16	○	50	10	16	12	0,050-0,055
63×4,0×22	●	63	4	22	12	0,060-0,066
63×5,0×22	○	63	5	22	12	0,060-0,066
63×6,0×22	○	63	6	22	12	0,060-0,066
63×8,0×22	○	63	8	22	12	0,060-0,066
63×10,0×22	●	63	10	22	12	0,060-0,066
63×12,0×22	○	63	12	22	12	0,060-0,066
63×14,0×22	○	63	14	22	12	0,060-0,066
63×16,0×22	○	63	16	22	12	0,060-0,066
80×4,0×27	●	80	4	27	14	0,070-0,077
80×5,0×27	●	80	5	27	14	0,070-0,077
80×6,0×27	●	80	6	27	14	0,070-0,077
80×8,0×27	●	80	8	27	14	0,070-0,077
80×10,0×27	●	80	10	27	14	0,070-0,077
80×12,0×27	○	80	12	27	14	0,070-0,077
80×14,0×27	○	80	14	27	14	0,070-0,077
80×16,0×27	○	80	16	27	14	0,070-0,077
80×20,0×27	○	80	20	27	14	0,070-0,077
100×4,0×32	○	100	4	32	14	0,080-0,088
100×5,0×32	○	100	5	32	14	0,080-0,088

Nº article	153531 stagger-toothed, without collar	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
100×6,0×32	○	100	6	32	14	0,080-0,088
100×8,0×32	●	100	8	32	14	0,080-0,088
100×10,0×32	●	100	10	32	14	0,080-0,088
100×12,0×32	○	100	12	32	14	0,080-0,088
100×14,0×32	○	100	14	32	14	0,080-0,088
100×16,0×32	○	100	16	32	14	0,080-0,088
100×18,0×32	○	100	18	32	14	0,080-0,088
100×20,0×32	○	100	20	32	14	0,080-0,088
100×25,0×32	○	100	25	32	14	0,080-0,088
125×6,0×32	●	125	6	32	16	0,090-0,099
125×8,0×32	●	125	8	32	16	0,090-0,099
125×10,0×32	○	125	10	32	16	0,090-0,099
125×12,0×32	○	125	12	32	16	0,090-0,099
125×14,0×32	○	125	14	32	16	0,090-0,099
125×16,0×32	○	125	16	32	16	0,090-0,099
125×20,0×32	○	125	20	32	16	0,090-0,099
125×25,0×32	○	125	25	32	16	0,090-0,099
160×8,0×40	○	160	8	40	18	0,090-0,099
160×10,0×40	○	160	10	40	18	0,090-0,099
160×12,0×40	○	160	12	40	18	0,090-0,099
160×14,0×40	○	160	14	40	18	0,090-0,099
160×16,0×40	○	160	16	40	18	0,090-0,099
160×18,0×40	○	160	18	40	18	0,090-0,099
160×20,0×40	○	160	20	40	18	0,090-0,099

High-performance disc cutter SC

PREMUS

	P N/mm²	M N/mm²	K HB	N N/mm²	
152510	⟨1200	⟨750	⟨240	Alu ⟨600	Copper, zinc
	vc = m/min.				
152510	75-120	24 - 45	50 - 70	120-280	150-300

SC | coated | Factory standard | Cross toothing | UNI

Design:
- similar to DIN 885
- stagger-toothed
- diameter tolerance +/- 0.1
- without collar, can therefore be used in a set (Please use milling arbor ring)



Nº article	152510 stagger-toothed, without collar, TiAlN	A1 mm	B11 mm	C3 mm	F21
40×3	●	40	3	13	12
40×4	●	40	4	13	12
40×5	●	40	5	13	12
40×6	●	40	6	13	12
40×8	●	40	8	13	12
40×10	●	40	10	13	12
50×3	●	50	3	16	14
50×4	●	50	4	16	14
50×5	●	50	5	16	14
50×6	●	50	6	16	14
50×8	●	50	8	16	14
50×10	●	50	10	16	14
63×3	●	63	3	22	18
63×4	●	63	4	22	18
63×5	●	63	5	22	14
63×6	●	63	6	22	14
63×8	●	63	8	22	14

Nº article	152510 stagger-toothed, without collar, TiAlN	A1 mm	B11 mm	C3 mm	F21
63×10	●	63	10	22	14
80×3	●	80	3	27	22
80×4	●	80	4	27	22
80×5	●	80	5	27	22
80×6	●	80	6	27	18
80×8	●	80	8	27	18
80×10	●	80	10	27	18
80×12	●	80	12	27	14
80×14	●	80	14	27	14
100×4	●	100	4	27	22
100×5	●	100	5	27	22
100×6	●	100	6	27	22
100×8	●	100	8	27	18
100×10	●	100	10	27	18
100×12	●	100	12	27	18
100×14	●	100	14	27	18

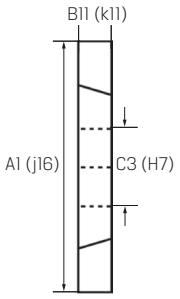
Metal circle cutter

PREMUS

	P N/mm²	K HB	N N/mm²
152900	<1200	<240	Copper, zinc
vc = m/min.			
152900	24-45	17 - 25	60-100

HSS-Co | DIN 1834 A | Typ N | 10° Twist | Cross toothing | Vc

N° article	152900 stagger-toothed	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth	N° article	152900 stagger-toothed	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
63×2,0×22	●	63	2	22	28	0,060-0,066	100×4,0×32	●	100	4	32	36	0,080-0,088
63×2,5×22	●	63	2,5	22	28	0,060-0,066	100×5,0×32	○	100	5	32	36	0,080-0,088
63×3,0×22	●	63	3	22	28	0,060-0,066	125×2,0×32	●	125	2	32	40	0,090-0,099
80×2,0×27	●	80	2	27	32	0,070-0,077	125×2,5×32	●	125	2,5	32	40	0,090-0,099
80×2,5×27	○	80	2,5	27	32	0,070-0,077	125×3,0×32	●	125	3	32	40	0,090-0,099
80×3,0×27	●	80	3	27	32	0,070-0,077	125×4,0×32	●	125	4	32	40	0,090-0,099
80×4,0×27	●	80	4	27	32	0,070-0,077	125×5,0×32	●	125	5	32	40	0,090-0,099
100×2,0×32	●	100	2	32	36	0,080-0,088	160×3,0×40	●	160	3	40	48	0,090-0,099
100×2,5×32	○	100	2,5	32	36	0,080-0,088	160×4,0×40	●	160	4	40	48	0,090-0,099
100×3,0×32	●	100	3	32	36	0,080-0,088	160×5,0×40	●	160	5	40	48	0,090-0,099





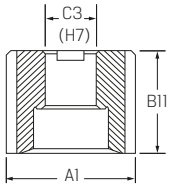
Shell end mills

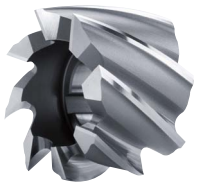
PREMUS

	P N/mm²	M N/mm²	K HB
154600	<1200	<750	<240
154601			
vc = m/min.			
154600	18-37	10 - 12	17 - 25
154601			

HSS-Co | coated | DIN 1880 | Typ N | 30° Twist

Drive:
Transverse and longitudinal keyway DIN 138





154600

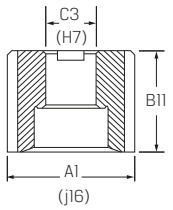


154601

N° article	154600	154601 TiAlN	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
40×32×16	●	●	40	32	16	6	0,080-0,088
50×36×22	●	●	50	36	22	8	0,085-0,094
63×40×27	●	●	63	40	27	8	0,100-0,110
80×45×27	●	○	80	45	27	10	0,110-0,120
100×50×32	○	○	100	50	32	10	0,110-0,120

	P N/mm²	M N/mm²	K HB
155030	<850	<750	<240
155031			
vc = m/min.			
155030	18-37	10 - 12	17 - 25
155031			

HSS-Co | coated | DIN 1880 | Typ NR | 30° Twist





155030



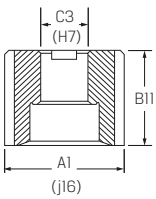
155031

N° article	155030	155031 TiN	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
40×32×16	●	○	40	32	16	6	0,080-0,088
50×36×22	●	○	50	36	22	6	0,085-0,094
63×40×27	●	○	63	40	27	8	0,100-0,110
80×45×27	○	○	80	45	27	8	0,110-0,120
100×50×32	○	○	100	50	32	10	0,110-0,120

	P N/mm²	M N/mm²	K HB	S N/mm²
155200	<1200	<750	<240	Hastelloy B
155400				
vc = m/min.				
155200	16-32	10 - 12	22 - 25	8-10
155400				

HSS-Co | coated | DIN 1880 | Typ HR | 30° Twist

Drive:
Transverse and longitudinal keyway DIN 138





155200

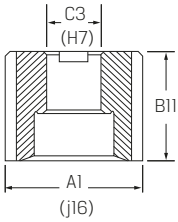


155400

N° article	155200	155400 TiAlN	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
40×32×16	●	●	40	32	16	8	0,050-0,055
50×36×22	●	●	50	36	22	8	0,050-0,055
63×40×27	●	●	63	40	27	10	0,060-0,066
80×45×27	○	○	80	45	27	10	0,070-0,077
100×50×32	○	○	100	50	32	12	0,080-0,088

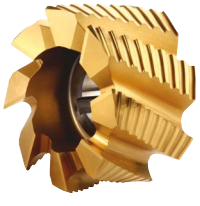
	P N/mm²	M N/mm²	K HB
155500	<850	<750	<240
155501			
vc = m/min.			
155500	18-37	10 - 12	17 - 25
155501			

HSS-Co | coated | DIN 1880 | Typ NF | 30° Twist





155500



155501

N° article	155500	155501 TiN	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
40×32×16	●	●	40	32	16	6	0,080-0,088
50×36×22	●	○	50	36	22	6	0,085-0,094
63×40×27	●	○	63	40	27	8	0,100-0,110
80×45×27	○	○	80	45	27	8	0,110-0,120
100×50×32	○	○	100	50	32	10	0,110-0,120

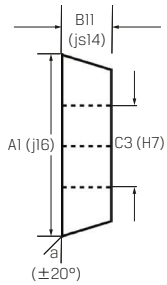
Angular milling cutters

PREMUS

	P N/mm²	K HB
156450		
156500	<850	<240
156600		
vc = m/min.		
156450		
156500	26-30	17 - 25
156600		

HSS | DIN 842 A | Typ H | Twist 0° | 45° | 50° | 60°

Use:
Milling of straight grooves (longitudinal groove to DIN 138) and guideways





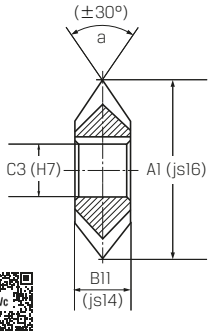
N° article	156450 45°	156500 50°	156600 60°	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
50×13×13	○	–	–	50	13	13	16	0,030-0,033
50×16×13	–	○	○	50	13	13	16	0,030-0,033
63×18×16	●	–	–	63	16	16	18	0,035-0,039
63×20×16	–	○	●	63	16	16	18	0,035-0,039
80×22×22	●	–	–	80	22	22	20	0,040-0,044
80×25×22	–	○	●	80	22	22	20	0,040-0,044
100×28×27	●	–	–	100	28	27	22	0,045-0,050
100×32×27	–	○	●	100	28	27	22	0,045-0,050

Prism milling cutters

PREMUS

	P N/mm²	K HB
156700		
156720	<850	<240
156750		
vc = m/min.		
156700		
156720	26-30	17 - 25
156750		

HSS | DIN 847 | Twist 0°





N° article	156700 45°	156720 60°	156750 90°	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
50×8	●	–	–	50	8	16	22	0,033-0,030
50×10	–	●	–	50	10	16	18	0,033-0,030
50×14	–	–	○	50	14	16	16	0,033-0,030
63×10	●	–	–	63	10	22	24	0,039-0,035
63×14	–	●	–	63	14	22	20	0,039-0,035
63×20	–	–	●	63	20	22	18	0,039-0,035
80×12	○	–	–	80	12	27	26	0,044-0,040
80×18	–	●	–	80	18	27	22	0,044-0,040
80×22	–	–	●	80	22	27	20	0,044-0,040
100×18	○	–	–	100	18	32	28	0,050-0,045
100×25	–	●	–	100	25	32	24	0,050-0,045
100×32	–	–	●	100	32	32	24	0,050-0,045

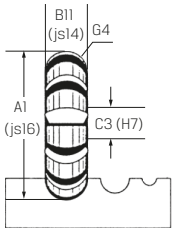
Profile cutter

PREMUS

	P N/mm²	K HB
156800	<850	<240
vc = m/min.		
156800	26-30	17 - 25

HSS | DIN 856 | Groove to DIN 138

Design:
- straight toothed
- radial relief ground
- 8° rake angle



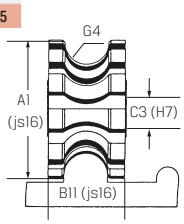


N° article	156800 semicircular, convex	G4 mm	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
1,0	●	1	50	2	16	14	0,080-0,088
1,6	●	1,6	50	3,2	16	14	0,080-0,088
2,0	●	2	50	4	16	14	0,080-0,088
2,5	●	2,5	63	5	22	12	0,100-0,111
3,0	●	3	63	6	22	12	0,100-0,111
4,0	●	4	63	8	22	12	0,100-0,111
5,0	●	5	63	10	22	12	0,100-0,111
6,0	○	6	80	12	27	12	0,120-0,132
8,0	●	8	80	16	27	12	0,120-0,132

	P N/mm²	K HB
156850	<850	<240
vc = m/min.		
156850	26-30	17 - 25

HSS | DIN 855 A | Groove to DIN 138

Design:
- straight toothed
- radial relief ground
- 8° rake angle





N° article	156850 semicircular, concave	G4 mm	A1 mm	B11 mm	C3 mm	F21	fz mm/tooth
1,0	○	1	50	6	16	14	0,080-0,088
2,0	○	2	50	9	16	14	0,080-0,088
2,5	○	2,5	63	10	22	12	0,100-0,110
3,0	●	3	63	12	22	12	0,100-0,110
4,0	○	4	63	16	22	12	0,100-0,110
5,0	●	5	63	20	22	12	0,100-0,110
6,0	○	6	80	24	27	12	0,120-0,132
8,0	○	8	80	32	27	12	0,120-0,132

Gear cutters

PREMUS

	P N/mm²	K HB
156800	<850	<240
vc = m/min.		
156800	26-30	17 - 25

Design:
- relieved
- pressure angle 20°

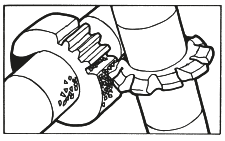
Use:
For milling spur gears to module

Ordering example:
159661 2.0/3
(milling cutter with module 3.0 and for no. of teeth 17 - 20)

HSS | DIN 6513 | Profil DIN 3972

Module/Milling cutter no.	156961 HSS-Co, single	A1 mm	C3 mm
0,5/1 - 0,5/8	○	40	16
0,5/1 - 0,5/8	○	50	16
1,0/1 - 1,0/8	○	50	16
1,5/3 - 1,5/8	○	63	22
2,0/3 - 2,0/8	○	63	22
2,5/8 - 2,5/8	○	63	22
3,0/4 - 3,0/8	○	70	27

Milling Cutter no.	1	2	3	4	5	6	7	8
For number of teeth	12-13	14-16	17-20	21-25	26-34	35-54	55-134	135-gear-rack



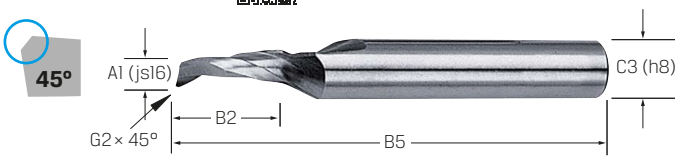


Single-lip cutter HSS-Co Aluminium

PREMUS

	N N/mm²
160000	Alu ⟨600
vc = m/min.	
160000	160-250

HSS-Co | Typ W | Tooth 1 | Centre cut | Straight shank | N



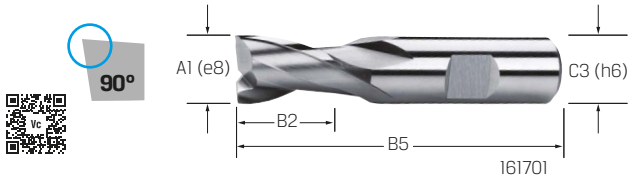
Nº article	160000	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
3×60	●	3	12	60	8	1	0.100 - 0.150
4×60	●	4	12	60	8	1	0.100 - 0.150
5×60	●	5	14	60	8	1	0.100 - 0.150
5×120	●	5	14	120	8	1	0.100 - 0.150
6×60	●	6	14	60	8	1	0.100 - 0.150
7×60	●	7	14	60	8	1	0.100 - 0.150
8×80	●	8	14	80	8	1	0.100 - 0.150
8×120	●	8	14	120	8	1	0.100 - 0.150
10×80	●	10	14	80	8	1	0.100 - 0.150

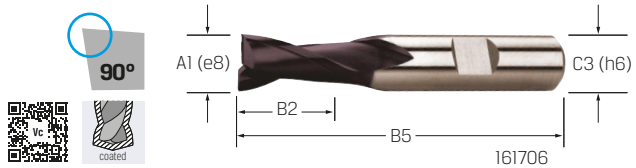
End mill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
161701 / 161706	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
vc = m/min.						
161701	12-30	10 - 20	10 - 20	5-12	50-150	30-60
161706	20-60	30 - 40	35 - 50	20-60	100-210	75-100

HSS-Co | DIN 327 | Typ N | Teeth 2 | 25° Twist | Centre cut | 1835 B shank | short | P9 | UNI





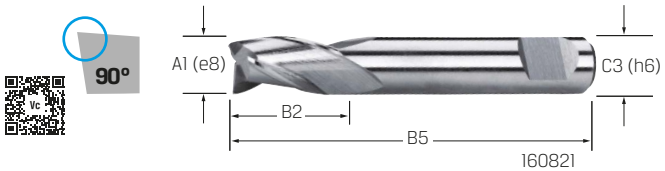
Nº article	161701	161706 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	●	2	4	48	6	2	0,001-0,005
2,50	●	●	2,5	5	49	6	2	0,001-0,005
3,00	●	●	3	5	49	6	2	0,003-0,010
3,50	●	○	3,5	6	50	6	2	0,003-0,010
4,00	●	●	4	7	51	6	2	0,006-0,015
4,50	●	●	4,5	7	51	6	2	0,006-0,015
5,00	●	●	5	8	52	6	2	0,007-0,020
5,50	●	●	5,5	8	52	6	2	0,007-0,020
6,00	●	●	6	8	52	6	2	0,014-0,030
6,50	●	●	6,5	10	60	10	2	0,009-0,025
7,00	●	●	7	10	60	10	2	0,009-0,025
7,50	●	●	7,5	10	60	10	2	0,009-0,025
8,00	●	●	8	11	61	10	2	0,014-0,030
8,50	●	●	8,5	11	61	10	2	0,014-0,030
9,00	●	●	9	11	61	10	2	0,014-0,030
9,50	○	●	9,5	11	61	10	2	0,014-0,030
10,00	●	●	10	13	63	10	2	0,018-0,035
11,00	●	●	11	13	70	12	2	0,018-0,035
12,00	●	●	12	16	73	12	2	0,022-0,045
13,00	●	●	13	16	73	12	2	0,022-0,045
14,00	●	●	14	16	73	12	2	0,022-0,045
15,00	●	●	15	16	73	12	2	0,022-0,045
16,00	●	●	16	19	79	16	2	0,027-0,055
17,00	●	●	17	19	79	16	2	0,027-0,055
18,00	●	●	18	19	79	16	2	0,027-0,055
19,00	●	○	19	19	79	16	2	0,027-0,055
20,00	●	●	20	22	88	20	2	0,033-0,065
22,00	●	●	22	22	88	20	2	0,033-0,065
24,00	●	○	24	26	102	25	2	0,033-0,065
25,00	●	●	25	26	102	25	2	0,033-0,065

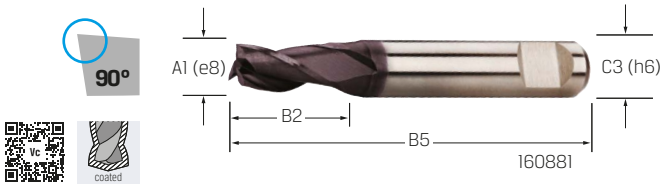
Mini cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
160821 / 160881	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600
vc = m/min.					
160821	10-30	10 - 15	15 - 20	8-10	160-250
160881	30-40	30 - 40	30 - 40	8-25	240-375

HSS-Co | Typ N | Teeth 3 | 30° Twist | Centre cut | 1835 B shank | short | P9 | UNI





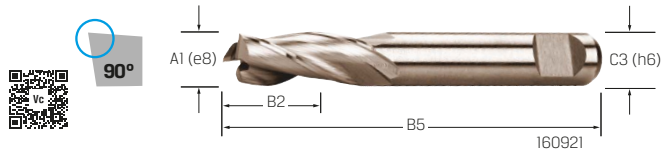
Nº article	160821	160881 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
1,50	●	●	1,5	3	34	6	3	0,001-0,002
2,00	●	●	2	4	35	6	3	0,001-0,002
2,50	●	●	2,5	5	36	6	3	0,001-0,002
2,80	○	○	2,8	5	36	6	3	0,001-0,002
3,00	●	●	3	5	36	6	3	0,003-0,004
3,50	●	●	3,5	6	37	6	3	0,003-0,004
3,80	●	○	3,8	6	38	6	3	0,003-0,004
4,00	●	●	4	7	38	6	3	0,005-0,007
4,50	●	–	4,5	7	38	6	3	0,005-0,007
4,80	○	–	4,8	8	39	6	3	0,005-0,007
5,00	●	●	5	8	39	6	3	0,007-0,010
5,50	○	–	5,5	8	39	6	3	0,007-0,010
6,00	●	●	6	8	39	6	3	0,009-0,013

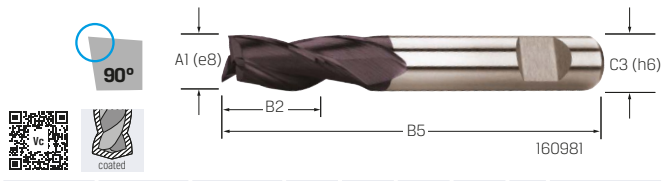
Mini cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
160921 / 160981	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600
vc = m/min.					
160921	10-30	10 - 15	15 - 20	8-10	160-250
160981	30-40	30 - 40	30 - 40	8-25	240-375

HSS-Co | Typ N | Teeth 3 | 30° Twist | Centre cut | 1835 B shank | long | P9 | UNI





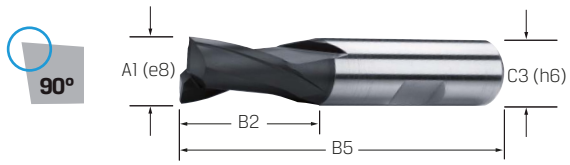
Nº article	160921	160981 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	●	2	7	38	6	3	0,001-0,002
2,50	●	●	2,5	8	39	6	3	0,001-0,002
3,00	●	●	3	8	39	6	3	0,002-0,003
3,50	●	●	3,5	10	41	6	3	0,002-0,003
4,00	●	●	4	11	42	6	3	0,004-0,005
4,50	●	●	4,5	11	42	6	3	0,004-0,005
5,00	●	●	5	13	44	6	3	0,005-0,008
6,00	●	●	6	13	44	6	3	0,006-0,012

End mill HSS-PM Universal

PREMUS

	P N/mm²	K HB	S N/mm²	N N/mm²	
161922	⟨1000	⟨240	Titanium ⟨1400	Alu ⟨600	Copper
vc = m/min.					
161922	20-80	35 - 65	30-45	90-420	100-110

HSS-PM | coated | DIN 327 | Typ N | Teeth 2 | 25° Twist | Centre cut | 1835 B shank | short | P9 | UNI | Vc



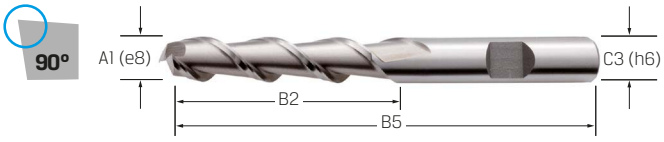
N° article	161922 AlTiN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
4,00	○	4	7	51	6	2	0,012-0,015
5,00	●	5	8	52	6	2	0,012-0,015
6,00	○	6	8	52	6	2	0,018-0,025
8,00	○	8	11	61	10	2	0,021-0,037
10,00	●	10	13	63	10	2	0,035-0,046
12,00	●	12	16	73	12	2	0,041-0,055
16,00	●	16	19	79	16	2	0,070-0,076
18,00	●	18	19	79	16	2	0,070-0,076
20,00	●	20	22	88	20	2	0,070-0,090

End mill HSS-Co Aluminium

PREMUS

	N N/mm²	
161451	Brass, bronze, Alu ⟨600	Plastics
vc = m/min.		
161451	27-140	63-90

HSS-Co | DIN 844 | Typ W | Teeth 2 | 40° Twist | Centre cut | 1835 B shank | overlong | P9 | N | Vc



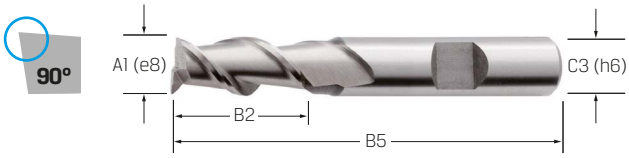
N° article	161451	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
3,00	●	3	12	56	6	2	0,004-0,010
4,00	●	4	19	63	6	2	0,008-0,015
5,00	●	5	24	68	6	2	0,010-0,020
6,00	●	6	24	68	6	2	0,013-0,024
8,00	●	8	38	88	10	2	0,019-0,032
10,00	●	10	45	95	10	2	0,025-0,038
12,00	●	12	53	110	12	2	0,030-0,046
14,00	○	14	53	110	12	2	0,030-0,046
16,00	●	16	63	123	16	2	0,038-0,054
20,00	●	20	75	141	20	2	0,045-0,066

End mill HSS-Co Aluminium

PREMUS

	N N/mm²	
161351	Brass, bronze, Alu ⟩600	Plastics
vc = m/min.		
161351	35-155	70-100

HSS-Co | DIN 844 | Typ W | Teeth 2 | 40° Twist | Centre cut | 1835 B shank | long | P9 | N | Vc



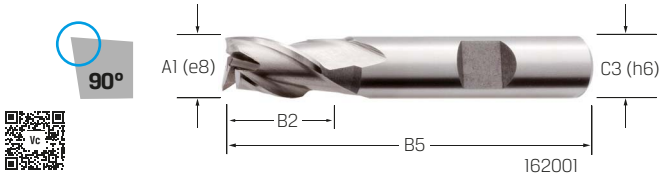
N° article	161351	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	2	7	51	6	2	0,002-0,005
2,50	●	2,5	8	52	6	2	0,002-0,005
3,00	●	3	8	52	6	2	0,004-0,010
3,50	●	3,5	10	54	6	2	0,004-0,010
4,00	●	4	11	55	6	2	0,004-0,010
4,50	●	4,5	11	55	6	2	0,004-0,010
5,00	●	5	13	57	6	2	0,010-0,020
5,50	●	5,5	13	57	6	2	0,010-0,020
6,00	●	6	13	57	6	2	0,013-0,024
6,50	●	6,5	16	66	10	2	0,013-0,024
8,00	●	8	19	69	10	2	0,019-0,032
8,50	●	8,5	19	69	10	2	0,019-0,032
9,00	●	9	19	69	10	2	0,019-0,032
10,00	●	10	22	72	10	2	0,025-0,038
11,00	●	11	22	79	12	2	0,025-0,038
12,00	●	12	26	83	12	2	0,030-0,046
13,00	●	13	26	83	12	2	0,030-0,046
14,00	●	14	26	83	12	2	0,030-0,046
15,00	●	15	26	83	12	2	0,030-0,046
16,00	●	16	32	92	16	2	0,038-0,054
18,00	○	18	32	92	16	2	0,038-0,054
20,00	●	20	38	104	20	2	0,045-0,066

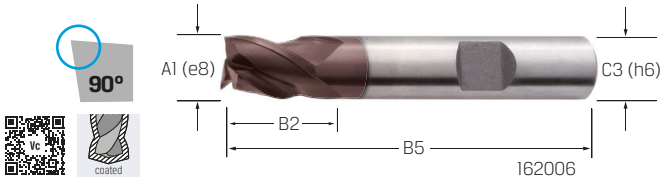
End mill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
162001 / 162006	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
vc = m/min.						
162001	10-30	10 - 20	10 - 20	5-7	35-150	30-60
162006	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | DIN 327 | Typ N | Teeth 3 | 30° Twist | Centre cut | 1835 B shank | short | P9 | UNI | Vc | coated





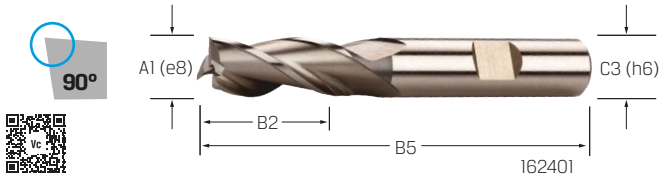
N° article	162001	162006 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	●	2	4	48	6	3	0,001-0,002
3,00	●	●	3	5	49	6	3	0,003-0,004
4,00	●	●	4	7	51	6	3	0,006-0,008
5,00	●	●	5	8	52	6	3	0,007-0,010
6,00	●	●	6	8	52	6	3	0,009-0,013
8,00	●	●	8	11	61	10	3	0,014-0,019
10,00	●	●	10	13	63	10	3	0,018-0,025
12,00	●	●	12	16	73	12	3	0,022-0,030
14,00	●	●	14	16	73	12	3	0,022-0,030
16,00	●	●	16	19	79	16	3	0,027-0,038
18,00	●	●	18	19	79	16	3	0,027-0,038
20,00	●	●	20	22	88	20	3	0,033-0,045
22,00	●	●	22	22	88	20	3	0,033-0,045
25,00	●	●	25	26	102	25	3	0,033-0,045

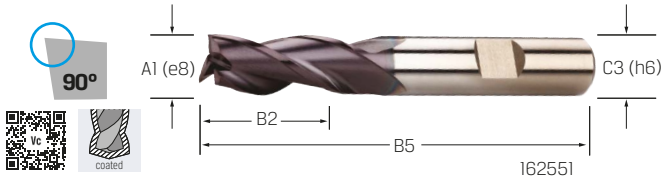
End mill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
162401 / 162551	<1000	<850	<240	Titanium <1200	Alu <600	Brass <600
vc = m/min.						
162401	10-30	10 - 20	10 - 20	5-7	35-150	30-60
162551	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | DIN 844 | Typ N
Teeth 3 | 30° Twist | Centre cut
1835 B shank | long | P9
UNI





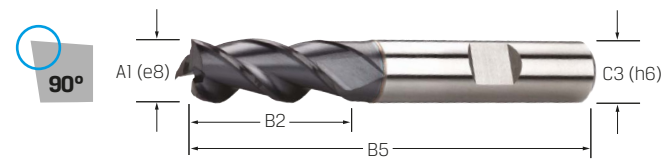
N° article	162401	162551 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
3,00	●	●	3	8	52	6	3	0,003-0,004
4,00	●	●	4	11	55	6	3	0,006-0,008
5,00	●	●	5	13	57	6	3	0,007-0,010
6,00	●	●	6	13	57	6	3	0,009-0,013
7,00	●	–	7	16	66	10	3	0,009-0,013
8,00	●	●	8	19	69	10	3	0,014-0,019
9,00	●	–	9	19	69	10	3	0,014-0,019
10,00	●	●	10	22	72	10	3	0,018-0,025
11,00	●	–	11	22	79	12	3	0,018-0,025
12,00	●	●	12	26	83	12	3	0,022-0,030
13,00	●	–	13	26	83	12	3	0,022-0,030
14,00	●	●	14	26	83	12	3	0,022-0,030
15,00	●	–	15	26	83	12	3	0,022-0,030
16,00	●	●	16	32	92	16	3	0,027-0,038
18,00	●	●	18	32	92	16	3	0,027-0,038
20,00	●	●	20	38	104	20	3	0,033-0,045
22,00	●	–	22	38	104	20	3	0,033-0,045
24,00	●	–	24	45	121	25	3	0,033-0,045
25,00	●	–	25	45	121	25	3	0,033-0,045

End mill HSS-PM Universal

PREMUS

	P N/mm²	M N/mm²	K HB
162575	<1000	<850	<240
vc = m/min.			
162575	20-75	20 - 40	35 - 50

HSS-PM coated | DIN 844 | Typ N
Teeth 3 | 30° Twist | Centre cut
1835 B shank | long | P9
UNI



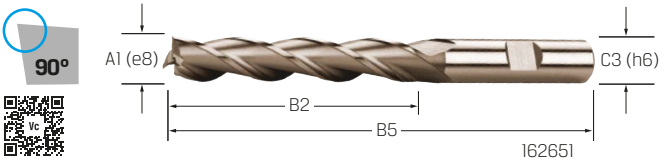
N° article	162575 AlTiN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	2	7	51	6	3	0,008-0,010
3,00	●	3	8	52	6	3	0,008-0,010
4,00	●	4	11	55	6	3	0,008-0,010
5,00	●	5	13	57	6	3	0,008-0,010
6,00	●	6	13	57	6	3	0,021-0,025
7,00	○	7	16	66	10	3	0,021-0,025
8,00	●	8	19	69	10	3	0,036-0,040
10,00	●	10	22	72	10	3	0,036-0,048
12,00	●	12	26	83	12	3	0,052-0,080
16,00	●	16	32	92	16	3	0,052-0,080
18,00	○	18	32	92	16	3	0,052-0,080
20,00	●	20	38	104	20	3	0,052-0,080

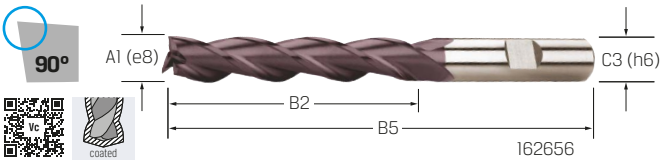
Slot milling cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
162651 / 162656	<1000	<850	<240	Titanium <1200	Alu <600	Brass <600
vc = m/min.						
162651	10-30	10 - 20	10 - 20	5-7	35-150	30-60
162656	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | DIN 844 | Typ N
Teeth 3 | 30° Twist | Centre cut
1835 B shank | overlong | P9
UNI





N° article	162651	162656 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	●	2	10	54	6	3	0,001-0,002
3,00	●	●	3	12	56	6	3	0,002-0,003
4,00	●	●	4	19	63	6	3	0,003-0,005
5,00	●	●	5	24	68	6	3	0,005-0,006
6,00	●	●	6	24	68	6	3	0,006-0,008
8,00	●	●	8	38	88	10	3	0,010-0,012
10,00	●	●	10	45	95	10	3	0,013-0,015
12,00	●	●	12	53	110	12	3	0,016-0,018
14,00	●	●	14	53	110	12	3	0,016-0,018
16,00	●	●	16	63	123	16	3	0,020-0,023
18,00	●	●	18	63	123	16	3	0,020-0,023
20,00	●	●	20	75	141	20	3	0,023-0,028

End mill HSS-Co Aluminium

PREMUS

	N N/mm²	
161551	brass, bronze Alu <600	Plastics
vc = m/min.		
161551	30-155	70-100

HSS-Co | DIN 844 | Typ W
Teeth 3 | 40° Twist | Centre cut
1835 B shank | long | N



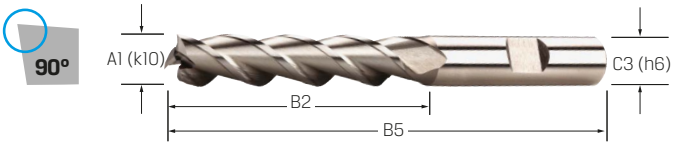
N° article	161551	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	2	7	51	6	3	0,002-0,005
3,00	●	3	8	52	6	3	0,004-0,010
4,00	●	4	11	55	6	3	0,008-0,015
4,50	●	4,5	11	55	6	3	0,008-0,015
5,00	●	5	13	57	6	3	0,010-0,020
6,00	●	6	13	57	6	3	0,013-0,024
7,00	○	7	16	66	10	3	0,013-0,024
8,00	●	8	19	69	10	3	0,019-0,032
9,00	○	9	19	69	10	3	0,019-0,032
10,00	●	10	22	72	10	3	0,025-0,038
12,00	●	12	26	83	12	3	0,030-0,046
14,00	●	14	26	83	12	3	0,030-0,046
16,00	●	16	32	92	16	3	0,038-0,054
18,00	○	18	32	92	16	3	0,038-0,054
20,00	●	20	38	104	20	3	0,045-0,066

End mill HSS-Co Aluminium

PREMUS

	N N/mm²	
161651	Brass, bronze, Alu ⟨600	Plastics
vc = m/min.		
161651	27-140	63-90

HSS-Co | DIN 844 | Typ W | Teeth 3 | 40° Twist | Centre cut | 1835 B shank | overlong | N



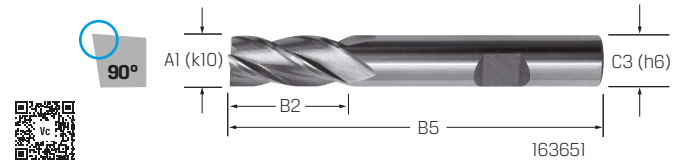
N° article	161651	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
10,00	●	10	45	95	10	3	0,025-0,038
12,00	●	12	53	110	12	3	0,030-0,046
14,00	●	14	53	110	12	3	0,030-0,046
16,00	●	16	63	123	16	3	0,038-0,054
18,00	○	18	63	123	16	3	0,038-0,054
20,00	●	20	75	141	20	3	0,045-0,066

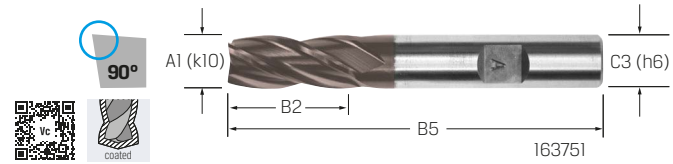
End mill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
163651 / 163751	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
vc = m/min.						
163651	10-30	10 - 20	10 - 20	6-8	40-170	35-70
163751	25-60	35 - 45	35 - 55	10-25	100-240	85-110

HSS-Co | DIN 844 | Typ N | Teeth 3-5 | 30° Twist | Centre cut | 1835 B shank | long | UNI





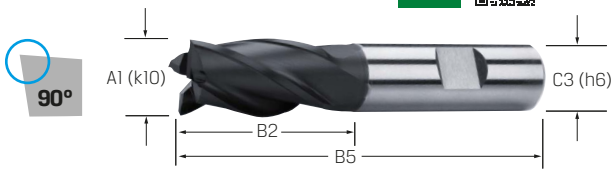
N° article	163651	163751 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	●	2	7	51	6	3	0,001-0,004
2,50	●	●	2,5	8	52	6	3	0,001-0,004
3,00	●	●	3	8	52	6	4	0,002-0,007
3,50	●	●	3,5	10	54	6	4	0,002-0,007
4,00	●	●	4	11	55	6	4	0,005-0,010
4,50	●	●	4,5	11	55	6	4	0,005-0,010
5,00	●	●	5	13	57	6	4	0,006-0,014
5,50	●	●	5,5	13	57	6	4	0,006-0,014
6,00	●	●	6	13	57	6	4	0,008-0,017
6,50	●	●	6,5	16	66	10	4	0,008-0,017
7,00	●	●	7	16	66	10	4	0,008-0,017
7,50	●	●	7,5	16	66	10	4	0,008-0,017
8,00	●	●	8	19	69	10	4	0,012-0,024
8,50	●	●	8,5	19	69	10	4	0,012-0,024
9,00	●	●	9	19	69	10	4	0,012-0,024
9,50	●	●	9,5	19	69	10	4	0,012-0,024
10,00	●	●	10	22	72	10	4	0,018-0,030
11,00	●	●	11	22	79	12	4	0,018-0,030
12,00	●	●	12	26	83	12	4	0,022-0,036
13,00	●	●	13	26	83	12	4	0,022-0,036
14,00	●	●	14	26	83	12	4	0,022-0,036
15,00	●	●	15	26	83	12	4	0,022-0,036
16,00	●	●	16	32	92	16	4	0,027-0,045
18,00	●	●	18	32	92	16	4	0,027-0,045
20,00	●	●	20	38	104	20	4	0,033-0,057
22,00	●	●	22	38	104	20	5	0,033-0,057
25,00	●	●	25	45	121	25	5	0,033-0,057

End mill HSS-PM Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
163780	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600
vc = m/min.					
163780	20-45	20 - 45	35 - 65	30-45	90-420

HSS-PM | coated | DIN 844 | Typ N | Teeth 3-5 | 30° Twist | Centre cut | 1835 B shank | long | UNI



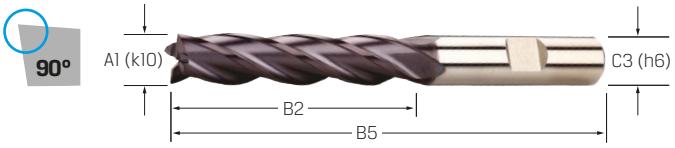
N° article	163780 AlTiN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	○	2	7	51	6	4	0,014-0,025
3,00	●	3	8	52	6	4	0,014-0,025
4,00	●	4	11	55	6	4	0,014-0,025
5,00	●	5	13	57	6	4	0,014-0,025
6,00	●	6	13	57	6	4	0,030-0,042
8,00	●	8	19	69	10	4	0,035-0,062
10,00	●	10	22	72	10	4	0,058-0,077
12,00	●	12	26	83	12	4	0,069-0,092
14,00	●	14	26	83	12	4	0,069-0,092
16,00	●	16	32	92	16	4	0,115-0,127
18,00	●	18	32	92	16	4	0,115-0,127
20,00	●	20	38	104	20	4	0,115-0,150
25,00	●	25	45	121	25	5	0,115-0,150
30,00	●	30	45	121	25	5	0,115-0,150

End mill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
164186	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
vc = m/min.						
164186	20-60	30 - 40	35 - 50	10-12	100-210	75-100

HSS-Co | coated | DIN 844 | Typ N | Teeth 3-5 | 30° Twist | Centre cut | 1835 B shank | overlong | UNI



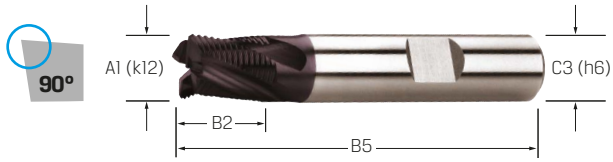
N° article	164186 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
2,00	●	2	10	54	6	3	0,001-0,002
3,00	●	3	12	56	6	4	0,002-0,004
4,00	●	4	19	63	6	4	0,003-0,008
5,00	●	5	24	68	6	4	0,005-0,010
6,00	●	6	24	68	6	4	0,006-0,013
7,00	●	7	30	80	10	4	0,006-0,013
8,00	●	8	38	88	10	4	0,010-0,019
9,00	●	9	38	88	10	4	0,010-0,019
10,00	●	10	45	95	10	4	0,013-0,025
11,00	●	11	45	102	12	4	0,013-0,025
12,00	●	12	53	110	12	4	0,016-0,030
14,00	●	14	53	110	12	4	0,016-0,030
16,00	●	16	63	123	16	4	0,020-0,038
18,00	●	18	63	123	16	4	0,020-0,038
20,00	●	20	75	141	20	4	0,023-0,045
22,00	●	22	75	141	20	5	0,023-0,045
24,00	○	24	90	166	25	5	0,023-0,045
25,00	●	25	90	166	25	5	0,023-0,045
26,00	●	26	90	166	25	5	0,023-0,045
28,00	●	28	90	166	25	5	0,023-0,045

Roughing cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²
166206	⟨1000	⟨850	⟨240	Titanium ⟨1200
	vc = m/min.			
166206	25-65	35 - 45	35 - 55	10-25

HSS-Co | coated | DIN 327
Typ HR | Teeth 4-5 | 30° Twist
Centre cut | 6535 HB shank | short
UNI | Vc



N° article	166206 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
6,00	●	6	8	52	6	4	0,006-0,011
8,00	●	8	11	61	10	4	0,010-0,016
10,00	●	10	13	63	10	4	0,013-0,021
12,00	○	12	16	73	12	4	0,016-0,026
14,00	●	14	16	73	12	4	0,016-0,026
16,00	●	16	19	79	16	4	0,020-0,032
18,00	○	18	19	79	16	4	0,020-0,032
20,00	●	20	22	88	20	4	0,023-0,038
25,00	○	25	26	102	25	5	0,023-0,038
30,00	○	30	26	102	25	5	0,023-0,038

Roughing cutter HSS-PM Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²
164375	⟨1000	⟨850	⟨240	Titanium ⟨1200
	vc = m/min.			
164375	20-75	30 - 45	35 - 65	30-45

HSS-PM | coated | DIN 844
Typ HR | Teeth 4-5 | 30° Twist
Centre cut | 1835 B shank | long
UNI | Vc



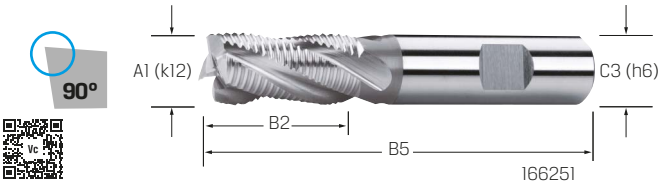
N° article	164375 AlTiN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
6,00	●	6	13	57	6	4	0,030-0,042
8,00	●	8	19	69	10	4	0,035-0,062
9,00	●	9	19	69	10	5	0,035-0,062
10,00	●	10	22	72	10	5	0,058-0,077
11,00	●	11	22	79	12	5	0,058-0,077
12,00	●	12	26	83	12	5	0,069-0,092
13,00	●	13	26	83	12	5	0,069-0,092
14,00	●	14	26	83	12	5	0,069-0,092
15,00	●	15	26	83	12	5	0,069-0,092
16,00	●	16	32	92	16	5	0,115-0,127
18,00	●	18	32	92	16	5	0,115-0,127
20,00	●	20	38	104	20	5	0,115-0,150
22,00	○	22	38	104	20	5	0,115-0,150
25,00	●	25	45	121	25	5	0,115-0,150

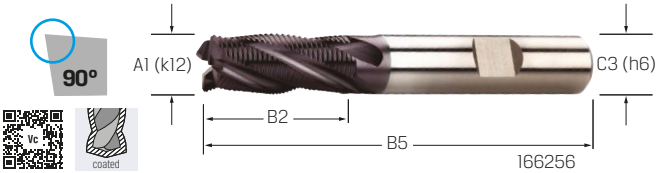
Roughing cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²
166251	⟨1000	⟨850	⟨240	Titanium ⟨1200
166256				
	vc = m/min.			
166251	12-40	18 - 25	20 - 30	5-15
166256	25-65	35 - 45	35 - 55	10-25

HSS-Co | DIN 844 | Typ HR
Teeth 4-5 | 30° Twist | Centre cut
1835 B shank | long | UNI



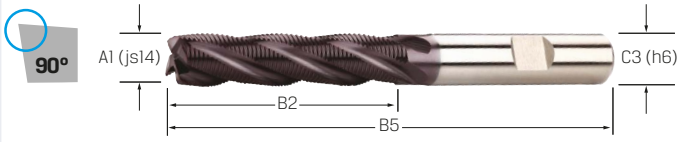


N° article	166251	166256 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
6,00	●	●	6	13	57	6	4	0,006-0,013
8,00	●	●	8	19	69	10	4	0,010-0,019
10,00	●	●	10	22	72	10	4	0,013-0,025
12,00	●	●	12	25	83	12	4	0,016-0,030
14,00	●	●	14	26	83	12	4	0,016-0,030
16,00	●	●	16	32	92	16	4	0,020-0,038
18,00	●	●	18	32	92	16	4	0,020-0,038
20,00	●	●	20	38	104	20	4	0,023-0,045
22,00	●	●	22	38	104	20	5	0,023-0,045
25,00	●	●	25	45	121	25	5	0,023-0,045
30,00	●	●	30	45	121	25	5	0,023-0,045

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
166486	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
	vc = m/min.					
166486	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | coated | DIN 844
Typ HR | Teeth 4-5 | 30° Twist
Centre cut | 1835 B shank | overlong
UNI | Vc



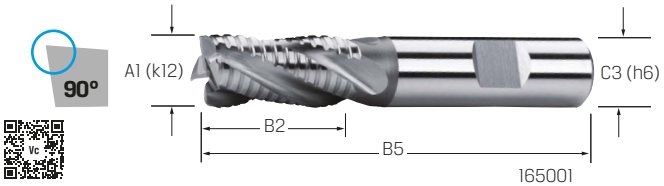
N° article	166486 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
6,00	●	6	24	68	6	4	0,006-0,011
8,00	●	8	38	88	10	4	0,010-0,016
10,00	●	10	45	95	10	4	0,013-0,021
12,00	●	12	53	110	12	4	0,016-0,026
16,00	●	16	63	123	16	4	0,020-0,032
20,00	●	20	75	141	20	4	0,023-0,038
25,00	●	25	90	166	25	5	0,023-0,038

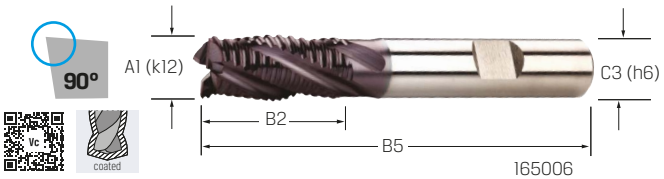
Roughing cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²
165001 / 165006	⟨1000	⟨850	⟨240	Titanium ⟨1200
vc = m/min.				
165001	12-35	18 - 25	20 - 30	5-15
165006	25-65	35 - 45	35 - 55	10-25

HSS-Co | DIN 844 | Typ NF | Teeth 4-5 | 30° Twist | Centre cut | 1835 B shank | long | UNI

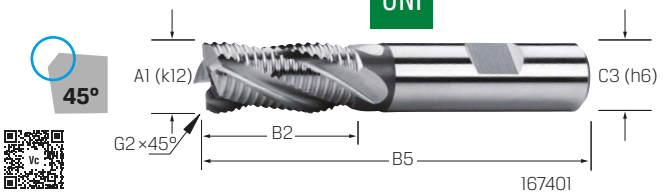


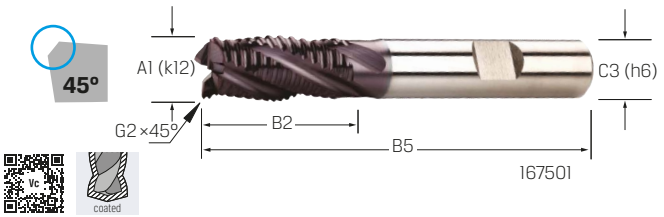


N° article	165001	165006 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
6,00	●	●	6	13	57	6	4	0,006-0,013
8,00	●	●	8	19	69	10	4	0,010-0,019
9,00	●	–	9	19	69	10	4	0,010-0,019
10,00	●	●	10	22	72	10	4	0,013-0,025
12,00	●	●	12	26	83	12	4	0,016-0,030
14,00	●	●	14	26	83	12	4	0,016-0,030
16,00	●	●	16	32	92	16	4	0,020-0,038
18,00	●	○	18	32	92	16	4	0,020-0,038
20,00	●	●	20	38	104	20	4	0,023-0,045
22,00	●	●	22	38	104	20	5	0,023-0,045
25,00	●	●	25	45	121	25	5	0,023-0,045

	P N/mm²	M N/mm²	K HB	S N/mm²
167401 / 167501	⟨1000	⟨850	⟨240	Titanium ⟨1200
vc = m/min.				
167401	12-40	18 - 25	20 - 30	5-15
167501	25-65	35 - 45	35 - 55	10-25

HSS-Co | DIN 844 | Typ NR | Teeth 4-5 | 30° Twist | Centre cut | 1835 B shank | long | UNI

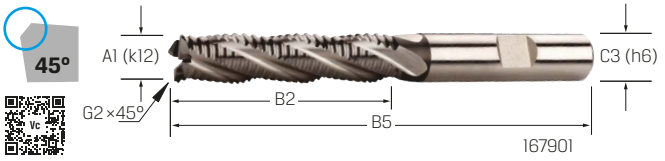


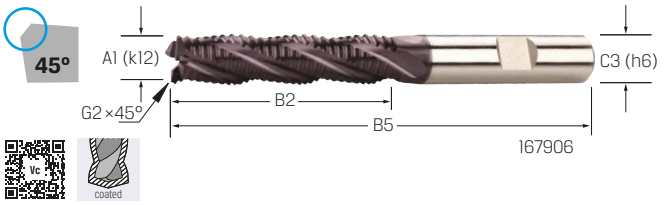


N° article	167401	167501 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
6,00	●	●	6	13	57	6	4	0,006-0,013
8,00	●	●	8	19	69	10	4	0,010-0,019
10,00	●	●	10	22	72	10	4	0,013-0,025
12,00	●	●	12	26	83	12	4	0,016-0,030
14,00	●	●	14	26	83	12	4	0,016-0,030
16,00	●	●	16	32	92	16	4	0,020-0,038
18,00	●	●	18	32	92	16	4	0,020-0,038
20,00	●	●	20	38	104	20	4	0,023-0,045
22,00	●	●	22	38	104	20	5	0,023-0,045
25,00	●	●	25	45	121	25	5	0,023-0,045

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
167901 / 167906	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
vc = m/min.						
167901	10-35	15 - 25	20 - 30	5-15		
167906	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | DIN 844 | Typ NR | Teeth 4-6 | 30° Twist | Centre cut | 1835 B shank | overlong | UNI





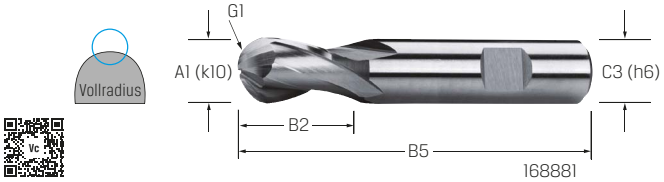
N° article	167901	167906 TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
10,00	●	●	10	45	95	10	4	0,013-0,021
12,00	●	●	12	53	110	12	4	0,016-0,026
14,00	●	●	14	53	110	12	4	0,016-0,026
16,00	●	●	16	63	123	16	4	0,020-0,032
18,00	●	●	18	63	123	16	4	0,020-0,032
20,00	●	●	20	75	141	20	4	0,023-0,038
22,00	●	●	22	75	141	20	5	0,023-0,038
25,00	●	○	25	90	166	25	5	0,023-0,038
30,00	●	●	30	90	166	25	5	0,023-0,038
32,00	○	●	32	106	186	32	6	0,023-0,038

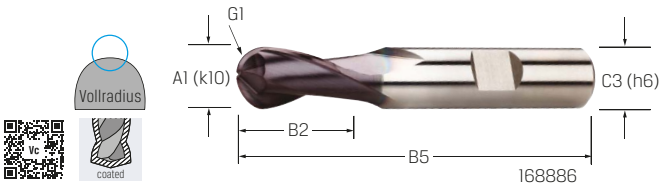
Radius cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
168881 / 168886	⟨1000	⟨850	⟨240	Titanium ⟨1200	Alu ⟨600	Brass ⟨600
vc = m/min.						
168881	10-30	10 - 20	10 - 20	5-12	35-150	30-60
168886	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | Factory standard | Teeth 2 | 25° Twist | Centre cut | 1835 B shank | short | UNI





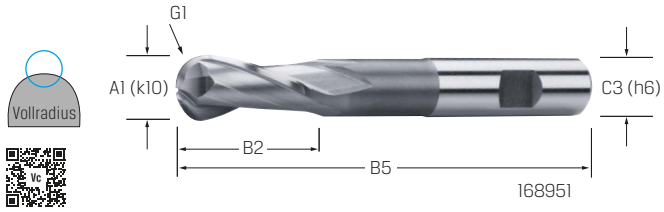
N° article	168881	168886 TiAlN	B2 mm	B5 mm	C3 mm	G1 mm	Z	fz mm/tooth
3,00	●	●	5	49	6	1,5	2	0,003-0,007
4,00	●	●	7	51	6	2	2	0,006-0,010
5,00	●	●	8	52	6	2,5	2	0,007-0,014
6,00	●	●	8	52	6	3	2	0,009-0,017
8,00	●	●	11	61	10	4	2	0,014-0,024
10,00	●	●	13	63	10	5	2	0,018-0,030
12,00	●	●	16	73	12	6	2	0,022-0,035
14,00	●	●	16	73	12	7	72	0,022-0,035
16,00	●	●	19	79	16	8	2	0,027-0,045
18,00	●	●	19	79	16	9	2	0,027-0,045
20,00	●	●	22	88	20	10	2	0,033-0,056
22,00	●	○	22	88	20	11	2	0,033-0,056
25,00	●	●	26	102	25	12,5	2	0,033-0,056
28,00	○	●	26	102	25	14	2	0,033-0,056
30,00	●	●	26	102	25	15	152	0,033-0,056

Radius cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
168951 168956	<1000	<850	<240	Titanium <1200	Alu <600	Brass <600
vc = m/min.						
168951	10-30	10 - 20	10 - 20	5-12	35-150	30-60
168956	20-60	30 - 40	35 - 50	10-25	100-210	75-100

HSS-Co | Factory standard | Teeth 2 | Twist 25° | Centre cut | 1835 B shank | overlong | UNI





N° article	168951	168956 TiAlN	B2 mm	B5 mm	C3 mm	G1 mm	Z	fz mm/tooth
4,00	●	○	11	63	6	2	2	0,003-0,005
5,00	●	●	13	68	6	2,5	2	0,005-0,006
6,00	●	●	13	68	6	3	2	0,006-0,008
8,00	●	●	19	88	10	4	2	0,010-0,012
10,00	●	●	22	95	10	5	2	0,013-0,015
12,00	○	●	26	110	12	6	2	0,016-0,018
14,00	●	○	26	110	12	7	2	0,016-0,018
16,00	●	○	32	123	16	8	2	0,020-0,023
18,00	●	○	32	123	16	9	2	0,020-0,023
20,00	●	●	38	141	20	10	2	0,023-0,028

Quarter round profile cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
169201	<1000	<850	<240	Titanium <1200	Copper, brass	Plastics
vc = m/min.						
169201	25-40	10 - 30	30 - 55	10-25	90-110	100-150

HSS-Co | DIN 6518 B | Teeth 4 | 1835 B shank | UNI



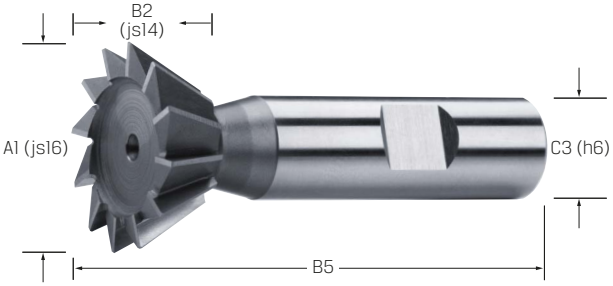
N° article	169201	A1 mm	A2 mm	B5 mm	C3 mm	G4 mm	Z	fz mm/tooth
1,00	●	6	8	60	10	1	4	0,001-0,002
1,50	●	7	9	60	10	1.5	4	0,001-0,002
2,00	●	6	10	60	10	2	4	0,002-0,004
2,50	●	5	11	60	10	2.5	4	0,002-0,004
3,00	●	6	12	60	12	3	4	0,002-0,004
3,50	●	7	13	60	12	3.5	4	0,002-0,004
4,00	●	6	14	60	12	4	4	0,003-0,006
5,00	●	6	16	60	12	5	4	0,003-0,006
6,00	●	9	20	67	16	6	4	0,004-0,008
7,00	●	10	22	71	16	7	4	0,004-0,008
8,00	●	8	24	71	16	8	4	0,004-0,008
10,00	●	8	28	85	25	10	4	0,009-0,018
12,00	●	11	34	90	25	12	4	0,012-0,023

Dovetail milling cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
169351	<1000	<850	<240	Titanium <1200	Copper, brass	Plastics
vc = m/min.						
169351	25-40	10 - 30	30 - 55	10-25	90-110	100-250

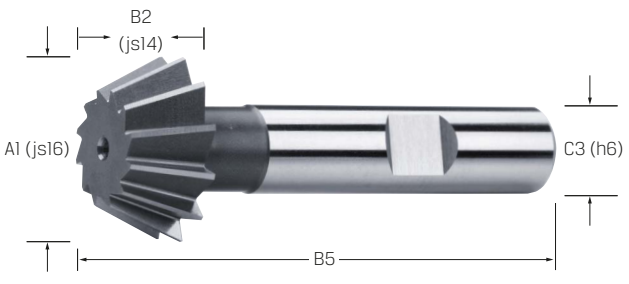
HSS-Co | DIN 1833 C | 0° Twist | 1835 B shank | UNI



N° article	169351 45° and 60°	G5	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
45×16,0	●	45	16	4	60	12	10	0,040-0,080
45×20,0	●	45	20	5	63	12	10	0,060-0,100
45×25,0	●	45	25	6	67	12	10	0,060-0,100
45×32,0	●	45	32	8	71	16	12	0,060-0,100
60×16,0	●	60	16	6	60	12	10	0,060-0,100
60×20,0	●	60	20	8	63	12	10	0,060-0,100
60×25,0	●	60	25	10	67	12	10	0,060-0,100
60×32,0	●	60	32	12	71	16	12	0,060-0,100

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²	
169361	<1000	<850	<240	Titanium <1200	Copper, brass	Plastics
vc = m/min.						
169361	25-40	10 - 30	30 - 55	10-25	90-110	100-250

HSS-Co | DIN 1833 D | 0° Twist | 1835 B shank | UNI

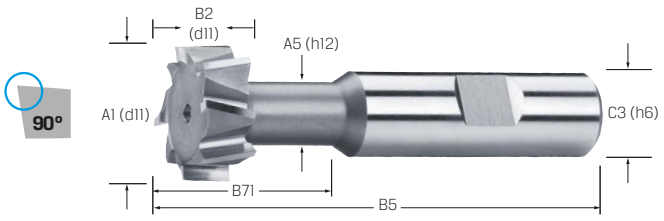


N° article	169361 45° and 60°	G5	A1 mm	B2 mm	B5 mm	C3 mm	Z	fz mm/tooth
45×16,0	●	45	16	4	60	12	10	0,040-0,080
45×20,0	●	45	20	5	63	12	10	0,060-0,100
45×25,0	●	45	25	6	67	12	10	0,060-0,100
45×32,0	●	45	32	8	71	16	12	0,060-0,100
60×16,0	●	60	16	6	60	12	10	0,060-0,100
60×20,0	●	60	20	8	63	12	10	0,060-0,100
60×25,0	●	60	25	10	67	12	10	0,060-0,100
60×32,0	●	60	32	12	71	16	12	0,060-0,100

T-slot end mill HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		HSS-Co	DIN 851	Typ N
169311	⟨1000	⟨850	⟨240	Titanium ⟨1200	Copper, brass	Plastics			
	vc = m/min.						10° Twist		
169311	25-40	10 - 30	30 - 55	10-25	90-110	100-250			1835 B shank
							Cross toothing	UNI	



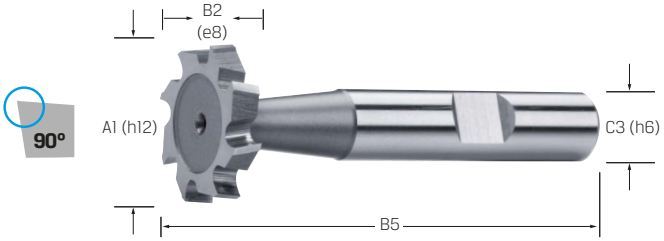
N° article	169311	A1 mm	A5 mm	B2 mm	B5 mm	B71 mm	C3 mm	Z	T-slot DIN 650	fz mm/tooth
12,5×6	●	12,5	5	6	57	17	10	6	6	0,004-0,008
16×8	●	16	7	8	62	22	10	6	8	0,004-0,008
18×8	●	18	8	8	70	25	12	6	10	0,004-0,008
21×9	●	21	10	9	74	29	12	6	12	0,006-0,012
25×11	●	25	12	11	82	34	16	8	14	0,006-0,012
28×12	●	28	13	12	85	37	16	8	16	0,006-0,012
32×14	●	32	15	14	90	42	16	8	18	0,006-0,012
36×16	●	36	17	16	103	47	25	8	20	0,006-0,012
40×18	●	4	19	18	108	52	25	10	22	0,006-0,012

Slitting cutter HSS-Co Universal

PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²		HSS-Co	DIN 850	10° Twist
169331	⟨1000	⟨850	⟨240	Titanium ⟨1200	Copper, brass	Plastics			
	vc = m/min.								
169331	25-40	10 - 30	30 - 55	10-25	90-110	100-250		1835 B shank	Cross toothing
							UNI		

≤ 7.5 mm straight toothed



N° article	169331 for woodruff keys	A1 mm	B5 mm	B2 mm	C3 mm	Z	fz mm/tooth
4,50×1,0	●	4,5	50	1	6	6	0,004-0,008
7,50×1,5	●	7,5	50	1	6	6	0,008-0,020
7,50×2,0	●	7,5	50	2	6	6	0,008-0,020
10,50×2,0	●	1,5	50	2	6	6	0,030-0,055
10,50×2,5	●	1,5	50	2	6	6	0,030-0,055
10,50×3,0	●	1,5	50	3	6	6	0,030-0,055
13,50×3,0	●	13,5	56	3	10	6	0,040-0,080
13,50×4,0	●	13,5	56	4	10	6	0,040-0,080
16,50×3,0	●	16,5	56	3	10	6	0,040-0,080
16,50×4,0	●	16,5	56	4	10	6	0,040-0,080
16,50×5,0	●	16,5	56	5	10	6	0,040-0,080
19,50×4,0	●	19,5	63	4	10	8	0,040-0,080
19,50×5,0	●	19,5	63	5	10	8	0,040-0,080
22,50×5,0	●	22,5	63	5	10	8	0,060-0,100
22,50×6,0	●	22,5	63	6	10	8	0,060-0,100
22,50×8,0	●	22,5	63	8	10	8	0,060-0,100
25,50×6,0	●	25,5	63	6	10	10	0,060-0,100
28,50×6,0	●	28,5	63	6	10	10	0,060-0,100
28,50×8,0	●	28,5	63	8	10	10	0,060-0,100
28,50×10,0	●	28,5	71	10	12	10	0,060-0,100
32,50×8,0	●	32,5	71	8	12	10	0,060-0,100
32,50×10,0	●	32,5	71	10	12	10	0,060-0,100
45,50×10,0	●	45,5	71	10	12	12	0,060-0,100

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- **flexible** You determine the time of dispatch and pick-up
- **economical:** short throughput times guarantee fast reutilisation
- **efficient:** simple handling, low effort

Overview solid carbide end mills

Product line 17

Cat. no.	Brand	⌀ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
175100	PREMUS	0,60-12,00	17/206	N	Tooth 1	SC		short	45°	Factory standard	
175200	PREMUS	0,10-2,00	17/206	UNI	Teeth 2	SC		short	90°	Factory standard	
175207	PREMUS	0,80/2-3,00/20	17/206	UNI	Teeth 2	SC	coated	overlong	90°	Factory standard	
175210	MIKRON TOOL	0,30-6,00	17/207	UNI	Teeth 2	SC	coated	1,5 × Al	45°	Factory standard	
175212	MIKRON TOOL	0,30-6,00	17/207	UNI	Teeth 2	SC	coated	3 × Al	45°	Factory standard	
175214	MIKRON TOOL	0,30-6,00	17/207	UNI	Teeth 2	SC	coated	5 × Al	45°	Factory standard	
175215-175216	MIKRON TOOL	0,20-1,00	17/210	UNI	Teeth 3	SC	coated	3 × Al 5 × Al		Factory standard	
175217-175218	MIKRON TOOL	0,20-1,00	17/214	S	Teeth 3	SC	coated	3 × Al 5 × Al		Factory standard	
175221-175222	MIKRON TOOL	0,40-1,00	17/218	UNI	Teeth 4	SC	coated	3 × Al 5 × Al		Factory standard	
175223 - 175224	MIKRON TOOL	0,40-1,00	17/225	S	Teeth 4	SC	coated	3 × Al 5 × Al		Factory standard	
175229	PREMUS GP	1,00-14,00	17/207	UNI	Teeth 2	SC	coated	short	90°	Factory standard	
175242	PREMUS GP	2,00-14,00	17/208	UNI	Teeth 2	SC	coated	long	90°	Factory standard	
175246	PRETEC	1,00-20,00	17/208	UNI	Teeth 2	SC	coated	long	90°	DIN 6527	
175257	PREMUS GP	2,00-20,00	17/208	N	Teeth 2	SC	coated	long	90°	Factory standard	
175265	PREMUS	2,00-8,00	17/246	P	Teeth 2	SC	coated	overlong	R	Factory standard	
175274-175276	HAIMER	2,00-20,00	17/209	N	Teeth 2	SC		1,75-2,5 × Al	45°	DIN 6527	
175277-175279	HAIMER	2,00-20,00	17/209	N	Teeth 2	SC	coated	1,75-2,5 × Al	45°	DIN 6527	
175309	PREMUS GP	1,00-20,00	17/212	UNI	Teeth 3	SC	coated	extra short	90°	Factory standard	
175315	PREMUS GP	2,00-20,00	17/212	UNI	Teeth 3	SC	coated	short	45°	Factory standard	
175316	PRETEC	2,00-20,00	17/210	UNI	Teeth 3	SC	coated	extra short	90°	Factory standard	
175317	PREMUS GP	1,00-20,00	17/212	UNI	Teeth 3	SC	coated	short	90°	Factory standard	
175341-175343	HAIMER	2,00-20,00	17/214	UNI	Teeth 3	SC	coated	1,75-2,5 × Al	90°	Factory standard	
175346	PRETEC	2,80-20,00	17/213	UNI	Teeth 3	SC	coated	long	90°	DIN 6527	
175347	PREMUS GP	3,00-20,00	17/213	UNI	Teeth 3	SC	coated	long	45°	Factory standard	
175349	PREMUS GP	2,00-20,00	17/213	UNI	Teeth 3	SC	coated	long	90°	Factory standard	
175351 - 175354	MIKRON TOOL	0,20-1,00	17/218	S	Teeth 3-4	SC	coated	3,5 × Al 5 × Al		Factory standard	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	⌀ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
175352	MIKRON TOOL	1,00-8,00	17/211	UNI	Teeth 3	SC	coated	2,5 × Al	45°	Factory standard	
175353+ 175356	MIKRON TOOL	0,20-1,00	17/218	M	Teeth 3-4	SC	coated	3,5 × Al 5 × Al	Factory standard		
175362	PREMUS GP	1,00-20,00	17/215	M	Teeth 3	SC	coated	short	45°	Factory standard	
175364	PREMUS GP	1,00-20,00	17/215	M	Teeth 3	SC	coated	short	90°	Factory standard	
175371	PREMUS GP	3,00-20,00	17/216	M	Teeth 3	SC	coated	long	45°	Factory standard	
175373	PREMUS GP	2,00-20,00	17/216	M	Teeth 3	SC	coated	long	90°	Factory standard	
175381	PREMUS GP	3,00-25,00	17/217	N	Teeth 3	SC	coated	long	90°	Factory standard	
175383	PREMUS GP	5,00-20,00	17/217	N	Teeth 3	SC	coated	overlong	90°	Factory standard	
175392	PREMUS	6,00-20,00	17/232	N	Teeth 3	SC		long	45°	Factory standard	
175393- 175395	HAIMER	2,00-20,00	17/217	N	Teeth 3	SC		1,75-2,5 × Al	45°	DIN 6527	
175396- 175398	HAIMER	2,00-20,00	17/217	N	Teeth 3	SC	coated	1,75-2,5 × Al	45°	DIN 6527	
175422	MIKRON TOOL	1,00-8,00	17/219	UNI	Teeth 4	SC	coated		90°	Factory standard	
175423 175424 175426	MIKRON TOOL	1,00-8,00	17/219	UNI	Teeth 4	SC	coated		90°	Factory standard	
175444	PRETEC	3,00-20,00	17/221	UNI	Teeth 4	SC	coated	short	45°	Factory standard	
175447	PRETEC	3,00-20,00	17/221	UNI	Teeth 4	SC	coated	long	45°	Factory standard	
175448	PREMUS	3,00-20,00	17/219	UNI	Teeth 4	SC	coated	long	45°	Factory standard	
175450	PREMUS	3,00×19-25,00×90	17/220	UNI	Teeth 4	SC		long	45°	Factory standard	
175455	PREMUS	3,00×19-25,00×90	17/220	UNI	Teeth 4	SC	coated	overlong	45°	Factory standard	
175460- 175462	HAIMER	2,00-20,00	17/221	UNI	Teeth 4	SC	coated	1,75-2,5 × Al	45°	DIN 6527	
175463- 175465	HAIMER	2,00-20,00	17/221	UNI	Teeth 4	SC	coated	1,75-2,5 × Al	45°	DIN 6527	
175484	PREMUS GP	3,00-20,00	17/220	UNI	Teeth 4	SC	coated	short	45°	Factory standard	
175487	PREMUS GP	3,00-20,00	17/222	UNI	Teeth 4	SC	coated	long	45°	Factory standard	
175489	PREMUS GP	5,00-20,00	17/223	UNI	Teeth 4	SC	coated	overlong	45°	Factory standard	
175491	PREMUS GP	2,00-20,00	17/220	UNI	Teeth 4	SC	coated	short	90°	Factory standard	
175492	PREMUS GP	3,00-20,00	17/222	UNI	Teeth 4	SC	coated	long	90°	Factory standard	
175493	PREMUS GP	2,00-20,00	17/222	UNI	Teeth 4	SC	coated	long	90°	Factory standard	

Overview solid carbide end mills

Product line 17

Cat. no.	Brand	⦰ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
175496	FREMUS GP	5,00-20,00	17/223	UNI	Teeth 4	SC	coated	overlong	90°	Factory standard	
175497	FREMUS GP	6,00-20,00	17/224	UNI	Teeth 4	SC	coated	overlong	90°	Factory standard	
175499+ 175506	FREMUS GP	6,00-20,00	17/227	UNI	Teeth 5 Teeth 4-5	SC	coated		R	Factory standard	
175500	FREMUS	6,00-20,00	17/223	UNI	Teeth 4	SC	coated	2 × Al	45°	Factory standard	
175501	FREMUS GP	6,00-20,00	17/228	UNI	Teeth 4-5	SC	coated	3 × Al	R	Factory standard	
175503	FREMUS GP	6,00-20,00	17/228	UNI	Teeth 4-5	SC	coated	5 × Al	R	Factory standard	
175507	FREMUS GP	6,00-20,00	17/228	M	Teeth 4-5	SC	coated	3 × Al	R	Factory standard	
175508+ 175509	FREMUS GP	6,00-20,00	17/229	M	Teeth 4-5	SC	coated	3 × Al 5 × Al	R	Factory standard	
175510	FREMUS GP	3,00-20,00	17/224	P	Teeth 4	SC	coated	short	45°	Factory standard	
175512	FREMUS GP	3,00-20,00	17/224	P	Teeth 4	SC	coated	long	45°	Factory standard	
175514	FREMUS GP	3,00-20,00	17/224	P	Teeth 4	SC	coated	overlong	45°	Factory standard	
175519	FREMUS	6,00-20,00	17/225	P	Teeth 5	SC	coated	3 × Al	45°	Factory standard	
175547	FREMUS	6,00-20,00	17/224	UNI	Teeth 4	SC	coated	overlong	45°	Factory standard	
175550- 175552	HAIMER	10,00-32,00	17/229	UNI	Teeth 5	SC	coated	1,75-2,5 × Al	45°	DIN 6527	
175560- 175562	HAIMER	6,00-20,00	17/230	UNI	Teeth 5	SC	coated	2,6-3,5 × Al	45°	DIN 6527	
175563- 175565	HAIMER	6,00-20,00	17/230	UNI	Teeth 5	SC	coated	2,6-3,5 × Al	45°	DIN 6527	
175580	FREMUS	3,00-20,00	17/227	N	Teeth 4	SC	coated	long	45°	Factory standard	
175582	FREMUS	6,00-16,00	17/227	N	Teeth 4	SC	coated	overlong	45°	Factory standard	
175584	FREMUS GP	3,00-20,00	17/225	M	Teeth 4	SC	coated	short	45°	Factory standard	
175585	FREMUS GP	3,00-20,00	17/226	M	Teeth 4	SC	coated	short	90°	Factory standard	
175587	FREMUS GP	1,00-20,00	17/226	M	Teeth 4	SC	coated	long	45°	Factory standard	
175588	FREMUS GP	3,00-20,00	17/226	M	Teeth 4	SC	coated	long	90°	Factory standard	
175589	FREMUS	6,00-20,00	17/228	M	Teeth 5	SC	coated	3 × Al	45°	Factory standard	
175599	FREMUS	6,00-20,00	17/229	S	Teeth 5	SC	coated	3 × Al	45°	Factory standard	
175600	FREMUS	3,00-16,00	17/231	H	Teeth 6	SC	coated	short	90°	Factory standard	
175602	FREMUS	3,00-16,00	17/231	H	Teeth 6	SC	coated	short	90°	Factory standard	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	⌀ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
175605	PREMUS	5,0-16,0	17/231	H	Teeth 6-8	SC	coated	short	45°	DIN 6527	
175616	PRETEC	4,00-32,00	17/230	UNI	Teeth 6-8	SC	coated	long	45°	Factory standard	
175626	PRETEC	4,00-32,00	17/230	UNI	Teeth 6-8	SC	coated	overlong	45°	Factory standard	
175633	PREMUS	6,00-20,00	17/231	UNI	Teeth 7	SC	coated	long	90°	Factory standard	
176028	PREMUS	4,00-20,00	17/232	H	Teeth 6	SC	coated	long	90°	Factory standard	
176068	PREMUS	4,00-20,00	17/232	H	Teeth 6	SC	coated	overlong	90°	Factory standard	
177015	PRETEC	6,00-20,00	17/233	UNI	Teeth 4	SC	coated	long	45°	DIN 6527	
177405	PRETEC	6,00-25,00	17/233	UNI	Teeth 5-6	SC	coated	long	45°	DIN 6527	
177408	PREMUS GP	4,00-20,00	17/232	UNI	Teeth 4	SC	coated	short	45°	Factory standard	
177410	PREMUS GP	6,00-25,00	17/233	UNI	Teeth 4	SC	coated	long	45°	Factory standard	
177412	PREMUS GP	6,00-20,00	17/233	UNI	Teeth 4	SC	coated	overlong	45°	Factory standard	
177420-177422	HAIMER	6,00-20,00	17/234	UNI	Teeth 4	SC	coated	1,75-2,5 × Al	45°	DIN 6527	
178200	PREMUS	0,30-2,00	17/236	UNI	Teeth 2	SC		short	VR	Factory standard	
178205	PREMUS	0,50-2,00	17/236	UNI	Teeth 2	SC	coated	short	VR	Factory standard	
178230	PRETEC	2,00-20,00	17/236	UNI	Teeth 2	SC	coated	long	VR	DIN 6527	
178250	PREMUS	1,00-16,00	17/236	UNI	Teeth 2	SC		short	VR	Factory standard	
178255	PREMUS	1,00-16,00	17/236	UNI	Teeth 2	SC	coated	short	VR	Factory standard	
178265	PREMUS	2,00-20,00	17/236	UNI	Teeth 2	SC	coated	long	VR	Factory standard	
178270	PREMUS	2,00-12,00	17/237	UNI	Teeth 2	SC		overlong	VR	Factory standard	
178271	PREMUS	10,00-16,00	17/237	UNI	Teeth 2	SC		overlong	VR	Factory standard	
178275	PREMUS	2,00-12,00	17/237	UNI	Teeth 2	SC	coated	overlong	VR	Factory standard	
178276	PREMUS	10,00-20,00	17/237	UNI	Teeth 2	SC	coated	overlong	VR	Factory standard	
178277	PREMUS	1,00×64-8,00×64	17/239	H	Teeth 2	SC	coated		VR	Factory standard	
178282-178284	HAIMER	2,00-20,00	17/237	UNI	Teeth 2	SC	coated	1,75-2,5 × Al	VR	DIN 6527	
178290-178292	HAIMER	2,00-20,00	17/238	N	Teeth 2	SC		1,75-2,5 × Al	VR	DIN 6527	
178296-178298	HAIMER	2,00-20,00	17/238	N	Teeth 2	SC	coated	1,75-2,5 × Al	VR	DIN 6527	

Overview solid carbide end mills

Product line 17

Cat. no.	Brand	⌀ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
178415	REMUS	2,00-20,00	17/239	UNI	Teeth 4	SC	coated	long	VR	DIN 6527	
178430	REMUS	3,00×20-16,00×90	17/239	UNI	Teeth 4	SC		overlong	VR	Factory standard	
178435	REMUS	3,00×20-16,00×90	17/239	UNI	Teeth 4	SC	coated	overlong	VR	Factory standard	
178455	REMUS	6,00-20,00	17/240	UNI	Teeth 4	SC	coated	short	VR	Factory standard	
178465	REMUS	6,00-20,00	17/240	UNI	Teeth 4	SC	coated	overlong	VR	Factory standard	
178473	MIKRON TOOL	1,00-8,00	17/247	UNI	Teeth 3	SC	coated	2,5 × Al	R	Factory standard	
178474	MIKRON TOOL	1,00-8,00	17/211	UNI	Teeth 3	SC	coated	5 × Al	90°	Factory standard	
178475	MIKRON TOOL	1,00-8,00	17/247	UNI	Teeth 3	SC	coated	5 × Al	R	Factory standard	
178480	MIKRON TOOL	1,00-8,00	17/240	UNI	Teeth 4	SC	coated	2 × Al	R	Factory standard	
178482	MIKRON TOOL	1,00-8,00	17/240	UNI	Teeth 4	SC	coated	3 × Al	R	Factory standard	
178484	MIKRON TOOL	1,00-8,00	17/240	UNI	Teeth 4	SC	coated	3,5 × Al	R	Factory standard	
178486	MIKRON TOOL	1,00-8,00	17/240	UNI	Teeth 4	SC	coated	4-5 × Al	R	Factory standard	
178488	MIKRON TOOL	1,00-8,00	17/240	UNI	Teeth 4	SC	coated	5 × Al	VR	Factory standard	
178502	MIKRON TOOL	0.30-8.00	17/238	UNI	Teeth 2	SC	coated	2 × Al	VR	Factory standard	
178504	MIKRON TOOL	0.30-8.00	17/238	UNI	Teeth 2	SC	coated	3 × Al	VR	Factory standard	
178506	MIKRON TOOL	0,30-8,00	17/238	UNI	Teeth 2	SC	coated	5 × Al	VR	Factory standard	
178510	REMUS	10,5×2-32,5×5	17/234	UNI		SC	coated			DIN 850	
178511	REMUS	38.5 x 10-45,5×10	17/234	UNI		SC	coated			DIN 850	
178512	REMUS	12.5 x 6-32×14	17/235	UNI		SC	coated			DIN 851	
178514	REMUS	12,5×6-32×14	17/235	UNI		SC	coated			DIN 851	
178516	REMUS	12.00 - 38.00	17/235	UNI		SC	coated			DIN 1833 C	
178518	REMUS	12.00 - 38.00	17/235	UNI		SC	coated			DIN 1833 C	
178520	REMUS	12.00 - 38.00	17/235	UNI		SC	coated			DIN 1833 C	
178522	REMUS	12.00 - 38.00	17/235	UNI		SC	coated			DIN 1833 C	
178700	MIKRON TOOL	0,30-2,00	17/241	UNI	Teeth 4-6	SC	coated		45°	Factory standard	
178702	MIKRON TOOL	0,36-5,70	17/241	UNI	Teeth 3-6	SC	coated	3 × Al	45°	Factory standard	

Cutting data / CAD data

You can find the cutting data at:
https://precitool.de/service/schnittdaten

The CAD data can be found at:
https://precitool.de/service/cad

Cat. no.	Brand	⌀ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
178703	MIKRON TOOL	0,36-5,70	17/241	UNI	Teeth 3-6	SC	coated	5 × Al	45°	Factory standard	
178705	MIKRON TOOL	1,00-6,00	17/241	UNI	Teeth 3	SC	coated	4 × Al	R	Factory standard	
178706	MIKRON TOOL	0,90-5,70	17/242	UNI	Teeth 4-6	SC	coated	3 × Al	45°	Factory standard	
178707	MIKRON TOOL	0,90-5,70	17/242	UNI	Teeth 4-6	SC	coated	6 × Al	45°	Factory standard	
178710	REMUS	4,00-20,00	17/242	UNI	Teeth 4	SC		short		DIN 6527	
178715	REMUS	4,00-20,00	17/242	UNI	Teeth 4	SC	coated	short		DIN 6527	
178720	REMUS	4,00-20,00	17/242	UNI	Teeth 4	SC		short		DIN 6527	
178725	REMUS	4,00-20,00	17/242	UNI	Teeth 4	SC	coated	short		DIN 6527	
178730	REMUS	4,00-20,00	17/242	UNI	Teeth 4	SC		short		DIN 6527	
178735	REMUS	4,00-20,00	17/242	UNI	Teeth 4	SC	coated	short		DIN 6527	
178740	HAIMER	4,00-10,00	17/243	UNI	Teeth 4-6	SC	coated		60°	DIN 6527	
178741	HAIMER	4,00-10,00	17/243	UNI	Teeth 4-6	SC	coated		90°	DIN 6527	
178742	HAIMER	4,00-10,00	17/243	UNI	Teeth 4-6	SC	coated		120°	DIN 6527	
178760	REMUS	3,00-20,00	17/243	UNI	Teeth 2	SC		short		Factory standard	
178761	REMUS	3,00-20,00	17/243	UNI	Teeth 2	SC		short		Factory standard	
178762	REMUS	3,00-20,00	17/243	UNI	Teeth 2	SC		short		Factory standard	
178765	REMUS	3,00-20,00	17/243	UNI	Teeth 2	SC	coated	short		Factory standard	
178766	REMUS	3,00-20,00	17/243	UNI	Teeth 2	SC	coated	short		Factory standard	
178767	REMUS	3,00-20,00	17/243	UNI	Teeth 2	SC	coated	short		Factory standard	
178770	HAIMER	4,00-10,00	17/244	UNI	Teeth 2	SC	coated	1,75-2,5 × Al	60°	DIN 6527	
178771	HAIMER	4,00-10,00	17/244	UNI	Teeth 2	SC	coated	1,75-2,5 × Al	90°	DIN 6527	
178772	HAIMER	4.00 - 10.00	17/244	UNI	Teeth 2	SC	coated	1,75-2,5 × Al	120°	DIN 6527	
178773	HAIMER	4,00-10,00	17/244	UNI	Teeth 2	SC	coated	1,75-2,5 × Al	142°	DIN 6527	
178810	REMUS	0,50-6,00	17/244	UNI	Teeth 4	SC		short	R	Factory standard	
178815	REMUS	0,50-6,00	17/244	UNI	Teeth 4	SC	coated	short	R	Factory standard	
178820	HAIMER	ER0,25-ER2,00	17/244	UNI	Teeth 4	SC	coated	0,75 × Al		DIN 6527	

Overview solid carbide end mills

Product line 17

Cat. no.	Brand	⌀ mm	Page	Material	Number of edges	Cutting material	Coating	Length	Cutting edge	DIN	End mill
178855	FREMUS	2,00-16,00	17/244	UNI	Teeth 3-4	SC	coated			Factory standard	
179010	MIKRON TOOL	0,30×0,05-6,00×1,00	17/245	UNI	Teeth 2	SC	coated	1,5 × Al	R	Factory standard	
179012	MIKRON TOOL	0,30×0,05-6,00×1,00	17/245	UNI	Teeth 2	SC	coated	3 × Al	R	Factory standard	
179014	MIKRON TOOL	0,30×0,05-6,00×1,00	17/245	UNI	Teeth 2	SC	coated	5 × Al	R	Factory standard	
179022	MIKRON TOOL	1,00×0,10-8,00×1,50	17/248	UNI	Teeth 4	SC	coated	2 × Al	R	Factory standard	
179023	MIKRON TOOL	1,00×0,10-8,00×1,50	17/248	UNI	Teeth 4	SC	coated	3 × Al	R	Factory standard	
179024	MIKRON TOOL	1,00×0,10-8,00×1,50	17/248	UNI	Teeth 4	SC	coated	4 × Al	R	Factory standard	
179026	MIKRON TOOL	1,00×0,10-8,00×1,50	17/248	UNI	Teeth 4	SC	coated	5 × Al	R	Factory standard	
179045	FREMUS	3,00×0.3-16,00×2.00	17/246	N	Teeth 2	SC	coated	long	R	Factory standard	
179050	HAIMER	2,00×0,2-20,00×4,0	17/250	UNI	Teeth 4	SC	coated	6535 HA shank	R	DIN 6527	
179051	HAIMER	2,00×0,2-20,00×4,0	17/250	UNI	Teeth 4	SC	coated	6535 HB shank	R	DIN 6527	
179052	HAIMER	2,00×0,2-20,00×4,0	17/250	UNI	Teeth 4	SC	coated	SAFE-LOCK	R	DIN 6527	
179055	FREMUS	3,00×0.3-16,00×2.0	17/246	N	Teeth 2	SC	coated	overlong	R	Factory standard	
179064	FREMUS GP	4,00×0.25-20,00×5.00	17/249	UNI	Teeth 4	SC	coated	long	R	Factory standard	
179065	FREMUS	2,00×0.1-20,00×4.0	17/249	UNI	Teeth 4	SC	coated	long	R	Factory standard	
179069	FREMUS GP	4,00×0.5-20,00×5.00	17/251	M	Teeth 4	SC	coated	long	R	Factory standard	
179070	FREMUS	2,00×6×0,15×45-16,00×100×3,5×150	17/251	H	Teeth 4	SC	coated		R	Factory standard	
179075	FREMUS	2,00×0.1-20,00×4.0	17/249	UNI	Teeth 4	SC	coated	overlong	R	Factory standard	
179086	FREMUS	3,00×0.3-20,00×2.0	17/251	H	Teeth 6-8	SC	coated	long	R	Factory standard	
179088	FREMUS	3,00×0.3-20,00×2.0	17/252	H	Teeth 6	SC	coated	long	R	Factory standard	
179503	FREMUS	4,00-20,00	17/252	Plastics	Teeth 8	SC	coated	long		Factory standard	
179505	FREMUS	4,00-20,00	17/252	Plastics	Teeth 8	SC	coated	long		Factory standard	
179553	FREMUS	4,00-20,00	17/253	Plastics	Teeth 8	SC	coated	long		Factory standard	
179555	FREMUS	4,00-20,00	17/253	Plastics	Teeth 8	SC	coated	long		Factory standard	

PRECITOOL tolerance fields (e8 - js15)

Nominal dimension range mm	e8	g7	h5	h6	h7	h8	h9	h10	js12	js14	js15
up to 3	-14 / -28	-2 / -12	0 / -4	0 / -6	0 / -10	0 / -14	0 / -25	0 / -40	+50 / -50	+125 / -125	+200 / -200
above 3 to 6	-20 / -38	-4 / -16	0 / -5	0 / -8	0 / -12	0 / -18	0 / -30	0 / -48	+60 / -60	+150 / -150	+240 / -240
above 6 to 10	-25 / -47	-5 / -20	0 / -6	0 / -9	0 / -15	0 / -22	0 / -36	0 / -58	+75 / -75	+180 / -180	+290 / -290
above 10 to 18	-32 / -59	-6 / -24	0 / -8	0 / -11	0 / -18	0 / -27	0 / -43	0 / -70	+90 / -90	+215 / -215	+350 / -350
above 18 to 30	-40 / -73	-7 / -28	0 / -9	0 / -13	0 / -21	0 / -33	0 / -52	0 / -84	+105 / -105	+260 / -260	+420 / -420
above 30 to 50	-50 / -89	-9 / -34	0 / -11	0 / -16	0 / -25	0 / -39	0 / -62	0 / -100	+125 / -125	+310 / -310	+500 / -500
above 50 to 80	-60 / -106	-10 / -40	0 / -13	0 / -19	0 / -30	0 / -46	0 / -74	0 / -120	+150 / -150	+370 / -370	+600 / -600
above 80 to 120	-72 / -126	-12 / -47	0 / -15	0 / -22	0 / -35	0 / -54	0 / -87	0 / -140	+175 / -175	+435 / -435	+700 / -700
above 120 to 180	-85 / -148	-14 / -54	0 / -18	0 / -25	0 / -40	0 / -63	0 / -100	0 / -160	+200 / -200	+500 / -500	+800 / -800
above 180 to 250	-100 / -172	-15 / -61	0 / -20	0 / -29	0 / -46	0 / -72	0 / -115	0 / -185	+230 / -230	+575 / -575	+925 / -925
above 250 to 315	-110 / -191	-17 / -69	0 / -23	0 / -32	0 / -52	0 / -81	0 / -130	0 / -210	+260 / -260	+650 / -650	+1,050 / -1,050
above 315 to 400	-125 / -214	-18 / -75	0 / -25	0 / -36	0 / -57	0 / -89	0 / -140	0 / -230	+285 / -285	+700 / -700	+1,150 / -1,150
above 400 to 500	-135 / -232	-20 / -83	0 / -27	0 / -40	0 / -63	0 / -97	0 / -155	0 / -250	+315 / -315	+775 / -775	+1,250 / -1,250

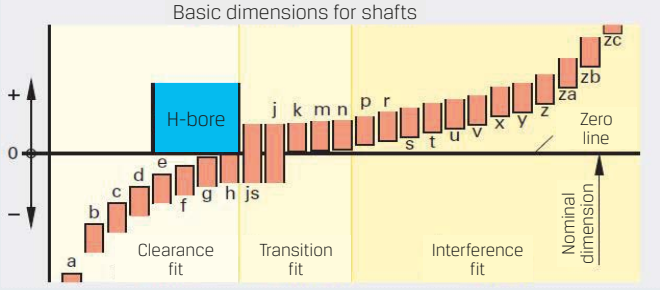
PRECITOOL tolerance fields (js16 - P9)

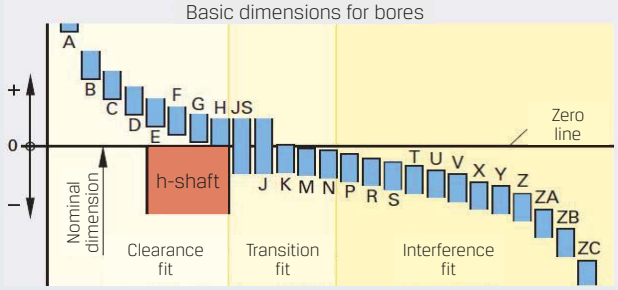
Nominal dimension range mm	js16	k5	k6	k10	m5	m7	H7	H8	H9	P9
up to 3	+300 / -300	+4 / 0	+6 / 0	+40 / 0	+6 / +2	-	+10 / 0	+14 / 0	+25 / 0	-6 / -31
above 3 to 6	+375 / -375	+6 / +1	+9 / +1	+48 / 0	+9 / +4	+16 / +4	+12 / 0	+18 / 0	+30 / 0	-12 / -42
above 6 to 10	+450 / -450	+7 / +1	+10 / +1	+58 / 0	+12 / +6	+21 / +6	+15 / 0	+22 / 0	+36 / 0	-15 / -51
above 10 to 18	+550 / -550	+9 / +1	+12 / +1	+70 / 0	+15 / +7	+25 / +7	+18 / 0	+27 / 0	+43 / 0	-18 / -61
above 18 to 30	+650 / -650	+11 / +2	+15 / +2	+84 / 0	+17 / +8	+29 / +8	+21 / 0	+33 / 0	+52 / 0	-22 / -74
above 30 to 50	+800 / -800	+13 / +2	+18 / +2	+100 / 0	+20 / +9	+34 / +9	+25 / 0	+39 / 0	+62 / 0	-26 / -88
above 50 to 80	+950 / -950	+15 / +2	+21 / +2	+120 / 0	+24 / +11	+41 / +11	+30 / 0	+46 / 0	+74 / 0	-32 / -106
above 80 to 120	+1,100 / -1,100	+18 / +3	+25 / +3	+140 / 0	+28 / +13	+48 / +13	+35 / 0	+54 / 0	+87 / 0	-37 / -124
above 120 to 180	+1,250 / -1,250	+21 / +3	+28 / +3	+160 / 0	+33 / +15	+55 / +15	+40 / 0	+63 / 0	+100 / 0	-43 / -143
above 180 to 250	+1,450 / -1,450	+24 / +4	+33 / +4	+185 / 0	+37 / +17	+63 / +17	+46 / 0	+72 / 0	+115 / 0	-50 / -165
above 250 to 315	+1,600 / -1,600	+27 / +4	+36 / +4	+210 / 0	+43 / +20	+72 / +20	+52 / 0	+81 / 0	+130 / 0	-56 / -186
above 315 to 400	+1,800 / -1,800	+29 / +4	+40 / +4	+230 / 0	+46 / +21	+78 / +21	+57 / 0	+89 / 0	+140 / 0	-62 / -202
above 400 to 500	+2,000 / -2,000	+32 / +5	+45 / +5	+250 / 0	+50 / +23	+86 / +23	+63 / 0	+97 / 0	+155 / 0	-68 / -223

Example of cutter diameter X A1 8$^{(e8)}$

- milling cutter edge diameter : × 10.000^{e8}
- tolerance field e8 at x 10 mm : -25 µm / -47 µm
- diameter range of the milling cutter : × 9.975 mm - 9.953 mm

(Please make sure to observe the small / big letters of the tolerance field)

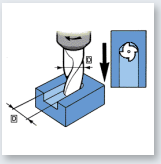






HVM (High Volume Milling)

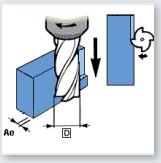
- use of the complete milling cutter, incl. face section
- very high time rate of material removal Q (cm3/min), especially at low and high alloy steels 1,500 N / mm2 tensile strength
- open, very positive blade geometry for the optimum Transport at large cutting depths (ap) and widths (ae)
- stable tool clamping with securing high torques is required for optimum performance





HPM (High Performance Milling)

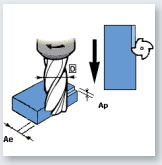
- conscious use of the entire cutting length (ap) and reduced cutting width (ae)
- first choice for difficult-to-machine, high strength and hardened materials
- adapted, positive cutting edge geometry for quiet running and low heat generation at the component
- in conjunction with a highly dynamic machine tool a very large time volume Q (cm^3/min) is possible





HSM (High Speed Milling)

- targeted use with low chip cross sections (ap x ae) and high cutting speeds (Vc)
- first choice in the fine-machining and finishing of all material groups
- optimised cutting geometry for high requirements of dimensional accuracy and surface quality
- the clamping of tools with a small runout error and optimised balance increases the machining results considerably





Cutting edge versions

Radius  Sharp  Chamfer 

Cylindrical shank milling cutter solid carbide Aluminium

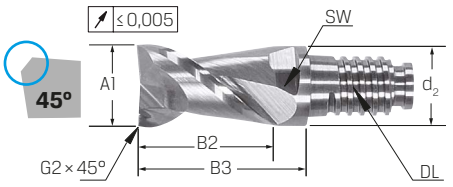
HAIMER

	N N/mm²
170228	Aluminium
170328	
vc = m/min.	
170228	300-500
170328	

Design:
- neck for higher cutting depth
- centre cutting
- polished flute and relief surfaces
- best length repeatability
- fine balanced

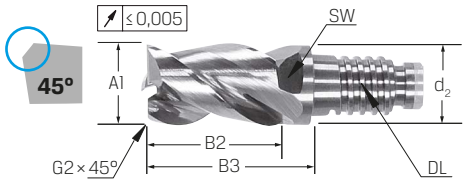
SC | Twist 43° 41° | 45° | N | vc

Teeth 2 | Twist 43° 41° | vc



N° article	170228 Duo-Lock, Power, 1.5× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	15	20	0,1	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	0,12	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	24	32	0,16	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	0,2	20	19.3	16	80	0.050 - 0.130

Teeth 3 | Twist 43° 42° 41° | coated



N° article	170328 Duo-Lock, Power, 1.5× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	15	20	0,1	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	0,12	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	24	32	0,16	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	0,2	20	19.3	16	80	0.050 - 0.130

Cylindrical shank milling cutter solid carbide Universal

HAIMER

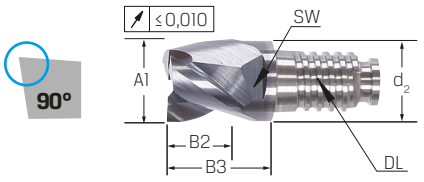
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170320	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170320	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 3

0,75 × A1 | Twist 37° 36° 35° | Centre cut

3-5° | UNI | vc

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- best length repeatability
- sharp cutting edge
- universal coating
- fine balanced



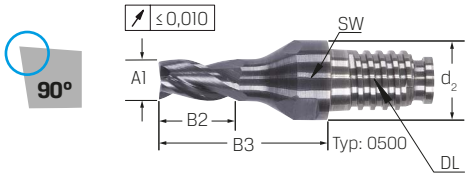
N° article	170320 Duo-Lock, Basic, 0.75× A1	A1 mm	B2 mm	B3 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	7,5	12,5	10	9.6	8	20	0.030 - 0.090
1200	○	12	9	15	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	12	20	16	15.5	13	60	0.040 - 0.120
2000	○	20	15	25	20	19.3	16	80	0.050 - 0.130

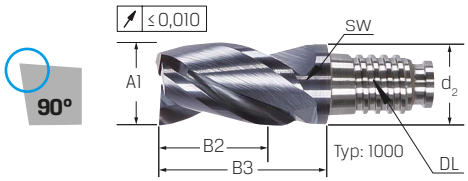
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170321	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170321	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 3

1,5 × A1 | Twist 37° 36° 35° | Centre cut

3-5° | UNI | vc





N° article	170321 Duo-Lock, Basic, 1.5× A1	A1 mm	B2 mm	B3 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
0200	○	2	3	20	10	9.6	8	20	0.006 - 0.018
0300	○	3	4,5	20	10	9.6	8	20	0.009 - 0.027
0400	○	4	6	20	10	9.6	8	20	0.012 - 0.036
0500	○	5	7,5	20	10	9.6	8	20	0.015 - 0.045
0600	○	6	9	20	10	9.6	8	20	0.018 - 0.054
0800	○	8	12	20	10	9.6	8	20	0.024 - 0.072
1000	○	10	15	20	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	24	32	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	20	19.3	16	80	0.050 - 0.130

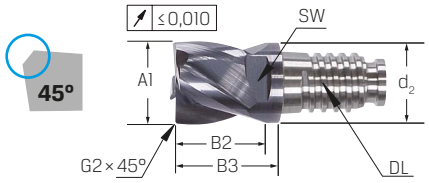
Cylindrical shank milling cutter solid carbide Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170402	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170402	255-420	40-80	95 - 170	160 - 230	50-90	30-40	340-820

SC | coated | Teeth 4 | 0,75 × A1 | Twist 33° 31° | Centre cut | 45° | UNI

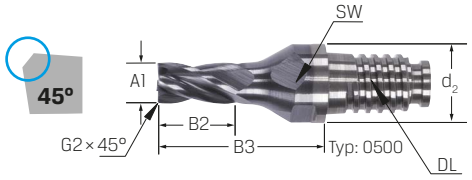
Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- best length repeatability
- fine balanced

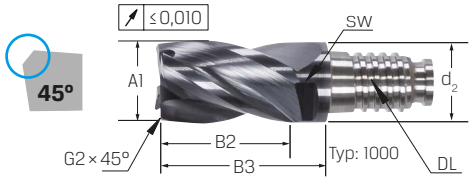


N° article	170402 Duo-Lock, Basic, 0.75× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	7,5	12,5	0,2	10	9.6	8	20	0.030 - 0.090
1200	○	12	9	15	0,24	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	12	20	0,32	16	15.5	13	60	0.040 - 0.120
2000	○	20	15	25	0,4	20	19.3	16	80	0.050 - 0.130
2500	○	25	18,75	31,25	0,5	25	24.0	21	100	0.060 - 0.170
3200	○	32	24	40	0,64	32	31.0	28	130	0.070 - 0.200

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170403	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170403	255-420	40-80	95 - 170	160 - 230	50-90	30-40	470-820

SC | coated | Teeth 4 | 1,5 × A1 | Twist 33° 31° | Centre cut | 45° | UNI



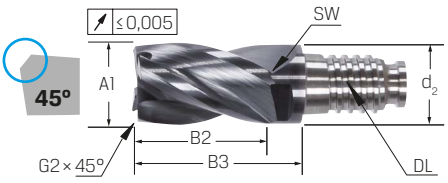


N° article	170403 Duo-Lock, 1.5× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
0200	○	2	3	20	0,04	10	9.6	8	20	0.006 - 0.018
0300	○	3	4,5	20	0,06	10	9.6	8	20	0.009 - 0.027
0400	○	4	6	20	0,08	10	9.6	8	20	0.012 - 0.036
0500	○	5	7,5	20	0,1	10	9.6	8	20	0.015 - 0.045
0600	○	6	9	20	0,12	10	9.6	8	20	0.018 - 0.054
0800	○	8	12	20	0,16	10	9.6	8	20	0.024 - 0.072
1000	○	10	15	20	0,2	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	0,24	12	11.5	9,5	30	0.030 - 0.010
1600	○	16	24	32	0,32	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	0,4	20	19.3	16	80	0.050 - 0.130
2500	○	25	37,5	50	0,5	25	24.0	21	100	0.060 - 0.170
3200	○	32	48	64	0,64	32	31.0	28	130	0.070 - 0.200

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170423	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170423	170-270	40-80	40 - 80	110 - 220	50-90	30-40	120-240

SC | coated | Teeth 4 | 1,5 × A1 | Twist 38,5° 36,5° | Centre cut | 3-5° | UNI

Design:
- especially suitable for long overhang and unstable clamping
- best results with DL-carbide extension
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- best length repeatability
- polished flute and relief surfaces
- coated
- fine balanced



N° article	170423 Duo-Lock, Power, 1.5× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	15	20	0,2	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	0,24	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	24	32	0,32	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	0,4	20	19.3	16	80	0.050 - 0.130

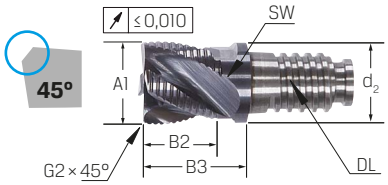
Cylindrical shank milling cutter solid carbide Universal

HAIMER

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
170404					
170405	⟨800	⟨650	⟨450	Titanium	Aluminium
vc = m/min.					
170404					
170405	160-280	80 -160	120-240	40-80	500-900

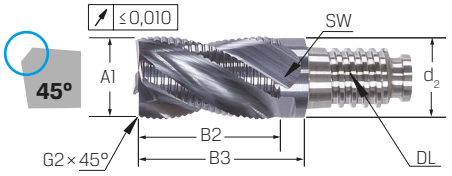
SC | coated | Teeth 4 | Twist 34° 32° | 3-5° | UNI

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- best length repeatability
- for roughing
- coated
- fine balanced



0,75 × A1

N° article	170404 Duo-Lock, Basic, short, 0.75× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	7,5	12,5	0,3	10	9.6	8	20	0.030 - 0.090
1200	○	12	9	15	0,3	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	12	20	0,5	16	15.5	13	60	0.040 - 0.120
2000	○	20	15	25	0,6	20	19.3	16	80	0.050 - 0.130



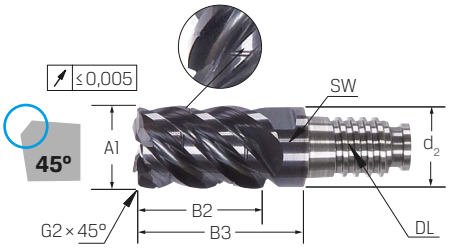
1,5 × A1

N° article	170405 Duo-Lock, Basic, 1.5× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	15	20	0,3	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	0,3	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	24	32	0,5	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	0,6	20	19.3	16	80	0.050 - 0.130

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²
170523						
170533	⟨800	45-55	⟨650	⟨450	Titanium	Aluminium
vc = m/min.						
170523						
170533	160-280	40-80	80 -160	120-240	40-80	500-900

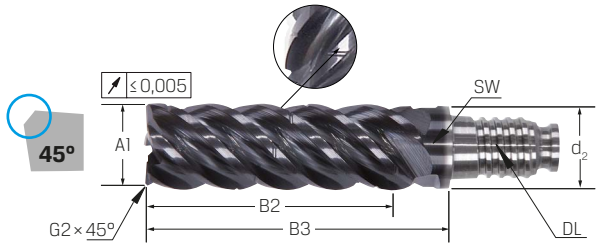
SC | coated | Teeth 5 | Twist 47° 46° | 1-2° | UNI

Design:
- neck for higher cutting depth
- unequal cutting edge pitch
- polished flute and relief surfaces
- best length repeatability
- with chip breaker
- coated
- fine balanced



1,5 × A1

N° article	170523 Duo-Lock, Power, 1.5× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	15	20	0,3	10	9.6	8	20	0.030 - 0.090
1200	○	12	18	24	0,3	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	24	32	0,5	16	15.5	13	60	0.040 - 0.120
2000	○	20	30	40	0,6	20	19.3	16	80	0.050 - 0.130
2500	○	25	37,5	50	0,6	25	24	21	100	0.060 - 0.170
3200	○	32	48	64	0,7	32	31	28	130	0.070 - 0.200



3 × A1

N° article	170533 Duo-Lock, Power, 3× A1	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1600	○	16	48	56	0,5	16	15.5	13	60	0.040 - 0.120
2000	○	20	60	70	0,6	20	19.3	16	80	0.050 - 0.130
2500	○	25	75	87,5	0,6	25	24	21	100	0.060 - 0.170
3200	○	32	96	112	0,7	32	31	28	130	0.070 - 0.200

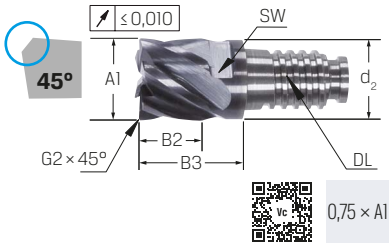
Cylindrical shank milling cutter solid carbide Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170602	<800	45-55	<650	<450	Titanium	Inconel	Aluminium
170603							
	vc = m/min.						
170602	220-280	60-80	120-160	180-240	40-80	30-40	500-900
170603			80-160	120-160			

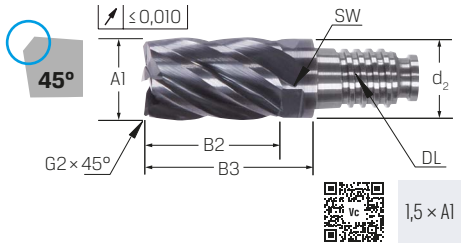
Design:
- neck for higher cutting depth
- unequal cutting edge pitch
- best length repeatability
- coated
- fine balanced

SC | coated | Teeth 6-10 | 35° Twist | UNI



0,75 × A1

N° article	170602 Duo-Lock, Basic, 0.75× A1	A1 mm	F21	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	6	7,5	12,5	0,2	10	9.6	8	20	0.030 - 0.090
1200	○	12	6	9	15	0,24	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	8	12	20	0,32	16	15.5	13	60	0.040 - 0.120
2000	○	20	10	15	25	0,4	20	19.3	16	80	0.050 - 0.130



1,5 × A1

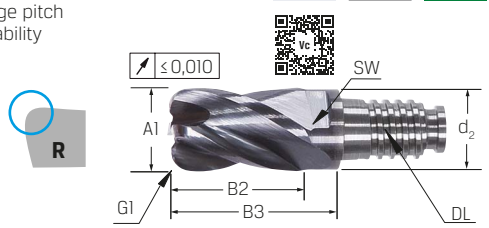
N° article	170603 Duo-Lock, Basic, 1.5× A1	A1 mm	F21	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	6	15	20	0,2	10	9.6	8	20	0.030 - 0.090
1200	○	12	6	18	24	0,24	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	8	24	32	0,32	16	15.5	13	60	0.040 - 0.120
2000	○	20	10	30	40	0,4	20	19.3	16	80	0.050 - 0.130

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170407	<800	45-55	<650	<450	Titanium	Inconel	Aluminium
	vc = m/min.						
170407	255-420	40-80	95-170	160-230	50-90	30-40	340-820

SC | coated | Teeth 4

1,5 × A1 | 33° 31° Twist | Centre cut | 45° | UNI

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- best length repeatability
- universal coating
- fine balanced



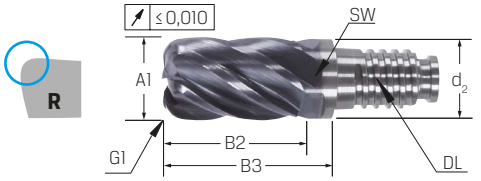
N° article	170407 Duo Lock Basic, 1.5× A1	A1 mm	B2 mm	B3 mm	G1 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1005	○	10	15	20	0,5	10	9.6	8	20	0.030 - 0.090
1010	○	10	15	20	1	10	9.6	8	20	0.030 - 0.090
1015	○	10	15	20	1,5	10	9.6	8	20	0.030 - 0.090
1020	○	10	15	20	2	10	9.6	8	20	0.030 - 0.090
1205	○	12	18	24	0,5	12	11.5	9,5	30	0.030 - 0.100
1210	○	12	18	24	1	12	11.5	9,5	30	0.030 - 0.100
1220	○	12	18	24	2	12	11.5	9,5	30	0.030 - 0.100
1605	○	16	24	32	0,5	16	15.5	13	60	0.040 - 0.120
1610	○	16	24	32	1	16	15.5	13	60	0.040 - 0.120
1620	○	16	24	32	2	16	15.5	13	60	0.040 - 0.120
1640	○	16	24	32	4	16	15.5	13	60	0.040 - 0.120
2005	○	20	30	40	0,5	20	19.3	16	80	0.050 - 0.130
2020	○	20	30	40	2	20	19.3	16	80	0.050 - 0.130
2040	○	20	30	40	4	20	19.3	16	80	0.050 - 0.130

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170607	<800	45-55	<650	<450	Titanium	Inconel	Aluminium
	vc = m/min.						
170607	220-280	60-80	120-160	180-240	40-80	30-40	500-900

SC | coated | Teeth 6-10

1,5 × A1 | 35° Twist | UNI

Design:
- neck for higher cutting depth
- unequal cutting edge pitch
- best length repeatability
- fine balanced
- coated



N° article	170607 Duo Lock Basic, 1.5× A1	A1 mm	F21	B2 mm	B3 mm	G1 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1005	○	10	6	15	20	0,5	10	9.6	8	20	0.030 - 0.090
1010	○	10	6	15	20	1	10	9.6	8	20	0.030 - 0.090
1015	○	10	6	15	20	1,5	10	9.6	8	20	0.030 - 0.090
1020	○	10	6	15	20	2	10	9.6	8	20	0.030 - 0.090
1205	○	12	6	18	24	0,5	12	11.5	9,5	30	0.030 - 0.100
1210	○	12	6	18	24	1	12	11.5	9,5	30	0.030 - 0.100
1220	○	12	6	16	24	2	12	11.5	9,5	30	0.030 - 0.100
1605	○	16	6	24	32	0,5	16	15.5	13	60	0.040 - 0.120
1610	○	16	8	24	32	1	16	15.5	13	60	0.040 - 0.120
1620	○	16	8	24	32	2	16	15.5	13	60	0.040 - 0.120
1640	○	16	8	24	32	4	16	15.5	13	60	0.040 - 0.120
2005	○	20	10	30	40	0,5	20	19.3	16	80	0.050 - 0.130
2010	○	20	10	30	40	2	20	19.3	16	80	0.050 - 0.130
2020	○	20	10	30	40	4	20	19.3	16	80	0.050 - 0.130

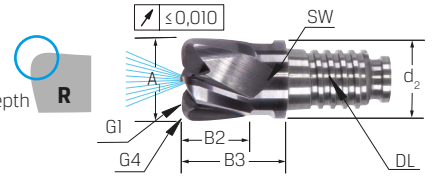
High-feed milling cutter SC Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170416	<800	45 - 55	<650	<450	Titanium	Inconel	Aluminium
	vc = m/min.						
170416	250-420	40-80	95 - 170	160 - 230	50-90	30-40	500-900

SC | coated | Teeth 4 | 0,75 × A1 | 30° Twist | 10° | ICS | UNI

Design:
- central internal cooling
- neck for higher cutting depth
- best length repeatability
- fine balanced
- coated



N° article	170416 Duo Lock, basic IC, 0.75×A1	A1 mm	B2 mm	B3 mm	G1 mm	G4 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1015	○	10	7,5	12,5	1,5	5	10	9.6	8	20	0.100 - 0.300
1218	○	12	9	15	1,8	6	12	11.5	9,5	30	0.120 - 0.360
1624	○	16	12	20	2,4	8	16	15.5	13	60	0.160 - 0.480
2030	○	20	15	25	3	10	20	19.3	16	80	0.200 - 0.600

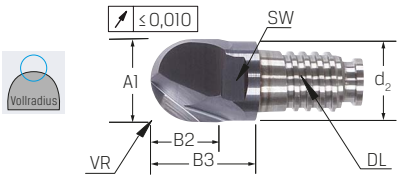
Full radius milling cutter SC Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170208	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170208	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 2 | 0,75 × A1 | 10° Twist | Centre cut | 45° | UNI

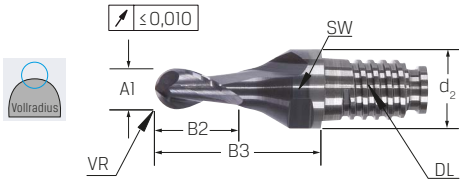
Design:
- neck for higher cutting depth
- full radius
- best length repeatability
- universal coating
- fine balanced



N° article	170208 Duo-Lock, Basic, 0.75× A1	A1 mm	B2 mm	B3 mm	Full radius mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	7,5	12,5	5	10	9.6	8	20	0.030 - 0.090
1200	○	12	9	15	6	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	12	20	8	16	15.5	13	60	0.040 - 0.120
2000	○	20	15	25	10	20	19.3	16	80	0.050 - 0.130

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170209	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170209	160-280	40-80	60 - 160	80 - 240	30-80	30-80	300-500

SC | coated | Teeth 2 | 1,5 × A1 | 10° Twist | Centre cut | 45° | UNI



N° article	170209 Duo-Lock, Basic, 1.5× A1	A1 mm	B2 mm	B3 mm	Full radius mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
0200	○	2	3	20	1	10	9.6	8	20	0.030 - 0.090
0300	○	3	4,5	20	1,5	10	9.6	8	20	0.030 - 0.090
0400	○	4	6	20	2	10	9.6	8	20	0.030 - 0.090
0500	○	5	7,5	20	2,5	10	9.6	8	20	0.030 - 0.090
0600	○	6	9	20	3	10	9.6	8	20	0.030 - 0.090
0800	○	8	12	20	4	10	9.6	8	20	0.030 - 0.090

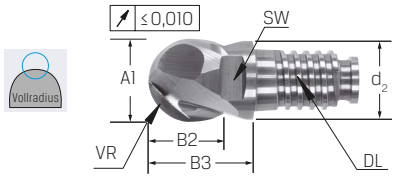
Full radius milling cutter SC
Aluminium

HAIMER

	N N/mm²
170210	Aluminium
vc = m/min.	
170210	300-500

SC | Teeth 2 | 0,75 × A1 | 10° Twist | Centre cut | 45° | N

Design:
- neck for higher cutting depth
- full radius
- best length repeatability
- fine balanced
- polished flute and relief surfaces



N° article	170210 Duo-Lock, Power, 0.75× A1	A1 mm	B2 mm	B3 mm	Full radius mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	7,5	12,5	5	10	9.6	8	20	0.030 - 0.090
1200	○	12	9	15	6	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	12	20	8	16	15.5	13	60	0.040 - 0.120
2000	○	20	15	25	10	20	19.3	16	80	0.050 - 0.130

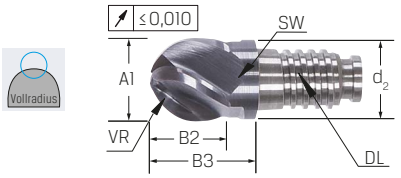
Full radius milling cutter SC
Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170408	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
170408	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 4 | 0,75 × A1 | 34° 32° Twist | Centre cut | 45° | UNI

Design:
- neck for higher cutting depth
- full radius
- best length repeatability
- fine balanced
- coated



N° article	170408 Duo-Lock, Basic, 0.75× A1	A1 mm	B2 mm	B3 mm	Full radius mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1000	○	10	7,5	12,5	5	10	9.6	8	20	0.030 - 0.090
1200	○	12	9	15	6	12	11.5	9,5	30	0.030 - 0.100
1600	○	16	12	20	8	16	15.5	13	60	0.040 - 0.120
2000	○	20	15	25	10	20	19.3	16	80	0.050 - 0.130

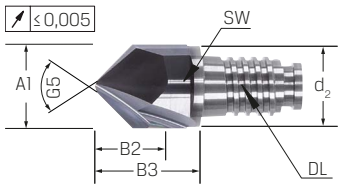
Multi purpose end mill Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170232	<800	45 - 55	<650	<450	Titanium	Inconel	Aluminium
vc = m/min.							
170232	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 2 | 20° Twist | Centre cut | UNI | CAD | Vc

Design:
- cone angle 60/90/120/142°
- centre point
- multifunctional tool
- circumference cutter
- best length repeatability
- coated
- fine balanced



N° article	170232 Duo Lock, Power	A1 mm	B2 mm	B3 mm	G5°	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1006	○	10	10	12,5	60	10	9.6	8	20	0.030 - 0.090
1009	○	10	10	12,5	90	10	9.6	8	20	0.030 - 0.090
1012	○	10	10	12,5	120	10	9.6	8	20	0.030 - 0.090
1014	○	10	10	12,5	142	10	9.6	8	20	0.030 - 0.090
1206	○	12	12	15	60	12	11.5	9,5	30	0.030 - 0.100
1209	○	12	12	15	90	12	11.5	9,5	30	0.030 - 0.100
1212	○	12	12	15	120	12	11.5	9,5	30	0.030 - 0.100
1214	○	12	12	15	142	12	11.5	9,5	30	0.030 - 0.100
1606	○	16	16	20	60	16	15.5	13	60	0.040 - 0.120
1609	○	16	16	20	90	16	15.5	13	60	0.040 - 0.120
1612	○	16	16	20	120	16	15.5	13	60	0.040 - 0.120
1614	○	16	16	20	142	16	15.5	13	60	0.040 - 0.120
2006	○	20	20	25	60	20	19.3	16	80	0.050 - 0.130
2009	○	20	20	25	90	20	19.3	16	80	0.050 - 0.130
2012	○	20	20	25	120	20	19.3	16	80	0.050 - 0.130
2014	○	20	20	25	142	20	19.3	16	80	0.050 - 0.130

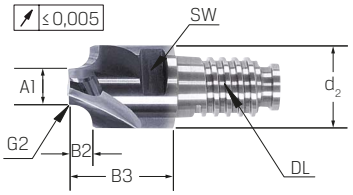
Quadrant cutter Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170232	<800	45 - 55	<650	<450	Titanium	Inconel	Aluminium
vc = m/min.							
170232	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 4 | Centre cut | UNI | Vc

Design:
- for contour rounding
- 5° tangential release
- positive rake angle without profile displacement
- best length repeatability
- smooth cutting edge
- fine balanced
- coated



N° article	170437 Duo-Lock, Power	A1 mm	B2 mm	B3 mm	G2 mm	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
0710	○	7	1,5	12,5	1	10	10	8	20	0.030 - 0.090
0615	○	6	2	12,5	1,5	10	10	8	20	0.030 - 0.090
0520	○	5	2,5	12,5	2	10	10	8	20	0.030 - 0.090
0625	○	6	3	15	2,5	12	12	9,5	30	0.030 - 0.100
0530	○	5	3,5	15	3	12	12	9,5	30	0.030 - 0.100
0835	○	8	4	20	3,5	16	16	13	60	0.040 - 0.120
0740	○	7	4,5	20	4	16	16	13	60	0.040 - 0.120
0645	○	6	5	20	4,5	16	16	13	60	0.040 - 0.120
0850	○	8	6	25	5	20	20	16	80	0.050 - 0.130
0660	○	6	7	25	6	20	20	16	80	0.050 - 0.130

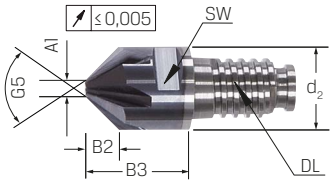
Deburring cutter Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
170639	<800	45 - 55	<650	<450	Titanium	Inconel	Aluminium
vc = m/min.							
170639	160-280	40-80	80 - 160	120 - 240	40-80	30-40	500-900

SC | coated | Teeth 6-8 | Centre cut | UNI | CAD | Vc

Design:
- cone angle 60/90/120°
- tip ground flat
- multifunctional tool
- best length repeatability
- straight grooved
- smooth cutting edge
- no neck
- chamfer angle 60°, 90° or 120°
- fine balanced
- coated



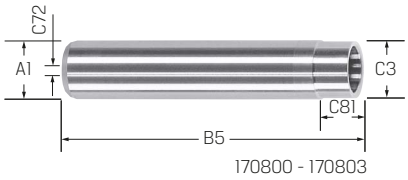
N° article	170639 Duo-Lock, Power	A1 mm	F21	B2 mm	B3 mm	G5°	DL	d2 mm	AF mm	Torque Nm	fz mm/tooth
1006	○	2	6	6,9	12,5	60	10	10	8	20	0.030 - 0.090
1206	○	2.4	6	8,3	15	60	12	12	9,5	30	0.030 - 0.100
1606	○	3.2	8	11	20	60	16	16	13	60	0.040 - 0.120
2006	○	4	8	13,9	25	60	20	20	16	80	0.050 - 0.130
1009	○	2	6	4	12,5	90	10	10	8	20	0.030 - 0.090
1209	○	2.4	6	4,8	15	90	12	12	9,5	30	0.030 - 0.100
1609	○	3.2	8	6,4	20	90	16	16	13	60	0.040 - 0.120
2009	○	4	8	8	25	90	20	20	16	80	0.050 - 0.130
1012	○	2	6	2,3	12,5	120	10	10	8	20	0.030 - 0.090
1212	○	2.4	6	2,7	15	120	12	12	9,5	30	0.030 - 0.100
1612	○	3.2	8	3,6	20	120	16	16	13	60	0.040 - 0.120
2012	○	4	8	4,6	25	120	20	20	16	80	0.050 - 0.130

Extensions Steel

Design:
- shank accuracy h6
- with internal cooling bore
- short, cylindrical

h6

Note:
For longevity of the system, it is imperative that the torque is maintained



170800 - 170803

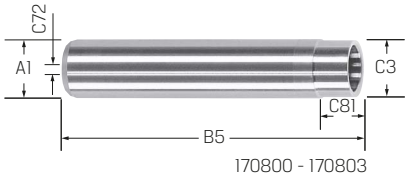
coated

N° article	170800 Duo-Lock, short	170801 Duo-Lock, short, coated	A1 mm	B5 mm	C3 mm	C72 mm	C81 mm	DL
1260	○	○	12	60	11,5	2,5	6	12
1665	○	○	16	65	15,5	3	8	16
2070	○	○	20	70	19,3	3	10	20
2580	○	○	25	80	24	5	12,5	25
3290	○	○	32	90	31	5	16	32

Design:
- shank accuracy h6
- with internal cooling bore
- cylindric, short
- with Safe-Lock as standard

SAFE-LOCK

h6



170800 - 170803

coated

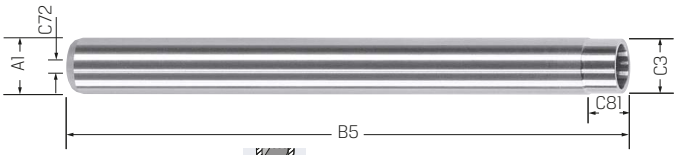
N° article	170802 Duo-Lock, short, with Safe-Lock	170803 Duo Lock, short, with Safe-Lock, coated	A1 mm	B5 mm	C3 mm	C72 mm	C81 mm	DL
1055	○	○	10	55	9,6	2,5	5	10
1260	○	○	12	65	11,5	2,5	6	12
1665	○	○	16	70	15,5	3	8	16
2070	○	○	20	80	19,3	3	10	20
2580	○	○	25	90	24	5	12,5	25
3290	○	○	32	105	31	5	16	32

Duo-Lock interface torque

Nm	DL 10	DL 12	DL 16	DL 20	DL 25	DL 30
	20	30	60	80	100	130

Design:
- shank accuracy h6
- with internal cooling bore
- cylindrical, long

h6



170805 - 170806

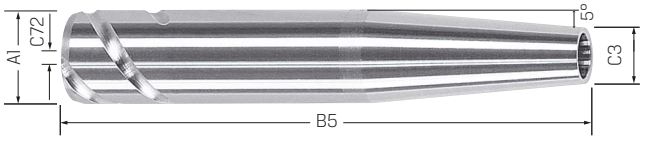
coated

N° article	170805 Duo-Lock, long	170806 Duo-Lock, long, coated	A1 mm	B5 mm	C3 mm	C72 mm	C81 mm	DL
1010	○	○	10	100	9,6	2,5	5	10
1212	○	○	12	120	11,5	2,5	6	12
1616	○	○	16	160	15,5	3	8	16
2020	○	○	20	200	19,3	3	10	20
2525	○	○	25	250	24	5	12,5	25
3225	○	○	32	250	31	5	16	32

Design:
- shank accuracy h6
- with internal cooling bore
- with Safe-Lock as standard
- conical, short

SAFE-LOCK

h6



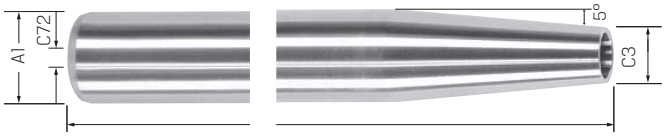
170808 - 170809

coated

N° article	170808 Duo-Lock, short, conical	170809 Duo-Lock, short, conical, coated	A1 mm	B5 mm	C3 mm	C72 mm	DL
1012	○	○	12	65	9,6	2,5	10
1016	○	○	16	90	9,6	2,5	10
1020	○	○	20	115	9,6	2,5	10
1216	○	○	16	80	11,5	2,5	12
1220	○	○	20	105	11,5	2,5	12
1620	○	○	20	80	15,5	3	16
1625	○	○	25	115	15,5	3	16
2025	○	○	25	95	19,3	5	20
2532	○	○	32	105	24	5	25
3240	○	○	40	140	31	5	32
3250	○	○	50	200	31	5	32

Design:
- shank accuracy h6
- with internal cooling bore
- conical, long

h6



170810 - 170811

coated

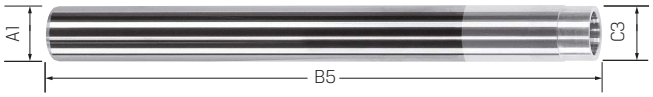
N° article	170810 Duo-Lock, long, conical	170811 Duo-Lock, long, conical, coated	A1 mm	B5 mm	C3 mm	C72 mm	DL
1012	○	○	12	120	9,6	2,5	10
1016	○	○	16	160	9,6	2,5	10
1020	○	○	20	200	9,6	2,5	10
1216	○	○	16	160	11,5	2,5	12
1220	○	○	20	200	11,5	2,5	12
1620	○	○	20	200	15,5	3	16
1625	○	○	25	250	15,5	3	16
2025	○	○	25	250	19,3	3	20
2532	○	○	32	250	24	5	25
3240	○	○	40	250	31	5	32
3250	○	○	50	250	31	5	32

Extensions

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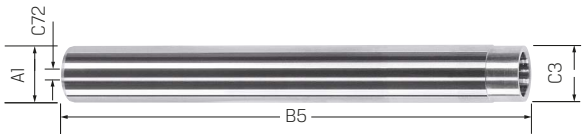
Design:
- shank accuracy h6
- with internal cooling bore

SC | ICS | h6



N° article	170813 Duo-Lock, carbide, IC	A1 mm	B5 mm	C3 mm	DL
1015	○	10	150	9,6	10
1218	○	12	180	11,5	12
1624	○	16	240	15,5	16
2026	○	20	260	19,3	20
2526	○	25	260	24	25
3226	○	32	260	31	32

ICS | h6



N° article	170814 Duo-Lock, heavy metal, IC	A1 mm	B5 mm	C3 mm	C72 mm	DL
1015	○	10	150	9,6	2,5	10
1218	○	12	180	11,5	2,5	12
1624	○	16	240	15,5	3	16
2026	○	20	260	19,3	3	20
2526	○	25	260	24	3	25
3226	○	32	260	31	5	32

Extensions Heavy Duty

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Design:
- shank accuracy h6
- with internal cooling bore
- with Safe-Lock as standard

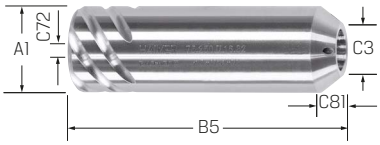
h6 | SAFE-LOCK



N° article	170815 Duo-Lock, short, conical	A1 mm	B5 mm	C3 mm	C72 mm	C81 mm	DL
1016	○	16	62,5	9,6	2,5	12,5	10
1216	○	16	65	11,5	2,5	15	12
1620	○	20	72	15,5	3	20	16
2025	○	25	82	19,3	3	24	20

Design:
- shank accuracy h6
- with Cool Jet
- with Safe-Lock as standard

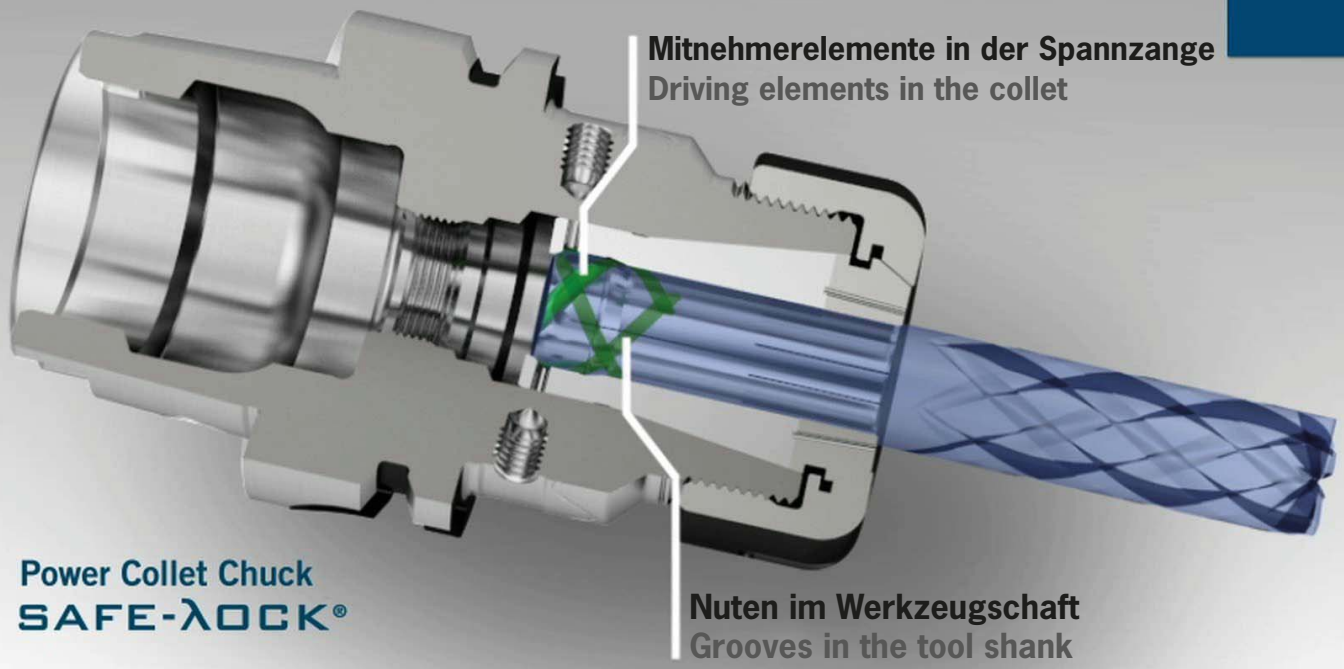
h6 | SAFE-LOCK



N° article	170816 Duo-Lock, short, conical	A1 mm	B5 mm	C3 mm	C72 mm	C81 mm	DL
1016	○	16	62,5	9,6	2,5	6	10
1216	○	20	67	11,5	2,5	6	12
1620	○	25	78	15,5	3	6	16
2025	○	32	82	19,3	3	6	20

SAFE-LOCK®: Der Sicherheitsgurt für Ihre Werkzeuge
The safety belt for your tools

HAIMER
Quality Wins.



Collet chuck

HAIMER

Design:
- suitable for Duo-Lock cutters from DL10 - DL25
- compatible with all common ER collet systems
- optional with Cool-Jet 3 or 6 bore



N° article	170818 Duo Lock, ER	ER mm	A7 mm	B3 mm	B8 mm	B71 mm	DL
1016	○	16	–	12	–	5,3	10
1020	○	20	–	13	–	5,48	10
1220	○	25	–	14	–	6,48	12
1025	○	20	–	13,5	–	5,5	10
1225	○	25	–	14,5	–	6,5	12
1625	○	32	–	13,5	–	5,5	16
1032	○	25	9,6	35,5	5	26,5	10
1232	○	32	11,5	36,5	6	27,5	12
1632	○	32	15,5	35,5	8	26,5	16
2032	○	32	19,3	35,5	10	26,5	20
2532	○	32	–	40,75	–	31,75	25

Tool holder ISO 7388-1

HAIMER

ISO 7388-1	Form AD/AF	G 2,5 25.000 min⁻¹

Design:
- Duo-Lock monobloc mount for direct clamping
- suitable for milling with short overhang length
- with steep taper SK40 form AD/AF ISO 7388-1
- central coolant supply and resealable coolant ducts at collar
- hardened 54-2 HRC
- all functional surfaces finely machined
- taper tolerance AT3



N° article	170820 Duo-Lock, short, ISO 7388-1	A1 mm	B3 mm	B71 mm	DL	C2
4010	○	10	21,9	5	10	SK40
4012	○	12	21,9	6	12	SK40
4016	○	16	30,9	8	16	SK40
4020	○	20	30,9	10	20	SK40
4025	○	25	36,9	12,5	25	SK40
4032	○	32	45,9	16	32	SK40
5010	○	10	60,9	5	10	SK50
5012	○	12	60,9	6	12	SK50
5016	○	16	60,9	8	16	SK50
5020	○	20	60,9	10	20	SK50
5025	○	25	60,9	12,5	25	SK50
5032	○	32	60,9	16	32	SK50

Tool holder ISO 7388-2

HAIMER

ISO 7388-2	Form JD/JF	G 2,5 25.000 min⁻¹

Design:
- Duo-Lock monobloc mount for direct clamping
- suitable for milling with short overhang length
- with steep taper ISO 7388-2
- central coolant supply and resealable coolant ducts at collar
- hardened 54-2 HRC
- all functional surfaces finely machined
- taper tolerance AT3



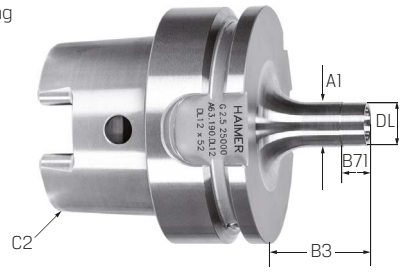
N° article	170822 Duo-Lock, short, ISO 7388-2	A1 mm	B3 mm	B71 mm	DL	C2
4010	○	10	22	5	10	BT40
4012	○	12	22	6	12	BT40
4016	○	16	31	8	16	BT40
4020	○	20	31	10	20	BT40
4025	○	25	33	12,5	25	BT40
4032	○	32	41	16	32	BT40

Tool holder ISO12164-1

HAIMER

ISO 12164-1	G 2,5 25.000 min⁻¹

Design:
- Duo-Lock monobloc mount for direct clamping
- suitable for milling with short overhang length
- with hollow shank taper HSK-A63 ISO 12164-1
- all holders incl. internal cooling
- hardened 54-2 HRC



N° article	170824 Duo-Lock, short, ISO 12164-1	A1 mm	B3 mm	B71 mm	DL	C2
6310	○	10	22	5	10	HST-A63
6312	○	12	26	6	12	HST-A63
6316	○	16	31	8	16	HST-A63
6320	○	20	31	10	20	HST-A63
6325	○	25	35	12,5	25	HST-A63
6332	○	32	46	16	32	HST-A63

Tool holder ISO 26623-1

HAIMER

ISO 26623-1	G 2,5 25.000 min⁻¹

Design:
- Duo-Lock monobloc mount for direct clamping
- suitable for milling with short overhang length
- with polygonal shank taper 63 according to ISO 26623-1
- all holders incl. internal cooling
- hardened 54-2 HRC



N° article	170826 Duo-Lock, short, ISO 26623-1	A1 mm	B3 mm	B71 mm	DL	C2
0610	○	10	28	5	10	PSC63
0612	○	12	28	6	12	PSC63
0616	○	16	33	8	16	PSC63
0620	○	20	33	10	20	PSC63
0625	○	25	38	12,5	25	PSC63
0632	○	32	46	16	32	PSC63

Length adjustment tool

HAIMER

Design:
- shrink aid
- length presetting



N° article	170830 Duo-Lock	Size
0010	○	DL10
0012	○	DL12
0016	○	DL16
0020	○	DL20
0025	○	DL25
0032	○	DL32

Torque wrench set

HAIMER

Design:
- for highest true running, no unilateral clamping
- optimal power transmission due to even force distribution
- for highest clamping accuracy and repeatability with dial gauge
- maximum torque for highest holding forces
- interchangeable inserts
- extended handles for DL16 - DL32



N° article	170831 Duo-Lock	Design:
0001	○	with handle set, long (without fork-shaped wear pieces)
0005	○	with case, 6 fork-shaped wear pieces and handle set long

Roller bearing wrench

HAIMER

Design:
170835:
- roller bearing wrench suitable for Duo-Lock blanks from DL10 - DL20
- for square ratchet with 1/2"

170836:
- manual spanner suitable for Duo-Lock milling heads from DL10 - DL20
- for direct tool change in the lathe



N° article	170835 Duo-Lock™ roller bearing wrench	170836 Duo-Lock™ manual spanner	Ideal for
0010	○	○	DL10
0012	○	○	DL12
0016	○	○	DL16
0020	○	○	DL20

Fork-shaped changeable wear inserts

HAIMER

Design:
- interchangeable fork-shaped wear inserts for Duo-Lock torque spanners
- suitable for Duo-Lock screw-in milling cutters



DL10 – DL12:
with wear insert



DL16 – DL32:
manufactured from one piece

N° article	170832 Duo-Lock™ fork-shaped changeable wear inserts	Size
0010	○	DL10
0012	○	DL12
0016	○	DL16
0020	○	DL20
0025	○	DL25
0032	○	DL32



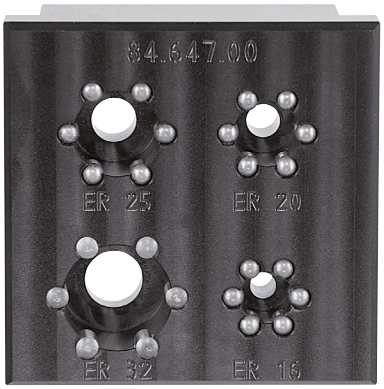
To accommodate all common square socket spanners with 1/2".

N° article	170833 Duo-Lock™ changeable wear inserts	Ideal for
0010	○	DL10
0012	○	DL12

Clamping device

HAIMER

Design:
- suitable for Duo-Lock collets ER16, ER20, ER25, ER32
- clamping surfaces for clamping in a vice



N° article	170837 Duo-Lock
0001	○

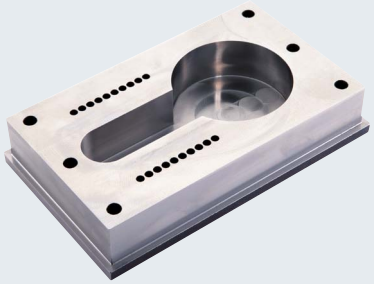
Solid Carbide Cutters Uni/INOX on YouTube

Product Information

UNI Video

Solid carbide cutter GP UNI 3-knife machined 1.7131 (16MnCr5)

- The workpiece shown was machined using the solid carbide milling cutter GP UNI with a diameter of 16.00 mm. The workpiece was completely manufactured in just under 5 minutes under normal industrial conditions. Roughing, finishing, helix milling and milling in full track is no challenge for the GP UNI. The holes with diameters of 5.00 mm (SL) and 8.50 mm (DL) have been drilled with our GP UNI drilling tool.
- The YouTube video has a length of 4:30 minutes, cutting data are displayed in real time.



YouTube
http://youTu.be/eqgkdf6o_vo

Solid carbide cutter GP UNI 4-knife machined C45

- The workpiece shown was machined using the solid carbide milling cutter GP with the diameters 12.00, 10.00 and 5.00 mm The workpiece made of C45 was completely manufactured in 7 minutes under normal industrial conditions. Roughing, finishing, helix milling and milling in full track is no challenge for the solid carbide cutter.
- The YouTube video has a length of approximately 3 minutes, cutting data are displayed in real time.

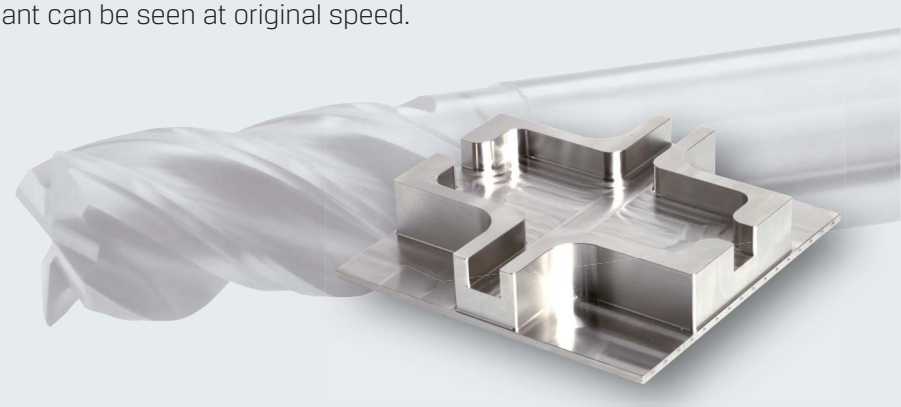


YouTube
http://youTu.be/HE70bi9ibp8

M Video

Solid carbide cutter GP INOX 4-knife machined 1.4301 (X5 CrNi18-10)

- The workpiece shown was machined using the solid carbide milling cutter GP INOX with the diameters 8.00 and 16.00 mm. The workpiece was completely manufactured dry in just under 7 minutes under normal industrial conditions. Roughing, finishing and milling in full track is no challenge for the GP INOX. In parallel, the machining of 1.4571 (X6 CrNiMoTi17-12-2) using cooling lubricant can be seen at original speed.
- The YouTube video has a length of approximately 6 minutes, cutting data are displayed in real time.



YouTube
http://youTu.be/dsDwpIXhkfg

End mill SC Aluminium

PREMUS

	N N/mm²
175100	Aluminium
vc = m/min.	
175100	400

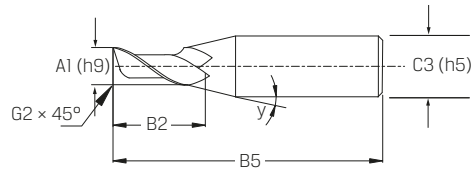
Protective chamfer from 3.00 mm

SC | Factory standard | Tooth 1 | 30° Twist | Centre cut | 6535 HA shank | short

HPM | HVM | N | vc

Tolerance

Diameter range	Edge-Ø Ø A1 (h9)	Shank-Ø Ø C3 (h5)
A1 ≤ 3	0 -0.025	0 -0.004
3 < A1 ≤ 6	0 -0.030	0 -0.005
6 < A1 ≤ 10	0 -0.036	0 -0.006
10 < A1 ≤ 18	0 -0.043	0 -0.008





N° article	175100 short, chamfer	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	y	fz mm/tooth
0,60	●	0,6	3	40	3	0,15	15	0,010 - 0,015
0,80	●	0,8	4	40	3	0,15	15	0,014 - 0,018
1,00	●	1	5	40	3	0,15	15	0,015 - 0,020
1,20	●	1,2	5	40	3	0,15	15	0,018 - 0,023
1,50	●	1,5	5	40	3	0,15	15	0,023 - 0,027
2,00	●	2	8	40	3	0,2	15	0,030 - 0,043
2,50	●	2,5	9	40	3	0,2	15	0,034 - 0,060
3,00	●	3	12	40	3	0,1	–	0,045 - 0,070

N° article	175100 short, chamfer	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	y	fz mm/tooth
4,00	●	4	12	50	4	0,1	–	0,050 - 0,080
5,00	●	5	15	50	5	0,15	–	0,060 - 0,100
6,00	●	6	16	50	6	0,2	–	0,075 - 0,120
7,00	●	7	20	60	7	0,2	–	0,080 - 0,135
8,00	●	8	20	60	8	0,25	–	0,095 - 0,150
10,00	●	10	22	70	10	0,3	–	0,115 - 0,185
12,00	●	12	25	75	12	0,35	–	0,140 - 0,230

Micro milling cutter SC Universal

PREMUS

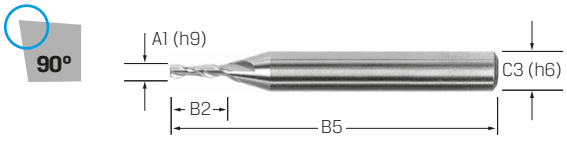
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
175200	< 1200	< 48	< 850	< 300	Titanium < 1200	Alu < 600	Brass < 600
vc = m/min.							
175200	35-60	25-30	20 - 35	45 - 70	20-30	160-490	80-110

SC | Factory standard | Typ N

Teeth 2 | 30° Twist | Centre cut

6535 HA shank | short | UNI

CAD | vc



N° article	175200 short	A1 mm	B2 mm	B5 mm	C3 mm	fz mm/tooth
0,20	●	0,2	0	38	3	0,002 - 0,004
0,30	●	0,3	1	38	3	0,002 - 0,004
0,40	●	0,4	1	38	3	0,002 - 0,004
0,50	●	0,5	1	38	3	0,002 - 0,004
0,60	●	0,6	1	38	3	0,002 - 0,004
0,70	●	0,7	2	38	3	0,002 - 0,004
0,80	●	0,8	2	38	3	0,002 - 0,004
0,90	●	0,9	2	38	3	0,002 - 0,004
1,00	●	1	3	38	3	0,002 - 0,004
1,20	●	1,2	4	38	3	0,002 - 0,004
1,40	●	1,4	4	38	3	0,002 - 0,004
1,50	●	1,5	4	38	3	0,005 - 0,010
1,60	●	1,6	4	38	3	0,005 - 0,010
1,80	●	1,8	5	38	3	0,005 - 0,010
2,00	●	2	5	38	3	0,012 - 0,019

	P N/mm²	H HRC	M N/mm²	K HB
175207	< 1400	< 66	< 900	< 300
vc = m/min.				
175207	115-220	30-115	80 - 140	100 - 215

Use:
Applicable up to 65 HRC

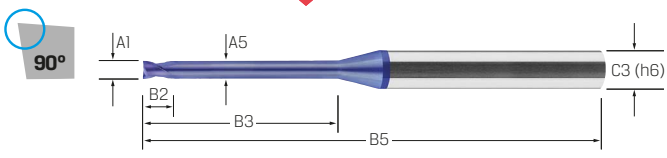
SC | coated | Factory standard

Teeth 2 | 30° Twist | Centre cut

6535 HA shank | overlong | UNI

vc

NEW



N° article	175207 long, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	fz mm/Zahn
0,80/2	○	0,8	0,77	0	2	40	4	0,002 - 0,004
0,90/4	○	0,9	0,87	0	4	40	4	0,002 - 0,004
1,00/6	●	1	0,95	1	6	45	4	0,002 - 0,004
1,00/12	●	1	0,95	1	12	45	4	0,002 - 0,004
1,40/14	●	1,4	1,35	1	14	50	4	0,002 - 0,004
1,50/14	●	1,5	1,45	1	14	50	4	0,005 - 0,010
1,80/18	●	1,8	1,75	1	18	50	4	0,005 - 0,010
2,00/10	●	2	1,92	2	10	50	4	0,012 - 0,019
2,00/12	●	2	1,92	2	12	50	4	0,012 - 0,019
2,00/16	●	2	1,92	2	16	50	4	0,012 - 0,019
2,00/20	●	2	1,92	2	20	50	4	0,012 - 0,019
2,50/16	●	2,5	2,4	2	16	50	4	0,012 - 0,019
3,00/12	●	3	2,9	3	12	50	6	0,012 - 0,019
3,00/20	●	3	2,9	3	20	60	6	0,012 - 0,019

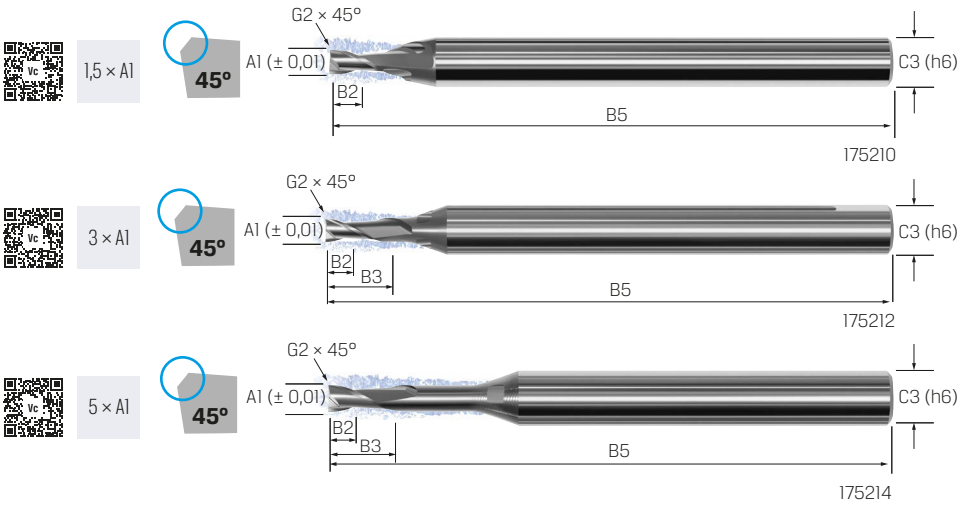
Micro milling cutter SC Universal with IC

CRAZYMILL Cool — MIKRON TOOL

Design:
- the only milling tool with diameter range from 0.3 to 6.0 mm with integrated IC
- specially developed carbide grade
- specially designed coating
- special cutting edge geometry
- cutting tips with protective chamfer

Use:
- universally applicable
- outstanding results in stainless steels, titanium, nickel
- a perfect surface finish is achieved in all materials due to the specific geometry, coating and cooling performance

SC | coated | Factory standard | Teeth 2 | 30° Twist | 6535 HA shank | UNI



N° article	175210 1.5× A1, eXedur RIP	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
0,30	○	0,3	0,45	38	3	0,02	0,002 - 0,007
0,40	○	0,4	0,6	38	3	0,02	0,002 - 0,007
0,50	●	0,5	0,75	38	3	0,02	0,004 - 0,016
0,60	○	0,6	0,9	38	3	0,02	0,004 - 0,016
0,80	●	0,8	1,2	38	3	0,02	0,004 - 0,016
1,00	●	1	1,5	40	4	0,02	0,007 - 0,018
1,20	●	1,2	1,8	40	4	0,03	0,007 - 0,018
1,50	●	1,5	2,25	40	4	0,03	0,009 - 0,026
1,80	○	1,8	2,7	40	4	0,03	0,009 - 0,026
2,00	●	2	3	40	4	0,03	0,010 - 0,034
2,50	●	2,5	3,75	40	4	0,04	0,010 - 0,034
3,00	●	3	4,5	50	6	0,04	0,015 - 0,052
4,00	●	4	6	50	6	0,04	0,020 - 0,055
6,00	○	6	9	60	10	0,05	0,020 - 0,055

N° article	175212 3× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
0,30	○	0,3	0,45	0,9	38	3	0,02	0,002 - 0,007
0,40	○	0,4	0,6	1,2	38	3	0,02	0,002 - 0,007
0,50	●	0,5	0,75	1,5	38	3	0,02	0,004 - 0,016
0,60	○	0,6	0,9	1,8	38	3	0,02	0,004 - 0,016
0,80	●	0,8	1,2	2,4	38	3	0,02	0,004 - 0,016
1,00	●	1	1,5	3	40	4	0,02	0,007 - 0,020
1,20	●	1,2	1,8	3,6	40	4	0,03	0,007 - 0,020
1,50	●	1,5	2,25	4,5	40	4	0,03	0,009 - 0,026
1,80	○	1,8	2,7	5,4	40	4	0,03	0,009 - 0,026
2,00	●	2	3	6	40	4	0,03	0,010 - 0,034
2,50	●	2,5	3,75	7,5	40	4	0,04	0,010 - 0,034
3,00	●	3	4,5	9	50	6	0,04	0,015 - 0,050
4,00	●	4	6	12	55	6	0,04	0,020 - 0,055
6,00	○	6	9	18	65	10	0,05	0,020 - 0,055

N° article	175214 5× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
0,30	○	0,3	0,45	1,5	38	3	0,02	0,002 - 0,007
0,40	○	0,4	0,6	2	38	3	0,02	0,002 - 0,007
0,50	●	0,5	0,75	2,5	38	3	0,02	0,004 - 0,016
0,60	○	0,6	0,9	3	38	3	0,02	0,004 - 0,016
0,80	●	0,8	1,2	4	38	3	0,02	0,004 - 0,016
1,00	●	1	1,5	5	40	4	0,02	0,007 - 0,018
1,20	●	1,2	1,8	6	40	4	0,03	0,007 - 0,018
1,50	●	1,5	2,25	7,5	40	4	0,03	0,009 - 0,026
1,80	●	1,8	2,7	9	40	4	0,03	0,009 - 0,026
2,00	●	2	3	10	44	4	0,03	0,010 - 0,034
2,50	●	2,5	3,75	12,5	44	4	0,04	0,010 - 0,034
3,00	●	3	4,5	15	55	6	0,04	0,015 - 0,052
4,00	●	4	6	20	60	6	0,04	0,020 - 0,050
6,00	○	6	9	30	70	10	0,05	0,020 - 0,050

End mill SC Universal

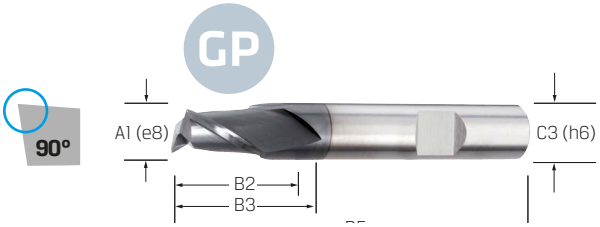
PREMUS GP

	P N/mm²	M N/mm²	K HB
175229	‹1200	‹850	‹650
vc = m/min.			
175229	110-280	80 - 110	110 - 200

Design:
- helix angle 30°
- short version
- cutting tips with protective chamfer
- for fit P9
- coated

Use:
- universally applicable
- extremely high cutting performance
- very smooth running

SC | coated | Factory standard | Teeth 2 | 30° Twist | Centre cut | 6535 HB shank | short | P9 | UNI | CAD



N° article	175229 GP, short, P9, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	3	54	3	0,02	0,006 - 0,015
1,50	●	1,5	4	54	3	0,02	0,006 - 0,015
1,80	●	1,8	4	54	3	0,02	0,007 - 0,020
2,00	●	2	4	54	6	0,02	0,007 - 0,020
2,50	●	2,5	4	54	6	0,02	0,007 - 0,020
2,80	●	2,8	6	54	6	0,03	0,007 - 0,028
3,00	●	3	6	54	6	0,03	0,007 - 0,028
3,80	●	3,8	8	54	6	0,04	0,010 - 0,035
4,00	●	4	8	54	6	0,04	0,010 - 0,035
4,80	●	4,8	9	54	6	0,05	0,015 - 0,035
5,00	●	5	9	54	6	0,05	0,015 - 0,035
5,75	●	5,75	10	54	6	0,06	0,025 - 0,040

N° article	175229 GP, short, P9, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	10	54	6	0,06	0,025 - 0,040
6,75	●	6,75	12	58	8	0,07	0,030 - 0,045
7,00	●	7	12	58	8	0,07	0,030 - 0,045
7,75	●	7,75	12	58	8	0,08	0,030 - 0,050
8,00	●	8	12	58	8	0,08	0,030 - 0,050
8,70	●	8,7	14	66	10	0,09	0,035 - 0,060
9,00	●	9	14	66	10	0,09	0,035 - 0,060
9,70	●	9,7	14	66	10	0,1	0,035 - 0,060
10,00	●	10	14	66	10	0,1	0,040 - 0,070
11,70	●	11,7	16	73	12	0,12	0,060 - 0,090
12,00	●	12	16	73	12	0,12	0,060 - 0,090
14,00	●	14	18	75	14	0,14	0,070 - 0,110

End mill SC
Universal, with relieved shank

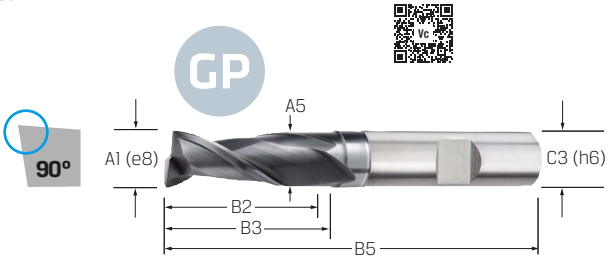
PREMUS GP

	P N/mm²	M N/mm²	K HB
175242	⟨1200	⟨850	⟨650
vc = m/min.			
175242	110-280	80 - 110	110 - 200

SC · coated · Factory standard · Teeth 2 · 30° Twist · Centre cut · shank relieved · 6535 HB shank · long · P9 · UNI · CAD · vc

Design:
- helix angle 30°
- long version
- relieved shank
- cutting tips with protective chamfer
- for fit P9
- coated

Use:
- universally applicable
- extremely high cutting performance
- very smooth running



N° article	175242 GP, long, P9, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	–	6	–	57	6	0,02	0,007 - 0,020
2,50	●	2,5	–	6	–	57	6	0,02	0,007 - 0,020
2,80	●	2,8	–	8	–	57	6	0,03	0,007 - 0,028
3,00	●	3	2,8	8	18	57	6	0,03	0,007 - 0,028
3,80	●	3,8	3,6	11	21	57	6	0,04	0,010 - 0,035
4,00	●	4	3,8	11	21	57	6	0,04	0,010 - 0,035
4,80	●	4,8	4,6	13	21	57	6	0,05	0,015 - 0,035
5,00	●	5	4,8	13	21	57	6	0,05	0,015 - 0,035
5,75	●	5,75	5,5	13	21	57	6	0,06	0,025 - 0,040
6,00	●	6	5,5	13	21	57	6	0,06	0,025 - 0,040
6,75	●	6,75	6,5	19	27	63	8	0,07	0,025 - 0,040
7,00	●	7	6,5	19	27	63	8	0,07	0,025 - 0,040
7,75	●	7,75	7,4	19	27	63	8	0,08	0,030 - 0,050
8,00	●	8	7,5	19	27	63	8	0,08	0,030 - 0,050
8,70	●	8,7	8,4	22	32	72	10	0,09	0,035 - 0,060
9,00	●	9	8,5	22	32	72	10	0,09	0,035 - 0,060
9,70	●	9,7	9,2	22	32	72	10	0,1	0,040 - 0,070
10,00	●	10	9,5	22	32	72	10	0,1	0,040 - 0,070
11,70	●	11,7	11,2	26	38	83	12	0,12	0,060 - 0,090
12,00	●	12	11,5	26	38	83	12	0,12	0,060 - 0,090
14,00	●	14	13,5	26	42	83	14	0,14	0,070 - 0,110

End mill SC Universal

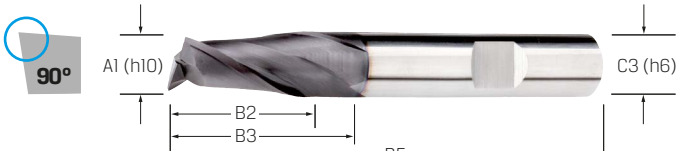
PRETEC

	P N/mm²	M N/mm²	K HB	N N/mm²	
175246	⟨1400	⟨850	⟨250	Aluminium	⟨7 % Si
vc = m/min.					
175246	80-160	50 - 85	85 - 120	120-220	100-160

SC · coated · DIN 6527 · Teeth 2 · 30° Twist · Centre cut · 6535 HA shank · 6535 HB shank · long · UNI · vc

Design:
- shank Ø C3 3.00 mm = HA
- shank Ø C3 6.00 mm = HA
- 30°, twisted
- long version
- cutting tips with protective chamfer
- coated

Use:
Universally applicable



N° article	175246 long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	2	38	3	0,03	0,007 - 0,013
1,50	●	1,5	3	38	3	0,03	0,007 - 0,013
2,00	●	2	6	57	6	0,03	0,007 - 0,013
2,50	●	2,5	7	57	6	0,05	0,010 - 0,018
3,00	●	3	7	57	6	0,05	0,010 - 0,018
4,00	●	4	8	57	6	0,05	0,010 - 0,018
5,00	●	5	10	57	6	0,05	0,010 - 0,018
6,00	●	6	10	57	6	0,05	0,015 - 0,025
8,00	●	8	16	63	8	0,1	0,018 - 0,032
10,00	●	10	19	72	10	0,1	0,027 - 0,042
12,00	●	12	22	83	12	0,1	0,030 - 0,049
16,00	●	16	26	92	16	0,15	0,039 - 0,063
20,00	●	20	32	104	20	0,15	0,048 - 0,070

End mill SC Aluminium, with relieved shank

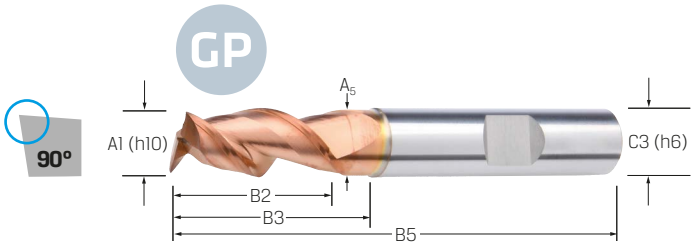
PREMUS GP

	N N/mm²			Plastics N/mm²		Plastics N/mm²
175257	Alu ⟨500	Aluminium alloys, bronze, brass ⟨500	Copper alloys ⟨500	PVC, PTFE, thermoplastics ⟨100	Bakelite, melamine, thermoset ⟨150	GRP, CRP, fibre-reinforced plastics ⟨1500
vc = m/min.						
175257	450-600	225-350	300-400	450-550	360-460	225-380

SC · coated · Factory standard · Teeth 2 · 45° Twist · Centre cut · shank relieved · 6535 HB shank · long · Plastics · vc

Design:
- 45°, twisted
- long version
- relieved shank
- cutting tips with protective chamfer
- coated

Use:
- for aluminium and plastic
- for large cutting depths
- very high chipping performance
- very smooth running



N° article	175257 GP, long, ZrCN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	11,5	6	21	57	6	0,03	0,025 - 0,050
3,00	●	3	2,8	8	21	57	6	0,03	0,035 - 0,070
4,00	●	4	3,8	11	21	57	6	0,04	0,040 - 0,080
5,00	●	5	4,8	13	21	57	6	0,05	0,045 - 0,090
6,00	●	6	5,5	13	21	57	6	0,06	0,060 - 0,120
8,00	●	8	7,5	22	27	63	8	0,08	0,080 - 0,160

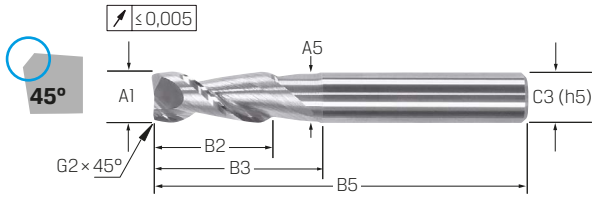
N° article	175257 GP, long, ZrCN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
10,00	●	10	9,5	23	32	72	10	0,1	0,090 - 0,180
12,00	●	12	11,5	27	38	83	12	0,1	0,100 - 0,200
14,00	●	14	13,5	27	38	83	14	0,1	0,110 - 0,200
16,00	●	16	15,5	37	44	92	16	0,1	0,120 - 0,210
18,00	●	18	17,5	37	44	92	18	0,1	0,130 - 0,210
20,00	●	20	19,5	43	54	104	20	0,1	0,140 - 0,220

End mill SC Aluminium

	N N/mm²
175274	Aluminium
175275	
175276	
vc = m/min.	
175274	300-600
175275	
175276	

SC	DIN 6527	Teeth 2
1,75-2,5 × A1	Twist 43° 41°	Centre cut
45°	6535 HA shank	6535 HB shank
SAFE-LOCK		N

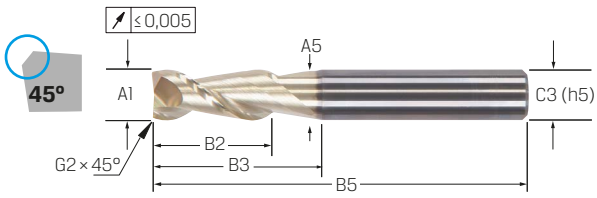
Design:
- neck for higher cutting depth
- centre cutting
- smooth cutting edge
- polished flute and relief surfaces
- coating for abrasive materials



N° article	175274 Power HA	175275 Power HB	175276 Power SL	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,02	0,002 - 0,020
3,00	○	○	○	3	2,9	8	10	58	6	0,03	0,003 - 0,030
4,00	○	○	○	4	3,8	11	15	58	6	0,04	0,004 - 0,040
5,00	○	○	○	5	4,8	13	18	58	6	0,05	0,005 - 0,050
6,00	○	○	○	6	5,7	13	20	58	6	0,06	0,006 - 0,060
8,00	○	○	○	8	7,6	19	26	64	8	0,08	0,008 - 0,080
10,00	○	○	○	10	9,5	22	30,5	73	10	0,1	0,010 - 0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	0,12	0,012 - 0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	0,14	0,014 - 0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	0,16	0,016 - 0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	0,18	0,018 - 0,198
20,00	○	○	○	20	19	38	52	105	20	0,2	0,020 - 0,200

Design:
- neck for higher cutting depth
- centre cutting
- smooth cutting edge
- polished flute and relief surfaces
- coating for abrasive materials

coated



N° article	175277 Power HA, coated	175278 Power HB, coated	175279 Power SL, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,02	0,002 - 0,020
3,00	○	○	○	3	2,9	8	10	58	6	0,03	0,003 - 0,030
4,00	○	○	○	4	3,8	11	15	58	6	0,04	0,004 - 0,040
5,00	○	○	○	5	4,8	13	18	58	6	0,05	0,005 - 0,050
6,00	○	○	○	6	5,7	13	20	58	6	0,06	0,006 - 0,060
8,00	○	○	○	8	7,6	19	26	64	8	0,08	0,008 - 0,080
10,00	○	○	○	10	9,5	22	30,5	73	10	0,1	0,010 - 0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	0,12	0,012 - 0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	0,14	0,014 - 0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	0,16	0,016 - 0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	0,18	0,018 - 0,198
20,00	○	○	○	20	19	38	52	105	20	0,2	0,020 - 0,200



End mill SC Universal

PRETEC

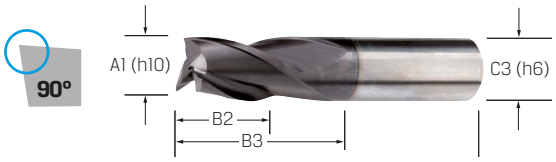
	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²	
175316	⟨1400	⟨850	⟨250	Titanium	Nickel	Aluminium	⟨7 % Si
	vc = m/min.						
175316	80-160	50 - 85	85 - 120	30-55	15-28	120-220	110-160

SC | coated | Factory standard | Teeth 3 | 30° Twist | Centre cut | 6535 HA shank

extra short | UNI | Vc

Design:
- 30°, twisted
- extra short version
- cutting tips with protective chamfer
- coated

Use:
Universally applicable



N° article	175316 extra short, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	4	38	6	0,03	0,007 - 0,013
2,50	●	2,5	5	38	6	0,05	0,007 - 0,013
3,00	●	3	5	38	6	0,05	0,007 - 0,013
3,50	●	3,5	6	38	6	0,05	0,007 - 0,013
4,00	●	4	7	38	6	0,05	0,010 - 0,018
4,50	●	4,5	8	38	6	0,05	0,010 - 0,018
5,00	●	5	8	38	6	0,05	0,010 - 0,018
5,50	●	5,5	8	38	8	0,05	0,010 - 0,018
5,75	●	5,75	8	38	6	0,05	0,010 - 0,018
6,00	●	6	8	38	6	0,05	0,015 - 0,025
6,75	●	6,75	10	42	8	0,1	0,015 - 0,025
7,00	●	7	10	42	8	0,1	0,015 - 0,025

N° article	175316 extra short, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
7,75	●	7,75	10	42	8	0,1	0,015 - 0,025
8,00	●	8	11	43	8	0,1	0,018 - 0,032
8,70	●	8,7	11	48	10	0,1	0,018 - 0,032
9,00	●	9	11	48	10	0,1	0,018 - 0,032
9,70	●	9,7	11	48	10	0,1	0,018 - 0,032
10,00	●	10	13	50	10	0,1	0,027 - 0,042
12,00	●	12	15	55	12	0,1	0,030 - 0,049
14,00	●	14	15	58	14	0,15	0,030 - 0,049
16,00	●	16	18	62	16	0,15	0,039 - 0,063
18,00	●	18	20	70	18	0,15	0,039 - 0,063
20,00	●	20	22	75	20	0,15	0,048 - 0,070

Micro milling cutter SC Universal with IC

CRAZYMILL Cool Micro | MIKRON TOOL

Design:
- with internal coolant supply
- material-specific **cutting edge geometry from diameter 0.2 mm**
- high cutting edge stability and robustness
- innovative and highly efficient cooling concept
- ultra-fine carbide grade and fine, homogeneous coating

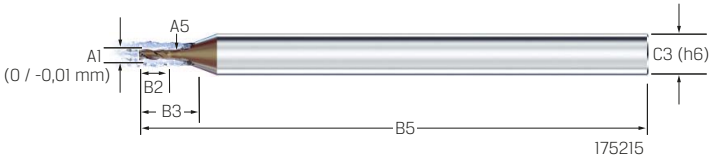
Use:
- universally applicable for edge trimming and groove milling of steel, stainless steel, cast iron, non-ferrous metal and titanium alloys
- milling with high contour precision
- excellent surface quality

NEW

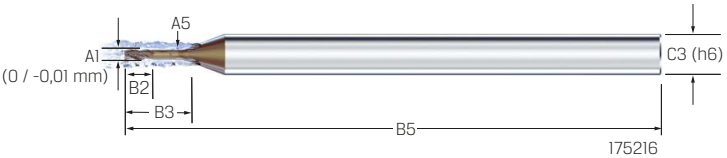
SC | coated | Factory standard | Teeth 3 | 35° Twist | 6535 HA shank

UNI

Vc | 3 × A1



Vc | 5 × A1



N° article	175215 CrazyMill Cool Micro, 3× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,20	○	0,2	0,19	0,3	0,6	38	3
0,30	○	0,3	0,28	0,5	0,9	38	3
0,40	○	0,4	0,38	0,6	1,2	38	3
0,50	○	0,5	0,47	0,8	1,5	38	3
0,60	○	0,6	0,56	0,9	1,8	38	3
0,70	○	0,7	0,66	1,1	2,1	38	3
0,80	○	0,8	0,75	1,2	2,4	38	3
0,90	○	0,9	0,85	1,4	2,7	38	3
1,00	○	1	0,94	1,5	3	40	4

N° article	175216 CrazyMill Cool Micro, 5× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,20	○	0,2	0,19	0,3	1	38	3
0,30	○	0,3	0,28	0,5	1,5	38	3
0,40	○	0,4	0,38	0,6	2	38	3
0,50	○	0,5	0,47	0,8	2,5	38	3
0,60	○	0,6	0,56	0,9	3	38	3
0,70	○	0,7	0,66	1,1	3,5	38	3
0,80	○	0,8	0,75	1,2	4	38	3
0,90	○	0,9	0,85	1,4	4,5	38	3
1,00	○	1	0,94	1,5	5	40	4

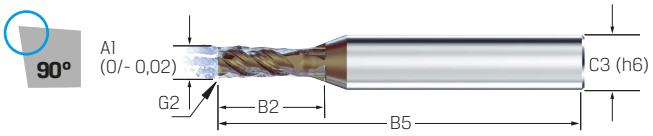
Micro milling cutter SC Universal with IC

CRAZYMILL Cool by Mikron Tool — MIKRON TOOL

SC | coated | Factory standard | Teeth 3 | 42° Twist | 2,5 × A1 | 6535 HA shank | UNI

Design:
- 3-edged plunge cutter
- for milling depth max. 2.5× A1
- special cutting geometry enables reliable vertical plunge milling
- specially designed coating
- cutting tips with protective chamfer
- with integrated cooling in the shank

Use:
- developed for roughing and finishing of all materials
- ideally suited for stainless steels, titanium, super alloys and CrCo alloys
- specially developed for plunge milling, slot milling, milling with linear ramp as well as side milling



N° article	175352 CrazyMill Cool P&S, short, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm
1,00	●	1	2,5	40	4	0,009
1,10	●	1,1	2,75	40	4	0,01
1,20	●	1,2	3	40	4	0,01
1,30	●	1,3	3,25	40	4	0,011
1,40	●	1,4	3,5	40	4	0,011
1,50	●	1,5	3,75	40	4	0,012
1,60	●	1,6	4	40	4	0,012
1,70	●	1,7	4,25	40	4	0,013
1,80	●	1,8	4,5	40	4	0,014
1,90	●	1,9	4,75	40	4	0,014
2,00	●	2	5	40	4	0,015
2,10	●	2,1	5,25	40	4	0,015
2,20	●	2,2	5,5	40	4	0,016
2,30	●	2,3	5,75	40	4	0,016
2,40	●	2,4	6	40	4	0,017
2,50	●	2,5	6,25	50	6	0,018
2,60	●	2,6	6,5	50	6	0,018

N° article	175352 CrazyMill Cool P&S, short, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm
2,70	●	2,7	6,75	50	6	0,019
2,80	●	2,8	7	50	6	0,019
2,90	●	2,9	7,25	50	6	0,02
3,00	●	3	7,5	50	6	0,02
3,10	●	3,1	7,75	50	6	0,021
3,30	●	3,3	8,25	50	6	0,022
3,70	●	3,7	9,25	50	6	0,024
4,00	●	4	10	50	6	0,026
4,30	●	4,3	10,75	60	8	0,028
4,70	●	4,7	11,75	60	8	0,03
4,80	●	4,8	12	60	8	0,031
5,00	●	5	12,5	60	8	0,032
5,30	●	5,3	13,25	65	10	0,034
5,70	●	5,7	14,25	65	10	0,036
6,00	●	6	15	65	10	0,038
8,00	●	8	20	80	12	0,049

Micro milling cutter SC Universal with IC

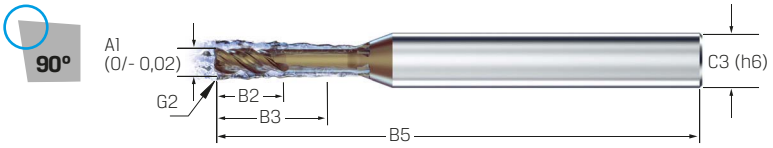
CRAZYMILL Cool by Mikron Tool — MIKRON TOOL

SC | coated | Factory standard | Teeth 3 | 42° Twist | 5 × A1 | 6535 HA shank | UNI

Design:
- 3-edged plunge cutter
- for milling depth max. 5× A1
- special cutting geometry enables reliable vertical plunge milling
- specially designed coating
- cutting tips with protective chamfer
- with integrated cooling in the shank

Use:
- developed for roughing and finishing of all materials
- ideally suited for stainless steels, titanium, super alloys and CrCo alloys
- specially developed for plunge milling, slot milling, milling with linear ramp as well as side milling

NEW



N° article	178474 CrazyMill Cool, P&S, long, exedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
0100	●	1	2	5	40	4	0,009
0110	●	1,1	2,2	5,5	40	4	0,01
0120	●	1,2	2,4	6	40	4	0,01
0130	●	1,3	2,6	6,5	40	4	0,011
0140	●	1,4	2,8	7	40	4	0,011
0150	●	1,5	3	7,5	40	4	0,012
0160	●	1,6	3,2	8	45	4	0,012
0170	●	1,7	3,4	8,5	45	4	0,013
0180	●	1,8	3,6	9	45	4	0,014
0190	●	1,9	3,8	9,5	44	4	0,014
0200	●	2	4	10	44	4	0,015
0210	●	2,1	4,2	10,5	44	4	0,015
0220	●	2,2	4,4	11	44	4	0,016
0230	●	2,3	4,6	11,5	44	4	0,016
0240	●	2,4	4,8	12	44	4	0,017
0250	●	2,5	5	12,5	55	6	0,018
0260	●	2,6	5,2	13	55	6	0,018

N° article	178474 CrazyMill Cool, P&S, long, exedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
0270	●	2,7	5,4	13,5	55	6	0,019
0280	●	2,8	5,6	14	55	6	0,019
0290	●	2,9	5,8	14,5	55	6	0,02
0300	●	3	6	15	55	6	0,02
0310	●	3,1	6,2	15,5	60	6	0,021
0330	●	3,3	6,6	16,5	60	6	0,022
0370	●	3,7	7,4	18,5	60	6	0,024
0400	●	4	8	20	60	6	0,026
0430	●	4,3	8,6	21,5	70	8	0,028
0470	●	4,7	9,4	23,5	70	8	0,03
0480	●	4,8	9,6	24	70	8	0,031
0500	●	5	10	25	70	8	0,032
0530	●	5,3	10,6	26,5	70	10	0,034
0570	●	5,7	11,4	28,5	70	10	0,036
0600	●	6	12	30	70	10	0,038
0800	●	8	16	40	90	10	0,049

End mill SC Universal

PREMUS GP

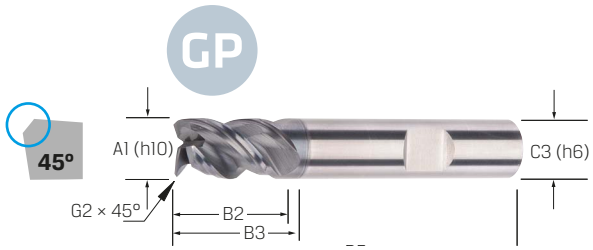
	P N/mm²	M N/mm²	K HB
175315	⟨1200	⟨850	⟨650
	vc = m/min.		
175315	110-280	80 - 110	110 - 200

Design:
- unequal twisted
- short version
- cutting tips with 45° chamfer
- extended flute volume in the front part of the cutting edge
- coated

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running

SC | coated | Factory standard | Teeth 3 | λ° | Centre cut | 6535 HB shank | short | UNI | CAD | Vc

N° article	175315 GP, short, with chamfer, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	4	54	6	0,1	0,007 - 0,020
2,50	●	2,5	4	54	6	0,1	0,007 - 0,020
3,00	●	3	6	54	6	0,13	0,007 - 0,028
3,50	●	3,5	6	54	6	0,13	0,007 - 0,028
4,00	●	4	8	54	6	0,18	0,010 - 0,035
5,00	●	5	9	54	6	0,2	0,015 - 0,035
6,00	●	6	10	54	6	0,2	0,025 - 0,040
7,00	●	7	12	58	8	0,2	0,030 - 0,045
8,00	●	8	12	58	8	0,2	0,030 - 0,050
9,00	●	9	14	66	10	0,3	0,035 - 0,060
10,00	●	10	14	66	10	0,3	0,040 - 0,070
12,00	●	12	16	73	12	0,3	0,060 - 0,090
14,00	●	14	18	75	14	0,3	0,070 - 0,110
16,00	●	16	23	82	16	0,4	0,090 - 0,130
20,00	●	20	27	92	20	0,5	0,130 - 0,170

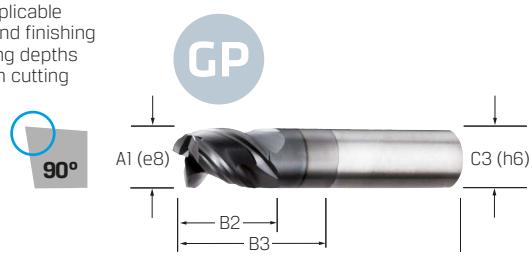


	P N/mm²	M N/mm²	K HB
175309	⟨1200	⟨850	⟨650
	vc = m/min.		
175309	110-280	80 - 110	110 - 200

Design:
- unequal twisted
- extra short version
- cutting tips with protective chamfer
- extended flute volume in the front part of the cutting edge
- for fit P9
- coated

SC | coated | Factory standard | Teeth 3 | λ° | Centre cut | 6535 HA shank | P9 | extra short | UNI | CAD | Vc

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running



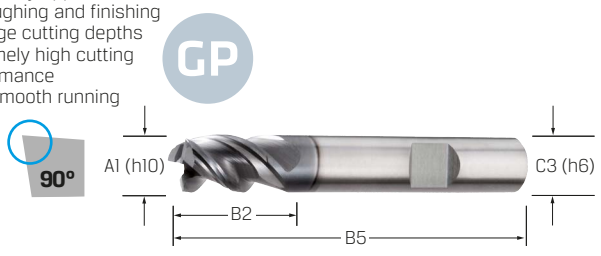
N° article	175309 GP, extra short, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	2	40	3	0,02	0,006 - 0,015
1,50	●	1,5	3	40	3	0,02	0,006 - 0,015
2,00	●	2	3	40	6	0,02	0,007 - 0,020
2,50	●	2,5	3	40	6	0,02	0,007 - 0,020
2,80	●	2,8	5	40	6	0,03	0,007 - 0,020
3,00	●	3	5	40	6	0,03	0,007 - 0,028
3,80	●	3,8	7	40	6	0,04	0,007 - 0,028
4,00	●	4	7	40	6	0,04	0,010 - 0,035
4,80	●	4,8	8	40	6	0,05	0,010 - 0,035
5,00	●	5	8	40	6	0,05	0,015 - 0,035
5,75	●	5,75	8	40	6	0,06	0,015 - 0,035
6,00	●	6	8	40	6	0,06	0,025 - 0,040
6,75	●	6,75	11	45	8	0,07	0,025 - 0,040
7,00	●	7	11	45	8	0,07	0,030 - 0,045
7,75	●	7,75	11	45	8	0,08	0,030 - 0,045
8,00	●	8	11	45	8	0,08	0,030 - 0,050
8,70	●	8,7	13	50	10	0,09	0,030 - 0,050
9,00	●	9	13	50	10	0,09	0,035 - 0,060
9,70	●	9,7	13	50	10	0,1	0,035 - 0,060
10,00	●	10	13	50	10	0,1	0,040 - 0,070
11,70	●	11,7	15	55	12	0,12	0,050 - 0,080
12,00	●	12	15	55	12	0,12	0,060 - 0,090
13,70	●	13,7	15	58	14	0,14	0,060 - 0,090
14,00	●	14	15	58	14	0,14	0,070 - 0,110
15,70	●	15,7	18	62	16	0,15	0,070 - 0,110
16,00	●	16	18	62	16	0,15	0,090 - 0,130
18,00	●	18	18	70	18	0,15	0,110 - 0,150
20,00	●	20	23	75	20	0,15	0,130 - 0,170

	P N/mm²	M N/mm²	K HB
175317	⟨1200	⟨850	⟨650
	vc = m/min.		
175317	110-280	80 - 110	110 - 200

Design:
- unequal twisted
- short version
- cutting tips with protective chamfer
- extended flute volume in the front part of the cutting edge
- coated

SC | coated | Factory standard | Teeth 3 | λ° | Centre cut | 6535 HB shank | short | UNI | CAD | Vc

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running



N° article	175317 GP, short, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	3	54	3	0,02	0,006 - 0,015
1,50	●	1,5	4	54	3	0,02	0,006 - 0,015
2,00	●	2	4	54	6	0,02	0,007 - 0,020
2,50	●	2,5	4	54	6	0,02	0,007 - 0,020
2,80	●	2,8	6	54	6	0,03	0,007 - 0,020
3,00	●	3	6	54	6	0,03	0,007 - 0,028
3,80	●	3,8	8	54	6	0,04	0,007 - 0,028
4,00	●	4	8	54	6	0,04	0,010 - 0,035
4,80	●	4,8	9	54	6	0,05	0,010 - 0,035
5,00	●	5	9	54	6	0,05	0,015 - 0,035
5,75	●	5,75	10	54	6	0,06	0,015 - 0,035
6,00	●	6	10	54	6	0,06	0,025 - 0,040
6,75	●	6,75	12	58	8	0,07	0,025 - 0,040
7,00	●	7	12	58	8	0,07	0,030 - 0,045
7,75	●	7,75	12	58	8	0,08	0,030 - 0,045
8,00	●	8	12	58	8	0,08	0,030 - 0,050
8,70	●	8,7	14	66	10	0,09	0,030 - 0,050
9,00	●	9	14	66	10	0,09	0,035 - 0,060
9,70	●	9,7	14	66	10	0,1	0,035 - 0,060
10,00	●	10	14	66	10	0,1	0,040 - 0,070
11,70	●	11,7	16	73	12	0,12	0,040 - 0,070
12,00	●	12	16	73	12	0,12	0,060 - 0,090
13,70	●	13,7	18	75	14	0,14	0,060 - 0,090
14,00	●	14	18	75	14	0,14	0,070 - 0,110
15,70	●	15,7	23	82	16	0,15	0,070 - 0,110
16,00	●	16	23	82	16	0,15	0,090 - 0,130
18,00	●	18	25	84	18	0,15	0,110 - 0,150
20,00	●	20	27	92	20	0,15	0,130 - 0,170

End mill SC Universal

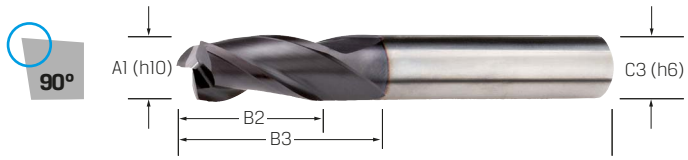
PRETEC

	P N/mm²	M N/mm²	K HB	N N/mm²	
175346	⟨1400	⟨850	⟨250	Aluminium	⟨7 % Si
	vc = m/min.				
175346	80-160	50 - 85	85 - 120	120-220	100-160

SC | coated | DIN 6527 | Teeth 3 | 30° Twist | Centre cut | 6535 HA shank | long | UNI | Vc

Design:
- 30°, twisted
- long version
- cutting tips with protective chamfer
- coated

Use:
Universally applicable



N° article	175346 long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,80	●	2,8	7	57	6	0,05	0,007 - 0,013
3,00	●	3	7	57	6	0,05	0,007 - 0,013
3,80	●	3,8	8	57	6	0,05	0,007 - 0,013
4,00	●	4	8	57	6	0,05	0,010 - 0,018
4,80	●	4,8	10	57	6	0,05	0,010 - 0,018
5,00	●	5	10	57	6	0,05	0,010 - 0,018
5,80	●	5,8	10	57	6	0,05	0,010 - 0,018
6,00	●	6	10	57	6	0,05	0,015 - 0,025
6,80	●	6,8	13	63	8	0,1	0,015 - 0,025
7,00	●	7	13	63	8	0,1	0,015 - 0,025
7,80	●	7,8	16	63	8	0,1	0,015 - 0,025
8,00	●	8	16	63	8	0,1	0,018 - 0,032

N° article	175346 long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
8,70	●	8	16	63	8	0,1	0,018 - 0,032
9,00	●	9	16	72	10	0,1	0,018 - 0,032
9,70	●	9,7	19	72	10	0,1	0,018 - 0,032
10,00	●	10	19	72	10	0,1	0,027 - 0,042
11,70	●	11,7	22	83	12	0,1	0,027 - 0,042
12,00	●	12	22	83	12	0,1	0,030 - 0,049
13,70	●	13,7	22	83	14	0,15	0,030 - 0,049
14,00	●	14	22	83	14	0,15	0,030 - 0,049
15,70	●	15,7	26	92	16	0,15	0,039 - 0,063
16,00	●	16	26	92	16	0,15	0,039 - 0,063
18,00	●	18	26	92	18	0,15	0,039 - 0,063
20,00	●	20	32	104	20	0,15	0,048 - 0,070

End mill SC Universal, with relieved shank

PREMUS GP

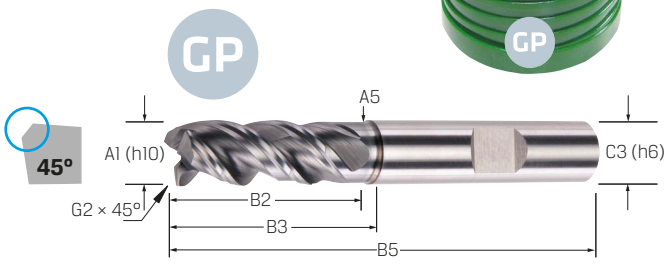
	P N/mm²	M N/mm²	K HB
175347	⟨1200	⟨850	⟨650
	vc = m/min.		
175347	110-280	80 - 110	110 - 200

SC | coated | Factory standard | Teeth 3 | λ | Centre cut | shank relieved | 6535 HB shank | long | UNI | CAD | Vc

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- extended flute volume in the front part of the cutting edge
- coated

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running





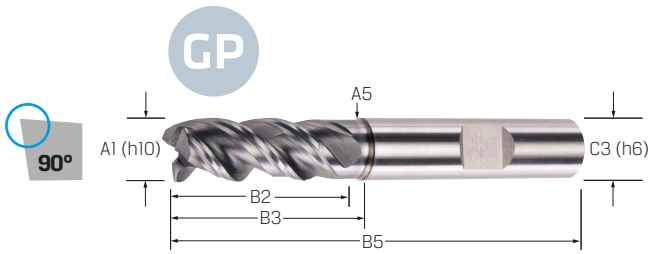
Art.-Nr.	175347 GP, long, with chamfer, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	2,8	8	18	57	6	0,13	0,007 - 0,028
3,50	●	3,5	3,3	8	18	57	6	0,13	0,007 - 0,028
4,00	●	4	3,8	11	21	57	6	0,18	0,010 - 0,035
5,00	●	5	4,8	13	21	57	6	0,2	0,015 - 0,035
6,00	●	6	5,5	13	21	57	6	0,2	0,025 - 0,040
7,00	●	7	6,5	19	27	63	8	0,2	0,030 - 0,045
8,00	●	8	7,5	19	27	63	8	0,2	0,030 - 0,050
9,00	●	9	8,5	22	32	72	10	0,3	0,035 - 0,060
10,00	●	10	9,5	22	32	72	10	0,3	0,040 - 0,070
12,00	●	12	11,5	26	38	83	12	0,3	0,060 - 0,090
14,00	●	14	13,5	26	42	83	14	0,3	0,070 - 0,110
16,00	●	16	15,5	32	44	92	16	0,4	0,090 - 0,130
20,00	●	20	19,5	38	54	104	20	0,5	0,130 - 0,170
SET	●	Contents: Set 4-piece: 6 | 8 | 10 | 12 mm							

	P N/mm²	M N/mm²	K HB
175349	⟨1200	⟨850	⟨650
	vc = m/min.		
175349	110-280	80 - 110	110 - 200

SC | coated | Factory standard | Teeth 3 | λ | Centre cut | shank relieved | 6535 HB shank | long | UNI | CAD | Vc

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with protective chamfer
- extended flute volume in the front part of the cutting edge
- coated

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running



N° article	175349 GP, long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	–	6	9,764	57	6	0,02	0,005 - 0,023
2,50	●	2,5	–	6	9,331	57	6	0,02	0,005 - 0,023
3,00	●	3,5	2,8	8	21	57	6	0,03	0,007 - 0,028
3,50	●	4	3,3	8	21	57	6	0,03	0,007 - 0,028
4,00	●	4,5	3,8	11	21	57	6	0,04	0,010 - 0,035
4,50	●	5	4,3	11	21	57	6	0,04	0,010 - 0,035
5,00	●	5,5	4,8	13	21	57	6	0,05	0,015 - 0,035
5,50	●	5,5	5,3	13	21	57	6	0,05	0,015 - 0,035
6,00	●	6	5,5	13	21	57	6	0,06	0,025 - 0,040
7,00	●	7	6,5	19	27	63	8	0,07	0,030 - 0,045
8,00	●	8	7,5	19	27	63	8	0,08	0,030 - 0,050
9,00	●	9	8,5	23	32	72	10	0,09	0,035 - 0,060
10,00	●	10	9,5	23	32	72	10	0,1	0,040 - 0,070
12,00	●	12	11,5	27	38	83	12	0,12	0,060 - 0,090
14,00	●	14	13,5	27	38	83	14	0,14	0,070 - 0,110
16,00	●	16	15,5	33	44	92	16	0,15	0,090 - 0,130
18,00	●	18	17,5	33	44	92	18	0,15	0,110 - 0,150
20,00	●	20	19,5	39	54	104	20	0,15	0,130 - 0,170

End mill SC Universal

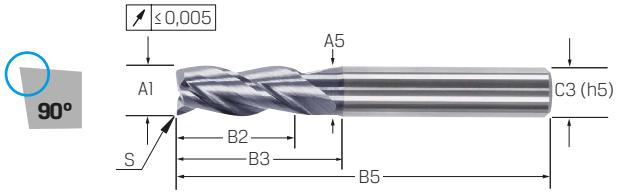
HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
175341							
175342	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
175343							
	vc = m/min.						
175341							
175342	170-270	40-80	55 - 65	110 - 220	60-80	30-40	120-240
175343							

SC | coated | DIN 6527 | Teeth 3 | 1,75-2,5 × A1 | Twist 37° 36° 35° | Centre cut

3-5° | 6535 HA shank | 6535 HB shank | SAFE-LOCK | UNI

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- polished flute and relief surfaces
- sharp cutting edge
- coated



N° article	175341 Power HA, coated	175342 Power HB, coated	175343 Power Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,002 - 0,012
3,00	○	○	○	3	2,9	8	10	58	6	0,003 - 0,018
4,00	○	○	○	4	3,8	11	15	58	6	0,004 - 0,024
5,00	○	○	○	5	4,8	13	18	58	6	0,005 - 0,030
6,00	○	○	○	6	5,7	13	20	58	6	0,006 - 0,036
8,00	○	○	○	8	7,6	19	26	64	8	0,008 - 0,048
10,00	○	○	○	10	9,5	22	30,5	73	10	0,010 - 0,060
12,00	○	○	○	12	11,4	26	36,5	84	12	0,012 - 0,072
14,00	○	○	○	14	13,3	26	36,5	84	14	0,014 - 0,084
16,00	○	○	○	16	15,2	32	42,5	93	16	0,016 - 0,096
18,00	○	○	○	18	17,1	32	42,5	93	18	0,018 - 0,108
20,00	○	○	○	20	19	38	52	105	20	0,020 - 0,120

Micro milling cutter SC HRSA with IC

CRAZYMILL Cool Micro by MIKRON TOOL

Design:
- with internal coolant supply
- material-specific **cutting edge geometry from diameter 0.2 mm**
- high cutting edge stability and robustness
- innovative and highly efficient cooling concept
- ultra-fine carbide grade and fine, homogeneous coating

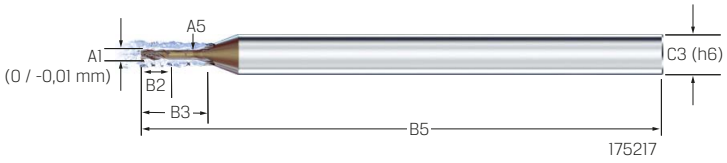
Use:
- applicable for trimming and groove milling of heat-resistant superalloys
- milling with high contour precision
- excellent surface quality

NEW

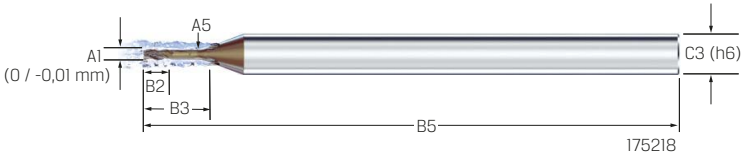
SC | coated | Factory standard | Teeth 3 | Twist 35° | 6535 HA shank

S

3 × A1



5 × A1



N° article	175217 CrazyMill Cool Micro, 3× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,20	○	0,2	0,19	0,3	0,6	38	3
0,30	○	0,3	0,28	0,5	0,9	38	3
0,40	○	0,4	0,38	0,6	1,2	38	3
0,50	○	0,5	0,47	0,8	1,5	38	3
0,60	○	0,6	0,56	0,9	1,8	38	3
0,70	○	0,7	0,66	1,1	2,1	38	3
0,80	○	0,8	0,75	1,2	2,4	38	3
0,90	○	0,9	0,85	1,4	2,7	38	3
1,00	○	1	0,94	1,5	3	40	4

N° article	175218 CrazyMill Cool Micro, 5× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,20	○	0,2	0,19	0,3	1	38	3
0,30	○	0,3	0,28	0,5	1,5	38	3
0,40	○	0,4	0,38	0,6	2	38	3
0,50	○	0,5	0,47	0,8	2,5	38	3
0,60	○	0,6	0,56	0,9	3	38	3
0,70	○	0,7	0,66	1,1	3,5	38	3
0,80	○	0,8	0,75	1,2	4	38	3
0,90	○	0,9	0,85	1,4	4,5	38	3
1,00	○	1	0,94	1,5	5	40	4

End mill SC INOX

PREMUS GP

	M N/mm²	S N/mm²	
175362	‹850	heat resistant super alloys	Titanium
vc = m/min.			
175362	65 - 120	35-42	50-75

SC | coated | Factory standard

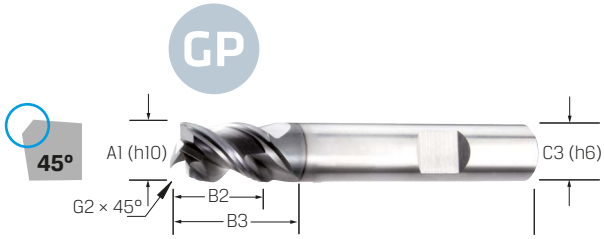
Teeth 3 | λ° ≠ | Centre cut

short | 6535 HB shank | M

S | CAD | Vc

Design:
- unequal twisted
- short version
- cutting tips with 45° chamfer
- extended flute volume in the front part of the cutting edge
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- extremely high cutting performance
- very smooth running
- very soft cut



N° article	175362 GP, short, with chamfer, ALNOVA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	4	54	6	0,1	0,006 - 0,010
2,50	●	2,5	4	54	6	0,1	0,006 - 0,010
3,00	●	3	6	54	6	0,13	0,010 - 0,015
3,50	●	3,5	6	54	6	0,13	0,010 - 0,015
4,00	●	4	8	54	6	0,18	0,014 - 0,020
5,00	●	5	9	54	6	0,2	0,018 - 0,024
6,00	●	6	10	54	6	0,2	0,020 - 0,028
7,00	●	7	12	58	8	0,2	0,020 - 0,028
8,00	●	8	12	58	8	0,2	0,030 - 0,038
9,00	●	9	14	66	10	0,3	0,030 - 0,038
10,00	●	10	14	66	10	0,3	0,040 - 0,050
12,00	●	12	16	73	12	0,3	0,045 - 0,055
14,00	●	14	18	75	14	0,3	0,050 - 0,060
16,00	●	16	23	82	16	0,4	0,070 - 0,080
20,00	●	20	27	92	20	0,5	0,070 - 0,090

	M N/mm²	S N/mm²	
175364	‹850	heat resistant super alloys	Titanium
vc = m/min.			
175364	65 - 120	35-42	50-75

SC | coated | Factory standard

Teeth 3 | λ° ≠ | Centre cut

6535 HB shank | short | P9

M | S | CAD

Vc

Design:
- unequal twisted
- short version
- cutting tips with protective chamfer
- extended flute volume in the front part of the cutting edge
- for fit P9
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- extremely high cutting performance
- very smooth running
- very soft cut



N° article	175364 GP, short, ALNOVA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	3	54	3	0,02	0,002 - 0,006
1,50	●	1,5	4	54	3	0,02	0,002 - 0,006
2,00	●	2	4	54	6	0,02	0,006 - 0,010
2,50	●	2,5	4	54	6	0,02	0,006 - 0,010
2,80	●	2,8	6	54	6	0,03	0,006 - 0,010
3,00	●	3	6	54	6	0,03	0,010 - 0,015
3,80	●	3,8	8	54	6	0,04	0,010 - 0,015
4,00	●	4	8	54	6	0,04	0,014 - 0,020
4,80	●	4,8	9	54	6	0,05	0,014 - 0,020
5,00	●	5	9	54	6	0,05	0,018 - 0,024
5,75	●	5,75	10	54	6	0,06	0,018 - 0,024
6,00	●	6	10	54	6	0,06	0,020 - 0,028
6,75	●	6,75	12	58	8	0,07	0,020 - 0,028
7,00	●	7	12	58	8	0,07	0,020 - 0,028
7,75	●	7,75	12	58	8	0,08	0,020 - 0,028
8,00	●	8	12	58	8	0,08	0,030 - 0,038
8,70	●	8,7	14	66	10	0,09	0,030 - 0,038
9,00	●	9	14	66	10	0,09	0,030 - 0,038
9,70	●	9,7	14	66	10	0,1	0,030 - 0,038
10,00	●	10	14	66	10	0,1	0,040 - 0,050
11,70	●	11,7	16	73	12	0,12	0,040 - 0,050
12,00	●	12	16	73	12	0,12	0,045 - 0,055
13,00	●	13	18	75	14	0,13	0,045 - 0,055
13,70	●	13,7	18	75	14	0,14	0,045 - 0,055
14,00	●	14	18	75	14	0,14	0,050 - 0,060
15,00	●	15	22	82	16	0,15	0,050 - 0,060
15,70	●	15,7	22	82	16	0,15	0,050 - 0,060
16,00	●	16	22	82	16	0,15	0,070 - 0,080
17,70	●	17,7	24	84	18	0,15	0,070 - 0,080
18,00	●	18	24	84	18	0,15	0,070 - 0,080
19,70	●	19,7	26	92	20	0,15	0,070 - 0,080
20,00	●	20	26	92	20	0,15	0,070 - 0,090

End mill SC INOX, with relieved shank

PREMUS GP

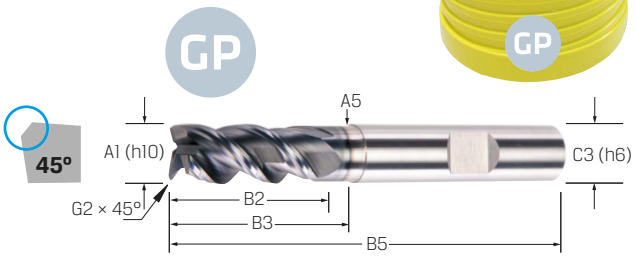
	M N/mm²	S N/mm²	
175371	‹850	heat resistant super alloys	Titanium
vc = m/min.			
175371	65 - 120	35-42	50-75

SC coated | Factory standard | Teeth 3 | λ° ≠ | Centre cut | 6535 HB shank | long | shank relieved | M | S | Vc | CAD

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- extended flute volume in the front part of the cutting edge
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running
- very soft cut





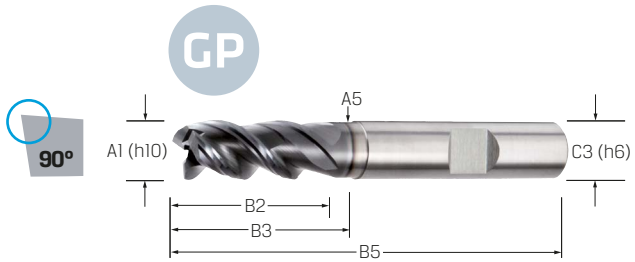
N° article	175371 GP, long, with chamfer, ALNOVA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	2,8	8	21	57	6	0,13	0,010 - 0,015
3,50	●	3,5	3,3	8	21	57	6	0,13	0,010 - 0,015
4,00	●	4	3,8	11	21	57	6	0,18	0,014 - 0,020
5,00	●	5	4,8	13	21	57	6	0,2	0,018 - 0,024
6,00	●	6	5,5	13	21	57	6	0,2	0,020 - 0,028
7,00	●	7	6,5	19	27	63	8	0,2	0,020 - 0,028
8,00	●	8	7,5	19	27	63	8	0,2	0,030 - 0,038
9,00	●	9	8,5	23	32	72	10	0,3	0,030 - 0,038
10,00	●	10	9,5	23	32	72	10	0,3	0,040 - 0,050
12,00	●	12	11,5	27	38	83	12	0,3	0,045 - 0,055
14,00	●	14	13,5	27	38	83	14	0,3	0,050 - 0,060
16,00	●	16	15,5	33	44	92	16	0,4	0,070 - 0,080
20,00	●	20	19,5	39	54	104	20	0,5	0,070 - 0,090
SET	●	Contents: Set 4-piece 6 | 8 | 10 | 12 mm							

	M N/mm²	S N/mm²	
175373	‹850	heat resistant super alloys	Titanium
vc = m/min.			
175373	65 - 120	35-42	50-75

SC coated | Factory standard | Teeth 3 | λ° ≠ | Centre cut | 6535 HB shank | long | shank relieved | M | S | Vc | CAD

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with protective chamfer
- extended flute volume in the front part of the cutting edge
- coated

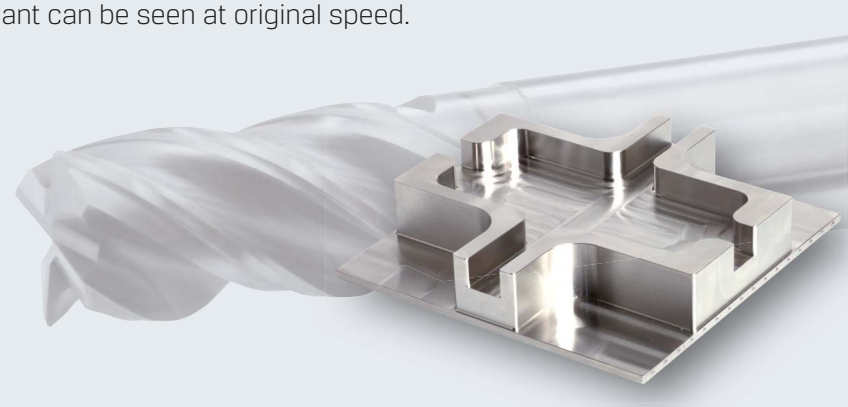
Use:
- for INOX and titanium materials
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running
- very soft cut



N° article	175373 GP, long, ALNOVA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	–	6	9,764	57	6	0,02	0,006 - 0,010
2,50	●	2,5	–	6	9,331	57	6	0,02	0,006 - 0,010
3,00	●	3	2,8	8	21	57	6	0,03	0,010 - 0,015
3,50	●	3,5	3,3	8	21	57	6	0,03	0,010 - 0,015
4,00	●	4	3,8	11	21	57	6	0,04	0,014 - 0,020
5,00	●	5	4,8	13	21	57	6	0,05	0,018 - 0,024
6,00	●	6	5,5	13	21	57	6	0,06	0,020 - 0,028
7,00	●	7	6,5	19	27	63	8	0,07	0,020 - 0,028
8,00	●	8	7,5	19	27	63	8	0,08	0,030 - 0,038
9,00	●	9	8,5	23	32	72	10	0,09	0,030 - 0,038
10,00	●	10	9,5	23	32	72	10	0,1	0,040 - 0,050
12,00	●	12	11,5	27	38	83	12	0,12	0,045 - 0,055
14,00	●	14	13,5	27	38	83	14	0,14	0,050 - 0,060
16,00	●	16	15,5	33	44	92	16	0,15	0,070 - 0,080
20,00	●	20	19,5	39	54	104	20	0,15	0,070 - 0,090

Solid carbide cutter GP INOX 4-knife machined 1.4301 (X5 CrNi18-10)

- The workpiece shown was machined using the solid carbide milling cutter GP INOX with the diameters 8.00 and 16.00 mm. The workpiece was completely manufactured dry in just under 7 minutes under normal industrial conditions. Roughing, finishing and milling in full track is no challenge for the GP INOX. In parallel, the machining of 1.4571 (X6 CrNiMoTi17-12-2) using cooling lubricant can be seen at original speed.
- The YouTube video has a length of approximately 6 minutes, cutting data are displayed in real time.



YouTube
http://youTu.be/dsDwpIXhkfg

End mill SC Aluminium, with relieved shank

PREMUS GP

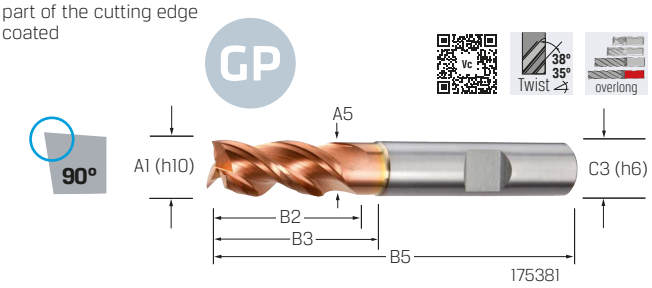
	N N/mm²			Plastics N/mm²		Plastics N/mm²
175381 / 175383	Alu ⟨ 500	Aluminium alloys, bronze, brass ⟨ 500	Copper alloys ⟨ 500	PVC, PTFE, thermoplastics ⟨ 100	Bakelite, melamine, thermoset ⟨ 150	GRP, CRP, fibre-reinforced plastics ⟨ 1500
vc = m/min.						
175381 / 175383	450-600	225-350	300-400	450-550	360-460	225-380

SC | coated | Factory standard | Teeth 3 | 6535 HB shank | long | N | Plastics | Plastics | CAD

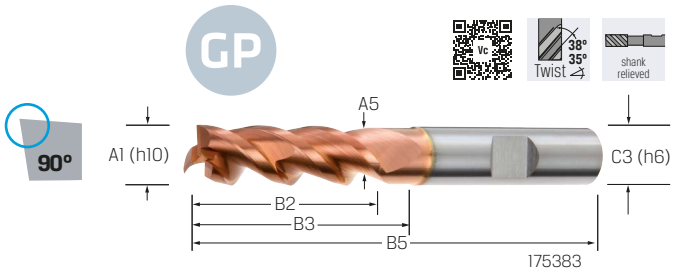
Design:
- 35°/38°, twisted
- long version (175381)
- extra long version (175383)
- relieved shank
- cutting tips with protective chamfer
- extended flute volume in the front part of the cutting edge
- coated

Use:
- for aluminium and plastic
- for large cutting depths
- very high chipping performance
- very smooth running

Note (175383):
When used in Weldon chucks, please note the programming length!



N° article	175381 GP, long, ZrCN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	2,8	8	21	57	6	0,03	0,070 - 0,070
4,00	●	4	3,8	11	21	57	6	0,04	0,080 - 0,080
5,00	●	5	4,8	13	21	57	6	0,05	0,090 - 0,090
6,00	●	6	5,5	13	21	57	6	0,06	0,120 - 0,120
8,00	●	8	7,5	22	27	63	8	0,08	0,160 - 0,160
10,00	●	10	9,5	23	32	72	10	0,1	0,180 - 0,180
12,00	●	12	11,5	27	38	83	12	0,1	0,200 - 0,200
14,00	●	14	13,5	27	38	83	14	0,1	0,200 - 0,200
16,00	●	16	15,5	37	44	92	16	0,1	0,210 - 0,210
18,00	●	18	17,5	37	44	92	18	0,1	0,210 - 0,210
20,00	●	20	19,5	43	54	104	20	0,1	0,220 - 0,220
25,00	●	25	24,5	52	69	125	25	0,1	0,240 - 0,240



N° article	175383 GP, extra long, ZrCN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
5,00	●	5	4,8	23	27	63	6	0,05	0,045 - 0,090
6,00	●	6	5,5	23	27	63	6	0,06	0,060 - 0,120
8,00	●	8	7,5	29	44	80	8	0,08	0,080 - 0,160
10,00	●	10	9,5	34	40	80	10	0,1	0,090 - 0,180
12,00	●	12	11,5	34	55	100	12	0,1	0,100 - 0,200
14,00	●	14	13,5	50	55	100	14	0,1	0,110 - 0,200
16,00	●	16	15,5	55	77	125	16	0,1	0,120 - 0,210
20,00	●	20	19,5	71	100	150	20	0,1	0,140 - 0,220

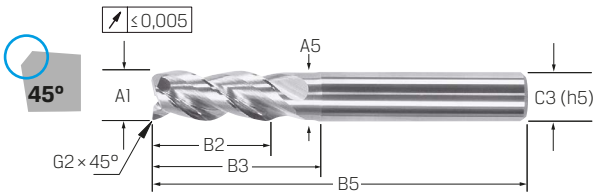
End mill SC Aluminium

HAIMER

	N N/mm²
175393 / 175394 / 175395	Aluminium
vc = m/min.	
175393 / 175394 / 175395	300-600

Design:
- neck for higher cutting depth
- centre cutting
- polished flute and relief surfaces
- smooth cutting edge
- finely balanced, except Weldon shank
- coating for abrasive materials

SC | DIN 6527 | Teeth 3 | 1,75-2,5 × A1 | Twist 43,5° 42,5° 41,5° | Centre cut | 45° | 6535 HA shank | 6535 HB shank | SAFE-LOCK | N

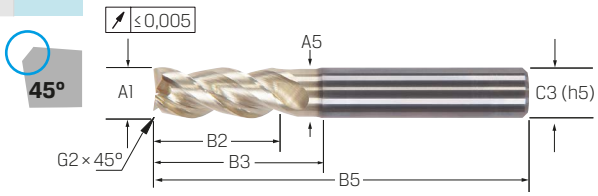


N° article	175393 Power HA	175394 Power HB	175395 Power Safe-Lock	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,02	0,002 - 0,020
3,00	○	○	○	3	2,9	8	10	58	6	0,03	0,003 - 0,030
4,00	○	○	○	4	3,8	11	15	58	6	0,04	0,004 - 0,040
5,00	○	○	○	5	4,8	13	18	58	6	0,05	0,005 - 0,050
6,00	○	○	○	6	5,7	13	20	58	6	0,06	0,006 - 0,060
8,00	○	○	○	8	7,6	19	26	64	8	0,08	0,008 - 0,080
10,00	○	○	○	10	9,5	22	30,5	73	10	0,1	0,010 - 0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	0,12	0,012 - 0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	0,14	0,014 - 0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	0,16	0,016 - 0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	0,18	0,018 - 0,198
20,00	○	○	○	20	19	41	52	105	20	0,2	0,020 - 0,200

	N N/mm²
175396 / 175397 / 175398	Aluminium
vc = m/min.	
175396 / 175397 / 175398	300-600

Design:
- neck for higher cutting depth
- centre cutting
- polished flute and relief surfaces
- smooth cutting edge
- finely balanced, except Weldon shank
- coating for abrasive materials

coated



N° article	175396 Power HA, coated	175397 Power HB, coated	175398 Power Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,02	0,002 - 0,020
3,00	○	○	○	3	2,9	8	10	58	6	0,03	0,003 - 0,030
4,00	○	○	○	4	3,8	11	15	58	6	0,04	0,004 - 0,040
5,00	○	○	○	5	4,8	13	18	58	6	0,05	0,005 - 0,050
6,00	○	○	○	6	5,7	13	20	58	6	0,06	0,006 - 0,060
8,00	○	○	○	8	7,6	19	26	64	8	0,08	0,008 - 0,080
10,00	○	○	○	10	9,5	22	30,5	73	10	0,1	0,010 - 0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	0,12	0,012 - 0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	0,14	0,014 - 0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	0,16	0,016 - 0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	0,18	0,018 - 0,198
20,00	○	○	○	20	19	41	52	105	20	0,2	0,020 - 0,200

Micro milling cutter SC SST-INOX

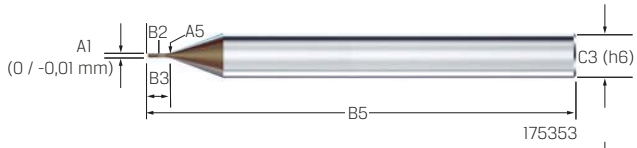
CRAZYMILL Hexalobe SST-INOX — MIKRON TOOL

Design:
- the robust carbide shank guarantees stable, vibration-free chamfering
- the high-performance coating eXedur SNP is heat and wear resistant, prevents the cutting edges from sticking and guarantees optimal chip transport
- special ultra-fine grain carbide with high stiffness and resistance to edge chipping
- chrome-free coating to avoid cross-contamination of medical parts
- specific cutting edge geometry for machining stainless steel

NEW

SC | coated | Teeth 3-4 | 35° Twist | Centre cut | M

3,5 × A1



5 × A1 | 5 × A1



N° article	175353 CrazyMill Hexalobe, 3.5×A1	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	TORX type	Number of teeth
0020	●	0,2	0,19	0,3	0,7	40	4	T4	3
0025	●	0,25	0,23	0,4	0,875	40	4	T5	3
0030	●	0,3	0,28	0,5	1,05	40	4	T6|T7	3
0040	●	0,4	0,38	0,6	1,4	40	4	T8|T10	4
0050	●	0,5	0,47	0,8	1,75	40	4	T10|T15	4
0060	●	0,6	0,56	0,9	2,1	40	4	T20	4
0080	●	0,8	0,75	1,2	2,8	40	4	T25	4
0100	●	1	0,94	1,5	3,5	40	4	T30	4

N° article	175356 CrazyMill Hexalobe, 5×A1	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	TORX type	Number of teeth
0020	●	0,2	0,19	0,3	1	40	4	T4	3
0025	●	0,25	0,23	0,4	1,25	40	4	T5	3
0030	●	0,3	0,28	0,45	1,5	40	4	T6|T7	3
0040	●	0,4	0,38	0,6	2	40	4	T8|T10	4
0050	●	0,5	0,47	0,75	2,5	40	4	T10|T15	4
0060	●	0,6	0,56	0,9	3	40	4	T20	4
0080	●	0,8	0,75	1,2	4	40	4	T25	4
0100	●	1	0,94	1,5	5	40	4	T30	4

Micro milling cutter SC Titanium

CRAZYMILL Hexalobe TITANIUM — MIKRON TOOL

Design:
- the robust carbide shank guarantees stable, vibration-free chamfering
- the high-performance coating eXedur SNP is heat and wear resistant, prevents the cutting edges from sticking and guarantees optimal chip transport
- special ultra-fine grain carbide with high stiffness and resistance to edge chipping
- chrome-free coating to avoid cross-contamination of medical parts
- specific cutting edge geometry for machining titanium

NEW

SC | coated | Teeth 3-4 | 35° Twist | Centre cut | S

3,5 × A1



5 × A1 | 5 × A1



N° article	175351 CrazyMill Hexalobe, 3.5×A1	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	TORX type	Number of teeth
0020	●	0,2	0,19	0,3	0,7	40	4	T4	3
0025	●	0,25	0,23	0,4	0,875	40	4	T5	3
0030	●	0,3	0,28	0,45	1,05	40	4	T6|T7	3
0040	●	0,4	0,38	0,6	1,4	40	4	T8|T10	4
0050	●	0,5	0,47	0,75	1,75	40	4	T10|T15	4
0060	●	0,6	0,56	0,9	2,1	40	4	T20	4
0080	●	0,8	0,75	1,2	2,8	40	4	T25	4
0100	●	1	0,94	1,5	3,5	40	4	T30	4

N° article	175354 CrazyMill Hexalobe, 5×A1	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	TORX type	Number of teeth
0020	●	0,2	0,19	0,3	1	40	4	T4	3
0025	●	0,25	0,23	0,4	1,25	40	4	T5	3
0030	●	0,3	0,28	0,5	1,5	40	4	T6|T7	3
0040	●	0,4	0,38	0,6	2	40	4	T8|T10	4
0050	●	0,5	0,47	0,8	2,5	40	4	T10|T15	4
0060	●	0,6	0,56	0,9	3	40	4	T20	4
0080	●	0,8	0,75	1,2	4	40	4	T25	4
0100	●	1	0,94	1,5	5	40	4	T30	4

Micro milling cutter SC Universal with IC

CRAZYMILL Cool Micro — MIKRON TOOL

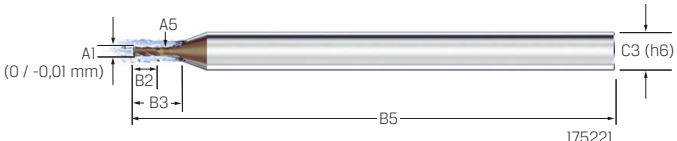
Design:
- with internal coolant supply
- material-specific **cutting edge geometry from diameter 0.4 mm**
- high cutting edge stability and robustness
- innovative and highly efficient cooling concept
- ultra-fine carbide grade and fine, homogeneous coating

Use:
- universally applicable for pre-finishing and finishing of steel, stainless steel, cast iron, non-ferrous metal and titanium alloys
- milling with high contour precision
- excellent surface quality

NEW

SC | coated | Factory standard | Teeth 4 | 35° Twist | 6535 HA shank | UNI

3 × A1



5 × A1



N° article	175221 CrazyMill Cool Micro, 3× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,40	○	0,4	0,38	0,6	1,2	38	3
0,50	○	0,5	0,47	0,8	1,5	38	3
0,60	○	0,6	0,56	0,9	1,8	38	3
0,70	○	0,7	0,66	1,1	2,1	38	3
0,80	○	0,8	0,75	1,2	2,4	38	3
0,90	○	0,9	0,85	1,4	2,7	38	3
1,00	○	1	0,94	1,5	3	40	4

N° article	175222 CrazyMill Cool Micro, 5× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,40	○	0,4	0,38	0,6	2	38	3
0,50	○	0,5	0,47	0,8	2,5	38	3
0,60	○	0,6	0,56	0,9	3	38	3
0,70	○	0,7	0,66	1,1	3,5	38	3
0,80	○	0,8	0,75	1,2	4	38	3
0,90	○	0,9	0,85	1,4	4,5	38	3
1,00	○	1	0,94	1,5	5	40	4

Micro milling cutter SC with IC

CRAZYMILL Cool — MIKRON TOOL

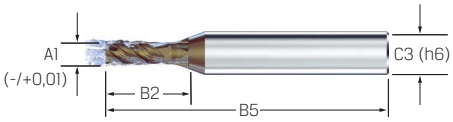
Design:
- 4 flute finishing cutter
- for milling depth 2× A1
- special cutting edge geometry
- special chip breakers
- new high performance coating
- with integrated cooling in the shank

Use:
- universally applicable, especially also for stainless steels, titanium superalloys and CrCo alloys

SC | coated | Factory standard | Teeth 4 | 42° Twist | Centre cut | 6535 HA shank

UNI

2 × A1 | 90°



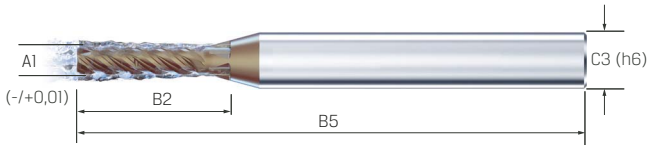
175422

3 × A1 | 90°



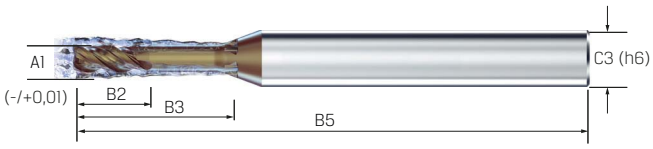
175423

4 × A1 | 90°



175424

5 × A1 | 90°



175426

N° article	175422 CrazyMill Cool, cylindrical, type A-2x A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm
1,00	○	1	2	2	40	4
1,20	○	1,2	2,4	2,4	40	4
1,50	●	1,5	3	3	40	4
1,80	○	1,8	3,6	3,6	40	4
2,00	●	2	4	4	40	4
2,50	●	2,5	5	5	50	6
3,00	○	3	6	6	50	6
3,50	○	3,5	7	7	50	6
4,00	○	4	8	8	50	6
4,50	○	4,5	9	9	60	8
5,00	●	5	10	10	60	8
6,00	○	6	12	12	60	10
8,00	○	8	16	16	70	12

N° article	175423 cylindric, type M-3x A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm
1,00	○	1	3	3	40	4
1,20	○	1,2	3,6	3,6	40	4
1,50	○	1,5	4,5	4,5	40	4
1,80	○	1,8	5,4	5,4	40	4
2,00	●	2	6	6	40	4
2,50	○	2,5	7,5	7,5	50	6
3,00	○	3	9	9	50	6
3,50	○	3,5	10,5	10,5	55	6
4,00	●	4	12	12	55	6
4,50	○	4,5	13,5	13,5	65	8
5,00	○	5	15	15	65	8
6,00	○	6	18	18	65	10
8,00	○	8	24	24	80	12

N° article	175424 cylindrical, type N-4x A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm
1,00	○	1	4	4	40	4
1,20	○	1,2	4,8	4,8	40	4
1,50	○	1,5	6	6	40	4
1,80	○	1,8	7,2	7,2	45	4
2,00	○	2	8	8	44	4
2,50	●	2,5	10	10	55	6
3,00	●	3	12	12	55	6
3,50	○	3,5	14	14	60	6
4,00	○	4	16	16	60	6
4,50	○	4,5	18	18	70	8
5,00	○	5	20	20	70	8
6,00	○	6	24	24	70	10
8,00	○	8	32	32	90	12

N° article	175426 cylindrical, type C-5 x A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm
1,00	●	1	2	5	40	4
1,20	○	1,2	2,4	6	40	4
1,50	○	1,5	3	7,5	40	4
1,80	○	1,8	3,6	9	45	4
2,00	●	2	4	10	44	4
2,50	○	2,5	5	12,5	55	6
3,00	○	3	6	15	55	6
3,50	○	3,5	7	17,5	60	6
4,00	○	4	8	20	60	6
4,50	○	4,5	9	22,5	70	8
5,00	○	5	10	25	70	8
6,00	○	6	12	30	70	10
8,00	○	8	16	40	90	12

End mill SC Allround, with relieved shank

PREMUS

	P N/mm²	M N/mm²	K HB
175448	⟨1200	⟨850	⟨300
vc = m/min.			
175448	110 - 320	85 - 120	170 - 240

Design:
- unequally divided and twisted
- long version
- relieved shank
- 45° protective bevel on the cutting edge
- AlCrN coated

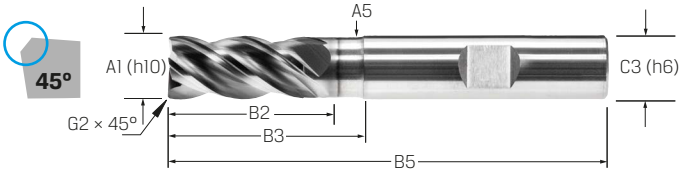
Use:
- all-rounder
- roughing to finishing
- very high metal removal rate
- very smooth running

SC | coated | AlCrN | Factory standard | Teeth 4 | 38° 35° Twist | Centre cut

shank relieved | 6535 HB shank | long | P | M | K

NEW

45°



N° article	175448 long, with chamfer, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21
3,00	●	3	2,8	8	18	57	6	0,13	4
4,00	●	4	3,8	11	21	57	6	0,18	4
5,00	●	5	4,8	13	21	57	6	0,2	4
6,00	●	6	5,5	13	21	57	6	0,2	4
8,00	●	8	7,5	19	27	63	8	0,2	4
10,00	●	10	9,5	22	32	72	10	0,3	4
12,00	●	12	11,5	26	38	83	12	0,3	4
16,00	●	16	15,5	32	44	92	16	0,4	4
20,00	●	20	19,5	38	54	104	20	0,5	4

End mill SC Universal

PREMUS

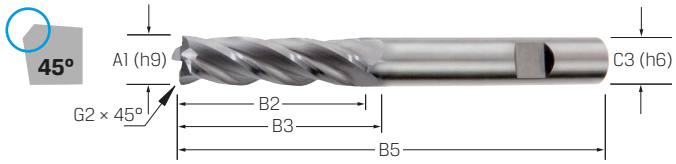
	P N/mm²	K HB	S N/mm²	N N/mm²	
175450	<1200	<300	Titan <1200	Alu >600	Messing <600
175455					
vc = m/min.					
175450	40-75	60-100	30-45	110-320	55-80
175455	65-130	95-165	45-70	180-550	90-130

SC | Factory standard | Typ N

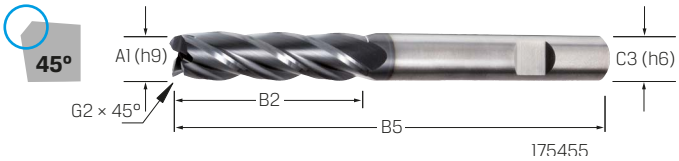
Teeth 4 | 30° Twist | Centre cut

6535 HB shank | long | overlong

UNI | CAD



coated



175455

N° article	175450	175455 ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00×19	●	●	3	19	57	6	0,05	0,002 - 0,010
3,00×30	●	●	3	30	75	6	0,05	0,002 - 0,010
4,00×19	●	●	4	19	57	6	0,05	0,005 - 0,019
4,00×25	●	●	4	25	75	6	0,05	0,005 - 0,019
4,00×30	●	●	4	30	75	6	0,05	0,005 - 0,019
5,00×30	●	●	5	30	75	6	0,05	0,006 - 0,020
5,00×40	●	●	5	40	100	6	0,05	0,006 - 0,020
6,00×30	●	●	6	30	75	6	0,05	0,008 - 0,025
6,00×40	●	●	6	40	100	6	0,05	0,008 - 0,025
8,00×30	●	●	8	30	75	8	0,1	0,012 - 0,032
8,00×40	●	●	8	40	100	8	0,1	0,012 - 0,032
10,00×30	●	●	10	30	75	10	0,1	0,015 - 0,039
10,00×40	●	●	10	40	100	10	0,1	0,015 - 0,039
10,00×60	●	●	10	60	125	10	0,1	0,015 - 0,039
12,00×45	●	●	12	45	100	12	0,15	0,018 - 0,048
12,00×75	●	●	12	75	150	12	0,15	0,018 - 0,048
14,00×45	●	●	14	45	100	14	0,15	0,018 - 0,048
14,00×75	●	●	14	75	150	14	0,15	0,018 - 0,048
16,00×45	●	●	16	45	100	16	0,15	0,023 - 0,058
16,00×75	●	●	16	75	150	16	0,15	0,023 - 0,058
16,00×90	○	●	16	90	150	16	0,15	0,023 - 0,058
18,00×45	○	●	18	45	100	18	0,15	0,023 - 0,058
18,00×75	●	●	18	75	150	18	0,15	0,023 - 0,058
20,00×45	●	●	20	45	100	20	0,15	0,028 - 0,073
20,00×75	●	●	20	75	150	20	0,15	0,028 - 0,073
20,00×90	●	●	20	90	150	20	0,15	0,028 - 0,073
25,00×45	○	○	25	45	100	25	0,2	0,028 - 0,073
25,00×75	○	●	25	75	150	25	0,2	0,028 - 0,073
25,00×90	○	●	25	90	150	25	0,2	0,028 - 0,073

End mill SC Universal

PREMUS GP

	P N/mm²	M N/mm²	K HB
175484	<1200	<850	<300
vc = m/min.			
175484	110-280	80-140	110-200

Design:
- unequal twisted
- short version
- cutting tips with 45° chamfer
- coated

Use:
- universally applicable
- for roughing and finishing
- extremely high cutting performance
- very smooth running

SC | coated | Factory standard

Teeth 4 | λ° | Centre cut

6535 HB shank | short | UNI

CAD | Vc

GP



N° article	175484 GP, short, chamfer ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	6	54	6	0,13	0,007 - 0,028
4,00	●	4	8	54	6	0,18	0,010 - 0,035
5,00	●	5	9	54	6	0,2	0,015 - 0,035
6,00	●	6	10	54	6	0,2	0,025 - 0,040
7,00	●	7	12	58	8	0,2	0,030 - 0,045
8,00	●	8	12	58	8	0,2	0,030 - 0,050
9,00	●	9	14	66	10	0,3	0,035 - 0,060
10,00	●	10	14	66	10	0,3	0,040 - 0,070
11,00	●	11	16	73	12	0,3	0,050 - 0,080
12,00	●	12	16	73	12	0,3	0,060 - 0,090
14,00	●	14	18	75	14	0,3	0,070 - 0,110
16,00	●	16	23	82	16	0,4	0,090 - 0,130
18,00	●	18	25	84	18	0,4	0,110 - 0,150
20,00	●	20	27	92	20	0,5	0,130 - 0,170

	P N/mm²	M N/mm²	K HB
175491	<1200	<850	<300
vc = m/min.			
175491	110-280	80-140	110-200

Design:
- unequal twisted
- short version
- cutting tips with protective chamfer
- coated

Use:
- universally applicable
- for roughing and finishing
- extremely high cutting performance
- very smooth running

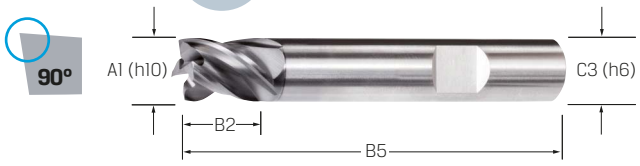
SC | coated | Factory standard

Teeth 4 | λ° | Centre cut

6535 HB shank | short | UNI

CAD | Vc

GP



N° article	175491 GP, short, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	4	54	6	0,02	0,005 - 0,023
2,50	●	2,5	4	54	6	0,02	0,005 - 0,023
3,00	●	3	6	54	6	0,03	0,007 - 0,028
4,00	●	4	8	54	6	0,04	0,010 - 0,035
5,00	●	5	9	54	6	0,05	0,015 - 0,035
6,00	●	6	10	54	6	0,06	0,025 - 0,040
7,00	●	7	12	58	8	0,07	0,030 - 0,045
8,00	●	8	12	58	8	0,08	0,030 - 0,050
9,00	●	9	14	66	10	0,09	0,035 - 0,060
10,00	●	10	14	66	10	0,1	0,040 - 0,070
11,00	●	11	16	73	12	0,11	0,050 - 0,080
12,00	●	12	16	73	12	0,12	0,060 - 0,090
14,00	●	14	18	75	14	0,14	0,070 - 0,110
16,00	●	16	23	82	16	0,15	0,090 - 0,130
18,00	●	18	25	84	18	0,15	0,110 - 0,150
20,00	●	20	27	92	20	0,15	0,130 - 0,170

End mill SC Universal, with relieved shank

PRETEC

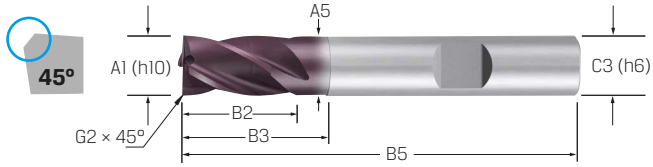
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²	
175444 / 175447	⟨1400	⟨55	⟨1250	⟨900	Titanium ⟨1250	Nickel ⟨1600	Aluminium ⟨550	Copper ⟨1400
vc = m/min.								
175444	100-240	80-140	30 - 110	80 - 240	40-110	20-100	220-700	80-210
175447	90-200	70-130	30 - 100	70 - 200	40-100	20-80	190-600	70-180

SC · coated · Factory standard · Teeth 4 · Twist 38° 35° · Centre cut · 3-5° · 6535 HB shank · shank relieved · UNI · CAD

Design:
- 35°/38°
- short version
- relieved shank
- specially adapted geometry
- cutting tips with protective chamfer
- cutting toward the centre
- TiAlN coated

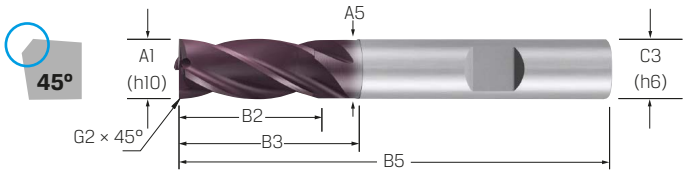
Use:
- can be used in almost all materials
- for roughing and finishing

Vc · short



N° article	175444 short, TiAlN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
3,00	●	3	2,9	5	14	50	6	0,07
4,00	●	4	3,8	8	18	54	6	0,07
5,00	●	5	4,8	9	18	54	6	0,07
6,00	●	6	5,8	10	16	54	6	0,12
8,00	●	8	7,7	12	20	58	8	0,12
10,00	●	10	9,5	15	24	66	10	0,2
12,00	●	12	11,5	18	26	73	12	0,2
16,00	●	16	15,5	24	32	82	16	0,2
20,00	●	20	19,5	30	40	92	20	0,3

Vc · long



N° article	175447 long, TiAlN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
3,00	●	3	2,9	8	14	57	6	0,07
4,00	●	4	3,8	11	18	57	6	0,07
5,00	●	5	4,8	13	19	57	6	0,12
6,00	●	6	5,8	13	20	57	6	0,12
8,00	●	8	7,7	19	25	63	8	0,12
10,00	●	10	9,5	22	30	72	10	0,2
12,00	●	12	11,5	26	35	83	12	0,2
14,00	●	14	13,5	26	35	83	14	0,2
16,00	●	16	15,5	32	40	92	16	0,2
20,00	●	20	19,5	38	50	104	20	0,3

N° article	175447 long, with chamfer, TiAlN	Contents
SET	●	Set 4-piece: 6 | 8 | 10 | 12 mm

End mill SC Universal

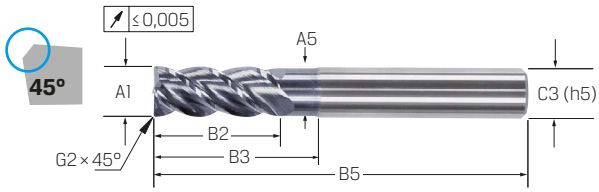
HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
175460 / 175461 / 175462	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
175460 / 175461 / 175462	170-270	40-80	55 - 65	110 - 220	60-80	30-40	120-240

SC · coated · DIN 6527 · Teeth 4 · 1,75-2,5 × A1 · Twist 43° 41° · Centre cut · 3-5° · 6535 HA shank · 6535 HB shank · SAFE-LOCK · UNI

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- polished flute and relief surfaces
- finely balanced, except Weldon shank
- smooth cutting edge
- coated

Vc 175460 · Vc 175461 · Vc 175462



N° article	175460 Power HA, coated	175461 Power HB, coated	175462 Power Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,2	0,002 - 0,012
3,00	○	○	○	3	2,9	8	10	58	6	0,3	0,003 - 0,018
4,00	○	○	○	4	3,8	11	15	58	6	0,4	0,004 - 0,024
5,00	○	○	○	5	4,8	13	18	58	6	0,5	0,005 - 0,030
6,00	○	○	○	6	5,7	13	20	58	6	0,5	0,006 - 0,036
8,00	○	○	○	8	7,6	19	26	64	8	0,6	0,008 - 0,048
10,00	○	○	○	10	9,5	22	30,5	73	10	0,1	0,010 - 0,060
12,00	○	○	○	12	11,4	26	36,5	84	12	0,1	0,012 - 0,072
14,00	○	○	○	14	13,3	26	36,5	84	14	0,15	0,014 - 0,084
16,00	○	○	○	16	15,2	32	42,5	93	16	0,2	0,016 - 0,096
18,00	○	○	○	18	17,1	32	42,5	93	18	0,2	0,018 - 0,108
20,00	○	○	○	20	19	38	52	105	20	0,3	0,020 - 0,120

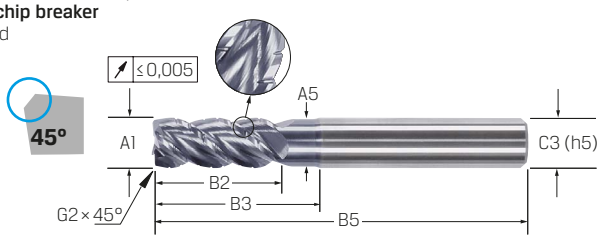
End mill SC Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²
175463 / 175464 / 175465	⟨800	45 - 55	⟨650	⟨450	Titanium	Aluminium
vc = m/min.						
175463 / 175464 / 175465	170-270	40-80	55 - 65	110 - 220	60-80	120-240

SC · coated · DIN 6527 · Teeth 4 · 1,75-2,5 × A1 · Twist 43° 41° · Centre cut · 3-5° · 6535 HA shank · 6535 HB shank · SAFE-LOCK · UNI

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- polished flute and relief surfaces
- finely balanced, except Weldon shank
- **with chip breaker**
- coated



Vc · Vc · Vc

N° article	175463 Power HA, coated	175464 Power HB, coated	175465 Power Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	○	○	○	6	5,7	13	20	58	6	0,5	0,006 - 0,036
8,00	○	○	○	8	7,6	19	26	64	8	0,6	0,008 - 0,048
10,00	○	○	○	10	9,5	22	30,5	73	10	0,2	0,012 - 0,010
12,00	○	○	○	12	11,4	26	36,5	84	12	0,2	0,014 - 0,072
14,00	○	○	○	14	13,3	26	36,5	84	14	0,3	0,014 - 0,084
16,00	○	○	○	16	15,2	32	42,5	93	16	0,3	0,016 - 0,096
18,00	○	○	○	18	17,1	32	42,5	93	18	0,4	0,018 - 0,108
20,00	○	○	○	20	19	38	52	105	20	0,5	0,020 - 0,120

End mill SC Universal, with relieved shank

PREMUS GP

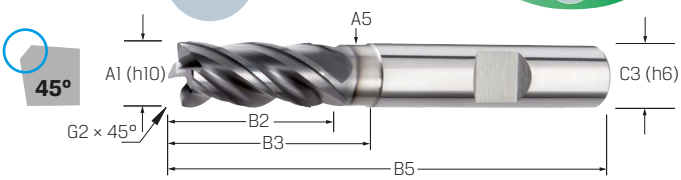
	P N/mm²	M N/mm²	K HB
175487	⟨1200	⟨850	⟨300
vc = m/min.			
175487	110-280	80-140	110-200

SC · coated · Factory standard · Teeth 4 · Centre cut · 6535 HB shank · long · shank relieved · UNI · Vc · CAD

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- coated

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running





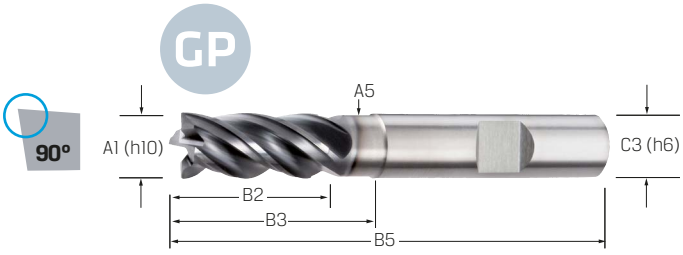
N° article	175487 GP, long, chamfer ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	0,9	3	5	57	6	0,02	0,004 - 0,021
1,50	●	1,5	1,4	4,5	8	57	6	0,02	0,004 - 0,021
2,00	●	2	1,8	6	10	57	6	0,02	0,005 - 0,023
2,50	●	2,5	2,3	7	11	57	6	0,02	0,005 - 0,023
3,00	●	3	2,8	8	18	57	6	0,13	0,007 - 0,028
4,00	●	4	3,8	11	21	57	6	0,18	0,010 - 0,035
5,00	●	5	4,8	13	21	57	6	0,2	0,015 - 0,035
6,00	●	6	5,5	13	21	57	6	0,2	0,025 - 0,040
7,00	●	7	6,5	19	27	63	8	0,2	0,030 - 0,045
8,00	●	8	7,5	19	27	63	8	0,2	0,030 - 0,050
9,00	●	9	8,5	22	32	72	10	0,3	0,035 - 0,060
10,00	●	10	9,5	22	32	72	10	0,3	0,040 - 0,070
11,00	●	11	10,5	26	38	83	12	0,3	0,050 - 0,080
12,00	●	12	11,5	26	38	83	12	0,3	0,060 - 0,090
14,00	●	14	13,5	26	42	83	14	0,3	0,070 - 0,110
16,00	●	16	15,5	32	44	92	16	0,4	0,090 - 0,130
18,00	●	18	17,5	32	50	92	18	0,4	0,110 - 0,150
20,00	●	20	19,5	38	54	104	20	0,5	0,130 - 0,170
SET	●	Set 4-piece 6 | 8 | 10 | 12 mm							

	P N/mm²	M N/mm²	K HB
175493	⟨1200	⟨850	⟨300
vc = m/min.			
175493	110-280	80-140	110-200

SC · coated · Factory standard · Teeth 4 · Centre cut · 6535 HB shank · long · shank relieved · UNI · CAD · Vc

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with protective chamfer
- coated

Use:
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running



N° article	175493 GP, long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
2,00	●	2	1,8	6	9,764	57	6	0,02	0,005 - 0,023
2,50	●	2,5	2,8	6	9,331	57	6	0,02	0,005 - 0,023
3,00	●	3	2,8	8	21	57	6	0,03	0,007 - 0,028
4,00	●	4	3,8	11	21	57	6	0,04	0,010 - 0,035
5,00	●	5	4,8	13	21	57	6	0,05	0,015 - 0,035
6,00	●	6	5,5	13	21	57	6	0,06	0,025 - 0,040
7,00	●	7	6,5	19	27	63	8	0,07	0,030 - 0,045
8,00	●	8	7,5	19	27	63	8	0,08	0,030 - 0,050
9,00	●	9	8,5	23	32	72	10	0,09	0,035 - 0,060
10,00	●	10	9,5	23	32	72	10	0,1	0,040 - 0,070
11,00	●	11	10,5	27	38	83	12	0,11	0,050 - 0,080
12,00	●	12	11,5	27	38	83	12	0,12	0,060 - 0,090
14,00	●	14	13,5	27	38	83	14	0,14	0,070 - 0,110
16,00	●	16	15,5	33	44	92	16	0,15	0,090 - 0,130
18,00	●	18	17,5	33	44	92	18	0,15	0,110 - 0,150
20,00	●	20	19,5	39	54	104	20	0,15	0,130 - 0,170

End mill SC Universal, HPM, with relieved shank

PREMUS GP

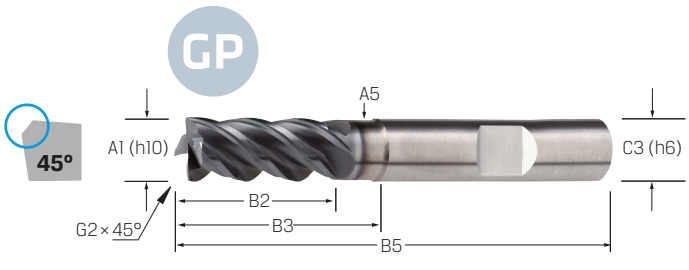
	P N/mm²	M N/mm²	K HB
175492	⟨1200	⟨850	⟨300
vc = m/min.			
175492	110-280	80-140	110-200

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- coated

Use:
- **optimised for HPM machining**
- **optimised for trochoid milling**
- universally applicable
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running

SC · coated · Factory standard · Teeth 4 · 6535 HB shank · long · shank relieved · HPM · UNI · CAD · Vc

N° article	175492 GP, HPM, long, Chamfer, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/Zahn
3,00	●	3	2,8	8	21	57	6	0,13	0,007 - 0,028
4,00	●	4	3,8	11	21	57	6	0,18	0,010 - 0,035
5,00	●	5	4,8	13	21	57	6	0,2	0,015 - 0,035
6,00	●	6	5,5	13	21	57	6	0,2	0,025 - 0,040
8,00	●	8	7,5	19	27	63	8	0,2	0,030 - 0,050
10,00	●	10	9,5	23	32	72	10	0,3	0,040 - 0,070
12,00	●	12	11,5	27	38	83	12	0,3	0,060 - 0,090
14,00	●	14	13,5	27	38	83	14	0,3	0,070 - 0,110
16,00	●	16	15,5	33	44	92	16	0,4	0,090 - 0,130
20,00	●	20	19,5	39	54	104	20	0,5	0,130 - 0,170



End mill SC Universal, with relieved shank

PREMUS GP

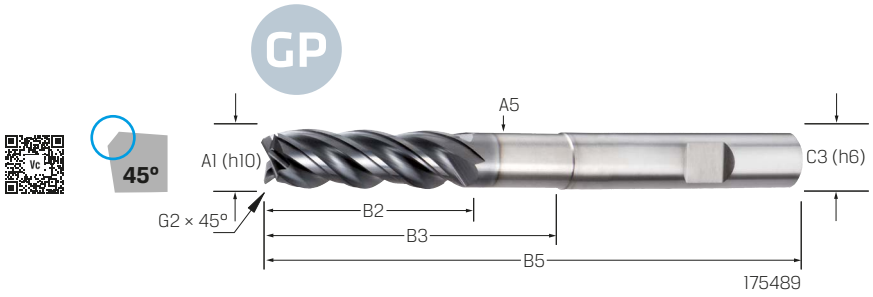
	P N/mm²	M N/mm²	K HB
175489	<1200	<850	<300
175496			
vc = m/min.			
175489	110-280	80-140	110-200
175496			

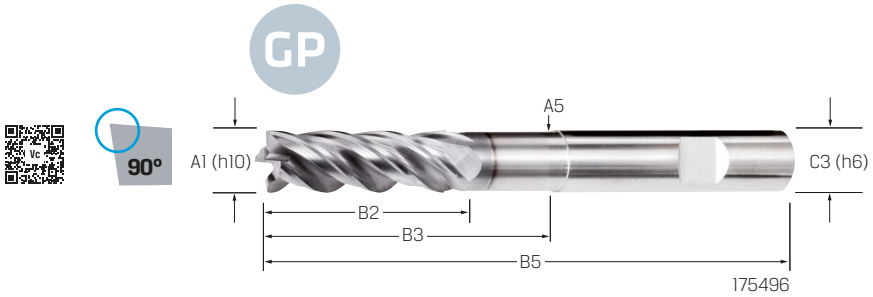
SC · coated · Factory standard · Teeth 4 · λ≠ · Centre cut · 6535 HB shank · overlong · shank relieved · UNI · CAD

Design:
- unequal twisted
- extra long version
- relieved shank
- cutting tips with 45° chamfer (175489)
- cutting tips with protective chamfer (175496)
- coated

Use:
- universally applicable
- for roughing and finishing
- for extremely large cutting depths
- extremely high cutting performance
- very smooth running

Note:
- when used in Weldon chucks, please note the programming length!





N° article	175489 GP, extra long, Chamfer, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
5,00	●	5	4,8	22	27	63	6	0,2	0,015 - 0,035
6,00	●	6	5,5	23	27	63	6	0,2	0,025 - 0,040
8,00	●	8	7,5	29	44	80	8	0,2	0,030 - 0,050
10,00	●	10	9,5	34	60	100	10	0,3	0,040 - 0,070
10,00×80	●	10	9,5	34	40	80	10	0,3	0,040 - 0,070
12,00	●	12	11,5	33	55	100	12	0,3	0,060 - 0,090
14,00	●	14	13,5	50	55	100	14	0,3	0,060 - 0,090
16,00	●	16	15,5	55	102	150	16	0,4	0,090 - 0,130
16,00×125	●	16	15,5	53	77	125	16	0,4	0,090 - 0,130
20,00	●	20	19,5	71	100	150	20	0,5	0,130 - 0,170

N° article	175496 GP, extra long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
5,00	●	5	4,8	22	27	63	6	0,05	0,015 - 0,035
6,00	●	6	5,5	23	27	63	6	0,06	0,025 - 0,040
8,00	●	8	7,5	29	44	80	8	0,08	0,030 - 0,050
10,00	●	10	9,5	34	60	100	10	0,1	0,040 - 0,070
10,00×80	●	10	9,5	34	40	80	10	0,1	0,040 - 0,070
12,00	●	12	11,5	33	55	100	12	0,12	0,060 - 0,090
12,00×120	●	12	11,5	34	75	120	12	0,12	0,060 - 0,090
14,00	●	14	13,5	50	55	100	14	0,14	0,060 - 0,090
16,00	●	16	15,5	55	102	150	16	0,15	0,090 - 0,130
16,00×125	●	16	15,5	55	77	125	16	0,15	0,090 - 0,130
20,00	●	20	19,5	71	100	150	20	0,15	0,130 - 0,170

End mill SC Universal, HPSM

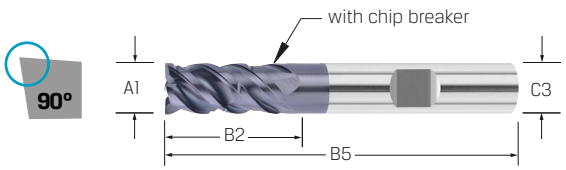
PREMUS

Design:
- 2× A1
- 48° helix angle
- cutting tips with protective chamfer
- specially adapted carbide grade
- special edge preparation
- with ground-in chip breakers
- coated

Use:
- universally applicable
- especially suitable for trochoidal milling

SC · coated · Factory standard · Teeth 4 · 48° Twist · Centre cut · 2 × A1 · UNI · CAD · Vc

TROCHOIDAL MILLING



N° article	175500 2× A1 AlTiN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm
6,00	●	6	14	54	6	0,08
8,00	●	8	18	60	8	0,1
10,00	●	10	22	70	10	0,1
12,00	●	12	26	83	12	0,12
16,00	●	16	34	92	16	0,2
20,00	●	20	42	104	20	0,25

End mill SC

Universal, with relieved shank and reinforced core

PREMUS GP

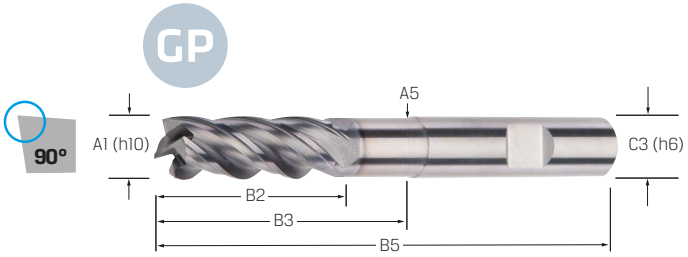
	P N/mm²	M N/mm²	K HB
175497	⟨1200	⟨850	⟨300
vc = m/min.			
175497	110-280	80-140	110-200

SC · coated · Factory standard
Teeth 4 · λ° ≠ · shank relieved
6535 HB shank · overlong
UNI · CAD · Vc

Design:
- unequal twisted
- extra long version
- relieved shank
- cutting tips with protective chamfer
- coated
- reinforced core

Use:
- universally applicable
- for roughing and finishing
- for extremely large cutting depths
- extremely high cutting performance
- very smooth running

Note:
- **not suitable for full-slot milling**
- when used in Weldon chucks, please note the programming length!



N° article	175497 GP, extra long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	5,5	23	27	63	6	0,06	0,025 - 0,040
8,00	●	8	7,5	29	44	80	8	0,08	0,030 - 0,050
10,00	●	10	9,5	34	40	80	10	0,1	0,040 - 0,070
12,00	●	12	11,5	34	55	100	12	0,12	0,060 - 0,090
14,00	●	14	13,5	50	55	100	14	0,14	0,070 - 0,110
16,00	●	16	15,5	55	77	125	16	0,15	0,090 - 0,130
20,00	●	20	19,5	71	100	150	20	0,15	0,130 - 0,170

End mill SC

Universal, with relieved shank and short cutting edge

PREMUS

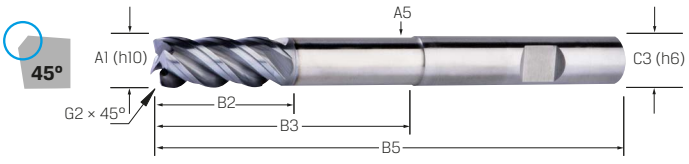
	P N/mm²	M N/mm²
175547	⟨1200	⟨850
vc = m/min.		
175547	65-100	50-55

SC · coated · Factory standard
Teeth 4 · λ° ≠ · Centre cut
6535 HB shank · overlong · shank relieved
UNI · Vc

Design:
- 4 cutting edges
- unequal twisted
- long version
- extra short edge length
- relieved shank
- cutting tips with 45° chamfer
- coated

- universally applicable
- extremely high cutting performance
- very smooth running

Use:



N° article	175547 extra long, TiAlN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	5,5	13	27	63	6	0,2	0,025 - 0,040
8,00	●	8	7,5	19	44	80	8	0,2	0,030 - 0,050
10,00	●	10	9,5	23	40	80	10	0,3	0,040 - 0,070
12,00	●	12	11,5	27	55	100	12	0,3	0,060 - 0,090
16,00	●	16	15,5	33	67	115	16	0,4	0,090 - 0,130
20,00	●	20	19,5	39	80	130	20	0,5	0,130 - 0,170

End mill SC

Steel, with relived shank

PREMUS GP

Design:
- short and long version
- unequal twisted
- cutting tips with 45° chamfer
- with relieved shank (only 175512)
- specially adapted carbide grade
- special edge preparation
- coated

Use:
The specialist for steel processing
Ramps up to 45° possible

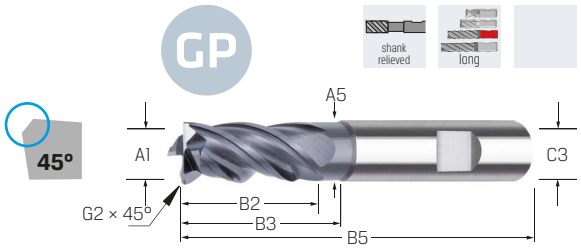
Note:
175510 without relieved shank

SC · coated · Factory standard
Teeth 4 · λ° ≠ · Centre cut
45° · 6535 HB shank · short
P · K · CAD · Vc



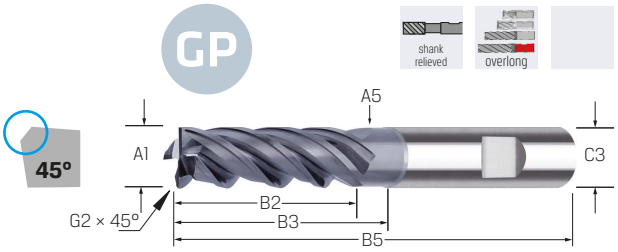
N° article	175510 GP, short, chamfer, V-plus	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm
3,00	●	3	6	54	6	0,06
4,00	●	4	8	54	6	0,08
5,00	●	5	9	54	6	0,1
6,00	●	6	10	54	6	0,13
8,00	●	8	12	58	8	0,15
10,00	●	10	14	66	10	0,2
12,00	●	12	16	73	12	0,25
16,00	●	16	22	82	16	0,35
20,00	●	20	26	92	20	0,4

shank relieved · long



N° article	175512 GP, long, chamfer, V-plus	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
3,00	●	3	2,8	8	18	57	6	0,06
4,00	●	4	3,6	11	21	57	6	0,08
5,00	●	5	4,6	13	21	57	6	0,1
6,00	●	6	5,5	13	21	57	6	0,13
8,00	●	8	7,5	19	27	63	8	0,15
10,00	●	10	9,5	22	32	72	10	0,2
12,00	●	12	11,5	26	38	83	12	0,25
16,00	●	16	15,5	32	44	92	16	0,35
20,00	●	20	19,5	38	54	104	20	0,4

shank relieved · overlong



N° article	175514 GP, extra long, chamfer, V-plus	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
6,00	●	6	5,5	22	42	80	6	0,13
8,00	●	8	7,5	28	62	100	8	0,15
10,00	●	10	9,5	33	58	100	10	0,2
12,00	●	12	11,5	42	73	120	12	0,25
16,00	●	16	15,5	53	100	150	16	0,35
20,00	●	20	19,5	68	98	150	20	0,4

End mill SC Steel, with relived shank, HPSM

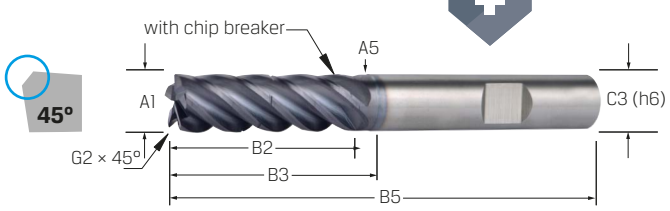
PREMUS

Design:
- 3× A1
- relieved shank
- cutting tips with 45° chamfer
- helix angle 40°
- sharp-edged face shape
- uneven distribution
- coated
- with ground-in chip breakers

Use:
- especially suitable for trochoidal milling in stainless steel

SC | coated | Factory standard | Teeth 5 | 40° Twist | 6535 HB shank | 3 × A1 | shank relieved | P | CAD | Vc

TROCHOIDAL MILLING



N° article	175519 3× A1, with bevel, V-plus	A1 mm	A5 mm	B3 mm	B5 mm	C3 mm	G2 mm
6,00	●	6	5,8	25	62	6	0,1
8,00	●	8	7,8	30	68	8	0,15
10,00	●	10	9,8	35	80	10	0,2
12,00	●	12	11,8	45	93	12	0,2
16,00	●	16	15,8	55	108	16	0,3
20,00	●	20	19,8	70	126	20	0,4

Micro milling cutter SC HRSA with IC

CRAZYMILL Cool Micro | MIKRON TOOL

Design:
- with internal coolant supply
- material-specific **cutting edge geometry from diameter 0.4 mm**
- high cutting edge stability and robustness
- innovative and highly efficient cooling concept
- ultra-fine carbide grade and fine, homogeneous coating

Use:
- applicable for pre-finishing and finishing of high-temperature superalloys
- milling with high contour precision
- excellent surface quality

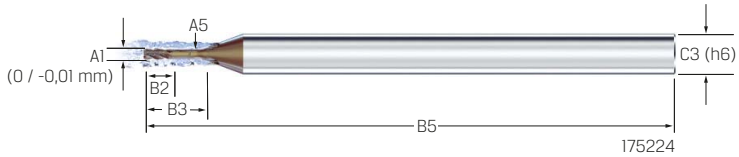
NEW

SC | coated | Factory standard | Teeth 4 | 35° Twist | 6535 HA shank | S

Vc | 3 × A1



Vc | 5 × A1



N° article	175223 CrazyMill Cool Micro, 3× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,40	○	0,4	0,38	0,6	1,2	38	3
0,50	○	0,5	0,47	0,8	1,5	38	3
0,60	○	0,6	0,56	0,9	1,8	38	3
0,70	○	0,7	0,66	1,1	2,1	38	3
0,80	○	0,8	0,75	1,2	2,4	38	3
0,90	○	0,9	0,85	1,4	2,7	38	3
1,00	○	1	0,94	1,5	3	40	4

N° article	175224 CrazyMill Cool Micro, 5× A1, eXedur SNP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm
0,40	○	0,4	0,38	0,6	2	38	3
0,50	○	0,5	0,47	0,8	2,5	38	3
0,60	○	0,6	0,56	0,9	3	38	3
0,70	○	0,7	0,66	1,1	3,5	38	3
0,80	○	0,8	0,75	1,2	4	38	3
0,90	○	0,9	0,85	1,4	4,5	38	3
1,00	○	1	0,94	1,5	5	40	4

End mill SC INOX

PREMUS GP

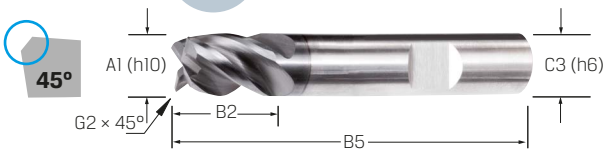
	M N/mm²	S N/mm²
175584	<850	Titan, Titanlegierungen
vc = m/min.		
175584	80-120	60-70

Design:
- unequal twisted
- short version
- cutting tips with 45° chamfer
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- extremely high cutting performance
- very smooth running
- very soft cut

SC | coated | Factory standard | Teeth 4 | λ | Centre cut | 6535 HB shank | short | M | S | CAD | Vc

GP



N° article	175584 GP, short, chamfer, ALNOVA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	6	54	6	0,13	0,010 - 0,015
4,00	●	4	8	54	6	0,18	0,014 - 0,020
5,00	●	5	9	54	6	0,2	0,018 - 0,024
6,00	●	6	10	54	6	0,2	0,020 - 0,028
7,00	●	7	12	58	8	0,2	0,020 - 0,028
8,00	●	8	12	58	8	0,2	0,030 - 0,038
9,00	●	9	14	66	10	0,3	0,030 - 0,038
10,00	●	10	14	66	10	0,3	0,040 - 0,050
11,00	●	11	16	73	12	0,3	0,040 - 0,050
12,00	●	12	16	73	12	0,3	0,045 - 0,055
14,00	●	14	18	75	14	0,3	0,050 - 0,060
16,00	●	16	23	82	16	0,4	0,070 - 0,080
18,00	●	18	25	84	18	0,4	0,070 - 0,080
20,00	●	20	27	92	20	0,5	0,070 - 0,090

End mill SC INOX

PREMUS GP

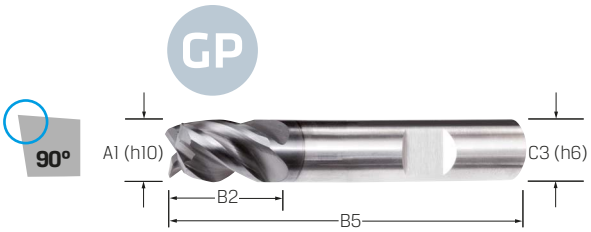
	M N/mm²	S N/mm²
175585	‹850	Titanium, titanium alloys
vc = m/min.		
175585	80 - 120	60-70

Design:
- unequal twisted
- short version
- cutting tips with protective chamfer
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- extremely high cutting performance
- very smooth running
- very soft cut

SC | coated | Factory standard | Teeth 4 | λ° ≠ | Centre cut | 6535 HB shank | short | M | S | CAD | Vc

N° article	175585 GP, short, ALNOVA	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	6	54	6	0,03	0,010 - 0,015
4,00	●	4	8	54	6	0,04	0,014 - 0,020
5,00	●	5	9	54	6	0,05	0,018 - 0,024
6,00	●	6	10	54	6	0,06	0,020 - 0,028
8,00	●	8	12	58	8	0,08	0,030 - 0,038
10,00	●	10	14	66	10	0,1	0,040 - 0,050
12,00	●	12	16	73	12	0,12	0,045 - 0,055
14,00	●	14	18	75	14	0,14	0,050 - 0,060
16,00	●	16	23	82	16	0,15	0,070 - 0,080
20,00	●	20	27	92	20	0,15	0,070 - 0,090



End mill SC INOX, with relievaed shank

PREMUS GP

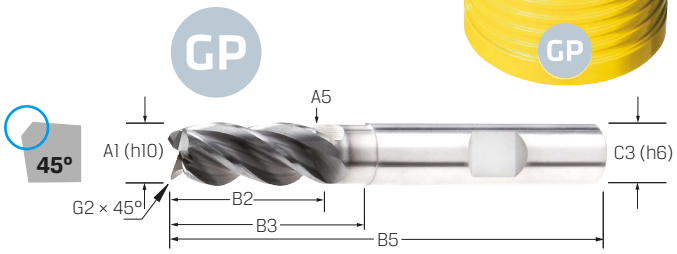
	M N/mm²	S N/mm²
175587	‹850	Titanium, titanium alloys
vc = m/min.		
175587	80 - 120	60-70

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running
- very soft cut

SC | coated | Factory standard | Teeth 4 | λ° ≠ | Centre cut | 6535 HB shank | long | shank relieved | M | S | Vc | CAD





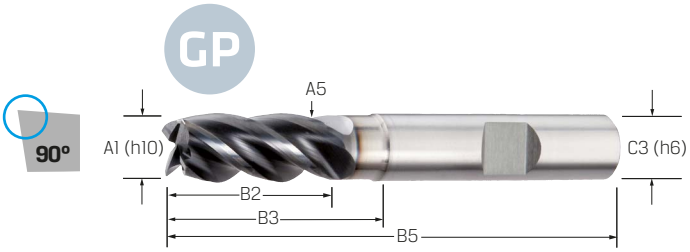
N° article	175587 GP, long, chamfer, ALNOVA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
1,00	●	1	0,9	3	5	57	6	0,02	0,004 - 0,009
1,50	●	1,5	1,4	4,5	8	57	6	0,02	0,006 - 0,011
2,00	●	2	1,8	6	10	57	6	0,02	0,007 - 0,012
2,50	●	2,5	2,3	7	11	57	6	0,02	0,008 - 0,013
3,00	●	3	2,8	8	12	57	6	0,13	0,010 - 0,015
4,00	●	4	3,8	11	15	57	6	0,18	0,014 - 0,020
5,00	●	5	4,8	13	17	57	6	0,2	0,018 - 0,024
6,00	●	6	5,5	13	21	57	6	0,2	0,020 - 0,028
7,00	●	7	6,5	19	27	63	8	0,2	0,020 - 0,028
8,00	●	8	7,5	19	27	63	8	0,2	0,030 - 0,038
9,00	●	9	8,5	22	32	72	10	0,3	0,030 - 0,038
10,00	●	10	9,5	22	32	72	10	0,3	0,040 - 0,050
11,00	●	11	10,5	26	38	83	12	0,3	0,040 - 0,050
12,00	●	12	11,5	26	38	83	12	0,3	0,045 - 0,055
14,00	●	14	13,5	26	42	83	14	0,3	0,050 - 0,060
16,00	●	16	15,5	32	44	92	16	0,4	0,070 - 0,080
18,00	●	18	17,5	32	50	92	18	0,4	0,070 - 0,080
20,00	●	20	19,5	38	54	104	20	0,5	0,070 - 0,090
SET	●				6 | 8 | 10 | 12 mm				

	M N/mm²	S N/mm²
175588	‹850	Titanium, titanium alloys
vc = m/min.		
175588	80 - 120	60-70

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with protective chamfer
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- for large cutting depths
- extremely high cutting performance
- very smooth running
- very soft cut

SC | coated | Factory standard | Teeth 4 | λ° ≠ | Centre cut | 6535 HB shank | long | shank relieved | M | S | CAD



N° article	175588 GP, long, ALNOVA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	2,8	8	12	57	6	0,03	0,010 - 0,015
4,00	●	4	3,8	11	15	57	6	0,04	0,014 - 0,020
5,00	●	5	4,8	13	17	57	6	0,05	0,018 - 0,024
6,00	●	6	5,5	13	21	57	6	0,06	0,020 - 0,028
8,00	●	8	7,5	19	27	63	8	0,08	0,030 - 0,038
10,00	●	10	9,5	23	32	72	10	0,1	0,040 - 0,050
12,00	●	12	11,5	27	38	83	12	0,12	0,045 - 0,055
14,00	●	14	13,5	27	42	83	14	0,14	0,050 - 0,060
16,00	●	16	15,5	33	44	92	16	0,15	0,070 - 0,080
20,00	●	20	19,5	39	54	104	20	0,15	0,070 - 0,090

End mill SC Aluminium, with relieved shank

PREMUS

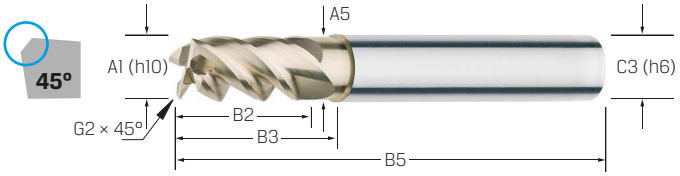
	N N/mm²	
175580	Alu ⟨450	Al alloy ⟨600
175582		
	vc = m/min.	
175580	370-450	145-220
175582		

Design:
- lapped
- zirconium nitride coating
- shank relieved
- cutting tip with 45° chamfer

SC | coated | Factory standard | Typ W | Teeth 4 | 45° Twist | Centre cut | 6535 HA shank | shank relieved | N | CAD

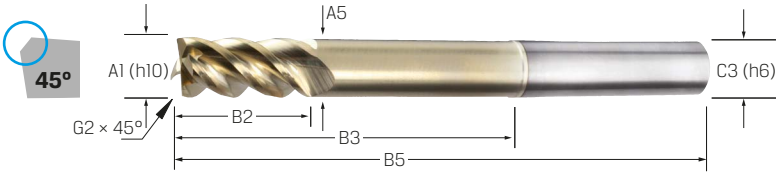
N° article	175580 GP, long, chamfer, ZrN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
3,00	●	3	2,8	8	12	57	6	0,1	0,010 - 0,015
4,00	●	4	3,8	11	18	57	6	0,1	0,018 - 0,023
5,00	●	5	4,8	13	18	57	6	0,1	0,020 - 0,025
6,00	●	6	5,8	13	18	57	6	0,2	0,025 - 0,031
8,00	●	8	7,8	21	25	63	8	0,2	0,032 - 0,042
10,00	●	10	9,7	22	30	72	10	0,2	0,039 - 0,050
12,00	●	12	11,7	26	36	83	12	0,2	0,048 - 0,059
16,00	●	16	15,7	36	42	92	16	0,2	0,058 - 0,071
20,00	●	20	19,5	41	52	104	20	0,2	0,073 - 0,090

Vc | lang



N° article	175582 GP, extra long, chamfer, ZrN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	5,8	13	42	80	6	0,2	0,025 - 0,031
8,00	●	8	7,8	21	62	100	8	0,2	0,032 - 0,042
10,00	●	10	9,7	22	58	100	10	0,2	0,039 - 0,050
12,00	●	12	11,7	26	73	120	12	0,2	0,048 - 0,059
16,00	●	16	15,7	36	100	150	16	0,2	0,058 - 0,071

Vc | extra lang



End mill SC Universal, HPSM, with relieved shank

PREMUS GP

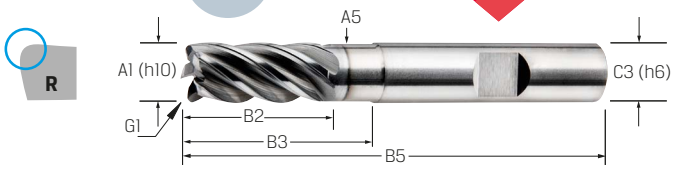
Design:
- 2× A1
- outstanding metal removal rate
- latest carbide generation
- unequally twisted and divided
- reinforced core
- corner radius for high process reliability
- optimised edge preparation
- special front geometry for perfect plunging behaviour

Use:
Especially suitable for trochoidal milling operations, full groove milling in steel and cast iron, roughing and finishing up to 2× A1.

SC | coated | Factory standard | Teeth 5 | λ° | shank relieved | 6535 HB shank | 2 × A1 | UNI | HPC | MTC | TPM | CAD | Vc

TROCHOIDAL MILLING

GP NEW



N° article	175499 GP, 2× A1, long, AlTiN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	G2 mm	F21	fz mm/tooth
6,00	●	6	5,5	13	21	57	6	0,5	0,5	5	0,030 - 0,100
8,00	●	8	7,5	19	27	63	8	0,5	0,5	5	0,040 - 0,140
10,00	●	10	9,5	23	32	72	10	1	1	5	0,050 - 0,016
12,00	●	12	11,5	27	38	83	12	1	1	5	0,070 - 0,200
16,00	●	16	15,5	33	44	92	16	1	1	5	0,090 - 0,280
20,00	●	20	19,5	39	54	104	20	1	1	5	0,120 - 0,280

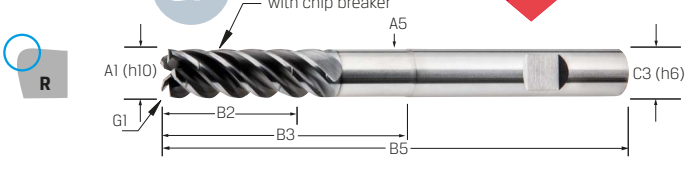
Design:
- 3× A1, with relieved shank
- latest carbide generation
- unequal cutting edge pitch
- large flute volumes
- cutting tips with corner radius
- special edge preparation
- with ground-in chip breakers
- special front geometry for perfect plunging behaviour
- high performance coating

Use:
- universally applicable
- especially suitable for trochoidal milling

SC | coated | Factory standard | Teeth 4-5 | λ° | shank relieved | 6535 HB shank | 3 × A1 | UNI | HPC | TPM | CAD | Vc

TROCHOIDAL MILLING

GP NEW



N° article	175506 GP, 3× A1, extra long, AlTiN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
6,00	●	6	5,5	21	39	75	6	0,1	4	0,060 - 0,084
8,00	●	8	7,5	27	49	85	8	0,1	4	0,080 - 0,112
10,00	●	10	9,5	33	60	100	10	0,1	5	0,100 - 0,140
12,00	●	12	11,5	39	65	110	12	0,12	5	0,120 - 0,168
14,00	●	14	13,5	46	80	125	14	0,15	5	0,140 - 0,196
16,00	●	16	15,5	54	92	140	16	0,15	5	0,160 - 0,224
20,00	●	20	19,5	65	115	165	20	0,2	5	0,200 - 0,280

End mill SC Universal, HPSM

PREMUS GP

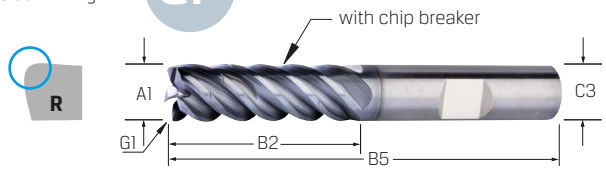
Design:
- 3×A1 and 5×A1
- latest carbide generation
- 45° helix angle
- unequal cutting edge pitch
- large flute volumes
- cutting tips with corner radius
- special edge preparation
- with ground-in chip breakers
- special front geometry for perfect plunging behaviour
- AlCr high-performance coating

SC | coated | Factory standard | Teeth 4-5 | λ° | 6535 HB shank | UNI | CAD

TROCHOIDAL MILLING

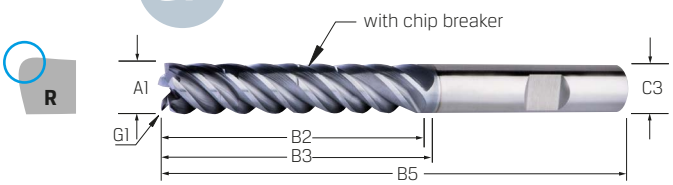
Use:
- universally applicable
- especially suitable for trochoidal milling

GP | Vc | 3 × A1



N° article	175501 GP, 3×A1, long ALCRONA	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
6,00	●	6	21	21	57	6	0,1	4	0,060-0,090
8,00	●	8	27	27	63	8	0,1	4	0,080-0,110
10,00	●	10	33	32	72	10	0,1	5	0,100-0,140
12,00	●	12	39	38	83	12	0,12	5	0,120-0,170
14,00	●	14	46	55	100	14	0,15	5	0,140-0,200
16,00	●	16	54	67	115	16	0,15	5	0,160-0,220
20,00	●	20	65	81	131	20	0,2	5	0,200-0,280

GP | Vc | 5 × A1



N° article	175503 GP, 5×A1, extra long ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
6,00	●	6	5,5	25	32	75	6	0,1	4	0,060-0,090
8,00	●	8	–	42	49	85	8	0,1	4	0,080-0,110
10,00	●	10	–	52	60	100	10	0,1	5	0,100-0,140
12,00	●	12	–	62	65	110	12	0,12	5	0,120-0,170
14,00	●	14	–	72	80	125	14	0,15	5	0,140-0,200
16,00	●	16	–	82	92	140	16	0,15	5	0,160-0,220
20,00	●	20	–	102	115	165	20	0,2	5	0,200-0,280

End mill SC INOX, with relived shank, HPSM

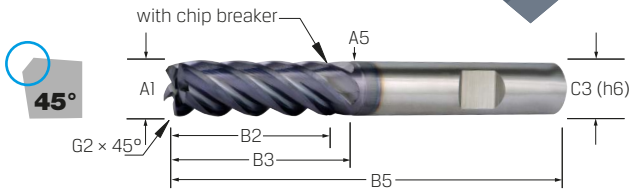
PREMUS

Design:
- 3× A1
- relieved shank
- cutting tips with 45° chamfer
- helix angle 40°
- sharp-edged face shape
- uneven distribution
- with ground-in chip breakers
- coated

Use:
- especially suitable for trochoidal milling in stainless steel

SC | coated | Factory standard | Teeth 5 | 40° Twist | 6535 HB shank | 3 × A1 | shank relieved | M | CAD | Vc

TROCHOIDAL MILLING



N° article	175589 3× A1, with bevel, V-plus	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
6,00	●	6	5,8	18	25	62	6	0,1
8,00	●	8	7,8	24	30	68	8	0,15
10,00	●	10	9,8	30	35	80	10	0,2
12,00	●	12	11,8	36	45	93	12	0,2
16,00	●	16	15,8	48	55	108	16	0,3
20,00	●	20	19,8	60	70	126	20	0,4

End mill SC INOX, HPSM

PREMUS GP

Design:
- 3× A1
- latest carbide generation
- unequal twisted
- unequal cutting edge pitch
- reinforced core
- large flute volumes
- cutting tips with corner radius
- special edge preparation
- with ground-in chip breakers
- special front geometry for perfect plunging behaviour

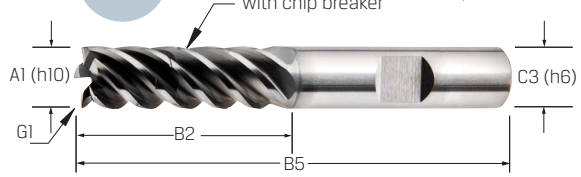
Use:
Especially suitable for trochoidal milling in stainless steel

SC | coated | Factory standard | Teeth 4-5 | λ° | 6535 HB shank | 3 × A1 | M | HPC | TPM | Vc | CAD

NEW

TROCHOIDAL MILLING

GP | R



N° article	175507 GP, 3× A1, long, AlTiN	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
6,00	●	6	21	57	6	0,1	4	0,060-0,084
8,00	●	8	27	63	8	0,1	4	0,080-0,112
10,00	●	10	33	72	10	0,1	5	0,100-0,140
12,00	●	12	39	83	12	0,12	5	0,120-0,168
14,00	●	14	46	110	14	0,15	5	0,140-0,196
16,00	●	16	54	115	16	0,15	5	0,160-0,224
20,00	●	20	65	131	20	0,2	5	0,200-0,280

End mill SC
INOX, HPSM, with relieved shank

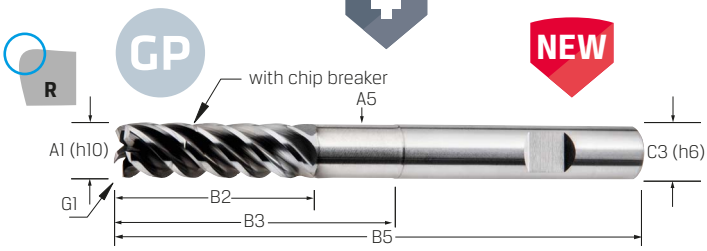
PREMUS GP

Design:
- 3× A1, with relieved shank
- latest carbide generation
- unequal twisted
- unequal cutting edge pitch
- reinforced core
- large flute volumes
- cutting tips with corner radius
- special edge preparation
- with ground-in chip breakers
- special front geometry for perfect plunging beha-viour

Use:
Especially suitable for trochoidal milling in stainless steel

SC | coated | Factory standard
Teeth 4-5 | λ° ≠ |
shank relieved | 6535 HB shank | 3 × A1
M | ϕ° | HPC
TPM | Vc | CAD

TROCHOIDAL MILLING



N° article	175508 GP, 3× A1, extra long, AlTiN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
6,00	●	6	5,5	21	39	75	6	0,1	4	0,060-0,084
8,00	●	8	7,5	27	49	85	8	0,1	4	0,080-0,112
10,00	●	10	9,5	33	60	100	10	0,1	5	0,100-0,140
12,00	●	12	11,5	39	65	110	12	0,12	5	0,120-0,168
14,00	●	14	13,5	46	80	125	14	0,15	5	0,140-0,196
16,00	●	16	15,5	54	92	140	16	0,15	5	0,160-0,224
20,00	●	20	19,5	65	115	165	20	0,2	5	0,200-0,280

End mill SC INOX, HPSM

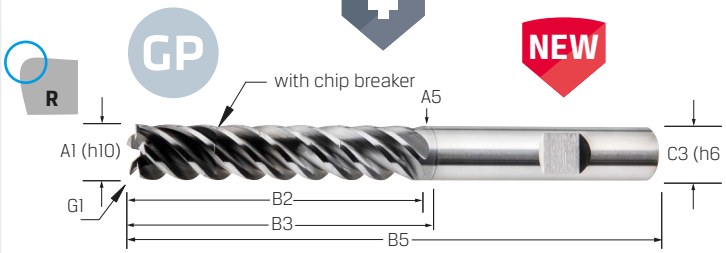
PREMUS GP

Design:
- 5× A1
- latest carbide generation
- unequal twisted
- unequal cutting edge pitch
- reinforced core
- large flute volumes
- cutting tips with corner radius
- special edge preparation
- with ground-in chip breakers
- special front geometry for perfect plunging behaviour

Use:
Especially suitable for trochoidal milling in stainless steel

SC | coated | Factory standard
Teeth 4-5 | λ° ≠ |
6535 HB shank | 5 × A1 | M
ϕ° | HPC | TPM
Vc | CAD

TROCHOIDAL MILLING



N° article	175509 GP, 5× A1, extra long, AlTiN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
6,00	●	6	5,5	26	39	75	6	0,1	4	0,050-0,070
8,00	●	8	–	44	49	85	8	0,1	4	0,066-0,093
10,00	●	10	–	54	60	100	10	0,1	5	0,082-0,115
12,00	●	12	–	65	65	110	12	0,12	5	0,100-0,140
14,00	●	14	–	75	80	125	14	0,15	5	0,115-0,161
16,00	●	16	–	86	92	140	16	0,15	5	0,132-0,185
20,00	●	20	–	26	115	165	20	0,2	5	0,165-0,231

End mill SC Titanium, with relived shank, HPSM

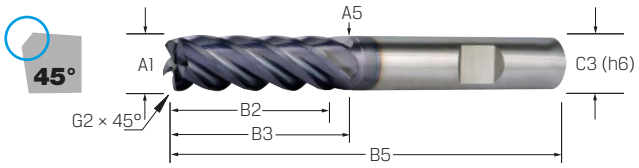
PREMUS

Design:
- 3× A1
- relieved shank
- cutting tips with 45° chamfer
- helix angle 40°
- sharp-edged face shape
- uneven distribution
- coated

Use:
Especially suitable for trochoidal milling in titanium and Inconel.

SC | coated | Factory standard
Teeth 5 | 40° Twist | Centre cut
6535 HB shank | 3 × A1 | shank relieved
S | CAD | Vc

TROCHOIDAL MILLING



N° article	175599 3× A1, with bevel, V-plus	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm
6,00	●	6	5,8	18	25	62	6	0,1
8,00	●	8	7,8	24	30	68	8	0,15
10,00	●	10	9,8	30	35	80	10	0,2
12,00	●	12	11,8	36	45	93	12	0,2
16,00	●	16	15,8	48	55	108	16	0,3
20,00	●	20	19,8	60	70	126	20	0,4

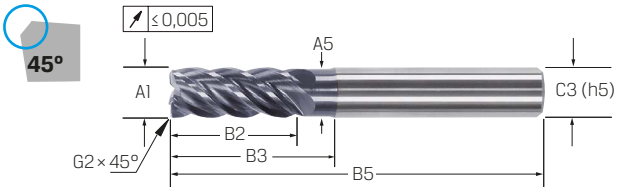
End mill SC Universal, with relieved shank

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
175550							
175551	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
175552							
	vc = m/min.						
175550							
175551	170-270	40-80	55 - 65	110 - 220	60-80	30-40	120-240
175552							

SC | coated | DIN 6527
Teeth 5 | 1,75-2,5 × A1 | 43° 41° Twist
2-3° | 6535 HA shank
6535 HB shank | SAFE-XDOCK | UNI
Vc | Vc | Vc
175550 | 175551 | 175552

Design:
- neck for higher cutting depth
- unequal cutting edge pitch
- polished flute and relief surfaces
- finely balanced, except Weldon shank
- non-centre-cutting diameter
- coated



N° article	175550 Power HA, Chamfer, coated	175551 Power HB, Chamfer, coated	175552 Power Safe-Lock, Chamfer, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
10,00	○	○	○	10	9,5	22	30,5	73	10	0,3	0,005 - 0,060
12,00	○	○	○	12	11,4	26	36,5	84	12	0,3	0,060 - 0,072
14,00	○	○	○	14	13,3	26	36,5	84	14	0,4	0,060 - 0,084
16,00	○	○	○	16	15,2	32	42,5	93	16	0,5	0,070 - 0,096
18,00	○	○	○	18	17,1	32	42,5	93	18	0,5	0,080 - 0,108
20,00	○	○	○	20	19	38	52	105	20	0,6	0,090 - 0,120
25,00	○	○	○	25	24	45	61	122	25	0,7	0,125 - 0,150
32,00	○	○	○	32	31	50	65	130	32	0,7	0,160 - 0,200

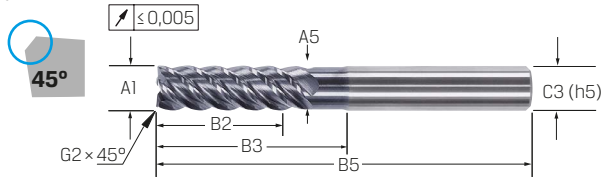
End mill SC Universal

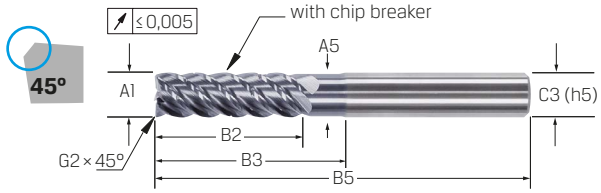
HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
175560 - 175562							
175563 - 175565	⟨800	45-55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
175560 - 175562							
175563 - 175565	250-270	60-80	55-65	200-220	60-80	30-40	120-240

SC | coated | DIN 6527 | Teeth 5 | 2,6-3,5 × Ai | Twist 47° 46° | 1-2° | 6535 HA shank | 6535 HB shank | SAFE-LOCK | UNI

Design:
- neck for higher cutting depth
- unequal cutting edge pitch
- polished flute and relief surfaces
- finely balanced, except Weldon shank
- non-centre-cutting diameter
- coated





N° article	175560 Power HA, Chamfer, coated	175561 Power HB, Chamfer, coated	175562 Power Safe-Lock, Chamfer, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	○	○	○	6	5,7	18	24	62	6	0,5	0,051
8,00	○	○	○	8	7,6	24	32	70	8	0,6	0,068
10,00	○	○	○	10	9,5	30	40	82	10	0,2	0,085
12,00	○	○	○	12	11,4	36	48	95	12	0,2	0,102
14,00	○	○	○	14	13,3	42	56	105	14	0,3	0,119
16,00	○	○	○	16	15,2	48	64	115	16	0,3	0,136
18,00	○	○	○	18	17,1	54	72	123	18	0,4	0,153
20,00	○	○	○	20	19	60	80	133	20	0,5	0,17

N° article	175563 Power HA, facet with chip breaker coated	175564 Power HB, chamfer with chip breaker coated	175565 Power Safe-Lock, Chamfer, with chip breaker coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	○	○	○	6	5,7	18	24	62	6	0,5	0,051
8,00	○	○	○	8	7,6	24	32	70	8	0,6	0,068
10,00	○	○	○	10	9,5	30	40	82	10	0,2	0,085
12,00	○	○	○	12	11,4	36	48	95	12	0,2	0,102
14,00	○	○	○	14	13,3	42	56	105	14	0,3	0,119
16,00	○	○	○	16	15,2	48	64	115	16	0,3	0,136
18,00	○	○	○	18	17,1	54	72	123	18	0,4	0,153
20,00	○	○	○	20	19	60	80	133	20	0,5	0,17

End mill SC Universal

PRETEC

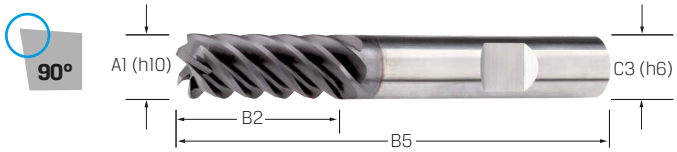
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
175616							
175626	⟨1400	⟨48	⟨850	⟨250	Titanium	Aluminium	⟨7 % Si
vc = m/min.							
175616							
175626	80-280	50-80	60 - 120	80 - 160	50-100	120-280	

SC | coated | Factory standard | Teeth 6-8 | Twist 45° | 6535 HB shank | UNI

Design:
- 45°, twisted
- long or extra long version, resp.
- cutting tips with protective chamfer
- TiAlN coated

Use:
- universally applicable
- not suitable for full-slot milling

lang



extra lang



N° article	175616 long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
4,00	●	4	11	57	6	0,05	6	0,024 - 0,035
5,00	●	5	13	57	6	0,05	6	0,024 - 0,035
6,00	●	6	13	57	6	0,05	6	0,024 - 0,035
8,00	●	8	19	63	8	0,1	6	0,032 - 0,045
10,00	●	10	22	72	10	0,1	6	0,040 - 0,055
12,00	●	12	26	83	12	0,1	6	0,048 - 0,065
16,00	●	16	32	92	16	0,15	6	0,055 - 0,080
20,00	●	20	38	104	20	0,15	8	0,072 - 0,120
25,00	●	25	45	121	25	0,2	8	0,104 - 0,150
32,00	●	32	53	133	32	0,3	8	0,110 - 0,160

N° article	175626 extra long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
4,00	●	4	16	65	6	0,05	6	0,024 - 0,035
5,00	●	5	18	65	6	0,05	6	0,024 - 0,035
6,00	●	6	30	75	6	0,05	6	0,024 - 0,035
8,00	●	8	40	100	8	0,1	6	0,032 - 0,045
10,00	●	10	40	100	10	0,1	6	0,040 - 0,055
12,00	●	12	45	150	12	0,1	6	0,048 - 0,065
16,00	●	16	65	150	16	0,15	6	0,056 - 0,080
20,00	●	20	65	150	20	0,15	8	0,072 - 0,120
25,00	●	25	75	150	25	0,2	8	0,104 - 0,150
32,00	●	32	106	186	32	0,3	8	0,110 - 0,160

End mill SC
Universal, HPC for finish machining

PREMUS

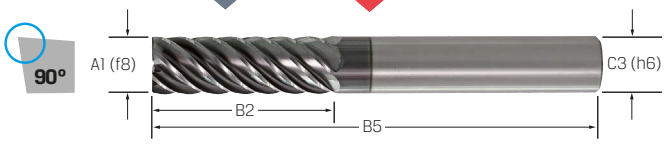
	P N/mm²	M N/mm²	K HB
175633	⟨1500	⟨1000	⟨800
vc = m/min.			
175633	240-475	120-195	215-520

SC | coated | Factory standard
Teeth 7 | 3 × A1 | 45° Twist
6535 HA shank | long
UNI | HPC

Design:
For peripheral milling as finishing operation to generate highest surface quality

RZ1
IM HPC-AREA!

NEW



N° article	175633 3×A1, long, coated	A1 mm	B2 mm	B5 mm	C3 mm	F21	fz mm/tooth
6,00	●	6	18	62	6	7	0,028 - 0,095
8,00	●	8	24	68	8	7	0,036 - 0,123
10,00	●	10	30	80	10	7	0,043 - 0,149
12,00	●	12	36	93	12	7	0,050 - 0,174
16,00	●	12	48	108	16	7	0,063 - 0,217
20,00	●	20	60	126	20	7	0,073 - 0,252

End mill SC
HRC, for finishing operations

PREMUS

	P N/mm²	H HRC	K HB
175605	⟨1200	⟨62	⟨350
vc = m/min.			
175605	160-190	50-75	130-330

SC | coated | DIN 6527
Typ N | Teeth 6-8 | 45° Twist
6535 HB shank | short
H | CAD



N° article	175605 short, chamfer X-CEED	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
5,0	●	5	10	54	6	0,1	6	0,010 - 0,025
6,0	●	6	10	54	6	0,1	6	0,013 - 0,033
8,0	●	8	12	58	8	0,1	6	0,019 - 0,047
10,0	●	10	14	66	10	0,1	6	0,019 - 0,047
12,0	●	12	16	73	12	0,15	6	0,030 - 0,072
16,0	●	16	20	82	16	0,2	8	0,038 - 0,088

End mill SC HRC

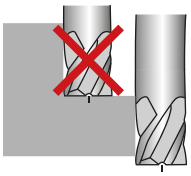
PREMUS

	High HRC
175600	⟨62
175602	⟨70
vc = m/min.	
175600	100-200
175602	80-150

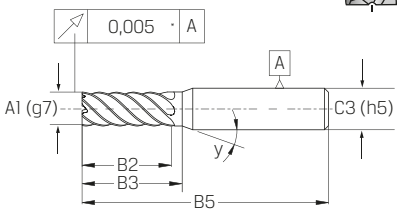
Tolerance

Diameter range	Edge-Ø ØA1 (g7)	Shank-Ø ØC3 (h5)
A1 ≤ 3	-0.002 -0.012	0 -0.004
3 ⟨ A1 ≤ 6	-0.004 -0.016	0 -0.005
6 ⟨ A1 ≤ 10	-0.005 -0.020	0 -0.006
10 ⟨ A1 ≤ 18	-0.006 -0.024	0 -0.008
18 ⟨ A1 ≤ 30	-0.007 -0.028	0 -0.009

SC | coated | Factory standard | Teeth 6 | 45° Twist | 6535 HA shank
short | HPM | HSM | H



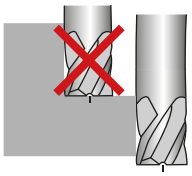
up to 62 HRC



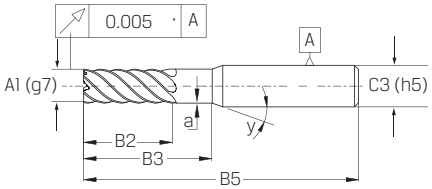




N° article	175600 short, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	y	F21	fz mm/tooth
3,00	●	3	10	65	6	15	6	0,020 - 0,035
4,00	●	4	10	65	6	15	6	0,030 - 0,045
5,00	●	5	15	65	6	15	5	0,030 - 0,055
6,00	●	6	20	65	6	–	6	0,045 - 0,065
8,00	●	8	20	65	8	–	6	0,060 - 0,080
10,00	●	10	25	70	10	–	6	0,070 - 0,095
12,00	●	12	25	79	12	–	6	0,085 - 0,110
16,00	●	16	35	90	16	–	6	0,095 - 0,125



up to 70 HRC








N° article	175602 short, TiAlN	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	a mm	y	F21	fz mm/tooth
3,00	●	3	8	15	65	6	0.05	15	6	0,020 - 0,035
4,00	●	4	10	16	65	6	0.1	15	6	0,030 - 0,045
5,00	●	5	12	18	65	6	0.15	15	6	0,030 - 0,055
6,00	●	6	14	20	65	6	0.2	–	6	0,045 - 0,065
8,00	●	8	18	25	79	8	0.2	–	6	0,060 - 0,080
10,00	●	10	22	30	79	10	0.3	–	6	0,070 - 0,095
12,00	●	12	26	35	90	12	0.3	–	6	0,085 - 0,110
16,00	●	16	34	26	90	16	–	–	6	0,095 - 0,125

End mill SC HRC

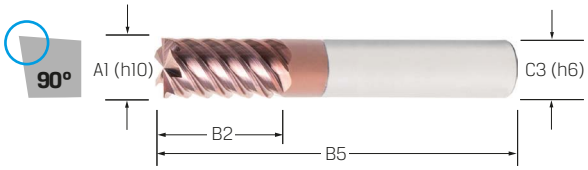
PREMUS

	High HRC
176028	⟨68
vc = m/min.	
176028	60 - 130

Use:
For peripheral milling of hardened steels from 45 HRC.

SC | coated | Factory standard | Typ HRC | Teeth 6 | 55° Twist | 6535 HA shank | H

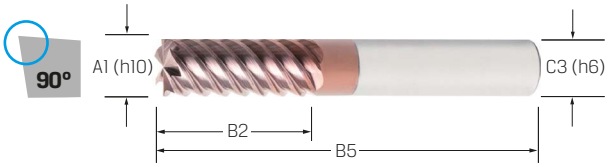
NEW



N° article	176028 long, coated	A1 mm	B2 mm	B5 mm	C3 mm	F21	fz mm/tooth
4,00	●	4	11	57	6	6	0,010 - 0,018
5,00	●	5	13	57	6	6	0,012 - 0,021
6,00	●	6	13	57	6	6	0,016 - 0,028
8,00	●	8	19	63	8	6	0,020 - 0,035
10,00	●	10	22	72	10	6	0,026 - 0,046
12,00	●	12	26	83	12	6	0,030 - 0,053
16,00	●	16	32	92	16	6	0,042 - 0,074
20,00	●	20	41	104	20	6	0,052 - 0,092

	High HRC
176068	⟨68
vc = m/min.	
176068	60 - 130

NEW



N° article	176068 extra long, coated	A1 mm	B2 mm	B5 mm	C3 mm	F21	fz mm/tooth
4,00	●	4	16	62	6	6	0,010 - 0,018
5,00	●	5	17	62	6	6	0,012 - 0,021
6,00	●	6	18	62	6	6	0,016 - 0,028
8,00	●	8	24	68	8	6	0,020 - 0,035
10,00	●	10	30	80	10	6	0,026 - 0,046
12,00	●	12	36	93	12	6	0,030 - 0,053
16,00	●	16	48	108	16	6	0,042 - 0,074
20,00	●	20	60	126	20	6	0,052 - 0,092

Roughing cutter SC Aluminium

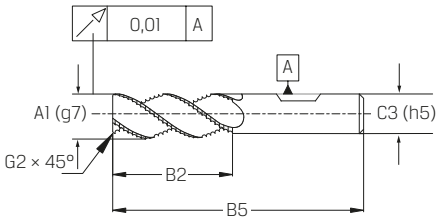
PREMUS

	N N/mm²
175392	Alu ⟩600
vc = m/min.	
175392	400-600

SC | Factory standard | Teeth 3 | 40° Twist | Centre cut | 6535 HB shank | long | HPM | HVM | N

Tolerance

Diameter range	Edge-Ø ØA1 (g7)	Shank-Ø ØC3 (h5)
A1 ≤ 3	0 -0.025	0 -0.004
3 ⟨ A1 ≤ 6	0 -0.030	0 -0.005
6 ⟨ A1 ≤ 10	0 -0.036	0 -0.006
10 ⟨ A1 ≤ 18	0 -0.043	0 -0.008
18 ⟨ A1 ≤ 30	0 -0.052	0 -0.009





N° article	175392 long, chamfer	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	16	64	6	0,25	0,030-0,050
8,00	●	8	20	64	8	0,5	0,040-0,070
10,00	●	10	22	70	10	0,5	0,050-0,100
12,00	●	12	25	78	12	0,5	0,060-0,120
16,00	●	16	35	89	16	1	0,090-0,170
20,00	●	20	40	102	20	1	0,120-0,200

Roughing cutter SC Universal

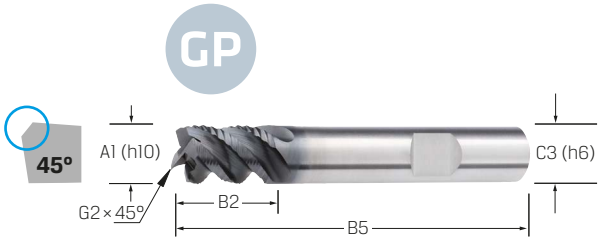
PREMUS GP

	P N/mm²	M N/mm²	K HB
177408	⟨1200	⟨850	⟨650
vc = m/min.			
177408	110-280	80-110	110-200

SC | coated | Factory standard | Typ HR | Teeth 4 | Centre cut | 6535 HB shank | short | UNI | CAD

Design:
- unequal twisted
- cutting tips with 45° chamfer
- coated
- HR cord profile

Use:
- universally applicable
- for roughing
- for large cutting depths
- extremely high cutting performance
- very smooth running
- ideal on low-performance machines



N° article	177408 GP, short, chamfer, type HR	A1 mm	B2 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
4,00	●	4	8	54	6	0,18	0,010-0,035
5,00	●	5	9	54	6	0,2	0,015-0,035
6,00	●	6	10	54	6	0,2	0,025-0,040
8,00	●	8	12	58	8	0,2	0,030-0,050
10,00	●	10	14	66	10	0,3	0,040-0,070
12,00	●	12	16	73	12	0,3	0,060-0,090
14,00	●	14	18	75	14	0,3	0,070-0,110
16,00	●	16	23	82	16	0,4	0,090-0,130
18,00	●	18	25	84	18	0,4	0,110-0,150
20,00	●	20	27	92	20	0,5	0,130-0,170

Roughing cutter SC Universal, with relieved shank

PREMUS GP

	P N/mm²	M N/mm²	K HB
177410	<1200	<850	<650
177412			<850
vc = m/min.			
177410	110-280	80-110	110-200
177412			

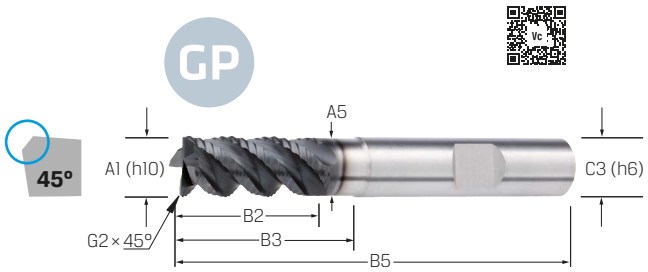
SC | coated | Factory standard | Typ HR | Teeth 4 | λ ≠ | Centre cut

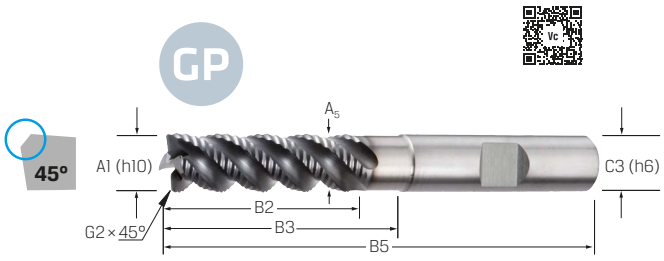
6535 HB shank | shank relieved | UNI | CAD

Design:
- unequal twisted
- relieved shank
- cutting tips with protective chamfer
- coated
- HR cord profile

Use:
- universally applicable
- for roughing
- for large cutting depths
- extremely high cutting performance
- very smooth running
- ideal on low-performance machines

Note (177412):
When used in Weldon chucks, please note the programming length!





N° article	177410 GP, long, chamfer, type HR	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	5,5	13	21	57	6	0,06	0,025-0,040
8,00	●	8	7,5	19	27	63	8	0,08	0,030-0,050
10,00	●	10	9,5	23	32	72	10	0,1	0,040-0,070
12,00	●	12	11,5	27	38	83	12	0,12	0,060-0,090
14,00	●	14	13,5	27	38	83	14	0,14	0,070-0,110
16,00	●	16	15,5	33	44	92	16	0,15	0,090-0,130
18,00	●	18	17,5	33	44	92	18	0,15	0,110-0,150
20,00	●	20	19,5	39	54	104	20	0,15	0,130-0,170
25,00	●	25	24,5	52	69	125	25	0,15	0,140-0,190

N° article	177412 GP, extra long, chamfer, type HR	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
6,00	●	6	5,5	23	27	63	6	0,2	4	0,025-0,040
8,00	●	8	7,5	29	44	80	8	0,2	4	0,030-0,050
10,00	●	10	9,5	34	60	100	10	0,3	4	0,040-0,070
12,00	●	12	11,5	34	55	100	12	0,3	4	0,060-0,090
14,00	●	14	13,5	50	55	100	14	0,3	4	0,060-0,090
16,00	●	16	15,5	55	77	125	16	0,4	4	0,090-0,130
18,00	●	18	17,5	55	102	150	18	0,4	4	0,110-0,150
20,00	●	20	19,5	71	100	150	20	0,5	4	0,130-0,170

Roughing cutter SC Universal, with relieved shank

PRETEC

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
177015	<1400	<850	<250	Titanium	Aluminium <7 % Si
vc = m/min.					
177015	110-160	55 - 110	100 - 150	50-80	130-250

SC | coated | DIN 6527 | Teeth 4 | 30° Twist | 1-2° | 6535 HB shank | long | shank relieved | UNI

Design:
- flat roughing-finishing profile
- 30°, twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- coated

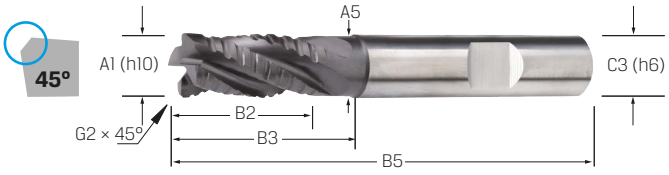
Use:
- universally applicable
- produces short chips

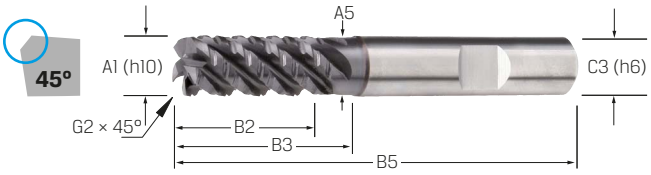
	P N/mm²	High HRC	M N/mm²	K HB	N N/mm²
177405	<1400	<48	<850	<250	Aluminium <7 % Si
vc = m/min.					
177405	110-160	50-80	55 - 110	100 - 150	130-250

SC | coated | DIN 6527 | Teeth 5-6 | 45° Twist | 6535 HB shank | long | shank relieved | UNI

Design:
- flat roughing-finishing profile
- 45°, twisted
- long version
- relieved shank
- cutting tips with 45° chamfer
- coated

Use:
- universally applicable
- produces short chips
- not suitable for full-slot milling





N° article	177015 long, chamfer TiAlN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	●	6	5,7	13	20	57	6	0,3	0,014-0,027
8,00	●	8	7,7	19	26	63	8	0,3	0,022-0,036
10,00	●	10	9,5	22	30	72	10	0,3	0,027-0,045
12,00	●	12	11,5	26	36	83	12	0,5	0,036-0,054
14,00	●	14	13,5	26	36	83	14	0,5	0,036-0,054
16,00	●	16	15,5	32	42	92	16	0,5	0,045-0,063
18,00	●	18	17,5	32	42	92	18	0,5	0,045-0,063
20,00	●	20	19,5	38	52	104	20	0,5	0,054-0,081

N° article	177405 long, chamfer TiAlN	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
6,00	●	6	5,7	13	20	57	6	0,3	5	0,014-0,027
8,00	●	8	7,7	19	26	63	8	0,3	5	0,022-0,036
10,00	●	10	9,5	22	30	72	10	0,3	5	0,027-0,045
12,00	●	12	11,5	26	36	83	12	0,5	5	0,036-0,054
14,00	●	14	13,5	26	36	83	14	0,5	5	0,036-0,054
16,00	●	16	15,5	32	42	92	16	0,5	6	0,045-0,063
18,00	●	18	17,5	32	42	92	18	0,5	6	0,045-0,063
20,00	●	20	19,5	38	52	104	20	0,5	6	0,054-0,081
25,00	●	25	24	45	63	121	25	0,6	6	0,063-0,120

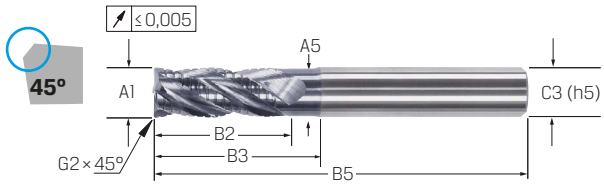
Roughing cutter SC Universal, with relieved shank

HAIMER

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
177420					
177421	⟨800	⟨650	⟨450	Titanium	Aluminium
177422					
vc = m/min.					
177420					
177421	170-270	55 - 65	110 - 220	60-80	120-240
177422					

SC | coated | DIN 6527 | 1,75-2,5 × A1 | Teeth 4 | Twist 34° 32° | 3-5° | 6535 HA shank | 6535 HB shank | SAFE-LOCK | UNI

Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- polished flute and relief surfaces
- for roughing
- coated



N° article	177420 Power HA,Chamfer, coated	177421 Power HB,Chamfer, coated	177422 Power Safe-Lock,Chamfer, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	fz mm/tooth
6,00	○	○	○	6	5,7	13	20	58	6	0,5	0,030-0,036
8,00	○	○	○	8	7,6	19	26	64	8	0,6	0,040-0,048
10,00	○	○	○	10	9,5	22	30,5	73	10	0,2	0,050-0,060
12,00	○	○	○	12	11,4	26	36,5	84	12	0,2	0,060-0,072
14,00	○	○	○	14	13,3	26	36,5	84	14	0,3	0,070-0,084
16,00	○	○	○	16	15,2	32	42,5	93	16	0,3	0,080-0,096
18,00	○	○	○	18	17,1	32	42,5	93	18	0,4	0,090-0,108
20,00	○	○	○	20	19	38	52	105	20	0,5	0,100-0,120

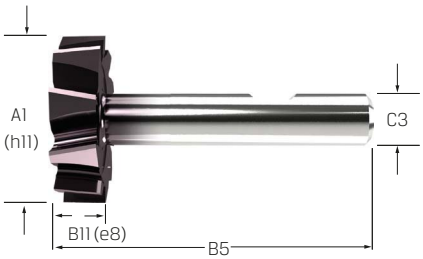
High-performance slot milling cutter SC

PREMUS

	P N/mm²	M N/mm²
178510	⟨900	
vc = m/min.		
178510	60-70	40

SC | coated | DIN 850 | Typ N | 6535 HB shank | Cross toothing | Teeth 6-10 | UNI

Design:
- universally applicable
- stagger-toothed
- fz mm/Tooth= 0.035-0.04

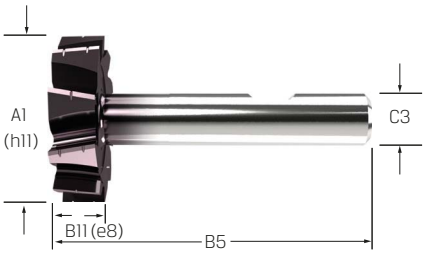


N° article	178510 stagger-toothed, TiAlN	A1 mm	B5 mm	B11 mm	C3 mm	F21
10,5×2	●	1,5	50	2	6	6
10,5×3	●	1,5	50	3	6	6
13,5×2	●	13,5	50	2	10	8
13,5×3	●	13,5	50	3	10	8
13,5×4	●	13,5	50	4	10	8
16,5×3	●	16,5	50	3	10	10
16,5×4	●	16,5	56	4	10	10
19,5×3	●	19,5	63	3	10	10
19,5×4	●	19,5	63	4	10	10
22,5×4	●	22,5	63	4	10	10
25,5×5	●	25,5	63	4	10	10
28,5×5	●	28,5	63	5	10	10
32,5×5	●	32,5	71	5	12	10

	P N/mm²	M N/mm²
178511	⟨900	
vc = m/min.		
178511	60-70	40

SC | coated | DIN 850 | Typ NF | 6535 HB shank | Cross toothing | Teeth 10 | UNI

Design:
- type NF, with chip breaker
- universally applicable
- stagger-toothed
- fz mm/Tooth= 0.035-0.04



N° article	178511 stagger-toothed, with chip breaker, TiAlN	A1 mm	B5 mm	B11 mm	C3 mm
38,5×10	●	38,5	71	10	12
45,5×10	●	45,5	71	10	12

High-performance T-slot milling cutter SC

PREMUS

	P N/mm²
178512	<900
vc = m/min.	
178512	60-105

Design:
- universally applicable
- stagger-toothed
- with corner bevel
- fz mm/Tooth= 0.033-0.045

SC coated | DIN 851 | Typ N | 6535 HB shank | Cross toothing | Teeth 6 | UNI



N° article	178512 stagger-toothed, chamfer, TiAlN	A1 mm	A5 mm	B5 mm	B11 mm	C3 mm	T-slot DIN 650
12,5×6	●	12,5	5	57	6	10	6
16×8	●	16	7	62	8	10	8
18×8	●	18	8	70	8	12	10
21×9	●	21	10	74	9	12	12
25×11	●	25	12	82	11	16	14
28×12	●	28	13	85	12	16	16
32×14	●	32	15	90	14	16	18

	P N/mm²
178514	<900
vc = m/min.	
178514	60-105

Design:
- type NF
- universally applicable
- stagger-toothed
- with corner bevel
- fz mm/Tooth= 0.033-0.045

SC coated | DIN 851 | Typ NF | 6535 HB shank | Cross toothing | Teeth 6 | UNI



N° article	178514 stagger-toothed, with chip breaker, chamfer, TiAlN	A1 mm	A5 mm	B5 mm	B11 mm	C3 mm	T-slot DIN 650
12,5×6	●	12,5	5	57	6	10	6
16×8	●	16	7	62	8	10	8
18×8	●	18	8	70	8	12	10
21×9	●	21	10	74	9	12	12
25×11	●	25	12	82	11	16	14
28×12	●	28	13	85	12	16	16
32×14	●	32	15	90	14	16	18

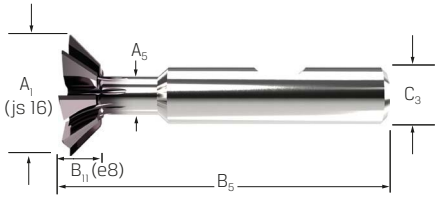
High performance angle milling cutter SC

PREMUS

	P N/mm²
178516	<900
vc = m/min.	
178516	60-105

Design:
- form C, 45 grade
- universally applicable
- with corner bevel
- fz mm/Tooth= 0.033-0.045

SC coated | DIN 1833 C | 6535 HB shank | Teeth 6-10 | UNI

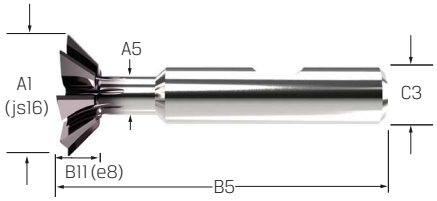


N° article	178516 Chamfer, TiAlN	A1 mm	A5 mm	B5 mm	B11 mm	C3 mm	F21
12	●	12	5	55	3	10	6
16	●	16	6,7	60	4	10	6
20	●	20	7	63	5	12	8
22	●	22	8	67	6	12	8
25	●	25	8	67	6,3	12	8
28	●	28	8,5	80	7,5	16	9
32	●	32	13	71	8	16	9
38	●	38	15	80	10	16	9

	P N/mm²
178520	<900
vc = m/min.	
178520	60-105

Design:
- form C, 60 grade
- universally applicable
- with corner bevel
- fz mm/Tooth= 0.033-0.045

SC coated | DIN 1833 C | 6535 HB shank | Teeth 6-10 | UNI

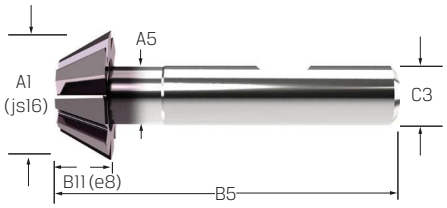


N° article	178520 Chamfer, TiAlN	A1 mm	A5 mm	B5 mm	B11 mm	C3 mm	F21
12	●	12	5	55	5	10	6
16	●	16	6	60	6,3	10	6
20	●	20	7,8	63	8	12	8
22	●	22	10	67	9	12	8
25	●	25	9	67	10	12	8
28	●	28	13	80	11	16	9
32	●	32	15	71	12,5	16	9
38	●	38	15	80	16	16	9

	P N/mm²
178518	<900
vc = m/min.	
178518	60-105

Design:
- form D, 45°
- universally applicable
- with corner bevel
- fz mm/Tooth= 0.033-0.045

SC coated | DIN 1833 D | 6535 HB shank | Teeth 6-10 | UNI

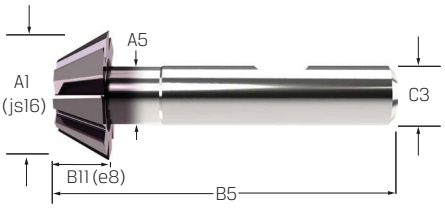


N° article	178518 Chamfer, TiAlN	A1 mm	A5 mm	B5 mm	B11 mm	C3 mm	F21
12	●	12	5	55	3	10	6
16	●	16	8	60	4	10	6
20	●	20	10	63	5	12	8
22	●	22	10,2	67	6	12	8
25	●	25	11	67	6,3	12	8
28	●	28	14	80	7,5	16	10
32	●	32	15	71	8	16	10
38	●	38	15	80	10	16	10

	P N/mm²
178522	<900
vc = m/min.	
178522	60-105

Design:
- form D, 60 °
- universally applicable
- with corner bevel
- fz mm/Tooth= 0.033-0.045

SC coated | DIN 1833 D | 6535 HB shank | Teeth 6-10 | UNI

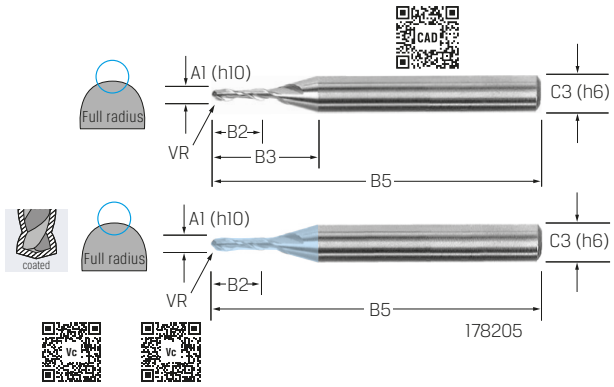


N° article	178522 Chamfer, TiAlN	A1 mm	A5 mm	B5 mm	B11 mm	C3 mm	F21
12	●	12	5	55	5	10	6
16	●	16	8,2	60	6,3	10	6
20	●	20	10,5	63	8	12	8
22	●	22	10,2	67	9	12	8
25	●	25	11,5	67	10	12	8
28	●	28	14	80	11	16	10
32	●	32	15	71	12,5	16	10
38	●	38	15	80	16	16	10

Full radius milling cutter SC
Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²		SC	Factory standard	Typ N
178200	⟨1200	⟨48	⟨850	⟨300	Titanium ⟨1200	Alu, brass ⟨600	Plastics	Teeth 2	30° Twist	Centre cut
178205								6535 HA shank	short	UNI
vc = m/min.										
178200	35-65	25-30	20 - 35	45 - 80	20-30	60-295	60-80			
178205	65-110	45-55	35 - 55	80 - 130	35-55	100-490				

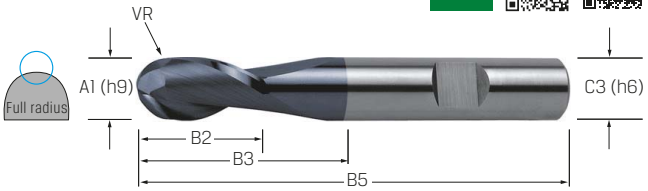


N° article	178200 short	178205 short, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
0,30	●	–	0,3	1	38	3	0,15	0,003-0,007
0,40	●	–	0,4	1	38	3	0,2	0,003-0,007
0,50	●	●	0,5	1	38	3	0,25	0,010-0,014
0,60	●	●	0,6	1	38	3	0,3	0,010-0,014
0,80	●	●	0,8	2	38	3	0,4	0,010-0,014
1,00	●	●	1	3	38	3	0,5	0,010-0,014
1,10	–	●	1,1	3	38	3	0,55	0,010-0,014
1,20	●	●	1,1	3	38	3	0,6	0,010-0,014
1,50	●	●	1,5	4	38	3	0,75	0,018-0,024
1,60	●	●	1,6	5	38	3	0,8	0,018-0,024
1,80	●	●	1,8	5	38	3	0,9	0,018-0,024
2,00	●	●	2	5	38	3	1	0,018-0,024

Ball cutter SC Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	N N/mm²		SC	coated	Factory standard
178265	⟨1200	⟨62	⟨850	⟨300	Alu ⟩600	Brass ⟨600	Typ N	Teeth 2	30° Twist
vc = m/min.							Centre cut	6535 HB shank	long
178265	105-240	50-60	65 - 105	145 - 240	280-880	160-200	UNI	CAD	Vc

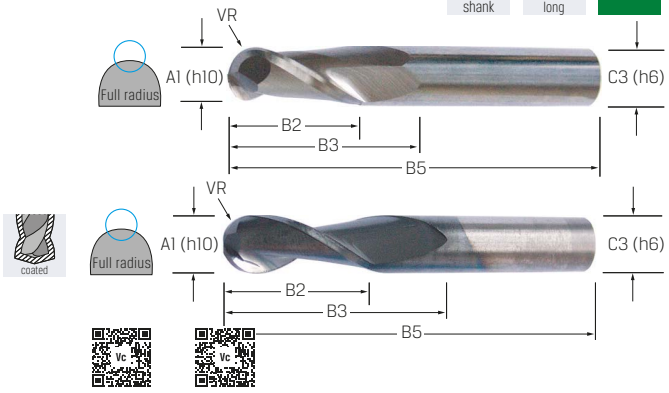


N° article	178265 long, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	●	2	6	50	6	1	0,005-0,014
3,00	●	3	7	57	6	1,5	0,010-0,019
4,00	●	4	8	57	6	2	0,018-0,025
5,00	●	5	10	57	6	2,5	0,020-0,028
6,00	●	6	10	57	6	3	0,024-0,039
7,00	○	7	16	63	8	3,5	0,024-0,039
8,00	●	8	16	63	8	4	0,032-0,053
9,00	○	9	19	72	10	4,5	0,032-0,053
10,00	●	10	19	72	10	5	0,038-0,065
12,00	●	12	22	83	12	6	0,045-0,079
14,00	○	14	22	83	14	7	0,050-0,084
16,00	●	16	26	92	16	8	0,054-0,095
18,00	○	18	26	92	18	9	0,059-0,100
20,00	○	20	32	104	20	10	0,066-0,110

Full radius milling cutter SC
Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	N N/mm²		SC	Factory standard	Typ N
178250	⟨1200	⟨60	⟨850	⟨300	Alu ⟩600	Brass ⟨600	Teeth 2	30° Twist	Centre cut
178255							6535 HA shank	long	UNI
vc = m/min.									
178250	65-145	30-35	40 - 65	85 - 145	205-520	95-120			
178255	105-240	50-60	65 - 95	145 - 230	280-880	160-200			



N° article	178250 short	178255 short, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
1,00	●	●	1	3	38	3	0,5	0,006-0,010
1,50	●	●	1,5	5	38	3	0,75	0,006-0,010
2,00	●	●	2	7	38	3	1	0,006-0,010
2,50	●	●	2,5	7	38	3	1,25	0,006-0,010
3,00	●	●	3	9	38	3	1,5	0,010-0,016
3,50	●	●	3,5	12	50	4	1,75	0,010-0,016
4,00	●	●	4	14	50	4	2	0,018-0,023
4,50	●	●	4,5	14	50	5	2,25	0,018-0,023
5,00	●	●	5	16	50	5	2,5	0,020-0,026
6,00	●	●	6	19	64	6	3	0,025-0,029
7,00	●	●	7	19	64	8	3,5	0,025-0,029
8,00	●	●	8	22	64	8	4	0,032-0,042
9,00	●	●	9	23	70	10	4,5	0,032-0,042
10,00	●	●	10	23	70	10	5	0,039-0,053
11,00	●	●	11	26	70	12	5,5	0,039-0,053
12,00	●	●	12	26	75	12	6	0,048-0,063
14,00	–	●	14	31	90	14	7	0,048-0,063
16,00	●	●	16	33	90	16	8	0,058-0,079

Full radius milling cutter SC
Universal

PRETEC

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²		SC	coated	DIN 6527
178230	⟨1400	⟨48	⟨850	⟨300	Titanium alloys	Titanium ⟨1300	Aluminium	⟨7 % Si	Teeth 2	30° Twist	Centre cut
vc = m/min.									6535 HB shank	long	UNI
178230	140-240	70-130	60 - 130	100 - 180	60-130	30-60	150-300	140-260			

Design:
- 30°, twisted
- long version
- coated

Use:
Universally applicable



N° article	178230 long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	●	2	6	57	6	1	0,020-0,030
3,00	●	3	7	57	6	1,5	0,030-0,040
4,00	●	4	8	57	6	2	0,035-0,045
5,00	●	5	10	57	6	2,5	0,035-0,045
6,00	●	6	10	57	6	3	0,040-0,050
8,00	●	8	16	63	8	4	0,050-0,070
10,00	●	10	19	72	10	5	0,070-0,100
12,00	●	12	22	83	12	6	0,080-0,120
16,00	●	16	26	92	16	8	0,100-0,150
20,00	●	20	32	104	20	10	0,100-0,150

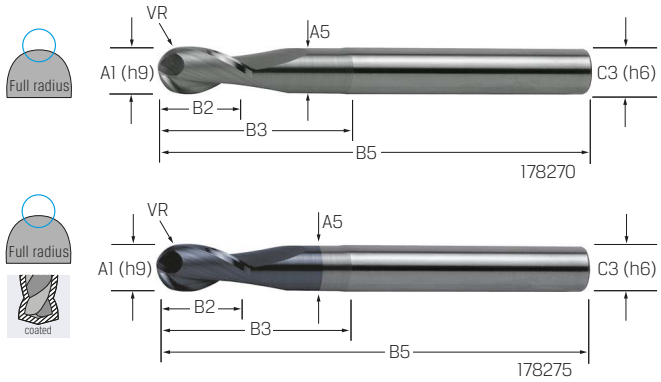
Full radius milling cutter SC Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	N N/mm²		
178270 178275	⟨1200	⟨60	⟨850	⟨300	Alu ⟩600	Brass ⟨600	
vc = m/min.							
178270	75-150	35-45	45 - 75	100 - 170	200-630	195-250	
178275	125-290	60-70	80 - 125	170 - 290	340-1050		

SC · Factory standard · Typ N
Teeth 2 · 30° Twist · Centre cut
6535 HA shank · overlong · shank relieved
UNI · CAD

Note:
Relieved shank allows larger operating length.

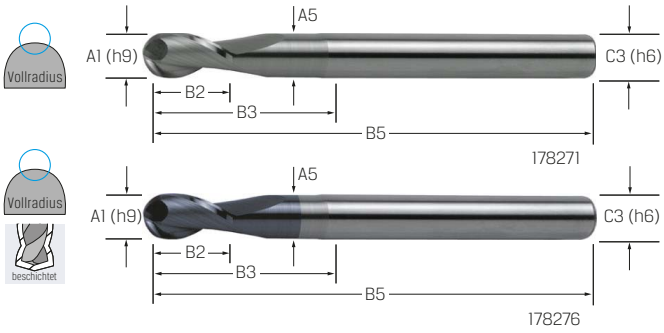


N° article	178270 extra long	178275 extra long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	●	●	2	1,8	5	20	75	6	1	0,010-0,018
3,00	●	●	3	2,8	6	20	75	6	1,5	0,016-0,024
4,00	●	●	4	3,8	8	20	75	6	2	0,023-0,030
5,00	●	●	5	4,8	20	40	100	6	2,5	0,026-0,032
6,00	●	●	6	5,8	20	40	100	6	3	0,029-0,041
8,00	●	●	8	7,8	20	40	100	8	4	0,042-0,058
10,00	●	●	10	9,8	20	40	100	10	5	0,053-0,073
12,00	●	●	12	11,7	20	40	100	12	6	0,063-0,090

	P N/mm²	H HRC	M N/mm²	K HB	N N/mm²		
178271 178276	⟨1200	⟨60	⟨850	⟨300	Alu ⟩600	Brass ⟨600	
vc = m/min.							
178271	75-150	35-45	45 - 75	100 - 170	200-630	195-250	
178276	125-290	60-70	80 - 125	170 - 290	340-1050		

SC · Factory standard · Typ N
Teeth 2 · 30° Twist · Centre cut
6535 HA shank · overlong · shank relieved
UNI · CAD

Note:
Relieved shank allows larger operating length.



N° article	178271 extra long	178276 extra long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
10,00	●	●	10	9,8	20	60	150	10	5	0,053-0,073
12,00	●	●	12	11,7	20	60	150	12	6	0,063-0,090
16,00	○	○	16	15,7	30	70	150	16	8	0,079-0,110
20,00	–	○	20	19,7	30	80	150	20	10	0,097-0,130

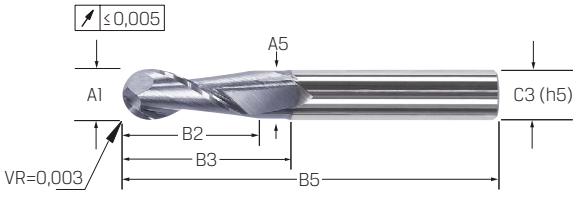
Full radius milling cutter SC Universal

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
178282 178283 178284	⟨800	45 - 55	⟨650	⟨450	Titanium	Inconel	Aluminium
vc = m/min.							
178282	180-320	40-80	110 - 190	110 - 220	60-80	30-40	120-240
178283	170-270			190 - 310			
178284		40-60					

SC · coated · DIN 6527 · Teeth 2 · 1,75-2,5 × A1 · 34° 32° Twist · Centre cut · 45°
6535 HA shank · 6535 HB shank · SAFE-LOCK
UNI

Design:
- neck for higher cutting depth
- full radius
- polished flute and relief surfaces
- smooth cutting edge
- finely balanced, except Weldon shank
- coated



N° article	178282 Power, HA coated	178283 Power HB, coated	178284 Power, Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,99	0,002-0,020
3,00	○	○	○	3	2,9	8	10	58	6	1,49	0,003-0,030
4,00	○	○	○	4	3,8	11	15	58	6	1,99	0,004-0,040
5,00	○	○	○	5	4,8	13	18	58	6	2,49	0,005-0,050
6,00	○	○	○	6	5,7	13	20	58	6	2,99	0,006-0,060
8,00	○	○	○	8	7,6	19	26	64	8	3,99	0,008-0,080

N° article	178282 Power, HA coated	178283 Power HB, coated	178284 Power, Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
10,00	○	○	○	10	9,5	22	30,5	73	10	4,99	0,010-0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	5,99	0,012-0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	6,99	0,014-0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	7,99	0,016-0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	8,99	0,018-0,198
20,00	○	○	○	20	19	38	52	105	20	9,99	0,020-0,200

Full radius milling cutter SC Universal, with IC

CRAZYMILL Cool — MIKRON TOOL

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²
178502						
178504	⟨1200	⟨55	⟨850		Titanium, nickel	Alu, copper, brass ⟨600
178506						
vc = m/min.						
178502						
178504	60-280	60-240	60-280	60-200	60-170	60-280
178506						

SC | coated | Factory standard | Teeth 2 | 30° Twist | Centre cut

UNI — 178502 | 178504 | 178506

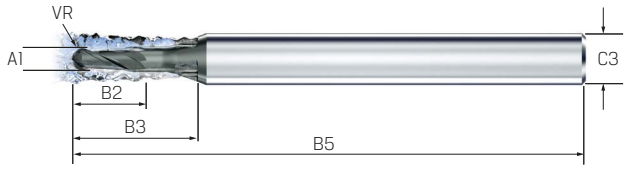
Design:
- the only milling tool in the diameter range 0.3 to 6.0 mm with integrated IC
- specially developed carbide grade
- specially designed coating
- special cutting edge geometry

Use:
- universally applicable
- outstanding results in stainless steels, titanium, nickel
- a perfect surface finish is achieved in all materials due to the specific geometry, coating and cooling performance

2 × A1 — Full radius



5 × A1 — Full radius



3 × A1 — Full radius



N° article	178502 2× A1, eXedur RIP	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm
0030	○	0,3	0,6	38	3	0,15
0040	○	0,4	0,8	38	3	0,2
0050	●	0,5	1	38	3	0,25
0060	○	0,6	1,2	38	3	0,3
0080	●	0,8	1,6	38	3	0,4
0100	●	1	2	40	4	0,5
0120	○	1,2	2,4	40	4	0,6
0150	●	1,5	3	40	4	0,75
0180	○	1,8	3,6	40	4	0,9
0200	●	2	4	40	4	1
0250	○	2,5	5	40	6	1,25
0300	●	3	6	50	6	1,5
0400	●	4	8	50	6	2
0600	●	6	12	60	10	3
0800	●	8	16	70	12	4

N° article	178504 3× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
0030	○	0,3	0,6	0,9	38	3	0,15
0040	○	0,4	0,8	1,2	38	3	0,2
0050	●	0,5	1	1,5	38	3	0,25
0060	○	0,6	1,2	1,8	38	3	0,3
0080	○	0,8	1,6	2,4	38	3	0,4
0100	○	1	2	3	40	4	0,5
0120	○	1,2	2,4	3,6	40	4	0,6
0150	○	1,5	3	4,5	40	4	0,75
0180	○	1,8	3,6	5,4	40	4	0,9
0200	●	2	4	6	40	4	1
0250	○	2,5	5	7,5	40	6	1,25
0300	○	3	6	9	50	6	1,5
0400	○	4	8	12	55	6	2
0600	○	6	12	18	65	10	3
0800	○	8	16	24	80	12	4

N° article	178506 5× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
0030	○	0,3	0,6	1,5	38	3	0,15
0040	○	0,4	0,8	2	38	3	0,2
0050	○	0,5	1	2,5	38	3	0,25
0060	●	0,6	1,2	3	38	3	0,3
0080	○	0,8	1,6	4	38	3	0,4
0100	○	1	2	5	40	4	0,5
0120	○	1,2	2,4	6	40	4	0,6
0150	○	1,5	3	7,5	40	4	0,75
0180	○	1,8	3,6	9	40	4	0,9
0200	○	2	4	10	40	4	1
0250	●	2,5	5	12,5	40	6	1,25
0300	○	3	6	15	50	6	1,5
0400	●	4	8	20	55	6	2
0600	○	6	12	30	65	10	3
0800	○	8	16	40	80	12	4

Full radius milling cutter SC Aluminium

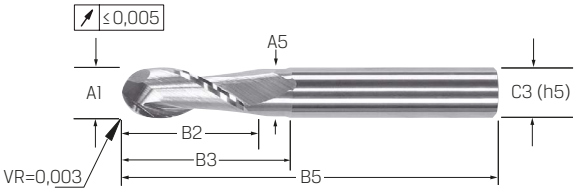
HAIMER

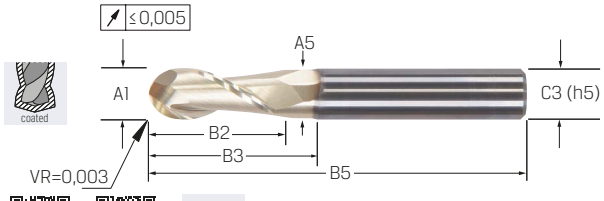
	N N/mm²
178290 - 178292	Aluminium
178296 - 178298	
vc = m/min.	
178290 - 178292	300-600
178296 - 178298	

Design:
- neck for higher cutting depth
- full radius
- polished flute and relief surfaces
- finely balanced, except Weldon shank

SC | DIN 6527 | Teeth 2 | 1,75-2,5 × A1 | 34° 32° Twist | Centre cut

45° | 6535 HA shank | 6535 HB shank | SAFE-LOCK | N





N° article	178290 Power, HA	178291 Power HB	178292 Power Safe-Lock,	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,99	0,002-0,020
3,00	○	○	○	3	2,9	8	10	58	6	1,49	0,003-0,030
4,00	○	○	○	4	3,8	11	15	58	6	1,99	0,004-0,040
5,00	○	○	○	5	4,8	13	18	58	6	2,49	0,005-0,050
6,00	○	○	○	6	5,7	13	20	58	6	2,99	0,006-0,060
8,00	○	○	○	8	7,6	19	26	64	8	3,99	0,008-0,080
10,00	○	○	○	10	9,5	22	30,5	73	10	4,99	0,010-0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	5,99	0,012-0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	6,99	0,014-0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	7,99	0,016-0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	8,99	0,018-0,198
20,00	○	○	○	20	19	38	52	105	20	9,99	0,020-0,200

N° article	178296 Power, HA coated	178297 Power HB, coated	178298 Power, Safe-Lock, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	○	○	○	2	1,9	7	9	58	6	0,99	0,002-0,020
3,00	○	○	○	3	2,9	8	10	58	6	1,49	0,003-0,030
4,00	○	○	○	4	3,8	11	15	58	6	1,99	0,004-0,040
5,00	○	○	○	5	4,8	13	18	58	6	2,49	0,005-0,050
6,00	○	○	○	6	5,7	13	20	58	6	2,99	0,006-0,060
8,00	○	○	○	8	7,6	19	26	64	8	3,99	0,008-0,080
10,00	○	○	○	10	9,5	22	30,5	73	10	4,99	0,010-0,100
12,00	○	○	○	12	11,4	26	36,5	84	12	5,99	0,012-0,120
14,00	○	○	○	14	13,3	26	36,5	84	14	6,99	0,014-0,140
16,00	○	○	○	16	15,2	32	42,5	93	16	7,99	0,016-0,160
18,00	○	○	○	18	17,1	32	42,5	93	18	8,99	0,018-0,198
20,00	○	○	○	20	19	38	52	105	20	9,99	0,020-0,200

Full radius milling cutter SC HRC

PREMUS

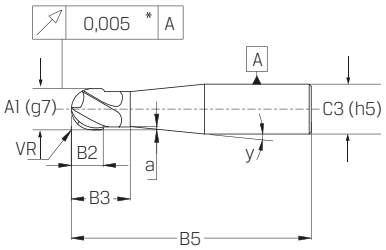
	High HRC
178277	⟨62
vc = m/min.	
178277	200-400

SC (coated) · Factory standard · Teeth 2 · 30° Twist · Centre cut · 6535 HA shank · long · overlong · HPM · HSM · H

Tolerance

Diameter range	Edge-Ø ØA1 (g7)	Shank-Ø ØC3 (h5)
A1 ≤ 3	-0.002 -0.012	0 -0.004
3 ⟨ A1 ≤ 6	-0.004 -0.016	0 -0.005
6 ⟨ A1 ≤ 10	-0.005 -0.020	0 -0.006
10 ⟨ A1 ≤ 18	-0.006 -0.024	0 -0.008

up to 62 HRC





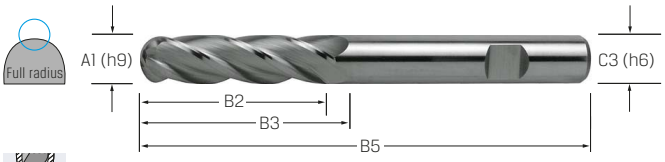
N° article	178277 TiAlN	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	a mm	y (°)	fz mm/tooth
1,00×64	●	1	2	4	65	6	0,5	0.05	7	0,020-0,040
1,50×64	○	1,5	2	4	65	6	0,75	0.05	7	0,020-0,040
2,00×64	●	2	3	5	65	6	1	0.05	6	0,030-0,075
2,00×78	○	2	3	15	79	6	1	0.05	5	0,030-0,075
3,00×64	●	3	4	7	65	6	1,5	0.05	5	0,040-0,090
4,00×64	○	4	5	8	65	6	2	0.1	4	0,050-0,100
4,00×78	●	4	5	15	79	6	2	0.1	3	0,050-0,100
5,00×64	●	5	5	10	65	6	2,5	0.15	3	0,060-0,120
5,00×78	●	5	5	20	79	6	2,5	0.15	2	0,060-0,120
6,00×64	●	6	6	25	65	6	3	0.2	–	0,065-0,125
6,00×78	●	6	6	35	79	6	3	0.2	–	0,065-0,125
8,00×64	●	8	8	25	65	8	4	0.3	–	0,080-0,130

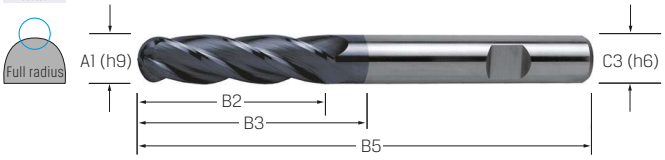
Full radius milling cutter SC Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB
178430	⟨1200	⟨60	⟨850	⟨300
178435				
vc = m/min.				
178430	50-110	20-30	30-45	76-115
178435	90-180	35-45	50-75	105-180

SC · Factory standard · Typ N · Teeth 4 · 30° Twist · Centre cut · 6535 HB shank · overlong · UNI





N° article	178430 extra long	178435 extra long, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
3,00×20	●	●	3	20	57	6	1,5	0,003-0,010
4,00×20	●	●	4	20	57	6	2	0,006-0,018
5,00×30	●	●	5	30	75	6	2,5	0,007-0,020
6,00×30	●	●	6	30	75	6	3	0,009-0,024
6,00×40	●	●	6	40	100	6	3	0,009-0,024
8,00×30	●	●	8	30	75	8	4	0,014-0,032
8,00×40	●	●	8	40	100	8	4	0,014-0,032
10,00×30	●	●	10	30	75	10	5	0,018-0,038
10,00×40	●	●	10	40	100	10	5	0,018-0,038
12,00×45	●	●	12	45	100	12	6	0,022-0,046
12,00×65	●	○	12	65	150	12	6	0,022-0,046
14,00×45	○	–	14	45	100	14	7	0,022-0,046
14,00×65	○	–	14	65	150	14	7	0,022-0,046
16,00×45	○	○	16	45	100	16	8	0,027-0,054
16,00×65	○	○	16	65	150	16	8	0,027-0,054
16,00×90	○	○	16	90	150	16	8	0,027-0,054

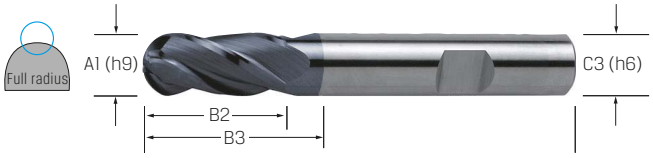
Full radius milling cutter SC Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB
178415	⟨1200	⟨60	⟨850	⟨300
vc = m/min.				
178415	115-240	50-60	65-105	145-240

SC (coated) · DIN 6527 · Typ N · Teeth 4 · 30° Twist · Centre cut · 6535 HB shank · long · UNI

N° article	178415 long, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
2,00	●	2	6	57	6	1	0,005-0,010
3,00	●	3	8	57	6	1,5	0,010-0,016
4,00	●	4	11	57	6	2	0,018-0,024
5,00	●	5	13	57	6	2,5	0,020-0,026
6,00	●	6	13	57	6	3	0,024-0,029
8,00	●	8	19	63	8	4	0,032-0,042
10,00	●	10	22	72	10	5	0,038-0,053
12,00	●	12	26	83	12	6	0,046-0,063
14,00	●	14	26	83	14	7	0,046-0,063
16,00	●	16	32	92	16	8	0,054-0,079
18,00	●	18	32	92	18	9	0,054-0,079
20,00	●	20	38	104	20	10	0,066-0,097



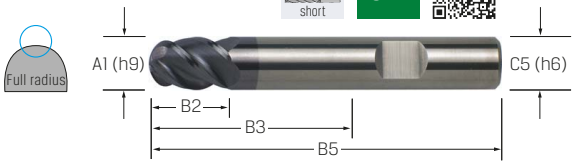
Full radius milling cutter SC
Universal

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	SC	coated	Factory standard	Typ N
178455	⟨1200	⟨60	⟨850	⟨300	Teeth 4	45° Twist	Centre cut	6535 HB shank
vc = m/min.								
178455	60-120	30-50	50-75	100-180				

Note:
Exquisite surface quality owing to hard helix angle.

short · UNI · CAD



N° article	178455 short, ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
6,00	●	6	10	54	6	3	0,015-0,080
8,00	●	8	12	58	8	4	0,015-0,080
10,00	●	10	14	66	10	5	0,025-0,120
12,00	●	12	16	73	12	6	0,025-0,120
14,00	○	14	18	75	14	7	0,030-0,150
16,00	○	16	22	82	16	8	0,030-0,150
20,00	○	20	26	92	20	10	0,040-0,200

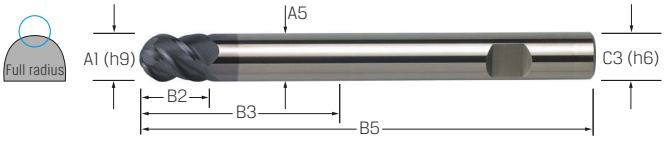
Full radius milling cutter SC
Universal, with relieved shank

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	SC	coated	Factory standard	Typ N
178465	⟨1200	⟨60	⟨850	⟨300	Teeth 4	45° Twist	Centre cut	6535 HB shank
vc = m/min.								
178465	60-120	30-50	50-75	100-180				

Note:
Exquisite surface quality owing to hard helix angle.

overlong · shank relieved · UNI · CAD



N° article	178465 extra long, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
6,00	●	6	5,8	10	40	100	6	3	0,015-0,080
8,00	●	8	7,8	12	40	100	8	4	0,015-0,080
10,00	●	10	9,7	14	40	100	10	5	0,025-0,120
12,00	●	12	11,7	16	40	100	12	6	0,025-0,120
14,00	○	14	13,7	18	40	100	14	7	0,030-0,150
16,00	○	16	15,6	22	70	150	16	8	0,030-0,150
20,00	○	20	19,6	26	70	150	20	10	0,040-0,200

Full radius milling cutter SC Universal, with integrated cooling

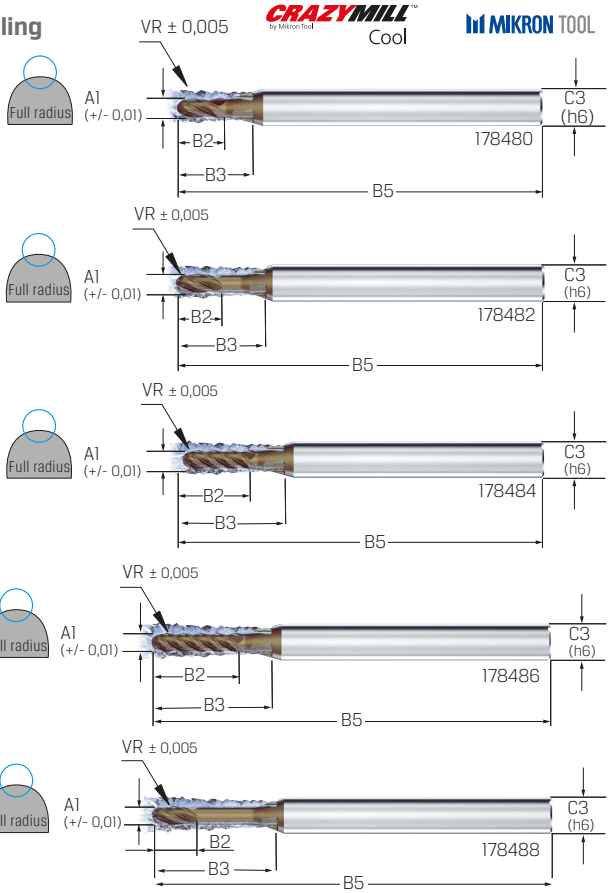
CRAZYMILL by Mikron Tool Cool · MIKRON TOOL

Design:
- 3-edged plunge cutter
- for milling depth 2× A1
- special cutting geometry enables reliable vertical plunge milling
- specially designed coating
- cutting tips with full radius
- with integrated cooling

Use:
- developed for roughing and finishing of all materials
- ideally suited for stainless steels, titanium, super alloys and CrCo alloys
- specially developed for plunge milling, slot milling, milling with linear ramp as well as side milling - pre-finishing (from max. 1× A1) and side milling - finishing.

SC · coated · Factory standard · Teeth 4 · 6535 HA shank · UNI

2 × A1 · 3 × A1 · 3,5 × A1 · 4,5 × A1 · 5 × A1



N° article	178480 2× A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
1,00	●	1	2	2	40	4	0,5
1,20	●	1,2	2,4	2,4	40	4	0,6
1,50	●	1,5	3	3	40	4	0,75
1,80	●	1,8	3,6	3,6	40	4	0,9
2,00	●	2	4	4	40	4	1
2,50	●	2,5	5	5	50	6	1,25
3,00	●	3	6	6	50	6	1,5
4,00	●	4	8	8	50	6	2
5,00	●	5	10	10	60	8	2,5
6,00	●	6	12	12	60	10	3
8,00	●	8	16	16	70	12	4

N° article	178482 3× A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
1,00	●	1	2	3	40	4	0,5
1,20	●	1,2	2,4	3,6	40	4	0,6
1,50	●	1,5	3	4,5	40	4	0,75
1,80	●	1,8	3,6	5,4	40	4	0,9
2,00	●	2	4	6	40	4	1
2,50	●	2,5	5	7,5	50	6	1,25
3,00	●	3	6	9	50	6	1,5
4,00	●	4	8	12	55	6	2
5,00	●	5	10	15	65	8	2,5
6,00	●	6	12	18	65	10	3
8,00	●	8	16	24	80	12	4

N° article	178484 3.5× A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
1,00	●	1	3,5	3,5	40	4	0,5
1,20	●	1,2	4,2	4,2	40	4	0,6
1,50	●	1,5	5,3	5,3	40	4	0,75
1,80	●	1,8	6,3	6,3	40	4	0,9
2,00	●	2	7	7	40	4	1
2,50	●	2,5	8,8	8,8	50	6	1,25
3,00	●	3	10,5	10,5	50	6	1,5
4,00	●	4	14	14	55	6	2
5,00	●	5	17,5	17,5	65	8	2,5
6,00	●	6	21	21	65	10	3
8,00	●	8	28	28	80	12	4

N° article	178486 4.5× A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
1,00	●	1	4,5	4,5	40	4	0,5
1,20	●	1,2	5,4	5,4	40	4	0,6
1,50	●	1,5	6,8	6,8	40	4	0,75
1,80	●	1,8	8,1	8,1	45	4	0,9
2,00	●	2	9	9	44	4	1
2,50	●	2,5	11,3	11,3	55	6	1,25
3,00	●	3	13,5	13,5	55	6	1,5
4,00	●	4	18	18	60	6	2
5,00	●	5	22,5	22,5	70	8	2,5
6,00	●	6	27	27	70	10	3
8,00	●	8	36	36	90	12	4

N° article	178488 5× A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm
1,00	●	1	2	5	40	4	0,5
1,20	●	1,2	2,4	6	40	4	0,6
1,50	●	1,5	3	7,5	40	4	0,75
1,80	●	1,8	3,6	9	45	4	0,9
2,00	●	2	4	10	44	4	1
2,50	●	2,5	5	12,5	55	6	1,25
3,00	●	3	6	15	55	6	1,5
4,00	●	4	8	20	60	6	2
5,00	●	5	10	25	70	8	2,5
6,00	●	6	12	30	70	10	3
8,00	●	8	16	40	90	12	4

Bevel cutter SC Universal

CRAZYMILL Frontchamfer — MIKRON TOOL

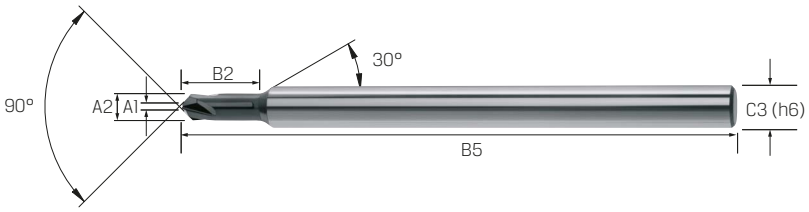
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
178700	⟨1200	⟩50	⟨1000	⟨300	Titanium ⟨1200	Copper ⟨900	Aluminium ⟨600
vc = m/min.							
178700	80-120	0-60	0-50	0-60	0-40	0-200	0-200

SC | coated | Teeth 4-6 | UNI

Design:
- SC
- all tools are coated
- chamfer 90°
- suitable for all metals

Use:
For chamfering in the smallest diameter ranges

N° article	178700 eXedur RI	A1 mm	A2 mm	B2 mm	B5 mm	C3 mm	F21	fz mm/tooth
0100	●	0,3	1	3	40	3	4	0,010-0,050
0200	●	0,6	2	6	40	3	4	0,010-0,050
0300	●	1	3	–	50	3	5	0,030-0,070
0400	●	1,5	4	–	50	4	6	0,030-0,070
0600	●	2	6	–	50	6	6	0,030-0,070



Deburring cutter SC Universal

CRAZYMILL Backchamfer — MIKRON TOOL

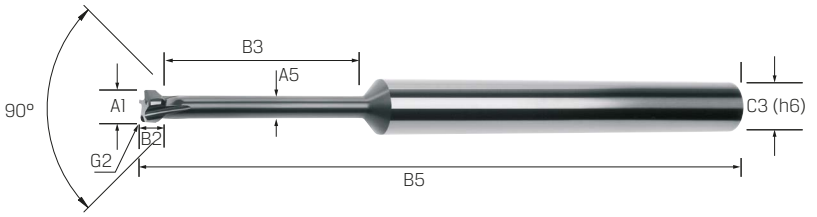
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
178702 178703	⟨1200	⟩50	⟨1000	⟨300	⟨1200	Copper ⟨900	Aluminium ⟨600
vc = m/min.							
178702 178703	80-120	0-60	0-50	0-60	0-40	0-200	0-200

SC | coated | Teeth 3-6 | UNI

Design:
- SC
- all tools are coated
- for bore Ø from 0.4 mm
- chamfer 90°
- suitable for all metals

Use:
For reverse deburring

45°



3 × A1

N° article	178702 3× A1, chamfer, eXedur RIP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
0036	●	0,36	0,22	0,2	1,6	45	3	0,03	3	0,015-0,030
0046	●	0,46	0,3	0,25	2	45	3	0,04	3	0,015-0,030
0065	●	0,65	0,4	0,35	2,8	45	3	0,04	3	0,015-0,030
0090	●	0,9	0,6	0,5	4	53	4	0,075	4	0,015-0,030
0140	●	1,4	0,95	0,9	6	53	4	0,1	4	0,015-0,030
0190	●	1,9	1,4	1	8	53	4	0,1	5	0,015-0,030
0290	●	2,9	2,1	1,5	12	60	4	0,2	5	0,020-0,040
0370	●	3,7	2,7	2	16	60	4	0,3	5	0,020-0,040
0470	●	4,7	3,3	2	20	70	6	0,4	6	0,020-0,040
0570	●	5,7	4	2	24	70	6	0,5	6	0,020-0,040

5 × A1

N° article	178703 5× A1, chamfer, eXedur RIP	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
0036	●	0,36	0,22	0,2	2,4	50	3	0,03	3	0,015-0,030
0046	●	0,46	0,3	0,25	3	50	3	0,04	3	0,015-0,030
0065	●	0,65	0,4	0,35	4,2	50	3	0,04	3	0,015-0,030
0090	●	0,9	0,6	0,5	6	60	4	0,075	4	0,015-0,030
0140	●	1,4	0,95	0,9	9	60	4	0,1	4	0,015-0,030
0190	●	1,9	1,4	1	12	60	4	0,1	5	0,015-0,030
0290	●	2,9	2,1	1,5	18	70	4	0,2	5	0,020-0,040
0370	●	3,7	2,7	2	24	70	4	0,3	5	0,020-0,040
0470	●	4,7	3,3	2	30	80	6	0,4	6	0,020-0,040
0570	●	5,7	4	2	36	80	6	0,5	6	0,020-0,040

Radius deburring cutter SC Universal

CRAZYMILL Radiuschamfer — MIKRON TOOL

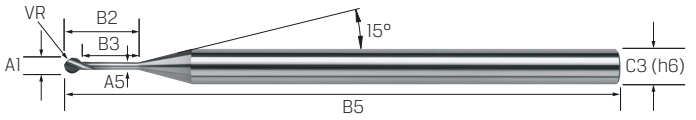
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
178705	⟨1200	⟩50	⟨1000	⟨300	⟨1200	Copper ⟨900	Aluminium ⟨600
vc = m/min.							
178705	80-120	0-60	0-50	0-60	0-40	0-200	0-200

SC | coated | Teeth 3 | 4 × A1 | UNI

Design:
- with radius
- usable cutting area 300°
- for front and back deburring
- special positive cutting geometry
- SC
- all tools are coated
- suitable for all metals

N° article	178705 4× A1, eXedur RI	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	Full radius mm	fz mm/tooth
0100	●	1	0,5	4	3	50	4	0,5	0,015-0,030
0150	●	1,5	0,75	6	4,5	50	4	0,75	0,015-0,030
0200	●	2	1	8	6	60	4	1	0,015-0,030
0250	●	2,5	1,25	10	7,5	60	4	1,25	0,015-0,030
0300	●	3	1,5	12	9	60	4	1,5	0,020-0,040
0400	●	4	2	16	12	70	6	2	0,020-0,040
0600	●	6	3	24	18	70	6	3	0,020-0,040

Full radius



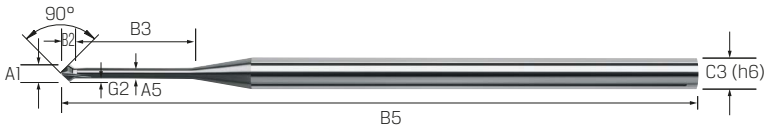
Deburring cutter SC Universal

CRAZYMILL Doublechamfer — MIKRON TOOL

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
178706							
178707	⟨1200	⟩50	⟨1000	⟨300	⟨1200	Copper ⟨900	Aluminium ⟨600
	vc = m/min.						
178706							
178707	80-120	0-60	0-50	0-60	0-40	0-200	0-200

SC — coated — Teeth 4-6 — UNI

Design:
- SC
- all tools are coated
- diameters from 0.9 to 5.7 mm
- chamfers of 45° or 90° each
- 4 to 6 teeth
- suitable for all metals



Use:
For forward and backward deburring

3 × A1

N° article	178706 3× A1, eXedur RI	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
0090	●	0,9	0,45	0,45	2,7	53	4	0,225	4	0,015-0,030
0140	●	1,4	0,7	0,7	4,2	53	4	0,35	5	0,015-0,030
0180	●	1,8	0,9	0,9	5,4	55	4	0,45	5	0,015-0,030
0280	●	2,8	1,4	1,4	8,4	60	4	0,7	5	0,020-0,040
0370	●	3,7	1,85	1,85	11,1	60	4	0,925	5	0,020-0,040
0470	●	4,7	2,35	2,35	14,1	70	6	1,175	5	0,020-0,040
0570	●	5,7	2,85	2,85	17,1	70	6	1,425	6	0,020-0,040

6 × A1

N° article	178707 6× A1, eXedur RI	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
0090	●	0,9	0,54	0,36	5,4	60	4	0,18	4	0,015-0,030
0140	●	1,4	0,84	0,56	8,4	60	4	0,28	5	0,015-0,030
0180	●	1,8	1,08	0,72	10,8	60	4	0,36	5	0,015-0,030
0280	●	2,8	1,68	1,12	16,8	60	4	0,56	5	0,020-0,040
0370	●	3,7	2,22	1,48	22,2	60	4	0,74	5	0,020-0,040
0470	●	4,7	2,82	1,88	28,2	80	6	0,94	5	0,020-0,040
0570	●	5,7	3,42	2,28	34,2	80	6	1,14	6	0,020-0,040

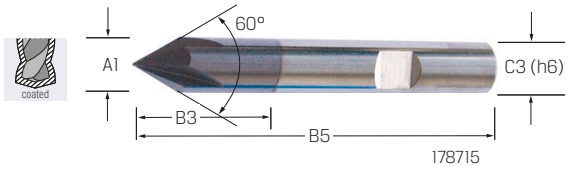
Deburring cutter SC Universal

PREMUS

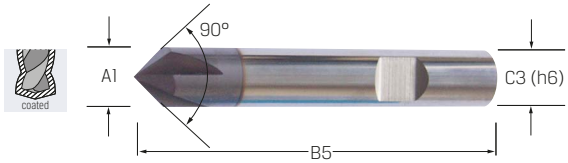
	P N/mm²	M N/mm²	K HB	S N/mm²		N N/mm²		
178710								
178715								
178720								
178725	⟨1620	⟨1000	⟨300	Titanium ⟨1200	Nickel ⟨1200	Copper ⟨350 Brass ⟨700	Al alloys	Thermoplastics Thermoset fibre-reinforced plastics
178730								
178735								
	vc = m/min.							
178710	40-120	30 - 35	70 - 100	40-120	40-170	200-250	300-800	70-200
178715	70-190	60 - 90	90 - 175	60-190	39-260	360-410	400-900	90-350
178720	40-120	30 - 35	70 - 100	40-120	40-170	200-250	300-800	70-200
178725	70-190	60 - 90	90 - 175	60-190	39-260	360-410	400-900	90-350
178730	40-120	30 - 35	70 - 100	40-120	40-170	200-250	300-800	70-200
178735	70-190	60 - 90	90 - 175	60-190	39-260	360-410	400-900	90-350

SC — coated — DIN 6527 — Typ N — Teeth 4 — 6535 HB shank — short — UNI

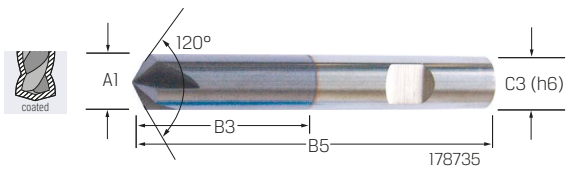
Design:
HB shank from C3 = 6.00 mm



178715



178725



178735

N° article	178710 60°, short	178715 60°, short ALCRONA	178720 90°, short	178725 90°, short ALCRONA	178730 120°, short	178735 120°, short ALCRONA	A1 mm	B5 mm	C3 mm	fz mm/tooth
4,00	●	●	●	●	●	●	4	54	4	0,008-0,015
6,00	●	●	●	●	●	●	6	57	6	0,013-0,025
8,00	●	●	●	●	●	●	8	63	8	0,020-0,040
10,00	●	●	●	●	●	●	10	72	10	0,027-0,050
12,00	●	●	●	●	●	●	12	83	12	0,035-0,065
16,00	●	●	●	●	●	●	16	92	16	0,050-0,090
20,00	●	●	●	●	●	●	20	104	20	0,060-0,120

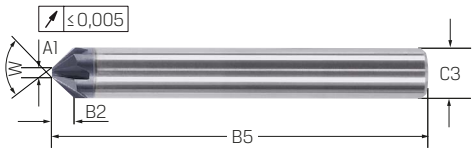
Deburring cutter SC Universal

HAIMER

SC | coated | DIN 6527 | Teeth 4-6 | Centre cut | 6535 HA shank | UNI

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
178740							
178741	<800	45-55	<650	<450	Titanium	Inconel	Aluminium
178742							
vc = m/min.							
178740							
178741	160-280	40-80	80-160	120-240	40-80	30-40	500-900
178742							

Design:
- cone angle 60/90/120°
- tip ground flat
- multifunctional tool
- straight grooved
- smooth cutting edge
- no neck
- smooth shank
- coated



60°

N° article	178740 Power, 60°, coated	A1 mm	B2 mm	B5 mm	C3 mm	fz mm/tooth
4,00	○	0,8	2,8	51	4	0,010-0,040
6,00	○	0,8	4,2	51	6	0,015-0,060
8,00	○	1,6	5,5	64	8	0,020-0,080
10,00	○	2	6,9	73	10	0,030-0,100

90°

N° article	178741 Power, 90°, coated	A1 mm	B2 mm	B5 mm	C3 mm	fz mm/tooth
4,00	○	0,8	1,6	51	4	0,010-0,040
6,00	○	1,2	2,4	58	6	0,015-0,060
8,00	○	1,6	3,2	64	8	0,020-0,080
10,00	○	2	4	73	10	0,030-0,100

120°

N° article	178742 Power, 120°, coated	A1 mm	B2 mm	B5 mm	C3 mm	fz mm/tooth
4,00	○	0,8	0,9	51	4	0,010-0,040
6,00	○	1,2	1,3	58	6	0,015-0,060
8,00	○	1,6	1,8	64	8	0,020-0,080
10,00	○	2	2,3	73	10	0,030-0,100

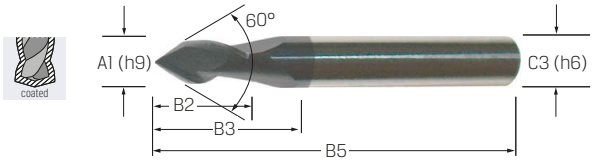
Multi purpose end mill SC Universal

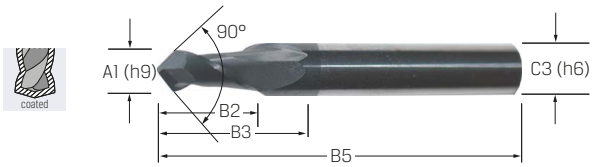
PREMUS

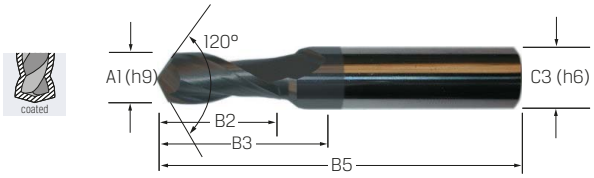
	P N/mm²	K HB	S N/mm²	N N/mm²	N N/mm²
178760	<850	<200		Alu <600	Copper, brass
178761					
178762					
178765	<1000	<300	Titanium, nickel <900		
178766					
178767					

SC | Factory standard | Typ N | Teeth 2 | 6535 HA shank | short | UNI

CAD







N° article	178760 60°, short	178761 90°, short	178762 120°, short	178765 60°, short ALCRONA	178766 90°, short ALCRONA	178767 120°, short ALCRONA	A1 mm	B2 mm	B5 mm	C3 mm
3,00	●	●	●	●	●	●	3	6	50	4
4,00	●	●	○	●	●	○	4	8	50	5
5,00	●	●	○	●	●	●	5	10	50	6
6,00	●	●	●	●	●	○	6	12	60	8
8,00	●	●	●	●	●	●	8	16	70	10
10,00	●	●	●	●	●	○	10	18	70	12
12,00	●	●	●	●	●	●	12	20	70	12
16,00	●	●	●	○	●	○	16	26	80	16
20,00	○	●	○	○	○	○	20	32	100	20

Multi purpose end mill SC Universal HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
178770							
178771	⟨800	45-55	⟨650	⟨450	Titanium	Inconel	Aluminium
178772							
178773							
vc = m/min.							
178770							
178771	160-280	40-80	80-160	120-240	40-80	30-40	500-900
178772							
178773							

SC | coated | DIN 6527

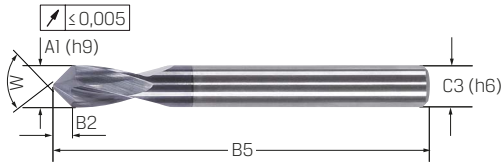
Teeth 2 | 1,75-2,5 × A1 | 60°

90° | 120° | 142°

20° Twist | Centre cut | 6535 HA shank

UNI

Design:
- cone angle 60/90/120/142°
- centre point
- multifunctional tool
- circumferential cutting
- smooth cutting edge
- no neck
- with smooth shank
- coated



N° article	178770 Power, 60°, coated	178771 Power, 90°, coated	178772 Power, 120°, coated	178773 Power, 142°, coated	A1 mm	B2 mm	B5 mm	C3 mm	f mm/U
4,00	○	○	○	○	4	11	51	4	0,010 - 0,040
6,00	○	○	○	○	6	13	66	6	0,015 - 0,060
8,00	○	○	○	○	8	19	79	8	0,020 - 0,080
10,00	○	○	○	○	10	22	89	10	0,030 - 0,100

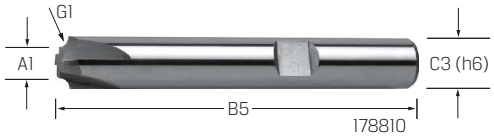
Quadrant cutter SC Universal PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²	
178810							
178815	⟨1200	⟨60	⟨850	⟨350	Titanium ⟨1200	Alu ⟩600	Brass ⟨600
vc = m/min.							
178810	30-90	55-75	20-60	40-80	20-40	100-450	85-190
178815	35-100	65-90	35-70	45-95	25-45	120-500	

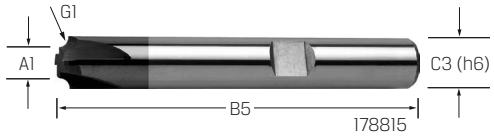
SC | Factory standard | Typ N

Teeth 4 | 6535 HB shank

UNI | CAD



coated



N° article	178810	178815 ALCRONA	G1 mm	A1 mm	B5 mm	C3 mm	fz mm/tooth
0,50	●	●	0,5	7	70	8	0,010-0,050
1,00	●	●	1	6	70	8	0,010-0,050
1,50	●	●	1,5	7	75	10	0,010-0,050
2,00	●	●	2	6	75	10	0,010-0,050
2,50	●	●	2,5	7	75	12	0,010-0,050
3,00	●	●	3	6	75	12	0,010-0,050
3,50	○	●	3,5	1	80	16	0,010-0,050
4,00	●	●	4	8	80	16	0,010-0,050
4,50	○	○	4,5	7	80	16	0,010-0,050
5,00	●	●	5	1	80	20	0,010-0,050
6,00	○	●	6	8	80	20	0,010-0,050

Deburring cutter SC Universal PREMUS

	P N/mm²	M N/mm²	K HB	S N/mm²	N N/mm²
178855	⟨1200	⟨850	⟨350	⟨1200	⟨600
vc = m/min.					
178855	50-90	30-50	50-80	30-40	300-350

SC | coated | Factory standard

Typ N | Teeth 3-4 | 6535 HA shank

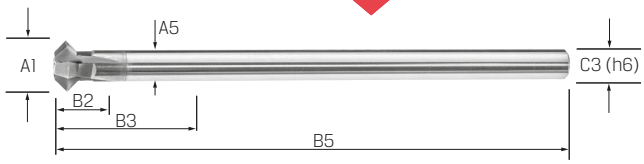
UNI | Vc

Design:
- angle 45°

Use:
For forward and backward deburring

Note:
Up to ØA1 6 mm tapered.
From ØA1 8 mm tip flattened.

NEW



N° article	178855 45°, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	F21	fz mm/tooth
2,00	●	2	1,2	1,4	8	75	6	3	0,004-0,010
2,00-S4	●	2	1,4	1	9	100	4	3	0,004-0,010
3,00	●	3	2	2	8	100	6	4	0,005-0,010
3,00-S4	●	3	2,2	1,5	12	75	4	4	0,005-0,010
4,00-S4	●	4	2,7	2	17	75	4	4	0,005-0,013
4,00	●	4	2	3	10	100	6	4	0,005-0,013
5,00	●	5	3,5	4	15	100	6	4	0,005-0,013
6,00	●	6	4	4	15	100	6	4	0,008-0,015
8,00	●	8	–	3,2	–	100	6	4	0,010-0,018
10,00	●	10	–	4,3	–	100	6	4	0,010-0,020
12,00	●	12	–	5	–	100	6	4	0,012-0,023
16,00	●	16	–	8	–	100	10	4	0,015-0,030

Quadrant cutter SC Universal HAIMER

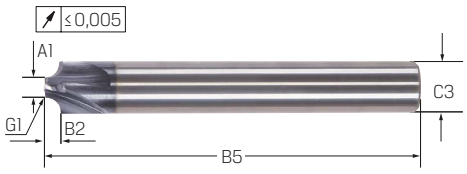
	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	N N/mm²
178820	⟨800	45-55	⟨650	⟨450	Titanium	Aluminium
vc = m/min.						
178820	160-280	40-80	80-160	120-240	40-80	500-900

SC | coated | DIN 6527

Teeth 4 | 0,75 × A1 | Centre cut

6535 HA shank | UNI | Vc

Design:
- for contour rounding
- 5° tangential release
- positive rake angle without profile displacement
- smooth cutting edge
- no neck
- smooth shank
- coated



N° article	178820 Power, radius, coated	G1 mm	A1 mm	B2 mm	B5 mm	C3 mm	fz mm/tooth
ER0,25	○	0,25	5	0,5	58	6	0,015-0,060
ER0,50	○	0,5	4,5	0,75	58	6	0,015-0,060
ER0,75	○	0,75	6	1	64	8	0,020-0,080
ER1,00	○	1	5	1,5	64	8	0,020-0,080
ER1,50	○	1,5	6	2	73	10	0,030-0,100
ER2,00	○	2	5	2,5	73	10	0,030-0,100

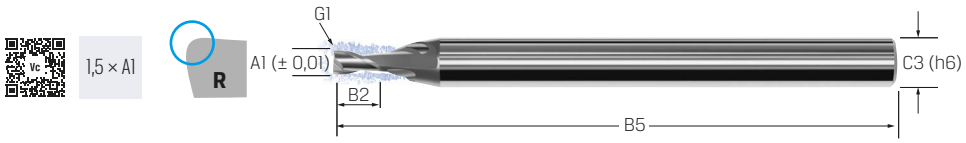
Torus cutter SC Universal with IC

CRAZYMILL Cool — MIKRON TOOL

Design:
- the only milling tool with diameter range from 0.3 to 6.0 mm with integrated IC
- specially developed carbide grade
- specially designed coating
- special cutting edge geometry
- cutting tips with corner radius

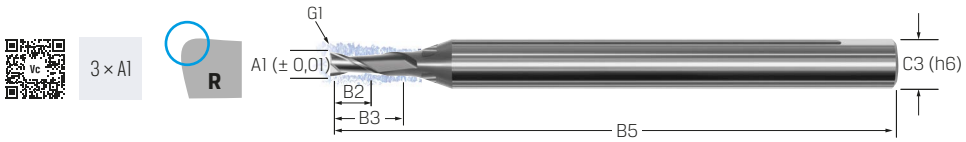
SC | coated | Factory standard | Teeth 2 | 30° Twist | 6535 HA shank | UNI

Use:
- universally applicable
- outstanding results in stainless steels, titanium, nickel
- a perfect surface finish is achieved in all materials due to the specific geometry, coating and cooling performance



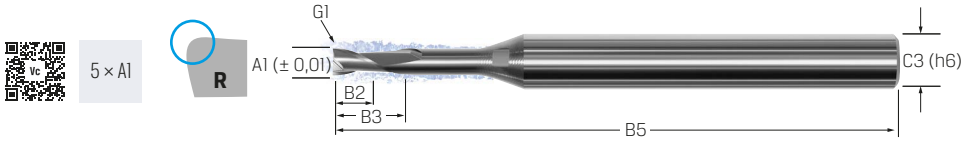
N° article	179010 1.5× A1, eXedur RIP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
0,30×0,05	○	0,3	0,45	38	3	0,05	0,003-0,008
0,40×0,05	●	0,4	0,6	38	3	0,05	0,003-0,008
0,50×0,05	○	0,5	0,75	38	3	0,05	0,004-0,018
0,50×0,10	○	0,5	0,75	38	3	0,1	0,004-0,018
0,60×0,05	○	0,6	0,9	38	3	0,05	0,004-0,018
0,60×0,10	○	0,6	0,9	38	3	0,1	0,004-0,018
0,80×0,05	●	0,8	1,2	38	3	0,05	0,004-0,018
0,80×0,10	●	0,8	1,2	38	3	0,1	0,004-0,018
1,00×0,10	○	1	1,5	40	4	0,1	0,007-0,022
1,00×0,20	●	1	1,5	40	4	0,2	0,007-0,022
1,20×0,10	●	1,2	1,8	40	4	0,1	0,007-0,022
1,20×0,20	○	1,2	1,8	40	4	0,2	0,007-0,022
1,50×0,10	○	1,5	2,25	40	4	0,1	0,009-0,028
1,50×0,30	●	1,5	2,25	40	4	0,3	0,009-0,028

N° article	179010 1.5× A1, eXedur RIP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
1,80×0,10	○	1,8	2,7	40	4	0,1	0,009-0,028
1,80×0,30	○	1,8	2,7	40	4	0,3	0,009-0,028
2,00×0,10	●	2	3	40	4	0,1	0,010-0,040
2,00×0,20	○	2	3	40	4	0,2	0,010-0,040
2,00×0,50	○	2	3	40	4	0,5	0,010-0,040
2,50×0,20	○	2,5	3,75	40	6	0,2	0,010-0,040
2,50×0,50	●	2,5	3,75	40	6	0,5	0,010-0,040
3,00×0,20	●	3	4,5	50	6	0,2	0,015-0,058
3,00×0,50	●	3	4,5	50	6	0,5	0,015-0,058
4,00×0,20	○	4	6	50	6	0,2	0,020-0,060
4,00×0,50	○	4	6	50	6	0,5	0,020-0,060
6,00×0,50	●	6	9	60	10	0,5	0,020-0,060
6,00×1,00	○	6	9	60	10	1	0,020-0,060



N° article	179012 3× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
0,30×0,05	○	0,3	0,45	0,9	38	3	0,05	0,003-0,008
0,40×0,05	○	0,4	0,6	1,2	38	3	0,05	0,003-0,008
0,50×0,05	○	0,5	0,75	1,5	38	3	0,05	0,004-0,018
0,50×0,10	○	0,5	0,75	1,5	38	3	0,1	0,004-0,018
0,60×0,05	○	0,6	0,9	1,8	38	3	0,05	0,004-0,018
0,60×0,10	○	0,6	0,9	1,8	38	3	0,1	0,004-0,018
0,80×0,05	○	0,8	1,2	2,4	38	3	0,05	0,004-0,018
0,80×0,10	○	0,8	1,2	2,4	38	3	0,1	0,004-0,018
1,00×0,10	○	1	1,5	3	40	4	0,1	0,007-0,022
1,00×0,20	○	1	1,5	3	40	4	0,2	0,007-0,022
1,20×0,10	○	1,2	1,8	3,6	40	4	0,1	0,007-0,022
1,20×0,20	○	1,2	1,8	3,6	40	4	0,2	0,007-0,022
1,50×0,10	○	1,5	2,25	4,5	40	4	0,1	0,009-0,028
1,50×0,30	○	1,5	2,25	4,5	40	4	0,3	0,009-0,028

N° article	179012 3× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
1,80×0,10	○	1,8	2,7	5,4	40	4	0,1	0,009-0,028
1,80×0,30	○	1,8	2,7	5,4	40	4	0,3	0,009-0,028
2,00×0,10	○	2	3	6	40	4	0,1	0,010-0,040
2,00×0,20	●	2	3	6	40	4	0,2	0,010-0,040
2,00×0,50	○	2	3	6	40	4	0,5	0,010-0,040
2,50×0,20	○	2,5	3,75	7,5	40	6	0,2	0,010-0,040
2,50×0,50	○	2,5	3,75	7,5	40	6	0,5	0,010-0,040
3,00×0,20	○	3	4,5	9	50	6	0,2	0,015-0,058
3,00×0,50	○	3	4,5	9	50	6	0,5	0,015-0,058
4,00×0,20	○	4	6	12	55	6	0,2	0,020-0,060
4,00×0,50	○	4	6	12	55	6	0,5	0,020-0,060
6,00×0,50	○	6	9	18	65	10	0,5	0,020-0,060
6,00×1,00	○	6	9	18	65	10	1	0,020-0,060



N° article	179014 5× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
0,30×0,05	○	0,3	0,45	1,5	38	3	0,05	0,003-0,008
0,40×0,05	○	0,4	0,6	2	38	3	0,05	0,003-0,008
0,50×0,05	○	0,5	0,75	2,5	38	3	0,05	0,004-0,018
0,50×0,10	○	0,5	0,75	2,5	38	3	0,1	0,004-0,018
0,60×0,05	○	0,6	0,9	3	38	3	0,05	0,004-0,018
0,60×0,10	○	0,6	0,9	3	38	3	0,1	0,004-0,018
0,80×0,05	●	0,8	1,2	4	38	3	0,05	0,004-0,018
0,80×0,10	○	0,8	1,2	4	38	3	0,1	0,004-0,018
1,00×0,10	○	1	1,5	5	40	4	0,1	0,007-0,022
1,00×0,20	○	1	1,5	5	40	4	0,2	0,007-0,022
1,20×0,10	○	1,2	1,8	6	40	4	0,1	0,007-0,022
1,20×0,20	○	1,2	1,8	6	40	4	0,2	0,007-0,022
1,50×0,10	●	1,5	2,25	7,5	40	4	0,1	0,009-0,028
1,50×0,30	○	1,5	2,25	7,5	40	4	0,3	0,009-0,028

N° article	179014 5× A1, eXedur RIP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
1,80×0,10	○	1,8	2,7	9	40	4	0,1	0,009-0,028
1,80×0,30	○	1,8	2,7	9	40	4	0,3	0,009-0,028
2,00×0,10	○	2	3	10	44	4	0,1	0,010-0,040
2,00×0,20	●	2	3	10	44	4	0,2	0,010-0,040
2,00×0,50	●	2	3	10	44	4	0,5	0,010-0,040
2,50×0,20	○	2,5	3,75	12,5	44	6	0,2	0,010-0,040
2,50×0,50	○	2,5	3,75	12,5	44	6	0,5	0,010-0,040
3,00×0,20	○	3	4,5	15	55	6	0,2	0,015-0,058
3,00×0,50	○	3	4,5	15	55	6	0,5	0,015-0,058
4,00×0,20	●	4	6	20	60	6	0,2	0,020-0,055
4,00×0,50	○	4	6	20	60	6	0,5	0,020-0,055
6,00×0,50	○	6	9	30	70	10	0,5	0,020-0,055
6,00×1,00	○	6	9	30	70	10	1	0,020-0,055

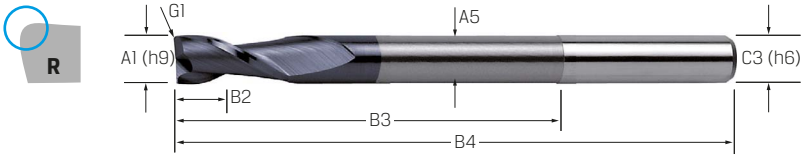
Torus cutter SC Steel, with relived shank

PREMUS

	P N/mm²	K HB	S N/mm²
175265	⟨1200	⟨300	⟨1200
vc = m/min.			
175265	40-75	60-90	25-65

SC | coated | Factory standard | Typ N | Teeth 2 | 30° Twist | Centre cut

6535 HA shank | overlong | shank relieved | P | CAD



N° article	175265 extra long ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
2,00	●	2	1,9	4	20	103	3	0,2	0,001-0,002
3,00	●	3	2,9	6	30	103	3	0,3	0,002-0,003
4,00	●	4	3,9	8	40	103	4	0,4	0,004-0,006
5,00	●	5	4,9	10	70	125	5	0,5	0,005-0,007
6,00	●	6	5,9	12	80	135	6	0,5	0,006-0,009
8,00	●	8	7,8	16	90	150	8	0,5	0,010-0,014

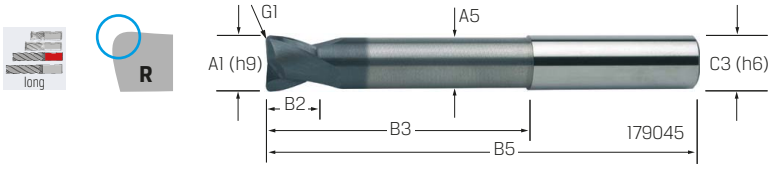
Torus cutter SC Aluminium, with relieved shank

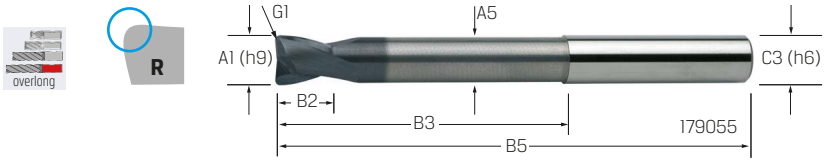
PREMUS

	N N/mm²	
179045	Alu ⟨600	Copper, brass
179055		
vc = m/min.		
179045	250-600	120-250
179055		

SC | coated | Factory standard | Typ W | Teeth 2 | 25° Twist | Centre cut

6535 HA shank | shank relieved | N | CAD





N° article	179045 long, TRIPLECUT	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
3,00×0,3	●	3	2,7	4	14	50	3	0,3	0,020-0,040
3,00×1,0	●	3	2,7	4	14	50	3	1	0,020-0,040
4,00×0,4	●	4	3,7	5	16	50	4	0,4	0,020-0,040
4,00×1,0	●	4	3,7	5	16	50	4	1	0,020-0,040
5,00×0,5	○	5	4,6	6	18	54	5	0,5	0,040-0,060
5,00×1,0	○	5	4,6	6	18	54	5	1	0,040-0,060
6,00×0,5	●	6	5,5	7	21	58	6	0,5	0,040-0,060
6,00×1,0	●	6	5,5	7	21	58	6	1	0,040-0,060
8,00×0,5	○	8	7,4	9	27	63	8	0,5	0,040-0,060
8,00×1,0	●	8	7,4	9	27	63	8	1	0,040-0,060
10,00×0,5	●	10	9,2	11	32	72	10	0,5	0,060-0,080
10,00×1,0	○	10	9,2	11	32	72	10	1	0,060-0,080
12,00×0,5	○	12	11	12	38	83	12	0,5	0,060-0,080
12,00×1,5	○	12	11	12	38	83	12	1,5	0,060-0,080
16,00×2,0	○	16	15	16	44	93	16	2	0,080-0,150

N° article	179055 extra long, TRIPLECUT	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
3,00×0,3	●	3	2,7	4	32	75	3	0,3	0,020-0,040
3,00×1,0	○	3	2,7	4	32	75	3	1	0,020-0,040
4,00×0,4	●	4	3,7	5	36	75	4	0,4	0,020-0,040
4,00×1,0	●	4	3,7	5	36	75	4	1	0,020-0,040
5,00×0,5	●	5	4,6	6	40	75	5	0,5	0,040-0,060
5,00×1,0	●	5	4,6	6	40	75	5	1	0,040-0,060
6,00×0,5	●	6	5,5	7	44	80	6	0,5	0,040-0,060
6,00×1,0	●	6	5,5	7	44	80	6	1	0,040-0,060
8,00×0,5	●	8	7,4	9	54	100	8	0,5	0,040-0,060
8,00×1,0	●	8	7,4	9	54	100	8	1	0,040-0,060
10,00×0,5	●	10	9,2	11	60	100	10	0,5	0,060-0,080
10,00×1,0	○	10	9,2	11	60	100	10	1	0,060-0,080
12,00×0,5	●	12	11	12	75	120	12	0,5	0,060-0,080
12,00×1,5	●	12	11	12	75	120	12	1,5	0,060-0,080
16,00×2,0	○	16	15	16	92	150	16	2	0,080-0,150

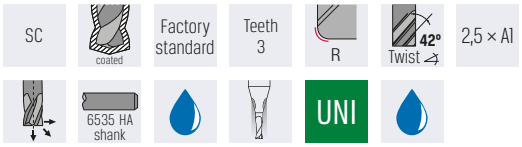
Micro milling cutter SC Universal with IC

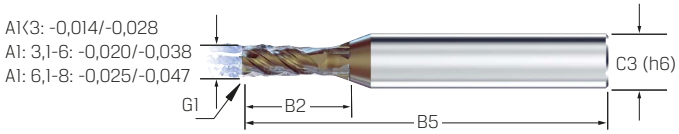
CRAZYMILL Cool by MIKRON TOOL — MIKRON TOOL

Design:
- 3-edged plunge cutter
- for milling depth max. 2.5× A1
- special cutting geometry enables reliable vertical plunge milling
- specially designed coating
- cutting tips with corner radius
- with integrated cooling in the shank

NEW

Use:
- developed for roughing and finishing of all materials
- ideally suited for stainless steels, titanium, super alloys and CrCo alloys
- specially developed for plunge milling, slot milling, milling with linear ramp as well as side milling





N° article	178473 CrazyMill Cool , P&S, toric, short, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
0100R010	●	1	2,5	40	4	0,1
0100R020	●	1	2,5	40	4	0,2
0110R010	●	1,1	2,75	40	4	0,1
0110R020	●	1,1	2,75	40	4	0,2
0120R010	●	1,2	3	40	4	0,1
0120R020	●	1,2	3	40	4	0,2
0130R010	●	1,3	3,25	40	4	0,1
0130R020	●	1,3	3,25	40	4	0,2
0140R010	●	1,4	3,5	40	4	0,1
0140R020	●	1,4	3,5	40	4	0,2
0150R010	●	1,5	3,75	40	4	0,1
0150R030	●	1,5	3,75	40	4	0,3
0160R010	●	1,6	4	40	4	0,1
0160R030	●	1,6	4	40	4	0,3
0170R010	●	1,7	4,25	40	4	0,1
0170R030	●	1,7	4,25	40	4	0,3
0180R010	●	1,8	4,5	40	4	0,1
0180R030	●	1,8	4,5	40	4	0,3
0190R010	●	1,9	4,75	40	4	0,1
0190R030	●	1,9	4,75	40	4	0,3
0200R010	●	2	5	40	4	0,1
0200R020	●	2	5	40	4	0,2
0200R050	●	2	5	40	4	0,5

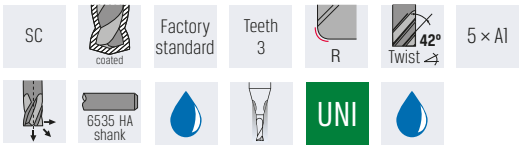
N° article	178473 CrazyMill Cool , P&S, toric, short, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
0210R020	●	2,1	5,25	40	4	0,2
0210R050	●	2,1	5,25	40	4	0,5
0220R020	●	2,2	5,5	40	4	0,2
0220R050	●	2,2	5,5	40	4	0,5
0230R020	●	2,3	5,75	40	4	0,2
0230R050	●	2,3	5,75	40	4	0,5
0240R020	●	2,4	6	40	4	0,2
0240R050	●	2,4	6	40	4	0,5
0250R020	●	2,5	6,25	50	6	0,2
0250R050	●	2,5	6,25	50	6	0,5
0260R020	●	2,6	6,5	50	6	0,2
0260R050	●	2,6	6,5	50	6	0,5
0270R020	●	2,7	6,75	50	6	0,2
0270R050	●	2,7	6,75	50	6	0,5
0280R020	●	2,8	7	50	6	0,2
0280R050	●	2,8	7	50	6	0,5
0290R020	●	2,9	7,25	50	6	0,2
0290R050	●	2,9	7,25	50	6	0,5
0300R020	●	3	7,5	50	6	0,2
0300R050	●	3	7,5	50	6	0,5
0310R020	●	3,1	7,75	50	6	0,2
0310R050	●	3,1	7,75	50	6	0,5
0330R020	●	3,3	8,25	50	6	0,2

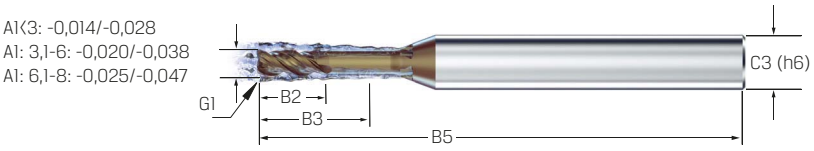
N° article	178473 CrazyMill Cool , P&S, toric, short, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
0330R050	●	3,3	8,25	50	6	0,5
0370R020	●	3,7	9,25	50	6	0,2
0370R050	●	3,7	9,25	50	6	0,5
0400R020	●	4	10	50	6	0,2
0400R050	●	4	10	50	6	0,5
0430R020	●	4,3	10,75	60	8	0,2
0430R050	●	4,3	10,75	60	8	0,5
0470R020	●	4,7	11,75	60	8	0,2
0470R050	●	4,7	11,75	60	8	0,5
0480R020	●	4,8	12	60	8	0,2
0480R050	●	4,8	12	60	8	0,5
0500R020	●	5	12,5	60	8	0,2
0500R050	●	5	12,5	60	8	0,5
0530R020	●	5,3	13,25	65	10	0,2
0530R050	●	5,3	13,25	65	10	0,5
0570R020	●	5,7	14,25	65	10	0,2
0570R050	●	5,7	14,25	65	10	0,5
0600R020	●	6	15	65	10	0,2
0600R050	●	6	15	65	10	0,5
0600R100	●	6	15	65	10	1
0800R020	●	8	20	70	12	0,2
0800R050	●	8	20	70	12	0,5
0800R150	●	8	20	70	12	1,5

Design:
- 3-edged plunge cutter
- for milling depth max. 5× A1
- special cutting geometry enables reliable vertical plunge milling
- specially designed coating
- cutting tips with corner radius
- with integrated cooling in the shank

NEW

Use:
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- ideally suited for stainless steels, titanium, super alloys and CrCo alloys
- specially developed for plunge milling, slot milling, milling with linear ramp as well as side milling





N° article	178475 CrazyMill Cool, P&S, toric, long eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm
0100R010	●	1	2	5	40	4	0,1
0100R020	●	1	2	5	40	4	0,2
0110R010	●	1,1	2,2	5,5	40	4	0,1
0110R020	●	1,1	2,2	5,5	40	4	0,2
0120R010	●	1,2	2,4	6	40	4	0,1
0120R020	●	1,2	2,4	6	40	4	0,2
0130R010	●	1,3	2,6	6,5	40	4	0,1
0130R020	●	1,3	2,6	6,5	40	4	0,2
0140R010	●	1,4	2,8	7	40	4	0,1
0140R020	●	1,4	2,8	7	40	4	0,2
0150R010	●	1,5	3	7,5	40	4	0,1
0150R030	●	1,5	3	7,5	40	4	0,3
0160R010	●	1,6	3,2	8	45	4	0,1
0160R030	●	1,6	3,2	8	45	4	0,3
0170R010	●	1,7	3,4	8,5	45	4	0,1
0170R030	●	1,7	3,4	8,5	45	4	0,3
0180R010	●	1,8	3,6	9	45	4	0,1
0180R030	●	1,8	3,6	9	45	4	0,3
0190R010	●	1,9	3,8	9,5	44	4	0,1
0190R030	●	1,9	3,8	9,5	44	4	0,3
0200R010	●	2	4	10	44	4	0,1
0200R020	●	2	4	10	44	4	0,2
0200R050	●	2	4	10	44	4	0,5

N° article	178475 CrazyMill Cool, P&S, toric, long eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm
0210R020	●	2,1	4,2	10,5	44	4	0,2
0210R050	●	2,1	4,2	10,5	44	4	0,5
0220R020	●	2,2	4,4	11	44	4	0,2
0220R050	●	2,2	4,4	11	44	4	0,5
0230R020	●	2,3	4,6	11,5	44	4	0,2
0230R050	●	2,3	4,6	11,5	44	4	0,5
0240R020	●	2,4	4,8	12	44	4	0,2
0240R050	●	2,4	4,8	12	44	4	0,5
0250R020	●	2,5	5	12,5	55	6	0,2
0250R050	●	2,5	5	12,5	55	6	0,5
0260R020	●	2,6	5,2	13	55	6	0,2
0260R050	●	2,6	5,2	13	55	6	0,5
0270R020	●	2,7	5,4	13,5	55	6	0,2
0270R050	●	2,7	5,4	13,5	55	6	0,5
0280R020	●	2,8	5,6	14	55	6	0,2
0280R050	●	2,8	5,6	14	55	6	0,5
0290R020	●	2,9	5,8	14,5	55	6	0,2
0290R050	●	2,9	5,8	14,5	55	6	0,5
0300R020	●	3	6	15	55	6	0,2
0300R050	●	3	6	15	55	6	0,5
0310R020	●	3,1	6,2	15,5	60	6	0,2
0310R050	●	3,1	6,2	15,5	60	6	0,5
0330R020	●	3,3	6,6	16,5	60	6	0,2

N° article	178475 CrazyMill Cool, P&S, toric, long eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm
0330R050	●	3,3	6,6	16,5	60	6	0,5
0370R020	●	3,7	7,4	18,5	60	6	0,2
0370R050	●	3,7	7,4	18,5	60	6	0,5
0400R020	●	4	8	20	60	6	0,2
0400R050	●	4	8	20	60	6	0,5
0430R020	●	4,3	8,6	21,5	70	8	0,2
0430R050	●	4,3	8,6	21,5	70	8	0,5
0470R020	●	4,7	9,4	23,5	70	8	0,2
0470R050	●	4,7	9,4	23,5	70	8	0,5
0480R020	●	4,8	9,6	24	70	8	0,2
0480R050	●	4,8	9,6	24	70	8	0,5
0500R020	●	5	10	25	70	8	0,2
0500R050	●	5	10	25	70	8	0,5
0530R020	●	5,3	10,6	26,5	70	10	0,2
0530R050	●	5,3	10,6	26,5	70	10	0,5
0570R020	●	5,7	11,4	28,5	70	10	0,2
0570R050	●	5,7	11,4	28,5	70	10	0,5
0600R020	●	6	12	30	70	10	0,2
0600R050	●	6	12	30	70	10	0,5
0600R100	●	6	12	30	70	10	1
0800R020	●	8	16	40	90	12	0,2
0800R050	●	8	16	40	90	12	0,5
0800R150	●	8	16	40	90	12	1,5

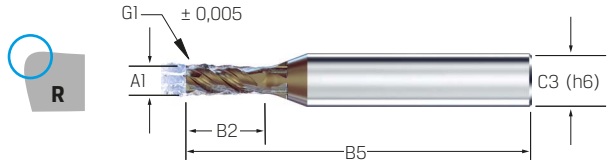
Micro milling cutter SC with integrated cooling

CRAZYMILL Cool — MIKRON TOOL

SC | coated | Factory standard | Teeth 4 | 42° Twist | Centre cut | 6535 HA shank | UNI

Design:
- 4 cutting edges
- for milling depths 2× A1, 3× A1, 4× A1, 5× A1
- special cutting edge geometry
- cutting tips with corner radius
- special chip breakers
- new high performance coating
- with integrated cooling in the shank

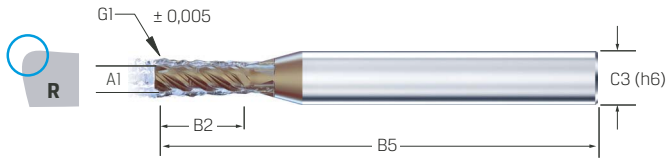
Use:
universally applicable, especially also for stainless steels, titanium superalloys and CrCo alloys.



2 × A1

N° article	179022 CrazyMill Cool, toric, type A-2x A1, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
1,00×0,10	○	1	2	40	4	0,1
1,00×0,20	○	1	2	40	4	0,2
1,20×0,10	○	1,2	2,4	40	4	0,1
1,20×0,20	○	1,2	2,4	40	4	0,2
1,50×0,10	○	1,5	3	40	4	0,1
1,50×0,30	○	1,5	3	40	4	0,3
1,80×0,10	○	1,8	3,6	40	4	0,1
1,80×0,30	○	1,8	3,6	40	4	0,3
2,00×0,10	○	2	4	40	4	0,1
2,00×0,20	○	2	4	40	4	0,2
2,00×0,50	○	2	4	40	4	0,5
2,50×0,20	○	2,5	5	50	6	0,2
2,50×0,50	○	2,5	5	50	6	0,5
3,00×0,20	○	3	6	50	6	0,2
3,00×0,50	○	3	6	50	6	0,5

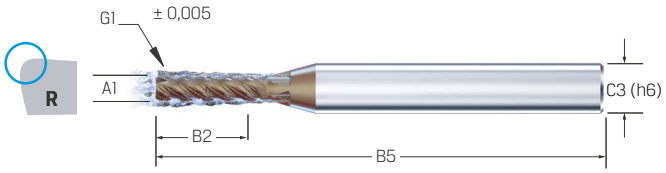
N° article	179022 CrazyMill Cool, toric, type A-2x A1, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
3,50×0,20	○	3,5	7	50	6	0,2
3,50×0,50	○	3,5	7	50	6	0,5
4,00×0,20	○	4	8	50	6	0,2
4,00×0,50	○	4	8	50	6	0,5
4,50×0,20	○	4,5	9	60	8	0,2
4,50×0,50	○	4,5	9	60	8	0,5
5,00×0,20	○	5	10	60	8	0,2
5,00×0,50	○	5	10	60	8	0,5
6,00×0,20	○	6	12	60	10	0,2
6,00×0,50	○	6	12	60	10	0,5
6,00×1,00	○	6	12	60	10	1
8,00×0,20	○	8	16	70	12	0,2
8,00×0,50	○	8	16	70	12	0,5
8,00×1,50	○	8	16	70	12	1,5



3 × A1

N° article	179023 CrazyMill Cool, toric, type M-3x A1, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
1,00×0,10	○	1	3	40	4	0,1
1,00×0,20	○	1	3	40	4	0,2
1,20×0,10	○	1,2	3,6	40	4	0,1
1,20×0,20	○	1,2	3,6	40	4	0,2
1,50×0,10	○	1,5	4,5	40	4	0,1
1,50×0,30	○	1,5	4,5	40	4	0,3
1,80×0,10	○	1,8	5,4	40	4	0,1
1,80×0,30	○	1,8	5,4	40	4	0,3
2,00×0,10	○	2	6	40	4	0,1
2,00×0,20	○	2	6	40	4	0,2
2,00×0,50	○	2	6	40	4	0,5
2,50×0,20	○	2,5	7,5	50	6	0,2
2,50×0,50	○	2,5	7,5	50	6	0,5
3,00×0,20	○	3	9	50	6	0,2
3,00×0,50	○	3	9	50	6	0,5

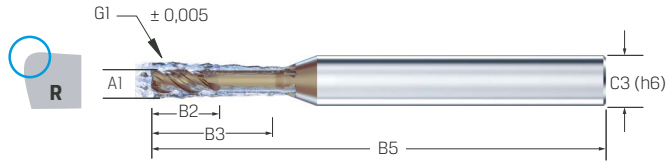
N° article	179023 CrazyMill Cool, toric, type M-3x A1, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
3,50×0,20	○	3,5	10,5	55	6	0,2
3,50×0,50	○	3,5	10,5	55	6	0,5
4,00×0,20	○	4	12	55	6	0,2
4,00×0,50	○	4	12	55	6	0,5
4,50×0,20	○	4,5	13,5	65	8	0,2
4,50×0,50	○	4,5	13,5	65	8	0,5
5,00×0,20	○	5	15	65	8	0,2
5,00×0,50	○	5	15	65	8	0,5
6,00×0,20	○	6	18	65	10	0,2
6,00×0,50	○	6	18	65	10	0,5
6,00×1,00	○	6	18	65	10	1
8,00×0,20	○	8	24	80	12	0,2
8,00×0,50	○	8	24	80	12	0,5
8,00×1,50	○	8	24	80	12	1,5



4 × A1

N° article	179024 CrazyMill Cool, toric, type N-4x A1, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
1,00×0,10	○	1	4	40	4	0,1
1,00×0,20	○	1	4	40	4	0,2
1,20×0,10	○	1,2	4,8	40	4	0,1
1,20×0,20	○	1,2	4,8	40	4	0,2
1,50×0,10	○	1,5	6	40	4	0,1
1,50×0,30	○	1,5	6	40	4	0,3
1,80×0,10	○	1,8	7,2	45	4	0,1
1,80×0,30	○	1,8	7,2	45	4	0,3
2,00×0,10	○	2	8	44	4	0,1
2,00×0,20	○	2	8	44	4	0,2
2,00×0,50	○	2	8	44	4	0,5
2,50×0,20	○	2,5	10	55	6	0,2
2,50×0,50	○	2,5	10	55	6	0,5
3,00×0,20	○	3	12	55	6	0,2
3,00×0,50	○	3	12	55	6	0,5

N° article	179024 CrazyMill Cool, toric, type N-4x A1, eXedur SNP	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm
3,50×0,20	○	3,5	14	60	6	0,2
3,50×0,50	○	3,5	14	60	6	0,5
4,00×0,20	○	4	16	60	6	0,2
4,00×0,50	○	4	16	60	6	0,5
4,50×0,20	○	4,5	18	70	8	0,2
4,50×0,50	○	4,5	18	70	8	0,5
5,00×0,20	○	5	20	70	8	0,2
5,00×0,50	○	5	20	70	8	0,5
6,00×0,20	○	6	24	70	10	0,2
6,00×0,50	○	6	24	70	10	0,5
6,00×1,00	○	6	24	70	10	1
8,00×0,20	○	8	32	90	12	0,2
8,00×0,50	○	8	32	90	12	0,5
8,00×1,50	○	8	32	90	12	1,5



5 × A1

N° article	179026 CrazyMill Cool, toric, type C-5x A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm
1,00×0,10	○	1	2	5	40	4	0,1
1,00×0,20	○	1	2	5	40	4	0,2
1,20×0,10	○	1,2	2,4	6	40	4	0,1
1,20×0,20	○	1,2	2,4	6	40	4	0,2
1,50×0,10	○	1,5	3	7,5	40	4	0,1
1,50×0,30	○	1,5	3	7,5	40	4	0,3
1,80×0,10	○	1,8	3,6	9	45	4	0,1
1,80×0,30	○	1,8	3,6	9	45	4	0,3
2,00×0,10	○	2	4	10	44	4	0,1
2,00×0,20	○	2	4	10	44	4	0,2
2,00×0,50	○	2	4	10	44	4	0,5
2,50×0,20	○	2,5	5	12,5	55	6	0,2
2,50×0,50	○	2,5	5	12,5	55	6	0,5
3,00×0,20	○	3	6	15	55	6	0,2
3,00×0,50	○	3	6	15	55	6	0,5

N° article	179026 CrazyMill Cool, toric, type C-5x A1, eXedur SNP	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm
3,50×0,20	○	3,5	7	17,5	60	6	0,2
3,50×0,50	○	3,5	7	17,5	60	6	0,5
4,00×0,20	○	4	8	20	60	6	0,2
4,00×0,50	○	4	8	20	60	6	0,5
4,50×0,20	○	4,5	9	22,5	70	8	0,2
4,50×0,50	○	4,5	9	22,5	70	8	0,5
5,00×0,20	○	5	10	25	70	8	0,2
5,00×0,50	○	5	10	25	70	8	0,5
6,00×0,20	○	6	12	30	70	10	0,2
6,00×0,50	○	6	12	30	70	10	0,5
6,00×1,00	○	6	12	30	70	10	1
8,00×0,20	○	8	16	40	90	12	0,2
8,00×0,50	○	8	16	40	90	12	0,5
8,00×1,50	○	8	16	40	90	12	1,5

Torus cutter SC Universal, with relieved shank

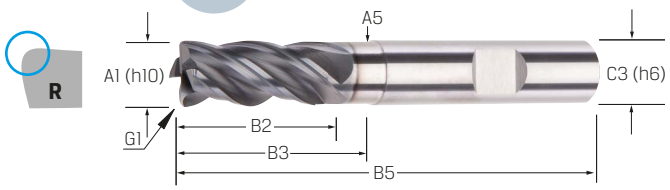
PREMUS GP

	P N/mm²	M N/mm²	K HB
179064	⟨1200	⟨850	⟨300
	vc = m/min.		
179064	110-280	80-110	110-200

SC · coated · Factory standard · Teeth 4 · λ° · Centre cut · 6535 HB shank · long · shank relieved · UNI · CAD · vc

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with corner radius
- coated

Use:
- universally applicable
- for roughing and finishing
- extremely high cutting performance
- very smooth running



N° article	179064 GP, long, corner radius, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
4,00×0,25	●	4	3,8	11	21	57	6	0,25	4	0,010-0,035
4,00×0,50	●	4	3,8	11	21	57	6	0,5	4	0,010-0,035
4,00×1,00	●	4	3,8	11	21	57	6	1	4	0,010-0,035
5,00×0,50	●	5	4,8	13	21	57	6	0,5	4	0,015-0,035
5,00×1,00	●	5	4,8	13	21	57	6	1	4	0,015-0,035
5,00×1,50	●	5	4,8	13	21	57	6	1,5	4	0,015-0,035
6,00×0,50	●	6	5,5	13	21	57	6	0,5	4	0,025-0,040
6,00×1,00	●	6	5,5	13	21	57	6	1	4	0,025-0,040
6,00×1,50	●	6	5,5	13	21	57	6	1,5	4	0,025-0,040
6,00×2,00	●	6	5,5	13	21	57	6	2	4	0,025-0,040
8,00×0,50	●	8	7,5	19	27	63	8	0,5	4	0,030-0,050
8,00×1,00	●	8	7,5	19	27	63	8	1	4	0,030-0,050
8,00×1,50	●	8	7,5	19	27	63	8	1,5	4	0,030-0,050
8,00×2,00	●	8	7,5	19	27	63	8	2	4	0,030-0,050
10,00×0,50	●	10	9,5	23	32	72	10	0,5	4	0,040-0,070
10,00×1,00	●	10	9,5	23	32	72	10	1	4	0,040-0,070
10,00×1,50	●	10	9,5	23	32	72	10	1,5	4	0,040-0,070
10,00×2,00	●	10	9,5	23	32	72	10	2	4	0,040-0,070
12,00×0,50	●	12	11,5	27	38	83	12	0,5	4	0,060-0,090

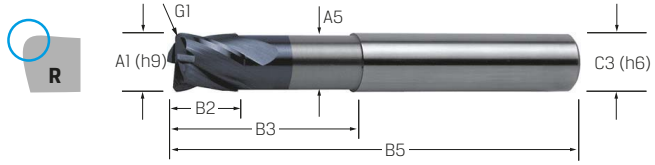
N° article	179064 GP, long, corner radius, ALCRONA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	F21	fz mm/tooth
12,00×1,00	●	12	11,5	27	38	83	12	1	4	0,060-0,090
12,00×1,50	●	12	11,5	27	38	83	12	1,5	4	0,060-0,090
12,00×2,00	●	12	11,5	27	38	83	12	2	4	0,060-0,090
14,00×1,00	●	14	13,5	27	38	83	14	1	4	0,080-0,110
14,00×2,00	●	14	13,5	27	38	83	14	2	4	0,080-0,110
16,00×1,00	●	16	15,5	33	44	92	16	1	4	0,090-0,130
16,00×1,50	●	16	15,5	33	44	92	16	1,5	4	0,090-0,130
16,00×2,00	●	16	15,5	33	44	92	16	2	4	0,090-0,130
16,00×2,50	●	16	15,5	33	44	92	16	2,5	4	0,090-0,130
18,00×1,50	●	18	17,5	33	44	92	18	1,5	4	0,120-0,150
18,00×2,50	●	18	17,5	33	44	92	18	2,5	4	0,120-0,150
20,00×1,00	●	20	19,5	39	54	104	20	1	4	0,130-0,170
20,00×1,50	●	20	19,5	39	54	104	20	1,5	4	0,130-0,170
20,00×2,00	●	20	19,5	39	54	104	20	2	4	0,130-0,170
20,00×2,50	●	20	19,5	39	54	104	20	2,5	4	0,130-0,170
20,00×3,00	●	20	19,5	39	54	104	20	3	4	0,130-0,170
20,00×4,00	●	20	19,5	39	54	104	20	4	4	0,130-0,170
20,00×5,00	●	20	19,5	39	54	104	20	5	4	0,130-0,170

Torus cutter SC Universal, type HSM, with relived shank

PREMUS

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	
179065	⟨1500	⟨60	⟨1000	⟨300	Titanium ⟨1250	Nickel ⟨1200
	vc = m/min.					
179065	200-250	80-180	200 - 230	300 - 350	70-120	50-70

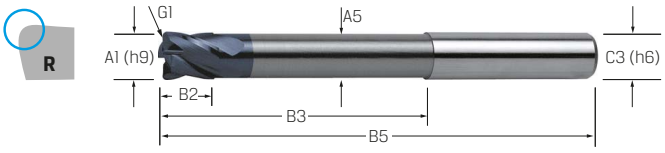
SC · coated · Factory standard · Teeth 4 · 30° Twist · Centre cut · 6535 HA shank · long · shank relieved · HSM · UNI · CAD



N° article	179065 long, X-CEED	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
2,00×0,1	●	2	1,8	4	12	40	2	0,1	0,004-0,030
2,00×0,3	●	2	1,8	4	12	40	2	0,3	0,004-0,030
3,00×0,3	●	3	2,7	4	14	50	3	0,3	0,004-0,030
3,00×1,0	●	3	2,7	4	14	50	3	1	0,004-0,030
4,00×0,4	●	4	3,7	5	16	50	4	0,4	0,004-0,030
4,00×1,0	●	4	3,7	5	16	50	4	1	0,004-0,030
5,00×0,5	●	5	4,6	6	18	54	5	0,5	0,020-0,100
5,00×1,0	●	5	4,6	6	18	54	5	1	0,020-0,100
6,00×0,5	●	6	5,5	7	21	57	6	0,5	0,020-0,100
6,00×1,0	●	6	5,5	7	21	57	6	1	0,020-0,100
6,00×1,5	●	6	5,5	7	21	57	6	1,5	0,020-0,100
8,00×0,5	●	8	7,4	9	27	63	8	0,5	0,020-0,100
8,00×1,0	●	8	7,4	9	27	63	8	1	0,020-0,100
8,00×1,5	●	8	7,4	9	27	63	8	1,5	0,020-0,100
8,00×2,0	●	8	7,4	9	27	63	8	2	0,020-0,100
10,00×0,5	●	10	9,2	11	32	72	10	0,5	0,035-0,120
10,00×1,0	●	10	9,2	11	32	72	10	1	0,035-0,120
10,00×1,5	○	10	9,2	11	32	72	10	1,5	0,035-0,120
10,00×2,0	●	10	9,2	11	32	72	10	2	0,035-0,120
12,00×0,5	●	12	11	12	38	83	12	0,5	0,035-0,120
12,00×1,0	●	12	11	12	38	83	12	1	0,035-0,120
12,00×1,5	●	12	11	12	38	83	12	1,5	0,035-0,120
12,00×2,0	●	12	11	12	38	83	12	2	0,035-0,120
16,00×1,0	○	16	15	16	44	92	16	1	0,050-0,150
16,00×2,0	●	16	15	16	44	92	16	2	0,050-0,150
16,00×3,0	○	16	15	16	44	92	16	3	0,050-0,150

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²	
179075	⟨1500	⟨60	⟨1000	⟨300	Titanium ⟨1250	Nickel ⟨ 1200
	vc = m/min.					
179075	200-250	80-180	200 - 230	300 - 350	70-120	50-70

SC · coated · Factory standard · Teeth 4 · 30° Twist · Centre cut · 6535 HA shank · overlong · shank relieved · HSM · UNI · CAD

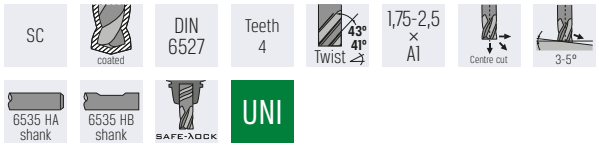


N° article	179075 extra long, X-CEED	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
2,00×0,1	●	2	1,8	4	20	60	2	0,1	0,004-0,030
2,00×0,3	●	2	1,8	4	20	60	2	0,3	0,004-0,030
3,00×0,3	●	3	2,7	4	32	75	3	0,3	0,004-0,030
3,00×1,0	●	3	2,7	4	32	75	3	1	0,004-0,030
4,00×0,4	●	4	3,7	5	36	75	4	0,4	0,004-0,030
4,00×1,0	●	4	3,7	5	36	75	4	1	0,004-0,030
5,00×0,5	●	5	4,6	6	40	75	5	0,5	0,020-0,100
5,00×1,0	●	5	4,6	6	40	75	5	1	0,020-0,100
6,00×0,5	●	6	5,5	7	44	80	6	0,5	0,020-0,100
6,00×1,0	●	6	5,5	7	44	80	6	1	0,020-0,100
6,00×1,5	●	6	5,5	7	44	80	6	1,5	0,020-0,100
8,00×0,5	●	8	7,4	9	54	100	8	0,5	0,020-0,100
8,00×1,0	●	8	7,4	9	54	100	8	1	0,020-0,100
8,00×1,5	○	8	7,4	9	54	100	8	1,5	0,020-0,100
8,00×2,0	●	8	7,4	9	54	100	8	2	0,020-0,100
10,00×0,5	●	10	9,2	11	60	100	10	0,5	0,035-0,120
10,00×1,0	●	10	9,2	11	60	100	10	1	0,035-0,120
10,00×1,5	●	10	9,2	11	60	100	10	1,5	0,035-0,120
10,00×2,0	●	10	9,2	11	60	100	10	2	0,035-0,120
12,00×0,5	●	12	11	12	75	120	12	0,5	0,035-0,120
12,00×1,0	●	12	11	12	75	120	12	1	0,035-0,120
12,00×1,5	○	12	11	12	75	120	12	1,5	0,035-0,120
12,00×2,0	●	12	11	12	75	120	12	2	0,035-0,120
16,00×1,0	●	16	15	16	92	150	16	1	0,050-0,150
16,00×2,0	●	16	15	16	92	150	16	2	0,050-0,150
16,00×3,0	○	16	15	16	92	150	16	3	0,050-0,150

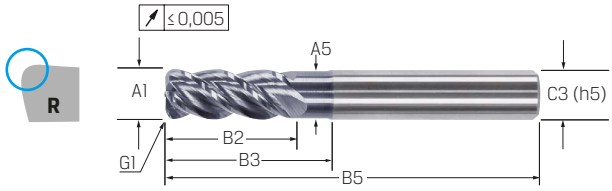
Torus cutter SC Universal, with relieved shank

HAIMER

	P N/mm²	H HRC	M N/mm²	K HB	S N/mm²		N N/mm²
179050							
179051	‹800	45 - 55	‹650	‹450	Titanium	Inconel	Aluminium
179052							
vc = m/min.							
179050							
179051	170-270	40-80	55 - 65	110 - 220	60-80	30-40	120-240
179052							



Design:
- neck for higher cutting depth
- centre cutting
- unequal cutting edge pitch
- polished flute and relief surfaces
- smooth cutting edge
- no neck
- coated



N° article	179050 Power, HA, corner radius, coated	179051 Power, HB, corner radius, coated	179052 Power, Safe-Lock, corner radius, coated	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
2,00×0,2	○	○	○	2	1,9	7	9	58	6	0,2	0,002-0,012
3,00×0,3	○	○	○	3	2,9	8	10	58	6	0,3	0,003-0,018
4,00×0,3	○	○	○	4	3,8	11	15	58	6	0,3	0,004-0,024
4,00×0,4	○	○	○	4	3,8	11	15	58	6	0,4	0,004-0,024
4,00×0,5	○	○	○	4	3,8	11	15	58	6	0,5	0,004-0,024
5,00×0,3	○	○	○	5	4,8	13	18	58	6	0,3	0,005-0,030
5,00×0,5	○	○	○	5	4,8	13	18	58	6	0,5	0,005-0,030
5,00×1,0	○	○	○	5	4,8	13	18	58	6	1	0,005-0,030
6,00×0,3	○	○	○	6	5,7	13	20	58	6	0,3	0,006-0,036
6,00×0,5	○	○	○	6	5,7	13	20	58	6	0,5	0,006-0,036
6,00×1,0	○	○	○	6	5,7	13	20	58	6	1	0,006-0,036
6,00×1,5	○	○	○	6	5,7	13	20	58	6	1,5	0,006-0,036
8,00×0,3	○	○	○	8	7,6	19	26	64	8	0,3	0,008-0,048
8,00×0,5	○	○	○	8	7,6	19	26	64	8	0,5	0,008-0,048
8,00×1,0	○	○	○	8	7,6	19	26	64	8	1	0,008-0,048
8,00×1,5	○	○	○	8	7,6	19	26	64	8	1,5	0,008-0,048
8,00×2,0	○	○	○	8	7,6	19	26	64	8	2	0,008-0,048
10,00×0,3	○	○	○	10	9,5	22	30,5	73	10	0,3	0,010-0,060
10,00×0,5	○	○	○	10	9,5	22	30,5	73	10	0,5	0,010-0,060
10,00×1,0	○	○	○	10	9,5	22	30,5	73	10	1	0,010-0,060
10,00×1,5	○	○	○	10	9,5	22	30,5	73	10	1,5	0,010-0,060
10,00×2,0	○	○	○	10	9,5	22	30,5	73	10	2	0,010-0,060
12,00×0,3	○	○	○	12	11,4	26	36,5	84	12	0,3	0,012-0,072
12,00×0,5	○	○	○	12	11,4	26	36,5	84	12	0,5	0,012-0,072
12,00×1,0	○	○	○	12	11,4	26	36,5	84	12	1	0,012-0,072
12,00×1,5	○	○	○	12	11,4	26	36,5	84	12	1,5	0,012-0,072
12,00×2,0	○	○	○	12	11,4	26	36,5	84	12	2	0,012-0,072
12,00×3,0	○	○	○	12	11,4	26	36,5	84	12	3	0,012-0,072
12,00×4,0	○	○	○	12	11,4	26	36,5	84	12	4	0,012-0,072
14,00×0,5	○	○	○	14	13,3	26	36,5	84	14	0,5	0,014-0,084
14,00×1,0	○	○	○	14	13,3	26	36,5	84	14	1	0,014-0,084
14,00×2,0	○	○	○	14	13,3	26	36,5	84	14	2	0,014-0,084
16,00×0,3	○	○	○	16	15,2	32	42,5	93	16	0,3	0,016-0,096
16,00×0,5	○	○	○	16	15,2	32	42,5	93	16	0,5	0,016-0,096
16,00×0,8	○	○	○	16	15,2	32	42,5	93	16	0,8	0,016-0,096
16,00×1,0	○	○	○	16	15,2	32	42,5	93	16	1	0,016-0,096
16,00×1,5	○	○	○	16	15,2	32	42,5	93	16	1,5	0,016-0,096
16,00×2,0	○	○	○	16	15,2	32	42,5	93	16	2	0,016-0,096
16,00×3,0	○	○	○	16	15,2	32	42,5	93	16	3	0,016-0,096
16,00×4,0	○	○	○	16	15,2	32	42,5	93	16	4	0,016-0,096
18,00×0,5	○	○	○	18	17,1	32	42,5	93	18	0,5	0,018-0,108
18,00×1,0	○	○	○	18	17,1	32	42,5	93	18	1	0,018-0,108
18,00×2,0	○	○	○	18	17,1	32	42,5	93	18	2	0,018-0,108
20,00×0,3	○	○	○	20	–	38	52	105	20	0,3	0,020-0,120
20,00×0,5	○	○	○	20	–	38	52	105	20	0,5	0,020-0,120
20,00×0,8	○	○	○	20	–	38	52	105	20	0,8	0,020-0,120
20,00×1,0	○	○	○	20	–	38	52	105	20	1	0,020-0,120
20,00×1,5	○	○	○	20	–	38	52	105	20	1,5	0,020-0,120
20,00×2,0	○	○	○	20	–	38	52	105	20	2	0,020-0,120
20,00×3,0	○	○	○	20	–	38	52	105	20	3	0,020-0,120
20,00×4,0	○	○	○	20	–	38	52	105	20	4	0,020-0,120

Torus cutter SC INOX, with relieved shank

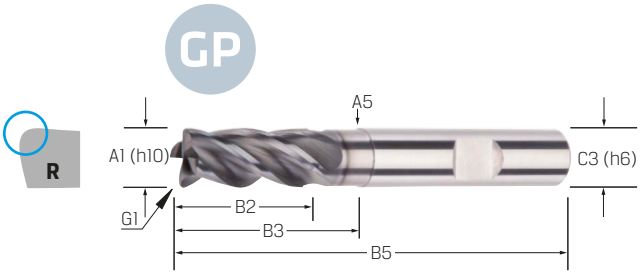
PREMUS GP

	M N/mm²	S N/mm²
179069	⟨850	Titanium, titanium alloys
vc = m/min.		
179069	65 - 120	60-70

SC · coated · Factory standard · Teeth 4 · λ° · Centre cut · 6535 HB shank · long · shank relieved · M · S · CAD · Vc

Design:
- unequal twisted
- long version
- relieved shank
- cutting tips with corner radius
- coated

Use:
- for INOX and titanium materials
- for roughing and finishing
- extremely high cutting performance
- very smooth running
- very soft cut



N° article	179069 GP, long, corner radius, ALNOVA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
4,00×0,5	●	4	3,8	11	21	57	6	0,5	0,014-0,020
4,00×1,0	●	4	3,8	11	21	57	6	1	0,014-0,020
5,00×0,5	●	5	4,8	13	21	57	6	0,5	0,018-0,024
5,00×1,0	●	5	4,8	13	21	57	6	1	0,018-0,024
6,00×0,5	●	6	5,5	13	21	57	6	0,5	0,020-0,028
6,00×1,0	●	6	5,5	13	21	57	6	1	0,020-0,028
6,00×2,0	●	6	5,5	13	21	57	6	2	0,020-0,028
8,00×0,5	●	8	7,5	19	27	63	8	0,5	0,030-0,038
8,00×1,0	●	8	7,5	19	27	63	8	1	0,030-0,038
8,00×2,0	●	8	7,5	19	27	63	8	2	0,030-0,038
10,00×0,5	●	10	9,5	23	32	72	10	0,5	0,040-0,050

N° article	179069 GP, long, corner radius, ALNOVA	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	fz mm/tooth
10,00×1,0	●	10	9,5	23	32	72	10	1	0,040-0,050
10,00×2,0	●	10	9,5	23	32	72	10	2	0,040-0,050
12,00×0,5	●	12	11,5	27	38	83	12	0,5	0,045-0,055
12,00×1,0	●	12	11,5	27	38	83	12	1	0,045-0,055
12,00×2,0	●	12	11,5	27	38	83	12	2	0,045-0,055
16,00×1,0	●	16	15,5	33	44	92	16	1	0,070-0,080
16,00×2,0	●	16	15,5	33	44	92	16	2	0,070-0,080
20,00×1,0	●	20	19,5	39	54	104	20	1	0,070-0,090
20,00×2,0	●	20	19,5	39	54	104	20	2	0,070-0,090
20,00×3,0	●	20	19,5	39	54	104	20	3	0,070-0,090
20,00×5,0	●	20	19,5	39	54	104	20	5	0,070-0,090

Torus cutter SC HRC

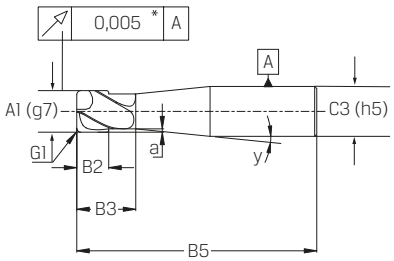
PREMUS

	H HRC
179070	⟨62
vc = m/min.	
179070	200-400

SC · coated · Factory standard · Teeth 4 · 30° Twist · Centre cut · 6535 HA shank · long · overlong · HPM · HSM · H · Vc

Tolerance

Diameter range	Edge-Ø Ø A1 (g7)	Shank-Ø Ø C3 (h5)
3 ⟨ A1 ≤ 6	-0.004 -0.016	0 -0.005
6 ⟨ A1 ≤ 10	-0.005 -0.020	0 -0.006
10 ⟨ A1 ≤ 18	-0.006 -0.024	0 -0.008





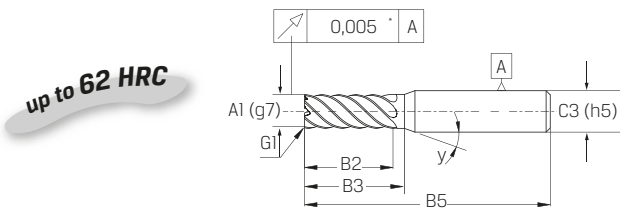
N° article	179070 TiAlN	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	a mm	y (°)	fz mm/tooth
2,00×6×0,15×45	●	2	3	6	45	4	0,15	0.1	7	0,030-0,075
4,00×18×0,3×60	●	4	6	18	60	6	0,3	0.1	6	0,050-0,100
6,00×25×1,0×65	●	6	6	25	65	6	1	0.2	–	0,065-0,125
6,00×35×0,5×79	●	6	6	35	79	6	0,5	0.2	–	0,065-0,125
8,00×25×0,5×65	●	8	8	25	65	8	0,5	0.3	–	0,080-0,130
8,00×25×0,5×79	●	8	8	25	79	8	0,5	0.3	–	0,080-0,130
10,00×35×0,5×79	●	10	10	35	79	10	0,5	0.3	–	0,085-0,135
10,00×35×2,0×79	●	10	10	35	79	10	2	0.3	–	0,085-0,135
10,00×55×1,0×100	●	10	10	55	100	10	1	0.3	–	0,085-0,135

	H HRC
179086	⟨62
vc = m/min.	
179086	100-200

SC · coated · Factory standard · Teeth 6 · 45° Twist · 6535 HA shank · long · HPM · HSM · H · Vc

Tolerance

Diameter range	Edge-Ø Ø A1 (g7)	Shank-Ø Ø C3 (h5)
A1 ≤ 3	-0.002 -0.012	0 -0.004
3 ⟨ A1 ≤ 6	-0.004 -0.016	0 -0.005
6 ⟨ A1 ≤ 10	-0.005 -0.020	0 -0.006
10 ⟨ A1 ≤ 18	-0.006 -0.024	0 -0.008
18 ⟨ A1 ≤ 30	-0.007 -0.028	0 -0.009





N° article	179086 long, TiAlN	A1 mm	B2 mm	B5 mm	C3 mm	G1 mm	y (°)	fz mm/tooth
4,00×0,3	○	4	10	65	6	0,3	15	0,030-0,045
6,00×0,5	●	6	20	65	6	0,5	–	0,045-0,065
8,00×0,5	●	8	20	65	8	0,5	–	0,060-0,080
12,00×0,5	●	12	25	78	12	0,5	–	0,085-0,110

Torus cutter SC HRC

PREMUS

SC | coated | Factory standard | Teeth 6 | 45° Twist | 6535 HA shank | long

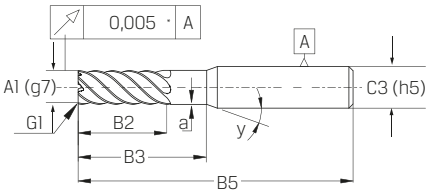
HPM | HSM | H | Vc

	H HRC
179088	〈70
vc = m/min.	
179088	80-150

Toleranz

Durchmesser-bereich	Schneiden-Ø ØA1 (g7)	Schaft-Ø ØC3 (h5)
A1 ≤ 3	-0,002 -0,012	0 -0,004
3 〈 A1 ≤ 6	-0,004 -0,016	0 -0,005
6 〈 A1 ≤ 10	-0,005 -0,020	0 -0,006
10 〈 A1 ≤ 18	-0,006 -0,024	0 -0,008
18 〈 A1 ≤ 30	-0,007 -0,028	0 -0,009

bis 70 HRC





N° article	179088 long, TiAlN	A1 mm	B2 mm	B3 mm	B5 mm	C3 mm	G1 mm	a mm	y (°)	fz mm/tooth
3,00×0,3	○	3	8	15	65	6	0,3	0.05	15	0,020-0,035
4,00×0,3	●	4	10	16	65	6	0,3	0.1	15	0,030-0,045
5,00×0,5	○	5	12	18	65	6	0,5	0.15	15	0,030-0,055
6,00×0,5	●	6	14	20	65	6	0,5	0.2	–	0,045-0,065
8,00×0,5	●	8	18	25	70	8	0,5	0.3	–	0,060-0,080
10,00×0,5	●	10	22	30	79	10	0,5	0.3	–	0,070-0,095
12,00×0,5	●	12	26	35	79	12	0,5	0.3	–	0,085-0,110

End mill SC GRP / CRP

PREMUS

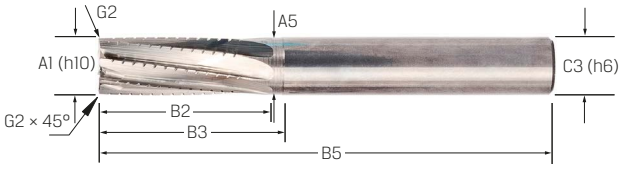
SC | Factory standard | coated | Teeth 8 | 6535 HA shank | Plastics

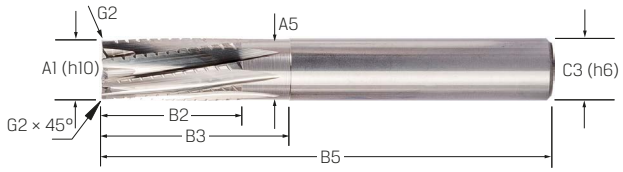
	Plastics N/mm²
179503	GRP / CRP
179505	
vc = m/min.	
179503	90 - 160
179505	

Use:
179503:
Pulling cut, to avoid delamination at the bottom edge of the workpiece

179505:
Sliding cut, to avoid delamination at the top of the workpiece.

NEW





Vc | Vc

N° article	179503 drawing	179505 pushing	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
4,00	○	○	4	3,9	11	11	57	6	0,08	8	0,012 - 0,021
5,00	○	○	5	4,9	13	13	57	6	0,1	8	0,012 - 0,021
6,00	○	○	6	5,8	21	27	65	6	0,12	8	0,015 - 0,026
8,00	○	○	8	7,8	22	32	70	8	0,16	8	0,017 - 0,031
10,00	○	○	10	9,7	22	30	72	10	0,2	8	0,019 - 0,035
12,00	○	○	12	11,6	26	36	83	12	0,24	8	0,021 - 0,038
16,00	○	○	16	15,5	32	42	92	16	0,32	8	0,023 - 0,042
20,00	○	○	20	19,4	38	52	104	20	0,4	8	0,024 - 0,043

End mill SC GRP / CRP

PREMUS

	Plastics N/mm²
179553	GRP / CRP
179555	
vc = m/min.	
179553	100 - 190
179555	

SC | coated | DIAMOND | Factory standard | Teeth 8 | 6535 HA shank

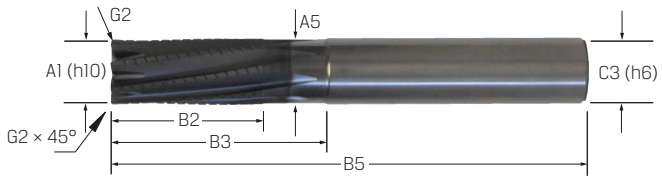
Plastics

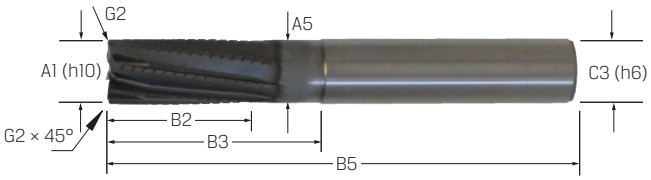
NEW

Design:
Diamond coating for optimum service life and performance

Use:
179553:
Pulling cut, to avoid delamination at the bottom edge of the workpiece

179555:
Pushing cut, to prevent delamination at the top edge of the workpiece.





N° article	179553 drawing	179555 pushing	A1 mm	A5 mm	B2 mm	B3 mm	B5 mm	C3 mm	G2 mm	F21	fz mm/tooth
4,00	○	○	4	3,9	11	11	57	6	0,08	8	0,012 - 0,021
5,00	○	○	5	4,9	13	13	57	6	0,1	8	0,012 - 0,021
6,00	○	○	6	5,8	21	27	65	6	0,12	8	0,015 - 0,026
8,00	○	○	8	7,8	22	32	70	8	0,16	8	0,017 - 0,031
10,00	○	○	10	9,7	22	30	72	10	0,2	8	0,019 - 0,035
12,00	○	○	12	11,6	26	36	83	12	0,24	8	0,021 - 0,038
16,00	○	○	16	15,5	32	42	92	16	0,32	8	0,023 - 0,042
20,00	○	○	20	19,4	38	52	104	20	0,4	8	0,024 - 0,043

Indexable insert milling countersink Continuously adjustable from 0° to 90°

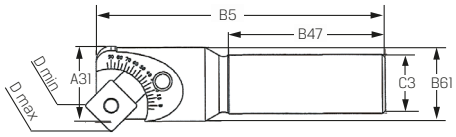
Design:
Cylinder shank with driving flat to DIN 1835 B / h6

Carbide WPL | 1835 B shank

Use:
Universal indexable insert spot facing milling cutter for chamfering, deburring and countersinking, employable forward and backward

Note:
Screw chucks or screw extensions see 241080

Fitting indexable inserts for SPMT 09T308 or 120408:
P25: WL4040
Alu H13A



178805

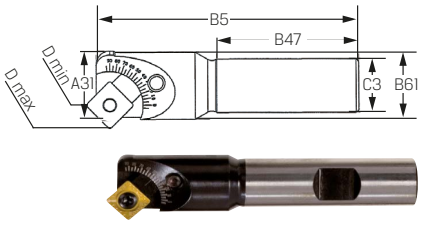
Angle	D max.	D min.
15	28.4	7.2
30	30.4	11.4
45	31.4	15.8
60	31.2	20.0
75	30.0	24.4



N° article	178805 for SPMT 12	C3 mm	A31 mm	B5 mm	B47 mm	B61 mm
20,00	●	20	26	98	53	25

178800

Angle	D max.	D min.
15	21.0	6.0
30	22.0	8.5
45	23.0	12.0
60	23.2	15.2
75	22.2	18.0



N° article	178800 for SPMT 09T	C3 mm	A31 mm	B5 mm	B47 mm	B61 mm
16,00	●	16	19,5	86,2	49	18,75

Screws

PREMUS

Carbide WPL

N° article	178802 Screws	178807 Screws	Design
M3,5	○	–	Clamping screw TORX M 3.5 for SPMT 09T308 16.00
M4	–	○	Clamping screw TORX M4 for SPMT 09T308 20.00
M5	○	–	Tensioning screw Allen key M5 for milling countersink 16.00
M6	–	○	Tensioning screw Allen key M6 for milling countersink 20.00

PREMUS®
HIGH PERFORMANCE BY PRECITOOL

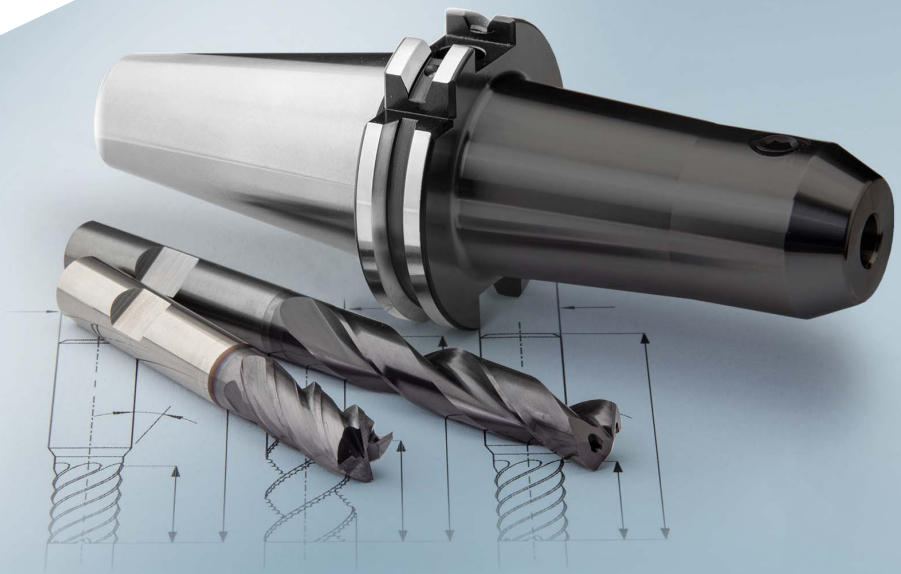
HIGH PERFORMANCE



- high-performance
- outstanding price/performance ratio
- innovative
- best-in-class

PRETEC®
BY PRECITOOL

DAILY BREAD



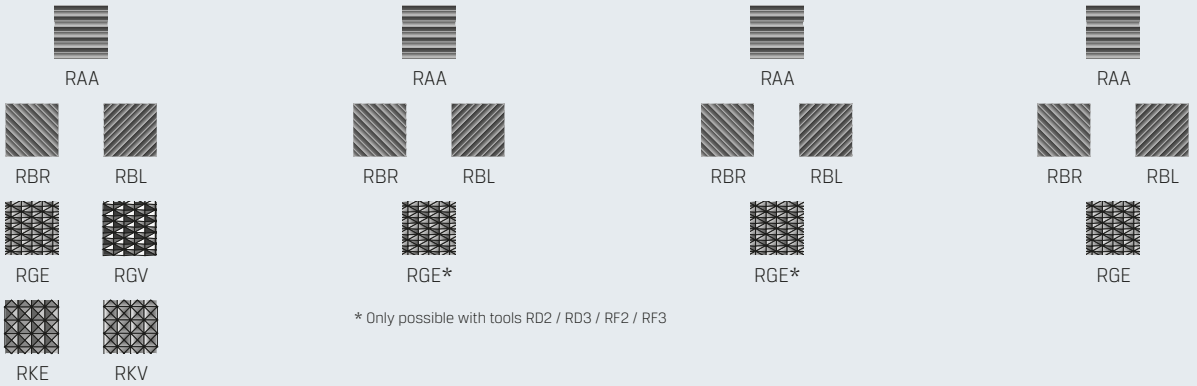
- good performance
- reasonable price
- sophisticated & proven

Knurling Methods

Product Information

The knurl technique distinguishes two different processes: knurl forming and knurl milling. Both procedures have their special fields of application, possible applications and limitations. While an advantage of knurl forming is, for example, the simpler application, knurl milling is always the preferred method if the surface quality does not allow any compromises. A fundamental distinguishing feature of the methods is the connection between the possible machining direction and the producibility of the knurl profiles on the workpiece:

Possible knurl forms



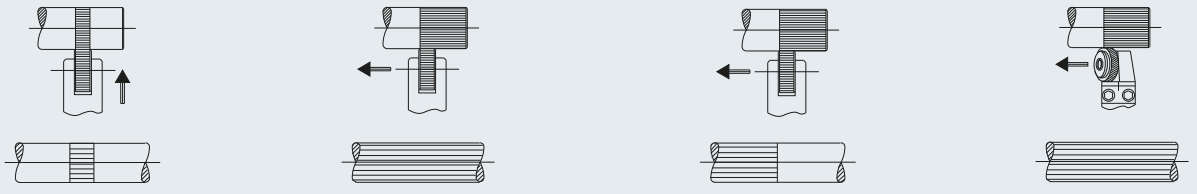
* Only possible with tools RD2 / RD3 / RF2 / RF3

Puncture knurling
radial
processing direction

Longitudinal knurling
axial
processing direction

Puncture and longitudinal knurling
radial and axial
processing direction

Longitudinal knurling
axial
processing direction



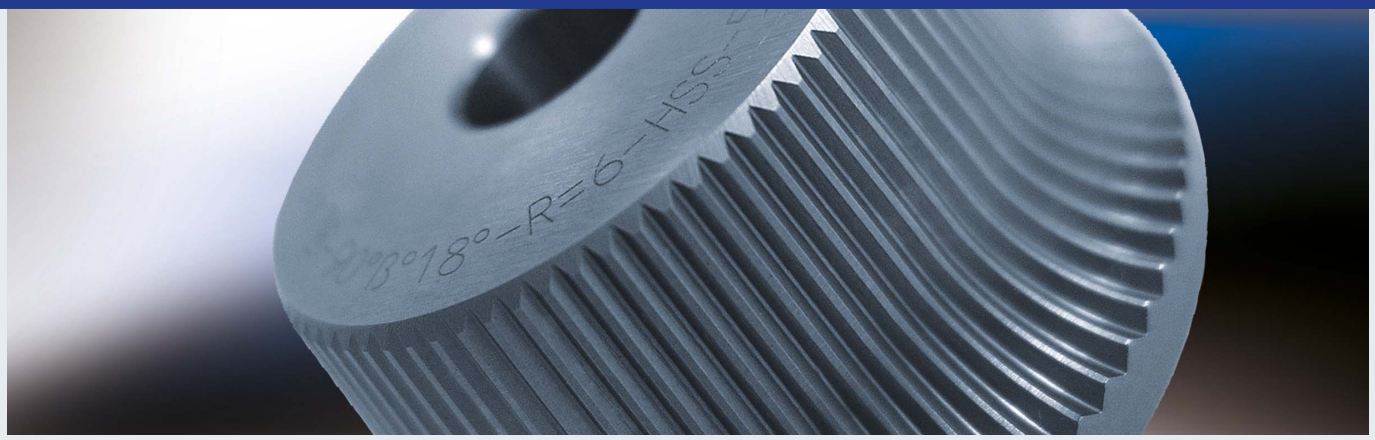
Knurl forming
chipless
treatment

Knurl milling
cutting
treatment

Knurling methods

Product Performance

Product Information



The zeus®-product programme of knurl wheels offers a great variety of knurl forming and milling applications. In addition to product standard, special profiles and customer-specific knurling wheels are among our product services. Utmost precision and the use of tool-life increasing materials are crucial product features of the brand zeus® Premium.

zeus® PREMIUM powder metal for increased service life

As your tool supplier for premium products, we rely on tooling materials that ensure the highest service life even when processing difficult-to-cut materials. In the zeus® standard programme we offer all knurl wheels made of the base material powder metal. This material is characterised by its high hot hardness and compressive strength, as well as its high toughness and wear resistance.

For knurling applications, the following advantages are obtained:

- undisturbed operationshifts
- low cutting forces
- reduction of tool expenses
- saving of setup costs

In addition to the standard versions of powder metal, versions made of HSS and hard metal are also available on request.

Improved life-time optimisation by post-treatment

A suitable post-treatment can have a positive effect on the service life of the knurling wheel.
The optimal post-treatment depends in all cases on the application (knurling method, basic material, knurl wheel dimensions, cutting speed etc.).

We offer the following options:

- heat treatment in a salt bath - TENIFER®-nitrided knurling wheels
- surface treatment - PVD coatings
- polished knurling wheels

Use:

Material	C45 Pb
Knurl profile/partition (DIN 82):	KAA/PTN 0.6
Machine:	Citizen L 32L



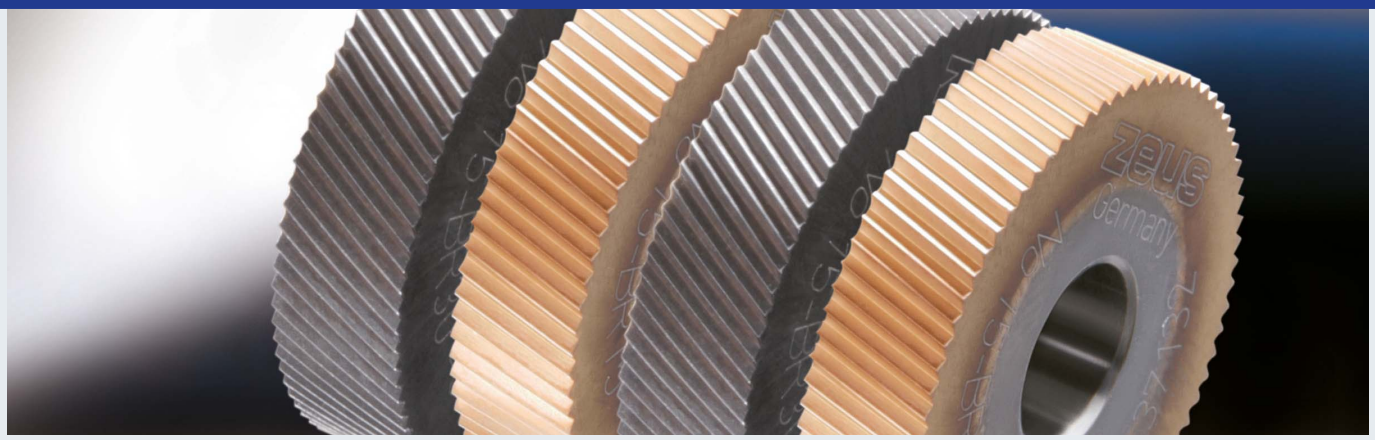
Application parameters:

Tool used:	Special tool
Knurl wheels:	Special knurls
Cutting speed:	10 m/min.
Feed:	0.27 mm/rev



Post-Treatment for Increased Tool Life

Product Information

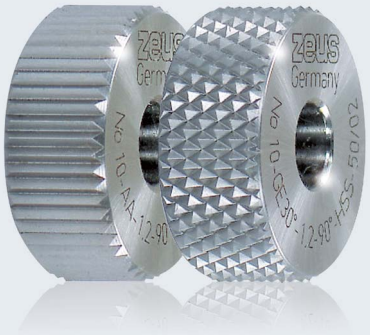


An optimised surface finish, which is matched to the material to be machined, results in a significant increase in tool life.

A suitable post-treatment can have a positive effect on the service life of the knurling wheel. We offer various treatment options. Which post-treatment ultimately provides the best result depends in all cases on the specific application. The method used, the material to be machined and the size of the knurling wheel are only a few influencing factors which affect the service life. We therefore offer several possibilities:

Polished knurl wheels

For the treatment of adhesive materials, which require optimal removal of the chip, we recommend the use of finely polished knurling wheels. This very fine polishing process results in very smooth surfaces with a low coefficient of friction The edge rounding on the tooth flanks prevents the formation of split edges and thus an early tooth break. Polished knurl wheels are a cost-effective alternative to hard metal knurling wheels, which are very often used in ground version for adhesive materials.



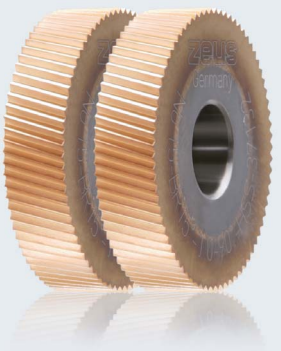
Heat treatment in a salt bath TENIFER®-nitrided knurling wheels

The post-treatment of the knurl wheel in a salt bath following the TENIFER® procedure is used to increase the wear resistance and the fatigue strength. By the salt bath nitrocarburising process, a high edge hardness can be achieved.



Surface treatment PVD coatings

With a suitable PVD coating of the knurl wheels the user is given further possibilities to influence the service life. TiN, TiCN, TiAlN, TiAlCN coatings are available as variants. PVD coatings are mainly used in knurl forming applications.



The ideal post-treatment should be defined through a series of experiments for the particular application.

Material deformation at knurl forming - chipless forming

Our experience for the enlargement of the workpiece diameter

Knurl profile to DIN 82:
Knurl wheels to DIN 403:

RAA (knurl profile at workpiece)
AA (Knurl profile at knurl wheel)


RAA

Partition		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	1.6	1.8	2.0
Material	Workpiece Ø mm	Enlargement of the workpiece Ø in mm												
Machining steel	5	0.08	0.14	0.18	0.22	0.27	0.29	0.33	0.35	0.50	–	–	–	–
	15	0.08	0.14	0.18	0.23	0.30	0.40	0.41	0.44	0.50	0.60	0.65	0.67	0.70
	25	0.08	0.15	0.23	0.24	0.28	0.35	0.38	0.44	0.53	0.62	0.70	0.70	0.98
Stainless steel	5	0.10	0.15	0.20	0.25	0.28	0.30	0.35	0.42	0.41	–	–	–	–
	15	0.10	0.15	0.19	0.25	0.30	0.34	0.40	0.45	0.51	0.60	–	–	–
	25	0.10	0.14	0.20	0.26	0.31	0.33	0.38	0.43	0.50	0.62	–	–	–
Brass	5	0.08	0.12	0.18	0.20	0.21	0.22	0.23	0.25	0.28	–	–	–	–
	15	0.10	0.14	0.20	0.26	0.28	0.29	0.31	0.35	0.41	0.44	0.48	0.50	0.55
	25	0.10	0.15	0.20	0.25	0.28	0.30	0.32	0.36	0.43	0.46	0.50	0.53	0.53
Aluminium	5	0.09	0.15	0.19	0.23	0.28	0.30	0.34	0.41	0.40	–	–	–	–
	15	0.10	0.15	0.19	0.26	0.29	0.33	0.39	0.45	0.51	0.57	0.65	–	–
	25	0.09	0.15	0.19	0.26	0.29	0.32	0.37	0.45	0.52	0.59	0.65	0.78	0.75

Knurl profile to DIN 82:
Knurl wheels to DIN DIN 403:

RBR 30° / RBL 30° (Knurl profile at workpiece)
BR 30° / BL 30° (Knurl profile at knurl wheel)


RBR 30°


RBL 30°

Partition		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	1.6	1.8	2.0
Material	Workpiece Ø mm	Enlargement of the workpiece Ø in mm												
Machining steel	5	0.11	0.15	0.20	0.24	0.28	0.34	0.38	0.45	0.55	–	–	–	–
	15	0.11	0.15	0.22	0.26	0.30	0.35	0.42	0.45	0.52	0.67	0.73	0.75	0.85
	25	0.11	0.14	0.23	0.25	0.28	0.36	0.42	0.45	0.56	0.70	0.72	0.78	0.90
Stainless steel	5	0.09	0.14	0.19	0.25	0.31	0.34	0.39	0.45	0.52	–	–	–	–
	15	0.12	0.20	0.23	0.31	0.35	0.40	0.45	0.51	0.62	0.66	0.73	0.85	0.97
	25	0.12	0.18	0.24	0.27	0.37	0.39	0.43	0.49	0.59	0.80	0.84	0.93	0.96
Brass	5	0.10	0.14	0.20	0.23	0.24	0.28	0.30	0.33	0.37	–	–	–	–
	15	0.10	0.15	0.21	0.23	0.24	0.31	0.36	0.41	0.47	0.53	0.55	0.64	0.63
	25	0.11	0.15	0.22	0.22	0.25	0.30	0.35	0.40	0.45	0.55	0.61	0.62	0.68
Aluminium	5	0.12	0.14	0.21	0.24	0.29	0.34	0.39	0.41	0.51	–	–	–	–
	15	0.12	0.18	0.23	0.26	0.36	0.40	0.43	0.50	0.56	0.56	0.61	0.74	0.75
	25	0.12	0.16	0.25	0.26	0.37	0.39	0.46	0.50	0.58	0.77	0.82	0.84	0.96

Knurl profile to DIN 82:
Knurl wheels to DIN 403:

RGE (Knurl profile at workpiece)
BR 30° + BL 30° (Knurl profile at knurl wheel)


RGE 30°

Partition		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	1.6	1.8	2.0
Material	Workpiece Ø mm	Enlargement of the workpiece Ø in mm												
Machining steel	5	0.12	0.16	0.20	0.25	0.33	0.41	0.45	0.55	0.65	–	–	–	–
	15	0.13	0.22	0.30	0.32	0.35	0.41	0.43	0.52	0.62	0.67	0.81	0.86	0.95
	25	0.12	0.18	0.28	0.32	0.35	0.38	0.43	0.55	0.67	0.77	0.87	0.98	0.98
Stainless steel	5	0.11	0.20	0.25	0.30	0.36	0.39	0.41	0.55	0.55	–	–	–	–
	15	0.10	0.14	0.21	0.24	0.29	0.34	0.40	0.43	0.53	0.66	0.72	0.70	0.88
	25	0.11	0.13	0.20	0.25	0.28	0.32	0.41	0.44	0.52	0.67	0.70	0.71	0.83
Brass	5	0.12	0.13	0.16	0.20	0.24	0.28	0.30	0.32	0.38	–	–	–	–
	15	0.12	0.16	0.18	0.24	0.28	0.30	0.37	0.39	0.40	0.48	0.52	0.55	0.63
	25	0.12	0.17	0.22	0.23	0.27	0.30	0.34	0.38	0.41	0.48	0.50	0.63	0.63
Aluminium	5	0.10	0.15	0.21	0.25	0.33	0.36	0.41	0.50	0.57	–	–	–	–
	15	0.11	0.14	0.20	0.25	0.28	0.33	0.39	0.43	0.54	0.67	0.71	0.76	0.89
	25	0.11	0.15	0.22	0.25	0.29	0.34	0.40	0.44	0.53	0.68	0.69	0.71	0.88

Guidelines for cutting speed and feed rate

Knurl milling – cutting treatment

Material	Workpiece Ø mm	Knurl wheel Ø mm	Vc (m/min.)		f (mm/rev)					
					Radial		Axial			
							Partition			
			from	to	from	to	〉0.3 〈0.5	〉0.5 〈1.0	〉1.0 〈1.5	〉1.5 〈2.0
Machining steel	〈 10	10 /15	40	70	0.04	0.08	0.14	0.09	0.06	0.05
	10 - 40	15 / 25	50	90	0.05	0.10	0.20	0.13	0.10	0.07
	40 - 100	25 / 32 / 42	65	110	0.05	0.10	0.25	0.18	0.12	0.08
	100 - 250	25 / 32 / 42	65	110	0.05	0.10	0.30	0.20	0.13	0.09
	〉250	32 / 42	80	100	0.05	0.10	0.32	0.21	0.14	0.10
Stainless steel	〈 10	10 / 15	22	40	0.04	0.08	0.12	0.08	0.05	0.04
	10 - 40	15 / 25	30	50	0.05	0.10	0.17	0.11	0.09	0.06
	40 - 100	25 / 32 / 42	35	60	0.05	0.10	0.21	0.15	0.10	0.07
	100 - 250	25 / 32 / 42	35	60	0.05	0.10	0.26	0.17	0.11	0.08
	〉250	32 / 42	45	5	0.05	0.10	0.27	0.18	0.12	0.09
Brass	〈 10	10 / 15	55	100	0.04	0.08	0.15	0.09	0.06	0.05
	10 - 40	15 / 25	70	125	0.05	0.10	0.21	0.14	0.11	0.07
	10 - 100	25 / 32 / 42	90	155	0.05	0.10	0.26	0.19	0.13	0.08
	100 - 250	25 / 32 / 42	90	155	0.05	0.10	0.32	0.21	0.14	0.09
	〉250	32 / 42	115	140	0.05	0.10	0.34	0.22	0.15	0.11
Aluminium	〈 10	10 / 15	70	120	0.04	0.08	0.18	0.11	0.08	0.06
	10 - 40	15 / 25	80	150	0.05	0.10	0.25	0.16	0.13	0.09
	40 - 100	25 / 32 / 42	110	160	0.05	0.10	0.31	0.23	0.15	0.10
	100 - 250	25 / 32 / 42	110	160	0.05	0.10	0.38	0.25	0.16	0.11
	〉250	32 / 42	130	150	0.05	0.10	0.40	0.26	0.18	0.13

Knurl forming – chipless treatment

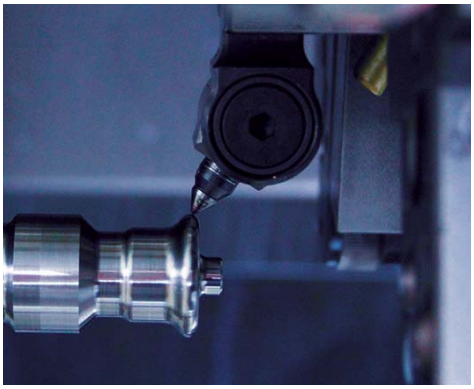
Material	Workpiece Ø mm	Knurl wheel Ø mm	Vc (m/min.)		f (mm/rev)					
					Radial		Axial			
							Partition			
			from	to	from	to	〉0.3 〈0.5	〉0.5 〈1.0	〉1.0 〈1.5	〉1.5 〈2.0
Machining steel	〈 10	10 /15	20	50	0.04	0.08	0.20	0.13	0.08	0.07
	10 - 40	15 / 20	25	55	0.05	0.10	0.28	0.18	0.14	0.10
	40 - 100	20 / 25	30	60	0.05	0.10	0.35	0.25	0.17	0.11
	100 - 250	20 / 25	30	60	0.05	0.10	0.42	0.28	0.18	0.13
	〉250	25	30	60	0.05	0.10	0.45	0.29	0.20	0.14
Stainless steel	〈 10	10 /15	15	40	0.04	0.08	0.14	0.09	0.06	0.05
	10 - 40	15 / 20	20	50	0.05	0.10	0.20	0.13	0.10	0.07
	40 - 100	20 / 25	25	50	0.05	0.10	0.25	0.18	0.12	0.08
	100 - 250	20 / 25	25	50	0.05	0.10	0.29	0.20	0.13	0.09
	〉250	25	25	50	0.05	0.10	0.31	0.21	0.14	0.10
Brass	〈 10	10 /15	30	75	0.04	0.08	0.22	0.14	0.09	0.08
	10 - 40	15 / 20	40	85	0.05	0.10	0.31	0.20	0.15	0.11
	40 - 100	20 / 25	45	90	0.05	0.10	0.39	0.28	0.18	0.12
	100 - 250	20 / 25	45	90	0.05	0.10	0.46	0.31	0.20	0.14
	〉250	25	45	90	0.05	0.10	0.49	0.32	0.22	0.15
Aluminium	〈 10	10 /15	25	60	0.04	0.08	0.12	0.08	0.05	0.04
	10 - 40	15 / 20	30	65	0.05	0.10	0.17	0.11	0.08	0.06
	40 - 100	20 / 25	35	70	0.05	0.10	0.21	0.15	0.10	0.07
	100 - 250	20 / 25	35	70	0.05	0.10	0.25	0.17	0.11	0.08
	〉250	25	35	70	0.05	0.10	0.27	0.18	0.12	0.08

Burnishing tool

Design:
- tool head variably adjustable
- tool universally applicable
- swivel range ±90°
- application up to a collar
- long service life of the diamond burnishing tip due to eight-fold position change of the tip

Use:
- smoothing speed up to 200 m/min and 0.2 mm/rev feed rate
- we recommend 0.01 mm (approx. Rz 10) or 0.02 mm (approx. Rz 20) as allowance on the workpiece
- the use of cooling lubricant is recommended

Note:
Delivery of the sets without a diamond burnishing tip.







N° article	188001 adjustable	Tool Holder	Basic shank mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	x mm	Angle °+w	Angle °-w	incl. shank adapter mm
1010L	○	520 - 10 -	10×10	10	10	118,5	20	37,5	25	17,5	9,5	90	90	12×12|16×16
1010R	○	520 - 10 -	10×10	10	10	118,5	20	37,5	25	17,5	9,5	90	90	12×12|16×16
1616	○	520 - 16 -	16×16	16	16	114,5	20	34,6	25	17,5	9,5	90	90	20×20|25×25

N° article	188002 Replacement tip, diamond tipped	Tip radii mm
0,4	○	0,4
0,6	○	0,6
0,8	○	0,8
1,0	○	1
2,0	○	2

Form knurling tool

RD 1

Use:
Knurl forming (chipless machining) Cut-in knurling (longitudinal knurling RAA, RBL and RBR possible). Fit for all kinds of knurling patterns, profiles and inscriptions. All knurling rollers applicable. For automatic and conventional lathes

Cut-in knurling: Fit for all kinds of knurling patterns, profiles and inscriptions
Longitudinal knurling: RAA, RBL and RBR can be produced

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82)	RAA	RBL	RBR	RGE	RGV	RKE	RKV
Knurling wheels	AA	BR	BL	GV	GE	KV	KE

N° article	189100	for knurl mm	Shank height mm	Shank width mm	Operating range mm
830-08U	●	15 × 4 × 4	8	8	3-50 -
830-16U	●	25/20 × 8 × 6	16	16	8-200 -

Form knurling tool

RD 1

Design:
Special surface hardening for increased wear resistance.
Threaded pins in the shank for adjustment of clearance angle
R = right hand version
U = universal version (right and left)

Use:
Knurl forming (chipless machining) Cut-in knurling (longitudinal knurling RAA, RBL and RBR possible). Fit for all kinds of knurling patterns, profiles and inscriptions. All knurling rollers applicable. Automatic long turning lathes and small lathes (131-12R). Automatic lathes and lathes, CNC and conventional (131-20U), top edge = centre height

Delivery:
Without knurl

Model 131-12R: For sliding headstock lathe automats
Model 131-20U: For fixed headstock lathe automats

Cut-in knurling: Fit for all kinds of knurling patterns, profiles and inscriptions
Longitudinal knurling: RAA, RBL and RBR can be produced



Knurl profile at workpiece (DIN 82)	RAA	RBL	RBR	RGE	RGV	RKE	RKV
Knurling wheels	AA	BR	BL	GV	GE	KV	KE

N° article	189110	for knurl mm	Shank height mm	Shank width mm	Operating range mm
131-12R	●	10 × 4 × 4, 15 × 4 × 4	12	12	3-50 -
131-20U	●	20 × 8 × 6, 25 × 8 × 6	20	20	8-200 -

Form knurling tool

RD 2

Design:
- modular configuration allows use as right- or left-hand version
- resetting by simple turning of the knurling head
- flexible centring
- threaded pins in the shank for adjustment of clearance angle
- special surface hardening for enhanced wear resistance Carbide pins for higher speeds, faster machining, improved tool life

Use:
Knurl forming (chipless forming) knurling profiles RAA, RGE 30°, RGE 45° to DIN 82. For automatic lathes and lathes, CNC and conventional, centre height is integrated in the tool

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82)	RAA	RGE 30°	RGE 45°
Knurling wheels	2×AA	1×BL30°/1×BR30°	1×BL45°/1×BR45°

N° article	189180	for knurl mm	Shank height mm	Shank width mm	Operating range mm
141-20M	●	20 × 8 × 6	20	20	10-110 -

Form knurling tool

RD 2

Design:
- top edge of shaft = centre height
- runner pin with flat, secured by screw; for quick replacement of the knurling wheels

Use:
- knurl forming (chipless machining)
- puncture and longitudinal knurling
- for knurling at workpieces to DIN 82: RAA, RGE 30°, RGE 45°
- for automatic lathes and small lathes, CNC and conventional

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82)	RAA	RGE 30°	RGE 45°
Knurling wheels	2×AA	1×BL30°/1×BR30°	1×BL45°/1×BR45°

N° article	189181	for knurl mm	Shank height mm	Shank width mm	Operating range mm
851-12R	●	15 × 4 × 4	12	12	6-60 -
851-20R	●	20 × 8 × 6	20	20	10-120 -

Form knurling tool

RD 2

Design:
- modular shank construction for conversion to alternative shank dimensions
- runner pin with face, secured by threaded pin
- knurl carrier easy to adjust to workpiece Ø and centre height via synchronous spindle and setting scale
- carbide pins
- special surface hardening for increased wear resistance
- no lateral pressure
- reduced strain for workpiece and machine
- synchronous spindle and setting scale ensure easy and accurate adjustment

Use:
- knurl forming (chipless machining)
- puncture and longitudinal knurling
- for knurling at workpieces to DIN 82: RAA, RGE 30°, RGE 45°
- for sliding headstock lathe automates, CNC and conventional

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82)	RAA	RGE 30°	RGE 45°
Knurling wheels	2×AA	1×BL30°/1×BR30°	1×BL45°/1×BR45°

N° article	189182	for knurl mm	Shank height mm	Shank width mm	Operating range mm
161-12R	○	15 × 4 × 4	12	12	0-15 -

Form knurling tool

RD 2

Design:
- runner pin with face, secured by threaded pin
- knurl carrier easy to adjust to workpiece Ø and centre height via synchronous spindle and setting scale
- carbide pins
- special surface hardening for increased wear resistance
- no lateral pressure
- reduced strain for workpiece and machine

Use:
- knurl forming (chipless machining)
- puncture and longitudinal knurling
- for knurling at workpieces to DIN 82: RAA, RGE 30°, RGE 45°
- usable conventional and for CNC on:
  Short/universal lathes
  Turning/milling centre
  Multi-spindle machines

Delivery:
Without knurl

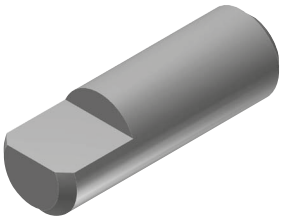


Knurl profile at workpiece (DIN 82)	RAA	RGE 30°	RGE 45°
Knurling wheels	2× AA	1× BL30°/1× BR30°	1× BL45°/1× BR45°

N° article	189183	for knurl mm	Shank height mm	Shank width mm	Operating range mm
161-20M	○	25 × 8 × 6	20	25	0-65 -

Accessories for form knurling tools

N° article	189290 Spare runner pin	suited for type	for knurl mm
0001	●	830-08U	15 × 4 × 4
0003	○	830-16U	20 × 8 × 6
0005	○	131/161-12R	10 × 4 × 4
0007	●	131/141-20U	20/25 × 8 × 6
0009	●	841-20M	20 × 8 × 6
0012	○	161-12R	15 × 6 × 4
0013	○	161-20M	25 × 8 × 6

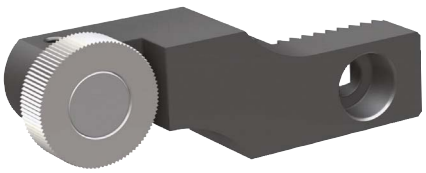


Use:
- for knurl forming tool 189183 161-20M
- jaw set standard (Type 0001)
- jaw set for converting for knurling up to the collar (type 0003)

Delivery:
Without knurl



N° article	189295 Replacement jaws
0001	○
0003	○



Form knurling wheel

Design:
- made of powder metal
- to DIN 403
- teeth finely milled to requested pitch
- face and bore hole ground, with chamfer

PM | DIN 403



AA | BL 30° | BR 30° | GE 30°

N° article	189601 Form AA	189602 Form BL 30°	189603 Form BR 30°	189604 Form GE 30°	189605 Form GV 30°	∅ mm	Graduation mm	Bore mm	Width mm
15/0,6	●	○	○	○	–	15	0.6	4	4
15/0,8	●	●	●	○	○	15	0.8	4	4
15/1,0	●	●	○	○	○	15	1	4	4
15/1,2	●	○	○	○	–	15	1.2	4	4
20/0,6	●	●	●	○	–	20	0.6	6	8
20/0,8	●	●	●	●	●	20	0.8	6	8
20/1,0	●	●	●	●	●	20	1	6	8
20/1,2	●	●	●	●	–	20	1.2	6	8
20/1,5	●	●	●	●	–	20	1.5	6	8
25/0,6	●	–	–	–	–	25	0.6	6	8
25/0,8	●	–	–	–	–	25	0.8	6	8
25/1,0	●	●	●	–	–	25	1	6	8
25/1,2	●	–	–	–	–	25	1.2	6	8
25/1,5	●	○	○	–	–	25	1.5	6	8

Knurl milling tool

Design and use:
- knurl milling (chip removing machining)
- longitudinal knurling at workpiece to DIN 82: RAA, RBL 30°, RBR 30°
- modular configuration
- knurl milling head exchangeable for right- or left-hand version
- fine adjustment for axially parallel knurling through adjustable knurling head
- adjustment of the clearance angle through pins on the shank
- special surface hardening for increased wear resistance
- carbide bushes for higher speeds, faster production, prolonged life
- 189730 231 - 12LD especially for sliding headstock automatic lathes
- top edge of shaft = centre height
- modular shank configuration
- easy presetting via setting spindle

RF 1

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82): RAA | RBL 30° | RBR 30°

Knurling wheels: 1× BL30° Insert left, 1× BR30° Insert right | 2× AA

N° article	189730	for knurl mm	Shank height mm	Shank width mm	Operating range mm
231-12LD	○	15 × 4 × 8	12	12	3-50
231-12M	○	15 × 4 × 8	12	12	3-50

Knurl milling tool

Design:
- modular configuration
- tool universally usable as right- or left-hand version
- quick resetting by simple demounting and turning of the knurling head
- a 3-point support provides the precise axis position after each assembly
- fine adjustment of the knurled head via threaded spindle with scaling
- threaded pin in shaft for clearance angle correction, special surface hardening, carbide bushing

RF 1

Use:
Knurl milling (chip removing machining), longitudinal knurling. For knurling at workpieces to DIN 82: RAA, RBL 30°, RBR 30°. For lathes and automatic lathes, CNC and conventional. Top edge of shaft = centre height

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82): RAA | RBL 30° | RBR 30°

Knurling wheels: 1× BL30° Insert left, 1× BR30° Insert right | 2× AA

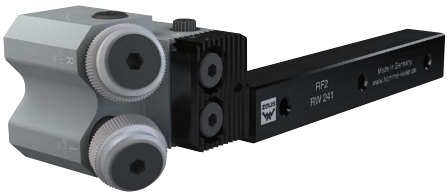
N° article	189731	for knurl mm	Shank height mm	Shank width mm	Total length mm	Operating range mm
231-20M	●	25 × 6 × 8	20	20	129	10-300

Knurl milling tool

RF 2

Design and use:
Knurl milling (chip removing machining), longitudinal knurling. For knurling at workpieces to DIN 82: RGE 30° and RGE 45°. Adjusting of workpieces Ø through central adjusting screw and scale. Fine adjustment through positioning of knurling head. Carbide bushes for higher speeds, faster production, prolonged life. Special surface hardening for increased wear resistance. For lathes and small lathes, conventional and CNC, top edge of shaft = centre height Modular shank system for conversion to alternative shank sizes. High stability due to the gearing between tool holder and knurling head.

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82)	RGE 30°	RGE 45°
Knurling wheels	2× AA	1× BR15°/1× BL15°

N° article	189735	for knurl mm	Shank height mm	Shank width mm	Operating range mm
241-12M	○	15 × 4 × 8	12	12	3-50 -

RF 2

Design:
- modular configuration
- tool universally usable as right- or left-hand version
- quick resetting by simple demounting and turning of the knurling head
- flexible usage through vertical hight adjustment for mounting to shank sizes 20 and 25
- fine adjustment of the centre height by height adjustment of the milling head spindle
- high stability by dovetailing between tool holder and knurl milling head, carbide running bushes
- special surface hardening for increased wear resistance

Use:
Knurl milling (chip removing machining), longitudinal knurling. For knurling at workpieces to DIN 82: RGE 30, RGE 45. For lathes and automatic lathes, CNC and conventional. Top edge of shaft = centre height. High stability by dovetailing between tool holder and knurl milling head, Carbide bushes. Special surface hardening for increased wear resistance

Delivery:
Without knurl



Knurl profile at workpiece (DIN 82)	RGE 30°	RGE 45°
Knurling wheels	2× AA	1× BR15°/1× BL15°

N° article	189736	for knurl mm	Shank height mm	Shank width mm	Total length mm	Operating range mm
241-20/25M	●	25 × 6 × 8	20	20	134	10-250 -

Accessories for knurl milling tools

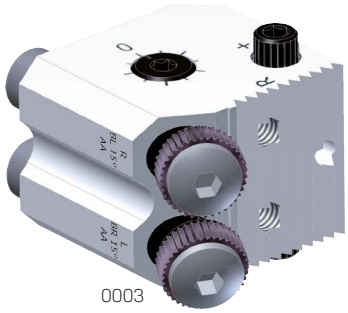


N° article	189750 Spare parts kit	suited for type	for knurl mm
0001	●	231/241-12M	15 × 4 × 8
0002	○	231 - 12LD	15 × 4 × 8
0003	●	231/241-20M	25 × 6 × 8

Design:
- machining diameter 3 - 50 mm
- knurl milling head RFK 15×4×8



0001



0003

N° article	189755 Spare milling head
0001	○
0003	○

Knurl milling wheel

PM | DIN 403

Design:
- made of powder metal
- teeth finely milled to requested pitch, entirely hardened
- face and bore ground, without chamfer

N° article	189790 Form AA	189792 Form BL 30°	189794 Form BR 30°	189796 Form BL 15°	189798 Form BR 15°	Diameter mm	Graduation mm	Bore mm	Width mm
15/0,6	○	○	●	○	○	15	0.6	8	4
15/0,8	●	○	○	–	–	15	0.8	8	4
15/1,0	●	○	●	○	○	15	1	8	4
15/1,2	●	○	○	–	–	15	1.2	8	4
25/0,6	○	○	●	○	○	25	0.6	8	6
25/0,8	●	●	●	–	–	25	0.8	8	6
25/1,0	●	●	●	●	●	25	1	8	6
25/1,2	●	○	●	●	●	25	1.2	8	6
25/1,5	●	●	●	–	–	25	1.5	8	6



AA | BL 30° | BR 30° | BL 15° | BR 15°

Tool . no. 311



Applicable on:
- Automatic lathes
- Sliding headstock lathes, universal lathes, turning/milling centres, multi-spindle machines

Use:
- conical knurling, face knurling, form knurling, (non-cutting forming)

Processing direction:
- Puncture knurling

Product features:
- Special surface hardening for increased wear resistance



User benefits:

- Threaded pins in the shank for easy free-angle correction
- Quick and easy change of the knurl wheel by loosening the retaining ring

Tool . no. 330

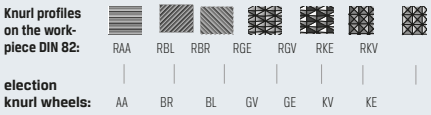


Applicable on:
- Automatic lathes
- Sliding headstock lathes, universal lathes, turning/milling centres, multi-spindle machines

Use:
- Inside knurling, form knurling (chipless forming)

Processing direction:
- Puncture knurling, all knurl profiles, patterns and inscriptions possible
- Longitudinal knurling: RAA, RBL and RBR

Product features:
- Round shaft with clamping surface
- Special surface hardening for increased wear resistance



User benefits:

- Applicable in narrow spaces of machines
- Easy alignment thanks to an optimal support on a clamping surface
- Quick and easy change of the knurl wheel by loosening the screw

Tool . no. 312



Applicable on:
- Sliding headstock lathes, universal lathes, turning/milling centres, multi-spindle machines

Use:
- Conical knurling, form knurling (non-cutting forming)

Processing direction:
- Puncture knurling

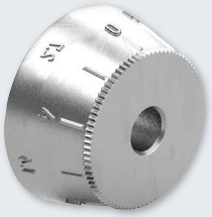
Product features:
- Special surface hardening for increased wear resistance



User benefits:

- Easy replacement of the knurled wheel by loosening the threaded pin
- Threaded pins in the shank for easy free-angle correction

Rolls/Rollers



Marking rolls

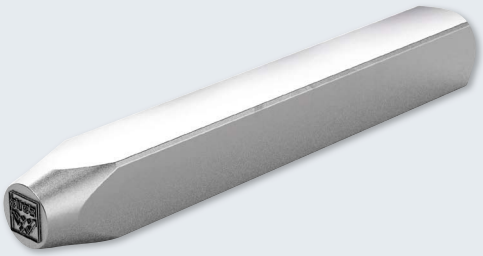
- Are provided with raised or recessed letters as required.



Embossing cylinders

- For embossing and marking of diverse materials like say leather and textiles.
- Provided with raised or recessed letters as required.

Punches/Dies



Manual impact punches

- Embossing of various materials for marking, numbering or decoration.
- We manufacture your individual logos and emblems exactly according to your specifications.



Punch machine dies

- Marking of all kinds of materials.
- Optionally with pin, groove or square drive at the end of the shank.
- Manufactured according to your requirements and drawing specifications.



Special engravings

- For marking complicated surfaces we are happy to work out an individual solution. Based on your data and sketched specifications, we develop and supply the right tool, even for extraordinarily complex applications.

Efficient marking of turned parts

The ability to mark parts with production data, delivery specifications and batch numbers is a prerequisite for the order confirmation in almost all branches of industry and offers decisive advantages:

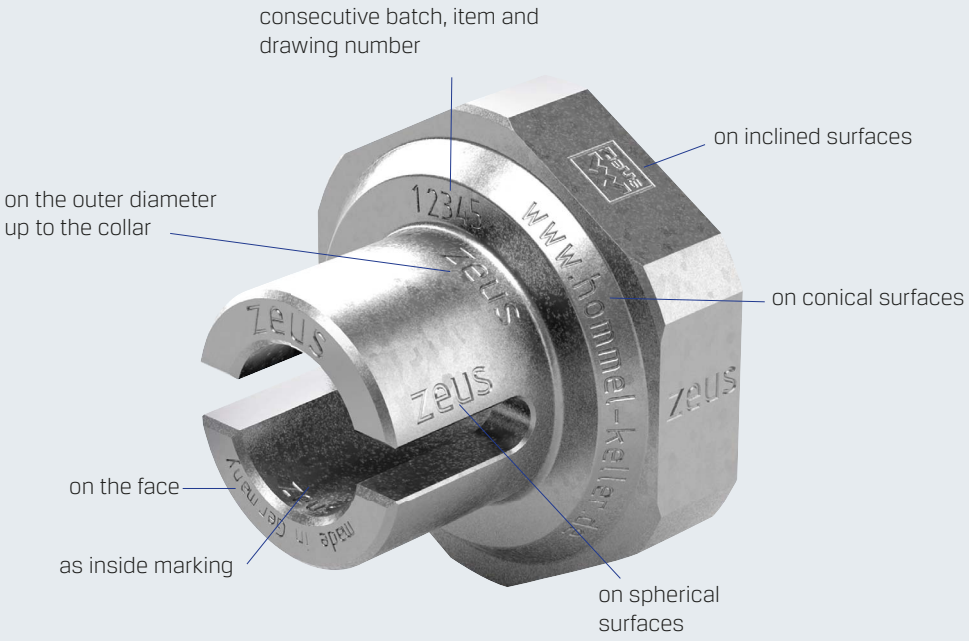
- uninterrupted production records
- distinction between and tracking of individual batches
- supplier traceability
- distinction from competitors or no-name products

The advantages of zeus

zeus marking tools are integrated directly into the process on the lathe or the machining centre, thus saving an additional operational step.

- **economy of time:** Significantly shorter machining times (compared to laser marking, pin marking etc.).
- **cost savings:** Significantly reduced setup costs through complete machining on one machine.
- **full flexibility:** Applicable on all conventional and CNC turning and milling centres.

Application options



Characteristics and benefits

- durability through stamping
- painting of the component is possible
- immediate traceability
- lateral drives can be removed after the marking process
- any characters can be used as drive, e.g. also logos, backslashes, stars, hashes etc.

Reference industries

- automotive industry
- aerospace industry
- fittings manufacturers
- connection technology, e.g. for fittings
- consumer goods producers
- producers of decorative elements, jewellery etc.

Marking tool Set

Design:
- sets in high quality packaging
- modular shank configuration
- with adapter 10 × 10 mm (for shank height & width 10 mm)
- with adapter 12 × 12 mm (for shank height & width 12 mm)
- with adapter 16 × 16 mm (for shank height & width 16 mm, dimension 'f: 31 mm)
- grub screws in the shaft to correct the axis parallelism
- including start and end segment

Use:
- lettering up to the collar
- precise positioning of characters on workpiece circumference
- marking positions can be set as desired

Note:
Top edge of shaft = centre height.
Centre height corresponds to first marking point

NEW



N° article	189910 right	189911 left
0030	○	○

Marking tool E-kit

Design:
For quick segment changes by replacing the e-kit on the mould.

Note:
189913 0030L for 189911
189913 0030R for 189910



N° article	189913 E- kit
0030L	○
0030R	○

Font segments

Design:
- font segments for 189910 and 189911
- typeface close to DIN 1451



N° article	189915	Contents
0001	○	Start segment
0005	○	Space
0009	○	End segment

Font segments Letter height 2 mm

Design:
- font segments for 189910 and 189911
- typeface close to DIN 1451



N° article	189917 A-Z, 0-9, Minus, Full stop, Slash	Contents
0000	○	Letter set A-Z
0001	○	Letter A
0002	○	Letter B
0003	○	Letter C
0004	○	Letter D
0005	○	Letter E
0006	○	Letter F
0007	○	Letter G
0008	○	Letter H
0009	○	Letter I
0010	○	Letter J
0011	○	Letter K
0012	○	Letter L
0013	○	Letter M
0014	○	Letter N
0015	○	Letter O
0016	○	Letter P
0017	○	Letter Q
0018	○	Letter R
0019	○	Letter S
0020	○	Letter T

N° article	189917 A-Z, 0-9, Minus, Full stop, Slash	Contents
0021	○	Letter U
0022	○	Letter V
0023	○	Letter W
0024	○	Letter X
0025	○	Letter Y
0026	○	Letter Z
0050	○	Number 9
0051	○	Number 0
0052	○	Number 1
0053	○	Number 2
0054	○	Number 3
0055	○	Number 4
0056	○	Number 5
0057	○	Number 6
0058	○	Number 7
0059	○	Number 8
0060	○	Set of numbers 0-9
0080	○	- (Minus)
0081	○	. (Full stop)
0082	○	/ (Slash)

Font segments Letter height 3 mm

Design:
- font segments for 189910 and 189911
- typeface close to DIN 1451



N° article	189919 A-Z, 0-9, Minus, Full stop, Slash	Contents
0000	○	Letter set A-Z
0001	○	Letter A
0002	○	Letter B
0003	○	Letter C
0004	○	Letter D
0005	○	Letter E
0006	○	Letter F
0007	○	Letter G
0008	○	Letter H
0009	○	Letter I
0010	○	Letter J
0011	○	Letter K
0012	○	Letter L
0013	○	Letter M
0014	○	Letter N
0015	○	Letter O
0016	○	Letter P
0017	○	Letter Q
0018	○	Letter R
0019	○	Letter S
0020	○	Letter T

N° article	189919 A-Z, 0-9, Minus, Full stop, Slash	Contents
0021	○	Letter U
0022	○	Letter V
0023	○	Letter W
0024	○	Letter X
0025	○	Letter Y
0026	○	Letter Z
0050	○	Number 9
0051	○	Number 0
0052	○	Number 1
0053	○	Number 2
0054	○	Number 3
0055	○	Number 4
0056	○	Number 5
0057	○	Number 6
0058	○	Number 7
0059	○	Number 8
0060	○	Set of numbers 0-9
0080	○	- (Minus)
0081	○	. (Full stop)
0082	○	/ (Slash)

Tool blank

PRETEC

FORM B = square tool blank
Made of EW9Co10 = cobalt alloyed HSS

HSS-Co | DIN 4964 | Form B

Design:
- hardened, tempered and ground to size
- front faces unground
- tolerance h12

Available qualities:
EW9Co10 = 10.0 % cobalt (HRC 65-67), ASP/C 60 = 10,5 % cobalt (HRC 66-68) = highly alloyed powder-metallurgical HSS.
The special manufacturing process ensures an even distribution of carbides and better homogeneity.
Quality ASP/C 60 available on request

Use:
- for turning, reboring, recessing etc.
- suitable for the production of special shaped steels



N° article	193000	C4 mm	C5 mm	B5 mm	N° article	193000	C4 mm	C5 mm	B5 mm
4×63	●	4	4	63	10×160	●	10	10	160
5×63	●	5	5	63	10×200	●	10	10	200
6×63	●	6	6	63	12×100	●	12	12	100
6×100	●	6	6	100	12×160	●	12	12	160
6×160	●	6	6	160	12×200	●	12	12	200
6×200	●	6	6	200	14×160	●	14	14	160
8×63	●	8	8	63	16×100	●	16	16	100
8×80	●	8	8	80	16×125	○	16	16	125
8×100	●	8	8	100	16×160	●	16	16	160
8×160	●	8	8	160	16×200	●	16	16	200
8×200	●	8	8	200	20×160	●	20	20	160
10×63	●	10	10	63	20×200	●	20	20	200
10×100	●	10	10	100	25×160	○	25	25	160
10×125	●	10	10	125	25×200	●	25	25	200

FORM A = round tool blank
Made of EW9Co10 = cobalt alloyed HSS

HSS-Co | DIN 4964 | Form A

Design:
- hardened, tempered and ground to size
- front faces unground
- diameter tolerance h8

Available qualities:
EW9Co10 = 10.0 % cobalt (HRC 65-67), ASP/C 60 = 10,5 % cobalt (HRC 66-68) = highly alloyed powder-metallurgical HSS.
The special manufacturing process ensures an even distribution of carbides and better homogeneity.
Quality ASP/C 60 available on request

Use:
- for turning, reboring, recessing etc.
- suitable for the production of special shaped steels



N° article	193200	C3 mm	B5 mm	N° article	193200	C3 mm	B5 mm
3×100	●	3	100	10×100	●	10	100
4×100	●	4	100	10×160	●	10	160
5×100	●	5	100	12×100	●	12	100
6×63	●	6	63	12×160	●	12	160
6×80	●	6	80	12×200	●	12	200
6×100	●	6	100	14×160	●	14	160
6×160	●	6	160	16×100	●	16	100
8×80	●	8	80	16×200	●	16	200
8×100	●	8	100	20×100	●	20	100
8×160	●	8	160	20×200	●	20	200

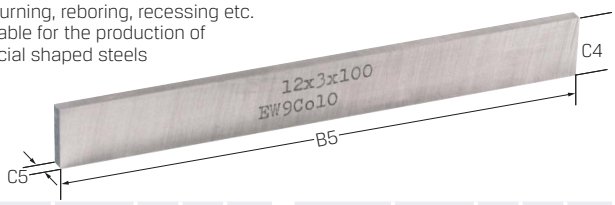
FORM D = square tool blank
Made of EW9Co10 = cobalt alloyed HSS

HSS-Co | DIN 4964 | Form D

Design:
- hardened, tempered and ground to size
- front faces unground
- tolerance h14

Available qualities:
EW9Co10 = 10.0 % cobalt (HRC 65-67), ASP/C 60 = 10,5 % cobalt (HRC 66-68) = highly alloyed powder-metallurgical HSS.
The special manufacturing process ensures an even distribution of carbides and better homogeneity. **Quality ASP/C 60 available on request**

Use:
- for turning, reboring, recessing etc.
- suitable for the production of special shaped steels



N° article	193100	C4 mm	C5 mm	B5 mm	N° article	193100	C4 mm	C5 mm	B5 mm
8×5×100	●	8	5	100	16×10×200	●	16	10	200
10×4×100	●	10	4	100	16×12×200	○	16	12	200
10×4×160	●	10	4	160	20×4×200	●	20	4	200
10×4×200	○	10	4	200	20×5×200	●	20	5	200
10×5×200	●	10	5	200	20×6×200	●	20	6	200
10×6×200	●	10	6	200	20×8×200	●	20	8	200
12×3×100	●	12	3	100	20×10×160	○	20	10	160
12×3×200	●	12	3	200	20×10×200	●	20	10	200
12×6×200	●	12	6	200	20×12×200	●	20	12	200
12×8×160	●	12	8	160	25×6×200	●	25	6	200
12×10×200	○	12	10	200	25×12×200	○	25	12	200
14×6×160	●	14	6	160	25×16×200	●	25	16	200
16×4×160	●	16	4	160	32×8×200	●	32	8	200
16×4×200	●	16	4	200	32×16×200	○	32	16	200
16×8×160	●	16	8	160					

Graver

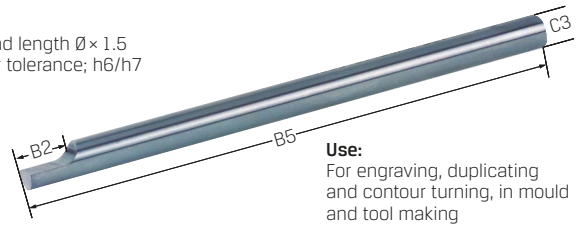
PRETEC

Form A, unilateral bisected
Made of EW9Co10 = cobalt alloyed HSS

HSS-Co | Form A



Design:
- preground length Ø × 1.5
- diameter tolerance; h6/h7



Use:
For engraving, duplicating and contour turning, in mould and tool making

N° article	193260	C3 mm	B5 mm	B2 mm	N° article	193260	C3 mm	B5 mm	B2 mm
3×63	○	3	63	4	8×100	●	8	100	12
4×63	●	4	63	6	10×100	●	10	100	15
6×80	●	6	80	6	12×100	●	12	100	18
8×80	○	8	80	12	16×125	○	16	125	24

Form D, pointed, 60°
Made of EW9Co10 = cobalt alloyed HSS

HSS-Co | Form D | 100°

Design:
- diameter cylindrical ground within tolerance h7/h8
- bisection pre-ground with 60° cutting edge



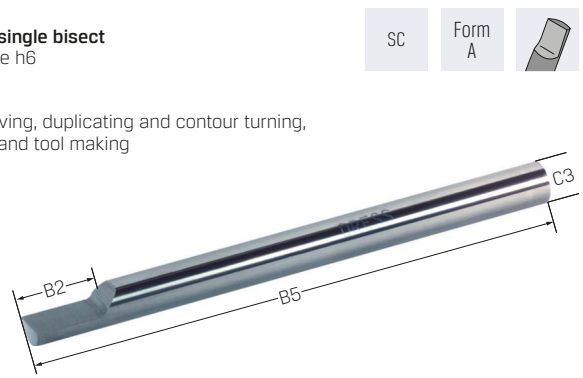
N° article	193270	C3 mm	B5 mm	B2 mm	N° article	193270	C3 mm	B5 mm	B2 mm
3×63	●	3	63	4	6×63	●	6	63	9
4×63	●	4	63	6	6×80	●	6	80	9
4×100	○	4	100	6	8×100	●	8	100	12
5×63	●	5	63	7	10×100	○	10	100	15
5×80	○	5	80	7					

Graver

PRETEC

Design:
- form A, single bisect
- tolerance h6

SC | Form A



Use:
For engraving, duplicating and contour turning, in mould and tool making

N° article	193280	C3 mm	B5 mm	B2 mm
3×50	●	3	50	6
4×50	●	4	50	8
4×60	●	4	60	8
5×50	●	5	50	8
5×100	○	5	100	8
6×50	●	6	50	12

N° article	193280	C3 mm	B5 mm	B2 mm
6×100	●	6	100	12
8×50	○	8	50	12
8×100	●	8	100	12
10×100	●	10	100	15
12×100	●	12	100	18
16×100	○	16	100	24

Design:
- diameter cylindrical ground within tolerance h6
- bisection pre-ground with 100° cutting edge

SC | Form B | 100°



N° article	193265	C3 mm	B5 mm	B2 mm
2×40	●	2	40	5
3×50	○	3	50	6
4×50	●	4	50	8
5×50	○	5	50	8

N° article	193265	C3 mm	B5 mm	B2 mm
6×75	●	6	75	12
8×75	○	8	75	12
10×75	○	10	75	15

Design:
- form D pointed 60°
- diameter cylindrical ground within tolerance h6
- bisection pre-ground with 60° cutting edge

SC | Form D | 100°



N° article	193285	C3 mm	B5 mm	B2 mm
2×40	●	2	40	5
2,5×40	●	2,5	40	5
3×50	●	3	50	6
4×50	●	4	50	8

N° article	193285	C3 mm	B5 mm	B2 mm
5×50	●	5	50	8
6×75	●	6	75	12
8×75	●	8	75	12
10×75	○	10	75	15

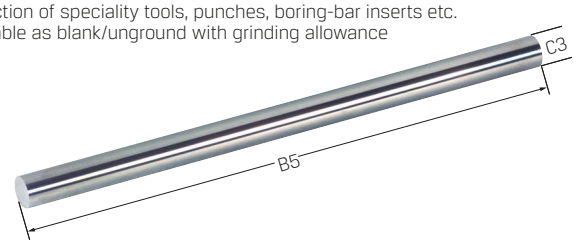
Round tool blank

PRETEC

Design:
- round solid carbide bar
- ground/polished
- tolerance h6/h7

SC

Use:
For production of speciality tools, punches, boring-bar inserts etc.
Also available as blank/unground with grinding allowance



N° article	193500	C3 mm	B5 mm
2,0	●	2	100
3,0	●	3	100
4,0	●	4	100
5,0	●	5	100
6,0	●	6	100
7,0	○	7	100

N° article	193500	C3 mm	B5 mm
8,0	●	8	100
10,0	●	10	100
12,0	●	12	100
14,0	●	14	100
16,0	○	16	100

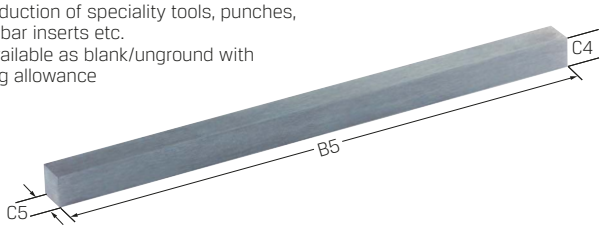
Square tool blank

PRETEC

Design:
- square solid carbide tool blank
- ground/polished
- tolerance h6/h7

SC

Use:
For production of speciality tools, punches, boring-bar inserts etc.
Also available as blank/unground with grinding allowance



N° article	193650	C4 mm	C5 mm	B5 mm
3×3	○	3	3	100
4×4	○	4	4	100
5×5	○	5	5	100
6×6	●	6	6	100

N° article	193650	C4 mm	C5 mm	B5 mm
8×8	●	8	8	100
10×10	●	10	10	100
12×12	○	12	12	100

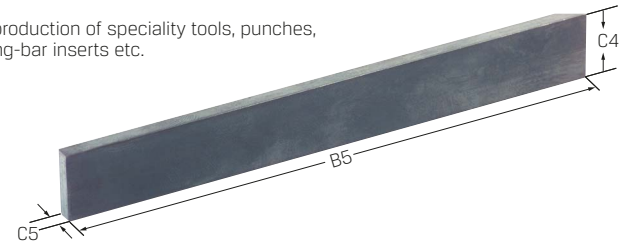
Flat bar tool blank

PRETEC

Design:
- rectangular SC tool blank
- unground
- blank with grinding allowance

SC

Use:
For production of speciality tools, punches, boring-bar inserts etc.



N° article	193750	C4 mm	C5 mm	h × w rough dimension mm	B5 mm
2×3	●	2	3	2.2×3.2	100
2×4	●	2	4	2.2×4.2	100
2×5	●	2	5	2.2×5.3	100
2×6	●	2	6	2.2×6.3	100
2×8	●	2	8	2.2×8.3	100
2×10	●	2	10	2.2×10.3	100
2×20	○	2	20	2.2×20.4	100

N° article	193750	C4 mm	C5 mm	h × w rough dimension mm	B5 mm
3×5	●	3	5	3.2×5.3	100
3×6	○	3	6	3.2×6.3	100
3×8	●	3	8	3.2×8.3	100
3×10	●	3	10	3.2×10.3	100
4×5	●	4	5	4.3×5.3	100
4×10	●	4	10	4.3×10.3	100

Engraving tool 45°/60° for indexable inserts

PREMUS

Design and use:
0001+0004:
- tool holder
- suited for HSC

0002/0003/0005/0006:
- with SC shank and soldered turning plate carrier made of steel
- suitable for shrinking
- for engraving of different materials

Delivery:
Without indexable insert









N° article	193900 Holder	Degree °	C3 mm	B5 mm	N° article	193900 Holder	Degree °	C3 mm	B5 mm
0001	●	45	6	40	0004	●	60	6	40
0002	●	45	6	60	0005	●	60	6	60
0003	●	45	6	100	0006	●	60	6	100

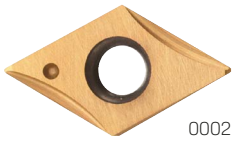
Indexable insert for engraving tool 45°/60°

PREMUS

Design:
- stable cutting edge through protective chamfer
- min. operation depth 0.2 mm
- universal grade for all kinds of steel ‹ 30 HRC, non-ferrous metal and stainless steel
- quality K20F

N° article	193902 Indexable insert 45°/60° TiN, with chamfer	D1 mm	D3°	G3 mm	G4 mm	W min. mm	W max. mm	T min. mm	T max. mm
0001	●	0,2	45	6,35	2	0,65	2,1	0,2	2
0002	●	0,2	60	6,35	2	0,65	2,7	0,2	2

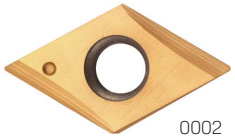

0001


0002

Design:
- highly positive throughout polished chip breaker for very fine engravings
- for non-ferrous metals, such as aluminium, brass, copper, titanium, plus for plastic or acrylic
- quality K20F

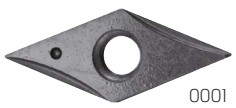
N° article	193903 Insert 45°/60°, TiN	D1 mm	D3°	G3 mm	G4 mm	W min. mm	W max. mm	T min. mm	T max. mm
0001	●	0,2	45	6,35	2	0,45	2,1	0,05	2
0002	●	0,2	60	6,35	2	0,45	2,7	0,05	2


0001


0002

Design:
- long service life
- for all kinds of steel from ‹ 48 HRC, carbon steel, alloy steel or cast iron
- quality K20F

N° article	193904 Indexable insert 45°/60°, TiAlN	D1 mm	D3°	G3 mm	G4 mm	W min. mm	W max. mm	T min. mm	T max. mm
0001	●	0,2	45	6,35	2	0,65	2,1	0,2	2
0002	●	0,2	60	6,35	2	0,65	2,7	0,2	2


0001


0002

Design:
- extremely heat resistant with minimal tool wear
- for hardened steel up to 56 HRC
- quality K20F

N° article	193905 Insert 60° TiAlN	D1 mm	D3°	G3 mm	G4 mm	W min. mm	W max. mm	T min. mm	T max. mm
0001	●	0,2	60	6,35	2	0,65	2,7	0,2	2



HM Lathe Tool

Product Information

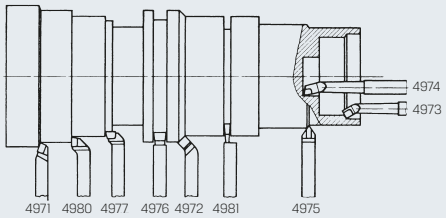
Design:

Steel clamping shank with 700-800 N/mm2 tensile strength. Support surface milled and flat machined. With soldered DIN-ISO carbide inserts. Clamping surfaces and flanks are ground and lapped. For rough machining or high cutting load, we recommend lapping of the cutting edge with hand lapper 474890.

Use of the respective carbide grades:

P20for steel processing/medium "coarse processing" with normal cutting speeds and medium feed

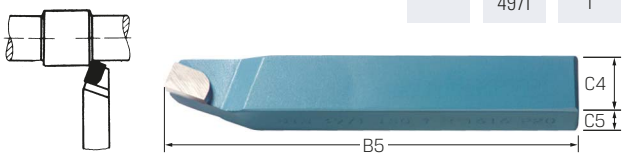
K20 for cast machining (GG to 250 HB) non-ferrous metals. General processing of short-chipping materials



Turning tool straight

PRETEC

Carbide | DIN 4971 | ISO 1



N° article	194020 right, P20	194060 right, K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
10×10	●	○	10	10	90	A8
12×12	●	○	12	12	100	A10
16×16	●	●	16	16	110	A12
20×20	●	○	20	20	125	A16
25×25	●	○	25	25	140	A20
32×32	○	○	32	32	170	A25

Turning tool bent

PRETEC

Carbide | DIN 4972 | ISO 2

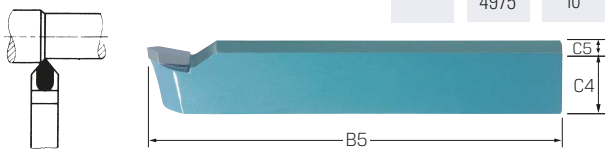


Art.-Nr.	194120 right P20	194160 right, K10/20	194170 left, P20	194190 left, K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
10×10	●	●	●	○	10	10	90	C8
12×12	●	●	●	○	12	12	100	C10
16×16	●	●	●	●	16	16	110	C12
20×20	●	●	●	○	20	20	125	C16
25×25	●	●	●	○	25	25	140	C20
32×32	●	○	○	○	32	32	170	C25

Turning tool pointed

PRETEC

Carbide | DIN 4975 | ISO 10

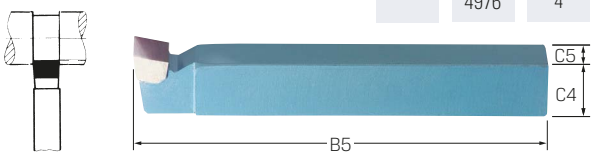


N° article	194220 P20	194260 K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
16×10	●	●	16	10	110	E5
20×12	●	●	20	12	125	E6
25×16	●	○	25	16	140	E8

Turning tool wide face

PRETEC

Carbide | DIN 4976 | ISO 4

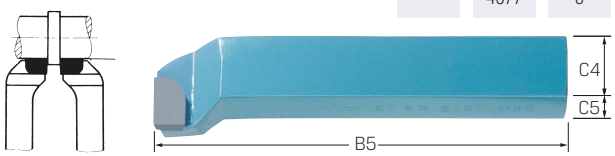


N° article	194320 P20	194360 K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
10×10	●	●	10	10	90	C10
12×12	●	●	12	12	100	C12
16×16	●	●	16	16	110	C16
20×20	●	●	20	20	125	C20
25×25	●	●	25	25	140	C25

Turning tool cranked

PRETEC

Carbide | DIN 4977 | ISO 5

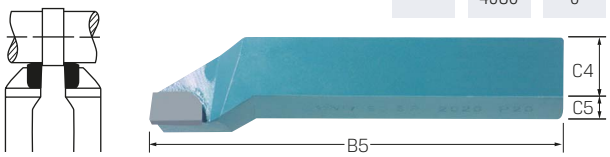


N° article	194420 right, P20	194450 right, K10/20	194470 left, P20	194490 left, K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
16×16	●	●	○	●	16	16	110	A12/B12
20×20	●	○	○	○	20	20	125	A16/B16
25×25	●	○	○	○	25	25	140	A20/B20

Side turning tool cranked

PRETEC

Carbide | DIN 4980 | ISO 6

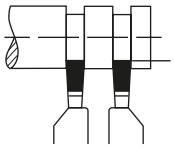


N° article	194520 right, P20	194560 right, K10/20	194570 left, P20	194590 left, K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
10×10	●	●	●	○	10	10	90	A8/B8
12×12	●	●	●	○	12	12	100	A10/B10
16×16	●	●	●	●	16	16	110	A12/B12
20×20	●	●	●	●	20	20	125	A16/B16
25×25	●	●	○	○	25	25	140	A20/B20
32×32	●	●	○	○	32	32	170	A25/B25

Grooving turning tool

PRETEC

Carbide	DIN 4981	ISO 7



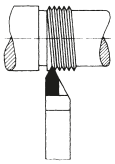


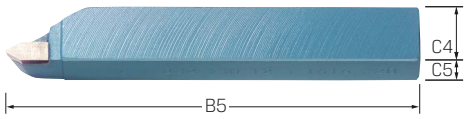
N° article	194620 right, P20	194630 left, P20	194640 right, P40	194650 right, K10/20	194670 left, K10/20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
12×8	●	●	●	●	●	12	8	100	D3
16×10	●	●	●	●	●	16	10	110	D4
20×12	●	●	●	●	●	20	12	125	D5
25×16	●	●	●	●	○	25	16	140	D6
32×20	●	●	○	○	○	32	20	170	D8

External threading tool
for 60° flank angle

PRETEC

Carbide	DIN 282	ISO 12



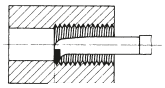


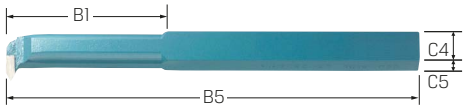
N° article	194680 right, P20	C4 mm	C5 mm	B5 mm	ISO/DIN HM sheet
12×12	●	12	12	110	E5
16×10	●	16	10	120	E5
16×16	●	16	16	125	E6
20×12	●	20	12	140	E6
20×20	●	20	20	140	E8
25×25	●	25	25	160	E10

Female thread turning tool
for 60° flank angle

PRETEC

Carbide	DIN 283	ISO 13



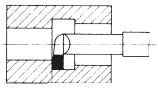


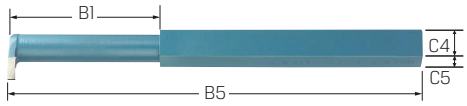
N° article	194720 right, P20	C4 mm	C5 mm	B5 mm	B1 mm	ISO/DIN HM sheet
10×10	●	10	10	140	52	E4
12×12	●	12	12	160	56	E5
16×16	●	16	16	180	63	E6
20×20	●	20	20	210	80	E8
25×25	●	25	25	250	100	E10

Internal recessing tool
for internal grooves

PRETEC

Carbide	ähnlich DIN 263	ISO 11



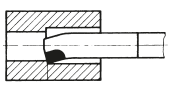


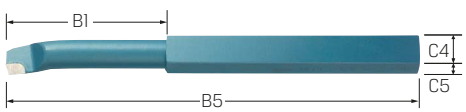
N° article	194760 right, P20	194780 right, K10/20	C4 mm	C5 mm	B5 mm	B1 mm	ISO/DIN HM sheet
10×10	●	●	10	10	140	52	D3
12×12	●	●	12	12	160	56	D4
16×16	●	●	16	16	180	63	D5
20×20	●	●	20	20	210	80	D6
25×25	●	○	25	25	250	100	D8

Internal turning tool

PRETEC

Carbide	DIN 4974	ISO 9

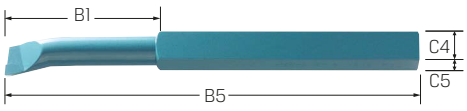




N° article	194820 Roughing lathe tool 75° right, P20	194840 Roughing lathe tool 75°, right, K10/20	C4 mm	C5 mm	B5 mm	B1 mm	ISO/DIN HM sheet
8×8	●	●	8	8	125	40	A5
10×10	●	●	10	10	150	50	A6
12×12	●	●	12	12	180	63	A8
16×16	●	●	16	16	210	80	A10
20×20	●	○	20	20	250	100	A12
25×25	●	○	25	25	300	125	A16
32×32	○	○	32	32	355	160	A20

PRETEC

Carbide	DIN 4974	ISO 9



N° article	194860 Corner lathe tool 90°, right, P20	194880 Corner lathe tool 90°, right, K10/20	C4 mm	C5 mm	B5 mm	B1 mm	ISO/DIN HM sheet
8×8	●	●	8	8	125	40	A5
10×10	●	●	10	10	150	50	A6
12×12	●	●	12	12	180	63	A8
16×16	●	●	16	16	210	80	A10
20×20	●	●	20	20	250	100	A12
25×25	●	○	25	25	300	125	A16
32×32	●	●	32	32	355	160	A20

Economical multifunctional tool for drilling, longitudinal turning (internal and external) and facing.
ISO material

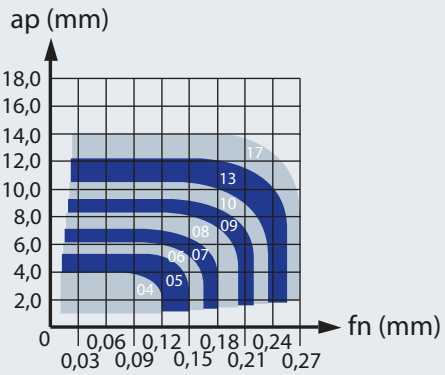


Cutting data recommendation

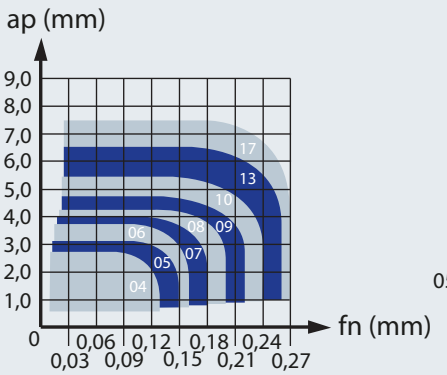
ISO	Material	HB	Cutting speed Vc [m/min]		
			F5120	T2330	N3610
P	steel	≤ 350	120		
	low alloy steel	≤ 350	80		
	alloy Steel	≤ 325	60		
M	stainless steel, martensitic	≤ 240	50		
	stainless steel, austenitic	≤ 230	50	80	
	stainless steel, duplex	≤ 230	50	80	
K	cast iron	≤ 260	180		
	spheroidal graphite iron	≤ 250	160		
	malleable cast iron	≤ 230	150		
N	aluminium	≤ 130			300
	copper	≤ 110			250
	plastics	–			150

The specified cutting values are guide values. The optimum data for the respective machining case should be determined in a test or during machining.

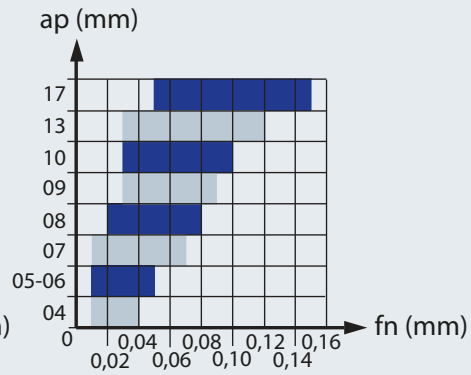
Turning 1,5 × A11



Turning 2,25 × A11



Drilling



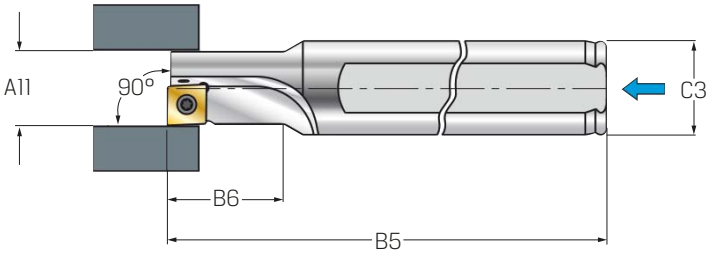
Turning an boring tool SEC

Design:
Made of quality tool steel.

Use:
Economical multifunctional tool for drilling, longitudinal turning (internal and external) and facing.

Delivery:
Without indexable insert.

Note:
Holder Ø 8 mm available on request.



NEW



N° article	195011 1.5×A11, right	A11 mm	B5 mm	B6 mm	C3 mm	Indexable insert type
SEC10-150.05	●	10	90	15	12	XCGT05... XCNT05...
SEC12-150.06	●	12	100	18	16	XCGT06... XCNT06...
SEC14-150.07	●	14	110	21	16	XCGT07... XCNT07...
SEC16-150.08	●	16	125	24	20	XCGT08... XCNT08...
SEC18-150.09	●	18	135	27	25	XCGT09... XCNT09...
SEC20-150.10	●	20	150	30	25	XCGT10... XCNT10...
SEC25-150.13	●	25	180	37,5	32	XCGT13... XCNT13...
SEC32-150.17	●	32	200	48	40	XCGT17... XCNT17...

N° article	195015 1,5×A11, links	A11 mm	B5 mm	B6 mm	C3 mm	Indexable insert type
SEC10-150.05	●	10	90	15	12	XCGT05... XCNT05...
SEC12-150.06	●	12	100	18	16	XCGT06... XCNT06...
SEC14-150.07	●	14	110	21	16	XCGT07... XCNT07...
SEC16-150.08	●	16	125	24	20	XCGT08... XCNT08...
SEC18-150.09	●	18	135	27	25	XCGT09... XCNT09...
SEC20-150.10	●	20	150	30	25	XCGT10... XCNT10...
SEC25-150.13	●	25	180	37,5	32	XCGT13... XCNT13...
SEC32-150.17	●	32	200	48	40	XCGT17... XCNT17...

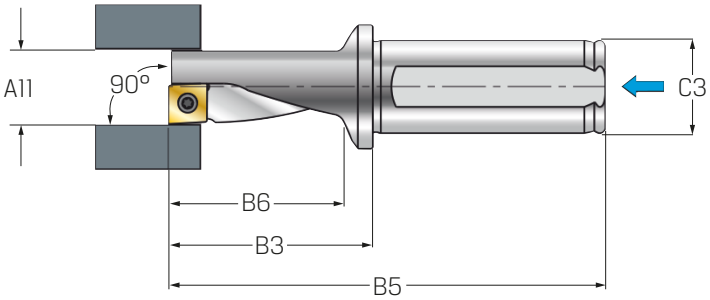
Internal turning tool SEC

Design:
Made of quality tool steel.

Use:
Economical multifunctional tool for drilling, longitudinal turning (internal and external) and facing.

Delivery:
Without indexable insert.

Note:
Holder Ø 8 mm available on request.



NEW



N° article	195021 2.25×A11, right	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	Indexable insert type
SEC10-225.05	●	10	28	70	22,5	12	XCGT05... XCNT05...
SEC12-225.06	●	12	34	79	27	16	XCGT06... XCNT06...
SEC14-225.07	●	14	38	83	31,5	16	XCGT07... XCNT07...
SEC16-225.08	●	16	43,5	93,5	36	20	XCGT08... XCNT08...
SEC18-225.09	●	18	52,5	108,5	40,5	25	XCGT09... XCNT09...
SEC20-225.10	●	20	55	111	45	25	XCGT10... XCNT10...
SEC25-225.13	●	25	69	129	56,3	32	XCGT13... XCNT13...
SEC32-225.17	●	32	87	157	72	40	XCGT17... XCNT17...

N° article	195025 2,25×A11, links	A11 mm	B3 mm	B5 mm	B6 mm	C3 mm	Indexable insert type
SEC10-225.05	●	10	28	70	22,5	12	XCGT05... XCNT05...
SEC12-225.06	●	12	34	79	27	16	XCGT06... XCNT06...
SEC14-225.07	●	14	38	83	31,5	16	XCGT07... XCNT07...
SEC16-225.08	●	16	43,5	93,5	36	20	XCGT08... XCNT08...
SEC18-225.09	●	18	52,5	108,5	40,5	25	XCGT09... XCNT09...
SEC20-225.10	●	20	55	111	45	25	XCGT10... XCNT10...
SEC25-225.13	●	25	69	129	56,3	32	XCGT13... XCNT13...
SEC32-225.17	●	32	87	157	72	40	XCGT17... XCNT17...

Indexable insert for turning and drilling tools SEC

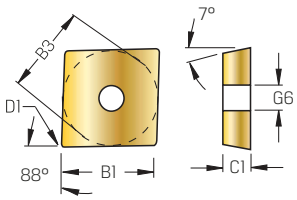
SC | PU 10 pieces

Design:
- variety F5120
- coated

Use:
Universally applicable for machining steel, stainless steel and cast iron.

Note:
Delivery only in PU. Price per piece
Further versions available on request

NEW





Art.-Nr.	195031 F5120	B1 mm	B3 mm	C1 mm	G6 mm	D1 mm
XCNT050202EN-N54	●	5	5,8	2,1	2,25	0,2
XCNT050204EN-N54	●	5	5,8	2,1	2,25	0,4
XCNT060202EN-N54	●	6	6,5	2,38	2,5	0,2
XCNT060204EN-N54	●	6	6,5	2,38	2,5	0,4
XCNT070304EN-N54	●	7	7,6	3,18	2,8	0,4
XCNT080304EN-N54	●	8	8,5	3,18	3,4	0,4
XCNT09T304EN-N54	●	9	9,6	3,97	3,4	0,4
XCNT10T304EN-N54	●	10	10,6	3,97	4,4	0,4
XCNT10T308EN-N54	●	10	10,6	3,97	4,4	0,8
XCNT130404EN-N54	●	12,5	13,5	4,76	5,3	0,4
XCNT130408EN-N54	●	12,5	13,5	4,76	5,3	0,8
XCNT170508EN-N54	●	17	17,5	5,56	5,3	0,8

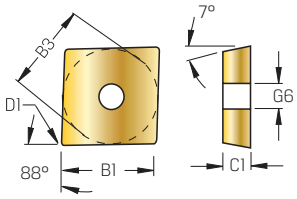
Design:
- variety T2330
- coated

Use:
Special grade for machining stainless steel.

Note:
delivery only in PU. Price per piece
Further versions available on request

SC | PU 10 pieces

NEW





Art.-Nr.	195035 T2330	B1 mm	B3 mm	C1 mm	G6 mm	D1 mm
XCGT050202EN-N53	●	5	5,8	2,1	2,25	0,2
XCGT050204EN-N53	●	5	5,8	2,1	2,25	0,4
XCGT060202EN-N53	●	6	6,5	2,38	2,5	0,2
XCGT060204EN-N53	●	6	6,5	2,38	2,5	0,4
XCGT070304EN-N53	●	7	7,6	3,18	2,8	0,4
XCGT080304EN-N53	●	8	8,5	3,18	3,4	0,4
XCGT09T304EN-N53	●	9	9,6	3,97	3,4	0,4
XCGT10T304EN-N53	●	10	10,6	3,97	4,4	0,4
XCGT10T308EN-N53	●	10	10,6	3,97	4,4	0,8
XCGT130404EN-N53	●	13	13,5	4,76	5,3	0,4
XCGT130408EN-N53	●	13	13,5	4,76	5,3	0,8
XCGT170508EN-N53	●	17	17,5	5,56	5,3	0,8

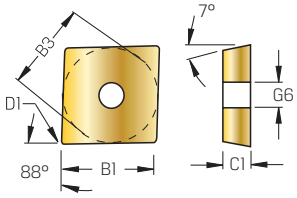
Design:
- variety N3610
- uncoated

Use:
Special grade for processing non-ferrous metals.

Note:
Delivery only in PU. Price per piece
Further versions available on request

SC | PU 10 pieces

NEW





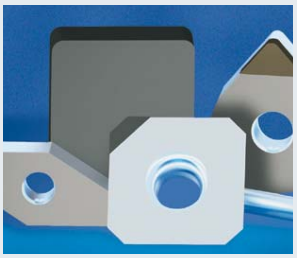
Art.-Nr.	195039 N3610	B1 mm	B3 mm	C1 mm	G6 mm	D1 mm
XCGT050202FN-N57P	●	5	5,8	2,1	2,25	0,2
XCGT050204FN-N57P	●	5	5,8	2,1	2,25	0,4
XCGT060202FN-N57P	●	6	6,5	2,38	2,5	0,2
XCGT060204FN-N57P	●	6	6,5	2,38	2,5	0,4
XCGT070304FN-N57P	●	7	7,6	3,18	2,8	0,4
XCGT080304FN-N57P	●	8	8,5	3,18	3,4	0,4
XCGT09T304FN-N57P	●	9	9,6	3,97	3,4	0,4
XCGT10T304FN-N57P	●	10	10,6	3,97	4,4	0,4
XCGT10T308FN-N57P	●	10	10,6	3,97	4,4	0,8
XCGT130404FN-N57P	●	13	13,5	4,76	5,3	0,4
XCGT130408FN-N57P	●	13	13,5	4,76	5,3	0,8
XCGT170508FN-N57P	●	17	17,5	5,56	5,3	0,8

Cubic Boron Nitride (CBN)

Product Information

Properties CBN

Cubic boron nitride (CBN) is known as the second hardest material after the diamond and shows, unlike diamond, hardly any chemical reaction in the processing of ferrous metals.



By means of a high-temperature high-pressure process, a dense, homogeneous layer of polycrystalline cubic boron nitride is applied to hard metal as carrier material. This polycrystalline cubic boron nitride is called CBN. CBN cutting inserts or inserts have been developed to replace grinding processes by finishing hardened steel materials (HRC 45-68) at high cutting speeds of 80-200 m/min. . CBN is also used for economical machining of pearlitic grey cast iron as well as hard and alloyed castings.

Applications

BBN 61	Hardened steel with heavily interrupted cut
BBN 33	Hardened steel with slightly interrupted cut and smooth cut vc-max 180 m / min.
BBN 62	Hard finishing without interruption, vc-max› 200 m / min.
BBN 02	Finishing of castings, sintered materials
BBN 27	Roughing of chilled castings, NiHard, sintered materials, hard facings **(on request))**

Cutting data recommendations CBN

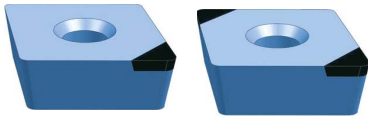
Material	Cut-speed V (m/min.)		DOC ap mm	Feed f mm/ rev *	BBN61	BBN33	BBN62	BBN02	BBN27
Hardened steel (HRC45 - 68) tool steels, case-hardening steels	Rough turning	80 – 130	0.5 – 2.0	0.1 – 0.4		□		□	■
Full and slightly interrupted cut	Finish turning	80 – 180	0.1 – 0.5	0.03 – 0.2	□	■	■		
(High efficiency even without cooling lubricant)	Milling	200 – 600	0.05 – 0.3	0.03 – 0.2				■	
Hardened steel (HRC45 - 68) tool steels, case-hardening steels	Rough turning	70 – 120	0.5 – 2.0	0.1 – 0.4	■				■
Heavy interrupted cut	Finish turning	70 – 150	0.1 – 0.5	0.03 – 0.2	■	□		□	
(If possible without cooling lubricant)	Milling	200 – 600	0.05 – 0.3	0.03 – 0.2				■	
Pearlitic cast iron	Rough turning	500 – 1,000	0.5 – 3.0	0.3 – 0.5				□	■
	Finish turning	600 – 2.000	0.05 – 0.5	0.05 – 0.5				■	
	Milling	600 – 2.000	0.5 – 3.0	0.1 – 0.3				■	□
Chilled casting	Rough turning	40 – 100	0.5 – 3.0	0.1 – 0.5				□	■
NiHard	Finish turning	40 – 120	0.1 – 1.0	0.1 – 0.3				■	
Chrome-alloyed castings	Milling	100 – 200	0.1 – 2.5	0.1 – 0.2				■	□
Carbide with over 18% cobalt content	Rough turning	20 – 30	0.2 – 1.0	0.1 – 0.4				■	
	Finish turning	20 – 35	0.1 – 0.5	0.1 – 0.3				■	
Superalloys (Inconel, Waspaloy, Colmonoy)	Finish turning	80 – 200	0.05 – 0.5	0.03 – 0.2				■	
Exotic steels based on nickel or cobalt	Milling	100 – 300	0.1 – 1.5	0.05 – 0.3				■	

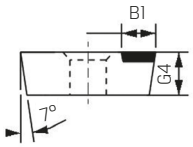
* Feed rates for milling = mm / tooth | ■ = particularly suitable | □ = conditionally suitable

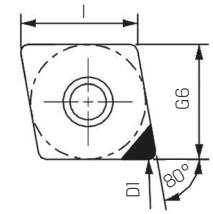
CBN indexable insert

PREMUS

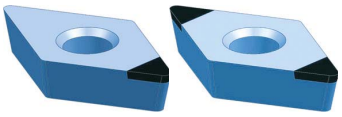
Design:
EW = Disposable cutting insert
MW = Regrindable cutting insert
Z2 = Two-lipped cutting insert
Z3 = Three-lipped cutting insert

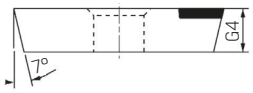


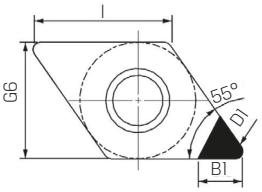




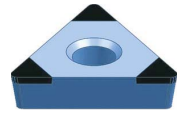
N° article	198205 BBN61	198210 BBN33	198220 BBN02	B1 mm	D1 mm	G4 mm	G6 mm
CCGW060202EW	–	○	–	2,5	0,2	2,38	6,35
CCGW060204EW	–	○	○	2,5	0,4	2,38	6,35
CCGW09T304EW	–	○	○	2,5	0,4	3,97	9,52
CCGW09T304EW-Z2	●	○	○	2,5	0,4	3,97	9,52
CCGW09T308EW	○	–	–	2,5	0,8	3,97	9,52
CCGW09T308EW-Z2	○	–	–	2,5	0,8	3,97	9,52
CCGW120404EW	–	○	–	2,5	0,4	4,76	12,7
CCGW120408EW	●	–	○	2,5	0,8	4,76	12,7

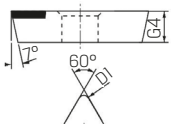






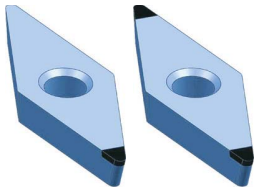
N° article	198225 BBN61	198230 BBN33	198240 BBN02	B1 mm	D1 mm	D1 mm	G4 mm
DCGW070202EW	–	○	–	2,5	0,2	0,2	2,38
DCGW070202EW-Z2	–	○	–	2,5	0,4	0,2	2,38
DCGW070204EW	–	○	○	2,5	0,4	0,4	2,38
DCGW070204EW-Z2	–	○	○	2,5	0,4	0,4	2,38
DCGW11T302EW	–	○	○	2,5	0,8	0,2	3,97
DCGW11T302EW-Z2	●	○	○	2,5	0,8	0,2	2,38
DCGW11T304EW	●	○	○	2,5	0,4	0,4	2,38
DCGW11T304EW-Z2	●	○	○	2,5	0,8	0,4	2,38
DCGW11T308EW	–	○	○	2,5	0,8	3,97	9,52
DCGW11T308EW-Z2	●	○	○	2,5	0,8	2,38	9,52

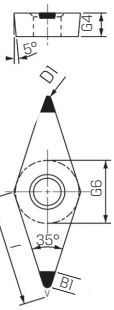




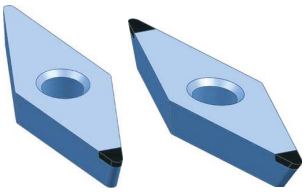
N° article	198245 BBN61	198250 BBN33	198260 BBN02	B1 mm	D1 mm	G4 mm	G6 mm
TCGW06T102EW	–	○	○	2,5	0,2	1,98	3,97
TCGW06T104EW	○	○	○	2,5	0,4	1,98	3,97
TCGW090204EW	–	○	–	2,5	0,4	2,38	5,56
TCGW110204EW	–	–	○	2,5	0,4	2,38	6,35
TCGW110204EW-Z3	–	–	○	2,5	0,4	2,38	6,35
TCGW110208EW-Z3	–	○	–	2,5	0,8	2,38	6,35
TCGW16T304EW	–	○	–	2,5	0,4	3,97	9,52

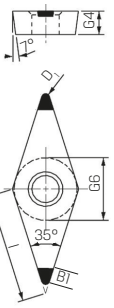
Design:
EW = Disposable cutting insert
Z2 = Two-lipped cutting insert



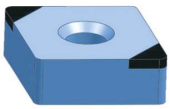


N° article	198305 BBN61	198310 BBN33	198320 BBN02	B1 mm	D1 mm	G4 mm	G6 mm
VBGW110202EW	–	○	–	3	0,2	2,38	6,35
VBGW110202EW-Z2	–	○	–	3	0,2	2,38	6,35
VBGW160402EW-Z2	–	○	○	3	0,2	4,76	9,52
VBGW160404EW	○	○	○	3	0,4	4,76	9,52
VBGW160404EW-Z2	●	○	○	3	0,4	4,76	9,52
VBGW160408EW	●	○	–	3	0,8	4,76	9,52
VBGW160408EW-Z2	–	○	–	3	0,8	4,76	9,52

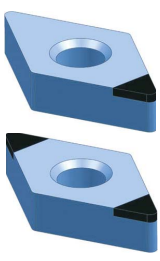


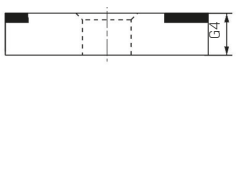


N° article	198330 BBN33	198340 BBN02	B1 mm	D1 mm	G4 mm	G6 mm
VCGW110202EW-Z2	–	○	3	0,2	2,38	6,35
VCGW160402EW	○	–	3	0,2	4,76	9,52
VCGW160402EW-Z2	○	–	3	0,2	4,76	9,52
VCGW160404EW	○	–	3	0,4	4,76	9,52
VCGW160404EW-Z2	○	○	3	0,4	4,76	9,52
VCGW160408EW	○	–	3	0,8	4,76	9,52
VCGW160408EW-Z2	○	○	3	0,8	4,76	9,52



N° article	198345 BBN61	198350 BBN33	198360 BBN02	B1 mm	D1 mm	G4 mm	G6 mm
CNGA120404EW	●	○	○	2,5	0,4	4,76	12,7
CNGA120404EW-Z2	●	○	○	2,5	0,4	4,76	12,7
CNGA120408EW	–	–	○	2,5	0,8	4,76	12,7
CNGA120408EW-Z2	●	○	○	2,5	0,8	4,76	12,7





N° article	198385 BBN61	198390 BBN33	198400 BBN02	B1 mm	D1 mm	G4 mm	G6 mm
DNGA150604EW	–	○	–	2,5	0,4	6,35	12,7
DNGA150604EW-Z2	●	○	○	2,5	0,4	6,35	12,7
DNGA150608EW	●	–	–	2,5	0,8	6,35	12,7
DNGA150608EW-Z2	●	○	○	2,5	0,8	6,35	12,7

Polycrystalline Diamond (PCD)

Product Information

Properties PCD

Diamond, known as the hardest material, is present here in a sintered polycrystalline diamond layer. By means of a high-temperature high-pressure process, a dense, homogeneous layer of polycrystalline diamonds is applied to hard metal as carrier material.



PCD diamond cutting plates are used in the processing of non-ferrous metals [aluminium alloys, copper alloys] and non-metals [fibre-reinforced plastics (GRP, CRP), hard rubber, wood, multilayer laminates (fibre boards, melamine resin composites), fibre particle reinforced metals (MMC - metal matrix composite)].

The use of PCD-equipped tools ensures the highest cutting speeds, service life, surface finishes and dimensional accuracies.

Applications

BDA 23	PCD fine-grain, increased surface requirements, fine-eroding tools
BDA 18	PCD medium grain, standard PCD quality, AlSi max. 12 %
BDA 16	PCD mixed grain, increased wear resistance, AlSi > 12 %, with a high proportion of abrasive fillers

Cutting data recommendations PCD

Material		Cut-speed V (m/min.)		Cutting depth ap mm	Feed f mm/rev *	Recommended type		
						BDA 23	BDA 18	BDA 16
Aluminium alloys, Aluminium, cast aluminium and moulded cast	Si < 12 %	Rough turning	800 – 3,000	0.3 – 5.0	0.1 – 0.6	□	■	
		Finish turning	800 – 3.000	0.05 – 1.0	0.03 – 0.2	□	■	■
		Milling	800 – 3.500	0.1 – 2.5	0.05 – 0.3	□	■	□
High-silicon aluminium	Si > 12 %	Rough turning	300 – 900	0.1 – 2.5	0.1 – 0.4	□	□	■
		Finish turning	300 – 900	0.05 – 0.8	0.03 – 0.2	□	□	■
		Milling	400 – 1.000	0.1 – 2.0	0.05 – 0.3	□	■	■
Copper alloys: Bronze, brass, tinplate, copper, zinc alloys, magnesium alloys		Rough turning	600 – 1,200	0.5 – 2.0	0.1 – 0.4		■	
		Finish turning	700 – 1.500	0.05 – 0.5	0.05 – 0.4	□	■	■
		Milling	700 – 1.200	0.1 – 2.5	0.1 – 0.3		■	□
Carbides up to max. 15 % cobalt content		Rough turning	20 – 25	0.1 – 0.5	0.1 – 0.3		■	□
		Finish turning	20 – 30	0.05 – 0.2	0.05 – 0.2		■	□
Hard rubber, glass, ceramics, graphite, all plastics, PVC, PA, PE, fibre reinforced plastics (GRP, CRP)		Rough turning	80 – 1,000	1.0 – 5.0	0.1 – 0.4			■
		Finish turning	80 – 1.500	0.1 – 2.0	0.05 – 0.3	□	■	■
		Finish turning	200 – 1.000	0.1 – 5.0	0.1 – 0.3		■	■
Wood composites		Sawing	2,000 – 5,000		0.05 – 1.0		■	■
		Milling	2,000 – 5.000		0.05 – 1.0	□	■	■

* Feed rates for milling = mm / tooth | ■ = particularly suitable | □ = conditionally suitable

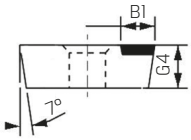
Cutting data recommendation for PCD tools with chip breaker MED and ROF

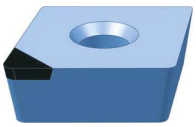
MED	**for fine to medium machining**			
	Radius	R0.2	R0.4	R0.8
	f mm/rev	0.04 - 0.1	0.08 - 0.2	0.1 - 0.3
	ap mm	0.05 - 0.6	0.1 - 2.0	0.3 - 2.5
ROF	**For roughing machining**			
	Radius		R0.4	R0.8
	f mm/rev		0.1 - 0.25	0.15 - 0.35
	ap mm		0.4 - 2.0	0.6 - 3.0

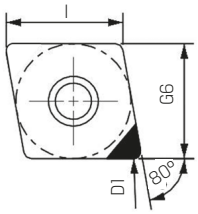
The values given are only approximations. The processing should start with the average value of the recommended cutting data, then the cutting values can be changed (according to the chip shape and surface quality) in order to optimise the machining.

PCD indexable insert

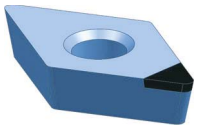
Design:
EW = Disposable cutting insert
MW = Reusable cutting insert
5/10: Positive rake angle

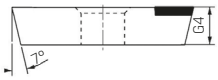


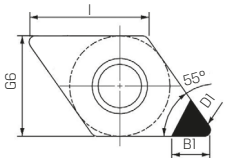




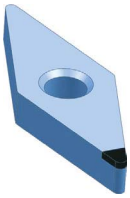
N° article	198450 BDA 18	B1 mm	D1 mm	G4 mm	G6 mm
CCGW060202EW	●	2,5	0,2	2,38	6,35
CCGW060204EW	●	2,5	0,4	2,38	6,35
CCGW09T304EW	●	2,5	0,4	3,97	9,52
CCGW120404EW	●	2,5	0,4	4,76	12,7

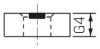


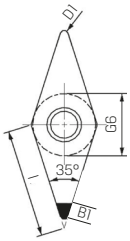




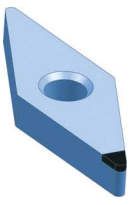
N° article	198470 BDA 18	198480 BDA 23	B1 mm	D1 mm	D3°	G4 mm	G6 mm
DCGW070202EW	●	–	2,5	0,2	–	2,38	6,35
DCGW070204EW	●	–	2,5	0,4	–	2,38	6,35
DCGW11T302EW	●	●	2,5	0,2	–	3,97	9,52
DCGW11T304EW	●	●	2,5	0,4	–	3,97	9,52
DCGT11T304MW-10	●	–	4	0,4	10	3,97	9,52
DCGT11T308MW-10	●	–	4	0,8	10	3,97	9,52

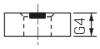


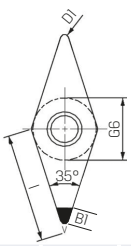




N° article	198570 BDA 18	B1 mm	D1 mm	D3°	G4 mm	G6 mm
VBGT110204EW-5	●	3	0,4	5	2,38	6,35
VBGW160404EW	●	3	0,4	–	4,76	9,52

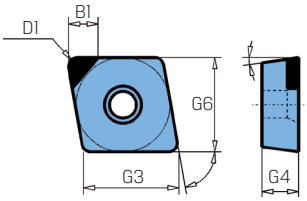


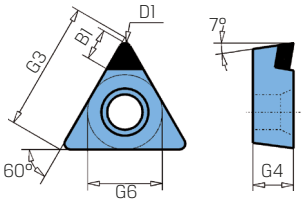




N° article	198590 BDA 18	B1 mm	D1 mm	D3°	G4 mm	G6 mm
VCGT160404MW-10	●	4	0,4	10	4,76	9,52
VCGT160408MW-10	●	4	0,8	10	4,76	9,52

Use:
MED: For fine to medium machining
ROF: For roughing machining









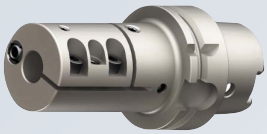
N° article	198650 BDA 18, with chip groove MED	198660 BDA 18, with chip groove ROF	B1 mm	D1 mm	G3 mm	G4 mm	G6 mm
CCGT09T304MED	●	–	4	0,4	9,7	3,97	9,52
DCGT070202MED	●	–	3,5	0,2	7,75	2,38	6,35
DCGT070204MED	●	–	3,5	0,4	7,75	2,38	6,35
DCGT11T302MED	●	–	4	0,2	11,6	3,97	9,52
DCGT11T304MED	●	–	4	0,4	11,6	3,97	9,52
DCGT11T304ROF	–	●	4	0,4	11,6	3,97	9,52
DCGT11T308MED	●	–	4	0,8	11,6	3,97	9,52
TCGT110202MED	●	–	3,5	0,2	11	2,38	6,35
TCGT16T304MED	●	–	4	0,4	16,5	3,97	9,52
VCGT110302MED	●	–	3,7	0,2	11,1	3,18	6,35
VCGT110304MED	●	–	3,7	0,4	11,1	3,18	6,35
VCGT160404MED	●	–	4,5	0,4	16,6	4,76	9,52
VCGT160404ROF	–	●	4,5	0,4	16,6	4,76	9,52
VCGT160412MED	●	–	4,5	1,2	16,6	4,76	9,52



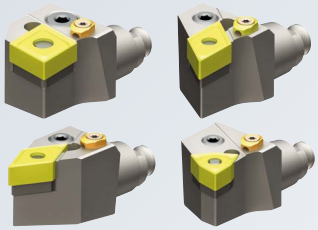
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Replaceable head for indexable inserts
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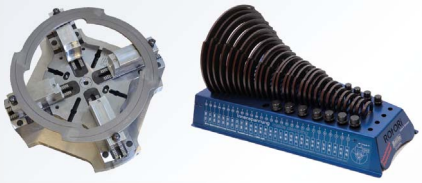
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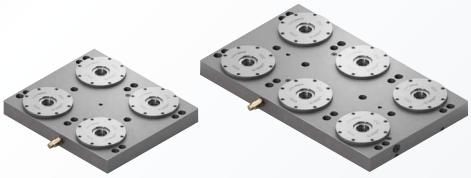
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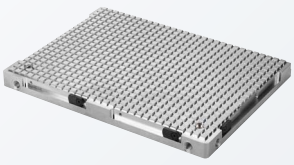
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Tower clamping module HILMA.TS
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Machine vice HILMA.UC 125
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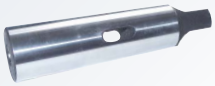


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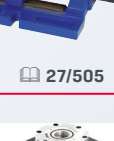



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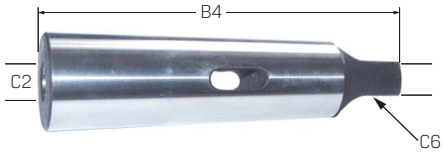
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Reducing sleeve for tools with MT

Design:
- **precision version,** fully hardened, inside and outside ground
- high concentricity

DIN 2185

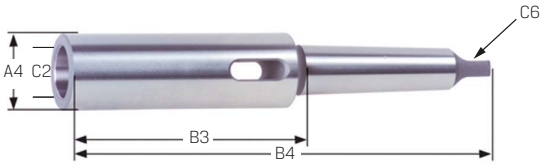


N° article	200100	C6	C2	B4 mm
1/0	○	MK1	MK0	85
2/1	●	MK2	MK1	92
3/1	●	MK3	MK1	99
3/2	●	MK3	MK2	112
4/1	●	MK4	MK1	124
4/2	●	MK4	MK2	124
4/3	●	MK4	MK3	140
5/1	●	MK5	MK1	156
5/2	●	MK5	MK2	156
5/3	●	MK5	MK3	156
5/4	●	MK5	MK4	171
6/3	○	MK6	MK3	218
6/4	●	MK6	MK4	218
6/5	●	MK6	MK5	218

Extension sleeve for tools with MT

Design:
- **precision version,** fully hardened, inside and outside ground
- high concentricity

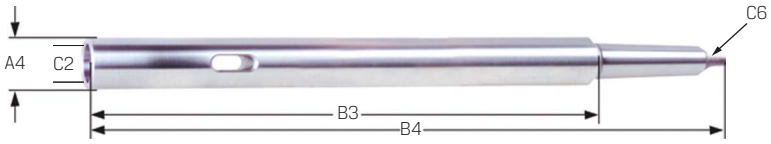
DIN 2187



N° article	200550	C6	C2	A4 mm	B3 mm	B4 mm
1/1	●	MK1	MK1	20	83	145
2/1	●	MK2	MK1	20	85	160
3/1	●	MK3	MK1	20	81	175
4/1	○	MK4	MK1	20	82,5	200
1/2	●	MK1	MK2	30	98	160
2/2	●	MK2	MK2	30	100	175
3/2	●	MK3	MK2	30	100	194
4/2	●	MK4	MK2	30	97,5	215
5/2	○	MK5	MK2	30	97,5	247
2/3	●	MK2	MK3	36	121	196
3/3	●	MK3	MK3	36	121	215
4/3	●	MK4	MK3	36	122,5	240
5/3	○	MK5	MK3	36	118,5	268
3/4	●	MK3	MK4	48	146	240
4/4	●	MK4	MK4	48	147,5	265
5/4	●	MK5	MK4	48	150,5	300
4/5	●	MK4	MK5	63	182,5	300
5/5	●	MK5	MK5	63	185,5	335

Extension sleeve with equal male and female taper

Design:
- for tools with MT
- fully hardened, inside and outside ground
- similar to DIN 2187



N° article	200600	C6	C2	A4 mm	B3 mm	B4 mm
1:1/250	●	MK1	MK1	20	188	250
1:1/350	●	MK1	MK1	20	288	350
2:2/300	●	MK2	MK2	25	225	300
2:2/400	●	MK2	MK2	25	325	400
3:3/300	●	MK3	MK3	32	206	300
3:3/450	●	MK3	MK3	32	356	450
4:4/300	●	MK4	MK4	40	182	300
4:4/400	●	MK4	MK4	40	282	400
4:4/500	●	MK4	MK4	40	382	500

Clamping sleeve
for taps and reamers

Design:
- fully hardened
- morse taper and hole ground

DIN 6328

Use:
For receiving taps and reamers with cylindrical shanks and squares in adjustable adapters, floating tool holders, quick-change adapters etc.



N° article	201300	C6	C2 mm	Square mm	N° article	201300	C6	C2 mm	Square mm
1/3,5	●	MK1	3,5	2,7	2/12	●	MK2	12	9
1/4	○	MK1	4	3	3/8	●	MK3	8	6,2
1/4,5	●	MK1	4,5	3,4	3/9	●	MK3	9	7
1/5	○	MK1	5	3,8	3/10	●	MK3	10	8
1/5,5	○	MK1	5,5	4,3	3/11	●	MK3	11	9
1/6	●	MK1	6	4,9	3/12	●	MK3	12	9
1/7	●	MK1	7	5,5	3/14	●	MK3	14	11
1/8	●	MK1	8	6,2	3/16	●	MK3	16	12
2/5,5	○	MK2	5,5	4,3	4/12	○	MK4	12	9
2/6	●	MK2	6	4,9	4/14	○	MK4	14	11
2/7	●	MK2	7	5,5	4/16	●	MK4	16	12
2/8	●	MK2	8	6,2	4/18	●	MK4	18	14,5
2/9	●	MK2	9	7	4/20	●	MK4	20	16
2/10	●	MK2	10	8	4/22	●	MK4	22	18
2/11	●	MK2	11	9	4/25	●	MK4	25	20

Taper mandrel

Design:
- fully hardened and ground
- with morse taper and tang

Use:
For holding drill chucks with drill chuck tapers to DIN 238, for power drills, box-column drilling machines etc.

*B18 shortened by 7 mm, fitting for quick-acting drill chucks 214500 and 215000 with taper B18



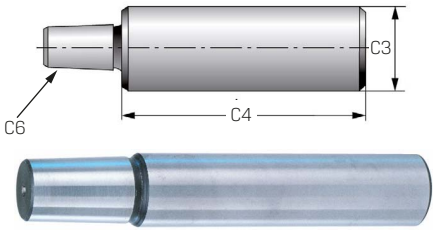
N° article	201400	C6	C2	N° article	201400	C6	C2
1/B10	●	MK1	B10	3/B16	●	MK3	B16
1/B12	●	MK1	B12	3/B18	●	MK3	B18
1/B16	●	MK1	B16	3/B18-1	●	MK3	B18*
1/B18-1	○	MK1	B18*	3/B22	●	MK3	B22
2/B10	●	MK2	B10	3/B24	○	MK3	B24
2/B12	●	MK2	B12	4/B16	●	MK4	B16
2/B16	●	MK2	B16	4/B18	●	MK4	B18
2/B18	●	MK2	B18	4/B18-1	●	MK4	B18*
2/B18-1	○	MK2	B18*	4/B22	●	MK4	B22
2/B22	●	MK2	B22	4/B24	○	MK4	B24
3/B12	●	MK3	B12				

Taper mandrel

ALBRECHT
Präzisions Spannfutter

Design:
- hardened and ground
- high concentricity ‹ 2 µm

Use:
- for holding precision drill chucks
- the parallel shank can be mounted into collets or milling chucks



N° article	201480	C6	C3 mm	C4 mm
B6/6	●	B6	6	35
B10/8	●	B10	8	35
B12/10	●	B12	10	50
B16/16	●	B16	16	50

Drill drifts

DIN 317

Design:
- made of special steel, hardened and burnished
- for morse tapers DIN 228 with tang



N° article	201500	for taper size	l_1 mm
0	●	MK0	90
1 - 2	●	MK1, MK2	140
3	●	MK3	190
4	●	MK4	225
5 - 6	●	MK5, MK6	265

Drill drifts

Design:
- made of special steel, hardened and burnished
- handle plastic coated, red, with finger guard

Use:
- one-hand operation
- for morse tapers DIN 228 with tang



N° article	201550 semi-automatic	for taper size	l_1 mm
1 - 3	●	MK1, MK2, MK3	330
4 - 6	●	MK4, MK5, MK6	380

Taper wiper HSK

Design:
- made of plastic, trimmed with dimensionally stable leather stripes
- oil and grease resistant, no abrasion particles
- large clearances to uptake dirt and swarf

Use:
For cleaning internal tapers



N° article	201625 Plastic	for taper size
HSK32	●	HSK32
HSK40	●	HSK40
HSK50	●	HSK50
HSK63	●	HST-A63
HSK80	●	HSK80
HSK100	●	HST-A100

Taper wiper MT/ST

Design:
201600:
- made of wood, trimmed with leather stripes

201605:
- made of plastic, trimmed with dimensionally stable leather stripes
- oil and grease resistant, no abrasion particles
- large clearances to uptake dirt and swarf

Use:
For cleaning MT/ST internal tapers


201600


201605

N° article	201600 Wood	201605 Plastic	for taper size
MK1	●	●	MK1
MK2	●	●	MK2
MK3	●	●	MK3
MK4	●	●	MK4
MK5	●	●	MK5
SK30	●	●	SK30
SK40	●	●	SK40
SK50	●	●	SK50

Taper wiper ER

Design:
- wooden
- set with leather strips

Use:
For cleaning internal tapers, at ER collet chuck.



N° article	201629 Wood	Collet size	for taper size
ER16	●	ER16	ER16
ER20	●	ER20	ER20
ER25	●	ER25	ER25
ER32	●	ER32	ER32
ER40	●	ER40	ER40

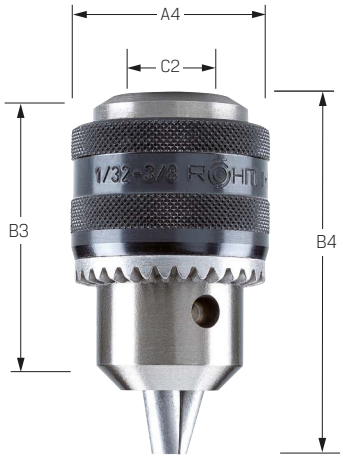
Gear rim drill chuck Prima

Design:
- key to DIN 6349
- jaw adjustment through gear teeth connection inside gear rim
- gear rim and thread are of one piece, which gives the advantage of direct momentum

Use:
- universal chuck with constant clamping power for all drilling work
- with tapers suited for clockwise and anticlockwise rotation

P = heavy industrial version,
for stationary drills and hand-held impact drills

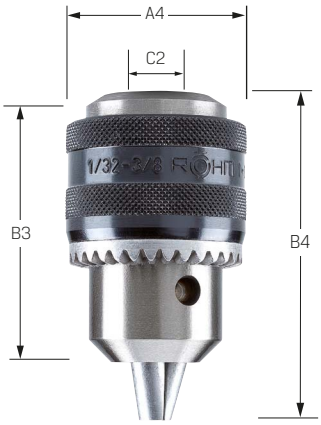
M or S = lightweight intermediate sizes,
mainly for hand-held impact drills



Nº article	214000 Taper reception	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2	Key size
8M-B10	○	0,5 - 8	29,5	43	53	B10	S1
8M-B12	○	0,5 - 8	29,5	47,5	57,5	B12	S1
10S	●	0,8 - 10	34,5	50	60,5	B12	S2A
10P	●	1 - 10	42,8	63	77	B16	S2A
13S	●	1,5 - 13	42,8	63	77	B16	S2A
16M	●	3 - 16	50	67,5	86,5	B16	S3
16P	●	1 - 16	56,5	79	98	B18	S3
20P	●	5 - 20	65	92,5	113,5	B22	S4

Design:
- like 214000, but with thread adapter and key DIN 6349
- socket pressed onto the toothed ring and sunk
- the chuck is fit for percussion drilling

DB = with holes, for clockwise and anti-clockwise operating machines



Nº article	214050 Thread attachment	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2	Key size
10S	●	1 - 10	33,35	49,5	61	3/8"-24	S2A
10S-DB	○	1 - 10	33,35	49,5	61	1/2"-201/2"-20	S2A
13S	●	1,5 - 13	42,4	59	74	3/8"-24	S2A
13S-DB	●	1,5 - 13	42,4	59	74	1/2"-20	S2A
16M	○	3 - 16	50	68,5	87,5	3/8"-24	S3

Spare key for scroll chucks

DIN 6349

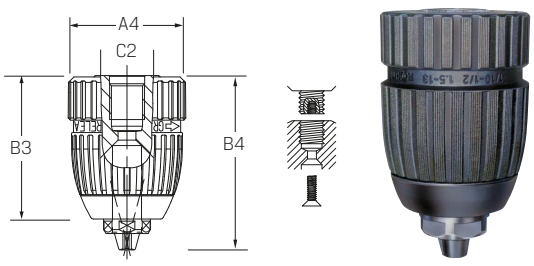


Nº article	214300	Key size	Tenon Ø mm
S1	●	S1	4
S2	●	S2	6
S2AT	●	S2AT	6
S3T	●	S3T	8
S3	●	S3	8
S4	●	S4	9

Chuck extra RV with through hole

Design and use:
- for right and left rotation
- keyless chuck with radial locking
- for mains-operated and cordless drills
- for percussion drilling, with hex key for attaching to and removing from the spindle
- for drilling machines up to 1,100 watt power

When drilling, percussion drilling and screw driving using corded and cordless drills, these chucks have decisive advantages:
- no additional locking necessary
- with collision protector
- with carbide inserts in the clamping jaws (size 13)
- with through-hole for clockwise and anti-clockwise rotation (thread M 5 or M 6)
- if necessary, use maintenance spray



Nº article	214350 Holder 3/8"-24	214360 Holder 1/2"-20	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2
1 - 10	●	○	1 - 10	42,7	55	60,9	3/8"-24
1,5 - 13	●	●	1,5 - 13	42,7	64,5	72,4	3/8"-24

Keyless drill chuck Supra

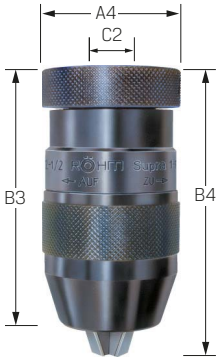
Design:
- self-clamping, robust retaining ring, short version, low weight
- automatic retightening during drilling proportional to clamping force to maintain the gripping force even under difficult conditions

Use:
For rapid clamping and releasing of tools on stationary or hand-guided power drills

N = heavy industrial version,
for stationary drills

S = light weight version,
mainly for hand-held impact drills

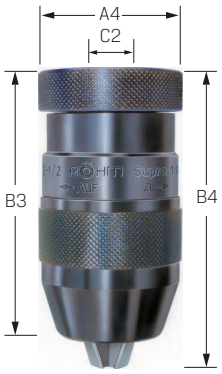
*shortened: B16 by 2.5 mm, B18 by 7 mm.



N° article	214500 Taper reception	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2
6N	●	0 - 6,5	32	59,5	65,6	B10
6N-1	●	0 - 6,5	32	59,5	65,6	B12
8N	●	0 - 8	35,8	67	73,4	B12
10N	●	0 - 10	40,2	79,5	86,1	B12
10N-1	●	0 - 10	40,2	82,5	89,1	B16*
13S	●	1 - 13	40,2	78,8	86,1	B12
13S-1	●	1 - 13	40,2	82,3	89,6	B16*
13N	●	1 - 13	46	93	101,5	B16*
16S	●	3 - 16	46	88,5	98,5	B16*
16S-1	●	3 - 16	46	92	102	B18*
16N	●	3 - 16	51	96,5	106,8	B16*
16N-1	●	3 - 16	51	96,5	106,8	B18*

Design and use:
Self-clamping, like 214500 but with thread socket

S = light weight version,
mainly for hand-held impact drills



N° article	214520 Thread attachment	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2
8S	○	0 - 8	32	61,5	67,6	3/8"-24
10S	●	0,5 - 10	35,8	66	73,7	3/8"-24
10S-1	○	0,5 - 10	35,8	66	73,7	1/2"-20
13S	●	1 - 13	40,2	76,3	83,6	3/8"-24
13S-1	●	1 - 13	40,2	76,3	83,6	1/2"-20
16S	●	3 - 16	46	87,5	97,5	1/2"-20

Keyless drill chuck Supra ST

Design:
- like 214500-214520, but percussion-proof quick-action keyless chuck for percussion drills
- self-clamping, accident-proof by clamping force safety device

B16: Shortened by 2.5 mm



N° article	214600 Clamping force safety device	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2
10SK	●	0,5 - 10	40	68	75,7	B12
13SK	●	1 - 13	42,8	77	86,1	B12
13SK-1	●	1 - 13	42,8	80,2	89,3	B16
13SK-2	●	1 - 13	42,8	74,2	83,3	3/8"-24

Keyless drill chuck Spiro

Design:
- self-clamping chuck with high runout precision
- automatic increase of clamping force
- wearing parts hardened, ground and exchangeable

Use:
For high speeds with high accuracy on drilling machines, boring mills etc.

B18: Shortened by 7 mm



N° article	214620 Precision version	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2
4/B10	○	0 - 4	26	45,5	50,8	B10
6/B12	○	0 - 6,5	35	62,5	68,6	B12
10/B12	○	0 - 10	43	82,5	90,1	B12
10/B16	●	0 - 10	43	82,5	90,1	B16
13/B16	●	1 - 13	50	94	102,5	B16
16/B16	●	3 - 16	55	96,5	106,8	B16
16/B18	●	3 - 16	55	96,5	106,8	B18

Keyless drill chuck SUPER

ALBRECHT
Präzisions Spannfutter

Design:
- self-clamping three-jaw chuck
- for permanent use with utmost concentricity
- wearing parts case-hardened, ground and replaceable
- 100 % concentricity accuracy with different plug gauge diameters at different measuring points, according to ISO 10888
- size 15 with vernier scale for easy clamping of smallest drills and for fine boring aid 215100

For matching taper mandrels see 201400 and 201480

Use:
As precision chuck with high clamping force for mass production, assembly and repair operations, on milling machines, machining centres, box column drills and jig boring machines

B18: with shortened taper





N° article	215000 Taper reception	Clamping width from-to mm	A4 mm	B3 mm	B4 mm	C2
015/06	●	0,2 - 1,5	19	35	37,5	B6
030/06	●	0,2 - 3	24	44	47,5	B6
030/10	●	0,2 - 3	24	44	47,5	B10
065/10	○	0,5 - 6,5	34	61,5	68	B10
065/12	●	0,5 - 6,5	34	61,5	68	B12
100/12	●	0,5 - 10	43	80	92	B12
100/16	●	0,5 - 10	43	80	92	B16
130/16	●	1 - 13	50	90,5	103	B16
160/16	●	3 - 16	56	95,5	109	B16
160/18	●	3 - 16	56	95,5	109	B18

N° article		015	030	065	100	130	160
215050	Replacement jaw set	○	○	○	○	●	●

Fine boring aid

ALBRECHT
Präzisions Spannfutter

Design:
- with ball bearing guide-ring and cylindrical shank Ø 13 mm
- to be mounted in collets or chucks
- with MK1 shank for direct mounting to drill spindle
- for sensitive drilling of the smallest holes

Use:
To hold precision drill chuck 215000 015/06.

Fine boring aid for sensitive drilling of small holes
Easy handling: For drilling, the ball-bearing guide ring is held with 2 fingers and pulled sensitively depending on the drill Ø.
At releasing the drill returns to its initial position. The drilling stroke is 20 mm.
The release spring of the fine boring aid is rated exactly for the weight of drill chuck 215000 size 015/06





N° article	215100 Bores up to 1.5 mm	C2	C6
B6/13	○	B6	13
B6/MK1	○	B6	MK1

Keyless drill chuck SBF-PLUS

ALBRECHT
Präzisions Spannfutter

Design:
- drill chuck and shank form one unit
- high concentricity
- compact construction, short version (21 mm shorter than two-piece system consisting of taper mandrel and drill chuck)



MK



16

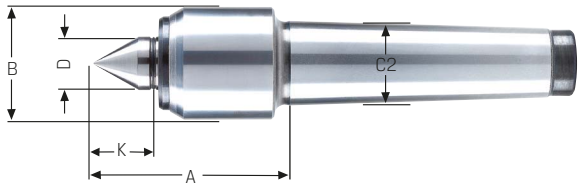
N° article	215200 Clamping range 1 - 13 mm	215250 Clamping range 3 - 16 mm	215200 B3 mm	215250 B3 mm	MT	Cyl. mm
MK2	●	●	85	88,5	MK2	–
MK3	●	●	85	88,5	MK3	–
MK4	●	●	86,5	90	MK4	–
16	●	–	79	–	–	16

Revolving tailstock centre

Design:
- with small head diameter, point angle 60°
- body and live centre forged, hardened and ground
- live centres repeatedly regrindable
- high runout accuracy due to precise roller bearings, life-time lubrication, maintenance-free
- sealed against dirt and cooling water

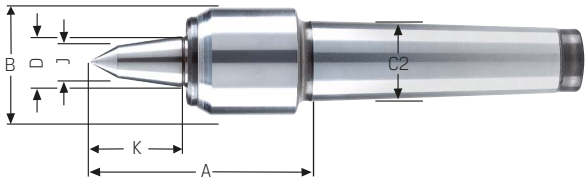
Use:
Due to the small head diameter no hindrance for supports, steel holders or turning tools

N° article	220100	C2	A mm	B mm	D mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2	●	MK2	62	32	15	19,5	200	0,005	7000
3	●	MK3	62	34	15	19,5	400	0,005	7000
4	●	MK4	75,5	42	20	24,5	800	0,005	6300
5	●	MK5	106	58	30	37	1600	0,01	4300



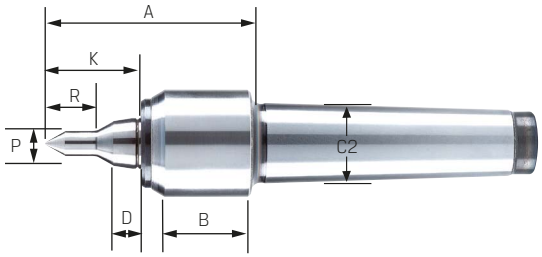
Design and use:
- with extended live centre, point angle 60°
- for unimpeded movement around supports
- especially suited for duplicating tasks
- reduced load capacity, body hardened

N° article	220150	C2	A mm	B mm	D mm	J mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2	●	MK2	73	32	15	10	29,5	170	0,008	7000
3	●	MK3	74	34	15	11	32	340	0,008	7000
4	●	MK4	88,5	42	20	13	37,5	700	0,008	6300
5	●	MK5	119	58	30	14	51,5	1400	0,01	4300



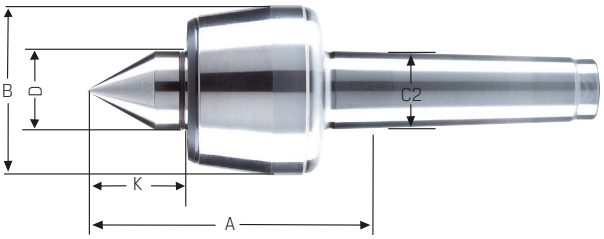
Design and use:
- point angle 60°, with profiled, extended live centre
- body hardened and ground, triple bearing, life-time lubricated
- high concentricity, concentricity error max. 0.01 mm
- high speed
- suitable for use on copying lathes for workpieces with small diameter

N° article	220180	C2	A mm	B mm	D mm	K mm	P mm	R mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2	●	MK2	73	32	15	29,5	6	12	50	0,008	7000
3	●	MK3	74	34	15	32	8	16	100	0,008	7000
4	●	MK4	88,5	42	20	37,5	10	20	150	0,008	6300
5	●	MK5	119	58	30	51,5	12	26	180	0,01	4300



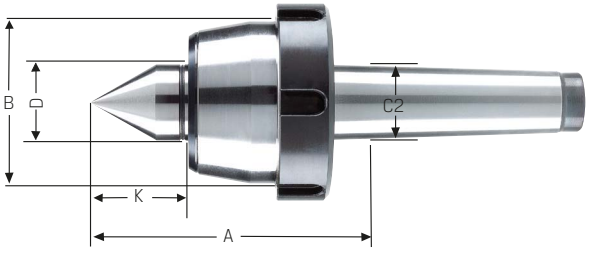
Design and use:
- high concentricity
- point angle 60°
- triple bearing
- live centres through hardened, thus unlimited regrindable
- long service life due to spray water groove, improved lifetime lubrication and tight tolerance bearing seats
- low interference contour due to slim housing construction
- body hardened and ground

N° article	220201	C2	A mm	B mm	D mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
3	●	MK3	82,5	55	25	30	300	0,005	8500
4	●	MK4	101,5	68,5	32	40	500	0,005	6000
5	●	MK5	128	88,5	40	49,5	630	0,005	4500



Design:
- for counter-clamping workpieces on lathes and grinding machines
- all-round centre point in classic style for almost any standard clamping situation
- with draw-off nut
- proven 3-fold bearing for high axial and radial loads
- lifetime lubrication for minimum maintenance requirements
- maximum concentricity deviation 0.005 mm for highest precision
- body hardened and ground (MT 2 - 6)
- point angle 60°

N° article	220220	C2	A mm	B mm	D mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
3	●	MK3	79,5	60	25	30,5	500	0,005	5000
4	●	MK4	102,5	70	32	40	800	0,005	3800
5	●	MK5	129	90	40	49,5	2000	0,005	3000

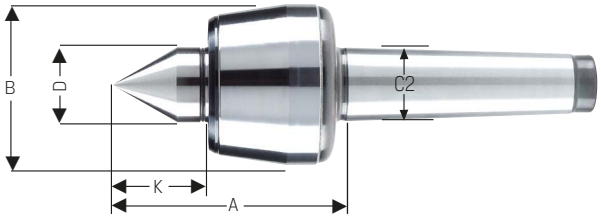


Revolving tailstock centre

Design:
- point angle 60°
- body and live centre forged, hardened and ground
- regular fibre orientation
- live centres repeatedly regrindable
- high runout accuracy due to precise roller bearings, life-time lubrication, maintenance-free
- sealed against dirt and cooling water

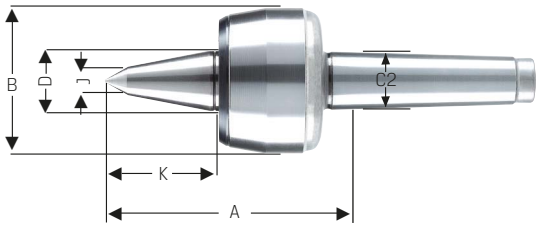
Use:
- for fine turning and roughing
- universally applicable on all lathes

N° article	220250	C2	A mm	B mm	D mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
1	○	MK1	60,5	34,5	15	17	100	0,005	7000
2	●	MK2	65	43	20	24	200	0,005	7000
3	●	MK3	70,5	48,5	22	27,5	400	0,005	6300
4	●	MK4	102,5	68,5	32	40	800	0,005	3800
5	●	MK5	129	88,5	40	49,5	2000	0,005	3000
6	●	MK6	152	102,5	50	57	3500	0,008	2600



Design and use:
- with extended live centre, point angle 60°
- body hardened
- for unimpeded movement around supports
- especially suited for duplicating tasks

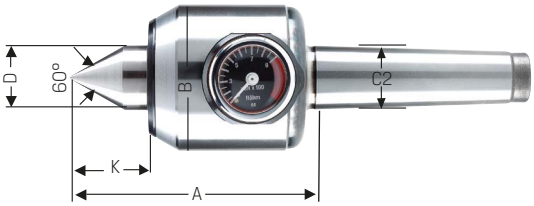
N° article	220300	C2	A mm	B mm	D mm	J mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2	○	MK2	75	43	20	10	34	140	0,005	7000
3	●	MK3	95,5	58,5	25	12	47	400	0,005	5000
4	●	MK4	114,5	68,5	32	14	53	500	0,005	3800
5	●	MK5	143,5	88,5	40	16	64	1200	0,005	3000



Design:
- live centre embedded in shank, point angle 60°
- body and live centre drop-forged, hardened and ground
- with manometer for adjusting and reading the clamping force
- disc springs provide expansion compensation
- sealed against dirt and cooling water
- permanent lubrication with special grease, maintenance-free

Use:
- for determining and maintaining the axial clamping force constant during turning with tangs
- also applicable for standard clamping tasks

N° article	221100	C2	A mm	B mm	D mm	K mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}	max. spring travel* mm	max. axial clamping force N
3	○	MK3	105	64	25	31	400	0,01	4000	1,6	5500
4	○	MK4	123,5	72	32	38,5	800	0,01	3500	2	9000
5	○	MK5	160,5	95	40	49	1600	0,01	2500	1,8	15000
6	○	MK6	202	120	52	59	3200	0,015	1800	2,7	20000



Design:
- short body, low-vibration running, live centre shank-bedded
- body hardened
- revolving centre with internal taper to receive interchangeable inserts of different shapes

Delivered in case

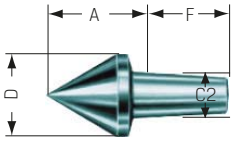
Use:
- versatile due to quick and easy exchange of centring inserts

Delivery:
- in wooden case
- 1 revolving tailstock centre / life centre
- 1 ejector
- 1 tip each 60°, 75°, 90°, 60°VL
- 1 insert for hollow parts = male taper 60° blunt
- 2 inserts for workpieces without centre = female taper 60° hollow
- 2 inserts for workpieces without centre = female taper 60° hollow

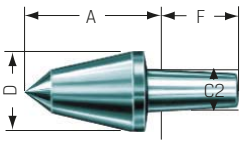


N° article	221400	C2	max. workpiece weight kg
2	○	MK2	40
3	○	MK3	130
4	○	MK4	250
5	●	MK5	650

Exchangeable live centre



N° article	221410 60 degree	A mm	D mm	f mm	C2
102	●	20	16	18	MK2
104	○	24	20	24	MK3
108	○	31,5	28	30	MK4
110	○	43	38	35	MK5



N° article	221425 60 degree, extended	A mm	D mm	f mm	C2
102	●	25	14	18	MK2
104	●	30	18	24	MK3
108	●	43	26	30	MK4
110	●	55	32	35	MK5

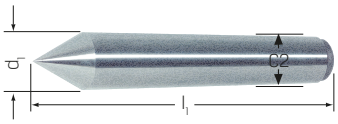
Fixed centre point

PRETEC®

Design:
221500:
- point angle 60°
- fully hardened and ground
- full point made of high-quality tool steel

DIN 806

Use:
For work with high precision at low load,
e.g. grinding work



N° article	221500	C2	d_1 mm	l_1 mm
1	●	MK1	12,2	80
2	●	MK2	18	100
3	●	MK3	24,1	125
4	●	MK4	31,6	160
5	●	MK5	44,7	200
6	●	MK6	63,8	270

Design:
221570:
- with deep recessed carbide tip
- several times regrindable
- shank of tool steel unhardened, fully ground

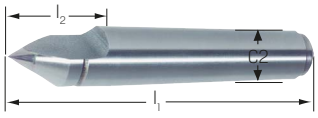
DIN 806



N° article	221570	C2	d_1 mm	l_1 mm	HM insert Ø mm
1	●	MK1	12,2	80	7
2	●	MK2	18	100	7
3	●	MK3	24,1	125	11
4	●	MK4	31,6	160	14
5	●	MK5	44,7	200	18

Design:
221600:
- with half carbide top, especially for thin workpieces
- several times regrindable
- shank of tool steel unhardened, fully ground

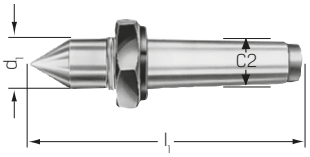
DIN 806



N° article	221600	C2	l_1 mm	l_2 mm	HM insert Ø mm
1	○	MK1	80	22	7
2	●	MK2	100	30	7
3	●	MK3	125	38	11
4	●	MK4	160	50	14
5	○	MK5	200	63	18

Design:
221650:
- with draw-off nut
- made of tool steel, fully hardened and ground

DIN 807



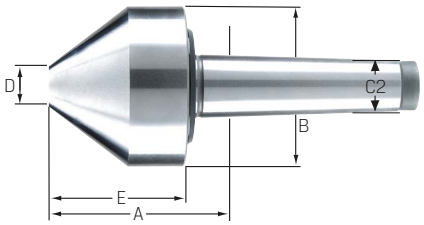
N° article	221650	C2	d_1 mm	l_1 mm
2	○	MK2	18	112
3	●	MK3	24,1	138
4	●	MK4	31,6	175
5	●	MK5	44,7	217
6	●	MK6	63,8	290

Revolving centring taper

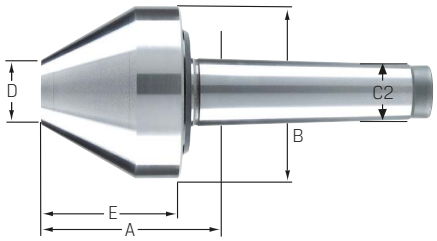
Design:
- robust construction
- high concentricity
- centring taper and receiving shank drop-forged, hardened and ground
- permanent lubrication with special grease, maintenance-free

Use:
- for heavy-duty cutting work
- for machining of pipes and hollow bodies

N° article	222300 blunt, 60 degree	C2	A mm	B mm	D mm	E mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2/50	○	MK2	65	50	20	52	200	0,008	6000
2/80	○	MK2	77	80	30	64	300	0,008	5000
3/80	○	MK3	77	80	30	64	400	0,008	5000
4/80	○	MK4	78,5	80	30	64	400	0,008	5000
3/120	○	MK3	96,5	120	30	83	600	0,008	4000
4/120	●	MK4	98	120	30	83	800	0,008	4000
5/120	●	MK5	99	120	30	83	800	0,008	4000



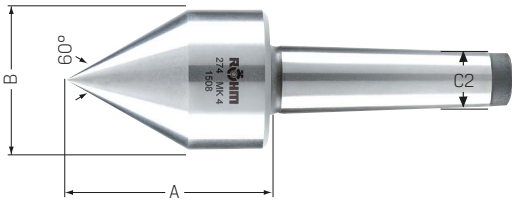
N° article	222350 blunt, 75 degree	C2	A mm	B mm	D mm	E mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2/80	○	MK2	80	80	20	67	300	0,008	5000
3/80	○	MK3	80	80	20	67	400	0,008	5000
4/80	○	MK4	81,5	80	20	67	400	0,008	5000
3/120	○	MK3	85,5	120	30	72	600	0,008	4000
4/120	○	MK4	87	120	30	72	800	0,008	4000
5/120	○	MK5	88	120	30	72	800	0,008	4000
4/170	○	MK4	107	170	50	90	1200	0,01	2800
5/170	○	MK5	106	170	50	90	1600	0,01	2800
6/170	○	MK6	107,5	170	50	90	1600	0,01	2800
5/250	○	MK5	146,5	250	75	130	2000	0,01	2200
6/250	○	MK5	148	250	75	130	2000	0,01	2200
6/350	○	MK5	184	350	120	168	4000	0,015	1200



Design:
- robust construction
- high concentricity
- centring taper and receiving shank drop-forged, hardened and ground
- permanent lubrication with special grease, maintenance-free

Use:
- for heavy-duty cutting work
- centring taper for hollow body
- centre point for machining of standard workpieces

N° article	222920 pointed, 60 degree	C2	A mm	B mm	max. workpiece weight kg	max. radial deviation mm	max. speed min^{-1}
2/42	●	MK2	61	42	200	0,01	6000
3/56	●	MK3	79	56	400	0,008	6000
4/64	●	MK4	100	64	800	0,008	4000
5/78	●	MK5	115,5	78	1600	0,008	4000



Chip hook

PREMUS

Design:
- with protective shield and 90° angled tip
- for removing chips in hard-to-reach places



Art.-Nr.	225371 with protective shield	Hook length mm
300	●	300
500	●	500

Chip collector magnetic

PREMUS

Design and Use:
With integrated high-performance permanent magnet (tensile force: 19.3 kg) for removing magnetic chips. By pulling out the handle, chips fall off. Reduces the risk of injury, with protective shield.





Art.-Nr.	225382 magnetic	Total length mm	∅ mm	Weight kg
300	●	300	25	0,6

Cleaning ball RGG 20

SCHUNK

Design:
- cleaning device with shank interface
- hydraulically, via machine coolant (filtered, max. particle size 30 µm) or pneumatically, via filtered compressed air according to ISO 8573-1:2010



N° article	225390 Aluminium alloy	Ambient temperature °C	max. speed min^{-1}	Max. operating pressure bar	∅ mm	Hauteur mm
20	○	-10 to +90	100	80	37	78

Cleaning propeller

PREMUS

Design:
- safe and fast method for removing chips and coolant
- opening and closing of the wings is done by controlling the spindle speed
- for vertical and horizontal machining centres
- clockwise direction of rotation

Use:
With collets and collet chucks 16 mm.



N° article	225391 Chip booster	A5 mm	B5 mm	B71 mm	C3 mm	A4 mm	B3 mm	Speed min^{-1}	Recommended feed min^{-1}
160	○	160	120	53	16	65	80	7000 - 12000	1000 - 3000
260	○	260	170	53	16	65	130	5000 - 8000	3000 - 15000

Overview Tool Holders

Product line 23

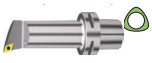
Item			Tool Holder DIN 69880						
			VDI 16	VDI 20	VDI 25	VDI 30	VDI 40	VDI 50	VDI 60
			Page	Page	Page	Page	Page	Page	Page
Square radial right-hand	Form B1		23/307 Cat. no. 233000	23/307 Cat. no. 233000	23/307 Cat. no. 233000	23/307 Cat. no. 233000	23/307 Cat. no. 233000	23/307 Cat. no. 233000	23/307 Cat. no. 233000
Square radial right-hand, with IC	Form B1		–	–	23/316 Cat. no. 234901	23/316 Cat. no. 234901	23/316 Cat. no. 234901	23/316 Cat. no. 234901	–
Square radial left-hand	Form B2		23/307 Cat. no. 233050	23/307 Cat. no. 233050	23/307 Cat. no. 233050	23/307 Cat. no. 233050	23/307 Cat. no. 233050	23/307 Cat. no. 233050	23/307 Cat. no. 233050
Square radial left-hand, with IC	Form B2		–	–	23/316 Cat. no. 234902	23/316 Cat. no. 234902	23/316 Cat. no. 234902	23/316 Cat. no. 234902	–
Square radial right-hand	Form B3		23/307 Cat. no. 233100	23/307 Cat. no. 233100	23/307 Cat. no. 233100	23/307 Cat. no. 233100	23/307 Cat. no. 233100	23/307 Cat. no. 233100	23/307 Cat. no. 233100
Square radial right-hand, with IC	Form B3		–	–	–	23/316 Cat. no. 234903	23/316 Cat. no. 234903	23/316 Cat. no. 234903	–
Square radial left-hand	Form B4		23/307 Cat. no. 233150	23/307 Cat. no. 233150	23/307 Cat. no. 233150	23/307 Cat. no. 233150	23/307 Cat. no. 233150	23/307 Cat. no. 233150	23/307 Cat. no. 233150
Square radial left-hand, with IC	Form B4		–	–	–	23/316 Cat. no. 234904	23/316 Cat. no. 234904	23/316 Cat. no. 234904	–
Square radial right-hand	Form B5		23/307 Cat. no. 233200	23/307 Cat. no. 233200	23/307 Cat. no. 233200	23/307 Cat. no. 233200	23/307 Cat. no. 233200	23/307 Cat. no. 233200	23/307 Cat. no. 233200
Square radial right-hand, with IC	Form B5		–	–	–	23/316 Cat. no. 234905	23/316 Cat. no. 234905	23/316 Cat. no. 234905	23/316 Cat. no. 234905
Square radial left-hand	Form B6		23/307 Cat. no. 233250	23/307 Cat. no. 233250	23/307 Cat. no. 233250	23/307 Cat. no. 233250	23/307 Cat. no. 233250	23/307 Cat. no. 233250	23/307 Cat. no. 233250
Square radial right-hand	Form B7		23/308 Cat. no. 233300	23/308 Cat. no. 233300	23/308 Cat. no. 233300	23/308 Cat. no. 233300	23/308 Cat. no. 233300	23/308 Cat. no. 233300	23/308 Cat. no. 233300
Square radial left-hand	Form B8		23/308 Cat. no. 233350	23/308 Cat. no. 233350	23/308 Cat. no. 233350	23/308 Cat. no. 233350	23/308 Cat. no. 233350	23/308 Cat. no. 233350	23/308 Cat. no. 233350
Square axial right-hand	Form C1		23/308 Cat. no. 233500	23/308 Cat. no. 233500	23/308 Cat. no. 233500	23/308 Cat. no. 233500	23/295 Cat. no. 233500	23/308 Cat. no. 233500	23/308 Cat. no. 233500
Square axial right-hand	Form C2		23/308 Cat. no. 233550	23/308 Cat. no. 233550	23/308 Cat. no. 233550	23/308 Cat. no. 233550	23/308 Cat. no. 233550	23/308 Cat. no. 233550	23/308 Cat. no. 233550
Square axial right-hand	Form C3		23/308 Cat. no. 233600	23/308 Cat. no. 233600	23/308 Cat. no. 233600	23/308 Cat. no. 233600	23/308 Cat. no. 233600	23/308 Cat. no. 233600	23/308 cat. no. 233600

Item		Tool Holder						
		DIN 69880						
			VDI 16	VDI 20	VDI 25	VDI 30	VDI 40	VDI 50	VDI 60
			Page	Page	Page	Page	Page	Page	Page
Square axial right-hand	Form C4		23/308 Cat. no. 233650	23/308 Cat. no. 233650	23/308 Cat. no. 233650	23/308 Cat. no. 233650	23/308 Cat. no. 233650	23/308 Cat. no. 233650	23/308 Cat. no. 233650
Square multiple	Form D1		–	–	23/309 Cat. no. 233700	23/309 Cat. no. 233700	23/309 Cat. no. 233700	23/309 Cat. no. 233700	23/309 Cat. no. 233700
Square multiple	Shape D2		–	–	23/309 Cat. no. 233750	23/309 Cat. no. 233750	23/309 Cat. no. 233750	23/309 Cat. no. 233750	23/309 Cat. no. 233750
U-drill holders	Shape E1		–	23/310 Cat. no. 234100	23/310 Cat. no. 234100	23/310 Cat. no. 234100	23/310 Cat. no. 234100	23/310 Cat. no. 234100	23/310 Cat. no. 234100
U-drill holders with IC	Form E2		23/310 Cat. no. 234200	23/310 Cat. no. 234200	23/310 Cat. no. 234200	23/310 Cat. no. 234200	23/310 Cat. no. 234200	23/310 Cat. no. 234200	23/310 Cat. no. 234200
U-drill holders with IC slotted	Form E25		–	–	–	23/311 Cat. no. 234210	23/311 Cat. no. 234210	23/311 Cat. no. 234210	23/311 Cat. no. 234210
MT holders	Form F		23/312 Cat. no. 234300	23/312 Cat. no. 234300	23/312 Cat. no. 234300	23/312 Cat. no. 234300	23/312 Cat. no. 234300	23/312 Cat. no. 234300	–
Collet chuck holders	Shape E4		23/312 Cat. no. 234550	23/312 Cat. no. 234550	23/312 Cat. no. 234550	23/312 Cat. no. 234550	23/312 Cat. no. 234550	23/312 Cat. no. 234550	23/312 Cat. no. 234550
Parting tool holders right-hand	Form AR		–	23/312 Cat. no. 234650	23/312 Cat. no. 234650	23/312 Cat. no. 234650	23/312 Cat. no. 234650	23/312 Cat. no. 234650	23/312 Cat. no. 234650
Parting tool holder, left	Form AL		–	23/312 Cat. no. 234660	23/312 Cat. no. 234660	23/312 Cat. no. 234660	23/312 Cat. no. 234660	23/312 Cat. no. 234660	23/312 Cat. no. 234660
Parting tool holders adjustable	Form ARU		–	23/313 Cat. no. 234670	23/313 Cat. no. 234670	23/313 Cat. no. 234670	23/313 Cat. no. 234670	23/313 Cat. no. 234670	23/313 Cat. no. 234670
Short drill chucks			23/313 Cat. no. 234700	23/313 Cat. no. 234700	23/313 Cat. no. 234700	23/313 Cat. no. 234700	23/313 Cat. no. 234700	23/313 Cat. no. 234700	23/313 Cat. no. 234700
Quick-change tapping chucks			–	23/313 Cat. no. 234720	–	23/313 Cat. no. 234720	23/313 Cat. no. 234720	–	–
Setting holders			–	23/314 Cat. no. 234750	–	23/314 Cat. no. 234750	23/314 Cat. no. 234750	23/314 Cat. no. 234750	–
Test mandrel			23/314 Cat. no. 233400	23/314 Cat. no. 233400	23/314 Cat. no. 233400	23/314 Cat. no. 233400	23/314 Cat. no. 233400	23/314 Cat. no. 233400	23/314 Cat. no. 233400

Overview Tool Holders

Product line 23

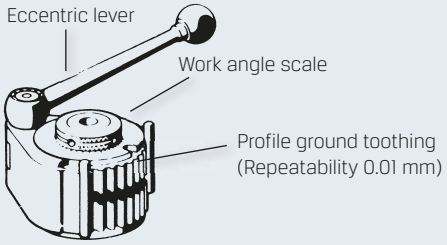
Item	Tool Holder								
		DIN ISO 12164-3					ISO 26623-1		
		HST-T40	HSK-T50	HST-T63	HST-T100		PSC-40	PSC-50	PSC-63
		Page	Page	Page	Page		Page	Page	Page
Tool holder axial, single		23/328 Cat. no. 237001	–	23/328 Cat. no. 237001	–		23/330 Cat. no. 237101	23/330 Cat. no. 237101	23/330 Cat. no. 237101
Tool holder axial, double		23/328 Cat. no. 237002	–	23/328 Cat. no. 237002	–		23/330 Cat. no. 237102	–	23/330 Cat. no. 237102
Tool holders axial, 3-fold		–	–	23/329 Cat. no. 237003	–		–	23/330 Cat. no. 237103	23/330 Cat. no. 237103
Tool holders radial		23/329 Cat. no. 237004	–	23/329 Cat. no. 237004	–		23/330 Cat. no. 237104	–	23/330 Cat. no. 237104
Tool holders diagonal		–	–	23/329 Cat. no. 237005	–		–	23/331 Cat. no. 237108	23/331 Cat. no. 237108
Parting tool holders radial		23/329 Cat. no. 237006	–	23/329 Cat. no. 237006	–		–	23/331 Cat. no. 237106	23/331 Cat. no. 237106
Parting tool holders axial		–	–	23/329 Cat. no. 237007	–		–	23/331 Cat. no. 237107	23/331 Cat. no. 237107
Clamp holders PWNL		23/333Cat. no. 237011	–	23/333 Cat. no. 237011	–		23/333 Cat. no. 237111	23/333 Cat. no. 237111	23/333 Cat. no. 237111
Clamp holders SCLC		23/333Cat. no. 237013	–	23/333 Cat. no. 237013	–		23/333 Cat. no. 237113	23/333 Cat. no. 237113	23/333 Cat. no. 237113
Clamp holders PCLN		23/333 Cat. no. 237015	–	23/333 Cat. no. 237015	–		23/333 Cat. no. 237115	23/333 Cat. no. 237115	23/333 Cat. no. 237115
Clamp holders SDUC		23/334 Cat. no. 237017	–	23/334 Cat. no. 237017	–		23/334 Cat. no. 237117	23/334 Cat. no. 237117	23/334 Cat. no. 237117
Clamp holders PDUN		23/334 Cat. no. 237019	–	23/334 Cat. no. 237019	–		23/334 Cat. no. 237119	23/334 Cat. no. 237119	23/334 Cat. no. 237119
Clamp holders SDJC		23/334 Cat. no. 237020	–	23/334 Cat. no. 237020	–		23/334 Cat. no. 237120	23/334 Cat. no. 237120	23/334 Cat. no. 237120
Clamp holders PDJN		23/334 Cat. no. 237022	–	23/334 Cat. no. 237022	–		23/334 Cat. no. 237122	23/334 Cat. no. 237122	23/334 Cat. no. 237122
Clamp holders SDHC		23/335 Cat. no. 237023	–	23/335 Cat. no. 237023	–		23/335 Cat. no. 237123	23/335 Cat. no. 237123	23/335 Cat. no. 237123
Clamp holders PDHN		23/335 Cat. no. 237025	–	23/335 Cat. no. 237025	–		23/335 Cat. no. 237125	23/335 Cat. no. 237125	23/335 Cat. no. 237125
Clamp holders SVUB		23/336 Cat. no. 237033	–	23/336 Cat. no. 237033	–		–	–	23/336 Cat. no. 237133
Clamp holders SVUC		23/336 Cat. no. 237026	–	23/336 Cat. no. 237026	–		–	–	–
Clamp holders DVUN		23/336 Cat. no. 237027	–	23/336 Cat. no. 237027	–		–	–	23/336 Cat. no. 237127
Clamp holders SVJB		23/335 Cat. no. 237029	–	23/335 Cat. no. 237029	–		–	–	23/335 Cat. no. 237129
Clamp holders SVJC		23/335 Cat. no. 237028	–	23/335 Cat. no. 237028	–		–	–	–
Clamp holders DVJN		–	–	23/335 Cat. no. 237035	–		–	–	–
Clamp holders SVPB		23/337 Cat. no. 237032	–	23/337 Cat. no. 237032	–		23/337 Cat. no. 237132	23/337 Cat. no. 237132	23/337 Cat. no. 237132
Clamp holders SVPC		23/337 Cat. no. 237030	–	23/337 Cat. no. 237030	–		–	–	–

Item	Tool Holder								
		DIN ISO 12164-3					ISO 26623-1		
		HST-T40	HSK-T50	HST-T63	HST-T100		PSC-40	PSC-50	PSC-63
		Page	Page	Page	Page		Page	Page	Page
Clamp holders DVPN		23/337 Cat. no. 237031	–	23/337 Cat. no. 237031	–		23/337 Cat. no. 237131	23/337 Cat. no. 237131	23/337 Cat. no. 237131
Clamp holders SSBC		23/338 Cat. no. 237034	–	23/338 Cat. no. 237034	–		–	–	23/338 Cat. no. 237134
Clamp holders PSBN		23/338 Cat. no. 237036	–	23/338 Cat. no. 237036	–		–	–	23/338 Cat. no. 237136
Clamp holders SSSC		23/339 Cat. no. 237037	–	23/339 Cat. no. 237037	–		–	–	23/339 Cat. no. 237137
Clamp holders DSSN		–	–	–	–		–	–	23/339 Cat. no. 237138
Clamp holders PSSN		23/339 Cat. no. 237039	–	23/339 Cat. no. 237039	–		–	–	23/339 Cat. no. 237139
Clamp holders SCMC		23/340 Cat. no. 237040	–	23/340 Cat. no. 237040	–		–	–	23/340 Cat. no. 237140
Clamp holders PCMN		23/340 Cat. no. 237042	–	23/340 Cat. no. 237042	–		–	–	23/340 Cat. no. 237142
Clamp holders SDNC		23/340 Cat. no. 237043	–	23/340 Cat. no. 237043	–		–	–	23/340 Cat. no. 237143
Clamp holders PDNN		23/340 Cat. no. 237045	–	23/340 Cat. no. 237045	–		–	–	23/340 Cat. no. 237145
Clamp holders SVVB		23/338 Cat. no. 237048	–	23/338 Cat. no. 237048	–		–	–	23/338 Cat. no. 237148
Clamp holders SVVC		23/338 Cat. no. 237046	–	23/338 Cat. no. 237046	–		–	–	–
Clamp holders DVVN		23/338 Cat. no. 237047	–	23/338 Cat. no. 237047	–		–	–	23/338 Cat. no. 237147
Boring bars SCLC		23/341 Cat. no. 237050	–	23/341 Cat. no. 237050	–		23/341 Cat. no. 237150	23/341 Cat. no. 237150	23/341 Cat. no. 237150
Boring bars PCLN		–	–	23/341 Cat. no. 237052	–		23/341 Cat. no. 237152	23/341 Cat. no. 237152	23/341 Cat. no. 237152
Boring bars SDQC		23/342 Cat. no. 237053	–	23/342 Cat. no. 237053	–		23/342 Cat. no. 237153	23/342 Cat. no. 237153	23/342 Cat. no. 237153
Boring bars PDQN		–	–	23/342 Cat. no. 237055	–		23/342 Cat. no. 237155	23/342 Cat. no. 237155	23/342 Cat. no. 237155
Boring bar holders		23/343 Cat. no. 237057	–	23/343 Cat. no. 237057	–		23/343 Cat. no. 237157	23/343 Cat. no. 237157	23/343 Cat. no. 237157
Blank		23/343 Cat. no. 237058	–	23/343 Cat. no. 237058	–		23/343 Cat. no. 237158	23/343 Cat. no. 237158	23/343 Cat. no. 237158
Blanking plugs		23/343 Cat. no. 237059	–	23/343 Cat. no. 237059	–		–	–	23/343 Cat. no. 237159
Extensions		23/343 Cat. no. 237060	–	23/343 Cat. no. 237060	–		23/343 Cat. no. 237160	23/343 Cat. no. 237160	23/343 Cat. no. 237160
Reduction		–	–	23/344 Cat. no. 237061	–		–	23/344 Cat. no. 237161	23/344 Cat. no. 237161
Clamping unit		23/344 Cat. no. 237062	–	23/344 Cat. no. 237062	–		–	–	–

Quick-Change Tool Holder

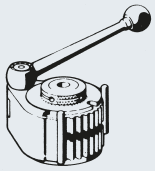
Product Information

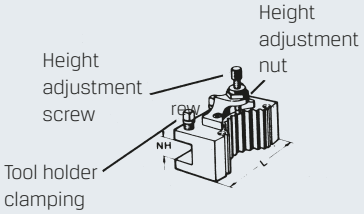
Design:
Tool holder**head** and all **quick-change tool holders** are **provided with profile ground** teeth. This combination guarantees a very long service life and a consistent repeatability of 0.01 mm for years. The exchange holder is pulled by means of the eccentric lever over the two-piece retention strap toward the toothing of the steel holder head and is thus firmly connected. Steel holder head and the exchange holders are made of high-quality Q & T steel with high accuracy.



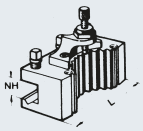
Use:
For **quick** and **repeatable tool change,** when used on lathes; for holding lathe tools, boring bars with round and square/rectangular shanks, drills, reamers etc., with morse taper shank. Due to the large selection of the available exchange holders, this system can be used universally.

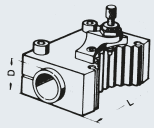
Note:
We recommend each tool to be clamped in its own steel holder to ensure a quick change. Setting: Height adjustment by the adjusting screw on the exchange holder. Time-consuming supporting and sanding of the tool shanks is no longer necessary.





Tool change:
The wide selection of tool holders makes it possible to use a wide range of applications and, above all, to change the holders quickly. The exchange holders are removed from the steel holder head by simply lifting them upwards



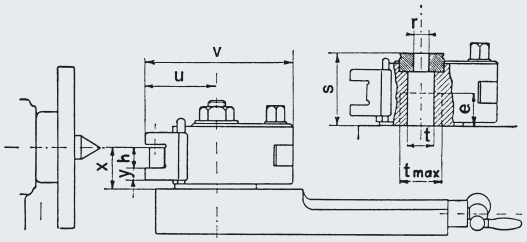




Adjustment:
The toothing on the steel holder head allows for 40 different clamping positions of the tool, without the tool or the holder having to be exchanged.

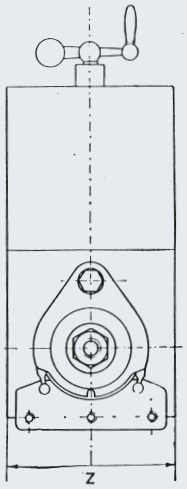
Mounting:
The steel holder head is attached to the support of the lathe with the support tensioning screw. The centring disc is thereby turned to the size of the clamping bolt.
The steel holder head is additionally secured with 2 dowel pins.

When choosing the size, please note:
1) The driving power of the lathe.
2) The width (z) of the slide, since the length of the exchange holder should correspond as far as possible to the width **z.**
3) The height of the lathe tool to be used (shank) **h** together with the steel support y and the space remaining below is the required dimension **x**). Please see table.



Required minimum dimension x for lathe tool height h:

h	Size Aa x	Size A x		Size B x		Size C x		Size D1 x		
mm	D12	D16	D20	D25	D32	D32	D40	D40	D50	D63
6	12	–	–	–	–	–	–	–	–	–
8	14	17	–	–	–	–	–	–	–	–
10	16	19	19	–	–	–	–	–	–	–
12	18	21	21	25	26	–	–	–	–	–
(14)	–	23	23	27	28	–	–	–	–	–
16	–	25	25	29	30	–	–	–	–	–
20	–	–	–	33	34	–	–	–	–	–
25	–	–	–	38	39	40.5	–	–	–	–
(30)	–	–	–	–	44	45.5	–	–	–	–
32	–	–	–	–	–	47.5	47.5	52	–	–
40	–	–	–	–	–	55.5	55.5	60	60	–
50	–	–	–	–	–	–	–	–	70	70
63	–	–	–	–	–	–	–	–	–	83



Tool holder head size		Aa	A	B	C	D1
matching exchange holder size		Aa D12	AD16|AD20	BD25|BD32	CD32|CD40|CD45	D1|D40|D1 D50|D1|D63
Drive power max.	kW	1.1	1.5	6	11	17.6
Slide width max.	z mm	80	100	150	180	200
Steel support	y mm	6	8.75	12 / 13.5	15	20
Bore normal	t mm	–	20	32	40	40
Bore max.	t max. mm	13	32	51	70	80
Depth of bore max.	e mm	–	35	45	75	75
Total height	s mm	37	54	75	105	122
Overall width max.	v mm	70	100	150	200	230|234|242
Reach max. at holder D	u mm	30	48	71	190	112|116|124

Quick-change tool holder

ORIGINALMULTI SUISSE

Delivery:
With eccentric lever and 1 clamping wrench.

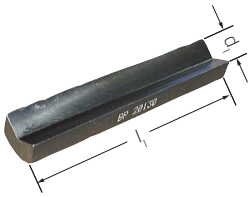


N° article	231000 section	head size
AA	○	AA
A	●	A
B	●	B
C	●	C
D1	○	D1
D2	○	D2
E	○	E

Insert V-block

ORIGINALMULTI SUISSE

Use:
For mounting small boring bars to boring steel holder 231200



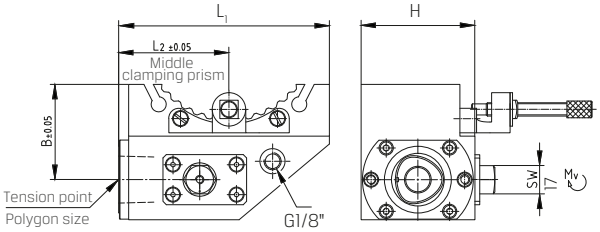
N° article	231250	for head size	d_1 mm	l_1 mm
AP1485	●	A	14	85
BP20130	●	B	20	130
CP25160	○	C	25	160
CP32160	○	C	32	160
D1P40180	○	D1	40	180

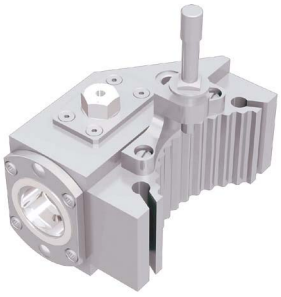
Quick-change tool holder

kw präzisions-werkzeuge

Design:
- Multifix interface and polygon holder
- for cycle-controlled and conventional lathes

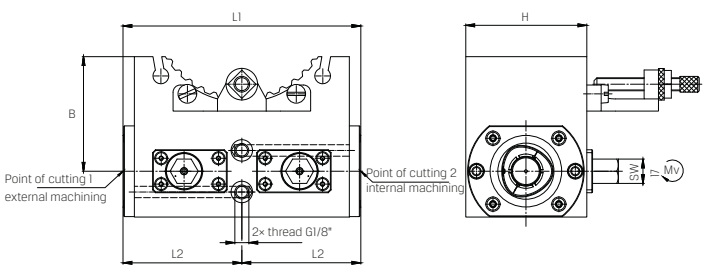
ISO 26623-1





N° article	231010 for external machining	Tool holder	for head size	B mm	H mm	L1 mm	L2 mm	G	Torque Nm
ABC4	○	PSC-40	B	57	68	126	62	1/8*	50
ACC5	○	PSC-50	C	80	84,5	158	83	1/8*	70

N° article	231011 for internal machining	Tool holder	for head size	B mm	H mm	L1 mm	L2 mm	G	Torque Nm
IBC4	○	PSC-40	B	57	68	126	62	1/8*	50
ICC5	○	PSC-50	C	80	84,5	158	83	1/8*	70



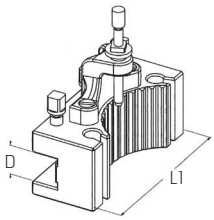


N° article	231012 for outdoor and indoor areas	Tool holder	for head size	B mm	H mm	L1 mm	L2 mm	G	Torque Nm
BDC4	○	PSC-40	B	70	69	172	86	1/8*	50
CDC4	●	PSC-40	C	74	70	184	92	1/8*	50
CDC5	●	PSC-50	C	80	84,5	200	100	1/8*	70
D1DC5	○	PSC-50	D1	87	84,5	201	100,5	1/8*	70
D1DC6	○	PSC-63	D1	94	115	244	122	1/8*	90

Quick-change lathe tool holder

ORIGINALMULTI SUISSE

Design:
- with flat lathe tool support
- complete with height-adjusting screw and 3 clamping screws



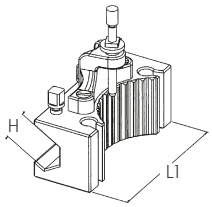


N° article	231100	for head size	D mm	L_1 mm
AAD1250	○	AA	12	50
AD1675	●	A	16	75
AD1690	●	A	16	90
AD2075	●	A	20	75
AD2090	●	A	20	90
BD25120	●	B	25	120
BD25140	●	B	25	140
BD32120	●	B	32	120
BD32140	●	B	32	140
CD32150	●	C	32	150
CD32170	●	C	32	170
CD40150	●	C	40	150
CD40170	●	C	40	170
CD45170	○	C	45	170
D1D40180	●	D1	40	180
D1D50180	●	D1	50	180
D1D63180	○	D1	63	180
D2D50220	○	D2	50	220
D2D63220	○	D2	63	220
ED16100	○	ED	16	100
ED20100	●	ED	20	100
ED25100	○	ED	25	100

Quick-change boring bar holder

ORIGINALMULTI SUISSE

Design:
- with V-shaped lathe tool support
- complete with height-adjusting screw and 3 clamping screws



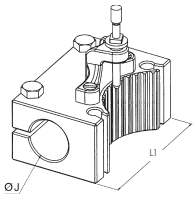


N° article	231200	for head size	H mm	L_1 mm
AAH1250	○	AA	12	50
AH2085	●	A	20	85
BH32130	●	B	32	130
CH40160	●	C	40	160
CH50160	○	C	50	160
D1H63180	○	D1	63	180
D2H70220	○	D2	70	220
EH16100	○	EH	16	100
EH25100	○	EH	25	100

Quick-change boring bar holder

ORIGINALMULTI SUISSE

Design:
- with cylindrical hole
- for direct mounting of say Coromant insert bars, all solid round boring bars, MT sleeves with clamping screw, 231600





N° article	231400	for head size	J mm	L_1 mm
AAJ1550	○	Aa	15	50
AJ3080	○	A	30	80
BJ40120	●	B	40	120
CJ40160	●	C	40	160
CJ50160	●	C	50	160
D1J63180	●	D1	63	180

Morse taper sleeve

ORIGINALMULTI SUISSE

Design:
- cylindrical exterior
- for mounting to drilling bar holder 231400



N° article	231600 with clamping screw	for head size	C2	∅ mm
AL130	○	A	MK1	30
AL230	○	A	MK2	30
BL340	●	B, C40	MK3	40
BL440	●	B, C40	MK4	40
CL350	○	C50	MK3	50
CL450	●	C50	MK4	50
DL563	●	D1	MK5	63

Spare part

ORIGINALMULTI SUISSE

N° article	231860 Eccentric wrench	231870 Square socket wrench	231880 Bracket (without set screw)	231890 Square head screw for fixing the lathe tools	231900 Set screw with nut for height adjustment	for head size
A	○	●	○	●	●	A
B	●	●	●	●	●	B
C	○	○	○	●	●	C
D1	○	○	○	●	●	D1
D2	○	○	○	○	○	D2
E	○	○	○	○	○	E


231860


231870


231880


231890


231900

Hollow spindle stop

PRETEC

Design and use:
- quick and easy fixing, seated inside the spindle
- for operations on centre lathes

N° article	232000 Hollow spindle stop	Spindle diameter, min. mm	Spindle diameter, max. mm
20	○	20	27
25	●	25	33
32	●	32	41
40	●	40	50
48	●	48	60
58	●	58	76
75	●	75	96
94	●	94	110

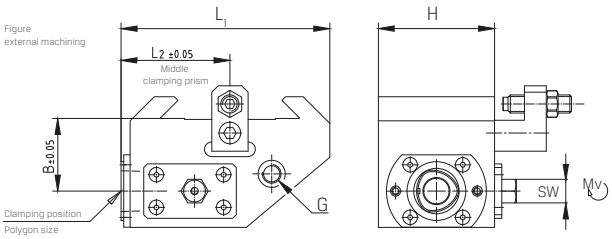


Quick-change tool holder

kw präzisions-werkzeuge

ISO 26623-1

Design:
- with Parat interface and polygonal socket
- best possible care of the cutting tool with internal cooling lubricant supply
- changing accuracy of cutting heads < 5 µm
- ergonomic relief by weight reduction
- reduction of measuring cuts





N° article	232102 for external machining	Tool holder	suitable for Parat head size	B mm	H mm	L1 mm	L2 mm	G	AF mm	Torque Nm
A2C3	○	PSC-30	2	40	64	115	60	G1/8"	13	35
A2C4	○	PSC-40	2	40	68	118	62	G1/8"	17	50
A2C5	○	PSC-50	2	44	84,5	134	72	G1/8"	17	70
A3C4	●	PSC-40	3	35	68	139	73	G1/8"	17	50
A3C5	●	PSC-50	3	40	84,5	142	76	G1/8"	17	70
A4C5	○	PSC-50	4	40	96	168	88	M14×1.5	17	70
A4C6	○	PSC-63	4	55	110	180	100	G1/8"	17	90
A5C6	○	PSC-63	5	55	115	229	119	G1/8"	17	90
A5C8	○	PSC-80	5	60	136	232	122	G1/8"	17	130

N° article	232103 for internal machining	Tool holder	suitable for Parat head size	B mm	H mm	L1 mm	L2 mm	G	AF mm	Torque Nm
I2C3	○	PSC-30	2	40	64	115	60	G1/8"	13	35
I2C4	○	PSC-40	2	40	68	118	62	G1/8"	17	50
I2C5	○	PSC-50	2	44	84,5	134	72	G1/8"	17	70
I3C4	●	PSC-40	3	35	68	139	73	G1/8"	17	50
I3C5	●	PSC-50	3	40	84,5	142	76	G1/8"	17	70
I4C5	○	PSC-50	4	40	96	168	88	M14×1.5	17	70
I4C6	○	PSC-63	4	55	110	180	100	G1/8"	17	90
I5C6	○	PSC-63	5	55	115	229	119	G1/8"	17	90
I5C8	○	PSC-80	5	60	136	232	122	G1/8"	17	130

KSS connection set

kw präzisions-werkzeuge

Use:
- for tool holders 231010 and 231011
- connection directly in Multifix holder

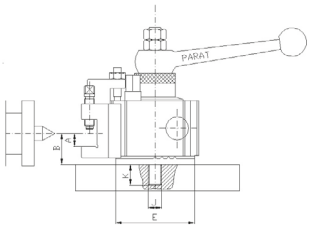
N° article	231950	Design
0001	○	Set complete
0003	○	Set screw connection
0005	○	Stop valve
0007	○	Hose 2m

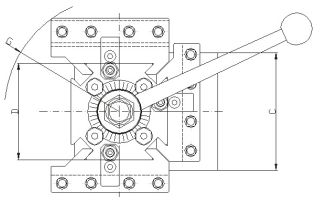
Quick-change tool holder

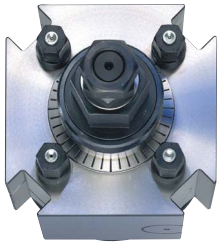
Design:
- high repeatability of 0.005 mm when swivelling out and back into position
- no additional finishing chips during fits
- up to 4 tool stations
- quick and easy exchange by eccentric clamping
- rare opening of the sliding hoods
- low exchange rate of tool holders
- clamping bolt with high damping and flex zone to reduce the force in case of accidents
- clamping bolt with internal coolant hole for short coolant hose

Technical data for size determination

Designation		Size 1	Size 2	Size 3	Size 4	Size 5
approx. drive power of the lathe	KW	6	15	25	45	65
approx. torque in the main spindle	Nm	150	700	1500	7000	12000
Turning tool diametet max.	A	□ 12 □ 20	□ 25	□ 40	□ 50	□ 50
Cutting edge height	B	30 35	40	60	80	90
Support width min.	C	90 - 100	110 - 150	150 - 180	200 - 250	200 - 300
Turret head (square base body)	D	□ 84	□ 106	□ 134	□ 154	□ 204
Dividing plate with protective ring	E	∅ 80	∅ 100	∅ 132	∅ 150	∅ 195
Turning radius with exchange holder	G	∅ 180	∅ 240	∅ 300	∅ 350	∅ 446
Clamping screw standard flange and feather key	J (H7) K	20 15	25 18	35 25	35 30	45 35
Clamping screw with thread	J	M 14	M 16	M 20	M 24	M 30 × 2
Clamping screw with thread and internal cooling	J	M 16	M 20	M 24	M 24	M 30 × 2
Thread length mm	K	21	25	30	35	35
Weight approx. in kg without interchangeable holder		3	6,5	14	21	42



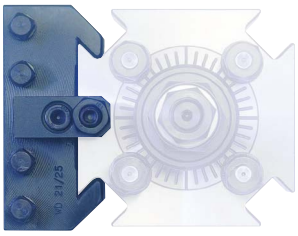




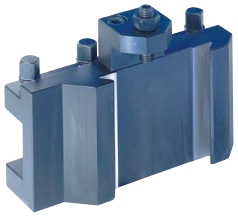
N° article	232100 Turret head	Size	Design:
0010	○	RD 1	Clamping screw for mounting with flange and feather key
0011	○	RD 1	Clamping screw for mounting with thread M14
0012	○	RD 1	Clamping screw for mounting with thread M16, internal cooling and coolant hose (4 bar)
0013	○	RD 1	Clamping screw for mounting with thread M16, internal cooling and VA coolant hose (40 bar)
0020	○	RD 2	Clamping screw for mounting with flange and feather key
0021	○	RD 2	Clamping screw for mounting with thread M16
0022	○	RD 2	Clamping screw for mounting Weiler lathes
0023	○	RD 2	Clamping screw for mounting with thread M20, internal cooling and coolant hose (4 bar)
0024	○	RD 2	Clamping screw for mounting with thread M20, internal cooling and VA coolant hose (40 bar)
0030	○	RD 3	Clamping screw for mounting with flange and feather key
0031	○	RD 3	Clamping screw for mounting with thread M20
0032	○	RD 3	Clamping screw for mounting with thread M24, internal cooling and coolant hose (4 bar)
0033	○	RD 3	Clamping screw for mounting with thread M24, internal cooling and VA coolant hose (40 bar)
0040	○	RD 4	Clamping screw for mounting with flange and feather key
0041	○	RD 4	Clamping screw for mounting with thread M24
0042	○	RD 4	Clamping screw for mounting with thread M24, internal cooling and coolant hose (4 bar)
0043	○	RD 4	Clamping screw for mounting with thread M24, internal cooling and VA coolant hose (40 bar)
0052	○ +	RD 5	Clamping screw for mounting with thread M30 × 2, internal cooling and coolant hose (4 bar)
0053	○ +	RD 5	Clamping screw for mounting with thread M30 × 2, internal cooling and VA coolant hose (40 bar)

Quick-change tool holder

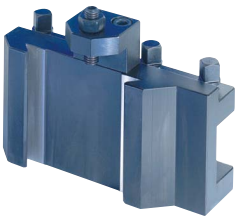
N° article	232104 Type WD universal	Size	N mm	O mm	P mm	R mm	S mm	Weight kg
0001	○	1/12	84	24	47	14	22	0,7
0003	○	1/20	84	33	52	20	22	0,8
0005	●	2/25	110	36	66	19	33	1,9
0007	●	3/32	140	44	76	25	33	3
0009	○	3/40	140	44	76	25	43	3,1
0011	○	4/40	160	53	96	30	44	5
0013	○	4/50	160	53	96	40	54	5,5
0015	○	5/50	220	67	114	40	54	9,6



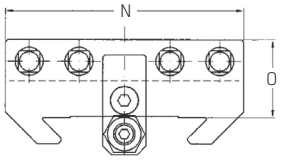
WD

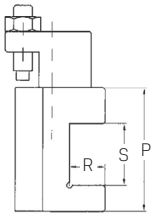


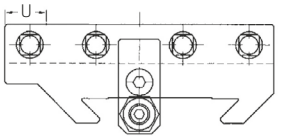
WDL



WDR







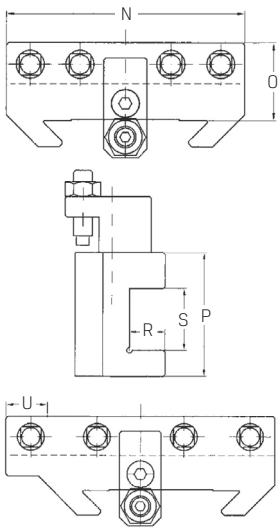
N° article	232106 Type WDL, inside machining	232108 Type WDR outside machining	Size	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg
0001	○	○	1/12	100	24	47	14	22	16	0,8
0003	○	○	1/20	100	33	52	20	22	16	0,9
0005	○	○	2/25	130	36	66	19	33	20	2,1
0007	○	○	3/32	165	44	76	25	33	25	3,4
0009	○	○	3/40	165	44	76	25	43	25	3,4
0011	○	○	4/40	190	53	96	30	44	30	5,8
0013	○	○	4/50	190	63	96	40	54	30	6
0015	○	○	5/50	260	67	114	40	54	40	10,6

Quick-change tool holder

N° article	232110 Type WDPL, inside machining	Size	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg
0001	○	1/12	100	28	47	16	22	16	0,9
0005	○	2/25	130	50	62	31	33	20	2,3
0007	○	3/32	165	53	66	31	33	25	3,6
0011	○	4/40	190	53	96	30	44	30	5,8
0015	○	5/50	260	74	114	51	54	40	10,5

N° article	232112 Type WB, inside machining	Size	N mm	O mm	P mm	R mm	Weight kg
0004	○	1/30	84	39	47	30	0,8
0006	●	2/40	110	51	63	40	1,8
0009	●	3/40	140	53	66	40	2,7
0010	○	3/50	140	63	76	50	3,5
0014	○	4/60	160	77	96	60	6
0017	○	5/80	220	103	120	80	13,2

N° article	232114 Type WBW, individual	Size	N mm	O mm	P mm	Weight kg
0004	○	1/30	84	39	63	1,4
0006	○	2/40	110	51	66	3,2
0009	○	3/40	140	53	76	4,3
0010	○	3/50	140	63	96	5,7
0014	○	4/60	160	81	120	10
0017	○	5/80	220	103	120	23,5



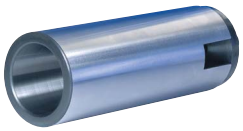

WDPL


WB

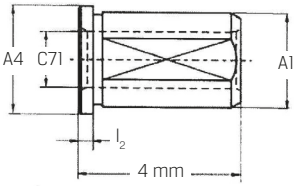

WBW

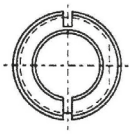
Design:
With internal morse taper for WB tool holder (232112)

N° article	232116 Clamping sleeve	Design	Size
0001	○	20 MK 1 ∅ 30	1
0003	○	20 MK 2 ∅ 30	1
0005	○	21 MK 3 ∅ 40	2|3
0007	○	21 MK 4 ∅ 40	2|3
0009	○	22 MK 3 ∅ 50	3
0011	○	22 MK 4 ∅ 50	3
0013	○	23 MK 4 ∅ 60	4
0015	○	23 MK 5 ∅ 60	4



Design:
Slotted with collar for WB insert holder.





N° article	232118 Clamping sleeve, cylindrical	Size	A1 mm	C71 mm	A4 mm	B5 mm
0001	○	1	30	8	34	50
0003	○	1	30	10	34	50
0005	○	1	30	12	34	50
0007	○	1	30	15	34	50
0009	○	1	30	16	34	50
0011	○	1	30	20	34	50
0013	○	1	30	25	34	50
0015	○	2|3	40	8	44	78
0017	○	2|3	40	10	44	78
0019	○	2|3	40	12	44	78
0021	○	2|3	40	15	44	78
0023	○	2|3	40	16	44	78
0025	○	2|3	40	20	44	78
0027	○	2|3	40	25	44	78

N° article	232118 Clamping sleeve, cylindrical	Size	A1 mm	C71 mm	A4 mm	B5 mm
0029	○	2|3	40	30	44	78
0031	○	2|3	40	32	44	78
0033	○	3	50	8	54	88
0035	○	3	50	20	54	88
0037	○	3	50	25	54	88
0039	○	3	50	30	54	88
0041	○	3	50	32	54	88
0043	○	3	50	40	54	88
0045	○	4	60	20	64	88
0047	○	4	60	25	64	88
0049	○	4	60	32	64	88
0051	○	4	60	40	64	88
0053	○	4	60	50	64	88

KSS connection set

Use:
- for tool holders 232102 and 232103
232120: Connection directly to Parat quick-change tool holder
232121: Connection central via Parat turret head

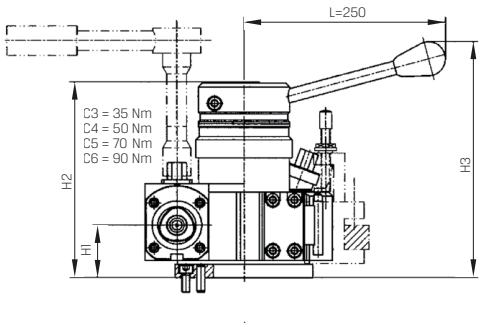
N° article	232120	Design
0001	○	Set complete
0003	○	Set screw connection
0005	○	Stop valve
0007	○	Hose 2m

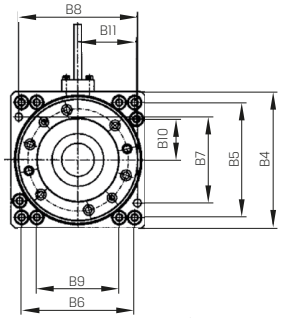
N° article	232121	Design:
0001	○	Set complete
0003	○	Set screw connection
0005	○	Stop valve
0007	○	Hose 2m

Polygon swivelling holder

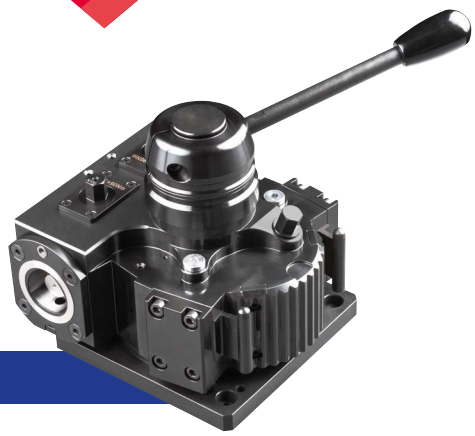
Design:
- with Parat and Multifix interface
- for cycle-controlled and conventional lathes

ISO 26623-1





NEW



Multifix interface

N° article	232124	Polygon size	Multifix size	H1 mm	H2 mm	H3 mm	B1 mm	B2 mm	B3 mm	B4 mm	B5 mm	B6 mm	B7 mm	B8 mm	B9 mm	B10 mm	B11 mm	B12 mm	Shank max
C4MB-C475	○	C4	B	53.5	201	251	60	84	180	140	118	118	88	124	–	42	61	105.5	20×20
C4MC-C358	○	C4	C	53.5	201	251	60	84	180	140	118	118	88	124	–	42	61	105.5	25×25
C5MC-C359	○	C5	C	53.5	201	251	68	100	200	140	118	118	88	124	–	42	61	102.5	25×25
C5MD1-C473	○	C5	D1	70	216	267	82.5	114.5	200	200	160	166	128	172	120	–	–	127.5	32×32
C5MD1-C555	○	C5	D1	81	227	278	82.5	114.5	200	200	160	166	128	172	120	–	–	139.5	40×40
C6MC-C490	○	C6	C	70	216	267	82.5	125	234	200	160	166	128	172	120	–	–	149	32×32
C6MD1-C369	○	C6	D1	70	216	267	82.5	125	234	200	160	166	128	172	120	–	–	139.5	32×32
C6MD1-C551	○	C6	D1	81	227	278	82.5	125	234	200	160	166	128	172	120	–	–	139.5	40×40

N° article	232125 Weiler cooling	Polygon size	Multifix size	H1 mm	H2 mm	H3 mm	B1 mm	B2 mm	B3 mm	B4 mm	B5 mm	B6 mm	B7 mm	B8 mm	B9 mm	B10 mm	B11 mm	B12 mm	Shank max
C4MB-C475	○	C4	B	53.5	201	251	60	84	180	140	118	118	88	124	–	42	61	105.5	20×20
C4MC-C358	○	C4	C	53.5	201	251	60	84	180	140	118	118	88	124	–	42	61	105.5	25×25
C5MC-C359	○	C5	C	53.5	201	251	68	100	200	140	118	118	88	124	–	42	61	102.5	25×25
C5MD1-C473	○	C5	D1	70	216	267	82.5	114.5	200	200	160	166	128	172	120	–	–	127.5	32×32
C5MD1-C555	○	C5	D1	81	227	278	82.5	114.5	200	200	160	166	128	172	120	–	–	139.5	40×40
C6MC-C490	○	C6	C	70	216	267	82.5	125	234	200	160	166	128	172	120	–	–	149	32×32
C6MD1-C369	○	C6	D1	70	216	267	82.5	125	234	200	160	166	128	172	120	–	–	139.5	32×32
C6MD1-C551	○	C6	D1	81	227	278	82.5	125	234	200	160	166	128	172	120	–	–	139.5	40×40

The swivel holder that is right for your machine is easy to configure

You simply select the desired polygon and multifix size and have already determined the right swivel holder.

You can achieve the correct center height using an adapted intermediate plate or by reworking the upper slide of your machine.

The swivel holder is ready for use immediately after it has been attached and adjusted to the machine slide.

The lever can be used to cycle through 90°. Intermediate positions of 5° each are possible.

A connection for internal coolant supply with rotary distributor is also available.

Polygon size	Multifix size	Max. torque around the swivel axis (turning)	Max. feed force (drilling)	Max. tool weight centered to the rotation axis	Max. tool weight off-center to the rotation axis
C4	B/C	1100 Nm	5,5 KN	25 kg	15 kg
C5	C/D1	1100 Nm	6,0 KN	25 kg	15 kg
C6	C/D1	1400 Nm	7,5 KN	35 kg	25 kg

Tool Holders for CNC Lathes

Product Information

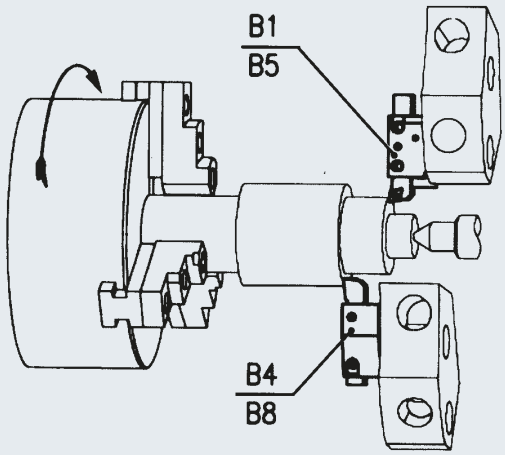
The tool holders of the various shapes defined in DIN 69880 are produced with the highest precision. The DIN program is supplemented by an extensive range of tried and tested special holders.

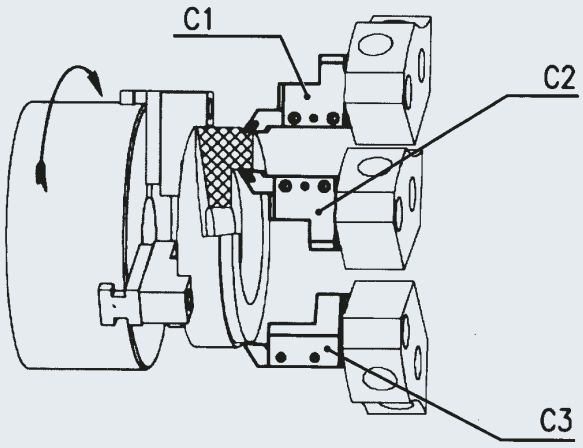
DIN 69880

The technical features:

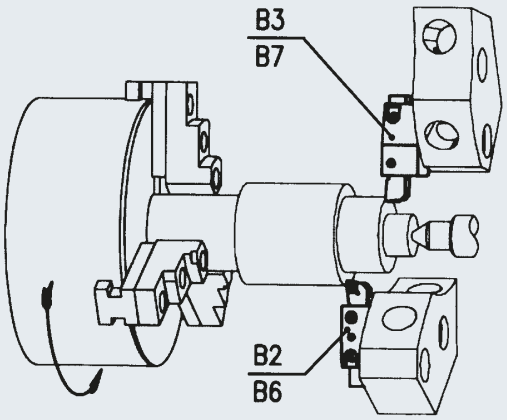
- surface of tool holders hardened (58 +/- HRC)
- core strength › 900 N/mm²
- completely burnished support area, shank and toothing ground. Shim plate for shaft reduction included
- position of the lathe tool in the tool holder adjustable by means of 2 stop screws
- flexible pressure plates for positionally accurate clamping of the lathe tool
- internal coolant supply via fast and precisely adjustable ball nozzles with clamping up to 60 bar tight

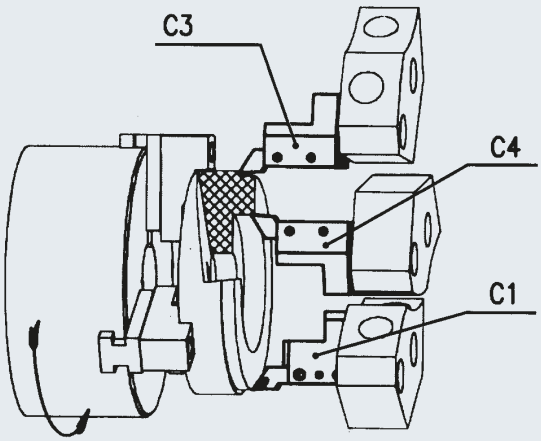
Application of tool holder with left-hand drive



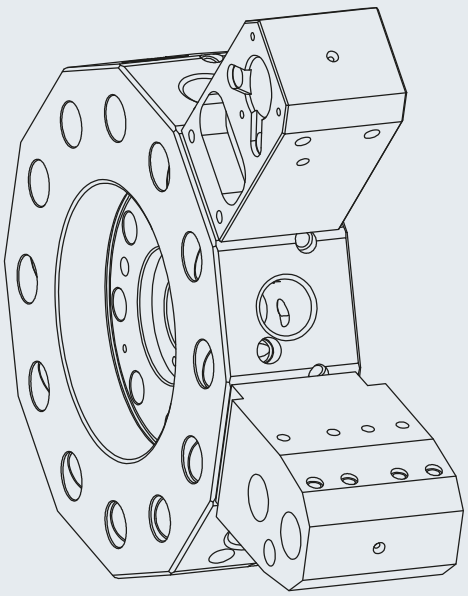


Application of tool holder with right-hand drive





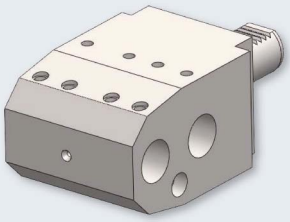
Tool holders (VDI tool holders) for lathes with star turrets (radial turrets)

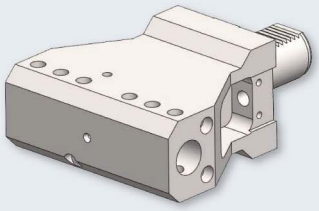


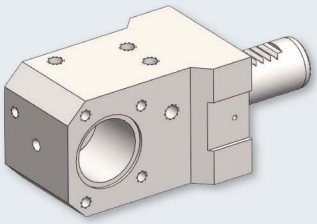
The new generations of lathes are increasingly using radial turrets, with the tool clamping on the circumference. This space-saving arrangement ensures the parallel use of the main spindle and secondary spindle. This allows the complete machining in two clamping actions on one machine.

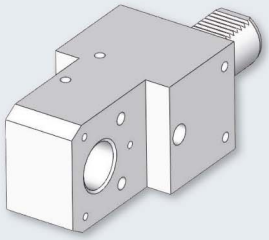
Due to this technical innovation, new, further developed tool holders are needed. We can offer you these static tools, which are individually tailored to your machine, from our assortment as a complete solution, inter alia, with the adjustment strip prescribed by the machine manufacturer.

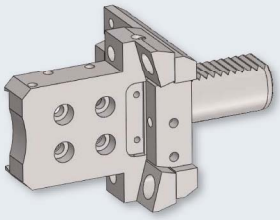
We deliver these holders in the sizes VDI 30, 40 or 50.
Contact your local PRECITOOL dealer for further information.

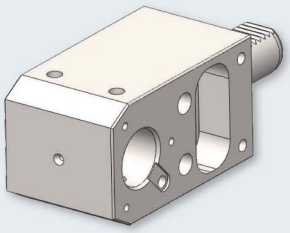


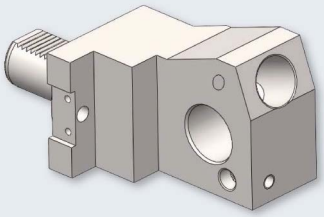


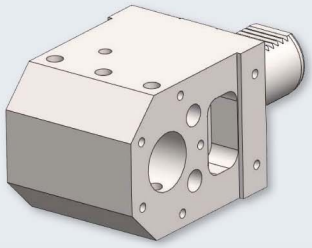












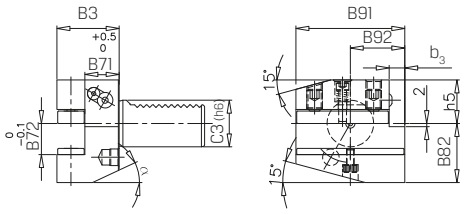
Tool Holder DIN 69880

PRETEC

Design:
- radial
- short
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880





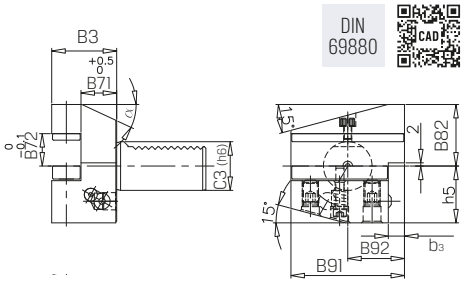
B1 B2

N° article	233000 Shape B1, right	233050 Shape B2, left	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm
B116×12×24	●	–	16	24	13	12	22	42	23	20	5
B216×12×24	–	○	16	24	13	12	22	42	23	20	5
B116×12×34	○	–	16	34	23	12	22	42	23	20	5
B216×12×34	–	○	16	34	23	12	22	42	23	20	5
B120×16×30	●	–	20	30	16	16	30	55	30	25	7
B220×16×30	–	●	20	30	16	16	30	55	30	25	7
B120×16×40	○	–	20	40	26	16	30	55	30	25	7
B220×16×40	–	○	20	40	26	16	30	55	30	25	7
B125×16×30	○	–	25	30	16	16	30	55	30	25	7
B225×16×30	–	○	25	30	16	16	30	55	30	25	7
B125×16×40	○	–	25	40	26	16	30	55	30	25	7
B225×16×40	–	○	25	40	26	16	30	55	30	25	7
B130×20×40	●	–	30	40	22	20	38	70	35	28	10
B230×20×40	–	●	30	40	22	20	38	70	35	28	10
B130×20×60	●	–	30	60	42	20	38	70	35	28	10
B230×20×60	–	●	30	60	42	20	38	70	35	28	10
B140×25×44	●	–	40	44	22	25	48	85	42,5	32.5	12,5
B240×25×44	–	●	40	44	22	25	48	85	42,5	32.5	12,5
B150×32×55	●	–	50	55	30	32	60	100	50	35	16
B250×32×55	–	●	50	55	30	32	60	100	50	35	16
B160×32×60	●	–	60	60	30	32	62,5	125	62,5	42.5	16
B260×32×60	–	●	60	60	30	32	62,5	125	62,5	42.5	16

Design:
- radial
- overhead
- short
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880





B3 B4

N° article	233100 Shape B35, right	233150 Shape B4, left	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm
B316×12×24	●	–	16	24	13	12	22	42	23	20	5
B416×12×24	–	○	16	24	13	12	22	42	23	20	5
B316×12×34	○	–	16	34	23	12	22	42	23	20	5
B416×12×34	–	○	16	34	23	12	22	42	23	20	5
B320×16×30	●	–	20	30	16	16	30	55	30	25	7
B420×16×30	–	○	20	30	16	16	30	55	30	25	7
B320×16×40	○	–	20	40	26	16	30	55	30	25	7
B420×16×40	–	○	20	40	26	16	30	55	30	25	7
B325×16×30	○	–	25	30	16	16	30	55	30	25	7
B425×16×30	–	○	25	30	16	16	30	55	30	25	7
B325×16×40	○	–	25	40	26	16	30	55	30	25	7
B425×16×40	–	○	25	40	26	16	30	55	30	25	7
B330×20×40	●	–	30	40	22	20	38	70	35	35	10
B430×20×40	–	●	30	40	22	20	38	70	35	35	10
B330×20×60	●	–	30	60	42	20	38	70	35	35	10
B430×20×60	–	○	30	60	42	20	38	70	35	35	10
B340×25×44	●	–	40	44	22	25	48	85	42,5	42.5	12,5
B440×25×44	–	●	40	44	22	25	48	85	42,5	42.5	12,5
B350×32×55	●	–	50	55	30	32	60	100	50	50	16
B450×32×55	–	○	50	55	30	32	60	100	50	50	16
B360×32×60	○	–	60	60	30	32	62,5	125	62,5	62.5	16
B460×32×60	–	○	60	60	30	32	62,5	125	62,5	62.5	16

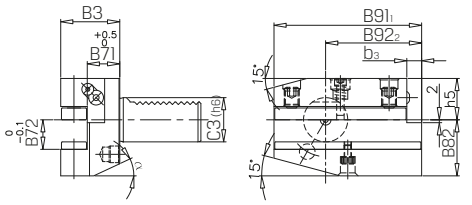
Tool holder for CNC lathes DIN 69880

PRETEC

Design:
- radial
- long
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880





B5 B6

N° article	233200 Shape B5, right	233250 Shape B6, left	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm
B516×12×24	○	–	16	24	13	12	22	58	39	20	5
B616×12×24	–	○	16	24	13	12	22	58	39	20	5
B516×12×34	○	–	16	34	23	12	22	58	39	20	5
B616×12×34	–	○	16	34	23	12	22	58	39	20	5
B520×16×30	○	–	20	30	16	16	30	75	50	25	7
B620×16×30	–	○	20	30	16	12	30	75	50	25	7
B520×16×40	○	–	20	40	26	16	30	75	50	25	7
B620×16×40	–	○	20	40	26	16	30	75	50	25	7
B525×16×30	○	–	25	30	16	16	30	75	50	25	7
B625×16×30	–	○	25	30	16	16	30	75	50	25	7
B525×16×40	○	–	25	40	26	16	30	75	50	25	7
B625×16×40	–	○	25	40	26	16	30	75	50	25	7
B530×20×40	●	–	30	40	22	20	38	100	65	28	10
B630×20×40	–	○	30	40	22	20	38	100	65	28	10
B530×20×60	○	–	30	60	42	20	38	100	65	28	10
B630×20×60	–	○	30	60	42	20	38	100	65	28	10
B540×25×44	●	–	40	44	22	25	48	118	75,5	32.5	12,5
B640×25×44	–	●	40	44	22	25	48	118	75,5	32.5	12,5
B550×32×55	●	–	50	55	30	32	60	130	80	35	16
B650×32×55	–	●	50	55	30	32	60	130	80	35	16
B560×32×60	○	–	60	60	30	32	62,5	145	82,5	42.5	16
B660×32×60	–	○	60	60	30	32	62,5	145	82,5	42.5	16

Tool Holder DIN 69880

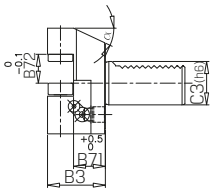
PRETEC

Design:
- radial
- overhead
- long
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880 CAD

N° article	233300 Shape B7, right	233350 Shape B8, left	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm
B716×12×24	○	–	16	24	13	12	22	58	39	20	5
B816×12×24	–	○	16	24	13	12	22	58	39	20	5
B716×12×34	○	–	16	34	23	12	22	58	39	20	5
B816×12×34	–	○	16	34	23	12	22	58	39	20	5
B720×16×30	○	–	20	30	16	16	30	75	50	25	7
B820×16×30	–	○	20	30	16	16	30	75	50	25	7
B720×16×40	○	–	20	40	26	16	30	75	50	25	7
B820×16×40	–	○	20	40	26	16	30	75	50	25	7
B725×16×30	○	–	25	30	16	16	30	75	50	25	7
B825×16×30	–	○	25	30	16	16	30	75	50	25	7
B725×16×40	○	–	25	40	26	16	30	75	50	25	7
B825×16×40	–	○	25	40	26	16	30	75	50	25	7
B730×20×40	●	–	30	40	22	20	38	100	65	35	10
B830×20×40	–	○	30	40	22	20	38	100	65	35	10
B730×20×60	○	–	30	60	42	20	38	100	65	35	10
B830×20×60	–	○	30	60	42	32	38	100	65	35	10
B740×25×44	●	–	40	44	22	25	48	118	75,5	42.5	12,5
B840×25×44	–	●	40	44	22	25	48	118	75,5	42.5	12,5
B750×32×55	○	–	50	55	30	32	60	130	80	50	16
B850×32×55	–	○	50	55	30	32	60	130	80	50	16
B760×32×60	○	–	60	60	30	32	62,5	145	82,5	62.5	16
B860×32×60	–	○	60	60	30	32	62,5	145	82,5	62.5	16



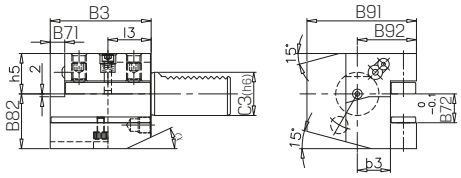

B7


B8

Design:
- axial
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880 CAD




C1

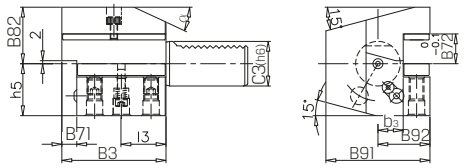

C2

N° article	233500 Shape C1, right	233550 Shape C2, left	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm	l_3 mm
C116×12×44	○	–	16	44	5	12	22	43	24	20	13	20
C216×12×44	–	○	16	44	5	12	22	43	24	20	13	20
C120×16×50	●	–	20	50	50	12	30	65	40	25	26	30
C220×16×50	–	○	20	50	50	16	30	65	40	25	26	30
C125×16×55	●	–	25	55	7	16	30	58	33	25	19	20
C225×16×55	–	○	25	55	7	16	30	58	33	25	19	20
C130×20×70	●	–	30	70	10	20	38	70	35	28	17	30
C230×20×70	–	●	30	70	10	20	38	76	41	28	23	30
C140×25×85	●	–	40	85	12	25	48	85	42,5	32.5	21	30
C240×25×85	–	●	40	85	12	25	48	90	47,5	32.5	25,5	30
C150×32×100	●	–	50	100	16	32	60	100	50	35	26	40
C250×32×100	–	●	50	100	16	32	60	105	55	35	30,5	40
C160×32×125	●	–	60	125	16	32	62,5	125	62,5	42.5	33	40
C260×32×125	–	●	60	125	16	32	62,5	125	62,5	42.5	33	40

Design:
- radial
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880 CAD




C3


C4

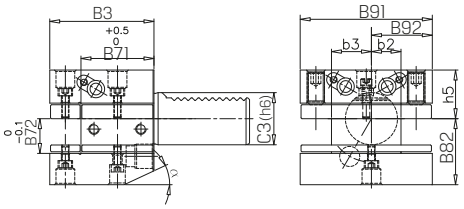
N° article	233600 Shape C3, right hand spiral flute	233650 Shape C4, left	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm	l_3 mm
C316×12×44	○	–	16	44	5	12	22	43	24	20	13	20
C416×12×44	–	○	16	44	5	12	22	43	24	20	42	20
C320×16×50	○	–	20	50	50	16	30	65	40	25	26	30
C420×16×50	–	○	20	50	50	16	30	65	40	25	13	30
C325×16×55	○	–	25	55	7	16	30	58	33	25	19	20
C425×16×55	–	●	25	55	7	16	30	58	33	25	26	20
C330×20×70	●	–	30	70	10	20	38	70	35	35	17	30
C430×20×70	–	●	30	70	10	20	38	76	41	35	19	30
C340×25×85	●	–	40	85	12	25	48	85	42,5	42.5	21	30
C440×25×85	–	●	40	85	12	25	48	90	47,5	42.5	23	30
C350×32×100	○	–	50	100	16	32	60	100	50	50	26	40
C450×32×100	–	○	50	100	16	32	60	105	55	50	25,5	40
C360×32×125	○	–	60	125	16	32	62,5	125	62,5	62.5	33	40
C460×32×125	–	○	60	125	16	32	62,5	125	62,5	62.5	30,5	40

Tool Holder DIN 69880

Design:
- radial
- with ball spray nozzle

Delivery:
Washer installed

DIN 69880 CAD





D1

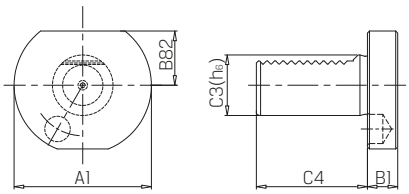


D2

N° article	233700 Form D1	233750 Shape D2	C3 mm	B3 mm	B71 mm	B72 mm	B82 mm	B91 mm	B92 mm	h_5 mm	b_3 mm
D125×16×48	○	–	25	48	34	16	30	66	33	25	19
D225×16×48	–	○	25	48	34	16	30	66	33	25	19
D130×20×60	●	–	30	60	42	20	28	76	35	38	23
D230×20×60	–	○	30	60	42	20	38	76	35	35	23
D140×25×72	●	–	40	72	50	20,5	32,5	90	42,5	48	25,5
D240×25×72	–	●	40	72	50	25	48	90	42,5	42.5	25,5
D150×32×85	●	–	50	85	60	32	60	105	50	35	30,5
D250×32×85	–	○	50	85	60	32	60	105	50	50	30,5
D160×32×110	○	–	60	110	85	32	42,5	115	57,5	62.5	33
D260×32×110	–	○	60	110	85	32	62,5	115	57,5	62.5	33

DIN 69880 CAD

N° article	233800 Shape Z2 S in steel	C3 mm	A1 mm	B1 mm	B82 mm	C4 mm
Z216S	○	16	40	13	18	45
Z220S	○	20	50	16	23	56
Z225S	○	25	58	16	25	64
Z230S	●	30	68	16	28	71
Z240S	●	40	83	20	32,5	83
Z250S	●	50	98	20	35	98
Z260S	○	60	123	20	42,5	114





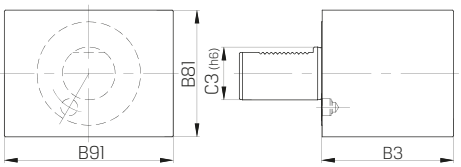
Z2

N° article	233850 Shape Z2 P made of plastic	C3 mm	A1 mm	B1 mm	B82 mm	C4 mm
Z216P	●	16	40	13	18	45
Z220P	●	20	50	16	23	56
Z230P	●	30	68	16	28	71
Z240P	●	40	83	20	32,5	83
Z250P	●	50	98	20	35	98
Z260P	●	60	123	20	42,5	114

Design:
square blank for special models form A1.
Shank and contact surface hardened and ground.

DIN 69880 CAD

N° article	233900	C3 mm	B3 mm	B81 mm	B91 mm
A116×44	○	16	44	44	78
A120×65	○	20	65	60	100
A125×75	○	25	75	60	100
A130×85	●	30	85	76	130
A140×100	●	40	100	96	151
A150×125	●	50	125	120	160
A160×160	○	60	160	125	165

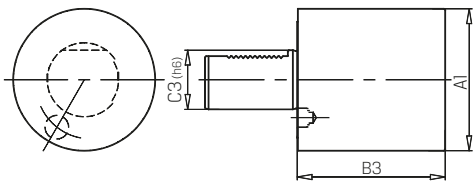



A1

Design:
round blank for special models form A2.
Shank and contact surface hardened and ground.

DIN 69880 CAD

N° article	233950	C3 mm	A1 mm	B3 mm
A216×60	○	16	40	60
A220×70	○	20	50	70
A225×80	○	25	58	80
A225×200	○	25	58	200
A230×100	○	30	68	100
A230×240	○	30	68	240
A240×120	●	40	83	120
A240×320	●	40	83	320
A250×135	●	50	98	135
A250×400	●	50	98	400
A260×150	○	60	123	150
A260×480	○ +	60	123	480




A2

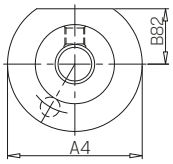
Tool Holder DIN 69880

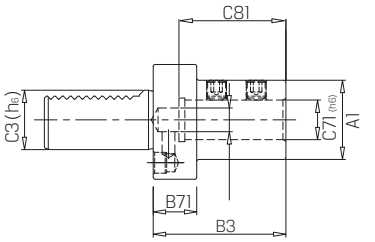
PRETEC

Toolholder for indexable insert drills form E1, with internal coolant supply via collar and ground contact surface.

Note:
Ideally suited for all drilling tools with Whistle Notch shank.

DIN 69880





N° article	234100 Shape E1	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	B82 mm	C71 mm	C81 mm
E120×16	○	20	36	50	64	18	–	16	51
E120×20	○	20	40	50	64	18	–	20	51
E120×25	○	20	45	50	71	18	–	25	59
E125×16	○	25	40	58	67	18	25	16	54
E125×20	○	25	40	58	67	18	25	20	54
E125×25	○	25	45	58	71	18	25	25	59
E125×32	○	25	52	58	75	18	25	32	63
E130×06	○	30	25	68	50	22	28	6	36
E130×08	○	30	28	68	50	22	28	8	36
E130×10	○	30	35	68	54	22	28	10	40
E130×12	●	30	42	68	59	22	28	12	45
E130×14	○	30	–	68	22	22	28	14	–
E130×16	●	30	36	68	64	22	28	16	51
E130×20	●	30	40	68	67	22	28	20	54
E130×25	●	30	45	68	71	22	28	25	59
E130×32	●	30	52	68	75	22	28	32	63
E140×06	●	40	25	83	50	22	32,5	6	36
E140×08	●	40	28	83	50	22	32,5	8	36
E140×10	●	40	35	83	54	22	32,5	10	40
E140×12	●	40	42	83	58	22	32,5	12	45

N° article	234100 Shape E1	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	B82 mm	C71 mm	C81 mm
E140×14	●	40	–	83	22	22	32,5	14	–
E140×16	●	40	36	83	64	22	32,5	16	51
E140×20	●	40	40	83	67	22	32,5	20	54
E140×25	●	40	45	83	75	22	32,5	25	59
E140×32	●	40	52	83	75	22	32,5	32	63
E140×40	●	40	65	83	90	22	32,5	40	73
E140×50	●	40	70	83	100	22	32,5	50	83
E150×16	○	50	36	98	64	30	35	16	51
E150×20	○	50	40	98	67	30	35	20	54
E150×25	●	50	45	98	80	30	35	25	59
E150×32	●	50	52	98	80	30	35	32	63
E150×40	●	50	65	98	90	30	35	40	73
E150×50	●	50	75	98	100	30	35	50	83
E160×16	○	60	36	123	64	30	42,5	16	51
E160×20	○	60	40	123	80	30	42,5	20	54
E160×25	○	60	45	123	80	30	42,5	25	59
E160×32	○	60	52	123	80	30	42,5	32	63
E160×40	○	60	65	123	90	30	42,5	40	73
E160×50	○	60	75	123	100	30	42,5	50	83

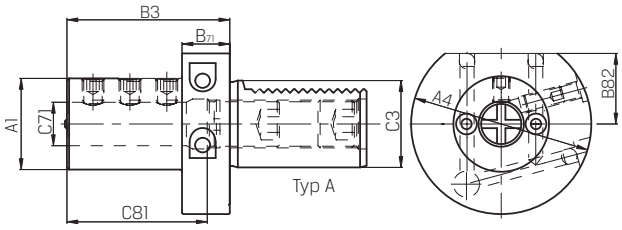


E1

Design:
- internal coolant supply adjustable via set screw at collar
- length adjustment with cannulated shank possible from the shank side (type A)
- adjustment screw secured with safety ring against falling into the turret
- type A, no need to shorten the boring bar

*Tool receptacle recessed

DIN 69880





E2

N° article	234200 Shape E2 with internal cooling	*	Type	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	B82 mm	C71 mm	C81 mm
E216×6	○		B	16	32	40	44	13	18	6	34
E216×8	○		B	16	32	40	44	13	18	8	34
E216×10	●		B	16	32	40	44	13	18	10	34
E216×12	●		B	16	40	40	44	44	18	12	34
E216×16	●		B	16	40	40	44	44	18	16	34
E220×6	●		B	20	40	50	50	18	23	6	42
E220×8	○	*	B	20	40	50	50	18	23	8	42
E220×10	○	*	B	20	40	50	50	18	23	10	42
E220×12	○		B	20	40	50	50	18	23	12	42
E220×16	●		B	20	40	50	50	18	23	16	42
E220×20	●		B	20	49	50	50	18	23	20	42
E220×25	●		B	20	49	50	60	18	23	25	52
E225×8	○	*	A	25	40	58	50	18	25	8	41
E225×10	○	*	A	25	40	58	50	18	25	10	41
E225×12	○	*	A	25	40	58	50	18	25	12	41
E225×16	○		B	25	40	58	50	18	25	16	41
E225×20	○		B	25	58	58	50	50	25	20	41
E225×25	○		B	25	58	58	60	60	25	25	51
E230×6	●		A	30	55	68	60	22	28	6	43
E230×8	●	*	A	30	55	68	60	22	28	8	43
E230×10	●	*	A	30	55	68	60	22	28	10	43
E230×12	●	*	A	30	55	68	60	22	28	12	43
E230×16	●	*	A	30	55	68	60	22	28	16	54
E230×20	●		B	30	55	68	60	22	28	20	51
E230×25	●		B	30	55	68	60	22	28	25	51
E230×30	○		B	30	67	68	75	22	28	30	61

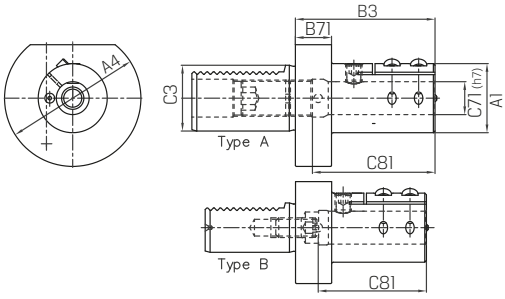
N° article	234200 Shape E2 with internal cooling	*	Type	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	B82 mm	C71 mm	C81 mm
E230×32	●		B	30	67	68	75	22	28	32	61
E230×40	●		B	30	67	68	90	22	28	40	76
E240×6	●		A	40	55	83	75	22	32,5	6	43
E240×8	●	*	A	40	55	83	75	22	32,5	8	43
E240×10	●	*	A	40	55	83	75	22	32,5	10	43
E240×12	●	*	A	40	55	83	75	22	32,5	12	58
E240×16	●	*	A	40	55	83	75	22	32,5	16	61
E240×20	●		A	40	55	83	75	22	32,5	20	61
E240×25	●		B	40	55	83	75	22	32,5	25	61
E240×30	●		B	40	82	83	75	22	32,5	30	61
E240×32	●		B	40	82	83	75	22	32,5	32	61
E240×40	●		B	40	82	83	90	22	32,5	40	76
E240×50	●		B	40	98	98	100	100	35	50	86
E250×12	●		A	50	68	98	90	30	35	12	71
E250×16	●		A	50	68	98	90	30	35	16	76
E250×20	●		A	50	68	98	90	30	35	20	76
E250×25	●		A	50	68	98	90	30	35	25	76
E250×32	●		B	50	68	98	90	30	35	32	76
E250×40	●		B	50	98	98	90	90	35	40	76
E250×50	●		B	50	98	98	100	100	35	50	86
E260×16	○		A	60	68	123	90	30	42,5	16	76
E260×20	○		A	60	68	123	90	30	42,5	20	76
E260×25	○		A	60	68	123	90	30	42,5	25	76
E260×32	○		A	60	68	123	90	30	42,5	32	76
E260×40	●		B	60	98	123	90	30	42,5	40	76
E260×50	●		B	60	98	123	100	30	42,5	50	86

Tool Holder DIN 69880

PRETEC

DIN 69880

Design:
- slotted version
- reduces vibrations by looping around the boring bar
- length adjustment with cannulated shank possible from the shank side (type A)
- adjustment screw secured with safety ring against falling into the turret
- full-round boring bars with V-groove can be clamped with height adjustment of the insert
- type A shank with through-hole, i.d. no need to shorten the boring bars
- type B shank without through-hole
- internal and external cooling possible





N° article	234210 Shape E2S slotted	Type	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	C71 mm	C81 mm
E230×6	○	A	30	46	68	88	22	6	65
E230×8	●	A	30	46	68	88	22	8	65
E230×10	●	A	30	46	68	88	22	10	65
E230×12	●	A	30	46	68	88	22	12	65
E230×16	●	A	30	50	68	88	22	16	70
E230×20	●	B	30	54	68	96	22	20	80
E230×25-K	○	B	30	59	68	83	22	25	66
E230×25	●	B	30	59	68	112	22	25	100
E230×32-K	○	B	30	65	68	96	22	32	80
E230×32	●	B	30	65	68	142	22	32	128
E240×6	○	A	40	46	83	88	22	6	65
E240×8	○	A	40	46	83	88	22	8	65
E240×10	●	A	40	46	83	88	22	10	65
E240×12	●	A	40	46	83	88	22	12	65
E240×16	●	A	40	50	83	88	22	16	70
E240×20	●	A	40	54	83	96	22	20	80
E240×25-K	○	B	40	59	83	96	22	25	80
E240×25	●	B	40	59	83	112	22	25	100
E240×32-K	○	B	40	65	83	96	22	32	80
E240×32	●	B	40	65	83	142	22	32	128

N° article	234210 Shape E2S slotted	Type	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	C71 mm	C81 mm
E240×40-K	○	B	40	73	83	124	22	40	100
E240×40	●	B	40	73	83	174	22	40	150
E250×16	○	A	50	50	98	103	30	16	85
E250×20	○	A	50	54	98	103	30	20	80
E250×25-K	○	A	50	59	98	104	30	25	90
E250×25	●	A	50	59	98	120	30	25	106
E250×32-K	○	B	50	65	98	112	30	32	90
E250×32	●	B	50	65	98	150	30	32	128
E250×40-K	○	B	50	73	98	122	30	40	100
E250×40	●	B	50	73	98	182	30	40	160
E250×50-K	○	B	50	83	98	147	30	50	125
E250×50	○	B	50	83	98	182	30	50	160
E260×25-K	○	A	60	59	123	110	30	25	90
E260×25	○	A	60	59	123	120	30	25	106
E260×32-K	○	A	60	65	123	112	30	32	90
E260×32	○	A	60	65	123	150	30	32	128
E260×40-K	○	B	60	73	123	122	30	40	100
E260×40	○	B	60	73	123	182	30	40	160
E260×50-K	○	B	60	83	123	147	30	50	125
E260×50	○	B	60	83	123	202	30	50	180

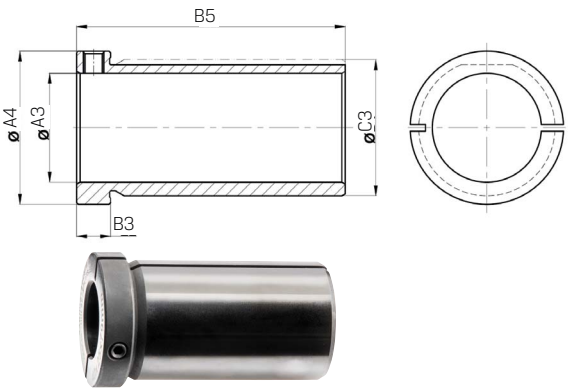
Reducing sleeve DIN 69880

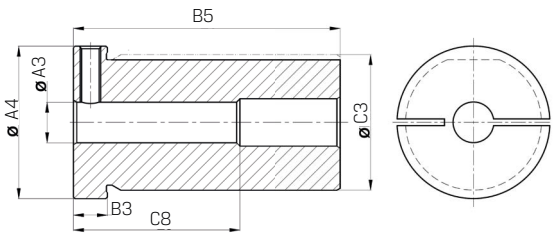
PRETEC

NEW

Note:
Fitting for 234210

Design:
- precision ground, with stop collar
- slotted, with fixing screw







N° article	234252 Reducing sleeve, cylindrical and vibration-damping	C3 mm	A3 mm	A4 mm	B3 mm	B5 mm	C8 mm
20×8	○	20	8	25	10	53	–
20×10	○	20	10	25	10	53	–
20×12	○	20	12	25	10	53	–
20×16	●	20	16	25	10	53	–
25×8	○	25	8	30	10	60	–
25×10	○	25	10	30	10	60	50
25×12	○	25	12	30	10	60	50
25×16	○	25	16	30	10	60	–
25×20	○	25	20	30	10	60	–
32×8	○	32	8	37	10	69	50
32×10	○	32	10	37	10	69	50
32×12	○	32	12	37	10	69	50
32×16	○	32	16	37	10	69	–
32×20	○	32	20	37	10	69	–
32×25	○	32	25	37	10	69	–
40×10	○	40	10	45	10	79	50
40×12	○	40	12	45	10	79	50
40×16	○	40	16	45	10	79	–
40×20	●	40	20	45	10	79	–
40×25	○	40	25	45	10	79	–
40×32	○	40	32	45	10	79	–
50×20	○	50	20	55	10	90	–
50×25	○	50	25	55	10	90	–
50×32	○	50	32	55	10	90	–
50×40	○	50	40	55	10	90	–
60×25	○	60	25	65	10	92	–
60×32	○	60	32	65	10	92	–
60×40	●	60	40	65	10	92	–
60×50	○	60	50	65	10	92	–

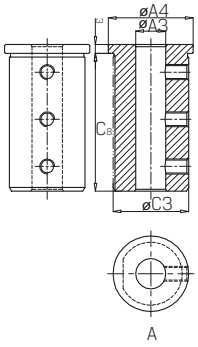
Accessories for tool holders
DIN 69880

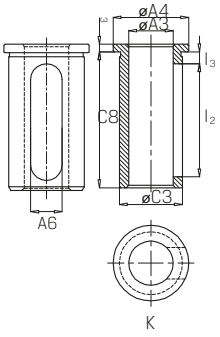
PRETEC

Design:
- for boring bar holders E1 and E2
- precision ground with stop collar
- bores for tools with parallel shank
- type A with bores
- type K with groove



N° article	234261 Reducing sleeve	Type	C3 mm	A3 mm	A4 mm	A6 mm	C8 mm	l_3 mm	l_2 mm
20×08	●	A	20	8	25	–	39	–	–
20×10	●	A	20	10	25	–	39	–	–
20×12	●	K	20	12	25	9	39	3.5	32.5
20×16	●	K	20	16	25	9	39	3.5	32.5
25×08	○	A	25	8	30	–	50	–	–
25×10	●	A	25	10	30	–	50	–	–
25×12	●	A	25	12	30	–	50	–	–
25×16	●	K	25	16	30	13	52	3.5	45.5
25×20	●	K	25	20	30	13	52	3.5	45.5
32×08	●	A	32	8	37	–	59	–	–
32×10	●	A	32	10	37	–	59	–	–
32×12	●	A	32	12	37	–	59	–	–
32×16	●	A	32	16	37	–	59	–	–
32×20	●	K	32	20	37	13	62	5.0	54
32×25	●	K	32	25	37	13	62	5.0	54
40×08	●	A	40	8	45	–	69	–	–
40×10	●	A	40	10	45	–	69	–	–
40×12	●	A	40	12	45	–	69	–	–
40×16	●	A	40	16	45	–	69	–	–
40×20	●	A	40	20	45	–	69	–	–
40×25	●	A	40	25	45	–	69	–	–
40×32	●	K	40	32	45	17	69	5.0	61
50×08	○	A	50	8	55	–	80	–	–
50×10	○	A	50	10	55	–	80	–	–
50×12	○	A	50	12	55	–	80	–	–
50×16	●	A	50	16	55	–	80	–	–
50×20	●	A	50	20	55	–	80	–	–
50×25	●	A	50	25	55	–	80	–	–
50×32	●	A	50	32	55	–	80	–	–
50×40	●	K	50	40	55	17	80	5.0	72



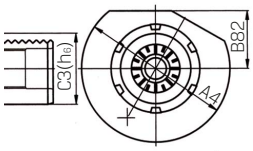


Tool Holder DIN 69880

PRETEC

Design:
- collet chuck form E4
- for ER collet chucks to DIN 6499, 248450-248659

DIN 69880







E4

N° article	234550 Shape E4	C6	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	B82 mm	Clamping range mm
E416×16	●	ER16	16	32	40	38	13	18	1 - 10
E416×20	●	ER20	16	35	40	44	13	18	1 - 13
E416×25	○	ER25	16	42	40	44	13	18	2 - 16
E420×16	●	ER16	20	32	50	44	18	–	1 - 10
E420×20	○	ER20	20	35	50	44	18	–	1 - 13
E420×25	●	ER25	20	42	50	50	18	–	1 - 16
E420×32	●	ER32	20	50	50	62	18	–	2 - 20
E425×25	●	ER25	25	42	58	57	18	25	2 - 16
E425×32	○	ER32	25	50	58	62	18	25	2 - 20
E430×16	●	ER16	30	32	68	48	22	28	1 - 10
E430×25	●	ER25	30	42	68	57	22	28	2 - 16
E430×32	●	ER32	30	50	68	62	22	28	2 - 20
E430×40	●	ER40	30	63	68	70	22	28	3 - 30
E440×25	●	ER25	40	42	83	62	22	32,5	2 - 16
E440×32	●	ER32	40	50	83	62	22	32,5	2 - 20
E440×40	●	ER40	40	63	83	75	22	32,5	2 - 30
E450×32	●	ER32	50	50	98	75	30	35	2 - 20
E450×40	●	ER40	50	63	98	75	30	35	2 - 30
E460×32	○	ER32	60	50	123	75	30	42,5	2 - 20
E460×40	○	ER40	60	63	123	75	30	42,5	2 - 30

Tool Holder DIN 69880

PRETEC

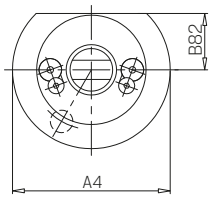
Design:
- for tools with shank to DIN 228B with tang
- with ball spray nozzlea

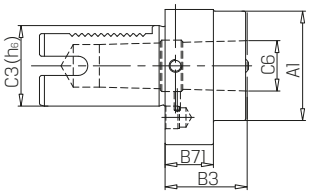
*without toothing

DIN 69880



F

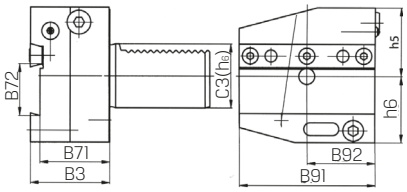




N° article	234300 Form F	*	C6	C3 mm	A1 mm	A4 mm	B3 mm	B71 mm	B82 mm
F16MK1	○		MK1	16	–	40	50	–	–
F20MK1	○		MK1	20	–	50	23	–	–
F20MK2	○	*	MK2	20	–	50	61	22	–
F25MK1	○		MK1	25	–	58	–	–	25
F25MK2	○		MK2	25	–	58	27	–	25
F30MK1	○		MK1	30	–	68	27	–	28
F30MK2	●		MK2	30	–	68	36	–	27
F30MK3	●		MK3	30	55	68	66	41	28
F40MK1	○		MK1	40	55	83	36	22	32,5
F40MK2	●		MK2	40	55	83	36	22	32,5
F40MK3	●		MK3	40	58	83	36	22	32,5
F40MK4	●		MK4	40	68	83	80	22	32,5
F50MK2	○		MK2	50	55	98	36	30	35
F50MK3	○		MK3	50	58	98	36	30	35
F50MK4	○		MK4	50	68	98	50	30	35
F50MK5	○	*	MK5	50	–	98	16	–	35

Design:
- height-adjustable
- with ball spray nozzle

DIN 69880





AR



AL

N° article	234650 Shape AR, right	234660 Shape AL, left	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm
AR2026	○	–	20	50	44	26	60	30	28	36
AL2026	–	○	20	50	44	26	60	30	28	36
AR2526	○	–	25	50	44	26	60	30	28	36
AL2526	–	○	25	50	44	26	60	30	28	36
AR3026	●	–	30	50	44	26	70	35	32	39
AL3026	–	○	30	50	44	26	70	35	32	39
AR3032	○	–	30	50	44	32	70	35	32	39
AR4026	○	–	40	50	44	26	85	42,5	43	41.5
AL4026	–	○	40	50	44	26	85	42,5	43	41.5
AR4032	●	–	40	50	44	32	85	42,5	43	41.5
AL4032	–	○	40	50	44	32	85	42,5	43	41.5
AR5026	○	–	50	50	44	26	100	50	43	45
AL5026	–	○	50	50	44	26	100	50	43	45
AR5032	○	–	50	50	44	32	100	50	43	45
AL5032	–	○	50	50	44	32	100	50	43	45
AR6032	○	–	60	50	44	32	125	62,5	48	55
AL6032	–	○	60	50	44	32	125	62,5	48	55

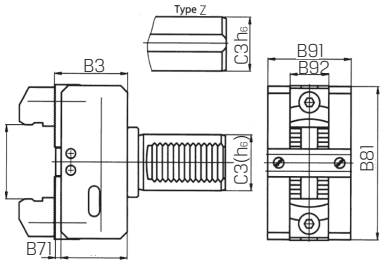
Tool Holder DIN 69880

PRETEC

Use:
- gripper to pull bar material on CNC lathes forward
- type Z available on request

DIN 69880

N° article	234600 Shape KH1	C3 mm	B1 mm	B3 mm	B71 mm	B81 mm	B91 mm	B92 mm	Clamping range mm
KH1-30	●	30	46	51	4	72	50	28	10 - 75
KH1-40	●	40	48	53	4	110	60	28	10 - 75
KH1-50	○	50	67	73	5	130	65	28	10 - 75

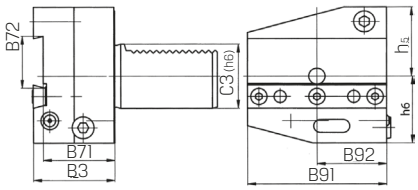



KH1

Design:
- height-adjustable
- overhead
- with ball spray nozzle

DIN 69880

N° article	234670 Shape ARU, right	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm
ARU2026	○	20	50	44	26	60	30	36	28
ARU2526	○	25	50	44	26	60	30	36	28
ARU3026	○	30	50	44	26	70	35	38	35
ARU3032	○	30	50	44	32	70	35	38	35
ARU4026	○	40	50	44	26	85	42,5	43	41.5
ARU4032	○	40	50	44	32	85	42,5	43	41.5
ARU5026	○	50	50	44	26	100	50	43	45
ARU5032	○	50	50	44	32	100	50	43	45
ARU6032	○	60	50	44	32	125	62,5	48	55



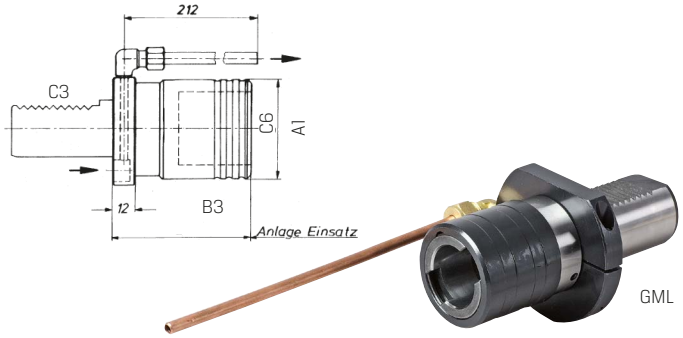

ARU

Design:
With flange for coolant connection, sealing and toothing, type KF with ball bearing bush

Delivery:
With coolant bore

DIN 69880

N° article	234720 With length compensation	C6	C3 mm	A1 mm	B3 mm	for taps	Length compensation compression/traction
20/12	●	Sz. 1	20	36	52,2	M3-M12	7.5/7.5
30/12	●	Sz. 1	30	36	52,2	M3-M12	7.5/7.5
40/12	●	Sz. 1	40	36	52,2	M8-M20	7.5/7.5
30/20	●	Sz. 2	30	53	76	M3-M12	12.5/12.5
40/20	●	Sz. 2	40	53	76	M8-M20	12.5/12.5



GML

Tool Holder DIN 69880

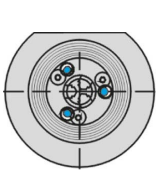
WTE MAPAL GROUP

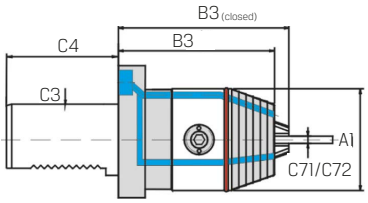
DIN 69880 | IKZ

Design:
- for right and left rotation
- parallel shank to DIN 69880 / VDI 3425 with coolant supply via 3 ball spray nozzles or with coolant supply through the centre.

For an additional charge, you will get a drill chuck head which can be rotated 180° to the shank (factory-made).

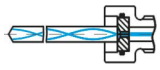
N° article	234700 with 3 ball spray nozzles	C3 mm	A1 mm	B3 mm	B3 (closed) mm	C4 mm	C71 mm	C72 mm	Weight kg
20/13	○	20	57	82	88	40	0,5	13	1,7
30/08	○	30	40	60	63	55	0,3	8	1
30/13	●	30	57	82	88	55	0,5	13	2,1
30/16	●	30	57	82	93	55	2,5	16	2,1
40/13	●	40	57	85	91	63	0,5	13	2,6
40/16	●	40	57	85	96	63	2,5	16	2,6
60/16	○	60	57	93	104	94	2,5	16	4,9



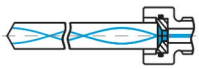




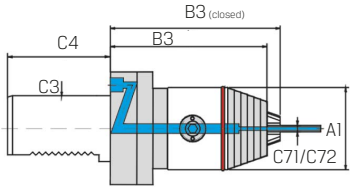
N° article	234705 with internal coolant supply	C3 mm	A1 mm	B3 mm	B3 (closed) mm	C4 mm	C71 mm	C72 mm	Weight kg
30/08	○	30	36	68	71	55	0,3	8	1,1
30/13	●	30	50	90	96	55	0,5	13	1,8
30/16	○	30	57	95	101	55	2,5	16	2
40/13	○	40	50	90	96	63	0,5	13	2,3
40/16	○	40	57	95	101	63	2,5	16	2,5
50/13	○	50	50	90	96	78	0,5	13	3



Gasket WTE 13 2,05 mm incl. in delivery.
For inner coolantdrills 3-6 mm, with smooth shank to DIN 6535 form HA.



Gasket WTE 13 4,2 mm integrated in chuck head. for inner coolant drill 6-13 mm, with smooth shank to DIN 6535 form HA.

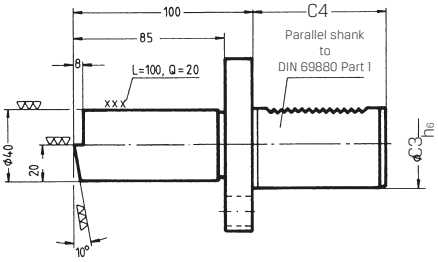




Tool Holder DIN 69880

PRETEC

Design:
- precision ground
- for the exact alignment of the machine



N° article	234750 Setting holders	C3 mm	A4 mm	C4 mm	d_2/H8 mm	r mm
20	○	20	50	40	10	18
30	○	30	68	55	14	25
40	○	40	83	63	14	32
50	○	50	98	78	16	37

Accessories for tool holders DIN 69880

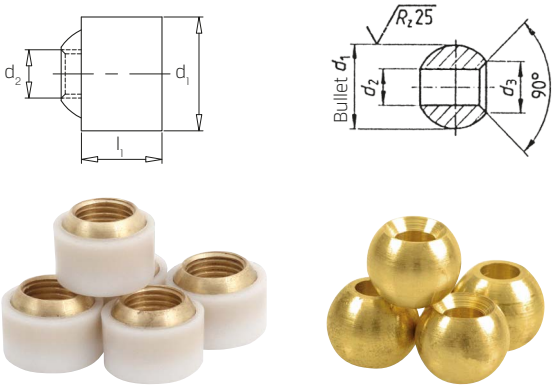
RIHETEC Kühlmitteldüsen

PRETEC

N° article	234800 PRETEC Ball nozzles with thread, seal and clamping screw Shape Z3	d_1 mm	d_2 mm	d_3 mm
8	●	8	3,6	5,5
10	●	10	5	7
14	●	14	6	9

N° article	234801 PRETEC Ball nozzles with thread, plastic-sheathed	d_1 mm	d_2 mm	l_1 mm
10	●	10	4	7
12	●	12	6	8
14	●	14	8	10

N° article	234802 RIHETEC Ball nozzles with thread, brass	d_1 mm	d_2
8	●	8	M4
10	●	10	M5
14	●	14	M8
15	●	15	M8



234801

234800

Tool Holder DIN 69880

PRETEC

Design:
In wooden stand with test certificate

DIN 69880



N° article	233400 Test mandrel	C3 mm	A1 mm	B71 mm
BC16	○	16	30	125
BC20	○	20	40	150
BC25	○	25	40	150
BC30	○	30	40	230
BC40	○	40	40	300
BC50	○	50	40	300
BC60	○	60	40	300

Accessories for tool holders

RIHETEC Kühlmitteldüsen

Design:
- brass balls
- relatively soft and with very good sealing properties
- precise and powerful coolant jet
- suitable for many CNC machines
- max. pressure 6-10 bar, depending on length

Use:
- quick and easy assembly
- insert coolant nozzle into coolant hole
- fix the ball with clamping screw
- then align nozzle with cutting edge



N° article	239502 Coolant nozzle BrassKD	Sphere ∅ mm	Pipe length mm
1405	●	14	50
1407	●	14	70
1410	●	14	100
1505	●	15	50
1507	●	15	70
1510	●	15	100

N° article	239502 Replacement tube for BrassKD	Thread	Pipe length mm
3005	●	M8	50
3007	●	M8	70
3010	●	M8	100

Accessories for tool holders DIN 69880

RIHETEC Kühlmitteldüsen

Design:
- stainless steel ball
- tube made of flexible composite material
- fixing with union nut
- precise and powerful coolant jet
- pressure 6 to 10 bar, dependent on length

Use:
- quick and easy assembly
- insert the coolant nozzle into the coolant bore and screw it tight
- then align nozzle with cutting edge
- saves setup time and ensures optimum cooling of the cutting edge



N° article	239501 SmartKD	Sphere ∅ mm	Pipe inside ∅ mm	Pipe length mm
1405	●	14	4	50
1407	●	14	4	70
1410	●	14	4	100
1505	●	15	4	50
1507	●	15	4	70
1510	●	15	4	100
1605	●	16	4	50
1607	●	16	4	70
1610	○	16	4	100

N° article	239501 Spare tube	Pipe length mm
3005	●	50
3007	●	70
3010	●	100

Design:
- stainless steel ball or stainless steel holder with thread
- tube made of flexible composite material
- parts are firmly connected to each other
- precise and powerful coolant jet
- quick and easy assembly
- pressure max. 10 bar

Use:
- especially for use in VDI holders
- also suited for other tool holders with external cooling
- easy installation: insert into the coolant hole, tighten and align



N° article	239503 MiniKD	Sphere ∅ mm	Thread	Pipe inside ∅ mm	Pipe length mm
0505	●	–	M5	4	50
0605	●	–	M6	4	50
1005	●	10	–	4	50
1007	●	10	–	4	70
1010	●	10	–	4	100
1105	●	11	–	4	50
1205	●	12	–	4	50
1207	●	12	–	4	70

Design:
- double nipple, union nut and MiniKD (mini cooling nozzle)
- the flexible tube allows precise adjustment of the coolant jet
- galvanised and passivated
- stainless steel ball (MiniKD)
- precise and powerful coolant jet
- quick and easy assembly
- pressure max. 10 bar
- versatile applicable

Use:
- with metric thread for use on driven tools for CNC lathes
- simple adjustment; the directed jet provides sufficient cooling
- suitable for use on units of various German manufacturers

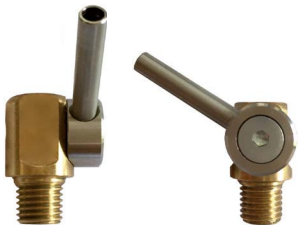


N° article	239505 DriveKD	G	Pipe inside ∅ mm	Pipe length mm
0805	●	M8×1	4	50
0807	●	M8×1	4	70
0810	●	M8×1	4	100
1005	●	M10×1	4	50
1007	●	M10×1	4	70
1010	●	M10×1	4	100
1805	●	G1/8	4	50
1807	●	G1/8	4	70
1810	●	G1/8	4	100

Accessories for tool holders

RIHETEC Kühlmitteldüsen

Design:
- coolant nozzle for use at power tools on CNC lathes
- suited for power tools of many German, European and Asian manufacturers, e.g. EWS, Eppinger, WTO, heimatec et al



N° article	239506 RingKD (KD = Coolant nozzle)	G
0800	●	M8×1
1000	●	M10×1
1800	●	G1/8

Accessories for tool holders
DIN 69880

RIHETEC Kühlmitteldüsen

Design:
- consisting of SmartPipe (flexible coolant tube for easy adjustment) with union nut, ring piece and banjo bolt
- thus rotatable on the banjo bolt and still tight, including 2 aluminium seals
- quick and easy assembly
- flexible exchangeable tube
- precise and powerful coolant jet
- pressure max. 6 - 8 bar

Use:
- especially for use in CNC lathes
- with SmartPipe for easy adjustment of the cooling jet



N° article	239507 EdgeKD	G	Pipe inside ∅ mm	Pipe length mm
1010	●	M10×1	4	100
1818	●	G1/8	4	100

Accessories for tool holders

RIHETEC Kühlmitteldüsen

Design:
- achieves an optimum coolant jet with low space requirement
- direction adjusted by hand
- align to desired direction and tighten union nut
- large setting range, thus a setting angle of up to 45° in any direction is possible



N° article	239508 JetKD	G	Pipe inside ∅ mm	Pipe length mm
0812	●	M8×1	4	12
0820	●	M8×1	4	20
1012	●	M10×1	4	12
1020	●	M10×1	4	20
1812	●	G1/8	4	12
1820	●	G1/8	4	20

N° article	239509 Extension for JetKD	G	Pipe inside ∅ mm	Pipe length mm
0811	●	M8×1	4	12
1011	●	M10×1	4	12
1811	●	G1/8	4	12

Tool Holder DIN 69880 for turning tools type AQUA-G

PREMUS

DIN 69880

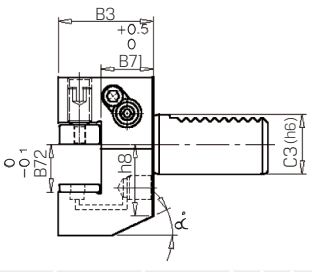
Design and use:
- radial version
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via pressure plate
- shim plate for reduction to next smaller holder cross-section optionally available

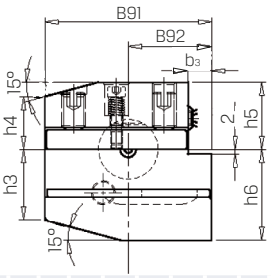


B1A



B2A





N° article	234901 with internal cooling, type B1A, right-hand side	234902 with internal cooling, type B2A, left-hand side	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
25×20×40	○	○	25	40	22	20	70	35	31.5	38.5	10	29.5	22	30	25°
30×20×40	●	●	30	40	22	20	70	35	28	38	10	26	22	30	25°
40×25×44	●	●	40	44	22	25	85	42,5	32.5	48	12.5	35	30	–	–
50×25×44	●	○	50	44	22	25	85	42,5	32.5	48	12.5	35	30	–	–

Tool Holder DIN 69880 for turning tools type AQUA-G

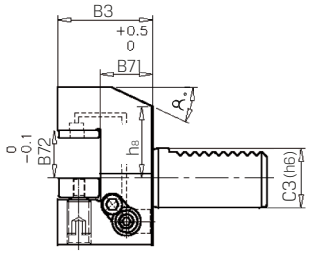
PREMUS

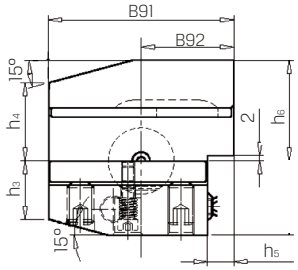


B3A



B4A



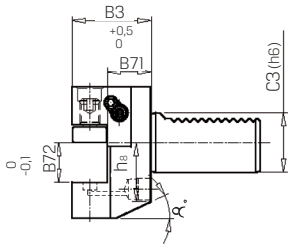


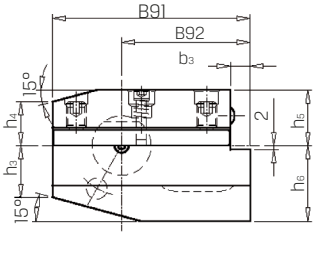
N° article	234903 with internal cooling, type B3A, right-hand side	234904 with internal cooling, type B4A, left-hand side	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×40	●	●	30	40	22	20	70	35	38	35	10	26	22	28	25°
40×25×44	●	●	40	44	22	25	85	42,5	48	42.5	12.5	35	30	–	–
50×25×44	●	○	50	44	22	25	85	42,5	48	42.5	12.5	35	30	–	–

DIN 69880



B5AK





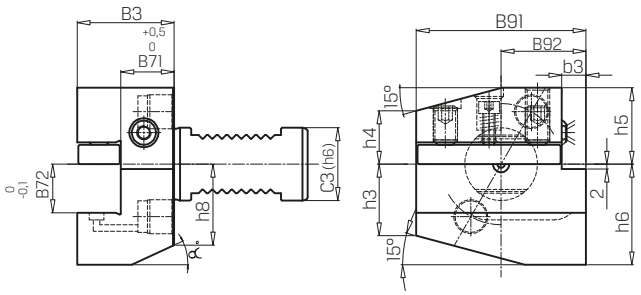
N° article	234905 with internal cooling, type B5AK, right-hand side	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×40	●	30	40	22	20	100	65	28	38	10	26	22	30	25°
40×25×44	●	40	44	22	25	118	75,5	32.5	48	12.5	35	30	–	–
50×32×55	●	50	55	30	32	130	80	35	60	16	42	35	–	–
60×32×60	○	60	60	30	32	145	82,5	42.5	62.5	16	46	42.5	–	–

Design and use:
- radial version, two holders in one due to double toothing
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via pressure plate
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



B1B4A



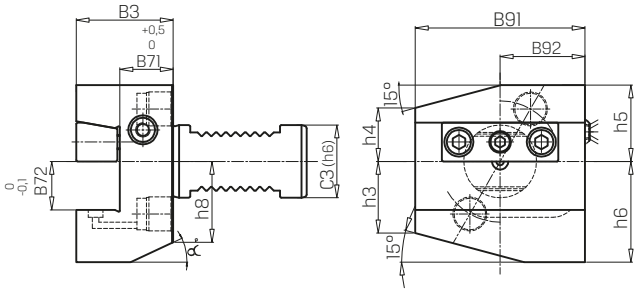
N° article	235001 Shape B1, right / B4 overhead, left	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×40	●	30	40	22	20	70	35	31.5	41.5	10	29.5	22	30	25°
40×25×44	●	40	44	22	25	85	42,5	38	48	12.5	35	30	–	–
50×25×44	○	50	44	22	25	85	42,5	43	48	12.5	43	30	–	–

Design and use:
- radial version, two holders in one due to double toothing
- high clamping force due to clamping bar
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via c losable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via clamping bar, easy lateral access and maximum clamping force
- ideal for turning operations with high feed or pulling cut
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



B1B4AK



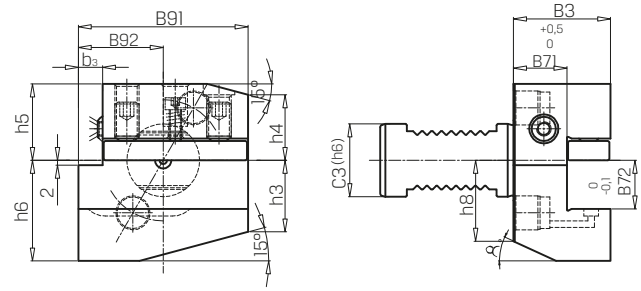
N° article	235003 Shape B1, right / B4 overhead, left	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×40	●	30	40	22	20	70	35	31.5	41.5	29.5	22	30	25°
40×25×44	●	40	44	22	25	85	42,5	38	48	35	30	–	–
50×25×44	●	50	44	22	25	85	42,5	43	48	43	30	–	–

Design and use:
- radial version, two holders in one due to double toothing
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via pressure plate
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



B2B3A



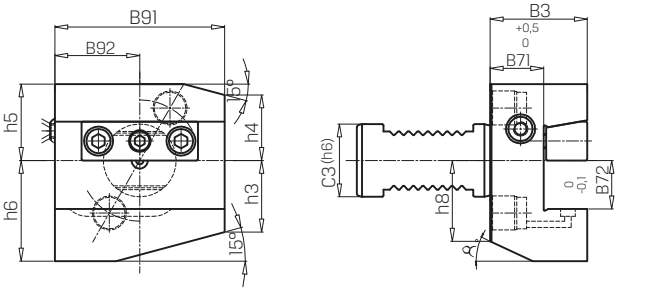
N° article	235005 Form B2, left / B3 overhead, right	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×40	●	30	40	22	20	70	35	31.5	41.5	10	29.5	27	30	25°
40×25×44	●	40	44	22	25	85	42,5	38	48	12.5	35	30	–	–
50×25×44	○	50	44	22	25	85	42,5	43	48	12.5	35	38	–	–

Design and use:
- radial version, two holders in one due to double toothing
- high clamping force due to clamping bar
- for tools with internal cooling, coolant transfer directly into the toolholder for all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via clamping bar, easy lateral access and maximum clamping force
- ideal for turning operations with high feed or pulling cut
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



B2B3AK



N° article	235007 Form B2, left / B3 overhead, right	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×40	○	30	40	22	20	70	35	31.5	41.5	29.5	27	30	25°
40×25×44	●	40	44	22	25	85	42,5	38	48	35	30	–	–
50×25×44	○	50	44	22	25	85	42,5	43	48	35	38	–	–

Tool Holder DIN 69880 for turning tools type AQUA-G with double toothing

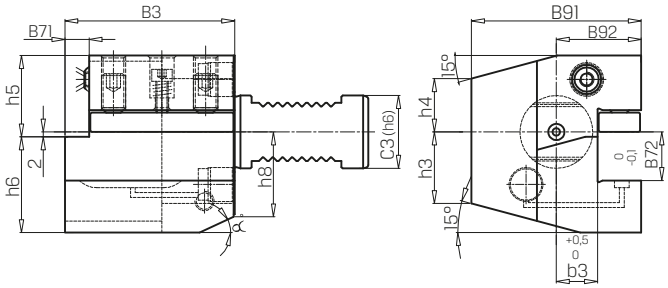
PREMUS®

Design and use:
- axial design, two holders in one due to double toothing
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via pressure plate
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



C1C4A



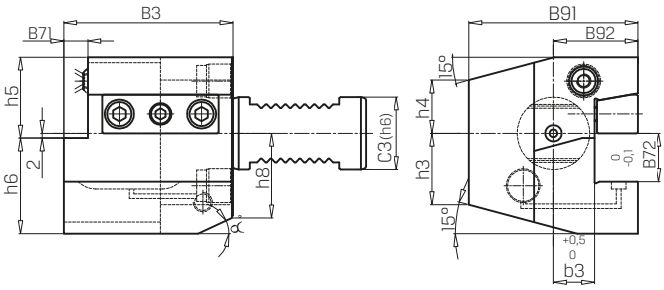
N° article	235011 Form C1, right / C4 overhead, left	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×70	●	30	70	10	20	70	35	32	38	17	26	22	30	25°
40×25×85	●	40	85	12,5	25	85	42,5	38	48	21	35	30	40	15°
50×25×85	○	50	85	12,5	25	90,5	48	44	48	26	42	35	–	–

Design and use:
- axial design, two holders in one due to double toothing
- high clamping force due to clamping bar
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via clamping bar, easy lateral access and maximum clamping force
- ideal for turning operations with high feed or pulling cut
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



C1C4AK



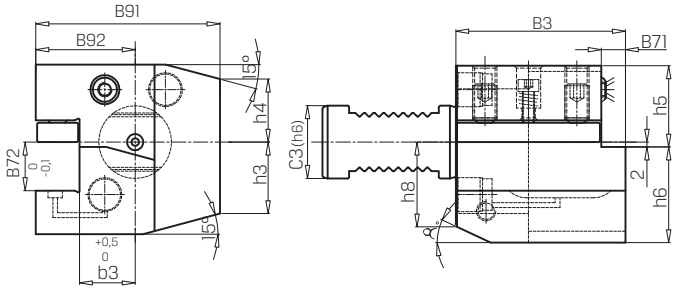
N° article	235013 Form C1, right / C4 overhead, left	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×70	○	30	70	10	20	70	35	32	38	17	26	22	30	25°
40×25×85	●	40	85	12,5	25	85	42,5	38	48	21	35	30	40	15°
50×25×85	○	50	85	12,5	25	90,5	48	44	48	26	42	35	–	–

Design and use:
- axial design, two holders in one due to double toothing
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via pressure plate
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



C2C3A



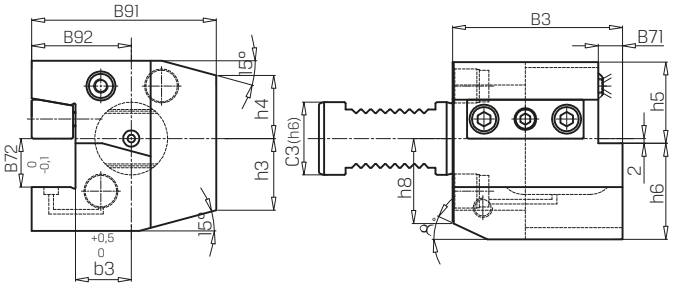
N° article	235015 Form C2, left / C3 overhead, right	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×70	●	30	70	10	20	76	41	32	38	23	26	26	30	25°
40×25×85	●	40	85	12,5	25	90	47,5	38	48	25.5	35	30	40	15°
50×25×85	○	50	85	12,5	25	95	52,5	44	48	30.5	42	37	–	–

Design and use:
- axial design, two holders in one due to double toothing
- high clamping force due to clamping bar
- for tools with internal cooling, coolant transfer directly into the toolholder, all manufacturers, usable up to max. 80 bar
- optional 100 % cooling through the holder or additionally via closable coolant nozzle
- screw plug included in the scope of delivery
- connection for external cooling G1/8" available
- clamping via clamping bar, easy lateral access and maximum clamping force
- ideal for turning operations with high feed or pulling cut
- shim plate for reduction to next smaller holder cross-section optionally available

DIN 69880



C2C3AK



N° article	235017 Form C2, left / C3 overhead, right	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm	b_3 mm	h_3 mm	h_4 mm	h_8 mm	α
30×20×70	○	30	70	10	20	76	41	32	38	23	26	26	30	25°
40×25×85	●	40	85	12,5	25	90	47,5	38	48	25.5	35	30	40	15°
50×25×85	○	50	85	12,5	25	95	52,5	44	48	30.5	42	37	–	–

Tool Holder DIN 69880 for turning tools type AQUA-G with double toothing

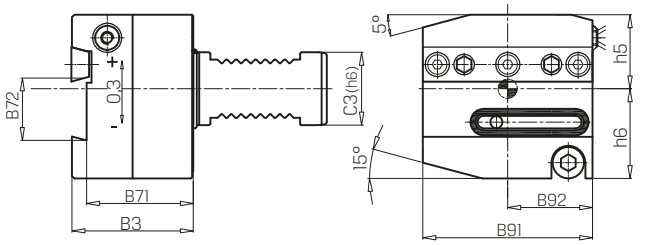
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Design:
- with double serration
- type AQUA-G® for tools with internal cooling for grooving blades with internal cooling
- nominal size 26 to 32 mm
- height adjustable ±0.3 mm
- fitting for Sandvik, Seco, Iscar and others

DIN 69880



ARALUA

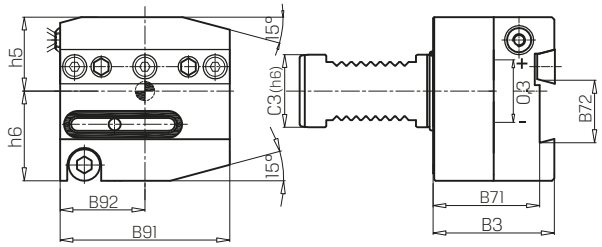


N° article	235021 AR, right / ALU, left, overhead	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm
3026	●	30	50	44	26	70	35	32	37
3032	●	30	50	44	32	85	42,5	32	40
4026	○	40	50	44	26	85	42,5	43	40
4032	●	40	50	44	32	85	42,5	43	40
5032	○	50	50	44	32	100	50	43	45

DIN 69880



ALARUA



N° article	235023 AL, left / ARU, right, overhead	C3 mm	B3 mm	B71 mm	B72 mm	B91 mm	B92 mm	h_5 mm	h_6 mm
3026	○	30	50	44	26	70	35	32	37
3032	○	30	50	44	32	85	42,5	32	40
4026	○	40	50	44	26	85	42,5	43	40
4032	●	40	50	44	32	85	42,5	43	40
5032	○	50	50	44	32	100	50	43	45

Accessories for tool holders with internal cooling

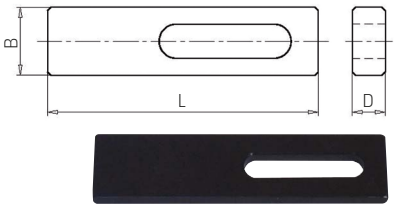
PREMUS®

Design:
- incl. 2 adapters G1/8"
- coolant-proof up to 150 bar
- connecting thread on both ends



N° article	235025 Coolant hose	Connection thread	Total length mm
0200	○	M12 × 1.5	200
0300	○	M12 × 1.5	300

Design:
- allows reduction to the next smaller insert holder without AQUA-G® Groove can be closed
- ground
- metallic sealing



N° article	235027 Support plate	L mm	B mm	D mm	Ideal for
0001	○	69	17	4	B holder, VDI 25, 20 mm to 16 mm
0003	○	54	17	4	C holder, VDI 25, 20 mm to 16 mm
0005	○	69	17	4	B+C holder, VDI 30, 20 mm to 16 mm
0007	○	98	17	4	B+C holder, VDI 40, 25 mm to 20 mm
0009	○	84	21	5	B holder, VDI 40 BAK, 25 mm to 20 mm
0011	○	116	21	5	B+C holder, VDI 50, 25 mm to 20 mm
0013	○	84	21	5	B+C holder, VDI 50, 25 mm to 20 mm
0015	○	129	24	7	B holder, VDI 50 BAK, 32 mm to 25 mm
0017	○	144	29	7	B holder, VDI 60 BAK, 32 mm to 25 mm

Note

Product Information

- **Maximum coolant quantity for internal cooling is achieved by closing the external coolant nozzle**
- **Screw plug M6 3 mm included**
- **Screw plug can be attached to the holder**

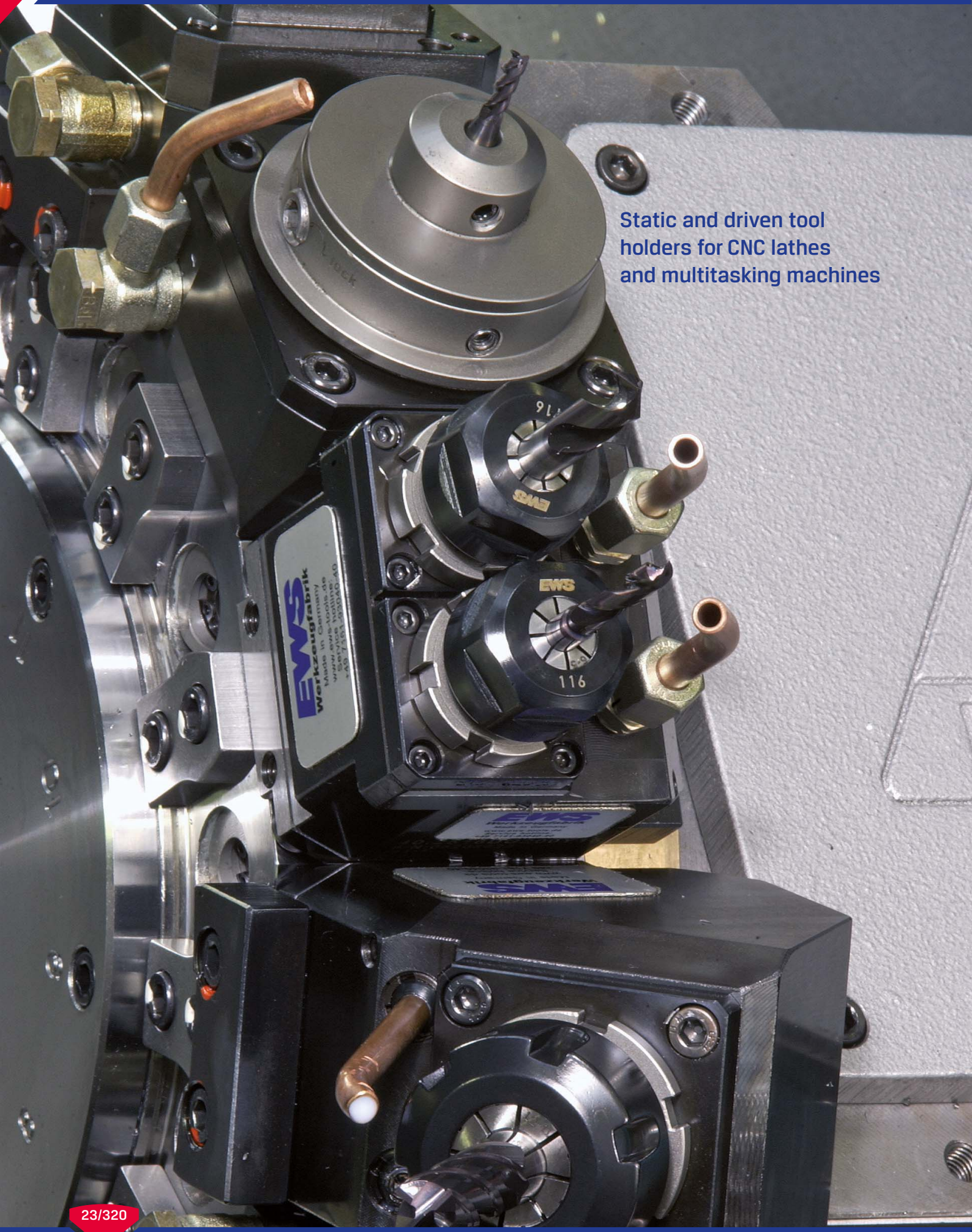
Attention: The coolant nozzle is delivered closed with the screw.

Further tool holders with BMT connection for machines from Mori Seiki, Okuma, Nakamura and Doosan on request.

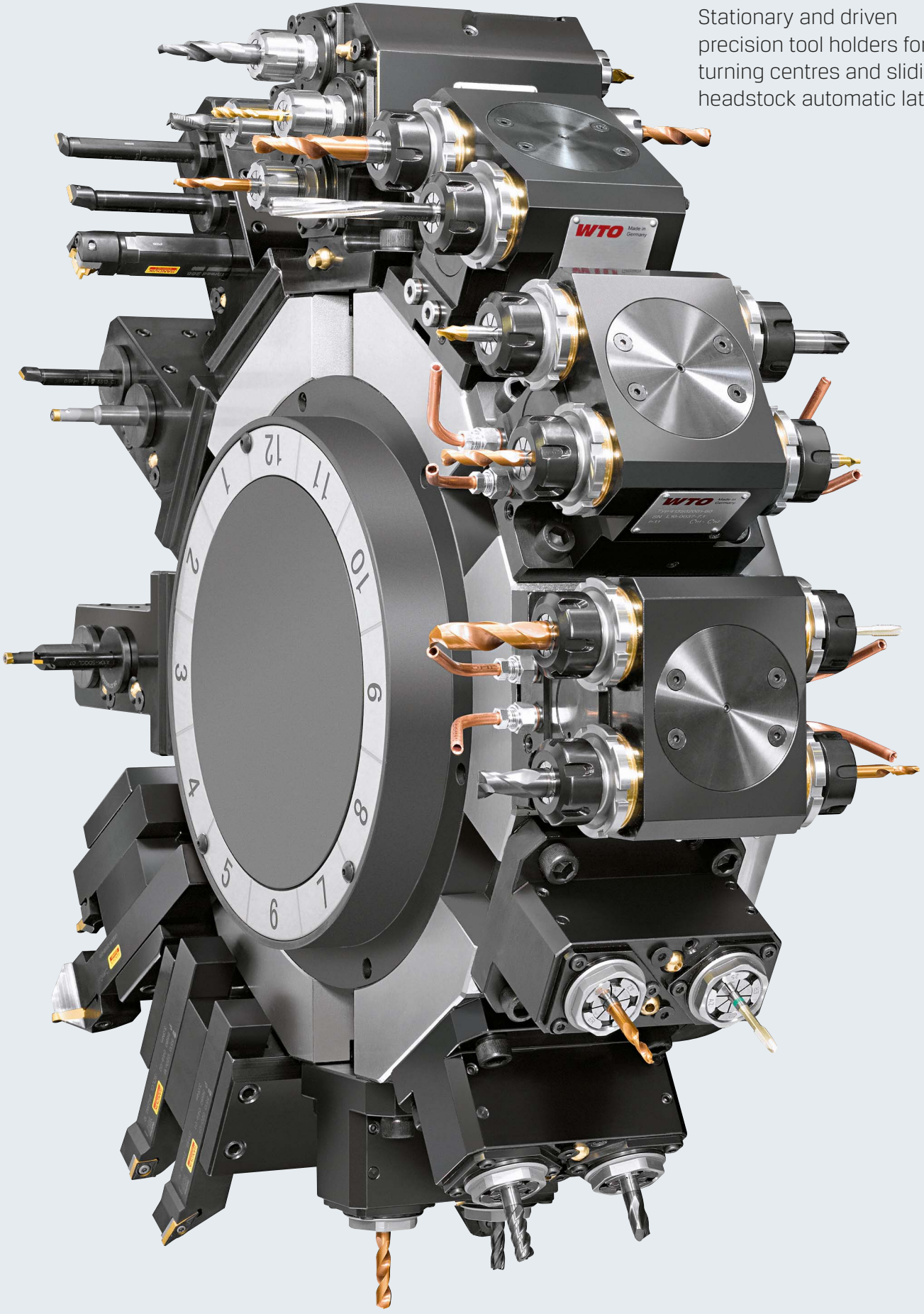
Driven Tools

Product Information

PRECITOOL®



Static and driven tool holders for CNC lathes and multitasking machines



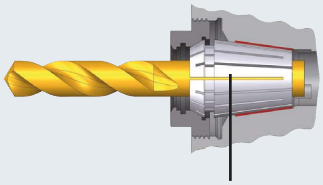
Stationary and driven precision tool holders for CNC turning centres and sliding headstock automatic lathes.

QuickFlex®

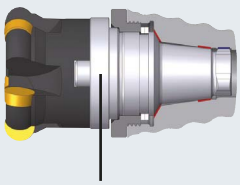


The optimum combination of ER collet chucking and quick-change system in a driven tool driven tool holder from WTO.

High concentricity and stability are guaranteed by two independent taper mountings.



With ER collet



With QuickFlex® milling arbor holder

Quick and safe tool change with the patented one-hand operation key.





Minimal investment

With a standard ER collet, pick up the cutting tools directly into the QuickFlex® tool holder.

Maximum expandability

QuickFlex® adapters can be purchased as required and extended flexibly to the quick-change system in order to reduce set-up times.

Tool adapter

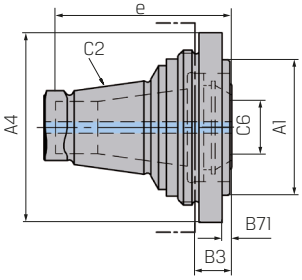
WTO

ISO 15488

Set in case, consisting of:
- one-handed operating key
- wrench for QuickFlex®
- Weldon/Whistle Notch adapter
- combination milling arbor adapter
- collet adapter
- wrench for collet adapter



N° article	235700	C2
0025	○	ER-25QF
0032	○	ER-32QF
0040	○	ER-40QF
0050	○	ER-50QF

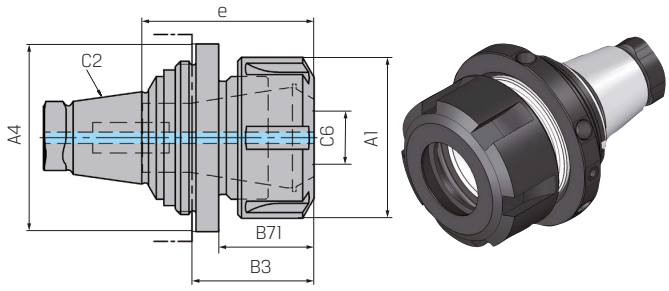




N° article	235701 collet chuck adapter, extra short	C2	C6	A1 mm	A4 mm	B3 mm	B71 mm	e mm	Clamping range mm	Torque Nm
2011	○	ER-20QF	ER11	–	36	6	–	36	0.5 - 7	40
2516	○	ER-25QF	ER16	–	49	7	–	40	0.5 - 10	50
2520	○	ER-25QF	ER20	35	49	9	2	45	1 - 13	75
3220	○	ER-32QF	ER20	–	58	7	–	45	1 - 13	75
3225	○	ER-32QF	ER25	–	58	7	–	48	1 - 16	100
4025	○	ER-40QF	ER25	–	71	8	–	48	1 - 16	100
4032	○	ER-40QF	ER32	–	71	8	–	50	2 - 20	130
5032	○	ER-50QF	ER32	–	82	9	–	50	2 - 20	130
5040	○	ER-50QF	ER40	–	82	9	–	56	3 - 26	150

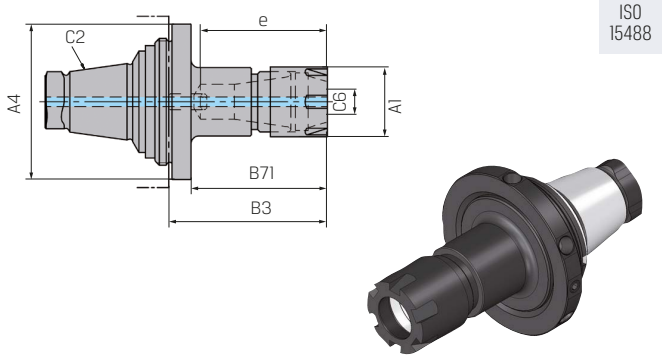


ISO 15488



N° article	235703 Collet chuck adapter short	C2	C6	A1 mm	A4 mm	B3 mm	B71 mm	e mm	Clamping range mm	Torque Nm
2016	○	ER-20QF	ER16	28	36	29	23	40	0.5 - 10	56
2020	○	ER-20QF	ER20	34	36	30	24	45	1 - 13	80
2516	○	ER-25QF	ER16	28	49	30	23	40	0.5 - 10	56
2520	○	ER-25QF	ER20	34	49	31	24	45	1 - 13	80
2525	○	ER-25QF	ER25	42	49	32	25	48	1 - 16	104
3220	○	ER-32QF	ER20	34	58	31	24	45	1 - 13	80
3225	○	ER-32QF	ER25	42	58	32	25	48	1 - 16	104
3232	○	ER-32QF	ER32	50	58	35	28	50	2 - 20	136
4025	○	ER-40QF	ER25	42	71	33	25	48	1 - 16	104
4032	○	ER-40QF	ER32	50	71	36	28	50	2 - 20	136
4040	○	ER-40QF	ER40	63	71	43	35	55	3 - 26	176
5032	○	ER-50QF	ER32	50	82	37	28	50	2 - 20	136
5040	○	ER-50QF	ER40	63	82	44	35	55	3 - 26	176

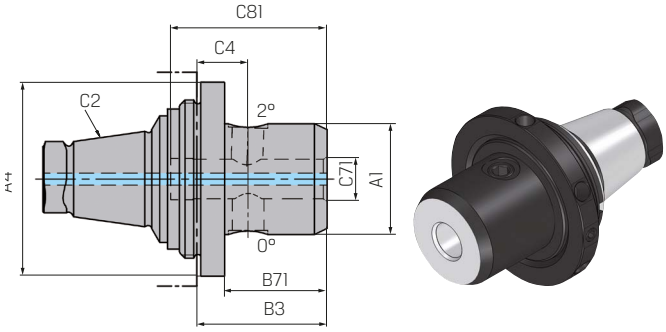
ISO 15488



N° article	235704 Collet chuck adapter, long	C2	C6	A1 mm	A4 mm	B3 mm	B71 mm	e mm	Clamping range mm	Torque Nm
2011	○	ER-20QF	ER11	16	36	40	34	36	0.5 - 7	16
2511	○	ER-25QF	ER11	16	49	40	33	36	0.5 - 7	16
2516	○	ER-25QF	ER16	22	49	50	43	40	0.5 - 10	24
3211	○	ER-32QF	ER11	16	58	50	43	36	0.5 - 7	16
3216	○	ER-32QF	ER16	22	58	60	53	40	0.5 - 10	24
4016	○	ER-40QF	ER16	22	71	60	52	40	0.5 - 10	24
4025	○	ER-40QF	ER25	35	71	60	52	48	1 - 16	32

Design:
- for shanks to DIN 6535-HB and -HE

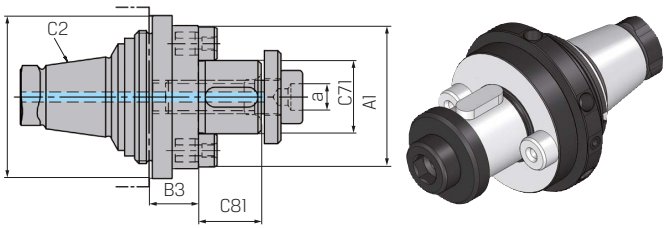
DIN 6535



N° article	235706 Weldon/Whistle Notch adapter short	C2	A1 mm	A4 mm	B3 mm	B71 mm	C4 mm	C71 mm	C81 mm
2006	○	ER-20QF	19	36	28	22	10	6	36
2008	○	ER-20QF	21	36	29	23	11	8	36
2010	○	ER-20QF	28	36	32	26	12	10	40
2012	○	ER-20QF	34	36	37	31	14,5	12	45
2014	○	ER-20QF	36	36	38	32	15,5	14	45
2506	○	ER-25QF	19	49	29	22	11	6	36
2508	○	ER-25QF	21	49	30	23	12	8	36
2510	○	ER-25QF	28	49	33	26	13	10	40
2512	○	ER-25QF	34	49	36	29	13,5	12	45
2514	○	ER-25QF	36	49	36	29	13,5	14	45
2516	○	ER-25QF	38	49	40	33	16	16	49
2518	○	ER-25QF	40	49	40	33	16	18	49
2520	○	ER-25QF	45	49	43	36	18	20	51
3206	○	ER-32QF	19	58	29	22	11	6	36
3208	○	ER-32QF	21	58	30	23	12	8	36
3210	○	ER-32QF	28	58	33	26	13	10	40
3212	○	ER-32QF	34	58	36	29	13,5	12	45
3214	○	ER-32QF	36	58	36	29	13,5	14	45
3216	○	ER-32QF	38	58	40	33	16	16	49
3218	○	ER-32QF	40	58	40	33	16	18	49
3220	○	ER-32QF	45	58	42	35	17	20	51
3225	○	ER-32QF	51	58	46	39	22	25	57
4006	○	ER-40QF	19	71	30	22	12	6	36
4008	○	ER-40QF	21	71	31	23	13	8	36
4010	○	ER-40QF	28	71	34	26	14	10	40
4012	○	ER-40QF	34	71	37	29	14,5	12	45
4014	○	ER-40QF	36	71	37	29	14,5	14	45
4016	○	ER-40QF	38	71	41	33	17	16	49
4018	○	ER-40QF	40	71	41	33	17	18	49
4020	○	ER-40QF	45	71	43	35	18	20	51
4025	○	ER-40QF	51	71	42	34	18	25	57
5006	○	ER-50QF	19	82	31	22	13	6	36
5008	○	ER-50QF	21	82	32	23	14	8	36
5010	○	ER-50QF	28	82	35	26	15	10	40
5012	○	ER-50QF	34	82	38	29	15,5	12	45
5014	○	ER-50QF	36	82	38	29	15,5	14	45
5016	○	ER-50QF	38	82	42	33	18	16	49
5018	○	ER-50QF	40	82	42	33	18	18	49
5020	○	ER-50QF	45	82	44	35	19	20	51
5025	○	ER-50QF	51	82	43	34	19	25	57
5032	○	ER-50QF	72	82	47	38	23	32	61

Design:
- for face and side milling cutters
- universal design
- feather key and tang can be removed

Factory standard



N° article	235708 Combi milling arbor adapter short	C2	A1 mm	A4 mm	B3 mm	C71 mm	C81 mm	a mm
2016	○	ER-20QF	35	36	12	16	17	6
2516	○	ER-25QF	35	49	8	16	17	6
2522	○	ER-25QF	43	49	15	22	19	8
2527	○	ER-25QF	50	49	15	27	21	10
3216	○	ER-32QF	35	58	8	16	17	6
3222	○	ER-32QF	43	58	8	22	19	8
3227	○	ER-32QF	50	58	15	27	21	10

N° article	235708 Combi milling arbor adapter short	C2	A1 mm	A4 mm	B3 mm	C71 mm	C81 mm	a mm
4022	○	ER-40QF	43	71	9	22	19	8
4027	○	ER-40QF	53	71	9	27	21	10
4032	○	ER-40QF	63	71	20	32	24	14
5022	○	ER-50QF	43	82	10	22	19	8
5027	○	ER-50QF	53	82	10	27	21	10
5032	○	ER-50QF	61	82	10	32	24	14

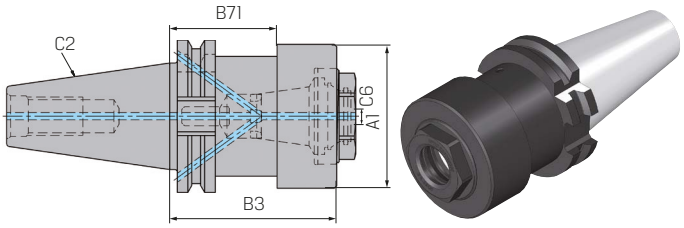
Tool adapter QuickFlex®

WTO

Use:
For presetters.

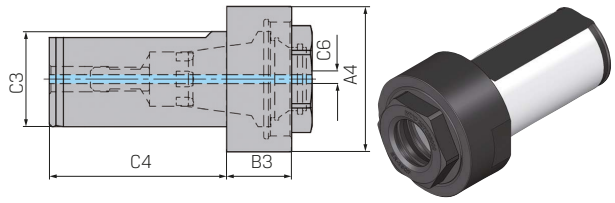
ISO 7388-1 | Form AD/AF

N° article	235712 Steep taper holder	C2	C6	A1 mm	B3 mm	B71 mm
2040	○	SK40	ER-20QF	50	40	–
2050	○	SK50	ER-20QF	50	40	–
2540	○	SK40	ER-25QF	50	40	–
2550	○	SK50	ER-25QF	50	40	–
3240	○	SK40	ER-32QF	63	60	35
3250	○	SK50	ER-32QF	63	60	–
4050	○	SK40	ER-40QF	78	60	–
5050	○	SK50	ER-50QF	85	60	35



Design:
- with cylindrical shank and lateral clamping surface
- for flexible use of QuickFlex®adapters in boring bar holders

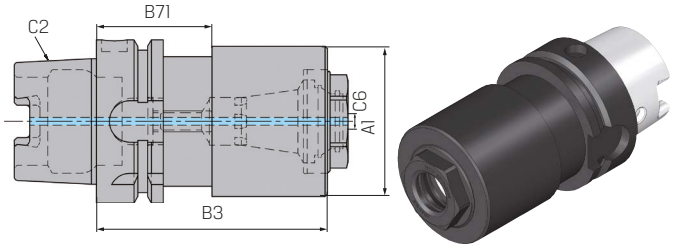
DIN 6535



N° article	235710 Cylindrical shank receptacle	C6	C3 mm	A4 mm	B3 mm	C4 mm	Clamping range mm
2532	○	ER-25QF	32	49	22	60	1 - 16
3240	○	ER-32QF	40	58	22	70	2 - 20
4050	○	ER-40QF	50	71	22	80	3 - 26

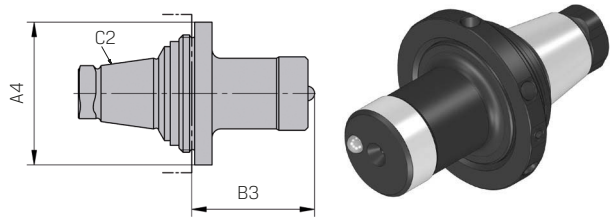
Design:
- ISO 12164A
- for presetters

ISO 12164-1 | Form A

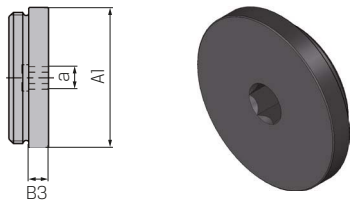


N° article	235714 Hollow taper adapter	C2	C6	A1 mm	B3 mm	B71 mm
2063	○	HST-A63	ER-20QF	50	85	–
2563	○	HST-A63	ER-25QF	50	90	–
3263	○	HST-A63	ER-32QF	63	90	42
4063	○	HST-A63	ER-40QF	78	100	42
5063	○	HST-A63	ER-50QF	85	120	42

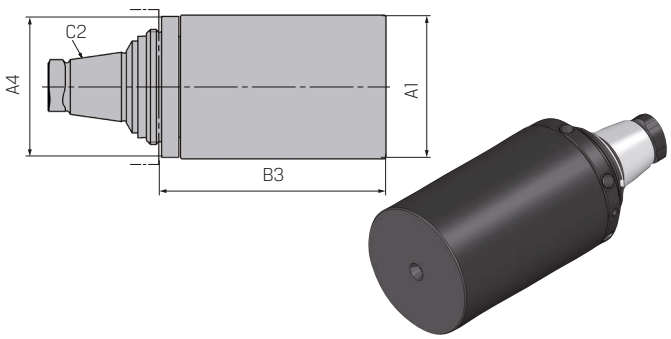
Design:
Actual dimensions engraved.



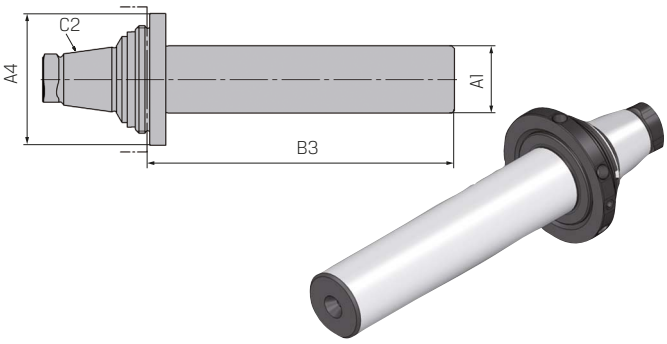
N° article	235716 Presetting adapter	C2	A4 mm	B3 mm
0020	○	ER-20QF	36	42,25
0025	○	ER-25QF	49	42,25
0032	○	ER-32QF	58	45,25
0040	○	ER-40QF	71	43,25
0050	○	ER-50QF	82	43,25



N° article	235718 Protective cover	for size	A1 mm	B3 mm	a mm
0020	○	ER-20QF	33	6	6
0025	○	ER-25QF	43	6	6
0032	○	ER-32QF	52	10	8
0040	○	ER-40QF	66	10	10
0050	○	ER-50QF	76	10	12



N° article	235720 Blank	C2	A1 mm	A4 mm	B3 mm
0020	○	ER-20QF	35	36	60
0025	○	ER-25QF	50	49	80
0032	○	ER-32QF	60	58	80
0040	○	ER-40QF	70	71	100
0050	○	ER-50QF	80	82	100



N° article	235722 Test mandrel	C2	A1 mm	A4 mm	B3 mm
0020	○	ER-20QF	20	36	85
0025	○	ER-25QF	25	49	115
0032	○	ER-32QF	32	58	115
0040	○	ER-40QF	32	71	115
0050	○	ER-50QF	32	82	115

Interface ISO 26623-1

The short adapters for ISO 26623-1 are designed for the application with driven precision tools and offer decisive advantages:

- reduced overall length without the gripper groove
- lower vibrations due to reduced projection length



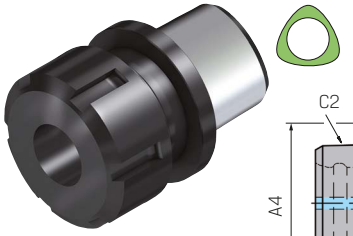


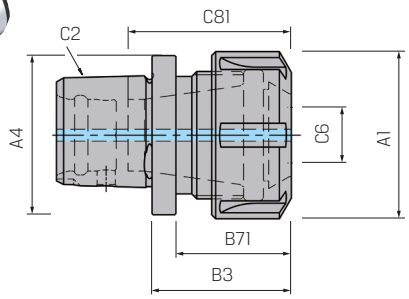
Tool adapter ISO 26623-1

WTO

Design:
- short
- without gripper groove

ISO 26623-1 | ISO 15488





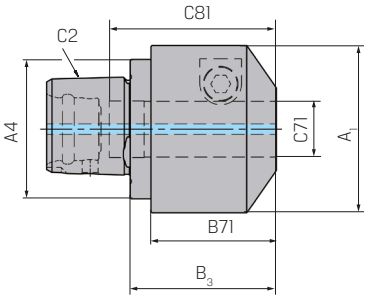
N° article	235801 Collet adapter	C2	C6	A1 mm	A4 mm	B3 mm	B71 mm	C81 mm	Clamping range mm	Torque Nm	Weight kg
0316	○	PSC32	ER16	28	32	30	24	32,5	0.5 - 10	56	0,12
0320	○	PSC32	ER20	34	32	35	29	38	1 - 13	80	0,15
0325	○	PSC32	ER25	42	32	44	–	41	1 - 16	104	0,25
0420	○	PSC40	ER20	34	40	32	26	38	1 - 13	80	0,2
0425	○	PSC40	ER25	42	40	35	29	41	1 - 16	104	0,25
0432	○	PSC40	ER32	50	40	52	–	47	2 - 20	136	0,43
0525	○	PSC50	ER25	42	50	34	28	41	1 - 16	104	0,35
0532	○	PSC50	ER32	50	50	41	35	47	2 - 20	136	0,42
0540	○	PSC50	ER40	63	50	58	–	53	2 - 26	176	0,76
0632	○	PSC63	ER32	50	63	42	34	47	2 - 20	136	0,64
0640	○	PSC63	ER40	63	63	48	40	53	2 - 26	176	0,79

Design:
- only for segment clamping
- not for use in basic holders and extensions/reductions
- not suited for automatic tool change (ATC)
- short
- without gripper groove

ISO 26623-1

Delivery:
Without setting screw

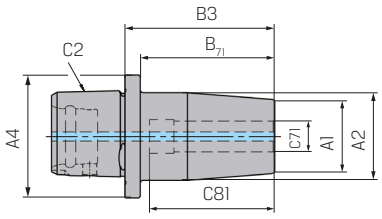




N° article	235803 Hydraulic expansion adapter	C2	A1 mm	A4 mm	B3 mm	B71 mm	C71 mm	C81 mm	Weight kg
0312	○	PSC30	43,5	32	42	36	12	45	0,4
0416	○	PSC40	48	40	42	36	16	48	0,5
0520	○	PSC50	52	50	46	40	20	53	0,7
0625	○	PSC63	59	63	50	44	25	58	1,1

Design:
- only for segment clamping
- not for use in basic holders and extensions/reductions
- not suited for automatic tool change (ATC)
- short
- without gripper groove

Delivery:
Without setting screw



ISO 26623-1

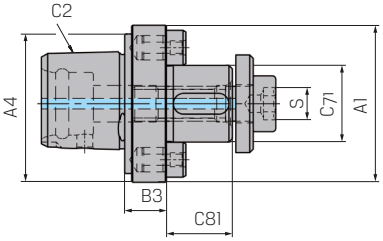


N° article	235807 Shrink-fit adapter	C2	A1 mm	A2 mm	A4 mm	B3 mm	B71 mm	C71 mm	C81 mm	Weight kg
0306	○	PSC30	20	24,5	32	48	44	6	36	0,2
0308	○	PSC30	20	24,5	32	48	44	8	36	0,19
0310	○	PSC30	22,5	27	32	48	44	10	41	0,21
0312	○	PSC30	22,5	27	32	48	44	12	46	0,2
0406	○	PSC40	20	24,5	40	49	44	6	36	0,26
0408	○	PSC40	20	24,5	40	49	44	8	36	0,26
0410	○	PSC40	24	28,5	40	49	44	10	41	0,3
0412	○	PSC40	24	28,5	40	49	44	12	46	0,28
0414	○	PSC40	27	31,5	40	49	44	14	46	0,33
0416	○	PSC40	27	32,3	40	54	49	16	49	0,33
0506	○	PSC50	20	24,5	50	50	44	6	36	0,38

N° article	235807 Shrink-fit adapter	C2	A1 mm	A2 mm	A4 mm	B3 mm	B71 mm	C71 mm	C81 mm	Weight kg
0508	○	PSC50	20	24,5	50	50	44	8	36	0,37
0510	○	PSC50	24	28,5	50	50	44	10	41	0,42
0512	○	PSC50	24	28,5	50	50	44	12	46	0,4
0514	○	PSC50	27	31,5	50	50	44	14	46	0,43
0516	○	PSC50	27	32,3	50	55	49	16	49	0,45
0606	○	PSC63	20	24,5	63	52	44	6	36	0,61
0608	○	PSC63	20	24,5	63	52	44	8	36	0,6
0610	○	PSC63	24	28,5	63	52	44	10	41	0,65
0612	○	PSC63	24	28,5	63	52	44	12	46	0,63
0614	○	PSC63	27	31,5	63	52	44	14	46	0,66
0616	○	PSC63	27	32,3	63	57	49	16	49	0,68

Design:
- for face and side milling cutters
- not for use in basic holders and extensions/reductions
- not suited for automatic tool change (ATC)
- short
- without gripper groove

Delivery:
With tightening bolt, without coolant supply bore



ISO 26623-1



N° article	235809 Combi milling arbor adapter	C2	A1 mm	A4 mm	B3 mm	C71 mm	C81 mm	S	Weight kg
0316	○	PSC32	36	32	15	16	17	6	0,18
0322	○	PSC32	45	32	19	22	19	8	0,31
0416	○	PSC40	40	40	10	16	17	6	0,21
0422	○	PSC40	45	40	12	22	19	8	0,31
0427	○	PSC40	50	40	14	27	21	10	0,42
0522	○	PSC50	50	50	12	22	19	8	0,42

N° article	235809 Combi milling arbor adapter	C2	A1 mm	A4 mm	B3 mm	C71 mm	C81 mm	S	Weight kg
0527	○	PSC50	50	50	12	27	21	10	0,49
0532	○	PSC50	63	50	18	32	24	12	0,79
0622	○	PSC63	63	63	10	22	19	8	0,6
0627	○	PSC63	63	63	11	27	21	10	0,7
0632	○	PSC63	63	63	16	32	24	12	0,9

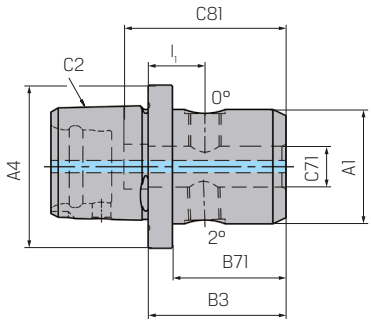
Tool adapter ISO 26623-1

WTO

ISO 26623-1 | DIN 6535

Design:
- for shanks to DIN 6535-HB and -HE
- only for segment clamping
- not for use in basic holders and extensions/reductions
- not suited for automatic tool change (ATC)
- short
- without gripper groove

Delivery:
Without setting screw





N° article	235805 Weldon/Whistle Notch adapter	C2	A1 mm	A4 mm	l_1 mm	B3 mm	B71 mm	C71 mm	C81 mm	Weight kg
0306	○	PSC32	19	32	15	33	27	6	36	0,12
0308	○	PSC32	21	32	15	33	27	8	36	0,12
0310	○	PSC32	28	32	17	37	31	10	40	0,19
0312	○	PSC32	34	32	19.5	42	–	12	45	0,28
0314	○	PSC32	36	32	20.5	43	–	14	45	0,31
0316	○	PSC32	38	32	27	51	–	16	49	0,39
0406	○	PSC40	19	40	12	30	24	6	36	0,17
0408	○	PSC40	21	40	12	30	24	8	36	0,18
0410	○	PSC40	28	40	14	34	28	10	40	0,24
0412	○	PSC40	34	40	16.5	39	33	12	45	0,32
0414	○	PSC40	36	40	16.5	39	33	14	45	0,34
0416	○	PSC40	38	40	19	43	37	16	49	0,38
0418	○	PSC40	40	40	19	43	–	18	49	0,4
0420	○	PSC40	45	40	20	45	–	20	51	0,49
0506	○	PSC50	19	50	11	29	23	6	36	0,28
0508	○	PSC50	21	50	11	29	23	8	36	0,29
0510	○	PSC50	28	50	13	33	27	10	40	0,34

N° article	235805 Weldon/Whistle Notch adapter	C2	A1 mm	A4 mm	l_1 mm	B3 mm	B71 mm	C71 mm	C81 mm	Weight kg
0512	○	PSC50	34	50	15.5	38	32	12	45	0,42
0514	○	PSC50	36	50	15.5	38	32	14	45	0,44
0516	○	PSC50	38	50	17	41	35	16	49	0,47
0518	○	PSC50	40	50	18	42	36	18	49	0,5
0520	○	PSC50	45	50	19	44	38	20	51	0,58
0525	○	PSC50	51	50	26	50	–	25	57	0,72
0606	○	PSC63	19	63	12	30	22	6	36	0,51
0608	○	PSC63	21	63	13	31	23	8	36	0,52
0610	○	PSC63	28	63	14	34	26	10	40	0,57
0612	○	PSC63	34	63	14.5	37	29	12	45	0,63
0614	○	PSC63	36	63	14.5	37	29	14	45	0,64
0616	○	PSC63	38	63	17	41	33	16	49	0,69
0618	○	PSC63	40	63	17	41	33	18	49	0,7
0620	○	PSC63	45	63	18	43	35	20	51	0,77
0625	○	PSC63	51	63	26	50	42	25	57	0,92
0632	○	PSC63	72	63	30	54	46	32	61	1,33

Tool Holder ISO 12164-3

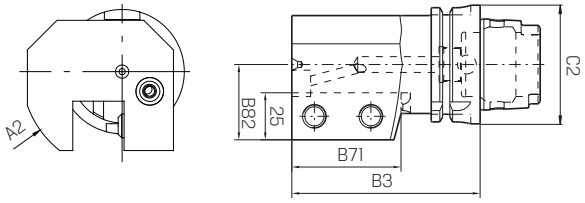
swiss FLEX

Design:
- for ISO clamp mounting with square shank
- adjustable cooling nozzle with internal thread
- driving grooves at HST to ICTM standard

ISO 12164-3

Note:
L = left
R = right

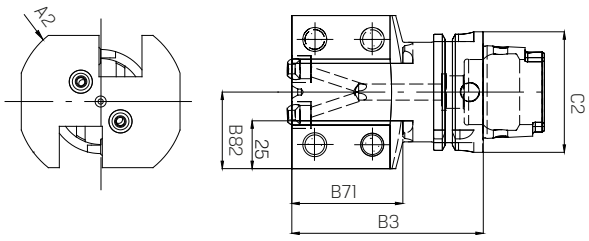




N° article	237001 axial, single	C2	Square mm	A2 mm	B3 mm	B71 mm	B82 mm
4020R	○	HST-T40	20×20	80	80	45	30
4020L	○	HST-T40	20×20	80	80	45	30
6320R	○	HST-T63	20×20	80	90	45	30
6320L	●	HST-T63	20×20	80	90	45	30
6325R	●	HST-T63	25×25	102	100	58	40
6325L	●	HST-T63	25×25	102	100	58	40

ISO 12164-3





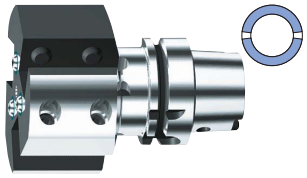
N° article	237002 axial, double	C2	Square mm	A2 mm	B3 mm	B71 mm	B82 mm
4020R	○	HST-T40	20×20	90	80	45	30
6320R	●	HST-T63	20×20	90	90	45	30
6325R	○	HST-T63	25×25	102	100	58	40

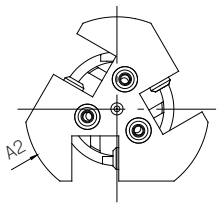
Tool Holder ISO 12164-3

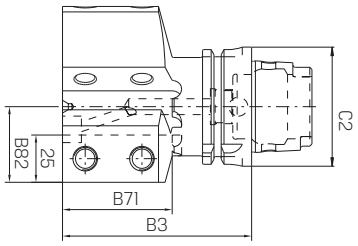
Design:
- for ISO clamp mounting with square shank
- adjustable cooling nozzle with internal thread
- driving grooves at HST to ICTM standard

ISO 12164-3

Note:
L = left
R = right

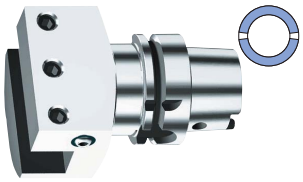


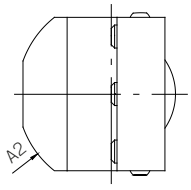


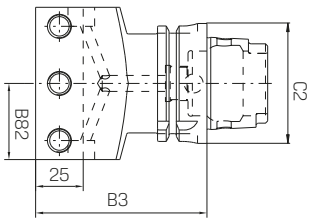


N° article	237003 axial, threefold	C2	Square mm	A2 mm	B3 mm	B71 mm	B82 mm
6320R	○	HST-T63	20×20	90	90	58	30
6325R	○	HST-T63	25×25	102	100	58	40

ISO 12164-3



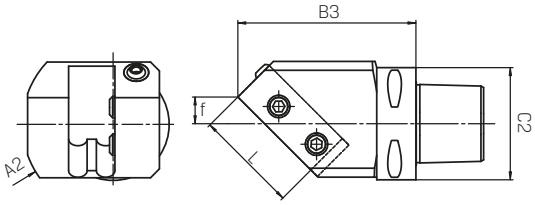




N° article	237004 radial	C2	Square mm	A2 mm	B3 mm	B82 mm
4020	○	HST-T40	20×20	80	75	30
6320	○	HST-T63	20×20	80	90	30
6325	○	HST-T63	25×25	102	90	40

ISO 12164-3



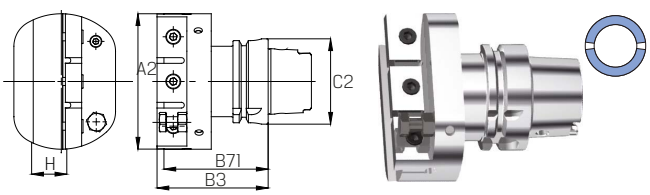


N° article	237005 diagonal, 45°	C2	Square mm	A2 mm	B3 mm	f mm
6320L	○	HST-T63	20×20	80	100	5
6320R	○	HST-T63	20×20	80	100	5
6325L	○	HST-T63	25×25	102	100	5
6325R	○	HST-T63	25×25	102	100	5

Design:
- to hold parting tools
- with internal cooling
- driving grooves at HST to ICTM standard
- cooling nozzle mountable on both sides (type 4026|6332)

ISO 12164-3

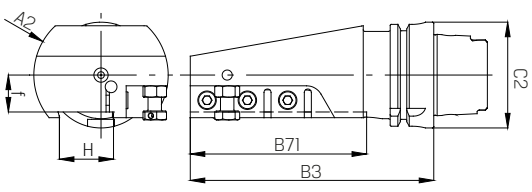
Note:
L = left
R = right



N° article	237006 radial	C2	A2 mm	B3 mm	B71 mm	H mm
4026	○	HST-T40	100	75	70	26
6332	○	HST-T63	100	80	54,5	32

ISO 12164-3





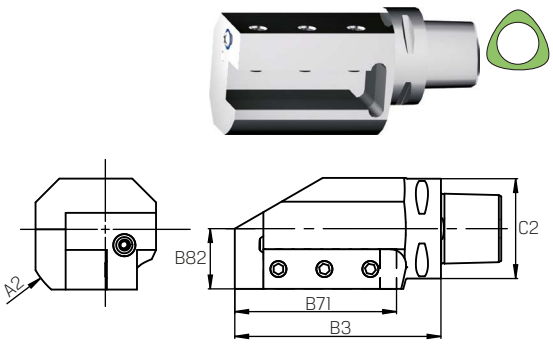
N° article	237007 axial	C2	A2 mm	B3 mm	B71 mm	f mm	H mm
6332R	○	HST-T63	80	145	110	22	32
6332L	○	HST-T63	80	145	110	22	32

Tool Holder ISO 26623-1

Design:
- for ISO clamp mounting with square shank
- adjustable cooling nozzle with internal thread

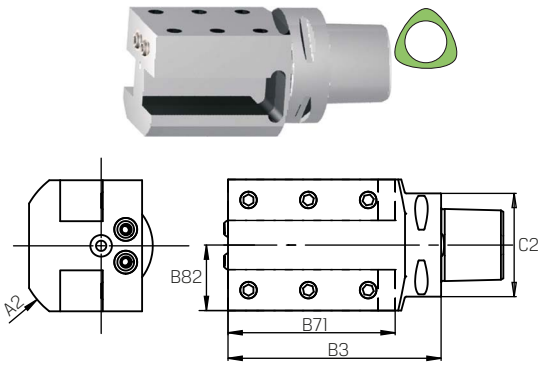
ISO 26623-1

Note:
L = left
R = right



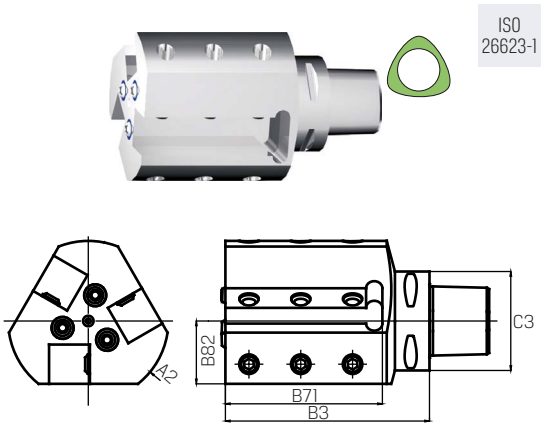
N° article	237101 axial, single	C2	Square mm	A2 mm	B3 mm	B71 mm	B82 mm
4020L	○	PSC40	20×20	80	80	60	30
4020R	○	PSC40	20×20	80	80	60	30
5020L	○	PSC50	20×20	80	98	75	30
5020R	○	PSC50	20×20	80	98	75	30
6320L	○	PSC63	20×20	80	100	75	30
6320R	○	PSC63	20×20	80	100	75	30
6325L	○	PSC63	25×25	102	130	102	38
6325R	○	PSC63	25×25	102	130	102	38

ISO 26623-1



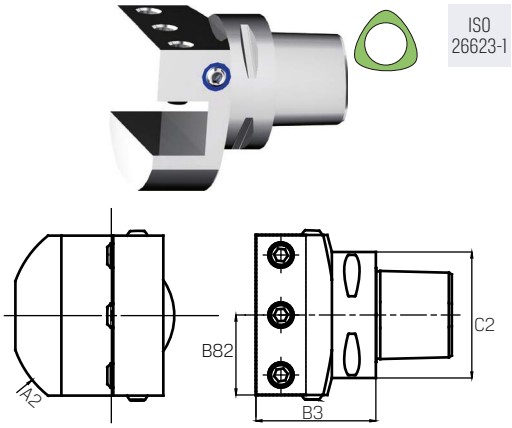
N° article	237102 axial, double	C2	Square mm	A2 mm	B3 mm	B71 mm	B82 mm
4020R	○	PSC40	20×20	80	80	60	30
6320R	○	PSC63	20×20	80	100	75	30
6325R	○	PSC63	25×25	102	130	102	40

ISO 26623-1



N° article	237103 axial, threefold	C2	Square mm	A2 mm	B3 mm	B71 mm	B82 mm
5020R	○	PSC50	20×20	90	123	97	36
6320R	○	PSC63	20×20	90	125	97	36
6325R	○	PSC63	25×25	102	130	102	40

ISO 26623-1



N° article	237104 radial	C2	Square mm	A2 mm	B3 mm	B82 mm
4020	○	PSC40	20×20	80	55	30
6320	○	PSC63	20×20	80	60	30
6325	○	PSC63	25×25	102	71	40

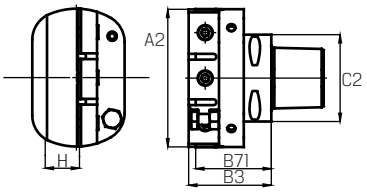
Tool Holder DIN 26623-1

Design:
- to hold parting tools
- with internal cooling

ISO 26623-1

Note:
L = left
R = right

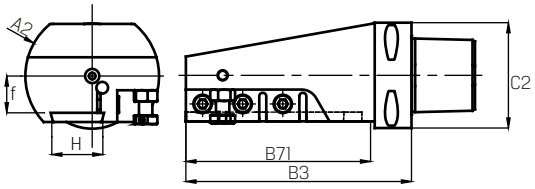




N° article	237106 radial L/R	C2	A2 mm	B3 mm	B71 mm	H mm
5026	○	PSC50	80	58	53	26
6332	○	PSC63	100	60	54,5	32

ISO 26623-1





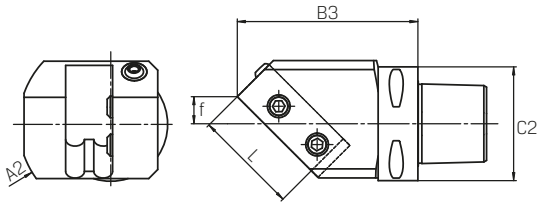
N° article	237107 axial	C2	A2 mm	B3 mm	B71 mm	f mm	H mm
5026L	○	PSC50	80	95	75	22	26
5026R	○	PSC50	80	95	75	22	26
6332L	○	PSC63	80	145	110	22	32
6332R	○	PSC63	80	145	110	22	32

Tool Holder DIN 26623-1

Design:
- for ISO clamp mounting with square shank
- adjustable cooling nozzle with internal thread

ISO 26623-1

Note:
L = left
R = right





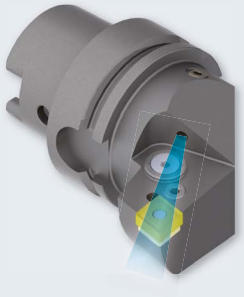
N° article	237108 diagonal 45°	C2	Square mm	A2 mm	B3 mm	f mm
5020L	○	PSC50	20×20	80	98	15
5020R	○	PSC50	20×20	80	98	15
6320L	○	PSC63	20×20	80	110	15
6320R	○	PSC63	20×20	80	110	15
6325L	○	PSC63	25×25	102	110	15
6325R	○	PSC63	25×25	102	110	15

- for efficient turning
- optimal cooling by fixed high-pressure cooling nozzles
- improved chip control
- increased machining security
- higher material removal
- shorter machining times

Clamp holders

All clamp holders marked with * symbol can be upgraded to high-performance cooling.







High-performance coolant set

Design:
- for efficient turning
- optimal cooling by fixed **H**igh- **P**ressure cooling nozzles
- improved chip control
- increased machining security
- higher material removal
- shorter machining times

Delivery:
Inclusive HP nozzle and O-ring.



Item no.	238079 for HP holder (RG 2375)
0022	○

Cooling and clamping systems



Clamping system:
The insert is fixed by means of screw clamping type S.

Cooling system:
Clamp holders for positive inserts have an aligned coolant nozzle.



Clamping system:
The insert is fixed by means of toggle lever clamping type P.

Cooling system:
Clamp holders with toggle lever clamping have an aligned coolant nozzle.



Clamping system:
The insert is fixed by means of screw clamping type D.

Cooling system:
Clamp mounting with double clamping feature have an alignable high-pressure coolant nozzle.

Clamp holders for indexable inserts

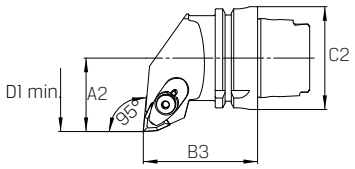
swiss FLEX | swiss PSC

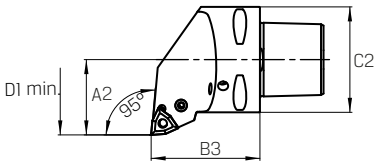
ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right

*Version HP ready - info see page 23/332





N° article	237011 HST-T, 95°/80° PWLN	237111 PSC, 95°/80° PWLN	C2	237011 B3 mm	237111 B3 mm	A2 mm	D1 min. mm	Indexable insert
4008R	○	○	-40	55	50	27	50	WN...08 04...
4008L	○	○	-40	55	50	27	50	WN...08 04...
5008R	–	○	-50	–	60	35	65	WN...08 04...
5008L	–	○	-50	–	60	35	65	WN...08 04...
6318R	○	○	-63	70	65	45	80	WN...08 04...
6318L	○	○	-63	70	65	45	80	WN...08 04...


237011


237111

N° article	237013 HST-T, 95°/80° SCLC	237113 PSC, 95°/80° SCLC	C2	237013 B3 mm	237113 B3 mm	A2 mm	D1 min. mm	Indexable insert
4012R	○	○	-40	55	50	27	50	CC...12 04...
4012L	○	○	-40	55	50	27	50	CC...12 04...
5012R	–	○	-50	–	60	35	65	CC...12 04...
5012L	–	○	-50	–	60	35	65	CC...12 04...
6312R	○	○	-63	70	65	45	80	CC...12 04...
6312L	○	○	-63	70	65	45	80	CC...12 04...


237013


237113

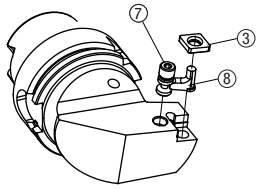
N° article	237015 HST-T, 95°/80° PCLN	237115 PSC, 95°/80° PCLN	C2	237015 B3 mm	237115 B3 mm	A2 mm	D1 min. mm	Indexable insert
4012R	○	○	-40	55	50	27	50	CN...12 04...
4012L	○	○	-40	55	50	27	50	CN...12 04...
6322R	○	○	-63	70	65	45	80	CN...12 04...
6322L	○	○	-63	70	65	45	80	CN...12 04...
6326R	○	○	-63	70	65	45	80	CN...16 06...
6326L	○	○	-63	70	65	45	80	CN...16 06...


237015


237115

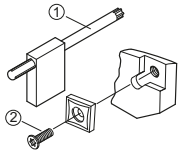
Spare part for 237011 and 237111

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	for insert WN..08 04..	238073 0804	○
⑦	Clamping screw	for toggle clamp	238077 0017	●



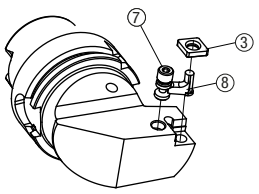
Spare part for 237013 and 237113

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T20	505450 T20	●
②	TORX®-screw	M5 × 10,2	237272 0510	●



Spare part for 237015 und 237115

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	for CN..12 04..	238073 1204	●
③	Intermediate layer	for CN..16 06..	238073 1606	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑦	Clamping screw	for toggle clamp	238077 0020	●
⑧	Toggle clamp	for CN..12 04..	238078 1204	●
⑧	Toggle clamp	for CN..16 06..	238078 1606	○



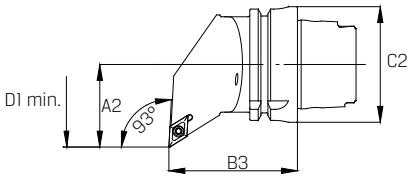
Clamp holders for indexable inserts

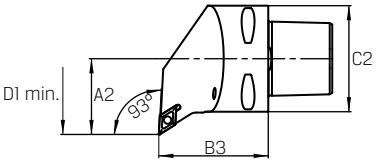
Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right

*Version HP ready - info see page 23/332

ISO 12164-3 | ISO 26623-1





N° article	237017 HST-T, 93°/55° SDUC	237117 PSC, 93°/55° SDUC	C2	237017 B3 mm	237117 B3 mm	A2 mm	D1 min. mm	Indexable insert
4011R	○	○	-40	55	50	27	50	DC...11 T3...
4011L	○	○	-40	55	50	27	50	DC...11 T3...
5011R	–	○	-50	–	60	35	65	DC...11 T3...
5011L	–	○	-50	–	60	35	65	DC...11 T3...
6311R	○	○	-63	70	65	45	80	DC...11 T3...
6311L	○	○	-63	70	65	45	80	DC...11 T3...





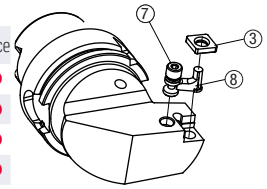
N° article	237019 HST-T, 93°/55° PDUN	237119 PSC, 93°/55° PDUN	*	C2	237119 B3 mm	237019 B3 mm	A2 mm	D1 min. mm	Indexable insert
4015R	○	○	–	-40	50	55	27	50	DN...15 06...
4015L	○	○	–	-40	50	55	27	50	DN...15 06...
5015R	–	○	*	-50	60	–	35	65	DN...15 06...
5015L	–	○	*	-50	60	–	35	65	DN...15 06...
6325R	○	○	*	-63	65	70	45	80	DN...15 06...
6325L	○	○	*	-63	65	70	45	80	DN...15 06...





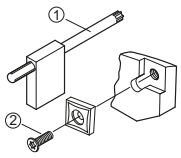
Spare part for 237019 and 237119

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	DN..15 04..	238073 1504	●
③	Intermediate layer	DN..15 06..	238073 1506	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	DN..15 06..	238078 1504	●



Spare part for 237017 and 237117

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●

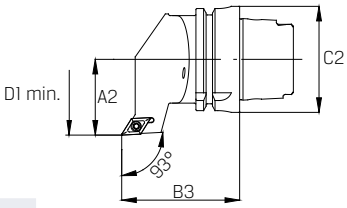


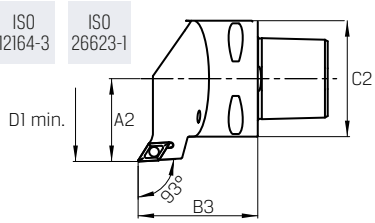
Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right

*Version HP ready - info see page 23/?332

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N° article	237020 HST-T, 55°/93° SDJC	237120 PSC, 55°/93° SDJC	C2	237020 B3 mm	237120 B3 mm	A2 mm	D1 min. mm	Indexable insert
4011R	○	○	-40	55	50	27	50	DC...11 T3...
4011L	○	○	-40	55	50	27	50	DC...11 T3...
5011R	–	○	-50	–	60	35	60	DC...11 T3...
6311R	○	○	-63	70	65	45	80	DC...11 T3...
6311L	○	○	-63	70	65	45	80	DC...11 T3...





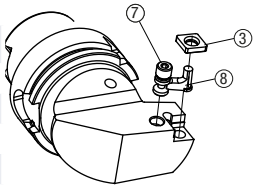
N° article	237022 HST-T, 55°/93° PDJN	237122 PSC, 55°/93° PDJN	*	C2	237122 B3 mm	237022 B3 mm	A2 mm	Indexable insert
4015R	○	○	–	-40	50	55	27	DN...15 06...
4015L	○	○	–	-40	50	55	27	DN...15 06...
5015R	–	○	*	-50	60	–	35	DN...15 06...
5015L	–	○	*	-50	60	–	35	DN...15 06...
6325R	○	○	*	-63	65	70	45	DN...15 06...
6325L	○	○	*	-63	65	70	45	DN...15 06...





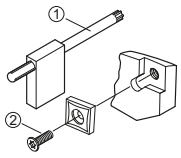
Spare part for 237022 and 237122

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	DN..15 04..	238073 1504	●
③	Intermediate layer	DN..15 06..	238073 1506	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	DN..15 06..	238078 1504	●



Spare part for 237020 and 237120

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



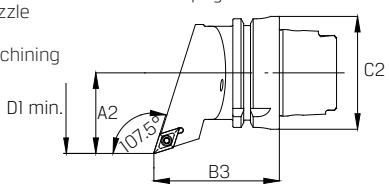
Clamp holders for indexable inserts

swiss FLEX swiss PSC

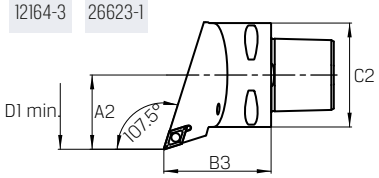
Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right

*Version HP ready - info see page 23/332



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N° article	237023 HST-T, 107,5°/55° SDHC	237123 PSC, 107.5°/55° SDHC	C2	237023 B3 mm	237123 B3 mm	A2 mm	D1 min. mm	Indexable insert
4011R	○	○	-40	55	50	27	50	DC...11 T3...
4011L	○	○	-40	55	50	27	50	DC...11 T3...
5011R	–	○	-50	–	60	35	65	DC...11 T3...
5011L	–	○	-50	–	60	35	65	DC...11 T3...
6311R	○	○	-63	70	65	45	80	DC...11 T3...
6311L	○	○	-63	70	65	45	80	DC...11 T3...





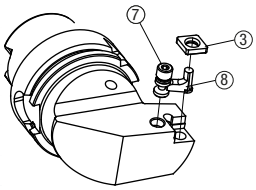
N° article	237025 HST-T, 107.5°/55° PDHN	237125 PSC, 107.5°/55° PDHN	*	C2	237125 B3 mm	237025 B3 mm	A2 mm	D1 min. mm	Indexable insert
4015R	○	○		-40	50	55	27	50	DN...15 06...
4015L	○	○		-40	50	55	27	50	DN...15 06...
5015R	–	○	*	-50	60	–	35	65	DN...15 06...
5015L	–	○	*	-50	60	–	35	65	DN...15 06...
6325R	○	○	*	-63	65	70	45	80	DN...15 06...
6325L	○	○	*	-63	65	70	45	80	DN...15 06...





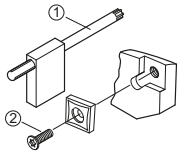
Spare part for 237025 and 237125

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	DN..15 04..	238073 1504	●
③	Intermediate layer	DN..15 06..	238073 1506	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	DN..15 06..	238078 1504	●



Spare part for 237023 and 237123

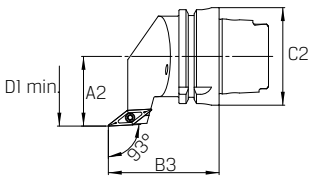
Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●

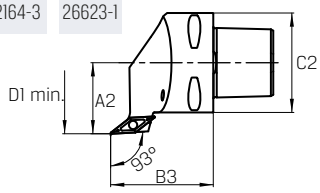


Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right

ISO 12164-3 ISO 26623-1





N° article	237029 HST T, 35°/93° SVJB	237129 PSC, 35°/93° SVJB	C2	237029 B3 mm	237129 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	–	-40	60	–	27	50	VB...16 04...
4016L	○	–	-40	60	–	27	50	VB...16 04...
6316R	○	○	-63	71,5	65	45	80	VB...16 04...
6316L	○	○	-63	71,5	65	45	80	VB...16 04...





N° article	237028 HST T, 35°/93° SVJC	C2	237028 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	-40	60	27	50	VC...16 04...
4016L	○	-40	60	27	50	VC...16 04...
6316R	○	-63	71,5	45	80	VC...16 04...
6316L	○	-63	71,5	45	80	VC...16 04...

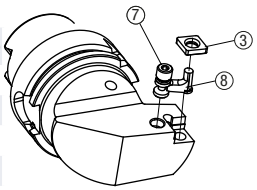


N° article	237035 HST-T, 35°/93° DVJN	C2	237035 B3 mm	A2 mm	D1 min. mm	Indexable insert
6316R	○	-63	70	45	80	VN...16 04...
6316L	○	-63	70	45	80	VN...16 04...



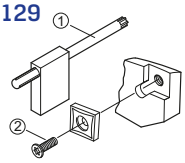
Spare part for 237035

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	DN..15 04..	238073 1504	●
③	Intermediate layer	DN..15 06..	238073 1506	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	DN..15 06..	238078 1504	●



Spare part for 237028, 237029 and 237129

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



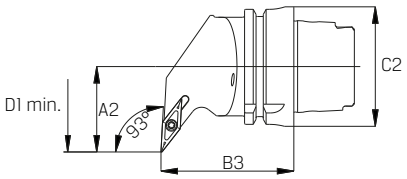
Clamp holders for indexable inserts

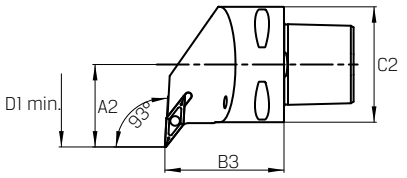
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Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right





N° article	237033 HST-T, 93°/35° SVUB	237133 PSC, 93°/35° SVUB	C2	237033 B3 mm	237133 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	–	-40	55	–	27	50	VB...16 04...
4016L	○	–	-40	55	–	27	50	VB...16 04...
6316R	○	○	-63	70	65	45	80	VB...16 04...
6316L	○	○	-63	70	65	45	80	VB...16 04...





N° article	237026 HST-T, 93°/35° SVUC	C2	237026 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	-40	55	27	50	VC...16 04...
4016L	○	-40	55	27	50	VC...16 04...
6316R	○	-63	70	45	80	VC...16 04...
6316L	○	-63	70	45	80	VC...16 04...



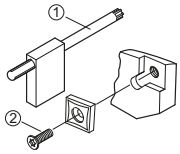
N° article	237027 HST T, 93°/35° DVUN	237127 PSC, 93°/35° DVUN	C2	237027 B3 mm	237127 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	–	-40	55	–	27	–	VN...16 04...
4016L	○	–	-40	55	–	27	–	VN...16 04...
6316R	○	○	-63	70	65	45	80	VN...16 04...
6316L	○	○	-63	70	65	45	80	VN...16 04...





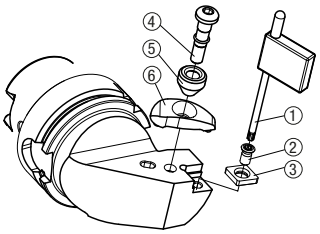
Spare part for 237026, 237033 and 237133

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



Spare part for 237027 and 237127

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●
③	Intermediate layer	VN..16 04..	238073 1604	○
④	Clamping screw	M6 × 28	238074 0628	●
⑤	Nozzle ring	∅ 14 mm	238075 1400	○
⑥	Clamping claw	small	238076 0024	●



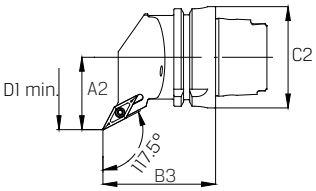
Clamp holders for indexable inserts

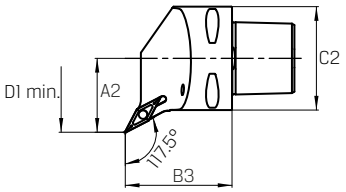
swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard
- clamp holder for external machining can also be used for internal machining considering the D1 min.

Note:
L = left
R = right





N° article	237032 HST-T, 117.5°/35° SVPB	237132 PSC, 117.5°/35° SVBP	C2	237032 B3 mm	237132 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	○	-40	55	50	27	50	VB...16 04...
4016L	○	○	-40	55	50	27	50	VB...16 04...
5016R	–	○	-50	–	60	35	60	VB...16 04...
5016L	–	○	-50	–	60	35	60	VB...16 04...
6316R	○	○	-63	70	65	45	80	VB...16 04...
6316L	○	○	-63	70	65	45	80	VB...16 04...





N° article	237030 HST-T, 117.5°/35° SVPC	C2	237030 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	-40	55	27	50	VC...16 04...
4016L	○	-40	55	27	50	VC...16 04...
6316R	○	-63	70	45	80	VC...16 04...
6316L	○	-63	70	45	80	VC...16 04...



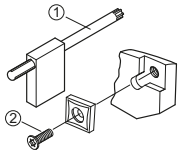
N° article	237031 HST T, 117.5°/35° DVPN	237131 PSC, 117.5°/35° DVPN	C2	237031 B3 mm	237131 B3 mm	A2 mm	D1 min. mm	Indexable insert
4016R	○	○	-40	55	50	27	–	VN...16 04...
4016L	○	○	-40	55	50	27	–	VN...16 04...
5016R	–	○	-50	–	60	35	60	VN...16 04...
5016L	–	○	-50	–	60	35	60	VN...16 04...
6316R	○	○	-63	70	65	45	80	VN...16 04...
6316L	○	○	-63	70	65	45	80	VN...16 04...





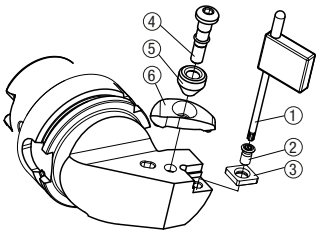
Spare part for 237030, 237032 and 237132

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



Spare part for 237031 and 237131

Bild-Nr.	Ersatzteil	Ausführung	Artikel-Nr.	Preis
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●
③	Intermediate layer	VN..16 04..	238073 1604	○
④	Clamping screw	M6 × 28	238074 0628	●
⑤	Nozzle ring	∅ 14 mm	238075 1400	○
⑥	Clamping claw	small	238076 0024	●



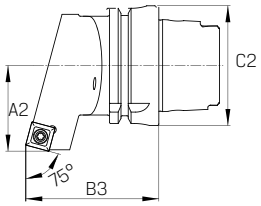
Clamp holders for indexable inserts

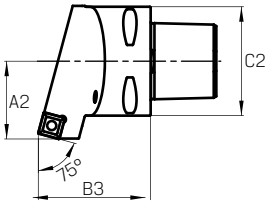
swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle

Note:
L = left
R = right





N° article	237034 HST-T, 90°/75° SSBC	237134 PSC, 90°/75° SSBC	C2	237034 B3 mm	237134 B3 mm	A2 mm	Indexable insert
4012R	○	–	-40	55	–	27	SC...12 04...
4012L	○	–	-40	55	–	27	SC...12 04...
6312R	○	○	-63	70	65	45	SC...12 04...
6312L	○	○	-63	70	65	45	SC...12 04...


237034


237134

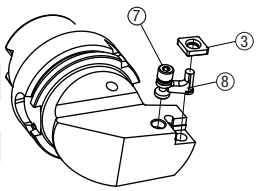
N° article	237036 HST T, 90°/75° PSBN	237136 PSC, 90°/75° PSBN	C2	237036 B3 mm	237136 B3 mm	A2 mm	Indexable insert
4012R	○	–	-40	55	–	27	SN...12 04...
4012L	○	–	-40	55	–	27	SN...12 04...
6312R	○	○	-63	70	65	45	SN...12 04...
6312L	○	○	-63	70	65	45	SN...12 04...


237036


237136

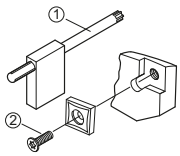
Spare part for 237036 and 237136

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	SN..12 04..	238073 2204	○
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	CN..12 04..	238078 1204	●

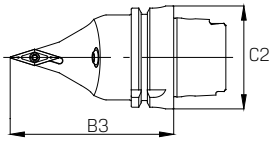


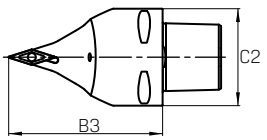
Spare part for 237034 and 237134

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard





N° article	237048 HST-T, 72.5°/35°/72.5° SVVB	237148 PSC, 72.5°/35°/72.5° SVVB	C2	B3 mm	Indexable insert
4016N-80	○	–	-40	80	VB...16 04...
6316N-100	–	○	-63	100	VB...16 04...
6316N-130	–	○	-63	130	VB...16 04...


237048


237148

N° article	237046 HST T, 72.5°/35°/72.5° SVVC	C2	B3 mm	Indexable insert
4016N-80	○	-40	80	VC...16 04...
6316N-130	○	-63	130	VC...16 04...


237046

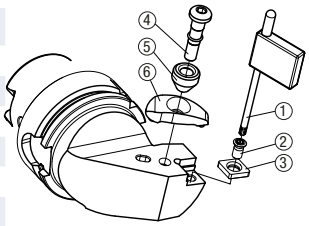
N° article	237047 HST T, 72.5°/35°/72.5° DVVN	237147 PSC, 72.5°/35°/72.5° DVVN	C2	B3 mm	Indexable insert
4016N-80	○	–	-40	80	VN...16 04...
6316N-100	○	○	-63	100	VN...16 04...
6316N-130	○	○	-63	130	VN...16 04...


237047


237147

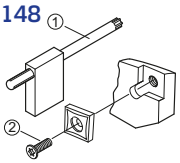
Spare part for 237047 and 237147

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M5 × 10,2	237272 0510	●
③	Intermediate layer	CN..16 06..	238073 1604	○
④	Clamping screw	M6 × 28	238074 0628	●
⑤	Nozzle ring	∅ 14 mm	238075 1400	○
⑥	Clamping claw	large	238076 0029	○



Spare part for 237046, 237048 and 237148

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



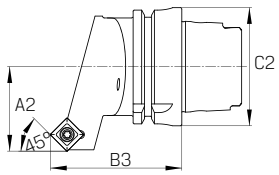
Clamp holders for indexable inserts

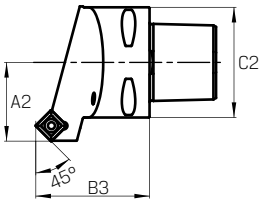
swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle

Note:
L = left
R = right



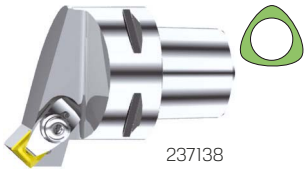


N° article	237037 HST T, 90°/45° SSSC	237137 PSC, 90°/45° SSSC	C2	237037 B3 mm	237137 B3 mm	A2 mm	Indexable insert
4012R	○	–	-40	55	–	27	SC...12 04...
4012L	○	–	-40	55	–	27	SC...12 04...
6312R	○	○	-63	70	65	45	SC...12 04...
6312L	○	○	-63	70	65	45	SC...12 04...


237037


237137

N° article	237138 PSC, 90°/45° DSSN	C2	237138 B3 mm	A2 mm	Indexable insert
6312R	○	-63	65	45	SN...12 04...
6312L	○	-63	65	45	SN...12 04...


237138

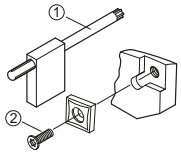
N° article	237039 HST T, 90°/45° PSSN	237139 PSC, 90°/45° PSSN	C2	237039 B3 mm	237139 B3 mm	A2 mm	Indexable insert
4012R	○	–	-40	55	–	27	SN...12 04...
4012L	○	–	-40	55	–	27	SN...12 04...
6312R	○	○	-63	70	65	45	SN...12 04...
6312L	○	○	-63	70	65	45	SN...12 04...


237039


237139

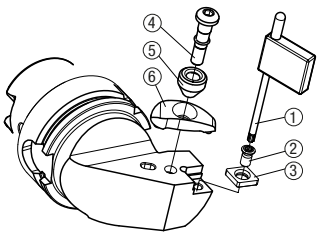
Spare part for 237037 and 237137

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



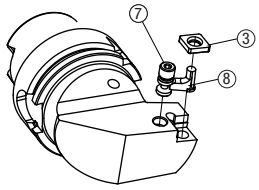
Spare part for 237038

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T20	505450 T20	●
②	TORX®-screw	M5 × 10,2	237272 0510	●
③	Intermediate layer	SN..12 04..	238073 2204	○
④	Clamping screw	M6 × 28	238074 0628	●
⑤	Nozzle ring	∅ 14 mm	238075 1400	○
⑥	Clamping claw	small	238076 0024	●



Spare part for 237039 and 237139

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	SN..12 04..	238073 2204	○
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	CN..12 04..	238078 1204	●



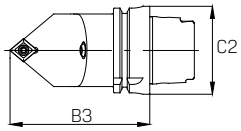
Clamp holders for indexable inserts

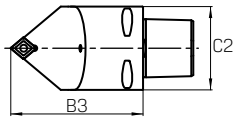
swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard

*Version HP ready - info see page 23/332





N° article	237040 HST T, 50°/80°/50° SCMC	237140 PSC, 50°/80°/50° SCMC	C2	B3 mm	Indexable insert
4012N-80	○	–	-40	80	CC...12 04...
6312N-100	○	○	-63	100	CC...12 04...
6312N-130	○	○	-63	130	CC...12 04...



237040



237140

N° article	237042 HST T, 50°/80°/50° PCMN	237142 PSC, 50°/80°/50° PCMN	*	C2	B3 mm	A mm	Indexable insert
4012N-80	○	–		-40	80	80	CN...12 04...
6322N-100	○	○	*	-63	100	100	CN...12 04...
6322N-130	○	○	*	-63	130	130	CN...12 04...
6326N-100	○	○	*	-63	100	100	CN...16 06...
6326N-130	○	○	*	-63	130	130	CN...16 06...



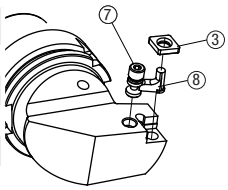
237042



237142

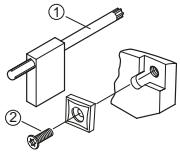
Spare part for 237042 and 237142

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	for CN..12 04..	238073 1204	●
③	Intermediate layer	for CN..16 06..	238073 1606	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑦	Clamping screw	for toggle clamp	238077 0020	●
⑧	Toggle clamp	CN..12 04..	238078 1204	●
⑧	Toggle clamp	CN..16 06..	238078 1606	○



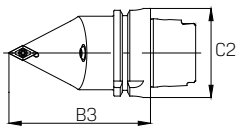
Spare part for 237040 and 237140

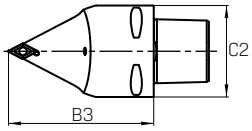
Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T20	505450 T20	●
②	TORX®-screw	M5 × 10,2	237272 0510	●



Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard

*Version HP ready - info see page 23/???





N° article	237043 HST-T, 62.5°/55°/62.5° SDNC	237143 PSC, 62.5°/55°/62.5° SDNC	C2	B3 mm	Indexable insert
4011N-80	○	–	-40	80	DC...11 T3...
6311N-100	●	○	-63	100	DC...11 T3...
6311N-130	–	○	-63	130	DC...11 T3...



237043



237143

N° article	237045 HST T, 62,5°/55°/62,5° PDNN	237145 PSC, 62.5°/55°/62.5° PDNN	*	C2	A mm	B3 mm	Indexable insert
4015N-80	○	–	–	-40	80	80	DN...15 06...
6325N-100	○	○	*	-63	100	100	DN...15 06...
6325N-130	○	○	*	-63	130	130	DN...15 06...



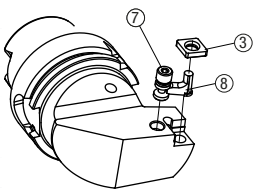
237045



237145

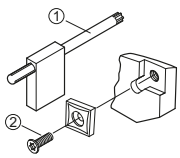
Spare part for 237045 and 237145

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	DN..15 04..	238073 1504	●
③	Intermediate layer	DN..15 06..	238073 1506	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	DN..15 06..	238078 1504	●



Spare part for 237043 and 237143

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



Boring bar for indexable inserts

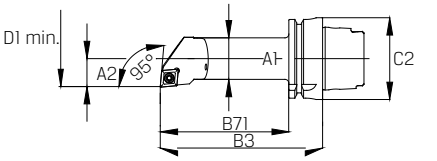
swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard

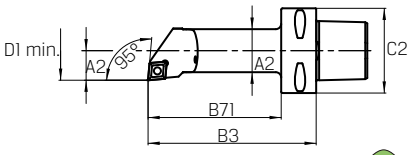
Note:
L = left
R = right

N° article	237050 HST-T, 95°/80° SCLC	237150 PSC, 95°/80° SCLC	C2	A1 mm	A2 mm	B3 mm	B71 mm	D1 min. mm	Indexable insert
4012R-90	–	○	-40	25	17	90	69	32	CC...12 04...
4012L-90	–	○	-40	25	17	90	69	32	CC...12 04...
4012R-110	○	○	-40	25	17	110	90	32	CC...12 04...
4012L-110	○	○	-40	25	17	110	90	32	CC...12 04...
4012R-140	○	–	-40	25	17	140	120	32	CC...12 04...
4012L-140	○	–	-40	25	17	140	120	32	CC...12 04...
5012R-90	–	○	-50	25	17	90	67	32	CC...12 04...
5012L-90	–	○	-50	25	17	90	67	32	CC...12 04...
5012R-110	–	○	-50	32	22	110	88	40	CC...12 04...
5012L-110	–	○	-50	32	22	110	88	40	CC...12 04...
6312R-125	○	○	-63	32	22	125	99	40	CC...12 04...
6312L-125	○	○	-40	32	22	125	99	40	CC...12 04...
6312R-140	○	–	-63	40	27	140	114	50	CC...12 04...
6312L-140	○	–	-63	40	27	140	114	50	CC...12 04...
6312R-160	○	○	-63	32	22	160	134	40	CC...12 04...
6312L-160	○	○	-63	32	22	160	134	40	CC...12 04...
6312R-180	○	–	-63	40	27	180	154	50	CC...12 04...
6312L-180	○	–	-63	40	27	180	154	50	CC...12 04...





237050





237150

N° article	237052 HST-T, 95°/80° PCLN	237152 PSC, 95°/80° PCLN	C2	A1 mm	A2 mm	B3 mm	B71 mm	D1 min. mm	Indexable insert
4012L-110	–	○	-40	32	22	110	89	40	CN...12 04...
4012R-110	–	○	-40	32	22	110	89	40	CN...12 04...
5012L-110	–	○	-50	32	22	110	88	40	CN...12 04...
5012R-110	–	○	-50	32	22	110	88	40	CN...12 04...
6312R-140	○	○	-63	40	27	140	114	50	CN...12 04...
6312L-140	○	○	-63	40	27	140	118	50	CN...12 04...
6312R-180	○	○	-63	40	27	180	154	50	CN...12 04...
6312L-180	○	○	-63	40	27	180	154	50	CN...12 04...



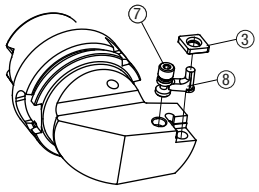
237052



237152

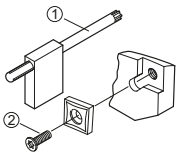
Spare part for 237052 and 237152

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	SN..12 04..	238073 2204	○
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	CN..12 04..	238078 1204	●



Spare part for 237050 and 237150

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T20	505450 T20	●
②	TORX®-screw	M5 × 10,2	237272 0510	●



Boring bar for indexable inserts

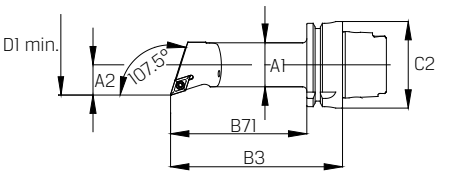
swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for turning
- cooling through aligned cooling nozzle and high-pressure cooling nozzle
- driving grooves at HST to ICTM standard

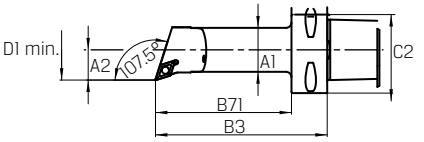
Note:
L = left
R = right

N° article	237053 HST-T, 107.5°/55° SDQC (RG 2375)	237153 PSC, 107.5°/55° SDQC (RG 2375)	C2	A1 mm	A2 mm	B3 mm	B71 mm	D1 min. mm	Indexable insert
4011R-90	–	○	-40	25	17	90	69	32	DC...11 T3...
4011L-90	–	○	-40	25	17	90	69	32	DC...11 T3...
4011R-110	○	○	-40	32	22	110	89	40	DC...11 T3...
4011L-110	○	○	-40	32	22	110	89	40	DC...11 T3...
4011R-140	○	–	-40	25	17	140	120	32	DC...11 T3...
4011L-140	○	–	-40	25	17	140	120	32	DC...11 T3...
5011R-90	–	○	-50	25	17	90	67	32	DC...11 T3...
5011L-90	–	○	-50	25	17	90	67	32	DC...11 T3...
5011R-110	–	○	-50	32	22	110	88	40	DC...11 T3...
5011L-110	–	○	-50	32	22	110	88	40	DC...11 T3...
6311R-125	○	○	-63	32	22	125	103	40	DC...11 T3...
6311L-125	○	○	-63	32	22	125	103	40	DC...11 T3...
6311R-140	○	○	-63	40	27	140	118	50	DC...11 T3...
6311L-140	○	–	-63	40	27	140	118	50	DC...11 T3...
6311R-160	○	○	-63	32	22	160	138	40	DC...11 T3...
6311L-160	○	○	-63	32	22	160	138	40	DC...11 T3...
6311R-180	○	–	-63	40	27	180	158	50	DC...11 T3...
6311L-180	○	–	-63	40	27	180	158	50	DC...11 T3...





237053





237153

N° article	237055 HST-T, 107.5°/55° PDQN	237155 PSC, 107,5°/55° PDQN	C2	A1 mm	A2 mm	B3 mm	B71 mm	D1 min. mm	Indexable insert
4015R-110	–	○	-40	32	22	110	89	40	DN...15 06...
4015L-110	–	○	-40	32	22	110	89	40	DN...15 06...
5015R-110	–	○	-50	32	22	110	88	40	DN...15 06...
5015L-110	–	○	-50	32	22	110	88	40	DN...15 06...
6315R-140	○	○	-63	40	27	140	114	50	DN...15 06...
6315L-140	○	○	-63	40	27	140	114	50	DN...15 06...
6315R-180	○	○	-63	40	27	180	154	50	DN...15 06...
6315L-180	○	○	-63	40	27	180	154	50	DN...15 06...



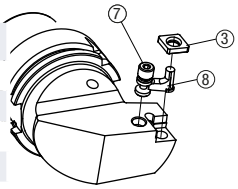
237055



237155

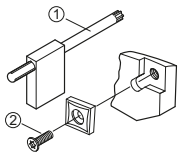
Spare part for 237055 and 237155

Figure no.	Spare part	Design	Item no.	Price
③	Intermediate layer	DN..15 04..	238073 1504	●
③	Intermediate layer	DN..15 06..	238073 1506	●
⑦	Clamping screw	for toggle clamp	238077 0017	●
⑧	Toggle clamp	DN..15 06..	238078 1504	●



Spare part for 237053 and 237153

Figure no.	Spare part	Design	Item no.	Price
①	TORX®-key	T15	505450 T15	●
②	TORX®-screw	M4 × 9	237272 0409	●



Boring bar holder

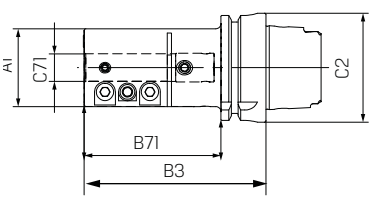
swiss FLEX

ISO 12164-3

Design:
Greater stability and vibration-damping effect thanks to looping around the boring bar.

NEW

N° article	237056 HST T, vibration-damped	C2	B3 mm	B71 mm	C71 mm	A1 mm
6310	●	63	105	65	10	45
6312	●	63	105	65	12	45
6316	●	63	105	75	16	45
6320	●	63	105	80	20	55
6325	●	63	105	80	25	55
6332	●	63	105	80	32	65
6340	●	63	105	80	40	75



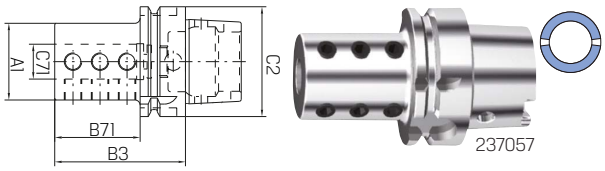


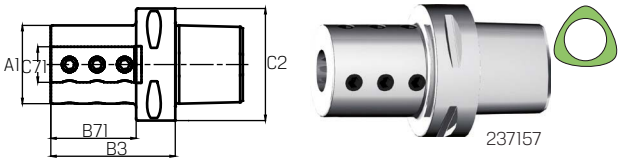
Boring bar holder

swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for holding boring bars
- driving grooves at HST to ICTM standard





N° article	237057 HST T	237157 PSC	C2	237057 B3 mm	237057 B71 mm	237157 B3 mm	237157 B71 mm	C71 mm	A1 mm
4006	○	○	-40	55	35	65	43	6	34
4008	○	○	-40	55	35	65	43	8	34
4010	○	○	-40	55	35	65	43	10	34
4012	●	○	-40	55	35	65	43	12	36
4016	●	○	-40	70	50	65	43	16	40
4020	–	○	-40	–	–	65	43	20	44
5006	–	○	-50	–	–	70	48	6	34
5008	–	○	-50	–	–	70	48	8	34
5010	–	○	-50	–	–	70	48	10	34
5012	–	○	-50	–	–	70	48	12	36
5016	–	○	-50	–	–	70	48	16	40
5020	–	○	-50	–	–	70	48	20	44

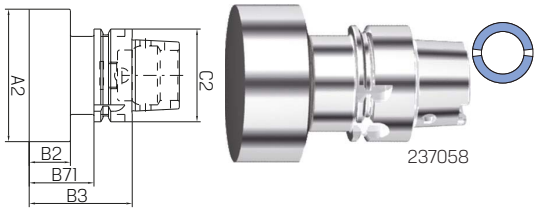
N° article	237057 HST T	237157 PSC	C2	237057 B3 mm	237057 B71 mm	237157 B3 mm	237157 B71 mm	C71 mm	A1 mm
6306	○	○	-63	60	34	80	58	6	34
6308	●	○	-63	60	34	80	58	8	34
6310	●	○	-63	60	34	80	58	10	34
6312	●	○	-63	60	34	80	58	12	36
6316	●	●	-63	75	49	80	58	16	40
6320	●	●	-63	75	49	80	58	20	44
6325	●	●	-63	75	49	100	78	25	50
6332	●	●	-63	90	64	100	78	32	56
6340	●	○	-63	90	64	105	83	40	63

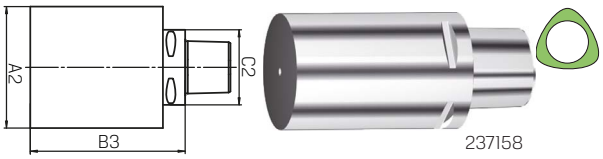
Blank

swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for the production of special tools
- driving grooves at HST to ICTM standard
- taper case-hardened 48HRc | 0.8 mm deep
- front area soft





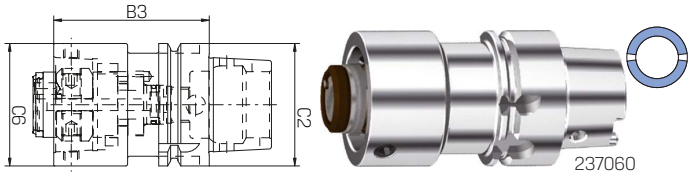
N° article	237058 HST T/A	237158 PSC	C2	237058 B3 mm	237158 B3 mm	B71 mm	B2 mm	A2 mm
4055	○	–	-40	55	–	35	20	54
4080	–	○	-40	–	80	–	–	80
5070	–	○	-50	–	60	–	–	70
5080	–	○	-50	–	98	–	–	80
5090	–	○	-50	–	123	–	–	90
6352	○	–	-63	100	–	58	58	52
6363	○	○	-63	200	100	174	158	63
6390	○	–	-63	70	–	44	28	90
63102	–	○	-63	–	130	–	–	102

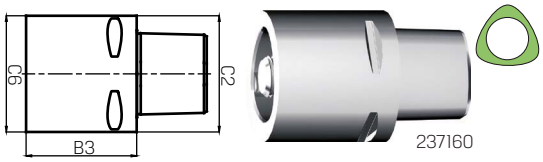
Extensions

swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1

Design:
- for extending HST or PSC tools
- driving grooves at HST to ICTM standard



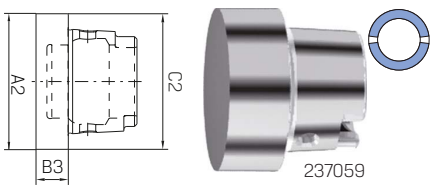


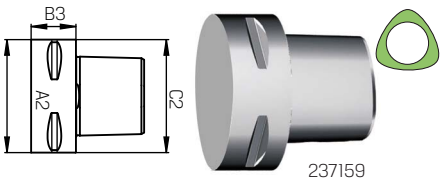
Art.-Nr.	237060 HSK T/A	237160 PSC	C2	C6	B3 mm
4040 - 60	○	○	-40	-40	60
4040 - 80	○	–	-40	-40	80
5050 - 80	–	○	-50	-50	80
6363 - 60	–	○	-63	-63	60
6363 - 80	○	–	-63	-63	80
6363 - 100	–	○	-63	-63	100
6363 - 120	○	–	-63	-63	120

Blanking plug

swiss FLEX | swiss PSC

ISO 12164-3 | ISO 26623-1





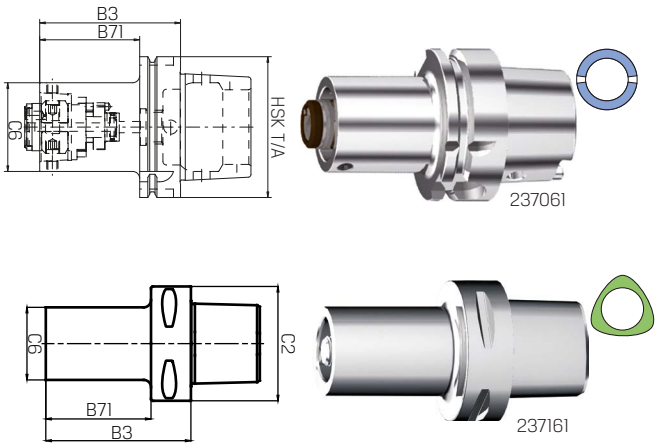
N° article	237059 HST A	237159 PSC	C2	237059 B3 mm	237159 B3 mm	A2 mm
4040	○	–	-40	15	–	40
6363	○	○	-63	15	25	63

Reduction

swiss FLEX | swiss PSC

Design:
- for the reduction of HST or PSC interfaces
- driving grooves at HST to ICTM standard

ISO 12164-3 | ISO 26623-1



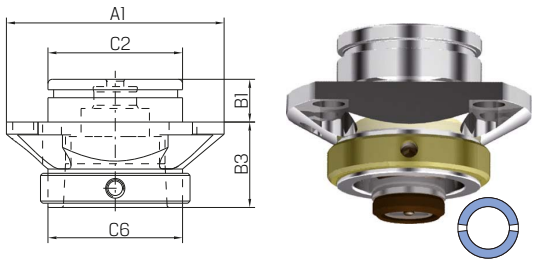
N° article	237061 HST T/A	237161 PSC	C2	C6	B3 mm	B71 mm
5040-65	–	○	-50	-40	65	40
6340-70	○	–	-63	-50	70	44
6340-80	–	○	-63	-40	80	58
6350-80	–	○	-63	-40	80	51

Clamping unit

swiss FLEX

Design:
- for mounting in turrets or turret assemblies
- high retaining force (at 20 Nm | 30.5 kN) at HST 63
- internal coolant supply

ISO 12164-3

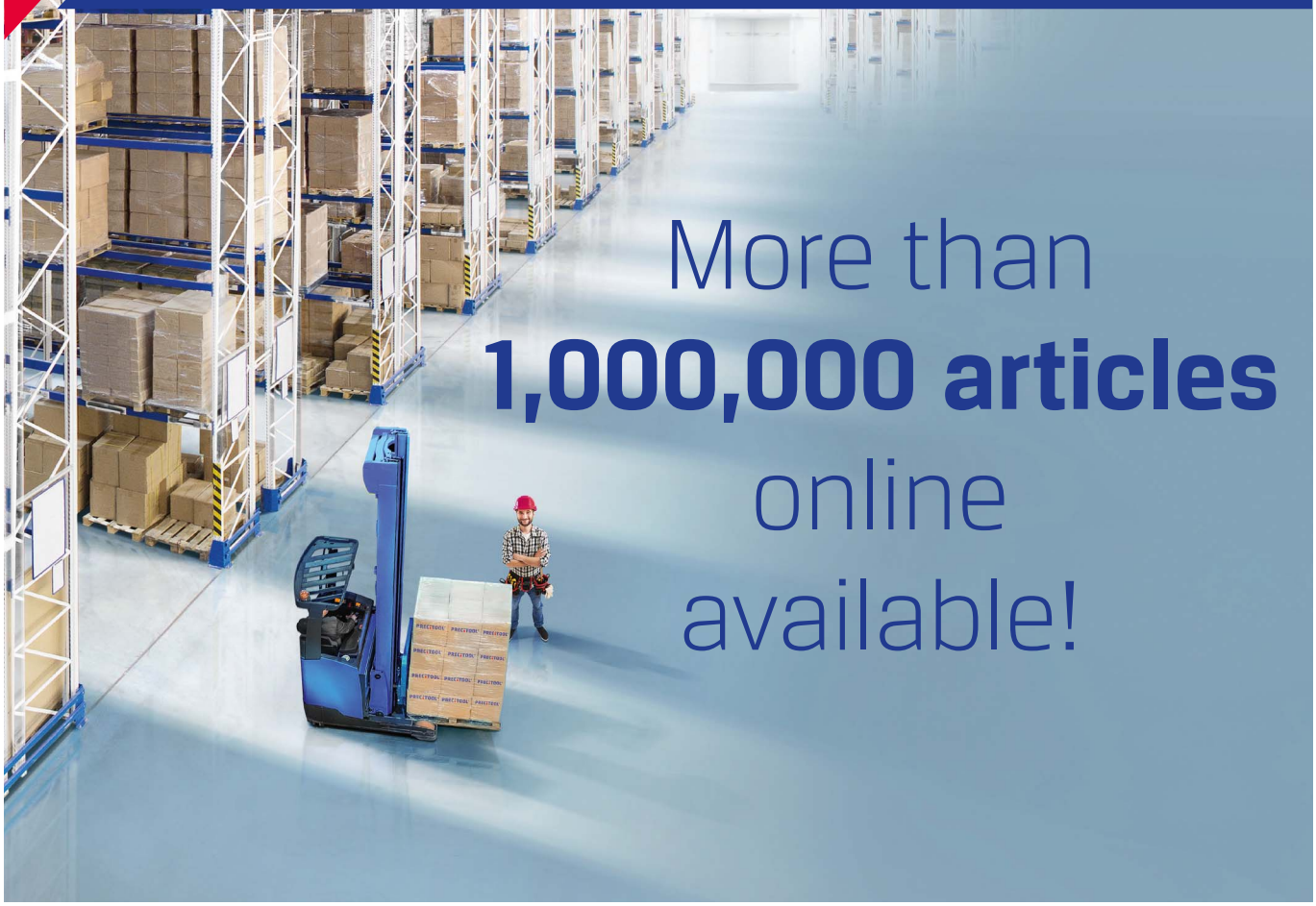


N° article	237062 HST T/C	C2	C6	A1 mm	B1 mm	B3 mm
4040-25	○	-40	-40	68	17	25
6363-40	○	-63	-63	102	20	40

Your full-range provider

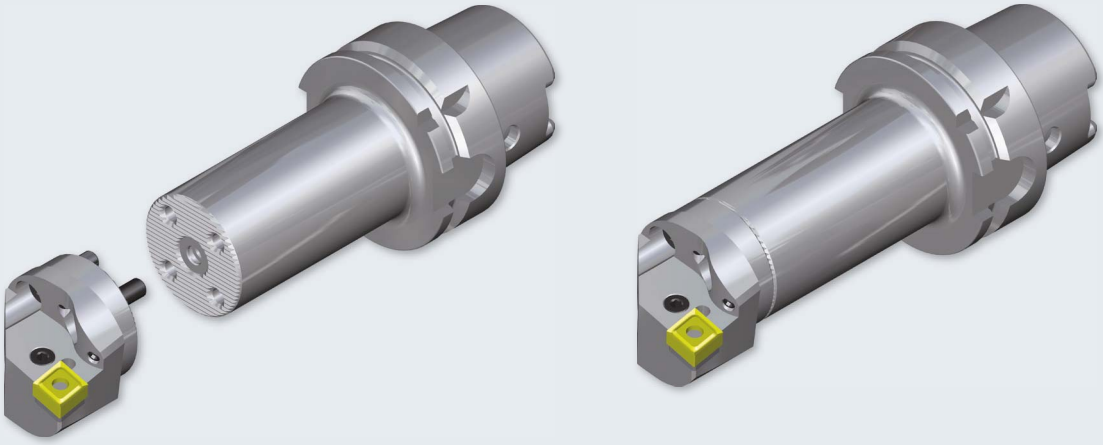
For every application the proper tool!

PRECITOOL®



Boring bars with interchangeable cutting heads

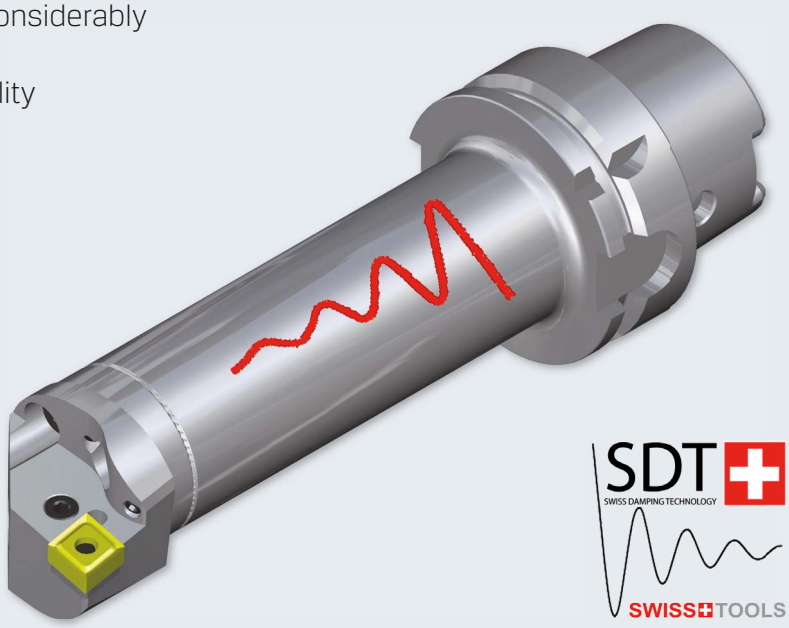
- all interchangeable cutting heads are equipped with high-performance cooling
- tool wear occurs mainly at the interchangeable cutting head, so the adapter has a longer service life
- in combination with the SDT boring bars, the concept is perfect for operations with long overhangs and with a tendency to vibrate



SWISS DAMPING TECHNOLOGY

Vibration-absorbed boring bar shafts

- gain in productivity, because thanks to the suppressed vibrations the cutting data can be increased considerably
- improved surface quality
- improved process reliability
- improved chip removal
- reduced costs per part



Replaceable head for indexable inserts

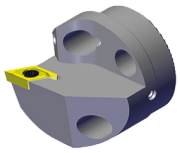
swiss FLEX

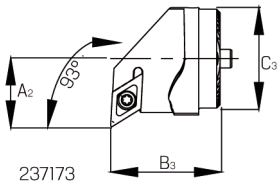
Design:
- for inserts with positive basic shape
- for efficient turning
- optimal cooling through aligned **H**igh **P**ressure cooling nozzles

Delivery:
Without boring bar shanks

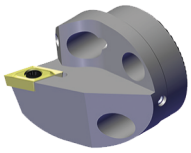
Note:
Matching boring bars see page 23/347

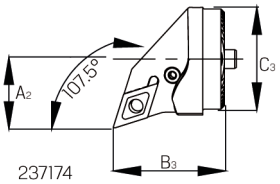



SDUC...



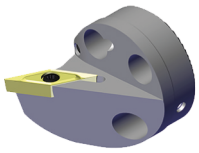
237173

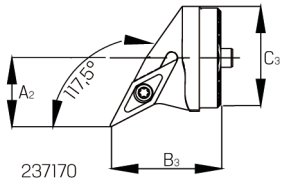

SDQC...



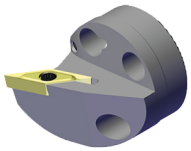
237174

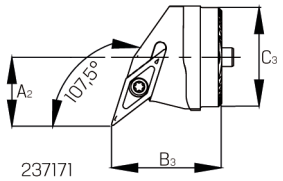
N° article	237173 SDUC	237174 SDQC	C3 mm	A2 mm	B3 mm	D1 min. mm	Indexable insert
2511R	○	○	25	17	35	32	DC...11 T3...
2511L	○	○	25	17	35	32	DC...11 T3...
3211R	○	○	32	22	35	40	DC...11 T3...
3211L	○	○	32	22	35	40	DC...11 T3...
4011R	○	○	40	27	40	50	DC...11 T3...
4011L	○	○	40	27	40	50	DC...11 T3...


SVPB...

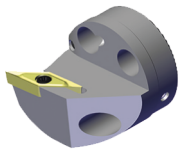


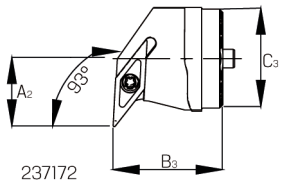
237170


SVQB...



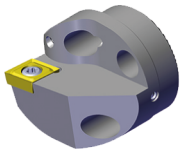
237171

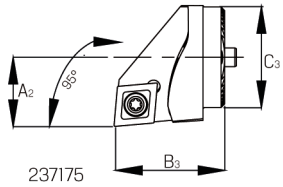

SVUB...



237172

N° article	237170 SVPB	237171 SVQB	237172 SVUB	C3 mm	A2 mm	B3 mm	D1 min. mm	Indexable insert
2511R	○	○	○	25	17	35	32	VB...11 03...
2511L	○	○	○	25	17	35	32	VB...11 03...
3216R	○	○	○	32	22	35	40	VB...16 04...
3216L	○	○	○	32	22	35	40	VB...16 04...
4016R	○	○	○	40	27	40	50	VB...16 04...
4016L	○	○	○	40	27	40	50	VB...16 04...


SCLC...

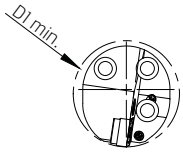


237175

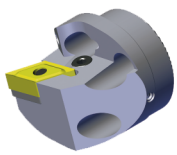
N° article	237175 SCLC	C3 mm	A2 mm	B3 mm	D1 min. mm	Indexable insert
2512R	○	25	17	35	32	CC...12 04...
2512L	○	25	17	35	32	CC...12 04...
3212R	○	32	22	35	40	CC...12 04...
3212L	○	32	22	35	40	CC...12 04...
4012R	○	40	27	40	50	CC...12 04...
4012L	○	40	27	40	50	CC...12 04...

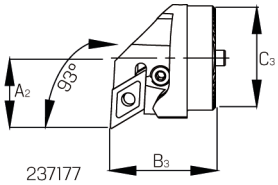
Design:
- for inserts with negative base shape
- for efficient turning
- optimal cooling through aligned **H**igh **P**ressure cooling nozzles

Delivery:
Without boring bar shanks



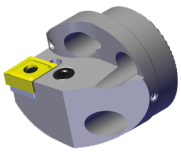


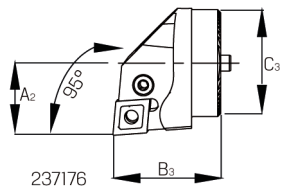

PDUN...



237177

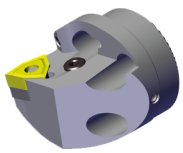
N° article	237177 PDUN	C3 mm	A2 mm	B3 mm	D1 min. mm	Indexable insert
3215R	○	32	22	35	40	DN...15 06...
3215L	○	32	22	35	40	DN...15 06...
4015R	●	40	27	40	50	DN...15 06...
4015L	○	40	27	40	50	DN...15 06...

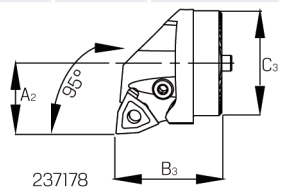

PCLN...



237176

N° article	237176 PCLN	C3 mm	A2 mm	B3 mm	D1 min. mm	Indexable insert
2512R	○	25	17	35	32	CN...12 04...
2512L	○	25	17	35	32	CN...12 04...
3212R	●	32	22	35	40	CN...12 04...
3212L	○	32	22	35	40	CN...12 04...
4012R	○	40	27	40	50	CN...12 04...
4012L	○	40	27	40	50	CN...12 04...


PWLN...



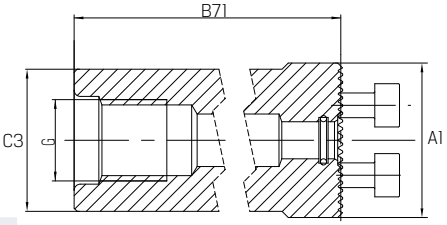
237178

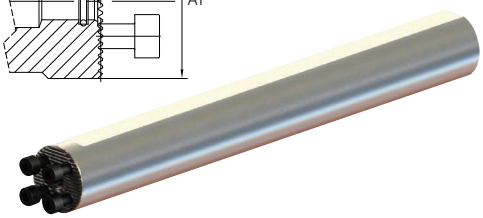
N° article	237178 PWLN	C3 mm	A2 mm	B3 mm	D1 min. mm	Indexable insert
3215R	○	32	22	35	40	WN...08 04...
3215L	○	32	22	35	40	WN...08 04...
4015R	○	40	27	40	50	WN...08 04...
4015L	○	40	27	40	50	WN...08 04...

Boring bar

swiss FLEX

Design:
- connection thread for internal cooling
- 3 clamping surfaces





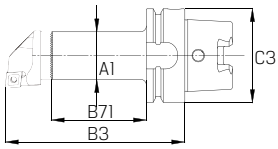
N° article	237179 with cylindrical shank	C3 mm	A1 mm	B71 mm	G
25×200	○	23	25	200	G 1/4
32×218	○	30	32	218	G 3/8
40×283	○	37	40	283	G 1/2

Boring bar ISO 12164-3

swiss FLEX

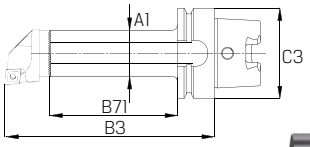
Design:
- for efficient turning
- driving grooves at HST to ICTM standard

ISO 12164-3





N° article	237180 HST-T, for exchangeable head	C3 mm	A1 mm	B3 mm	B71 mm
4025×90	○	-40	25	90	35
4025×110	○	-40	25	110	55
4032×115	○	-40	32	115	60
4040×120	○	-40	40	120	–
6325×105	○	-63	25	105	44
6332×125	○	-63	32	125	64
6332×160	○	-63	32	160	99
6340×140	○	-63	40	140	74
6340×180	○	-63	40	180	114



ISO 12164-3



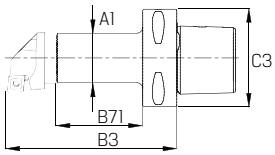
N° article	237181 HST-T, for exchangeable head, vibration-damped	C3 mm	A1 mm	B3 mm	B71 mm
6325×150	○	-63	25	150	89
6332×185	○	-63	32	185	124
6340×225	○	-63	40	225	159

Boring bar ISO 26623-1

swiss PSC

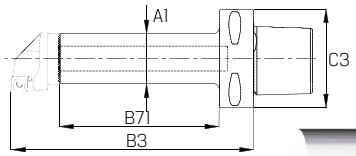
Design:
- for efficient turning

ISO 26623-1

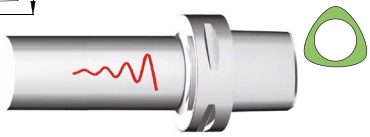




N° article	237183 PSC, for exchangeable head	C3 mm	A1 mm	B3 mm	B71 mm
4025×90	○	-40	25	90	35
4032×110	○	-40	32	110	55
4040×120	○	-40	40	120	–
5025×90	○	-50	25	90	35
5032×110	○	-50	32	110	55
5040×140	○	-50	40	140	80
6325×100	○	-63	25	100	43
6332×125	○	-63	32	125	68
6332×160	○	-63	32	160	103
6340×140	○	-63	40	140	78
6340×180	○	-63	40	180	118



ISO 26623-1



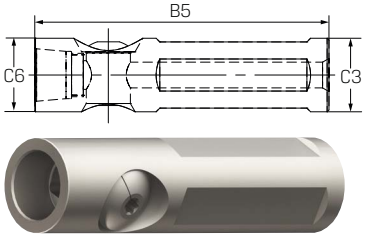
N° article	237184 PSC, for exchangeable head, vibration-damped	C3 mm	A1 mm	B3 mm	B71 mm
6325×150	○	-63	25	150	93
6332×185	○	-63	32	185	128
6340×225	○	-63	40	225	163

Basic holder round

swiss MICRO

Design:
- for efficient turning
- with direct coolant connection M8 × 1
- special dimensions on request
- the use of a torque wrench is recommended

NEW



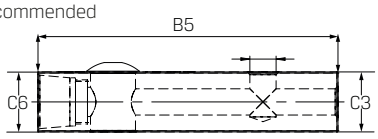
N° article	238100 SWISS Micro	C6	C3 mm	B5 mm
3 16×80	○	3	16	80
4 20×80	○	4	20	80
5 20×80	○	5	20	80
5 22×80	○	5	22	80
5 25×80	○	5	25	80

Basic holder square

swiss MICRO

Design:
- for efficient turning
- with direct coolant connection M8 × 1
- special dimensions on request
- the use of a torque wrench is recommended

NEW





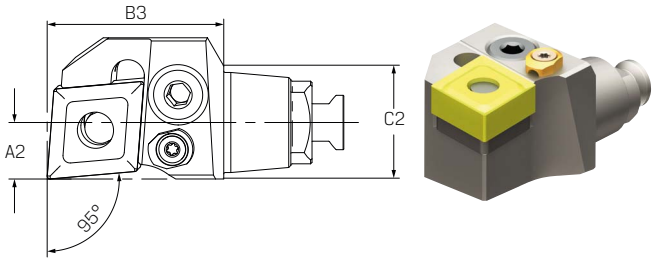
N° article	238102 SWISS Micro	C6	C3 mm	B5 mm
3 1212×80	○	3	12	80
4 1616×80	○	4	16	80
5 2020×100	○	5	20	100

Replaceable head for indexable inserts

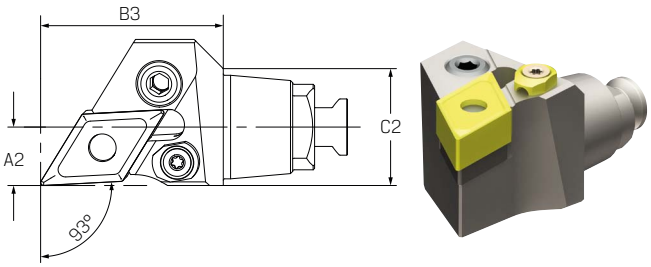
Design:
- for indexable inserts with negative basic form
- optimum cooling through aligned high pressure (HP) cooling nozzles

NEW

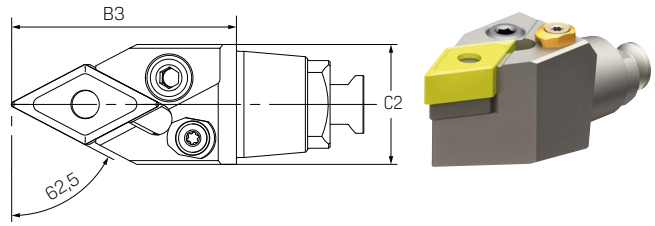
Delivery:
Without base holder



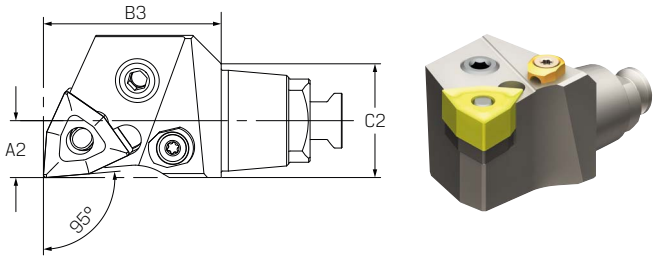
N° article	238110 PCLN	C2	A2 mm	B3 mm	Indexable insert
412L	○	4	8	25	CN...12 04...
412R	○	4	8	25	CN...12 04...
512L	○	5	10	30	CN...12 04...
512R	○	5	0	30	CN...12 04...



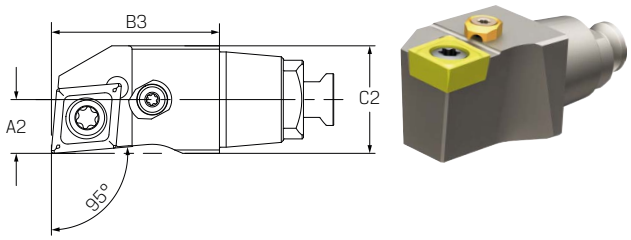
N° article	238113 PDJN	C2	A2 mm	B3 mm	Indexable insert
411L	○	4	8	25	DN...11 04...
411R	○	4	8	25	DN...11 04...
511L	○	5	10	25	DN...11 04...
511R	○	5	10	25	DN...11 04...



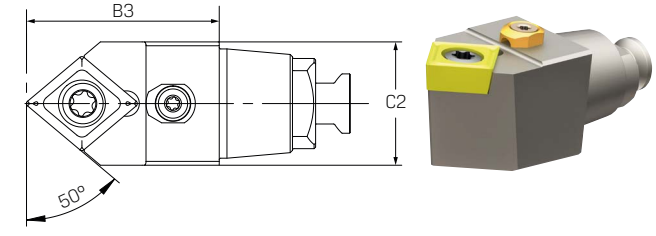
N° article	238116 PDNNN	C2	B3 mm	Indexable insert
411N	○	4	30	DN...11 04...
511N	○	5	30	DN...11 04...



N° article	238119 PWLN	C2	A2 mm	B3 mm	Indexable insert
406L	○	4	8	25	WN...06 04...
406R	○	4	8	25	WN...06 04...
506L	○	5	10	25	WN...06 04...
506R	○	5	10	25	WN...06 04...



N° article	238122 SCLC	C2	A2 mm	B3 mm	Indexable insert
306L	○	3	6	20	CC...06 02...
306R	○	3	6	20	CC...06 02...
309L	○	3	6	20	CC...09 T3...
309R	○	3	6	20	CC...09 T3...
406L	○	4	8	25	CC...09 T3...
406R	○	4	8	25	CC...09 T3...
409L	○	4	8	25	CC...09 T3...
409R	○	4	8	25	CC...09 T3...
509L	○	5	10	25	CC...09 T3...
509R	○	5	10	25	CC...09 T3...



N° article	238125 SCMCN	C2	B3 mm	Indexable insert
306N	○	3	20	CC...06 02...
309N	○	3	20	CC...09 T3...
406N	○	4	25	CC...06 02...
409N	○	4	25	CC...09 T3...
509N	○	5	25	CC...09 T3...

Replaceable head for indexable inserts

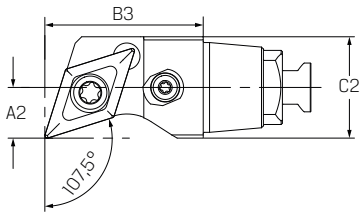
SWISS MICRO

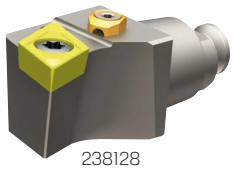
HP ready

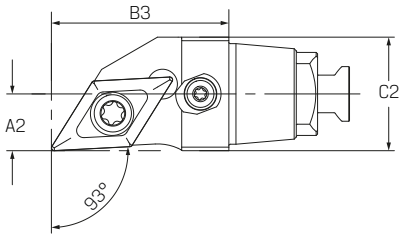
Design:
- for indexable inserts with negative basic form
- optimum cooling through aligned high pressure (HP) cooling nozzles

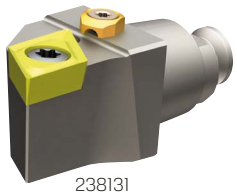
NEW

Delivery:
Without base holder

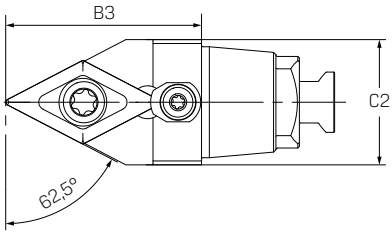


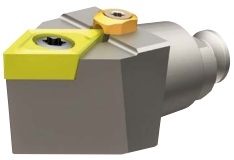




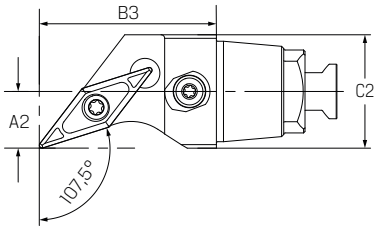


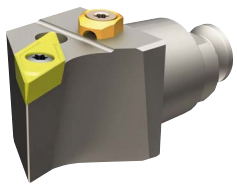
N° article	238128 SDHC	238131 SDJC	C2	A2 mm	B3 mm	Indexable insert
307L	○	○	3	6	20	DC...07 02...
307R	○	○	3	6	20	DC...07 02...
311L	○	○	3	6	25	DC...11 T3...
311R	○	○	3	6	25	DC...11 T3...
407L	○	○	4	8	25	DC...07 02...
407R	○	○	4	8	25	DC...07 02...
411L	○	○	4	8	25	DC...11 T3...
411R	○	○	4	8	25	DC...11 T3...
511L	○	○	5	10	25	DC...11 T3...
511R	○	○	5	10	25	DC...11 T3...



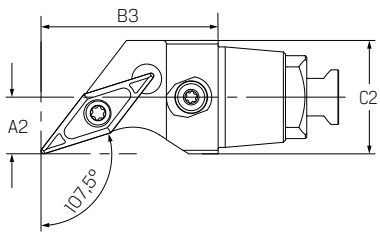


N° article	238134 SDNCN	C2	B3 mm	Indexable insert
307N	○	3	20	DC...07 02...
311N	○	3	25	DC...11 T3...
407N	○	4	25	DC...07 02...
411N	○	4	25	DC...11 T3...
507N	○	5	30	DC...07 02...
511N	○	5	30	DC...11 T3...



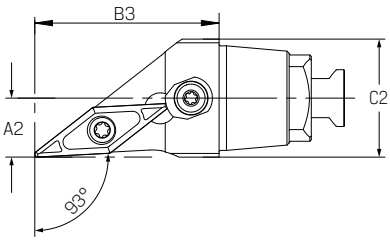


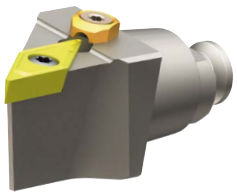
N° article	238137 SVHB	C2	A2 mm	B3 mm	Indexable insert
311L	○	3	6	25	VB...11 03...
311R	○	3	6	25	VB...11 03...
411L	○	4	8	25	VB...11 03...
411R	○	4	8	25	VB...11 03...
511L	○	5	10	25	VB...11 03...
511R	○	5	10	25	VB...11 03...





N° article	238140 SVHC	C2	A2 mm	B3 mm	Indexable insert
311L	○	3	6	25	VC...11 03...
311R	○	3	6	25	VC...11 03...
411L	○	4	8	25	VC...11 03...
411R	○	4	8	25	VC...11 03...
516L	○	5	10	25	VC...16 04...
516R	○	5	10	25	VC...16 04...





N° article	238143 SVJB	C2	A2 mm	B3 mm	Indexable insert
311L	○	3	6	25	VB...11 03...
311R	○	3	6	25	VB...11 03...
411L	○	4	8	25	VB...11 03...
411R	○	4	8	25	VB...11 03...
511L	○	5	10	25	VB...11 03...
511R	○	5	10	25	VB...11 03...

Replaceable head for indexable inserts

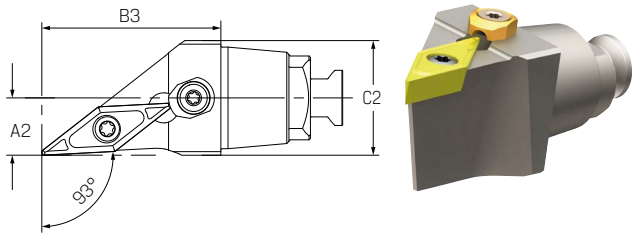
swiss MICRO

HP ready

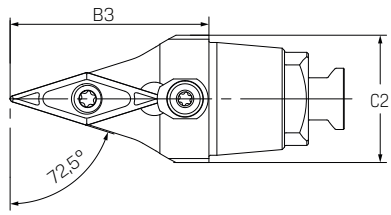
Design:
- for indexable inserts with positive basic form
- optimum cooling through aligned high pressure (HP) cooling nozzles

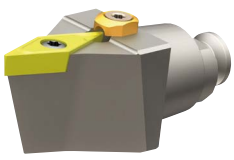
NEW

Delivery:
Without base holder



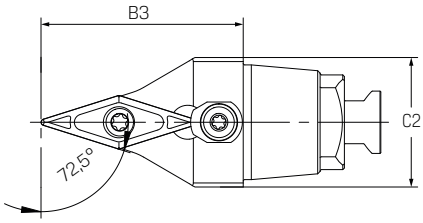
N° article	238146 SVJC	C2	A2 mm	B3 mm	Indexable insert
311L	○	3	6	25	VC...11 03...
311R	○	3	6	25	VC...11 03...
313L	○	3	6	30	VC...13 03...
313R	○	3	6	30	VC...13 03...
411L	○	4	8	25	VC...11 03...
411R	○	4	8	25	VC...11 03...
413L	○	4	8	30	VC...13 03...
413R	○	4	8	30	VC...13 03...
416L	○	4	8	35	VC...16 04...
416R	○	4	8	35	VC...16 04...
516L	○	5	10	35	VC...16 04...
516R	○	5	10	35	VC...16 04...

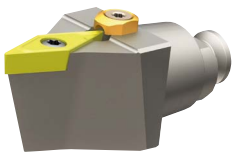




N° article	238149 SVVBN	C2	B3 mm	Indexable insert
311N	○	3	25	VC...11 03...
411N	○	4	25	VC...11 03...
511N	○	5	25	VC...11 03...

N° article	238152 SVVCN	C2	B3 mm	Indexable insert
311N	○	3	25	VC...11 03...
313N	○	3	30	VC...13 03...
411N	○	4	25	VC...11 03...
413N	○	4	30	VC...13 03...
416N	○	4	35	VC...16 04...
516N	○	5	35	VC...16 04...





Replaceable head for indexable inserts

swiss BORE

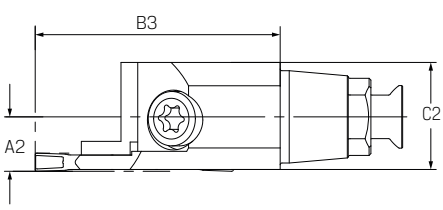
swiss MICRO

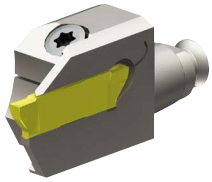
HP ready

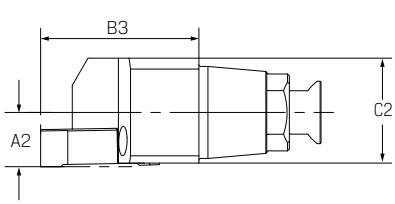
Note:
Compatible with Simtek indexable inserts.

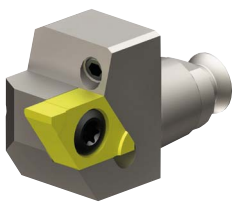
NEW

N° article	238160 TH2	C2	A2 mm	B3 mm	Indexable insert
3 TH2.15L	○	3	6	27	TH2.15
3 TH2.15R	○	3	6	27	TH2.15
3 TH2.20L	○	3	6	27	TH2.20
3 TH2.20R	○	3	6	27	TH2.20
3 TH2.25L	○	3	6	27	TH2.25
3 TH2.25R	○	3	6	27	TH2.25
3 TH2.30L	○	3	6	27	TH2.30
3 TH2.30R	○	3	6	27	TH2.30

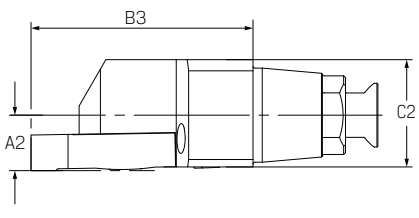


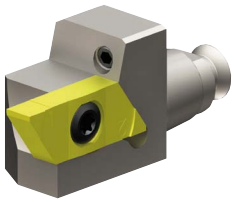






N° article	238163 TK2.A	C2	A2 mm	B3 mm	Indexable insert
3 TK2.A.L.04	○	3	6	17,5	TK2.G.L.04
3 TK2.A.R.04	○	3	6	17,5	TK2.G.R.04



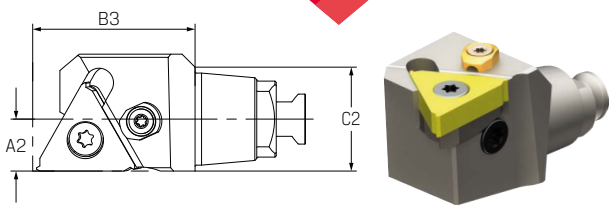


N° article	238166 TK2.G	C2	A2 mm	B3 mm	Indexable insert
3 TK2.G.L.04	○	3	6	24	TK2.A.L.04
3 TK2.G.R.04	○	3	6	24	TK2.A.R.04

Replaceable head for indexable inserts

SWISS MICRO

NEW

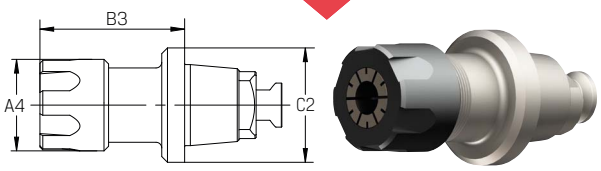


N° article	238170 External thread	C2	A2 mm	B3 mm	Indexable insert
316EL	○	3	6	25	16 EL
316ER	○	3	6	25	16 ER
416EL	○	4	8	25	16 EL
416ER	○	4	8	25	16 ER
516EL	○	5	10	25	16 EL
516ER	○	5	10	25	16 ER

Replaceable head Collet chuck

SWISS MICRO

NEW



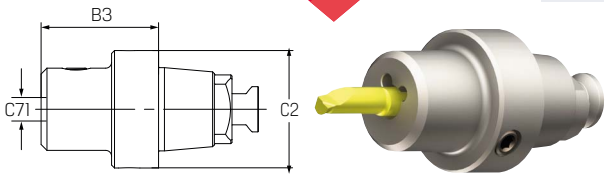
N° article	238180 ER	C2	A4 mm	B3 mm	Collet chuck
3ER11	○	3	16	26	ER11
5ER11	○	5	16	26	ER11
5ER16	○	5	22	35	ER16

Replaceable head for cutting inserts

SWISS MICRO

NEW

HP ready



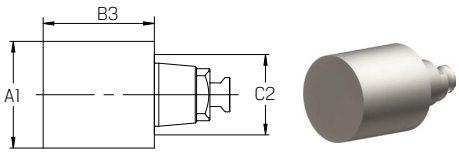
N° article	238185 for cutting inserts	C2	B3 mm	C71 mm
5 0420	○	5	20	4
5 0725	○	5	25	7

Replaceable head Blank

SWISS MICRO

NEW

HP ready



N° article	238199 Blank	C2	A1 mm	B3 mm
3 23×37	○	4	23	37
4 30×43	○	5	30	43
5 30×43	○	5	30	43

Coolant tube HSK

PREMUS

ISO 12164-1

Design:
- gentle, smooth surface prevents damage to the spindle seal
- 2 O-rings for highest safety and maximum mobility

Use:
- required for all rotating HSC spindles
- sealed transfer of the coolant in the tool holder
- prevents coolant entering the spindle and thus damage
- dimension and finish according to spindle manufacturer's specifications



N° article	237185 for HSK mounts	for taper	M mm	D mm	L mm	L1 mm
1032	○	HST-A32	10×1,0	6	26	5,5
1040	○	HST-A40	12×1,0	8	29	7,5
1050	○	HST-A50	16×1,0	10	33	9,5
1063	○	HST-A63	18×1,0	12	36,5	11,5
1080	○	HST-A80	20×1,5	14	40	13,5
1100	○	HST-A100	24×1,5	16	44	15,5

Mounting key for coolant tube

PREMUS

ISO 12164-1

Design:
- blade made of hardened special steel
- handle made of impact-proof plastic, cadmium free, black

Use:
Allows the exact installation of the coolant pipes to the required depth



N° article	237186 Mounting key for HSK coolant tubes	for taper
1032	○	PSC-32
1040	○	PSC-40
1050	○	PSC-50
1063	○	PSC-63
1080	○	PSC-80
1100	○	PSC-100

Coolant tube PSC

PREMUS

Design:
- gentle, smooth surface prevents damage to the spindle seal
- 2 O-rings for highest safety and maximum mobility

ISO 26623-1

Use:
- required for all rotating polygon spindles
- sealed transfer of the coolant into the tool holder
- prevents coolant entering the spindle and thus damage
- dimension and finish according to spindle manufacturer's specifications



N° article	237187 for polygon receptacles	for taper	M mm	D mm	L mm	L1 mm
1032	●	PSC-32	12×1.5	5	22,3	10
1040	●	PSC-40	14×1.5	6	25	12
1050	●	PSC-50	16×1.5	7	28,3	14
1063	●	PSC-63	20×2	8	31	15
1080	●	PSC-80	20×2	10	33,2	15
1100	○	PSC-100	24×2	14	47	22

Mounting key for coolant tube

PREMUS

Design:
- blade made of hardened special steel
- handle made of impact-proof plastic, cadmium free, black

ISO 26623-1

Use:
Allows the exact installation of the coolant pipes to the required depth

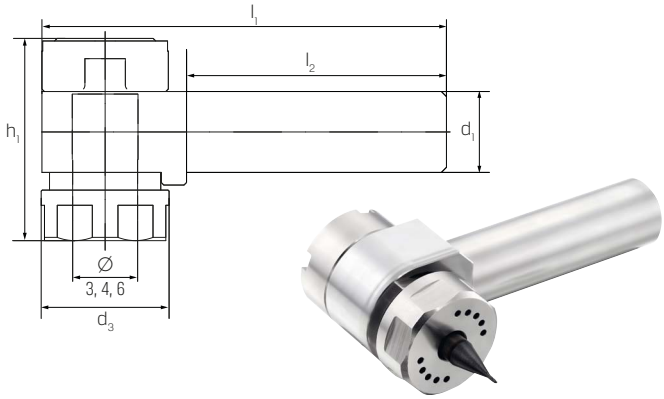


N° article	237188 Installation wrench for polygon coolant pipes	for taper
1032	●	PSC-32
1040	●	PSC-40
1050	●	PSC-50
1063	●	PSC-63
1080	●	PSC-80
1100	○	PSC-100

High-speed spindle

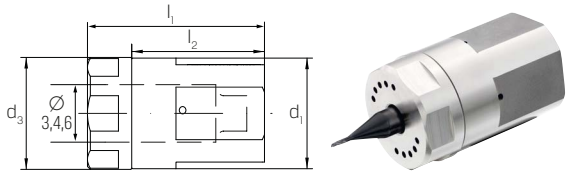
WTO

Design:
- driven by coolant or cutting oil
- coolant pressure 10 - 60 bar
- dynamic runout: 4 µm or better



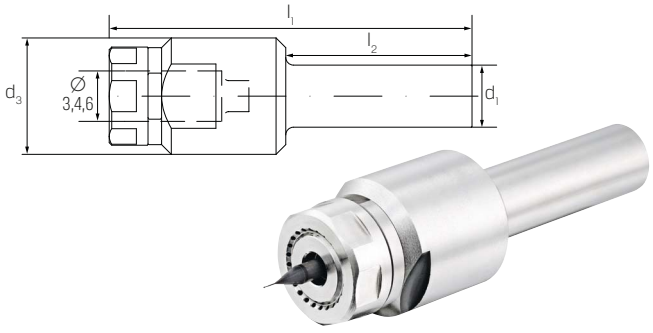
N° article	235111 CoolSpeed mini 90°	d_1 mm	l_1 mm	l_2 mm	d_3 mm	h_1 mm	Mount	Output Watt	Coolant flow l/min	Revolution per minute
0316	○	16	80	51	25	40	3|4|6	300	11 - 30	75000

Design:
- driven by coolant or cutting oil
- coolant pressure 10 - 60 bar
- dynamic runout: 4 µm or better



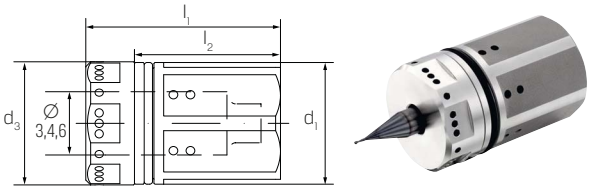
N° article	235110 CoolSpeed mini	d_1 mm	l_1 mm	l_2 mm	d_3 mm	Mount	Output Watt	Coolant flow l/min	Revolution per minute
0325	○	25	40	30	25,5	3|4|6	300	11 - 30	75000

Design:
- driven by coolant or cutting oil
- coolant pressure 10 - 60 bar
- dynamic runout: 4 µm or better



N° article	235112 CoolSpeed mini EX	d_1 mm	l_1 mm	l_2 mm	d_3 mm	Mount	Output Watt	Coolant flow l/min	Revolution per minute
0316	○	16	94	48	30	3|4|6	300	11 - 30	75000

Design:
- driven by air-oil mixture
- operating pressure 4 - 7 bar
- dynamic runout: 4 µm or better

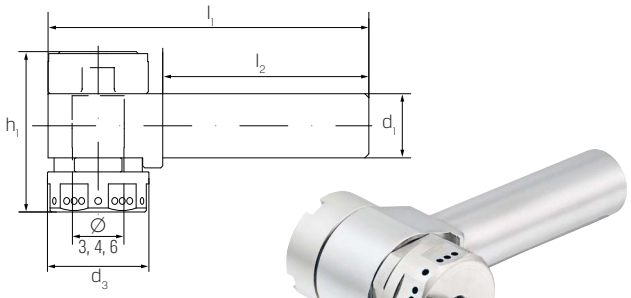


N° article	235114 CoolSpeed mini Air	d_1 mm	l_1 mm	l_2 mm	d_3 mm	Mount	Output Watt	Revolution per minute
0225	○	25	40	30	25	3|4|6	200	55000

High-speed spindle

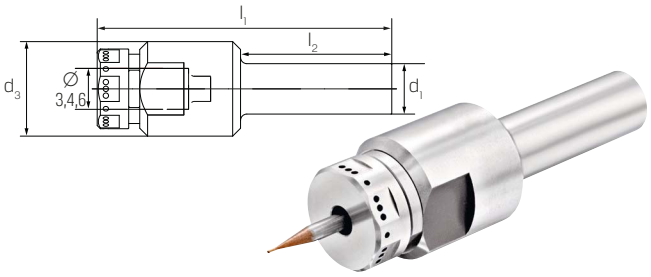
WTO

Design:
- driven by air pressure
- operating pressure 3 - 7 bar
- dynamic runout: 4 µm or better



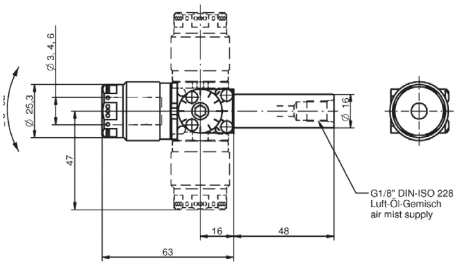
N° article	235115 CoolSpeed mini Air 90°	d_1 mm	l_1 mm	l_2 mm	d_3 mm	h_1 mm	Mount	Output Watt	Revolution per minute
0216	○	16	80	51	25	40	3|4|6	200	55000

Design:
- driven by air pressure
- operating pressure 3 - 7 bar
- dynamic runout: 4 µm or better

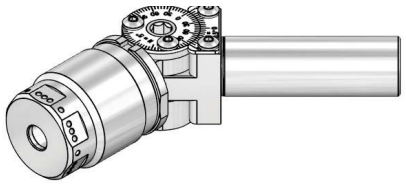


N° article	235116 CoolSpeed mini EX Air	d_1 mm	l_1 mm	l_2 mm	d_3 mm	Mount	Output Watt	Revolution per minute
0216	○	16	94	48	30	3|4|6	200	55000

Design:
- driven by air pressure
- operating pressure 4-5 bar (58-73 PSI)



NEW



N° article	235117 CoolSpeed mini V Air	d_1 mm	l_1 mm	l_2 mm	d_3 mm	Mount	Output Watt	Revolution per minute
1648	○	16	111	48	25,3	3.4,6	300	50.000

Accessories for high-speed spindle

WTO

Design:
- 3-piece ball bearing set, installation set consisting of 2 bearings and 1 turbine
- CM-SRK-030 Ø 3 mm
- CM-SRK-040 Ø 4 mm
- CM-SRK-060 Ø 6 mm



N° article	235118 CoolSpeed	Ø mm
0003	○	3
0004	○	4
0005	○	6

Design:
- mounting fixture
- set for Ø 3, 4, 6 mm

NEW

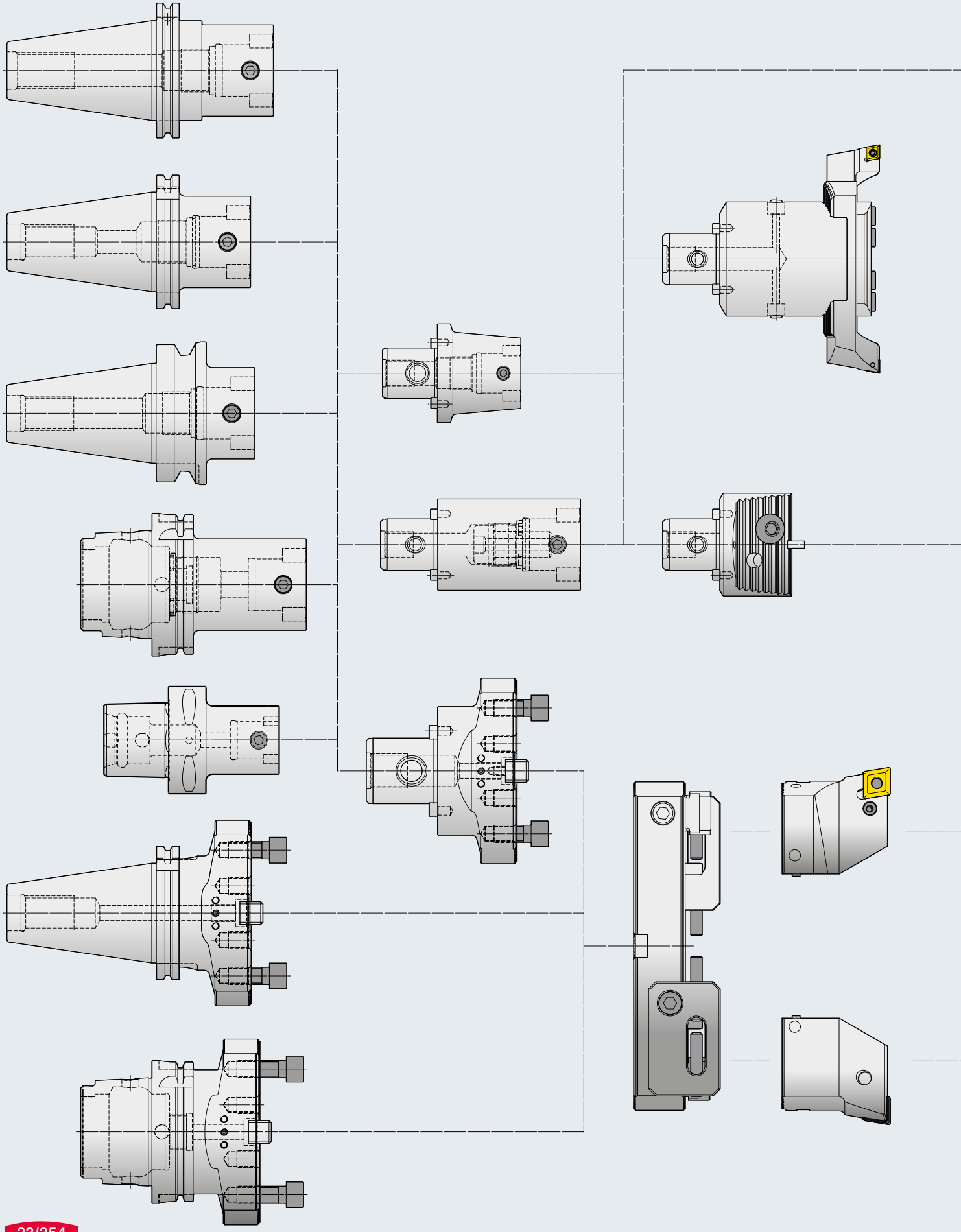


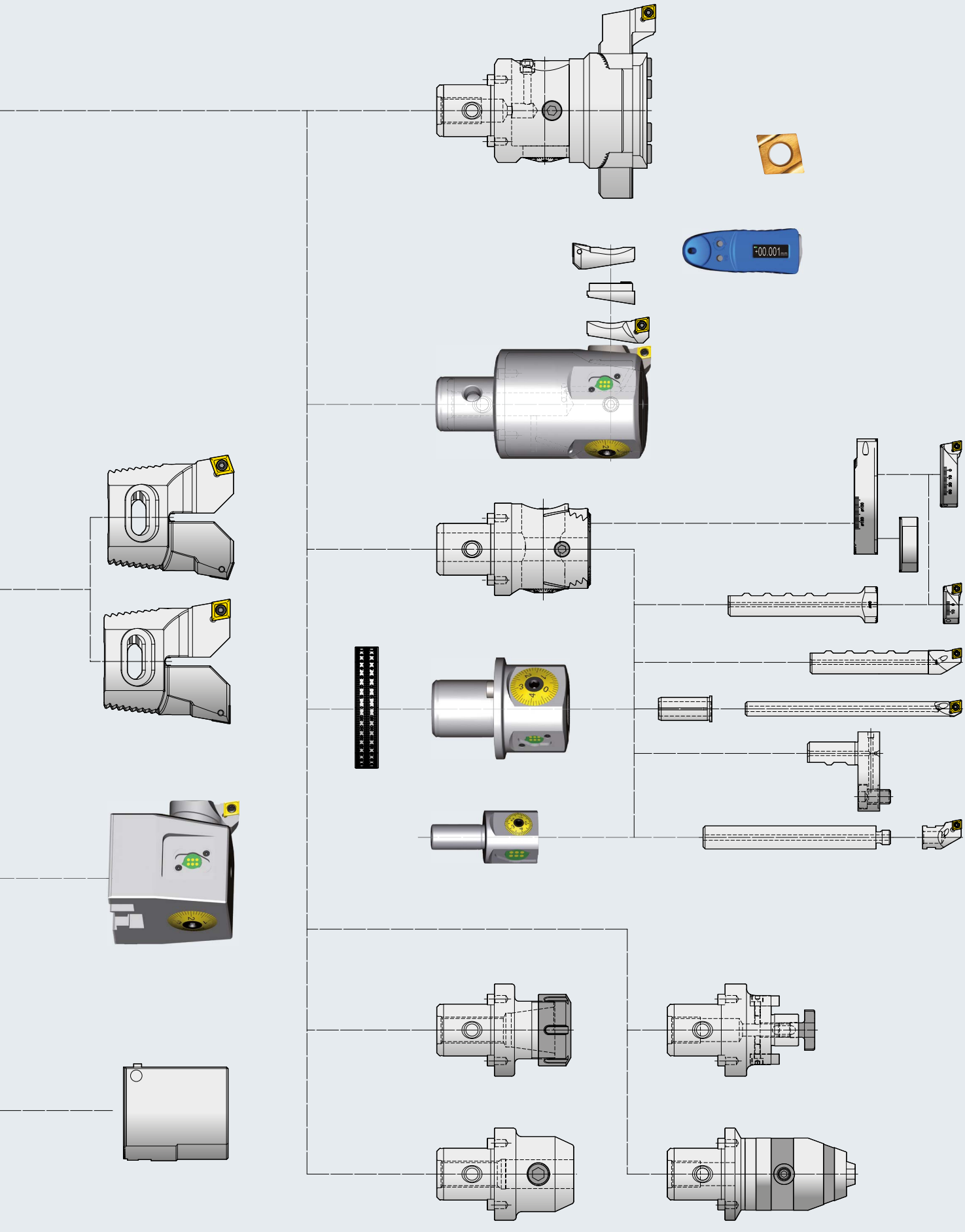
N° article	235119 CoolSpeed SET	Ø mm
0346	○	3|4|6

Design:
- pressure measuring adapter set



N° article	235120 CoolSpeed	Ø mm
0025	○	25





Spindle tool

Design:
- a display for all fine boring heads Ø 0.3 mm - 2205 mm
- display reversible for left/right handed users
- mm/inch selectable
- standard AAA battery for power supply
- the display is held by magnetic force on the tool
- setting accuracy 0.001 mm in diameter
- direct path measuring system, no backlash
- no battery and evaluation electronics built into the tool
- very easy operation
- usable digital and analogue



N° article	239100 Display unit digital, for fine boring heads Ø 0.3-2205
0001	○

Design 239001:
- extendable from Ø 3 to Ø 88.1 mm
- further accessories available on request
- set consisting of:
  1 case
  1 boring head
  1 boring tool each Ø 9.75-15.1 | 14.75-20.1 | 19.75-25.1 | 24.75-30.1
  1 Allen key AF5
  1 TORX®wrench T7

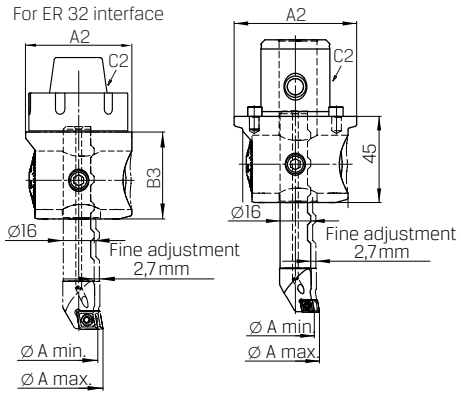


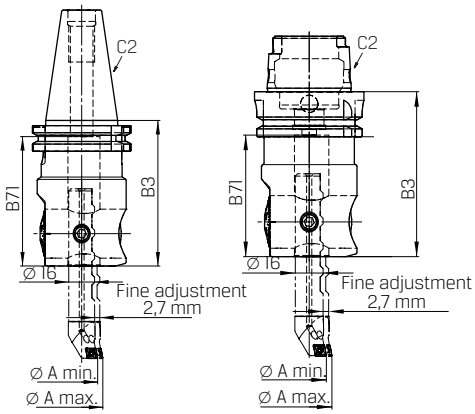
239001

Design 239101:
- extendable from Ø 3 to Ø 88.1 mm
- further accessories available on request
- set consisting of:
  1 case
  1 boring head
  1 boring tool each Ø 9.75-15.1 | 14.75-20.1 | 19.75-25.1 | 24.75-30.1
  1 Allen key AF5
  1 TORX®wrench T7
  1 digital display unit



239101



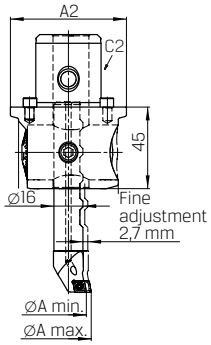


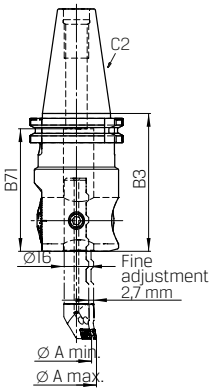
N° article	239001 analogue	239101 digital	C2	A2 mm	B3 mm	B71 mm	min./max. Ø A mm
0001	–	○	ST6	64	45	–	9.75/30.1
0002	○	–	ST6	64	45	–	9.75/30.1
0003	○	–	ER32	55	60	–	9.75/30.1
0004	○	○	AD 40	55	90	80	9.75/30.1
0006	○	○	BT40	55	90	80	9.75/30.1
0008	○	○	HST-A63	55	95	70	9.75/30.1

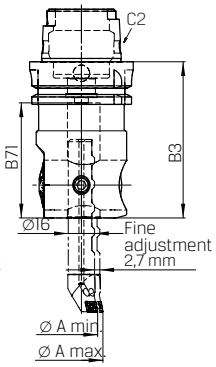
Spindle tool

Design 239002:
- extendable from Ø 3 to Ø 88.1
- further accessories available on request
- set consisting of:
  1 case
  1 boring head
  1 boring tool each Ø 9.75-15.1 | 14.75-20.1 | 19.75-25.1 | 24.75- 30.1
  1 shank each Ø 29.75-48.1 | 47.75-88.1
  1 indexable insert holder each Ø 29.75-48.1 | 47.75-88.1
  1 Allen key each AF4 | AF5
  1 TORX®wrench T7

Design 239102:
- extendable from Ø 3 to Ø 88.1
- further accessories available on request
- set consisting of:
  1 case
  1 boring head
  1 boring tool each Ø 9.75-15.1 | 14.75-20.1 | 19.75-25.1 | 24.75-30.1
  1 shank each Ø 29.75-48.1 | 47.75-88.1
  1 insert holder each Ø 29.75 - 48.1 | 47.75- 88.1
  1 Allen key each AF4 | AF5
  1 TORX®wrench T7
  1 digital display unit









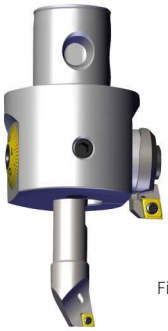
239002

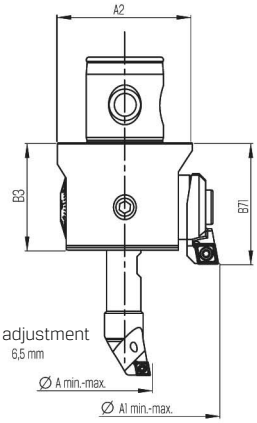


239102

N° article	239002 analogue	239102 digital	C2	A2 mm	B3 mm	B71 mm	min./max. Ø A mm
0002	○	○	ST6	64	50	–	9.75/88.1
0004	○	○	ST-40	55	90	80	9.75/88.1
0006	○	○	BT40	55	90	80	9.75/88.1
0008	○	○	HST-A63	55	95	70	9.75/88.1

Design:
- feed accuracy of 0.01 mm resp. via vernier 0.002 mm in diameter
- extendable from Ø 3 to 152.1
- set consisting of:
  1 case
  1 boring head
  1 boring tool each Ø 9.75-20.1 | 19.75-30.1
  1 shank each Ø 29.75-48.1 | 47.75-88.1
  1 indexable insert holder each Ø 29.75-48.1 | 47.75-88.1
  1 indexable insert holder CC...09T3... Ø 87.75-101.1
  1 coolant plug
  2 TORX keys T7 | T15
  1 Allan key AF 1.5-8





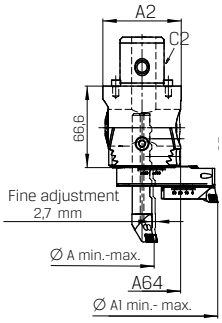


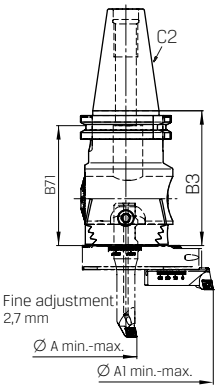
N° article	239003 Vario Head analogue	A2 mm	B3 mm	B71 mm	min./max. Ø A mm
0012	○	63	50,5	57	9.75 / 101.1

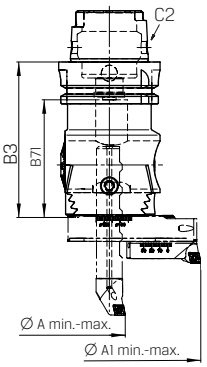
Spindle tool

swiss BORE

Design:
- expandable from Ø 3 to Ø 320
- further accessories available on request
- set consisting of:
  1 case
  1 boring head
  1 boring tool each Ø 9.75-15.1 | 14.75-20.1 | 19.75-25.1 | 24.75-30.1
  1 shank each Ø 29.75-48.1 | 47.75-88.1
  1 bridge Ø 80
  1 insert holder each Ø 29.75-48.1 | 47.75-88.1
  1 Allen key each AF4 | AF5
  1 TORX key T7



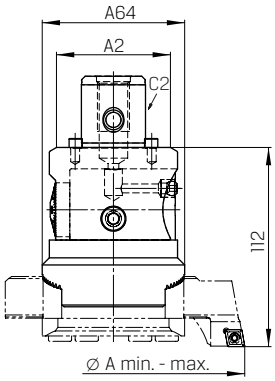






N° article	239004 Multi Head analogue	C2	A2 mm	A64 mm	B3 mm	B71 mm	min./max. Ø A mm	Design
0002	○	ST6	64	63	–	–	9.75/164	Modular
0004	●	ST-40	–	–	120	90	9.75/164	Monobloc
0006	○	BT40	–	–	120	90	9.75/164	Monobloc
0008	○	HST-A63	–	–	125	95	9.75/164	Monobloc

Design:
- expandable to Ø 402
- further accessories available on request
- set consisting of:
  1 case
  1 fine boring head
  1 insert holder each Ø 86-138 | 136-220 | 188-302
  2 supports
  2 pressure plates
  10 indexable inserts CC...09T3...
  1 Allen key AF5
  1 TORX key T15





N° article	239005 analogue	C2	A2 mm	A64 mm	min./max. Ø A mm
0002	○	ST6+	64	80	86/302

Base adapter

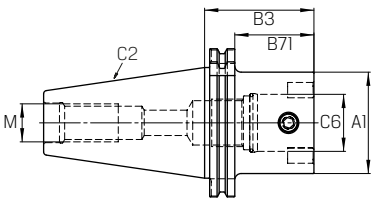
swiss BORE

ISO 7388-1

Design 239010:
- ST+ extension without traction bolt and threaded ring
- further accessories available on request

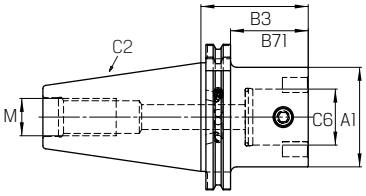
Design 239011:
- coolant supply via collar
- further accessories available on request

N° article	239010 ST shape AD	239011 ST shape AF	C2	C6	A1 mm	B3 mm	B71 mm	Thread
3050	○	–	SK30	ST5	50	50	30,9	M12
4010	○	○	SK40	ST1	20	35	15,9	M16
4020	○	○	SK40	ST2	25	40	20,9	M16
4030	○	○	SK40	ST3	32	40	20,9	M16
4040	○	○	SK40	ST4	39	43	23,9	M16
4050	○	○	SK40	ST5	50	43	23,9	M16
4060	–	○	SK40	ST6	64	59	39,9	M16
4061	●	–	SK40	ST6+	64	59	39,9	M16
5010	○	○	SK50	ST1	20	45	25,9	M24
5020	○	○	SK50	ST2	25	50	30,9	M24
5030	○	○	SK50	ST3	32	50	30,9	M24
5040	○	○	SK50	ST4	39	53	33,9	M24
5050	○	○	SK50	ST5	50	53	33,9	M24
5060	–	○	SK50	ST6	64	69	49,9	M24
5061	○	–	SK50	ST6+	64	69	49,9	M24
5071	○	–	SK50	ST7+	90	85	65,9	M24



Form AD





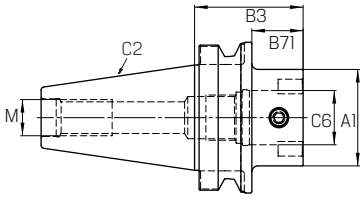
Form AF



Base adapter

Design:
- ST+ extension without traction bolt and threaded ring
- further accessories available on request

ISO 7388-2 | Form JD

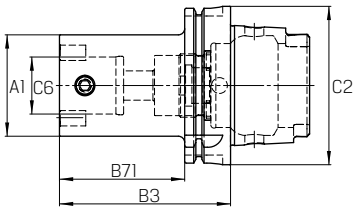




N° article	239012 BT shape JD	C2	C6	A1 mm	B3 mm	B71 mm
3050	○	BT30	ST5	50	38	16
4010	○	BT40	ST1	20	42	15
4020	○	BT40	ST2	25	42	15
4030	○	BT40	ST3	32	44	17
4040	○	BT40	ST4	39	48	21
4050	○	BT40	ST5	50	55	28
4061	○	BT40	ST6+	64	46	19
5010	○	BT50	ST1	20	63	25
5020	○	BT50	ST2	25	63	25
5030	○	BT50	ST3	32	65	27
5040	○	BT50	ST4	39	69	31
5050	○	BT50	ST5	50	72	34
5061	○	BT50	ST6+	64	72	34
5071	○	BT50	ST7+	90	86	48

Design:
- ST+/HST including thread ring, but without traction bolt
- further accessories available on request

ISO 12164-1 | Form A



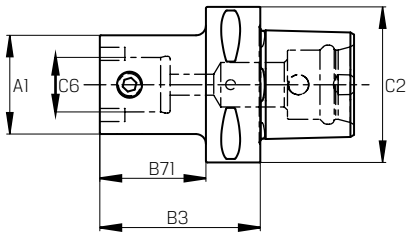


N° article	239014 HST shape A	C2	C6	A1 mm	B3 mm	B71 mm
6310	○	HST-A63	ST1	20	42	16
6320	○	HST-A63	ST2	25	42	16
6330	○	HST-A63	ST3	32	44	18
6340	○	HST-A63	ST4	39	48	22
6350	○	HST-A63	ST5	50	59	33
6360	●	HST-A63	ST6	64	70	44
6361	○	HST-A63	ST6+	64	100	74
1010	○	HST-A100	ST1	20	55	26
1020	○	HST-A100	ST2	25	55	26
1030	○	HST-A100	ST3	32	57	28
1040	○	HST-A100	ST4	39	61	32
1050	○	HST-A100	ST5	50	72	43
1060	○	HST-A100	ST6	64	78	49
1061	○	HST-A100	ST6+	64	108	79
1071	○	HST-A100	ST7+	90	127	98

Spindle tool

Design:
- ST+ extension without traction bolt and threaded ring
- further accessories available on request

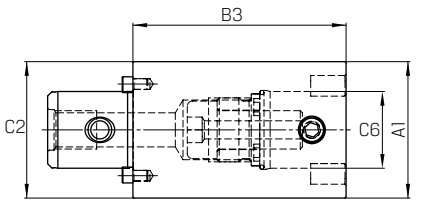
ISO 26623-1





N° article	239016 PSC	C2	C6	A1 mm	B3 mm	B71 mm
6310	○	PSC63	ST1	20	65	43
6320	○	PSC63	ST2	25	65	43
6330	○	PSC63	ST3	32	65	43
6340	○	PSC63	ST4	39	58	36
6350	○	PSC63	ST5	50	48	26
6360	○	PSC63	ST6	64	59	37
6361	○	PSC63	ST6+	64	94	72

Design:
- ST+ extension without traction bolt and threaded ring
- further accessories available on request



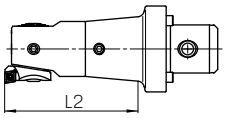


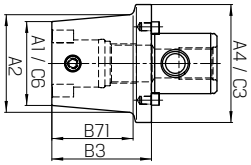
N° article	239018 Extensions	C2	C6	A1 mm	B3 mm
0001	○	ST1	ST1	20	20
0003	○	ST1	ST1	20	30
0005	○	ST2	ST2	25	30
0007	○	ST2	ST2	25	45
0009	○	ST3	ST3	32	30
0011	○	ST3	ST3	32	45
0013	○	ST4	ST4	39	40
0015	○	ST4	ST4	39	60
0017	○	ST5	ST5	50	60
0019	○	ST5	ST4	50	90
0021	○	ST6+	ST6	64	60
0023	○	ST6+	ST6+	64	100
0025	○	ST7+	ST7+	90	100
0027	○	ST7+	ST7+	90	160

Spindle tool

Design:
- length L2 is the maximum penetration depth with twin cutter or fine boring head
- ST+ reduction without traction bolt and threaded ring
- further accessories available on request

N° article	239019 Reduction	C2	C6	A1 mm	A2 mm	A4 mm	B3 mm	B71 mm	L_2 mm
0001	○	ST2	ST1	20	23	25	36	25	60.5
0003	○	ST3	ST1	20	23	32	40,5	28	63.5
0005	○	ST3	ST2	25	29	32	34,5	20	60.0
0007	○	ST4	ST1	20	23	39	57,5	42	77.5
0009	○	ST4	ST2	25	29	39	51,5	37	77.0
0011	○	ST4	ST3	32	38	39	47	35	82.0
0013	○	ST5	ST1	20	23	50	57,5	38,5	74.0
0015	○	ST5	ST2	25	29	50	51,5	33,5	73.5
0017	○	ST5	ST3	32	38	50	47	30,5	77.5
0019	○	ST5	ST4	39	48	50	40	25,5	82.5
0021	○	ST6+	ST1	20	23	64	66,5	45,5	81.0
0023	○	ST6+	ST1	20	23	64	101,5	80,5	116.0
0024	○	ST6+	ST1	20	23	64	119,5	100,5	136.0
0025	○	ST6+	ST2	25	29	64	60,5	40,5	80.5
0027	○	ST6+	ST2	25	29	64	95,5	75,5	115.5
0028	○	ST6+	ST2	25	29	64	135	115	155.0
0029	○	ST6+	ST3	32	38	64	56	37,5	84.5
0031	○	ST6+	ST3	32	38	64	91	72	119.0
0032	○	ST6+	ST3	32	38	64	158	139	186.0
0033	○	ST6+	ST4	39	48	64	49	32	89.0
0035	○	ST6+	ST4	39	48	64	84	66,5	123.5
0036	○	ST6+	ST4	39	48	64	129	111,5	168.5
0037	○	ST6+	ST5	50	60	64	39	24	104.0
0039	○	ST6+	ST5	50	60	64	74	58,5	138.5
0041	○	ST7+	ST6+	64	75	90	76	60	160.0

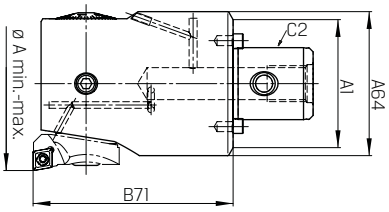




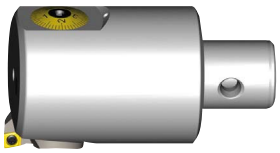


Design:
- diameter adjustment with very slight backlash
- feed accuracy of 0.01 mm resp. over vernier 0.002 mm in diameter
- with internal cooling
- further accessories available on request
- **please order insert holder separately**

Note:
Fitting insert holders under 239023 0001-0023.

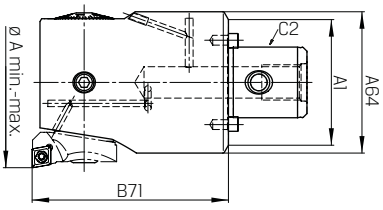


N° article	239022 Fine boring head analogue	C2	A1 mm	A64 mm	B71 mm	min./max. ∅ A mm
0010	○	ST1	20	20	35,5	23.9/37.1
0020	○	ST2	25	25	40	30.9/47.1
0030	○	ST3	32	32	47	39.9/59.1
0040	○	ST4	39	42	57	50.9/81.1
0050	○	ST5	50	55	80	66.9/105.1
0061	○	ST6+	64	72	100	86.9/134.1
0071	○	ST7+	90	94	130	115.9/171.1

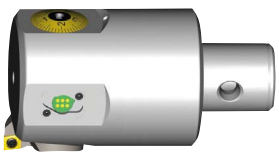


Design:
- setting accuracy 0.001 mm in diameter
- direct path measuring system, no backlash
- no battery and evaluation electronics built into the tool
- very easy operation
- usable digital and analogue
- with internal cooling

Note:
Display unit must be ordered separately, see page 23/356 under 239100



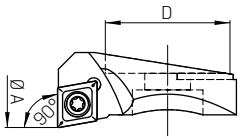
N° article	239122 Fine boring head digital	C2	A1 mm	A64 mm	B71 mm	min./max. ∅ A mm
0010	○	ST1	20	20	35,5	23.9/37.1
0020	○	ST2	25	25	40	30.9/47.1
0030	○	ST3	32	32	47	39.9/59.1
0040	○	ST4	39	42	57	50.9/81.1
0050	○	ST5	50	55	80	66.9/105.1
0061	○	ST6+	64	72	100	86.9/134.1
0071	○	ST7+	90	94	130	115.9/171.1

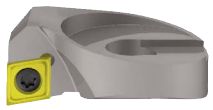


Spindle tool

Design:
- for fine boring heads from 239022 0010-0071

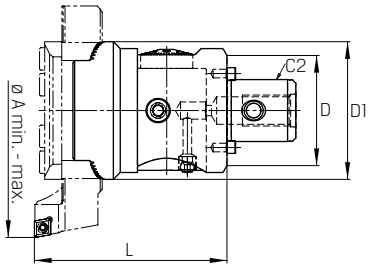
N° article	239023 Indexable insert holder 90°	239024 Indexable insert holder 95°	D mm	min./max. Ø A mm	Indexable insert
0001	○	○	11	23.9/31.1	CC...0602...
0003	○	–	11	29.9/37.1	CC...0602...
0005	○	○	13	30.9/40.1	CC...0602...
0007	○	–	13	37.9/47.1	CC...0602...
0009	○	○	17	39.9/51.1	CC...0602...
0011	○	–	17	47.9/59.1	CC...0602...
0013	○	○	22	50.9/67.1	CC...0602...
0015	○	–	22	64.9/81.1	CC...0602...
0017	○	–	30	66.9/87.1	CC...0602...
0019	○	○	30	66.9/87.1	CC...09T3...
0021	○	–	30	84.9/105.1	CC...0602...
0023	○	–	30	84.9/105.1	CC...09T3...
0025	○	–	30	153.9/191.1	CC...09T3...





Design:
- diameter adjustment with very slight backlash
- feed accuracy 0.01 mm in diameter
- with internal cooling
- further accessories available on request
- please order insert holder separately

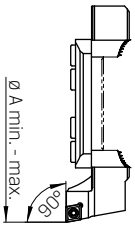
Note:
Fitting insert holders under 239026 0027-0033.





N° article	239025 Fine boring head ∅ 86-402 analogue	C2	D_i mm	L mm	D mm	min./max. Ø A mm
0001	○	ST6+	80	112	64	86 / 402

Design:
- for fine boring head from 239025 0001
- further accessories available on request

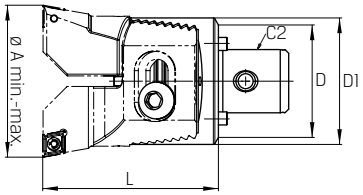




N° article	239026 Insert holder incl. clamp plate and support block	min./max. Ø A mm	Indexable insert
0027	○	86/138	CC...09T3...
0028	○	86/138	CC...1204...
0029	○	136/220	CC...09T3...
0030	○	136/220	CC...1204...
0031	○	188/302	CC...09T3...
0033	○	242/402	CC...09T3...

Design:
- with internal cooling
- please order insert holder separately
- further accessories available on request

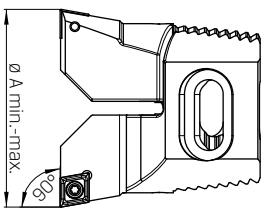
Note:
Fitting insert holders under 239029, 239030 or 239031!





N° article	239028 Twin cutter head	C2	D_i mm	L mm	D mm	min./max. Ø A mm
0010	○	ST1	20	35.5	20	23.5/30.5
0020	○	ST2	25	40.0	25	29.5/40.1
0030	○	ST3	32	47.0	32	39.5/50.5
0040	○	ST4	42	57.0	39	49.5/66.5
0050	○	ST5	55	80.0	50	65.5/87.5
0061	○	ST6+	72	100.0	64	86.5/115.5
0071	○	ST7+	94	130.0	90	114.5/153.0

Design:
- for twin cutter head 239028
- supplied in pairs
- with the synchronous spindle both insert holders can be simultaneously adjusted symmetrically (only 239031)
- further accessories available on request



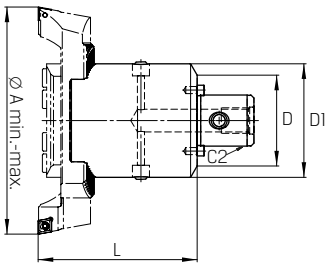


N° article	239029 Indexable insert holder 90°	239030 Indexable insert holder 70°	239031 Insert holder, Synchro, 90°	min./max. Ø A mm	Indexable insert
0001	○	○	○	23.5/30.5	CC...0602...
0003	○	○	○	29.5/40.1	CC...0602...
0005	○	○	○	39.5/50.5	CC...09T3...
0007	○	○	○	49.5/66.5	CC...09T3...
0009	○	○	○	65.5/87.5	CC...1204...
0011	○	○	–	65.5/87.5	CN...1204...
0013	○	○	○	86.5/115.5	CC...1204...
0015	○	○	–	86.5/115.5	CN...1606...
0017	○	–	○	114.5/153.0	CC...1204...
0019	○	○	–	114.5/153.0	CN...1606...

Spindle tool

Design:
- with internal cooling
- please order insert holder separately

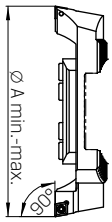
Note:
Fitting insert holders under 1239033

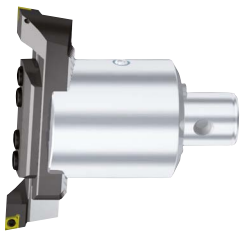




N° article	239032 Twin cutter head	C2	D_1 mm	L mm	D mm	min./max. Ø A mm
0001	○	ST6+	80	112	64	86/402

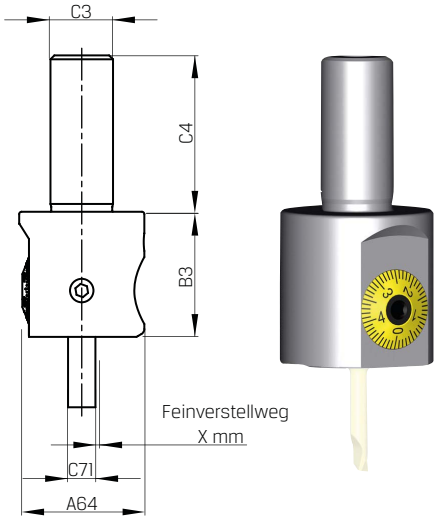
Design:
- for twin cutter head 239032





N° article	239033 Holder for indexable inserts, pair incl. pressure pad	min./max. Ø A mm	Indexable insert
0027	○	86/138	CC...09T3...
0028	○	86/138	CC...1204...
0029	○	136/220	CC...09T3...
0030	○	136/220	CC...1204...
0031	○	188/302	CC...09T3...
0033	○	242/402	CC...09T3...

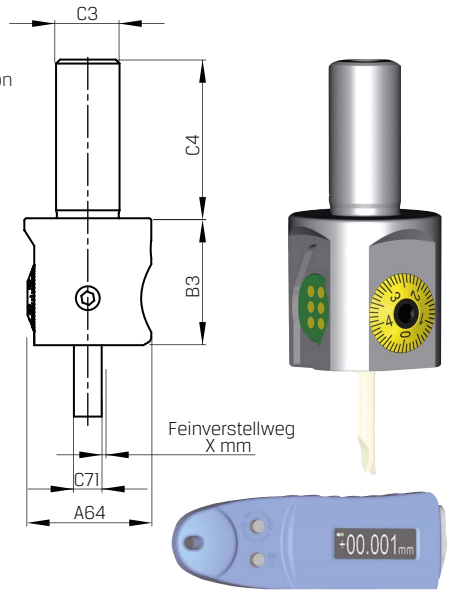
Design:
- diameter adjustment with very slight backlash
- feed accuracy of 0.002 mm resp. over vernier 0.002 mm in diameter
- with internal cooling



N° article	239034 Micro boring head Ø 0.3-19.1 analogue	C3 mm	L mm	A64 mm	B3 mm	C4 mm	C71 mm	X mm
0001	○	10	25	25	25	25	4	1.5
0003	○	16	32	32	32	40	7	2.5

Design:
- setting accuracy 0.001 mm in diameter
- direct path measuring system, no backlash
- no battery and evaluation electronics built into the tool
- very easy operation
- usable digital and analogue

Note:
Display unit must be ordered separately, see page 23/356 under 239100

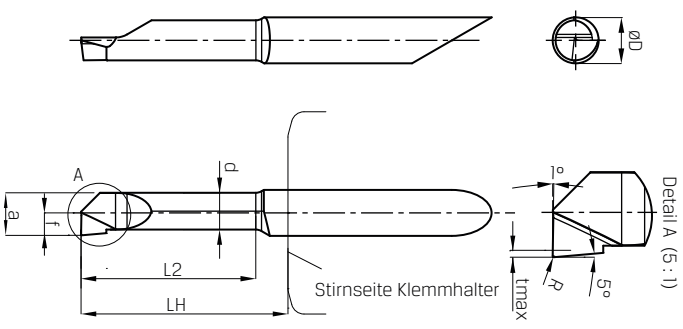


N° article	239134 Micro boring head Ø 0.3-19.1 digital	C3 mm	L mm	A64 mm	B3 mm	C4 mm	C71 mm	X mm
0001	○	10	25	25	25	25	4	1.5
0003	○	16	32	32	32	40	7	2.5

Accessories for spindle tools

Note:
- cutting values (Start) f 0.02 mm/rev.

N° article	239047 Cutting insert for micro boring head	min. Ø d mm	max. Ø d mm	D mm	L_2 mm	R	a mm	d mm	f mm	LH mm	T max. mm
0001	○	0.3	0.7	4	1.2	–	0.25	0.15	0.15	11	0,03
0004	○	0.6	1.1	4	2.5	–	0.55	0.46	0.3	11	0,05
0007	○	1.0	2.3	4	4.0	0.05	0.95	0.65	0.5	11	0,1
0010	○	2.2	3.3	4	6.0	0.05	2	1.55	1.1	11	0,2
0013	○	3.2	4.3	4	10.2	0.05	3	2.55	1.6	11	0,2
0016	○	3.9	(7.1)	4	15.2	0.05	3.7	3.45	1.95	16	0,3
0019	○	5.2	6.3	7	20.3	0.05	5	4.25	2.6	21	0,5
0022	○	6.2	7.3	7	20.3	0.05	6	5.25	3.1	21	0,5
0025	○	6.9	(12.1)	7	25.4	0.2	6.7	6.25	3.45	26	0,5

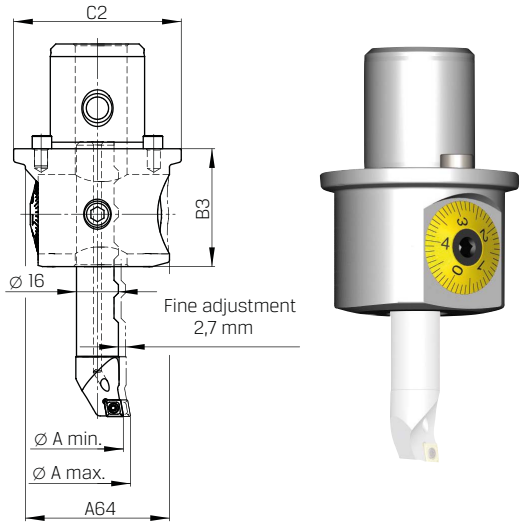


Spindle tool

swiss BORE

Design:
- for boring bars with shank diameter 16 mm
- diameter adjustment with very slight backlash
- feed accuracy of 0.01 mm resp. over vernier 0.002 mm in diameter
- with internal cooling
- boring bars go through head
- please order boring bars separately
- further accessories available on request

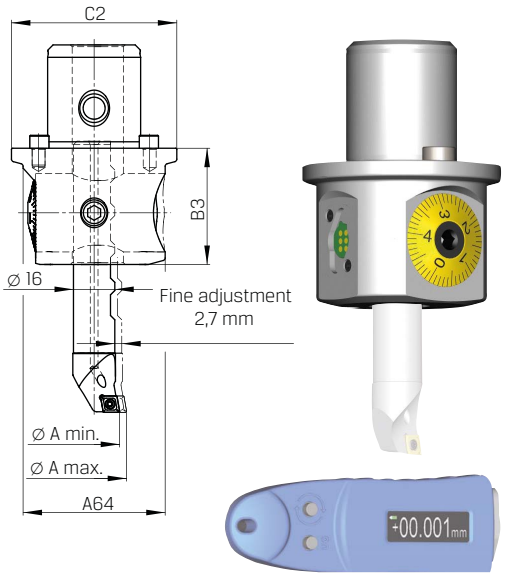
Note:
Fitting boring bars see under 239045 or 239049



N° article	239035 analogue	C2	A64 mm	B3 mm	min./max. ∅ A mm
0001	○	ST5	55	45	3/88.1
0002	○	ST6	55	45	3/88.1
0004	○	ST-40	55	90	3/88.1
0006	○	BT40	55	90	3/88.1
0008	○	HST-A63	55	95	3/88.1

Design:
- for boring bars with shank diameter 16 mm
- setting accuracy 0.001 mm in diameter
- direct path measuring system, no backlash
- no battery and evaluation electronics built into the tool
- very easy operation
- usable digital and analogue
- with internal cooling
- boring bars go through head

Note:
Display unit must be ordered separately, see page 23/356 under 239100



N° article	239135 digital	C2	A64 mm	B3 mm	min./max. ∅ A mm
0001	○	ST5	55	45	3/88.1
0002	○	ST6	55	45	3/88.1

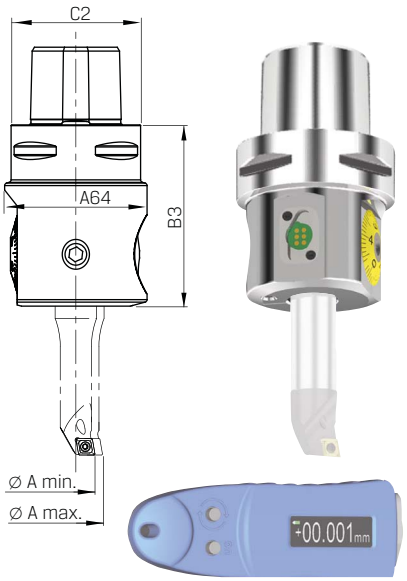
Spindle tool

swiss PSC

Design:
- for boring bars with shank diameter 16 mm
- setting accuracy 0.001 mm in diameter
- direct path measuring system without reversal backlash
- no battery and evaluation electronics built into the tool
- very easy operation
- usable digital and analogue
- with internal cooling

ISO 26623-1

Note:
Display unit must be ordered separately, see page 23/356 under 239100



N° article	239136 digital	C2	A64 mm	B3 mm	min./max. ∅ A mm
0001	○	PSC40	55	65	9.75/88.1
0003	○	PSC50	55	70	9.75/88.1
0005	○	PSC63	55	90	9.75/88.1

Design:
- setting accuracy 0.001 mm in diameter
- direct path measuring system without reversal backlash
- no battery and evaluation electronics built into the tool
- very easy operation
- usable digital and analogue
- with internal cooling

ISO 26623-1

Note:
Insert holders must be ordered separately; see under 239023 and 239024 Display unit must be ordered separately, see page 23/356 under 239100

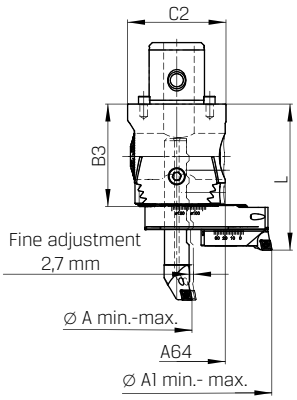


N° article	239137 digital	C2	L mm	A64 mm	min./max. ∅ A mm
0001	○	PSC32	80	20	23.9/31.1
0003	○	PSC32	90	25	30.9/40.1
0005	○	PSC40	90	32	39.9/51.1
0007	○	PSC50	90	42	50.9/67.1
0009	○	PSC50	100	55	65.9/87.1
0011	○	PSC63	120	72	86.9/116.1
0013	○	PSC63	150	94	114.9/153.1

Spindle tool

Design:
- for boring bars with shank diameter 16 mm
- diameter adjustment with very slight backlash
- feed accuracy of 0.01 mm resp. over vernier 0.002 mm in diameter
- with internal cooling
- boring bars go through head
- further accessories available on request
- please order boring tools, fine boring bridges and insert holders separately

Note:
Fitting fine boring bridges / boring bars see under 239039 to 239041 or 239045 and 239049!

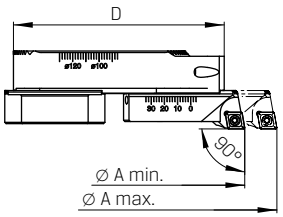


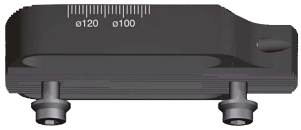


N° article	239038 Multi Head analogue	C2	L mm	A64 mm	B3 mm	B71 mm	min./max. Ø A mm
0002	○	ST6	95	63	67	–	3/88.1
0004	○	ST-40	125	63	96	72	3/88.1
0006	○	BT40	120	63	91	81	3/88.1
0008	○	HST-A63	120	63	91	81	3/88.1

Accessories for spindle tools

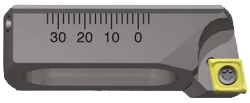
Design:
- aluminium bridge and insert holder with internal cooling
- counterweight for high speeds
- further accessories available on request





N° article	239039 Aluminium bridge for Multi Head	min./max. Ø A mm	D mm
0001	○	86/164	80
0003	○	162/320	158

N° article	239040 Insert holder for Multi Head	min./max. Ø A mm	Indexable insert
0001	○	29.75/48.1	CC...0602...
0003	○	47.75/320.0	CC...0602...
0004	○	47.75/320.0	CC...09T3...

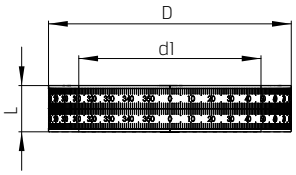


N° article	239041 Counterweight for Multi Head
0001	○



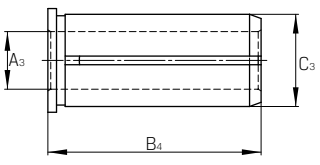
Accessories for spindle tools

Design:
- for balancing adjustable tools
- suited for boring heads from 239035 and 239036
- further accessories available on request





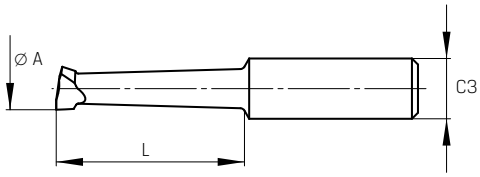
N° article	239042 Universal balancing rings	d_1 mm	L mm	D mm
0001	○	50	16	70
0002	○	55	16	75
0003	○	63	16	84
0004	○	64	16	84





N° article	239043 Reducing sleeves	B4 mm	C3 mm	A3 mm
0004	○	37	16	4
0005	○	37	16	5
0006	○	37	16	6
0008	○	37	16	8
0009	○	37	16	9
0010	○	37	16	10
0011	○	37	16	11
0012	○	37	16	12
0013	○	37	16	13
0014	○	37	16	14

Design:
- carbide grade K10 for cast, aluminium etc.
- carbide grade P20 for steel, chrome nickel steel etc.

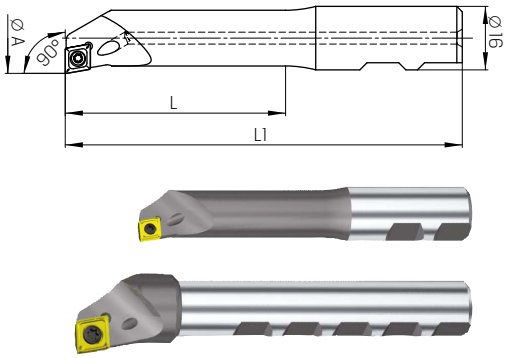




N° article	239044 Boring tool with carbide cutting edge, Ø 3.0 - 19.0	C3 mm	min./max. Ø A mm	L mm	Carbide quality
0001	○	10	3/8	20	K10
0003	○	10	3/8	20	P20
0005	○	10	4/9	23	K10
0007	○	10	4/9	23	P20
0009	○	10	5/10	25	K10
0011	○	10	5/10	25	P20
0013	○	10	6/11	28	K10
0015	○	10	6/11	28	P20
0017	○	10	7/12	31	K10
0019	○	10	7/12	31	P20
0021	○	10	9/14	34	K10
0023	○	10	9/14	34	P20
0025	○	10	10/15	37	K10
0027	○	10	10/15	37	P20
0030	○	10	12/17	40	K10
0033	○	10	12/17	40	P20
0035	○	10	14/19	43	K10
0037	○	10	14/19	43	P20

Accessories for spindle tools

Design:
- with internal cooling
- further accessories available on request

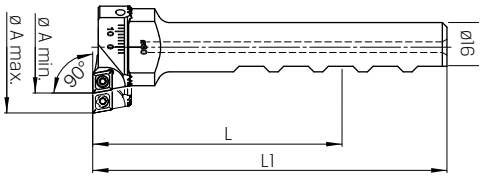


N° article	239045 Boring tool for indexable inserts	min./max. Ø A mm	L mm	Indexable insert	L_1 mm
0001	○	9.75/15.1	30	CC...0602...	75
0003	○	11.75/17.1	37	CC...0602...	80
0005	○	13.75/19.1	43	CC...0602...	85
0007	○	14.75/20.1	51	CC...0602...	90
0009	○	15.75/21.1	57	CC...0602...	95
0011	○	17.75/23.1	67	CC...0602...	100
0013	○	19.75/25.1	72	CC...0602...	105
0014	○	19.75/25.1	72	CC...09T3...	105
0016	○	21.75/27.1	77	CC...09T3...	110
0017	○	24.75/30.1	82	CC...0602...	115
0018	○	24.75/30.1	82	CC...09T3...	115
0020	○	27.75/33.1	82	CC...09T3...	115
0021	○	29.75/35.1	82	CC...0602...	115
0024	○	31.75/37.1	82	CC...09T3...	115
0025	○	34.75/40.1	82	CC...0602...	115
0026	○	34.75/40.1	82	CC...09T3...	115

Design:
- very good damping properties
- length L indicates the maximum boring depth
- further accessories available on request

Delivery:
Without indexable insert holder

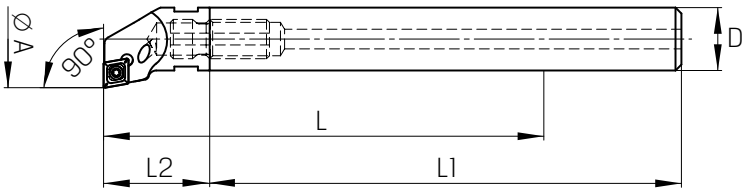
Note:
Fitting indexable insert holder see 239040





N° article	239046 Shank for internal cooling	min./max. Ø A mm	L mm	L_1 mm
0002	○	29.75/48.1	85	115
0004	○	47.75/88.1	85	115

Design:
- for executing long bores
- very good damping properties due to carbide shank
- with internal cooling
- further accessories available on request



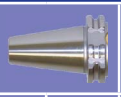
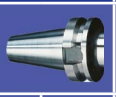


N° article	239049 Carbide boring tools	min./max. Ø A mm	Indexable insert	L max. mm	D mm	L_2 mm
0001	○	8.75/14.1	CC...0602...	56	8	18
0003	○	9.75/15.1	CC...0602...	63	9	18
0005	○	10.75/16.1	CC...0602...	70	10	23
0007	○	11.75/17.1	CC...0602...	77	11	23
0009	○	12.75/18.1	CC...0602...	84	12	23
0011	○	13.75/19.1	CC...0602...	91	13	23
0013	○	14.75/20.1	CC...0602...	98	14	23
0015	○	15.75/21.1	CC...0602...	98	14	23
0017	○	16.75/22.1	CC...0602...	112	16	27
0019	○	17.75/23.1	CC...0602...	112	16	27
0021	○	19.75/25.1	CC...0602...	112	16	27
0023	○	21.75/27.1	CC...0602...	112	16	27
0025	○	24.75/30.1	CC...0602...	112	16	27
0027	○	27.75/33.1	CC...0602...	112	16	27
0029	○	31.75/37.1	CC...0602...	112	16	27
0031	○	34.75/40.1	CC...0602...	112	16	27

N° article	239050 Carbide shank	Thread	D mm	L_1 mm
0001	○	M5	8	91
0003	○	M5	9	98
0005	○	M6	10	105
0007	○	M6	11	112
0009	○	M6	12	119
0011	○	M6	13	126
0013	○	M6	14	133
0015	○	M10	16	147

Overview Steep Taper Tools

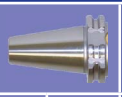
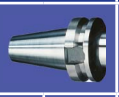
Product line 24

Item	Steep taper adapters									Hollow shank taper mount						
	DIN 2080 			ISO 7388-1 			ISO 7388-2 			ISO 12164-1 						
	ST 30	SK 40	SK 50	ST 30	SK 40	SK 50	BT 30	BT 40	BT 50	HST-A 25	HST-A 32	HST-A 40	HST-A 50	HST-A 63	HST-A 80	HST-A 100
	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page
Weldon chucks	–	24/372	24/372	–	24/374	24/374	24/397	24/397	24/397	–	24/412	24/412	24/412	24/412	24/412	24/412
Whistle-Notch chucks	–	–	–	–	24/376	24/376	–	–	–	–	–	–	–	24/413	–	24/413
Indexable insert drill chucks	–	–	–	–	24/376	24/376	–	–	–	–	–	–	–	24/413	–	24/413
Combi shell arbors	–	24/372	24/372	–	24/376	24/376	24/399	24/399	24/399	–	–	24/413	24/413	24/413	–	24/413
Shell arbors	–	–	–	–	–	–	24/399	–	–	–	–	24/414	24/414	24/414	–	24/414
Collet chuck DMC	–	–	–	–	24/378	–	–	–	–	–	–	–	–	24/416	–	–
Collet chuck ER Mini	–	–	–	–	24/378	–	–	–	–	–	–	–	–	24/416	–	24/416
Collet chuck ER	–	24/372	24/372	–	24/379	24/379	24/400	24/400	24/400	–	24/415	24/415	24/415	24/415	24/415	24/415
Collet chucks ER Power	–	–	–	–	24/380	24/380	24/401	24/401	24/401	–	24/417	24/417	24/417	24/417	–	24/417
Collet chuck Centro|P	–	–	–	–	24/382	24/382	–	–	–	–	24/417	24/417	–	24/417	–	24/417
High-precision chucks	–	–	–	–	24/383	24/383	–	24/402	24/402	–	–	–	–	24/419	–	24/419
Intermediate sleeve MT with tang	–	24/372	24/372	–	24/384	24/384	–	24/403	24/403	–	–	–	–	24/420	–	24/420
Intermediate sleeve MT with LT	–	–	–	–	24/384	24/384	–	–	–	–	–	–	–	24/420	–	24/420
Intermediate sleeve ST	–		–	–	24/384	24/384	–	–	–	–	–	–	–	–	–	–
Short drill chuck Micro	–	–	–	24/385	–	–	24/403	–	–	–	24/420	24/420	24/420	–	–	–

Item	Hollow shank taper mount				Polygonal shank taper adapters				Shank adapters	
	ISO 12164-1 				ISO 26623-1 				DIN 1835 	DIN 228 B 
	HST-E 25	HST-E 32	HST-E 40	HST-E 50	PSC 40	PSC 50	PSC 63	PSC 80		
	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page
Weldon chuck	–	–	–	–	–	–	24/437	–	–	–
Whistle-Notch chuck	–	–	–	–	–	–	–	–	–	–
Indexable insert drill chuck	–	–	–	–	–	–	–	–	–	–
Combi shell arbor	–	–	–	–	–	–	–	–	–	–
Shell arbor	–	–	–	–	–	–	24/437	–	–	–
Collet chuck DMC	–	–	–	–	–	–	–	–	–	–
Collet chuck ER Mini	–	–	–	–	–	–	–	–	–	–
Collet chuck ER	–	–	–	–	–	–	24/438	–	24/441	–
Collet chucks ER Power	–	–	–	–	–	–	–	–	–	–
Collet chuck CENTRO|P	–	–	–	–	–	–	–	–	24/441	–
High-precision chuck	–	–	–	–	–	–	–	–	–	–
Intermediate sleeve MT with tang	–	–	–	–	–	–	–	–	–	–
Intermediate sleeves MT with LT	–	–	–	–	–	–	–	–	–	–
Intermediate sleeves ST	–	–	–	–	–	–	–	–	–	–
Short drill chucks Micro	24/409	24/409	24/409	–	–	–	–	–	24/441	–

Overview Steep Taper Tools

Product line 24

Item	Steep taper adapters									Hollow shank taper mount						
	DIN 2080 			ISO 7388-1 			ISO 7388-2 			ISO 12164-1 						
	ST 30	SK 40	SK 50	ST 30	SK 40	SK 50	BT 30	BT 40	BT 50	HST-A 25	HST-A 32	HST-A 40	HST-A 50	HST-A 63	HST-A 80	HST-A 100
	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page
Short drill chucks	–	24/373	–	24/385	24/385	24/385	24/404	24/404	24/404	–	24/420	24/420	24/420	24/420	24/420	24/420
Quick-change tapping chucks	–	24/373	24/373	–	24/386	24/386	–	24/405	24/405	–	–	–	–	24/421	–	24/421
Synchro Tapping chucks	–	–	–	–	24/386	–	–	24/405	–	–	–	–	–	24/421	–	24/421
Tapping heads	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Shrink-fit chucks Mini	–	–	–	–	–	–	–	–	–	–	–	–	–	24/423	–	–
Shrink-fit chuck	–	–	–	24/389	24/389	24/389	24/405	24/406	24/406	–	24/422	24/422	24/422	24/422	24/422	24/422
Shrink-fit chucks Power Mini	–	–	–	–	24/390	24/390	–	–	–	–	–	–	–	24/425	–	–
Shrink-fit chucks Power	–	–	–	–	24/390	24/390	–	24/407	24/407	–	–	–	–	24/425	–	24/425
Shrink-fit chuck Heavy Duty	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hydraulic expansion chuck	–	–	–	24/391	24/391	24/391	–	24/408	24/408	–	24/428	24/428	24/428	24/428	–	24/428
Chuck APC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Power chuck CTS-SA	–	–	–	–	24/395	24/395	–	–	–	–	–	–	–	24/431	–	24/431
Screw-in chuck	–	–	–	–	24/396	24/396	–	–	–	–	–	–	–	24/431	–	24/431
Test mandrel	–	–	–	–	24/396	24/396	–	–	–	–	–	–	–	24/431	–	24/431
Saw blade holders	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Item	Hollow shank taper mount				Polygonal shank taper adapters				Shank adapters	
	ISO 12164-1 				ISO 26623-1 				DIN 1835 	DIN 228 B 
	HST-E 25	HST-E 32	HST-E 40	HST-E 50	PSC 40	PSC 50	PSC 63	PSC 80		
	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page
Short drill chuck	–	–	–	–	–	–	–	–	–	–
Quick-change tapping chuck	–	–	–	–	–	–	–	–	24/441	24/442
Synchro tapping chuck	–	–	–	–	–	–	–	–	24/442	–
Tapping head	–	–	–	–	–	–	–	–	–	24/443
Shrink-fit chuck Mini	24/433	–	24/433	24/433			–	–	–	–
Shrink-fit chuck	–	24/435	24/435	24/435	–	–	24/439	–	–	–
Shrink-fit chucks Power Mini	–	–	–	–	–	–	–	–	–	–
Shrink-fit chuck Power	–	–	–	–	–	–	–	–	–	–
Shrink-fit chuck Heavy Duty	–	–	–	–	–	–	–	–	–	–
Hydraulic expansion chuck	–	–	24/435	24/435	24/440	24/440	24/440	–	–	–
Chuck APC	–	–	–	–	–	–	–	–	–	–
Power chuck CTS-SA	–	–	–	–	–	–	–	–	–	–
Screw-in chuck	–	–	–	–	–	–	–	–	–	–
Test mandrel	–	–	–	–	–	–	–	–	–	–
Saw blade holders	–	–	–	–	–	–	–	–	24/442	–

Selection criteria for the right tool clamping technology

	NC drill chucks	Collet chucks	Weldon chucks	Shrink chucks	Hydraulic chucks	Cold shrinking
Concentricity	■	■■	■	■■■	■■■	■■■
Torque transmission						
Small diameters	■■■	■■	■■■	■■■	■	■
Large diameters	■	■■	■■■	■■■	■	■
Interfering contour	■	■■	■■	■■■	■■	■■■
Imbalance	■	■■	■	■■■	■■	■■
Process reliability	■	■■	■■	■■■	■	■■
Prices tool clamping	■■■	■■■	■■■	■■	■	■■
Prices for add. clamping devices	■■■	■■■	■■■	■	■■■	■
Handling	■■■	■■	■■■	■	■■	■■■
Length adjustment	■	■	■	■	■■■	■■■
Tool change time	■■■	■■■	■■■	■	■■■	■■
Tool damping	■■	■■	■	■■	■■■	■
Service life	■■	■■	■■■	■■■	■■	■
Work safety	■■	■■	■■■	■■■	■■	■
Tool life	■	■■	■	■■	■■■	■■
Clamping range	■■■	■■	■	■	■■	■
Use:	Drilling Reaming Countersinking	Drilling Reaming Countersinking Milling	Drilling Reaming Countersinking Milling Heavy machining	Drilling Reaming Countersinking Milling Heavy machining	Drilling Reaming Countersinking Finish milling Internal grinding	Drilling Reaming Countersinking Finish milling
Workpiece requirements						
Accuracy	■	■■	■	■■■	■■■	■■■
Surface quality	■	■■	■	■■■	■■■	■■
Roughing	■■	■	■■■	■■■	■	■
Production requirements						
Heavy machining	■	■■	■■■	■■■	■	■
HSC suitability	■	■■	■	■■■	■■■	■■■
Evaluation of the clamping systems from the user's perspective						
good	■■■					
medium	■■					
poor	■					

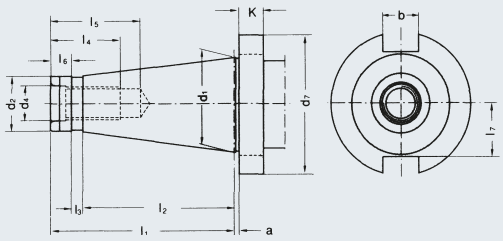
The user is obligated to observe:
The highest accuracy and balance quality results in:
- increased tool life,
- greatest possible processing accuracy
- reduction of rejects
- less dynamic stress
- reduction of tool breakages
- better surface quality
- longer life of the spindle bearing

Large torque transmission:
- prevents slipping through of the tool
- reduces tool breakage
- reduces rejects

Sources:
- current catalogues
- internet metalworking info
- WTE manufacturing
- WTE customer service
- Technical literature research

Technical data for common shaft designs of milling machines and processing centres

Tool shanks DIN 2080

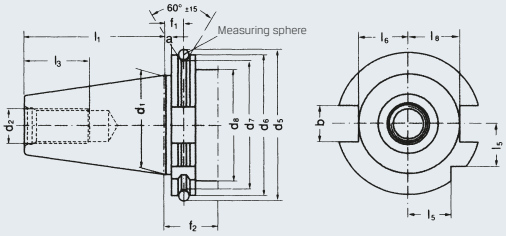


SK sz.	30	40*)	50	SK sz.	30	40*)	50
$a^{\pm 0.2}$	1.6	1.6	3.20	l_1	68.4	93.4	126.8
b^{H12}	16.1	16.1	25.70	l_2	48.4	65.4	101.8
d_1	31.75	44.45	69.85	l_3	3.0	5.0	8.0
d_2 Nom. dim.	17.4	25.3	39.60	l_4	24.0	32.0	47.0
d_4	M 12	M 16	M 24	$l_{5\ min.}$	33.5	42.5	61.5
$d_7{}^{0}_{-0,40}$	50	63	97.50	$l_6{}^{+0,40}_{0}$	5.5	8.2	11.5
$k_{\pm 0,15}$	8	10	12.00	l_7	16.2	22.5	35.3

*) with ring groove

NC tool shanks ISO 7388- 1

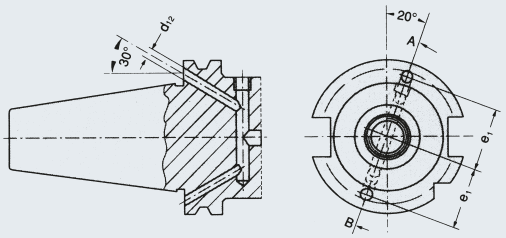
Part 1 form A



SK sz.	30	40	45	50	SK sz.	30	40	45	50
$a^{\pm 0.2}$	3.2	3.2	3.2	3.2	$f_{1\pm 0,1}$	11.1	11.1	11.1	11.10
b h 12	16.1	16.1	19.3	25.7	$f_{2\ min.}$	35.0	35.0	35.0	35.00
d_1	31.75	44.45	57.15	69.85	$l_{1-0,1}$	47.8	68.4	82.7	101.75
d_2	M 12	M 16	M 20	M 24	$l_{3\ min.}$	24.0	32.0	40.0	47.00
$d_{5\ +0,05}$	59.3	72.3	91.35	107.25	$l_{5-0,1}$	15.0	18.5	24.0	30.00
$d_{6-0,1}$	50	63.55	82.55	97.50	$l_{6-0,4}$	16.4	22.8	29.1	35.50
$d_{7-0,5}$	44.3	56.25	75.25	91.25	$l_{8-0,4}$	19.0	25.0	31.3	37.70
$d8_{max.}$	45	50	63	60					

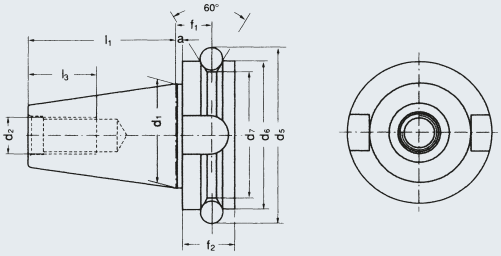
NC tool shanks ISO 7388- 1

Part 1 form AF



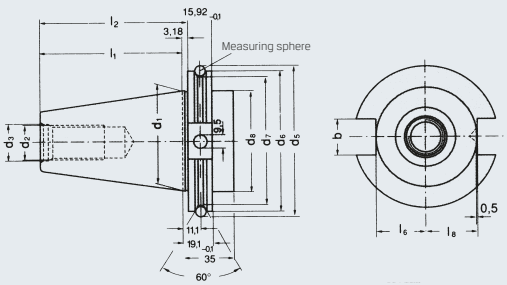
SK sz.	d_{12}	e_1 ±0,1
30	4	21
40	4	27
50	5	42

NC tool shanks ISO 7388- 2



BT sz.	40	45	50	BT sz.	40	45	50
$a^{\pm 0.4}$	2	3	3	d_1 h 12	53.0	73.0	85.0
d_1	44.45	57.15	69.85	f_1 ±0.1	16.6	21.2	21.2
d_2	M 16	M 20	M 24	f_2	25.0	30.0	35.0
d_5 h 8	75.68	100.22	119.00	l_1 ±0.1	65.4	82.8	101.8
d_6 h 8	63.00	85.00	100.00	$l_{2\ min.}$	30.0	40.0	45.0

ANSI NC tool shanks



CAT sz.	40	45	50	CAT sz.	40	45	50
$b_{+0,2}$	16.10	19.30	27.50	$d_{6\ -0,1}$	63.55	82.55	98.45
d_1	44.45	57.15	69.85	$d_{7\ -0,5}$	56.25	75.25	91.25
d_2	M 16	M 20	M 24	$d_{8\ -0,5}$	44.70	57.40	70.10
d_3 h 7	17.00	21.00	25.00	$l_{6\ -0,4}$	22.80	29.10	35.50
$d_{5\ -0,1}$	72.35	91.40	107.30	$l_{8\ -0,4}$	26.00	32.50	40.40

Weldon chucks DIN 2080

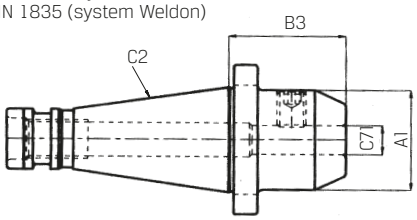
PRETEC

DIN 2080 | DIN 6359

Design:
- made of case-hardening steel, all functional surfaces groand
- tensile strength in the core of at least 800 N/mm², hardened
- Vickers hardness min. HV 6300 N/mm² (min. 56 HRC)
- taper accuracy min. AT 3
- permissible concentricity deviation for direct tool mounting 0.015 mm (measured at 3×C71), at the tool holder

Use:
For holding tools (milling cutters) with cylindrical shank and lateral clamping surface to DIN 1835 (system Weldon)

Note:
SK50 without ring groove





N° article	240010 short	C2	C71 mm	A1 mm	B3 mm
40/06	●	SK40	6	25	50
40/08	●	SK40	8	28	50
40/10	●	SK40	10	35	50
40/12	●	SK40	12	42	50
40/16	●	SK40	16	48	63
40/20	●	SK40	20	52	63
40/25	●	SK40	25	65	90
40/32	●	SK40	32	72	90
50/06	○	SK50	6	25	50
50/08	○	SK50	8	28	50
50/10	○	SK50	10	35	63
50/12	○	SK50	12	42	63
50/16	●	SK50	16	48	63
50/20	●	SK50	20	52	63
50/25	●	SK50	25	65	80
50/32	●	SK50	32	72	85

Combination face milling adapter DIN 2080

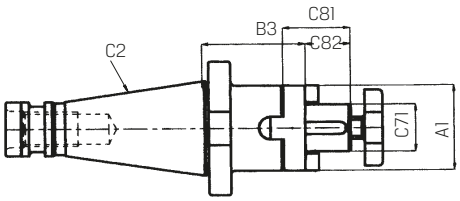
PRETEC

DIN 2080 | DIN 6358

Design:
- made of case-hardening steel, all functional surfaces groand
- tensile strength of min. 800 N/mm², hardened
- Vickers hardness min. HV 6300 N/mm² (min. HRC 56)
- taper accuracy min. AT 3
- steep taper ST 40 with ring groove

Use:
For milling cutters with longitudinal or transversal groove

Delivery:
With tightening bolt, driving ring and feather key





N° article	240050 short	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
40×16	●	SK40	16	32	52	27	17
40×22	●	SK40	22	40	52	31	19
40×27	●	SK40	27	48	52	33	21
40×32	●	SK40	32	58	52	38	24
50×16	●	SK50	16	32	55	27	17
50×22	●	SK50	22	40	55	31	19
50×27	●	SK50	27	48	55	33	21
50×32	●	SK50	32	58	55	38	24
50×40	●	SK50	40	70	55	41	27

Collet chuck ER DIN 2080

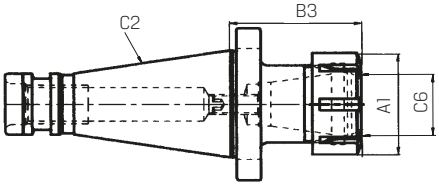
PRETEC

DIN 2080

Design:
- for collets to ISO 15488 type ER/ESX
- made of case-hardening steel, all functional surfaces groand
- tensile strength of min. 800 N/mm², hardened
- Vickers hardness min. HV 6300 N/mm² (min. HRC 56)
- permissible runout of internal and external taper 0.01mm
- taper accuracy min. AT 3
- steep taper ST 40 with ring groove

Use:
For clamping tools with cylindrical shank

Delivery:
With clamping nut, without collets and key. Other sizes on request





N° article	240030 short	C2	C6	A1 mm	B3 mm	Clamping range mm
40/16	●	SK40	ER25	42	70	1 - 16
40/20	●	SK40	ER32	50	70	2 - 20
40/26	●	SK40	ER40	63	70	3 - 30
50/20	●	SK50	ER32	50	80	2 - 20
50/26	●	SK50	ER40	63	80	3 - 30

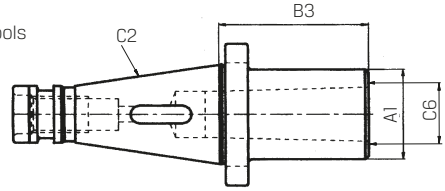
Intermediate sleeve DIN 2080

PRETEC

DIN 2080

Design:
- made of case-hardening steel, all functional surfaces groand
- tensile strength in core of min. 800 N/mm², hardened
- Vickers hardness min. HV 6,300 N/mm² (min. HRC 56)
- taper accuracy to AT 3
- steep taper ST 40 with ring groove

Use:
For holding morse taper tools with tang





N° article	240060 short	C2	C6	A1 mm	B3 mm
40×2	●	SK40	MK2	32	50
40×3	●	SK40	MK3	40	65
40×4	●	SK40	MK4	48	95
50×2	●	SK50	MK2	32	60
50×3	●	SK50	MK3	40	65
50×4	●	SK50	MK4	48	70
50×5	○	SK50	MK5	63	105

Universal chuck DIN 2080

WTE MAPAL GROUP

DIN 2080

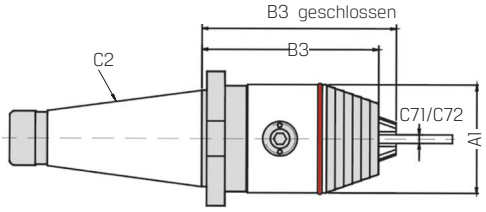
Specification:
- for right and left rotation
- compact construction, short length
- runout 0.05 mm, max. perm. speed 7,000 rpm^{-1}
- high holding torque (through bevel gears) lateral clamped with hex T-key
- holding torque at 15 Nm starting torque 30 N/m - 35 N/m
- holding torque at 20 Nm starting torque 70 N/m - 80 N/m
- tool change possible directly in the machine (with the machine spindle at standstill)
- brief clamping and changeover times

Design:
Steep taper shank similar to DIN 2080 with thread for manual clamping and ring groove for automatic clamping (e.g. Maho, Deckel, Mikron).

Use:
Only for drilling and countersinking in NC machines, slowly rotating machines and for older machinery

Delivery:
Chuck with hexagonal T-key, operating manual and test report

Balancing:
NC drill chucks 240062 cannot be balanced





N° article	240062 Standard	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
40/13	●	SK40	0,5	13	50	78	84	1,5
40/16	●	SK40	2,5	16	57	78	86	1,7

Quick-change tapping chuck DIN 2080

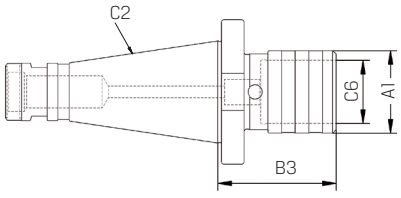
PRETEC

DIN 2080

Design:
- short version with max. length compensation and small weight
- smooth-running length compensation on pressure and tension
- to adjust the difference between machine feed and thread lead by use of a ball cage
- adjustable intensifier for initial cutting pressure
- thread depth controllable within ±0.1 mm
- balanced G6.3 at 8,000 1/min

Use:
Standard chuck to mount taps on mechanically and NC controlled lathes, drilling and milling machines and machining centres

Note:
Matching accessories see page 24/463.





N° article	240066 With length compensation	C2	C6	A1 mm	B3 mm	for taps	Length compensation compression/ traction
40/M3-12	●	SK40	GR 1	36	50	M3-M12	9/ 9
50/M3-12	○	SK50	GR 1	36	59	M3-M12	9/ 9
40/M6-20	○	SK40	GR 2	53	78	M6-M20	15/15
50/M6-20	●	SK50	GR 2	53	80	M6-M20	15/15
50/M14-33	○	SK50	GR 3	78	130	M14-M33	24/24

Weldon chucks ISO 7388-1

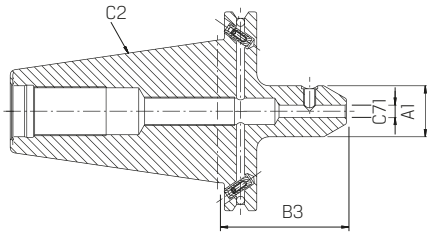
HAIMER PREMUS

ISO 7388-1 | Form AD | Form AD/AF | DIN 6359 | CAD

Use:
- for clamping of milling cutters with parallel shank and lateral drive surface to DIN 1835-B and DIN 6535-HB
- to DIN 6359 with steep taper
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

Delivery:
With clamping screw

Note:
- spare clamping screws see ander 240570 on page 24/443.
- *also suited for ANSI-CAT





N° article	240505 PREMUS Shape AD/AF, ultra short, G2.5 at 25,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
40/16	●		SK40	16	44	35
40/20	●		SK40	20	44	35
40/25	●		SK40	25	45	35
40/32	●		SK40	32	72	70
50/16	○		SK50	16	80	35
50/20	○		SK50	20	52	35
50/25	●		SK50	25	65	35
50/32	○		SK50	32	72	35

N° article	240503 HAIMER Shape AD/AF, ultra short, G2.5 at 22,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
40/16	○		SK40	16	48	35
40/20	○		SK40	20	52	40
40/25	○		SK40	25	65	60
40/32	○		SK40	32	72	70

N° article	240490 PRETEC Shape AD, short, G2.5 at 15,000 1/min	240507 PREMUS Shape AD/AF, short, G2.5 at 25,000 1/min	240494 HAIMER Shape AD, short, G2.5 at 22,000 1/min	240493 HAIMER Shape AD/AF, short, G2.5 at 22,000 1/min	*	C2	C71 mm	240490 240507 A1 mm		240494 240493 A1 mm		B3 mm
40/06	●	●	○	○	*	SK40	6	25	25	25	25	50
40/08	●	●	○	○	*	SK40	8	28	28	28	28	50
40/10	●	●	○	○	*	SK40	10	35	35	35	35	50
40/12	●	●	○	○	*	SK40	12	42	42	42	42	50
40/14	●	●	○	○	*	SK40	14	44	44	42	42	50
40/16	●	●	○	○		SK40	16	48	48	48	48	63
40/18	●	●	○	○		SK40	18	50	50	48	48	63
40/20	●	●	○	○		SK40	20	52	52	52	52	63
40/25	●	●	○	○		SK40	25	65	65	65	65	100
40/32	●	●	○	○		SK40	32	72	72	72	72	100
40/40	●	●	–	–		SK40	40	80	80	–	–	115
50/06	●	●	○	○	*	SK50	6	25	25	25	25	63
50/08	●	●	○	○	*	SK50	8	28	28	28	28	63
50/10	●	●	○	○	*	SK50	10	35	35	35	35	63
50/12	●	●	○	○	*	SK50	12	42	42	42	42	63
50/14	●	○	○	○	*	SK50	14	44	44	42	42	63
50/16	●	●	○	○	*	SK50	16	48	48	48	48	63
50/18	●	●	○	○	*	SK50	18	50	50	48	48	63
50/20	●	●	○	○	*	SK50	20	52	52	52	52	63
50/25	●	●	○	○	*	SK50	25	65	65	65	65	80
50/32	●	●	○	○		SK50	32	72	72	72	72	100
50/40	●	●	–	○		SK50	40	80	80	–	78	120

N° article	240497 HAIMER Shape AD/AF short, with Cool Jet G2.5 at 22,000 1/min	240508 PREMUS short, with coolant duct bores G2.5 at 25,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
40/06	○	●	*	SK40	6	25	50
40/08	○	●	*	SK40	8	28	50
40/10	○	●	*	SK40	10	35	50
40/12	○	●	*	SK40	12	42	50
40/14	○	●	*	SK40	14	44	50
40/16	○	●		SK40	16	48	63
40/18	–	●		SK40	18	50	63
40/20	○	●		SK40	20	52	63
40/25	○	●		SK40	25	65	100
40/32	–	●		SK40	32	72	100
40/40	–	●		SK40	40	80	115

N° article	240497 HAIMER Shape AD/AF short, with Cool Jet G2.5 at 22,000 1/min	240508 PREMUS short, with coolant duct bores G2.5 at 25,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
50/06	–	●	*	SK50	6	25	63
50/08	–	●	*	SK50	8	28	63
50/10	○	●	*	SK50	10	35	63
50/12	○	●	*	SK50	12	42	63
50/14	–	●	*	SK50	14	44	63
50/16	○	●	*	SK50	16	48	63
50/18	–	●	*	SK50	18	50	63
50/20	○	●	*	SK50	20	52	63
50/25	–	●	*	SK50	25	65	80
50/32	–	●		SK50	32	72	100
50/40	–	●		SK50	40	80	120

Weldon chucks ISO 7388-1

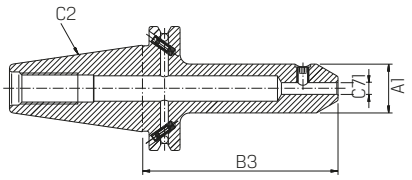
HAIMER PREMUS PRETEC

Use:
- for clamping of milling cutters with parallel shank and lateral drive surface to DIN 1835-B and DIN 6535-HB
- to DIN 6359 with steep taper
- form AD/AF means central coolant supply and resealable coolant ducts at the collar

Delivery:
With clamping screw

Note:
- spare clamping screws see ander 240570 on page 24/443
- 240491/240509, 240492/240511: C71 10 Ø conical
- *also suited for ANSI-CAT

ISO 7388-1 | Form AD | Form AD/AF | DIN 6359





N° article	240491 PRETEC Shape AD, long, G6.3 at 15,000 1/min	240509 PREMUS Shape AD/AF, long, G2.5 at 25,000 1/min	240510 HAIMER Shape AD/AF, long, G2.5 at 22,000 1/min	240514 PREMUS Shape AD/AF, long, with coolant duct exit bores, G2.5 at 25,000 1/min	*	C2	C71 mm	240491 A1 mm	240509 A1 mm	240510 A1 mm	240514 A1 mm	B3 mm
40/06	●	●	○	●	*	SK40	6	25	25	25	25	100
40/08	●	●	○	●	*	SK40	8	28	28	28	28	100
40/10	●	●	○	●	*	SK40	10	35	35	35	35	100
40/12	●	●	○	●	*	SK40	12	42	42	42	42	100
40/14	●	●	○	●	*	SK40	14	44	44	42	44	100
40/16	●	●	○	●		SK40	16	48	48	48	48	100
40/18	●	○	○	●		SK40	18	50	50	48	50	100
40/20	●	●	○	●		SK40	20	52	52	52	52	100
50/06	●	●	○	–	*	SK50	6	25	25	25	–	100
50/08	●	●	○	–	*	SK50	8	28	28	28	–	100
50/10	●	●	○	–	*	SK50	10	35	35	35	–	100
50/12	●	●	○	–	*	SK50	12	42	42	42	–	100
50/14	●	●	○	–	*	SK50	14	44	44	42	–	100
50/16	●	●	○	–	*	SK50	16	48	48	48	–	100
50/18	●	○	○	–	*	SK50	18	50	50	48	–	100
50/20	●	●	○	–	*	SK50	20	52	52	52	–	100
50/25	●	●	○	–	*	SK50	25	65	65	65	–	100

N° article	240492 PRETEC Form AD, overlong, G6.3 at 15,000 1/min	240511 PREMUS Shape AD/AF, overlong, G2.5 at 25,000 1/min	*	C2	C71 mm	240492 A1 mm	240511 A1 mm	B3 mm
40/06	●	●	*	SK40	6	25	25	160
40/08	●	●	*	SK40	8	28	28	160
40/10	●	●	*	SK40	10	35	35	160
40/12	●	●	*	SK40	12	42	42	160
40/14	○	○	*	SK40	14	42	44	160
40/16	●	●		SK40	16	48	48	160
40/18	○	○		SK40	18	48	50	160
40/20	●	○		SK40	20	52	52	160
40/25	●	○		SK40	25	65	65	160
40/32	○	○		SK40	32	72	72	160
50/06	●	●	*	SK50	6	25	25	160
50/08	●	○	*	SK50	8	28	28	160
50/10	●	●	*	SK50	10	35	35	160
50/12	●	●	*	SK50	12	42	42	160
50/14	●	○	*	SK50	14	42	44	160
50/16	●	○	*	SK50	16	48	48	160
50/18	●	○	*	SK50	18	48	50	160
50/20	●	●	*	SK50	20	52	52	160
50/25	●	○		SK50	25	65	65	160
50/32	●	○		SK50	32	72	72	160
50/40	●	○		SK50	40	78	80	160

N° article	240515 HAIMER Shape AD/AF, ZG130, G2.5 at 22,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
50/06	○	*	SK50	6	25	130
50/08	○	*	SK50	8	28	130
50/10	○	*	SK50	10	35	130
50/12	○	*	SK50	12	42	130
50/14	○	*	SK50	14	42	130
50/16	○	*	SK50	16	48	130
50/18	○	*	SK50	18	48	130
50/20	○	*	SK50	20	52	130
50/25	○	*	SK50	25	65	130
50/32	○		SK50	32	72	130
50/40	○		SK50	40	78	130

Whistle Notch chuck ISO 7388-1

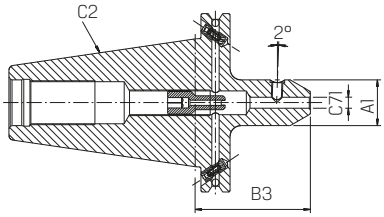
PREMUS

Use:
- for clamping of milling cutters with parallel shank and inclined clamping surface to DIN 1835-E and DIN 6535-HE
- to DIN 63559 with steep taper
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

Delivery:
With clamping screw and length setting screw

Note:
- spare clamping screws see ander 240570 on page 24/443
- *also suited for ANSI-CAT

ISO 7388-1	Form AD/AF	DIN 6359





N° article	240575 Shape AD/AF, short, G2.5 at 25,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
40/06	●	*	SK40	6	25	50
40/08	○	*	SK40	8	28	50
40/10	○	*	SK40	10	35	50
40/12	●	*	SK40	12	42	50
40/14	○	*	SK40	14	44	50
40/16	○		SK40	16	48	63
40/18	○		SK40	18	50	63
40/20	●		SK40	20	52	63
40/25	○		SK40	25	65	100
40/32	●		SK40	32	72	100
40/40	○		SK40	40	78	120

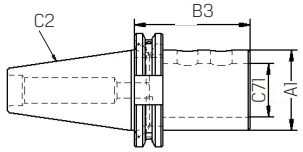
N° article	240575 Shape AD/AF, short, G2.5 at 25,000 1/min	*	C2	C71 mm	A1 mm	B3 mm
50/06	○	*	SK50	6		63
50/08	○	*	SK50	8		63
50/10	○	*	SK50	10		63
50/12	○	*	SK50	12		63
50/14	○	*	SK50	14		63
50/16	○	*	SK50	16		63
50/18	○	*	SK50	18		63
50/20	○	*	SK50	20		63
50/25	●	*	SK50	25		80
50/32	●		SK50	32		100
50/40	○		SK50	40		120

Drill holder ISO 7388-1

PREMUS

Design:
- for clamping of insert drills with parallel shank and lateral drive surface to DIN 1835-B and DIN 6535-HB
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

ISO 7388-1	Form AD/AF	G 6,3 15.000 min⁻¹





N° article	240580 E1, short Shape AD/AF	C2	C71 mm	A1 mm	B3 mm
40/20	●	SK40	20	40	65
40/25	●	SK40	25	45	70
40/32	●	SK40	32	52	75
40/40	●	SK40	40	60	100
50/20	○	SK50	20	40	70
50/25	○	SK50	25	45	70
50/32	○	SK50	32	52	70
50/40	●	SK50	40	60	80
50/50	●	SK50	50	75	105

Combi shell mill arbor ISO 7388-1

HAIMER PRETEC

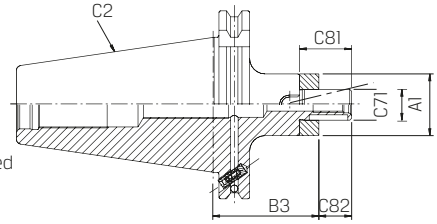
Use:
- for clamping shell end mills DIN 841 and DIN 1880 as well as angular milling cutters DIN 842 and cutters DIN 1830
- to DIN 6358 with steep taper
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

Delivery:
Complete with milling cutter tightening bolt, driving ring and feather key

Note for 240620 and 240625:
SK50 without cooling bores to the centre of the milling cutter.
By using the tightening bolt 247201, internal cooling can be achieved

Matching accessories see page 24/444 et seq.

ISO 7388-1	Form AD	Form AD/AF	DIN 6358	CAD





N° article	240620 PRETEC Shape AD, short, G6.3 at 15,000 1/min	240618 HAIMER Shape AD/AF, short, G2.5 at 22,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
40×16	●	○	SK40	16	32	55	27	17
40×22	●	○	SK40	22	40	55	31	19
40×27	●	○	SK40	27	48	55	33	21
40×32	●	○	SK40	32	58	60	38	24
40×40	●	○	SK40	40	70	60	41	27
50×16	●	–	SK50	16	32	55	27	17

N° article	240620 PRETEC Shape AD, short, G6.3 at 15,000 1/min	240618 HAIMER Shape AD/AF, short, G2.5 at 22,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
50×22	●	–	SK50	22	40	55	31	19
50×27	●	–	SK50	27	48	55	33	21
50×32	●	–	SK50	32	58	55	38	24
50×40	●	–	SK50	40	70	55	41	27
50×50	●	–	SK50	50	90	70	46	30

N° article	240625 PRETEC Shape AD, long, G6.3 at 15,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
40×16	●	SK40	16	32	100	27	17
40×22	●	SK40	22	40	100	31	19
40×27	●	SK40	27	48	100	33	21
40×32	●	SK40	32	58	100	38	24
40×40	●	SK40	40	70	100	41	27

N° article	240625 PRETEC Shape AD, long, G6.3 at 15,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
50×16	●	SK50	16	32	100	27	17
50×22	●	SK50	22	40	100	31	19
50×27	●	SK50	27	48	100	33	21
50×32	●	SK50	32	58	100	38	24
50×40	●	SK50	40	70	100	41	27

Cutter head holder ISO 7388-1

HAIMER PREMUS

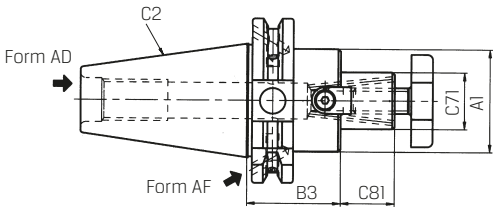
ISO 7388-1 | Form AD | Form AD/AF

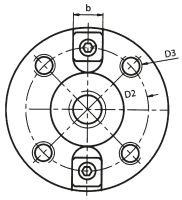
Design:
- made of case-hardening steel, all functional surfaces groand
- tensile strength in the core of at least 800 N/mm², hardened (min. HRC 56)
- with driving keys and enlarged contact surface
- taper accuracy min. AT 3
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- coolant outlet hole at front side (not for 240610 and 240611)

Use:
For holding face mill arbors and milling cutters with transverse groove

Delivery:
Complete with screwed-on drive blocks and tightening bolt
From C71 = 40 mm additionally with 4 threaded holes according to DIN 2079

Note:
- matching accessories see page 24/444
- *also suited for ANSI-CAT





ab C71=40



N° article	240632 PREMUS Shape AD/AF, short, G2.5 at 25,000 1/min with coolant duct	240614 HAIMER Basic Shape AD, short, G2.5 at 22,000 1/min	240616 HAIMER Shape AD/AF, short, G2.5 at 22,000 1/min with coolant duct	*	C2	C71 mm	240632 A1 mm	240632 B3 mm	240614 A1 mm	240614 B3 mm	240616 A1 mm	240616 B3 mm	C81 mm
40×16	●	○	○		SK40	16	38	45	36	35	32	35	17
40×22	●	○	○		SK40	22	48	45	48	35	48	35	19
40×27	●	○	○		SK40	27	58	50	48	35	48	35	21
40×32	●	–	○		SK40	32	78	55	–	–	78	50	24
40×40	●	–	○		SK40	40	88	55	–	–	87	50	27
50×16	●	–	–		SK50	16	38	45	–	–	–	–	17
50×22	●	○	○	*	SK50	22	48	45	48	35	48	35	19
50×27	●	○	○	*	SK50	27	58	45	60	35	60	35	21
50×32	●	○	○		SK50	32	78	50	78	35	78	35	24
50×40	●	–	○		SK50	40	88	55	–	–	89	50	27
50×50	○	–	○		SK50	50	120	70	–	–	120	70	30
50×60	–	–	○		SK50	60	–	–	–	–	127	70	40

N° article	240634 PREMUS Shape AD/AF, long, G2.5 at 25,000 1/min with coolant duct	240619 HAIMER Shape AD/AF, long, G2.5 at 22,000 1/min with coolant duct	*	C2	C71 mm	240634 A1 mm	240619 A1 mm	B3 mm	C81 mm
40×16	●	○		SK40	16	38	36	100	17
40×22	●	○		SK40	22	48	48	100	19
40×27	●	○		SK40	27	58	60	100	21
40×32	○	○		SK40	32	78	78	100	24
40×40	○	–		SK40	40	88	–	100	27
50×16	●	–		SK50	16	38	–	100	17
50×22	●	○	*	SK50	22	48	48	100	19
50×27	●	○	*	SK50	27	58	60	100	21
50×32	○	○		SK50	32	78	78	100	24
50×40	○	○		SK50	40	88	89	100	27

N° article	240612 PREMUS Shape AD/AF, overlong, G2.5 at 25,000 1/min with coolant duct	240621 HAIMER Shape AD/AF, overlong, G2.5 at 22,000 1/min with coolant duct	*	C2	C71 mm	240612 A1 mm	240621 A1 mm	B3 mm	C81 mm
40×16	●	–		SK40	16	38	–	160	17
40×22	●	–		SK40	22	48	–	160	19
40×27	○	–		SK40	27	58	–	160	21
40×32	○	–		SK40	32	78	–	160	24
40×40	○	–		SK40	40	88	–	160	27
50×16	○	–		SK50	16	38	–	160	17
50×22	●	○	*	SK50	22	48	48	160	19
50×27	○	○	*	SK50	27	58	58	160	21
50×32	○	○		SK50	32	78	78	160	24
50×40	○	○		SK50	40	88	88	160	27

N° article	240638 PREMUS Shape AD/AF, extra long, G2.5 at 25,000 1/min with coolant duct	C2	C71 mm	240638 A1 mm	B3 mm	C81 mm
40×16	●	SK40	16	38	200	17
40×22	●	SK40	22	48	200	19
40×27	○	SK40	27	58	200	21
40×32	○	SK40	32	78	200	24
40×40	○	SK40	40	88	200	27
50×16	○	SK50	16	38	200	17
50×22	●	SK50	22	48	200	19
50×27	●	SK50	27	58	200	21
50×32	○	SK50	32	78	200	24
50×40	○	SK50	40	88	200	27

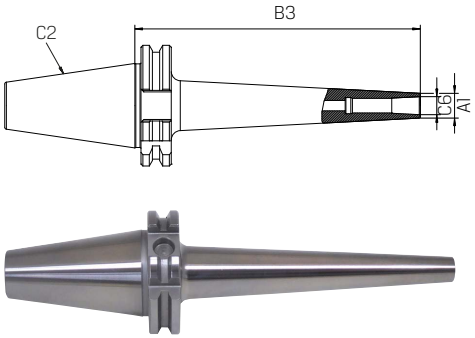
Collet chucks DMC ISO 7388-1

PRETEC

ISO 7388-1 | Form A | G 2,5 25.000 min⁻¹

Design and use:
- narrow, slim outer diameter
- especially suited for tool and mould making due to 3° inclination
- the extremely slim construction allows machining even in hard-to-reach places
- very flexible thanks to collets instead of shrink-fit chucks
- made of case-hardening steel, all functional surfaces groand
- tensile strength in core of min. 800 N/mm², hardened, (min. HRC 56)
- high concentricity of < 5 µm
- the collet is clamped through the chuck from behind by means of a clamping nut

Note:
Fitting collets see ander 247900 on page 24/378.



N° article	240660 long	C2	C6	A1 mm	B3 mm	Clamping range mm
40/DMC6	○	SK40	DMC6	13	120	3 - 6

N° article	240661 overlong	C2	C6	A1 mm	B3 mm	Clamping range mm
40/DMC6	○	SK40	DMC6	13	160	3 - 6

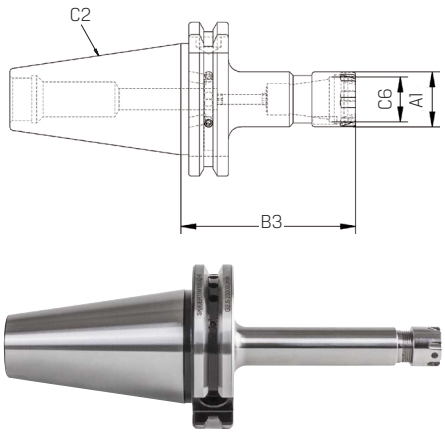
Collet chuck ER Mini ISO 7388-1

PREMUS

ISO 7388-1 | Form AD/AF | ISO 15488 | G 2,5 25.000 min⁻¹

Design:
- made of case-hardening steel, all functional surfaces groand
- tensile strength in the core of at least 800 N/mm², hardened (min. HRC 56)
- collet chuck ER
- short, long, overlong
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- with mini clamping nut, therefore slim construction

Note:
Matching accessories see page 24/452 et seq.



N° article	240703 short	C2	C6	A1 mm	B3 mm	Clamping range mm
40/ER11M	●	SK40	ER11-M	16	50	0,5 - 7
40/ER16M	●	SK40	ER16-M	22	70	0,5 - 10

N° article	240705 long	C2	C6	A1 mm	B3 mm	Clamping range mm
40/ER11M	●	SK40	ER11-M	16	100	0,5 - 7
40/ER16M	●	SK40	ER16-M	22	100	0,5 - 10

N° article	240708 overlong	C2	C6	A1 mm	B3 mm	Clamping range mm
40/ER11M	●	SK40	ER11-M	16	160	0,5 - 7
40/ER16M	●	SK40	ER16-M	22	160	0,5 - 10

Collet chuck ER ISO 7388-1

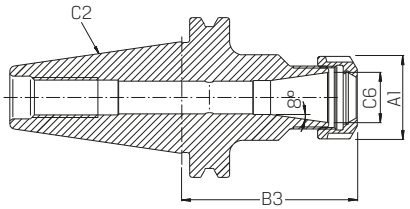
HAIMER PREMUS PRETEC

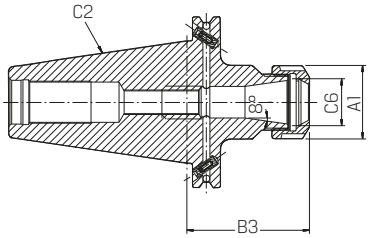
ISO 7388-1 | Form AD | Form AD/AF | ISO 15488 | CAD

Use:
- for clamping tools with cylindrical shank into collets according to ISO 15488
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

Delivery:
Complete with clamping nut (balanced, with slide coating for increased clamping power)

Note:
- 240602, 240604, 240607 and 240613 up to and including ER20 with hex nut
- Matching accessories can be foand in the main catalogue from page 24/452.
- *also suited for ANSI-CAT









N° article	240600 PRETEC Shape AD, short, G6.3 at 15,000 1/min	240641 PREMUS Shape AD/AF, short, G2.5 at 25,000 1/min	240598 HAIMER Basic Shape AD, short, G2.5 at 25,000 1/min	240602 HAIMER Shape AD/AF, short, G2.5 at 22,000 1/min	*	C2	C6	240600, 240641 A1 mm	240600, 240641 B3 mm	240598, 240602 A1 mm	240598, 240602 B3 mm	Clamping range mm
40/ER16	●	●	○	○	*	SK40	ER16	32	70	28	70	0,5 - 10
40/ER20	–	–	–	○	*	SK40	ER20	–	–	34	70	1,5 - 13
40/ER25	●	●	○	○	*	SK40	ER25	42	70	42	70	1 - 16
40/ER32	●	●	○	○		SK40	ER32	50	70	50	70	1,5 - 20
40/ER40	●	●	–	○		SK40	ER40	63	70	63	70	2,5 - 26
50/ER16	○	○	○	○	*	SK50	ER16	32	70	28	70	0,5 - 10
50/ER20	–	–	–	○	*	SK50	ER20	–	–	34	70	1,5 - 13
50/ER25	●	○	○	○	*	SK50	ER25	42	70	42	70	1 - 16
50/ER32	●	●	○	○	*	SK50	ER32	50	70	50	70	1,5 - 20
50/ER40	●	●	–	○	*	SK50	ER40	63	80	63	70	2,5 - 26

N° article	240601 PRETEC Shape AD, long, G6.3 at 15,000 1/min	240642 PREMUS Shape AD/AF, long, G2.5 at 25,000 1/min	240604 HAIMER Shape AD/AF, long, G2.5 at 22,000 1/min	*	C2	C6	240601 240642 A1 mm	240604 A1 mm	B3 mm	Clamping range mm
40/ER16	●	●	○	*	SK40	ER16	32	28	100	0,5 - 10
40/ER20	–	–	○	*	SK40	ER20	–	34	100	1,5 - 13
40/ER25	●	●	○	*	SK40	ER25	42	42	100	1 - 16
40/ER32	●	●	○		SK40	ER32	50	50	100	1,5 - 20
40/ER40	●	●	○		SK40	ER40	63	63	100	2,5 - 26
50/ER16	●	○	○	*	SK50	ER16	32	28	100	0,5 - 10
50/ER20	–	–	○	*	SK50	ER20	–	34	100	1,5 - 13
50/ER25	●	●	○	*	SK50	ER25	42	42	100	1 - 16
50/ER32	●	●	○	*	SK50	ER32	50	50	100	1,5 - 20
50/ER40	●	○	○	*	SK50	ER40	63	63	100	2,5 - 26

N° article	240606 PRETEC Form AD, overlong, G6.3 at 15,000 1/m	240643 PREMUS Shape AD/AF, overlong, G2.5 at 25,000 1/min	240607 HAIMER Shape AD/AF, overlong, G2.5 at 22,000 1/min	*	C2	C6	240606 240643 A1 mm	240607 A1 mm	B3 mm	Clamping range mm
40/ER16	●	●	○	*	SK40	ER16	32	28	160	0,5 - 10
40/ER25	●	●	○	*	SK40	ER25	42	42	160	1 - 16
40/ER32	●	●	○		SK40	ER32	50	50	160	1,5 - 20
40/ER40	●	○	○		SK40	ER40	63	63	160	2,5 - 26
50/ER16	●	○	○	*	SK50	ER16	32	28	160	0,5 - 10
50/ER25	●	●	○	*	SK50	ER25	42	42	160	1 - 16
50/ER32	●	●	○	*	SK50	ER32	50	50	160	1,5 - 20
50/ER40	●	○	○		SK50	ER40	63	63	160	2,5 - 26

N° article	240644 PREMUS Shape AD/AF, extra long, G2.5 at 25,000 1/min	240613 HAIMER Shape AD/AF,ZG200 G2.5 at 22,000 1/min	*	C2	C6	240644 A1 mm	240613 A1 mm	B3 mm	Clamping range mm
40/ER16	●	○	*	SK40	ER16	32	28	200	0,5 - 10
40/ER25	●	○	*	SK40	ER25	42	42	200	1 - 16
40/ER32	●	○		SK40	ER32	50	50	200	1,5 - 20
40/ER40	○	–		SK40	ER40	63	–	200	2,5 - 26
50/ER16	○	○	*	SK50	ER16	32	28	200	0,5 - 10
50/ER25	●	○	*	SK50	ER25	42	42	200	1 - 16
50/ER32	●	○	*	SK50	ER32	50	50	200	2,5 - 26
50/ER40	○	○		SK50	ER40	63	63	200	2,5 - 26

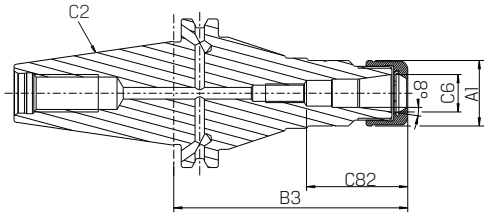
Collet chuck ER High Precision ISO 7388-1

HAIMER

Design:
- with specially coated smooth locknut optimally balanced < 1 gmm
- for highest cutting performance at HSM operations
- high stiffness with vibration damping and noise reduction
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488
  (Attention: When used with standard collets the B3 dimension becomes longer)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws
- SK40 balanced G2.5 30,000 min^{-1}
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

Note:
- matching collets see ander 248910, 248920 and 248930 on page 24/456
- fitting tightening bolts see ander 246542 on page 24/445
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

ISO 7388-1	Form AD/AF	ISO 15488	G 2,5 25.000 min^{-1}	G 2,5 30.000 min^{-1}





N° article	240712 HP, short	C2	C6	A1 mm	B3 mm	B71 mm	Clamping range mm
40/ER16	○	SK40	ER16	28	70	43	2 - 10
40/ER25	○	SK40	ER25	42	70	61,5	2 - 16
40/ER32	○	SK40	ER32	50	70	62	2 - 20
50/ER16	○	SK50	ER16	28	70	43	2 - 10
50/ER25	○	SK50	ER25	42	70	62	2 - 16
50/ER32	○	SK50	ER32	50	70	62,5	2 - 20

N° article	240714 HP, long	C2	C6	A1 mm	B3 mm	B71 mm	Clamping range mm
40/ER16	○	SK40	ER16	28	100	43	2 - 10
40/ER25	○	SK40	ER25	42	100	51	2 - 16
40/ER32	○	SK40	ER32	50	100	53	2 - 20
50/ER16	○	SK50	ER16	28	100	43	2 - 10
50/ER25	○	SK50	ER25	42	100	51	2 - 16
50/ER32	○	SK50	ER32	50	100	53	2 - 20

N° article	240716 HP, ZG130	C2	C6	A1 mm	B3 mm	B71 mm	Clamping range mm
50/ER16	○	SK50	ER16	28	130	43	2 - 10
50/ER25	○	SK50	ER25	42	130	51	2 - 16
50/ER32	○	SK50	ER32	50	130	53	2 - 20

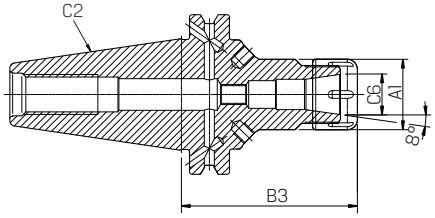
Collet chuck ER ISO 7388-1

HAIMER

Design:
- for highest cutting performance at HSM operations
- high rigidity with vibration damping
- universally applicable also with standard collets
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488
  (Attention: When used with standard collets the B3 dimension becomes longer)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws
- form AD/AF with central coolant supply and resealable coolant ducts at the collar

Note:
Matching collets see ander 248910, 248920 and 248930 on page 24/456.

ISO 7388-1	Form AD/AF	HPC	HSC	G 2,5 25.000 min^{-1}	CAD





N° article	240721 Power, short	C2	C6	A1 mm	B3 mm	B71 mm	Clamping range / collets
40/ER16	○	SK40	ER16	28	70	43	2 - 10
40/ER25	○	SK40	ER25	42	70	61,5	2 - 16
40/ER32	○	SK40	ER32	50	70	62	2 - 20
50/ER16	○	SK50	ER16	28	70	43	2 - 10
50/ER25	○	SK50	ER25	42	70	62	2 - 16
50/ER32	○	SK50	ER32	50	70	62,5	2 - 16

N° article	240724 Power, long	C2	C6	A1 mm	B3 mm	B71 mm	Clamping range / collets
40/ER16	○	SK40	ER16	28	100	43	2 - 10
40/ER25	○	SK40	ER25	42	100	51	2 - 16
40/ER32	○	SK40	ER32	50	100	53	2 - 20
50/ER16	○	SK50	ER16	28	100	43	2 - 10
50/ER25	○	SK50	ER25	42	100	51	2 - 16
50/ER32	○	SK50	ER32	50	100	53	2 - 20

N° article	240725 Power, ZG130	C2	C6	A1 mm	B3 mm	B71 mm	Clamping range / collets
50/ER16	○	SK50	ER16	28	130	43	2 - 10
50/ER25	○	SK50	ER25	42	130	51	2 - 16
50/ER32	○	SK50	ER32	50	130	53	2 - 20

FAHRION® PRÄZISION

Innovative tool clamping systems by FAHRION

When it comes to clamping cutting tools,
the collet chuck technology in terms of precision and force related to reliability and profitability is
unmatched. For decades, FAHRION has given this technology the decisive impulses.



FAHRION precision collet

The core of this technology is the collet:
A combination of a specially made steel and our unique manufacturing technology has enabled FAHRION for years to produce collets of the highest quality to DIN ISO 15488 (ER/ESX) at a high accuracy level of 2 µm.

FAHRION, precision collet chuck CENTRO|P

It´s no coincidence that the CENTRO|P has a legendary reputation in the market. It is one of the best collet chucks you can buy. Combined with the perfectly matched FAHRION collets this tool achieves a system accuracy of 3 µm and saves the use of cost-intensive expansion and shrinking techniques. The manifold advantages of this technology in relation to accuracy, holding power, flexibility and value for money we explain detailed in our catalogue.

Even more power with the high-performance Maxi|GRIP power clamping system

In order to use the CENTRO|P clamping technology also for extreme roughing and high-strength materials, this as simple as technically ingenious clamping technique increases the holding torque of the CENTRO|P to 800 Nm and more.

Count on tool clamping systems from FAHRION and you get perfect results - with unbeatable economy.

Collet chuck ER ISO 7388-1

FAHRION®

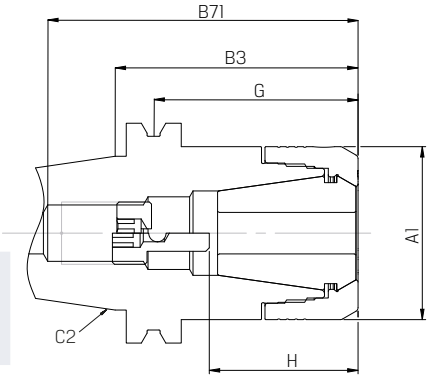
In order to achieve utmost flexibility in the fields of application, chuck, clamping nut, collet and accessories have to be defined separately

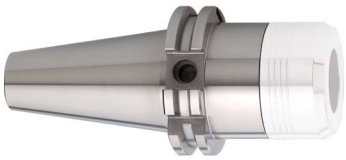
ISO 7388-1 | Form AD | G 2,5 25.000 min⁻¹

B3: Measure for clamping nut without gasket
E: Max. insertion depth without stop
* = Without andercut to ISO 7388-1 in front of the gripper collar

Delivery:
Without clamping nut

Note:
Matching accessories can be foand in the main catalogue from page 24/445.





N° article	241209 Centro|P	C2	A1 mm	B3 mm	E mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CP16-AD40-A=70	●	SK40	30	70	55	45/28	31/16	1.0-10.0 GERC16-HP/HPD/HPDD/GBD/GBDD
CP16-AD40-A=100	●	SK40	30	100	85	45/28	31/16	1.0-10.0 GERC16-HP/HPD/HPDD/GBD/GBDD
CP25-AD40-A=70	●	SK40	40	70	114	60/35	42/20	2,0-16,0 GERC25-HP/HPD/HPDD/GBD/GBDD
CP25-AD40-A=100	●	SK40	40	100	114	60/35	42/20	2,0-16,0 GERC25-HP/HPD/HPDD/GBD/GBDD
CP25-AD50-A=100	○	SK50	40	100	120	64/35	48/20	2,0-16,0 GERC25-HP/HPD/HPDD/GBD/GBDD
CP32-AD40-A=50	●	SK40	50	50	84	70/52	52/26	2,0-20,0 GERC32-HP/HPD/HPDD/GBD/GBDD
CP32-AD40-A=70	●	SK40	50	70	99	75/55	62/42	2,0-20,0 GERC32-HP/HPD/HPDD/GBD/GBDD
CP32-AD40-A=100	●	SK40	50	100	114	70/52	52/32	2,0-20,0 GERC32-HP/HPD/HPDD/GBD/GBDD
CP40-AD40-A=70	○	SK40	63	70	83	55/48	–	3.0-26.0 GERC40-HP/HPD/HPDD/GBD/GBDD

Collet chuck ER ISO 7388-1

FAHRION®

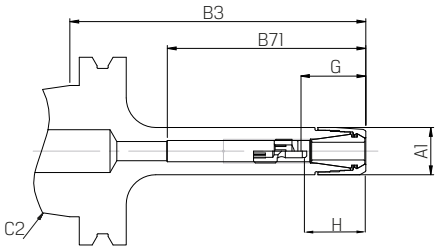
In order to achieve utmost flexibility in the fields of application, chuck, clamping nut, collet and accessories have to be defined separately

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹

B3: Measure for clamping nut without gasket
B71: Max. insertion depth without stop

Delivery:
Without clamping nut

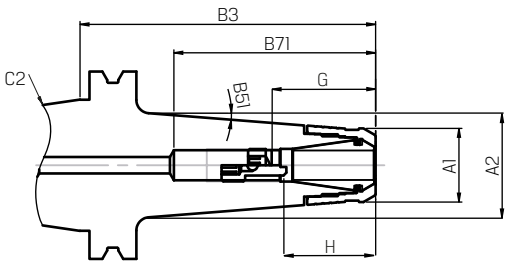
Note:
Matching accessories can be foand in the main catalogue from page 24/445.





N° article	241218 CENTRO|P	C2	A1 mm	B3 mm	E mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CP11M-B40-A=70	○	SK40	16	70	54	32/15	22/ 7	1.0-7.0 GER11-HP/HPD/HPDD
CP11M-B40-A=100	●	SK40	16	100	84	36/18	26/12	1.0-7.0 GER11-HP/HPD/HPDD
CP11M-B40-A=130	○	SK40	16	130	114	32/15	22/ 7	1.0-7.0 GER11-HP/HPD/HPDD
CP16M-B40-A=70	●	SK40	22	70	54	50/28	36/14	1.0-10.0 GER16-HP/HPD/HPDD/GBD/GBDD
CP16M-B40-A=100	●	SK40	22	100	84	50/28	36/14	1.0-10.0 GER16-HP/HPD/HPDD/GBD/GBDD
CP16M-B40-A=130	○	SK40	22	130	114	50/28	36/14	1.0-10.0 GER16-HP/HPD/HPDD/GBD/GBDD
CP16M-B40-A=160	○	SK40	22	160	144	50/28	36/14	1.0-10.0 GER16-HP/HPD/HPDD/GBD/GBDD

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹





N° article	241220 CENTRO|P conical	C2	A1 mm	B3 mm	B51°	E mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CPC16-B40-A=100	●	SK40	24	100	4,5	120	48/28	35/20	1.0-10.0 GER16-HP/ HPD/HPDD/GBD/GBDD
CPC16-B40-A=160	○	SK40	24	160	2,5	120	48/28	35/20	1.0-10.0 GER16-HP/ HPD/HPDD/GBD/GBDD

Collet chuck HDC ISO 7388-1

FAHRION®
FAR BEYOND PRECISION

ISO 7388-1	Form AD	G 2,5 25.000 min⁻¹

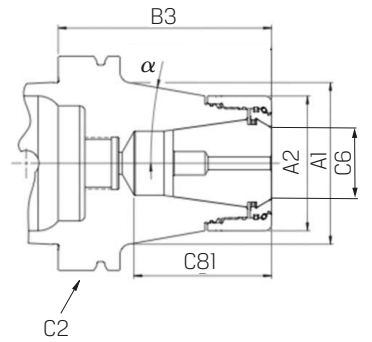
Design:
- highest possible holding torque for high radial and axial forces
- collet sits completely in the cone, thus providing the largest possible contact surface and guidance
- no clamping bridging for optimum fit
- clamping nut with ball bearings for high holding torque to prevent rotation of the collet (up to over 700 Nm holding torque)
- bearing shells with specially treated surface
- trapezoidal fine thread for higher clamping forces
- multi-part clamping nut for additional damping of the entire system
- maximum security against twisting, micro-creep and pull-out

Use:
The use of a FAHRION wedge collet leads to a positive fit on the Weldon surface of the tool, which reliably prevents micro-creep or pull-out of the tool.

Note:
Fitting collets:
GERC32-W (248480)
GERC32-W (248482)

Scope of delivery:
Including clamping nut

NEW





N° article	241222 HDC32, Heavy Duty Chuck	C2	C6	A1 mm	A2 mm	B3 mm	C81 mm	α°
40/ER32	○	SK40	ER32	–	53	65	87	–
50/ER32/70	○	SK50	ER32	60	53	70	91	10
50/ER32/100	○	SK50	ER32	71	53	100	121	10

Collet chuck HG ISO 7388-1

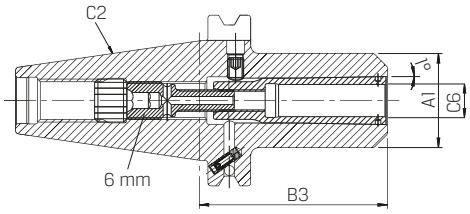
HAIMER

ISO 7388-1	Form AD/AF	G 2,5 25.000 min⁻¹

Use:
- for highly precise clamping of tools with cylindrical shank with special collets
- very well suited for high-speed machining
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- shank tolerance h6

Delivery:
- HG chuck with clamping screw
- extraction hook

Note:
- fitting collets see ander 241320 on page 24/460
- *also suited for ANSI-CAT





N° article	241300 short	*	C2	C6	A1 mm	B3 mm	Clamping range mm
40/HG01	○	*	SK40	HG01	30	65	2 - 8
40/HG02	○	*	SK40	HG02	35	70	10 - 14
40/HG03	○		SK40	HG03	48	75	16 - 20

N° article	241301 long Stock standard	*	C2	C6	A1 mm	B3 mm	Clamping range mm
40/HG01	○	*	SK40	HG01	30	100	2 - 8
40/HG02	○	*	SK40	HG02	35	100	10 - 14
40/HG03	○		SK40	HG03	48	100	16 - 20

Intermediate sleeve ISO 7388-1

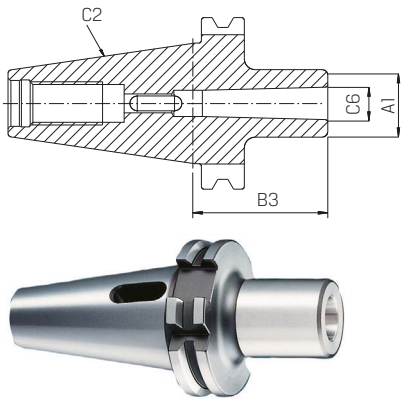
PRETEC

Use:
- for holding tools with morse taper shanks with tang according to DIN 228-1 shape B
- similar to DIN 6383 with steep taper

Note:
*Also suited for ANSI-CAT

ISO 7388-1 | Form AD | similar DIN 6383

G 6,3 8.000 min⁻¹



N° article	240630 PRETEC, short	*	C2	C6	A1 mm	B3 mm
40×1	●	*	SK40	MK1	25	50
40×2	●	*	SK40	MK2	32	50
40×3	●	*	SK40	MK3	40	70
40×4	●		SK40	MK4	48	95
50×1	●	*	SK50	MK1	25	50
50×2	●	*	SK50	MK2	32	60
50×3	●	*	SK50	MK3	40	65
50×4	●	*	SK50	MK4	48	95
50×5	●		SK50	MK5	63	120

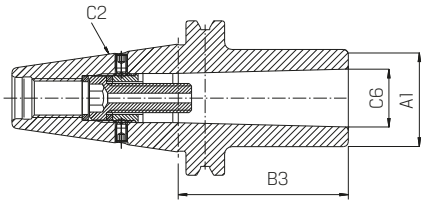
Use:
- for holding tools with morse taper and thread according to DIN 228/1 form A
- similar to DIN 6383 with steep taper

Delivery:
Complete with mounted tightening bolt

Note:
*Also suited for ANSI-CAT

ISO 7388-1 | Form AD | similar DIN 6383

G 6,3 8.000 min⁻¹



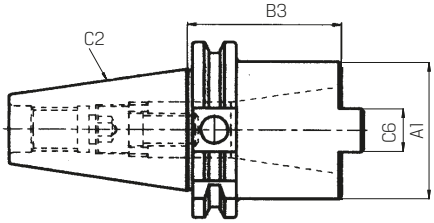
N° article	240650 PRETEC, short	*	C2	C6	A1 mm	B3 mm
40×1	●		SK40	MK1	25	50
40×2	●	*	SK40	MK2	32	50
40×3	●	*	SK40	MK3	40	75
40×4	●		SK40	–	48	105
50×1	○		SK50	MK1	25	45
50×2	●	*	SK50	MK2	32	60
50×3	●	*	SK50	MK3	40	65
50×4	●	*	SK50	MK4	48	80
50×5	●		SK50	MK5	63	100



Design:
- made of case-hardening steel, all functional surfaces groand
- tensile strength in the core of at least 800 N/mm², outside hardened (min. HRC 56)
- taper accuracy min. AT 3

Use:
For reducing steep taper to steep taper

ISO 7388-1 | Form AD | G 6,3 8.000 min⁻¹





N° article	240670	C2	C6	A1 mm	B3 mm
40×30	○	SK40	SK30	49	60
50×40	●	SK50	SK40	68	70

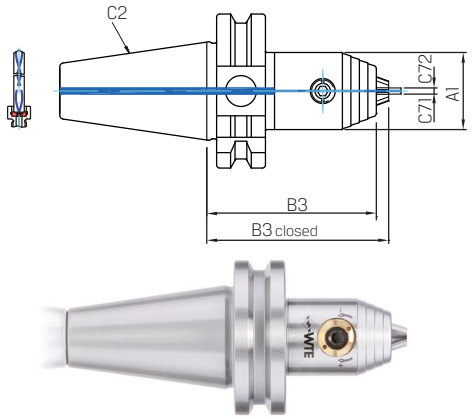
Universal chuck ISO 7388-1

ISO 7388-1 | Form AD

G 2,5 25.000 min⁻¹ | ICS

Design:
- large clamping range from Ø 0.2 to 6.4 mm and 0.2 to 3.4 mm
- low interfering contour
- secure and quick clamping
- easy handling
- for speeds up to 60,000 max.$^{-1}$
- high concentricity ‹ 0.005

Use:
- suitable for medical technology, watch industry or precision engineering and electronics sector
- even for secure clamping of micro tools with internal cooling



N° article	240672 Micro	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
30/03	○	SK30	0,2	3,4	19	45	48	0,41
30/06	○	SK30	0,2	6,4	25	55	59	0,8

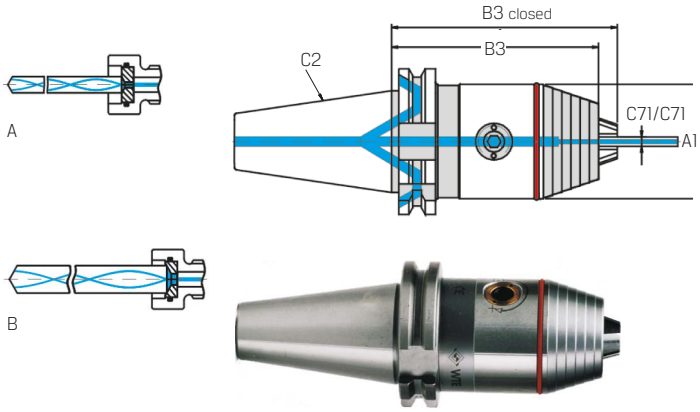
Design:
- for right and left rotation
- steep taper shank according to ISO 7388-1 shape AD or shape AF with internal coolant supply either through the centre (shape AD) or via the collar (shape AF) for automatic tool changing

ISO 7388-1 | Form AD/AF

ICS | G 6,3 25.000 min⁻¹

Note:
A: Sealing washer WTE 13 (Ø 2.05 mm) included in delivery. For coolant duct drill 3 - 6 mm, with smooth shank according to DIN 6535 form HA.

B: Sealing washer WTE 13 (Ø 4.20 mm) installed in the drill chuck head. For coolant duct drill 6 - 13 mm, with smooth shank according to DIN 6535 shape HA.



N° article	240677 Precision, ICS	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
40/08	●	SK40	0,3	8	36	73	76	1,3
40/13	●	SK40	0,5	13	50	90	96	1,7
40/16	●	SK40	2,5	16	57	95	101	1,9
50/13	○	SK50	0,5	13	50	106	112	3,9
50/16	●	SK50	2,5	16	57	111	117	4,1

Specification:
- for right and left rotation
- compact construction, short length
- runout 0.05 mm, max. perm. speed 7,000 rpm^{-1}
- high holding torque (through bevel gears) lateral clamped with hex T-key
- holding torque at 15 Nm starting torque 30 N/m - 35 N/m
- holding torque at 20 Nm starting torque 70 N/m - 80 N/m
- tool change possible directly in the machine (with the machine spindle at standstill)
- brief clamping and changeover times

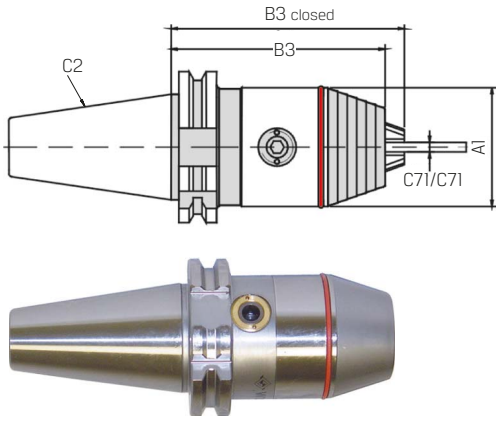
ISO 7388-1 | Form A

Design:
Steep taper shank according to ISO 7388-1 form A with tightening thread for manual clamping and ring groove for automatic clamping (e.g. Maho, Deckel, Mikron)

Use:
Only for drilling and countersinking in NC machines, slowly rotating machines and for older machinery

Delivery:
Chuck with hexagonal T-key, operating manual and test report

Balancing:
Short drill chucks standard can not be balanced

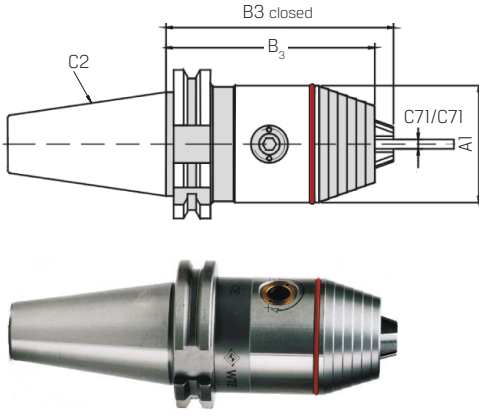


N° article	240674 Standard	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
40/13	●	SK40	0,5	13	50	84	90	1,5
40/16	●	SK40	2,5	16	57	84	92	1,7

Design:
- for right and left rotation
- steep taper shank according to ISO 7388-1 shape A

ISO 7388-1 | Form A

G 6,3 25.000 min⁻¹



N° article	240676 Precision	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
30/08	○	SK30	0,3	8	36	70	73	0,7
40/08	●	SK40	0,3	8	36	70	73	1,3
40/13	●	SK40	0,5	13	50	90	96	1,6
40/16	●	SK40	2,5	16	57	95	101	1,8
50/13	●	SK50	0,5	13	50	106	112	4,1
50/16	●	SK50	2,5	16	57	111	117	4,3

Quick-change tapping chuck ISO 7388-1

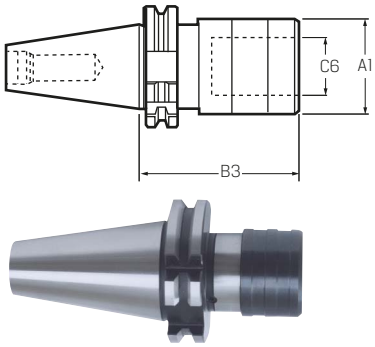
PREMUS®

Design:
- short version with max. length compensation and small weight
- smooth-running length compensation on pressure and tension
- to adjust the difference between machine feed and thread lead by use of a ball cage

ISO 7388-1 | Form A | G 6,3 8.000 min⁻¹

Use:
Standard chuck for mounting taps on mechanically and NC controlled lathes, drilling and milling machines and machining centres

Note:
Matching accessories see page 24/463.

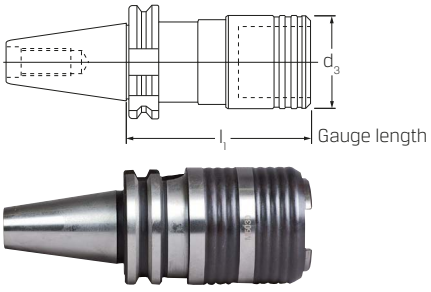


N° article	240678	C2	C6	A1 mm	B3 mm	for taps	Length compensation compression/ traction
40/M3 - 12	●	SK40	Gr. 1	36	60	M3-M12	9/ 9
50/M3 - 12	●	SK50	Gr. 1	36	60	M3-M12	9/ 9
40/M6 - 20	●	SK40	Gr. 2	53	98	M6-M20	15/15
50/M6 - 20	●	SK50	Gr. 2	53	84	M6-M20	15/15
50/M14 - 33	●	SK50	Gr. 3	78	139	M14-M33	24/24

Use:
- without pressure and tension compensation
- tapping on work stations with synchronous spindle
- to be used only with quick-change adapters **without** safety coupling

ISO 7388-1 | Form A | G 6,3 8.000 min⁻¹

Note:
Matching accessories see page 24/463.



N° article	240679	C2	C6	A1 mm	B3 mm	for taps
40/M3 - 12	●	SK40	Gr. 1	32	59	M3-M12
40/M6 - 20	●	SK40	Gr. 2	50	82	M6-M20

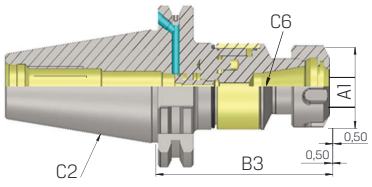
Synchro tapping chuck ISO 7388-1 with minimum length compensation

PREMUS®

Design:
- version AD/AF
- coolant supply into the tool holder, optionally centrally axially or laterally at the spindle nose via collar
- the minimal length compensation balances out deviations between thread pitch and spindle feed, which means less pressure on the thread flanks of the tools and thus considerably longer tool life
- with internal coolant supply (max. 50 bar)
- safe clamping of taps with collets DIN ISO 15488 (ER) and internal square drive drills or taps
- collets with quick-change system (see main catalogue page 24/434)
- with Balluffchip bore for tool identification

ISO 7388-1 | Form AD/AF | G 6,3 8.000 min⁻¹ | ICS

Delivery:
With sealable clamping nut.



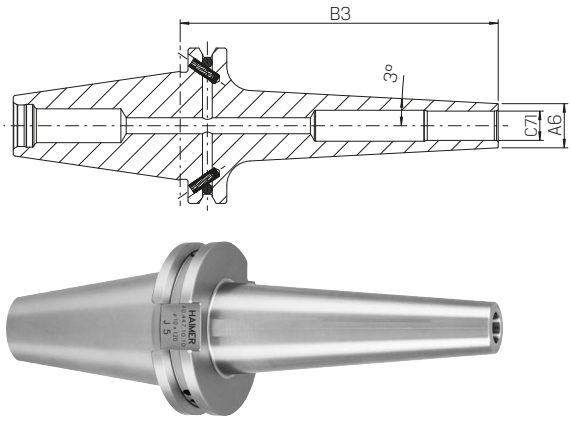


N° article	240680	C2	C6	A1 mm	B3 mm	for taps
40/ER16	●	SK40	ER16	32	79	M3-M12
40/ER16M	●	SK40	ER16-M	22	79	M3-M12
40/ER20	○	SK40	ER20	35	80	M3-M12
40/ER25	●	SK40	ER25	42	84	M3-M14
40/ER32	●	SK40	ER32	50	95	M4 - M27
40/ER40	●	SK40	ER40	63	120	M4-M33

Shrink-fit chuck ISO 7388-1

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹

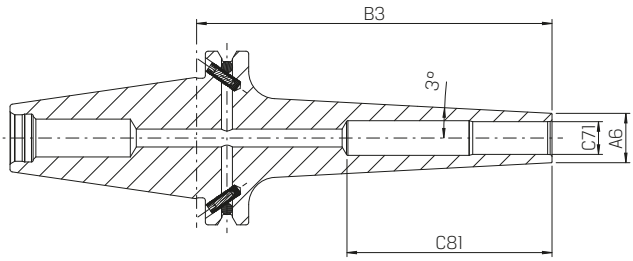
Design and use:
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- heat resistant hot-working steel
- hardened 54-2 HRC
- for all carbide tools
- shank tolerance h6
- 3° bevel, fitting for mould inclines
- no interfering edges
- highest concentricity 3 µm
- **extra slim execution**



N° article	242680 Mini, Form AD/AF, ZG120, extra schlank	C2	C71 mm	A6 mm	B3 mm
40/03	○	SK40	3	6	120
40/04	○	SK40	4	7	120
40/05	○	SK40	5	8	120
40/06	○	SK40	6	9	120
40/08	○	SK40	8	11	120
40/10	○	SK40	10	13	120
40/12	○	SK40	12	15	120

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹

Design and use:
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- heat resistant hot-working steel
- hardened 54-2 HRC
- for all carbide tools
- shank tolerance h6
- 3° bevel, fitting for mould inclines
- no interfering edges
- highest concentricity 3 µm



N° article	242682 Mini, ZG120	C2	C71 mm	A6 mm	B3 mm	C81 mm
40/03	○	SK40	3	9	120	–
40/04	○	SK40	4	10	120	–
40/05	○	SK40	5	11	120	–
40/06	○	SK40	6	12	120	–
40/08	○	SK40	8	14	120	–
40/10	○	SK40	10	16	120	–
40/12	○	SK40	12	18	120	–
40/16	○	SK40	16	22	120	75

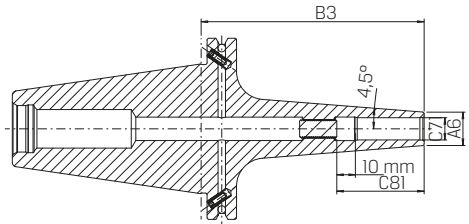


ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹

Design and use:
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- with 4.5° bevel
- **extra slim execution**

Delivery:
With length adjustment screw (Ø 6-12 mm)

Note:
40/03-040/12 additional cooling adapter required



N° article	242690 Mini, ZG120, extra slim	C2	C71 mm	A6 mm	B3 mm	C81 mm
40/03	○	SK40	3	9	120	–
40/04	○	SK40	4	9	120	–
40/05	○	SK40	5	9	120	–
40/06	○	SK40	6	15	120	36
40/08	○	SK40	8	15	120	36
40/10	○	SK40	10	18	120	42
40/12	○	SK40	12	18	120	47
50/03	○	SK50	3	9	120	–
50/04	○	SK50	4	9	120	–
50/05	○	SK50	5	9	120	–
50/06	○	SK50	6	15	120	36
50/08	○	SK50	8	15	120	36
50/10	○	SK50	10	18	120	42
50/12	○	SK50	12	18	120	47



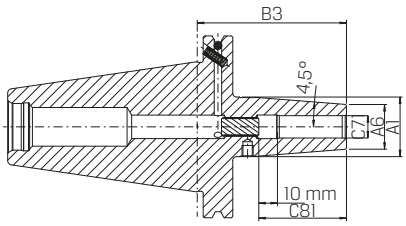
Shrink-fit chuck ISO 7388-1

HAIMER

Design:
- form AD/AF with central coolant supply and resealable coolant ducts at the collar
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- with 4.5° bevel
- fine-balancing by balancing screws

Delivery:
With length adjustment screw

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹





N° article	242699 Shape AD/AF, ZG120	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/03	○	SK40	3	–	10	120	9
40/04	○	SK40	4	–	10	120	12
40/05	○	SK40	5	–	10	120	15
40/06	○	SK40	6	27	21	120	36
40/08	○	SK40	8	27	21	120	36
40/10	○	SK40	12	32	24	120	42
40/12	○	SK40	12	32	24	120	47
40/14	○	SK40	14	34	27	120	47
40/16	○	SK40	16	34	27	120	50
40/18	○	SK40	18	42	33	120	50
40/20	○	SK40	20	42	33	120	52
40/25	○	SK40	25	53	44	120	58

N° article	242699 Shape AD/AF, ZG120	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/32	○	SK40	32	53	44	120	58
50/06	○	SK50	6	27	21	120	36
50/08	○	SK50	8	27	21	120	36
50/10	○	SK50	12	32	24	120	42
50/12	○	SK50	12	32	24	120	47
50/14	○	SK50	14	34	27	120	47
50/16	○	SK50	16	34	27	120	50
50/18	○	SK50	18	42	33	120	50
50/20	○	SK50	20	42	33	120	52
50/25	○	SK50	25	53	44	120	58
50/32	○	SK50	32	53	44	120	58

Shrink-fit chuck ISO 7388-1

HAIMER

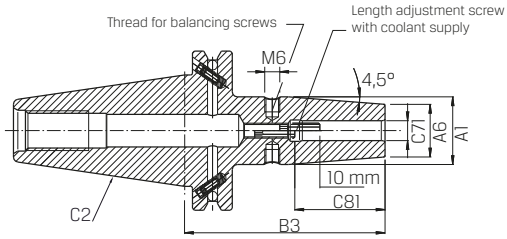
Design and use:
Suitable for inductive, contact and hot air shrink-fit units

With steep taper ISO 7388-1
- shape AD with central coolant supply
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- fine-balancing by balancing screws
- concentricity ‹ 3 µm

Delivery:
With length adjustment screw

Note:
- *without set screw, without threads for balancing screws, without slits along the clamping bore for coolant supply
- **without adjustment screws, without threads for balancing screws
- matching accessories see page 24/??? et seq.

ISO 7388-1 | Form AD | G 2,5 25.000 min⁻¹ | CAD





N° article	242718 Basic Form AD, ZG 120	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/06	○		SK40	6	27	21	120	36
40/08	○		SK40	8	27	21	120	36
40/10	○		SK40	10	32	24	120	42

N° article	242718 Basic Form AD, ZG 120	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/12	○		SK40	12	32	24	120	47
40/16	○		SK40	16	34	27	120	50
40/20	○		SK40	20	42	33	120	52

N° article	242720 Shape AD, ultra short,	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
30/03	○	*	SK30	3	–	10	60	9
30/04	○	*	SK30	4	–	10	60	12
30/06	○	**	SK30	6	–	23	60	36
30/08	○	**	SK30	8	–	23	60	36

N° article	242720 Shape AD, ultra short,	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
30/10	○	**	SK30	10	–	27	60	42
30/12	○	**	SK30	12	–	27	60	47
30/16	○	**	SK30	16	–	30	65	50
30/20	○	**	SK30	20	40,5	35,5	70	52

Shrink-fit chuck ISO 7388-1

HAIMER

Design and use:
Suitable for inductive, contact and hot air shrink-fit units

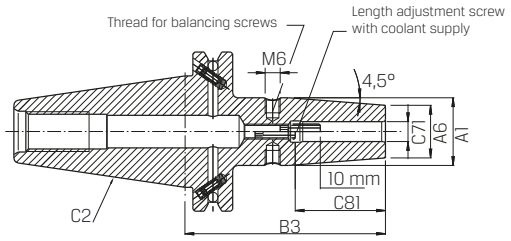
With steep taper ISO 7388-1
- shape AD with central coolant supply
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- fine-balancing by balancing screws
- concentricity ‹ 3 µm

Delivery:
With length adjustment screw

Note:
- *without set screw, without threads for balancing screws, without slits along the clamping bore for coolant supply
- **without adjustment screws, without threads for balancing screws
- matching accessories see page 24/464 et seq.

ISO 7388-1	Form AD	Form AD/AF	G 2,5 25.000 min⁻¹	CAD





N° article	242717 Basic Shape AD, short,	242721 Shape AD/AF, short	242722 Shape AD/AF, short with Cool Jet	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
30/03	–	○	–	*	SK30	3	–	10	80	9
30/04	–	○	–	*	SK30	4	–	10	80	12
30/05	–	○	–	*	SK30	5	–	10	80	15
30/06	–	○	–		SK30	6	27	21	80	36
30/08	–	○	–		SK30	8	27	21	80	36
30/10	–	○	–		SK30	10	32	24	80	42
30/12	–	○	–		SK30	12	32	24	80	47
30/16	–	○	–		SK30	16	34	27	80	50
40/03	–	○	–	*	SK40	3	–	10	80	9
40/04	–	○	–	*	SK40	4	–	10	80	12
40/05	–	○	–	*	SK40	5	–	10	80	15
40/06	○	○	○		SK40	6	27	21	80	36
40/08	○	○	○		SK40	8	27	21	80	36
40/10	○	○	○		SK40	10	32	24	80	42
40/12	○	○	○		SK40	12	32	24	80	47
40/14	○	○	○		SK40	14	34	27	80	47

N° article	242717 Basic Shape AD, short,	242721 Shape AD/AF, short	242722 Shape AD/AF, short with Cool Jet	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/16	○	○	○		SK40	16	34	27	80	50
40/18	○	○	○		SK40	18	42	33	80	50
40/20	○	○	○		SK40	20	42	33	80	52
40/25	○	○	○		SK40	25	53	44	100	58
40/32	–	○	○		SK40	32	53	44	100	58
50/06	○	○	○		SK50	6	27	21	80	36
50/08	○	○	○		SK50	8	27	21	80	36
50/10	○	○	○		SK50	10	32	24	80	42
50/12	○	○	○		SK50	12	32	24	80	47
50/14	○	○	○		SK50	14	34	27	80	47
50/16	○	○	○		SK50	16	34	27	80	50
50/18	○	○	○		SK50	18	42	33	80	50
50/20	○	○	○		SK50	20	42	33	80	52
50/25	○	○	○		SK50	25	53	44	100	58
50/32	–	○	○		SK50	32	53	44	100	58

N° article	242725 Shape AD/AF, ZG130	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/03	○		SK40	3	–	10	130	9
40/04	○		SK40	4	–	10	130	12
40/05	○		SK40	5	–	10	130	15
40/06	○		SK40	6	27	21	130	36
40/08	○		SK40	8	27	21	130	36
40/10	○		SK40	10	32	24	130	42
40/12	○		SK40	12	32	24	130	47
40/14	○		SK40	14	34	27	130	47
40/16	○		SK40	16	34	27	130	50
40/18	○		SK40	18	42	33	130	50
40/20	○		SK40	20	42	33	130	52
40/25	○		SK40	25	53	44	130	58

N° article	242725 Shape AD/AF, ZG130	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/32	○		SK40	32	53	44	130	58
50/06	○		SK50	6	27	21	130	36
50/08	○		SK50	8	27	21	130	36
50/10	○		SK50	10	32	24	130	42
50/12	○		SK50	12	32	24	130	47
50/14	○		SK50	14	34	27	130	47
50/16	○		SK50	16	34	27	130	50
50/18	○		SK50	18	42	33	130	50
50/20	○		SK50	20	42	33	130	52
50/25	○		SK50	25	53	44	130	58
50/32	○		SK50	32	53	44	130	58

N° article	242727 Shape AD/AF overlong	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/06	○		SK40	6	27	21	160	36
40/08	○		SK40	8	27	21	160	36
40/10	○		SK40	10	32	24	160	42
40/12	○		SK40	12	32	24	160	47
40/14	○		SK40	14	34	27	160	47
40/16	○		SK40	16	34	27	160	50
40/18	○		SK40	18	42	33	160	50
40/20	○		SK40	20	42	33	160	52
40/25	○		SK40	25	53	44	160	58
50/06	○		SK50	6	27	21	160	36

N° article	242727 Shape AD/AF overlong	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/08	○		SK50	8	27	21	160	36
50/10	○		SK50	10	32	24	160	42
50/12	○		SK50	12	32	24	160	47
50/14	○		SK50	14	34	27	160	47
50/16	○		SK50	16	34	27	160	50
50/18	○		SK50	18	42	33	160	50
50/20	○		SK50	20	42	33	160	52
50/25	○		SK50	25	53	44	160	58
50/32	○		SK50	32	53	44	160	58

N° article	242729 Shape AD/AF,ZG200	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/06	○		SK50	6	27	21	200	36
50/08	○		SK50	8	27	21	200	36
50/10	○		SK50	10	32	24	200	42
50/12	○		SK50	12	32	24	200	47
50/14	○		SK50	14	34	27	200	47

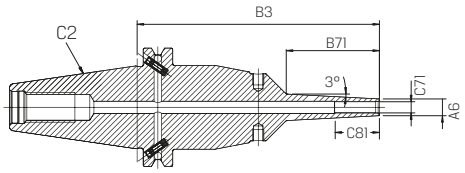
N° article	242729 Shape AD/AF,ZG200	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/16	○		SK50	16	34	27	200	50
50/18	○		SK50	18	42	33	200	50
50/20	○		SK50	20	42	33	200	52
50/25	○		SK50	25	53	44	200	58
50/32	○		SK50	32	53	44	200	58

Shrink-fit chuck ISO 7388-1

HAIMER

Design and use:
- for 5-axis machining in mould making and medical technology
- efficient milling possible even with large protruding of tilted tools
- the tip is extremely slim, the basis reinforced
- 3° incline in the tip area
- with threaded holes for balancing screws
- for carbide tools with shank tolerance h6
- shrinking only with shrink and cooling sleeves
- concentricity ‹ 3 µm

Note:
Matching accessories see page 24/464 et seq.



ISO 7388-1 | Form AD/AF | HPC
HSC | G 2,5 25.000 min⁻¹ | CAD



N° article	242805 Power, Mini, ZG130	C2	C71 mm	A6 mm	B3 mm	B71 mm	C81 mm
40/03	○	SK40	3	9	130	50	–
40/04	○	SK40	4	10	130	50	–
40/05	○	SK40	5	11	130	50	–
40/06	○	SK40	6	12	130	50	–
40/08	○	SK40	8	14	130	50	–
40/10	○	SK40	10	16	130	50	68
40/12	○	SK40	12	18	130	50	75
40/16	○	SK40	16	24	130	50	75
50/06	○	SK50	6	12	130	50	–
50/08	○	SK50	8	14	130	50	–

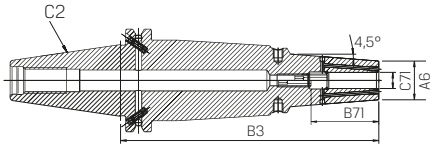
N° article	242807 Power, Mini, overlong	C2	C71 mm	A6 mm	B3 mm	B71 mm	C81 mm
40/03	○	SK40	3	9	160	80	–
40/04	○	SK40	4	10	160	80	–
40/05	○	SK40	5	11	160	80	–
40/06	○	SK40	6	12	160	80	–
40/08	○	SK40	8	14	160	80	–
40/10	○	SK40	10	16	160	80	68
40/12	○	SK40	12	18	160	80	75
40/16	○	SK40	16	24	160	80	75

Design and use:
- for highest cutting performance at HSM operations
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- smoother running results in better surface quality and spares tools, spindle and machine
- better dimensional stability
- with closable Cool Jet holes
- with threaded holes for balancing screws

Note:
- all versions also available with® SAFE-LOCK
- matching accessories see page 24/464 et seq.

The long versions (B3 = 130-200 mm) with slim tip are especially versatile in use
- high rigidity
- vibration-damping
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- universally applicable, saves space in the tool magazine
- concentricity ‹ 3 µm

ISO 7388-1 | Form AD/AF | HPC
HSC | G 2,5 25.000 min⁻¹ | CAD





N° article	242810 Power, ultra short	C2	C71 mm	A6 mm	B3 mm	B71 mm
40/06	○	SK40	6	22	65	36
40/08	○	SK40	8	22	65	36
40/10	○	SK40	10	26,5	65	42
40/12	○	SK40	12	26,5	65	47
40/14	○	SK40	14	29,5	65	47
40/16	○	SK40	16	29,5	65	50
40/18	○	SK40	18	35,5	65	50
40/20	○	SK40	20	35,5	65	52
40/25	○	SK40	25	45,5	75	58
40/32	○	SK40	32	45,5	80	58

N° article	242811 Power, short	C2	C71 mm	A6 mm	B3 mm	B71 mm
50/06	○	SK50	6	21	80	36
50/08	○	SK50	8	21	80	36
50/10	○	SK50	10	27	80	42
50/12	○	SK50	12	27	80	47
50/14	○	SK50	14	33,3	80	47
50/16	○	SK50	16	33,3	80	50
50/18	○	SK50	18	44,7	80	50
50/20	○	SK50	20	44,7	80	52
50/25	○	SK50	25	44	100	58

N° article	242815 Power, ZG130	C2	C71 mm	A6 mm	B3 mm	B71 mm
40/06	○	SK40	6	21	130	36
40/08	○	SK40	8	21	130	36
40/10	○	SK40	10	24	130	42
40/12	○	SK40	12	24	130	47
40/14	○	SK40	14	27	130	47
40/16	○	SK40	16	27	130	50
40/18	○	SK40	18	33	130	50
40/20	○	SK40	20	33	130	52
40/25	○	SK40	25	44	130	58
40/32	○	SK40	32	44	130	58

N° article	242817 Power, overlong	C2	C71 mm	A6 mm	B3 mm	B71 mm
40/06	○	SK40	6	21	160	36
40/08	○	SK40	8	21	160	36
40/10	○	SK40	10	24	160	42
40/12	○	SK40	12	24	160	47
40/14	○	SK40	14	27	160	47
40/16	○	SK40	16	27	160	50
40/18	○	SK40	18	33	160	50
40/20	○	SK40	20	33	160	52
40/25	○	SK40	25	44	160	58
40/32	○	SK40	32	44	160	58
50/06	○	SK50	6	21	160	36
50/08	○	SK50	8	21	160	36
50/10	○	SK50	10	27	160	42
50/12	○	SK50	12	27	160	47
50/14	○	SK50	14	33	160	47
50/16	○	SK50	16	33	160	50
50/18	○	SK50	18	44	160	50
50/20	○	SK50	20	44	160	52
50/25	○	SK50	25	44	160	58

N° article	242819 Power, ZG200	C2	C71 mm	A6 mm	B3 mm	B71 mm
50/06	○	SK50	6	21	200	36
50/08	○	SK50	8	21	200	36
50/10	○	SK50	10	27	200	42
50/12	○	SK50	12	27	200	47
50/14	○	SK50	14	33	200	47
50/16	○	SK50	16	33	200	50
50/18	○	SK50	18	44	200	50
50/20	○	SK50	20	44	200	52
50/25	○	SK50	25	44	200	58

Hydraulic expansion chuck ISO 7388-1

SCHUNK

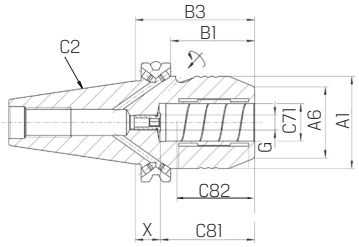
Design:
- short, heavy-duty version, with axial length adjustment
- for automatic tool change
- with vibration damping and radial rigidity
- concentricity ⟨ 0.003 mm
- clamping without peripheral equipment, simply with an Allen key, all commercially available shank types can be clamped

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.

ISO 7388-1	Form AD/AF	HPC	HSC	G 2,5 25.000 min⁻¹



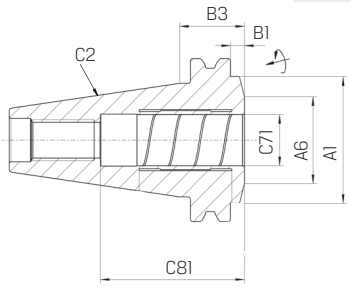
N° article	241400 TENDO E Compact, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/12	○	SK40	12	42	32	50	30,9	4	46	36	M8×1	110	1,1
40/16	○	SK40	16	49,25	38	64,5	45,4	13,5	51	41	M8×1	350	1,2
40/20	○	SK40	20	49,25	38	64,5	45,4	13,5	51	41	M8×1	520	1,3
50/12	○	SK50	12	42	32	50	31,9	4	46	36	M8×1	110	2,8
50/20	○	SK50	20	49,25	38	64,5	45,4	13,5	51	41	M8×1	520	3,1
50/32	○	SK50	32	72	58,5	81	61,9	20	61	51	M8×1	900	4,1



Design:
- extra short version, for automatic tool change
- with vibration damping and radial rigidity
- permanent concentricity and alternating repeatability ⟨ 0.003 mm
- clamping without peripheral equipment, simply with an Allen key, all commercially available shank types can be clamped

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.

ISO 7388-1	Form AD	HPC	HSC	G 2,5 25.000 min⁻¹





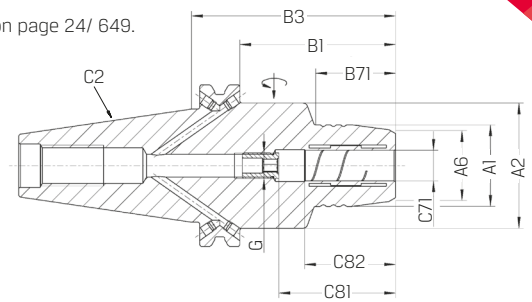
N° article	241401 TENDO ES	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	C81 mm	Torque min. Nm	Weight kg
40/20	○	SK40	20	49,25	34	24,6	5,5	51,7	330	0,7
50/32	○	SK50	32	70,5	44,5	30,9	11,85	61	650	2,5

Design:
- with adjusting screw for axial length adjustment
- for automatic tool holder change
- voltage without peripheral devices
- concentricity ⟨ 0.003 mm at 2.5×D
- holes for mould AF sealed with grub screws on delivery
- hole for data carrier optional

Note:
Intermediate sleeve see 241461 and 241462 on page 24/ 649.

NEW

ISO 7388-1	Form AD/AF	HPC	HSC	G 2,5 25.000 min⁻¹





N° article	241402 TENDO Silver	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/06	○	SK40	6	26	49,25	22	80,5	61,4	29,5	37	27	M5	16	1,4
40/08	○	SK40	8	28	49,25	24	80,5	61,4	30	37	27	M6	23	1,4
40/10	○	SK40	10	30	49,25	26	80,5	61,4	31	41	3131	M8×1	45	1,4
40/12	○	SK40	12	32	49,25	28	80,5	61,4	31,5	46	36	M10×1	90	1,4
40/16	○	SK40	16	38	49,25	34	80,5	61,4	33	49	39	M12×1	185	1,4
40/18	○	SK40	18	40	49,25	36	80,5	61,4	33	49	39	M12×1	240	1,4
40/20	○	SK40	20	42	49,25	38	80,5	61,4	34	51	41	M16×1	330	1,4
40/25	○	SK40	25	55	65,95	53	80,5	61,4	22	57	47	M16×1	400	1,8
40/32	○	SK40	32	63	72,95	60	80,5	61,4	25,5	61	51	M16×1	650	2
50/12	○	SK50	12	32	49,25	28	80,5	61,45	31,5	46	3636	M10×1	90	3,2
50/16	○	SK50	16	38	49,25	34	80,5	61,45	33	49	39	M12×1	185	3,2
50/20	○	SK50	20	42	49,25	38	80,5	61,45	34	51	41	M16×1	330	3,3
50/32	○	SK50	32	64	70,25	60	103,2	81,15	62,5	61	51	M16×1	650	4,4

Hydraulic expansion chuck ISO 7388-1

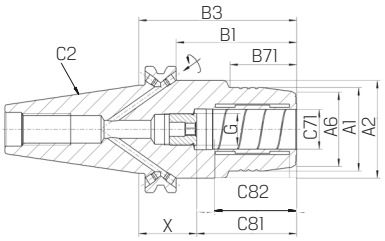
SCHUNK

Design:
- short, heavy version with axial length adjustment
- vibration damping
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ≤ 0.003 mm
- maximum speed 50,000 rpm^{-1}

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.

ISO 7388-1 | Form AD/AF | HPC | HSC | G 2,5 25.000 min^{-1}

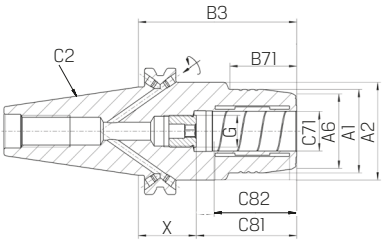




N° article	241404 TENDO KS	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
30/06	○	SK30	6	26	45	23	55	36	20	18	37	27	M5	16	0,6
30/08	○	SK30	8	28	45	25	55	36	20	18	37	27	M6	23	0,6
30/10	○	SK30	10	30	45	27	55	36	21	14	41	31	M8×1	45	0,6
30/12	○	SK30	12	32	45	29	55	36	22	9	46	36	M10×1	90	0,6
30/16	○	SK30	16	38	45	35	90	71	50	41	49	39	M6	185	0,6
30/20	○	SK30	20	42	45	38	90	71	50	39	51	41	M6	330	0,6
40/06	○	SK40	6	26	49,5	22	80,5	61,5	29,5	43,5	37	27	M5	16	1,4
40/08	○	SK40	8	28	49,5	24	80,5	61,5	30	43,5	37	27	M6	23	1,4
40/10	○	SK40	10	30	49,5	26	80,5	61,5	31	39,5	41	31	M8×1	45	1,4
40/12	○	SK40	12	32	49,5	28	80,5	61,5	31,5	34,5	46	36	M10×1	90	1,4
40/16	○	SK40	16	38	49,5	34	80,5	61,5	33	31,5	49	39	M12×1	185	1,4
40/20	○	SK40	20	42	49,5	38	80,5	61,5	34	29,5	51	41	M16×1,0	330	1,4
40/25	○	SK40	25	55	66	53	80,5	61,5	22	23,5	57	47	M16×1,0	400	1,8
40/32	○	SK40	32	63	80	60	80,5	61,5	25,5	19,5	61	51	M16×1,0	650	2
50/20	○	SK50	20	42	49,5	38	80,5	61,5	34	29,5	51	41	M16×1,0	330	3,3

Design:
- long, slim version with axial length adjustment
- vibration damping
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ≤ 0.003 mm
- maximum speed 50,000 rpm^{-1}

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.



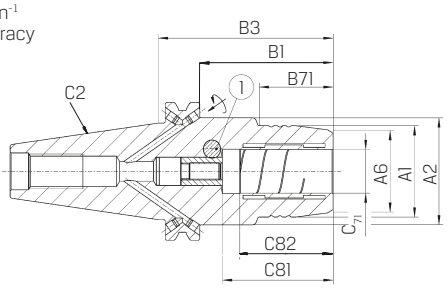
ISO 7388-1 | Form AD/AF | HPC | HSC | G 2,5 25.000 min^{-1}



N° article	241406 TENDO LS	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/06	○	SK40	6	26	49,5	22	110	29,5	73	37	27	M5	16	1,8
40/08	○	SK40	8	28	49,5	24	110	30	73	37	27	M6	23	1,9
40/10	○	SK40	10	30	49,5	26	110	31	69	41	31	M8×1	45	1,9
40/12	○	SK40	12	32	49,5	28	110	31,5	63	47	37	M10×1	90	1,8
40/16	○	SK40	16	38	49,5	34	110	33	61	49	39	M12×1	185	1,9
40/20	○	SK40	20	42	49,5	38	110	34	59	51	41	M16×1	330	1,9
50/20	○	SK50	20	42	49,5	38	110	34	59	51	41	M16×1	330	3,7

Design:
- long, super slim version with axial length adjustment
- for automatic tool change
- balancing quality G2.5 at 25,000 min^{-1}
- permanent run-out and repeat accuracy ≤ 0,006 mm

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min^{-1}





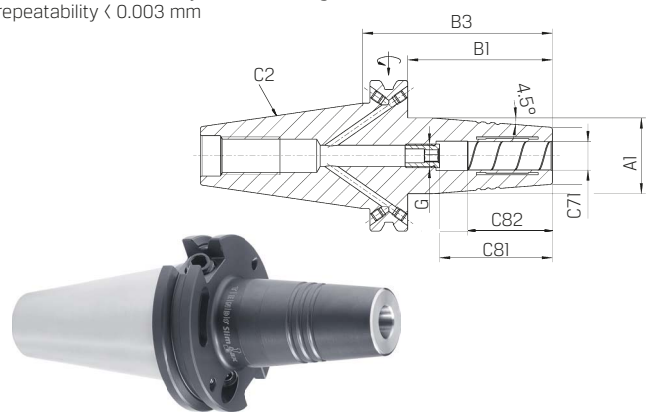
N° article	241408 TENDO LSS	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm
40/06	○	SK40	6	16	26,2	12	200	88,5	40,5	37	27
40/08	○	SK40	8	18	28,2	14	200	89,5	40,5	37	27
40/10	○	SK40	10	20	30,2	16	200	90,5	40,5	41	31
40/12	○	SK40	12	22	32,2	18	200	89,5	40,5	46	36
40/14	○	SK40	14	24	34,2	20	200	90,5	40,5	46	36
40/16	○	SK40	16	26	36,2	22	200	90,5	40,5	49	39
40/20	○	SK40	20	30	40,2	26	200	91,5	40,5	51	41

Hydraulic expansion chuck ISO 7388-1

SCHUNK

Design:
- slim version with axial length adjustment
- for automatic tool change
- balancing quality G2.5 at 25,000 min^{-1}
- permanent concentricity and alternating repeatability ‹ 0.003 mm

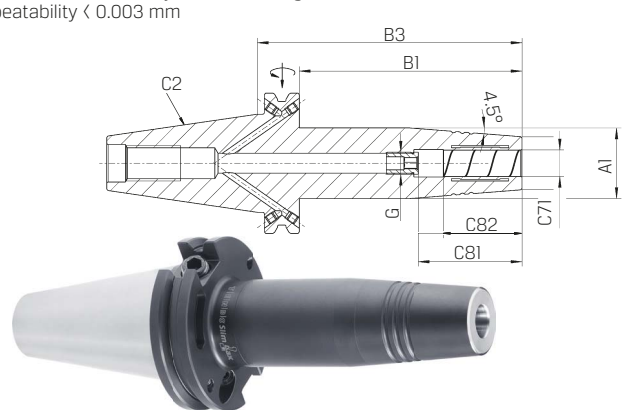
ISO 7388-1 | Form AD/AF | G 2,5 25.000 min^{-1}



N° article	241412 TENDO, slim, short	C2	C71 mm	C72 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm
40/06	○	SK40	6	10	27	80	60,9	26	26
40/08	○	SK40	8	10	27	80	60,9	36	26
40/10	○	SK40	10	10	32	80	60,9	42	32
40/12	○	SK40	12	10	32	80	60,9	47	37
40/16	○	SK40	16	10	34	80	60,9	50	40
40/20	○	SK40	20	10	42	80	60,9	42	42

Design:
- long, slim version with axial length adjustment
- for automatic tool change
- balancing quality G2.5 at 25,000 min^{-1}
- permanent concentricity and alternating repeatability ‹ 0.003 mm

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min^{-1}



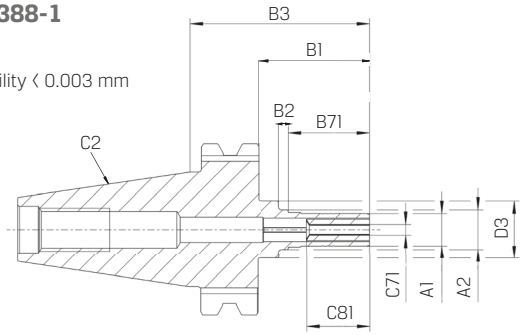
N° article	241413 TENDO slim, long	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	G
40/06	○	SK40	6	27	120	100,9	36	26	M5
40/08	○	SK40	8	27	120	100,9	36	26	M6
40/10	○	SK40	10	32	120	100,9	42	32	M8 × 1
40/12	○	SK40	12	32	120	100,9	47	37	M10 × 1
40/16	○	SK40	16	34	120	100,9	50	40	M12 × 1
40/20	○	SK40	20	42	120	100,9	52	42	M16 × 1

Polygonal chuck TRIBOS ISO 7388-1

SCHUNK

Design:
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- for automatic tool change
- hole for data carrier optional
- tool shank quality h6
- without length adjustment screw

Note:
Matching accessories see page 24/470.



ISO 7388-1 | Form AD | HSC | G 2,5 25.000 min^{-1}

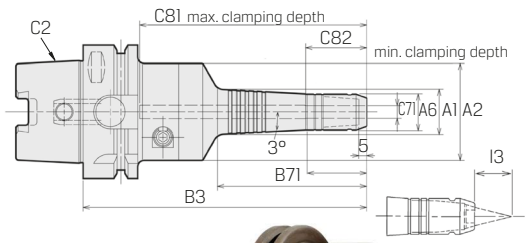


N° article	241415 Mini	C2	C71 mm	A1 mm	A2 mm	D3 mm	B3 mm	B1 mm	B2 mm	B71 mm	C81 mm	Torque min. Nm	Weight kg
3001	○	SK30	1	9	11	16	50	30,95	2,7	22,5	17,5	–	0,25
30015	○	SK30	1,5	9	11	16	50	30,95	2,7	22,5	17,5	–	0,25
3002	○	SK30	2	9	11	16	50	30,95	2,7	22,5	17,5	1	0,25
3003	○	SK30	3	9	11	16	50	30,95	2,7	22,5	17,5	1,5	0,25
3004	○	SK30	4	9	11	16	50	30,95	2,7	22,5	17,5	2,5	0,25
3006	○	SK30	6	9	11	16	50	30,95	2,7	22,5	17,5	4,5	0,25

Hydraulic expansion chuck ISO 7388-1

Design:
- with the flexibility of a collet chuck and with high clamping forces
- clamping range 3.0 - 25.0 mm
- concentricity 0.003 mm
- maximum speed 20,000 rpm^{-1}
- shank tolerance h6
- super slim construction
- 3° draught
- **with patented Jet-Cap coolant seal**

Use:
For highly efficient milling, drilling and reaming For mould construction and die making Applications in the aerospace and automotive industries



ISO 7388-1 | Form AD | G 2,5 20.000 min^{-1}



N° article	241500 PHC-SB-NC	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C81 mm	C82 mm	L3 mm
40/10	○	SK40	10	21,4	46	21	95	37	180	45	50
40/12	○	SK40	12	23,5	46	23	95	38	180	45	60

N° article	241501 PHC-SB-NC	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C81 mm	C82 mm	L3 mm
40/04	○	SK40	4	19,5	46	15	140	76	180	29	20
40/06	○	SK40	6	21,5	46	17	140	76	180	34	30
40/08	○	SK40	8	23,6	46	19	140	77	180	34	40
40/10	○	SK40	10	25,6	46	21	140	77	180	45	50
40/12	○	SK40	12	27,7	46	23	140	78	180	45	60

Our trademarks

PREMUS®
HIGH PERFORMANCE BY PRECITOOL

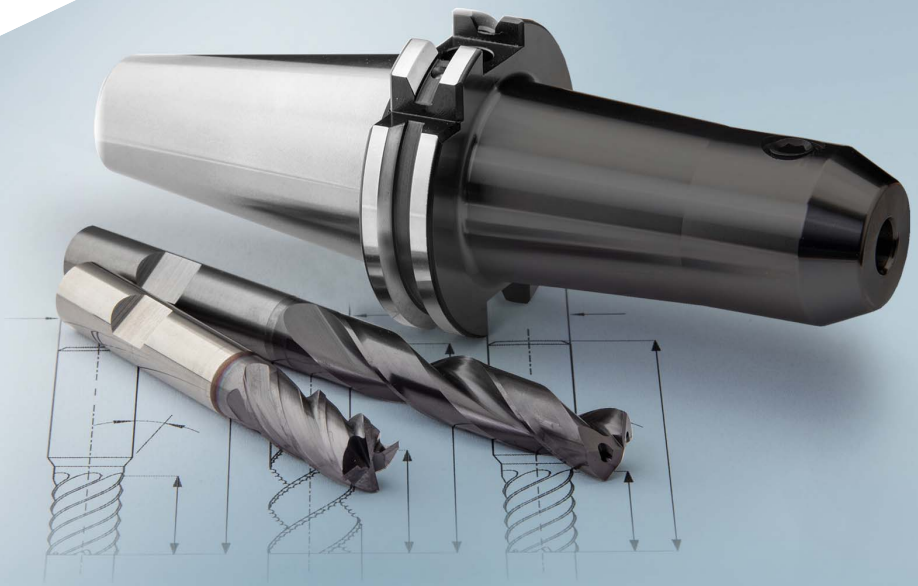
HIGH PERFORMANCE



- high-performance
- outstanding price/performance ratio
- innovative
- best-in-class

PRETEC®
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DAILY BREAD



- good performance
- reasonable price
- sophisticated & proven

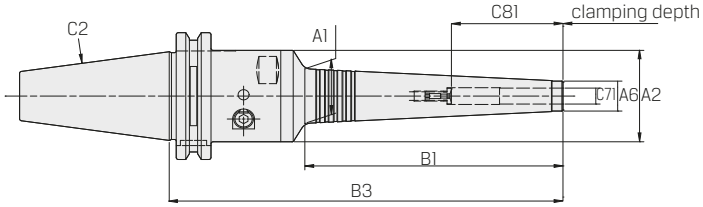
Hydraulic expansion chuck ISO 7388-1

ISO 7388-1	Form AD	HPC	HSC	G 2,5 25.000 min⁻¹

Design:
- with the flexibility of a collet chuck and with high clamping forces
- CAD data free of charge
- clamping range 1.0 - 25.0 mm
- concentricity 0.003 mm
- maximum speed 15,000 rpm^{-1}
- shank tolerance h6
- internal coolant supply possible, air outlet holes are to be closed with two screws M4 × 5
- for chuck size 40/12 HS clamping sleeve to reduce the diameter

Use:
For universal milling, drilling and reaming

Note:
Clamping sleeve 241499 see page 24/470.





N° article	241490 PHC-SB, short, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	C81 mm
40/03	○	SK40	3	18,5	46	11	135	71	18
40/04	○	SK40	4	18,5	46	11	135	71	24
40/06	○	SK40	6	20,5	46	13	135	71	29
40/08	○	SK40	8	22,6	46	15	135	72	29
40/10	○	SK40	10	24,6	46	17	135	72	40
40/12	○	SK40	12	26,7	46	19	135	73	40

N° article	241491 PHC-SB, long, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	C81 mm
40/06	○	SK40	6	22,2	46	13	150	87	29
40/08	○	SK40	8	24,2	46	15	150	87	29
40/10	○	SK40	10	26,3	46	17	150	88	40
40/12	○	SK40	12	28,3	46	19	150	88	40
40/20	○	SK40	20	34,7	62	28	150	63	40

N° article	241492 PHC-SB, overlong, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	C81 mm
40/06	○	SK40	6	23,7	46	13	165	102	29
40/08	○	SK40	8	25,8	46	15	165	103	29
40/10	○	SK40	10	27,8	46	17	165	103	40
40/12	○	SK40	12	30	46	19	165	104	40
40/16	○	SK40	16	33,8	52,5	23	165	103	80

N° article	241493 PHC-SB, extra long, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	C81 mm
40/06	○	SK40	6	25,4	46	13	180	118	29
40/08	○	SK40	8	27,4	46	15	180	118	29
40/10	○	SK40	10	29,5	46	17	180	119	40
40/12	○	SK40	12	31,5	46	19	180	119	40
40/16	○	SK40	16	33,8	52,5	23	180	103	40
40/20	○	SK40	20	37,8	62	28	180	93	40

Power chuck CTS ISO 7388-1

ISO 7388-1	Form AD	HPC	HSC

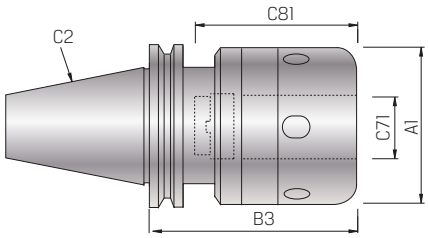
Design:
- basic setting form AD
- concentricity 0.005 mm
- maximum speed 20,000 rpm^{-1}
- internal coolant supply possible, air outlet holes are to be closed with 2 screws M4 × 5
- **241600 40/20:** Without undercut to ISO 7388-1 in front of the gripper collar

Note:
Matching accessories see page 24/471.

N° article	241600 extra short	C2	C71 mm	A1 mm	B3 mm	C81 mm
40/20	○	SK40	20	52	75	56

N° article	241602 short	C2	C71 mm	A1 mm	B3 mm	C81 mm
40/16	○	SK40	16	45	90	65
40/20	○	SK40	20	52	90	80
50/16	○	SK50	16	45	90	65
50/20	○	SK50	20	52	90	80
50/32	○	SK50	32	73	120	95

N° article	241604 long	C2	C71 mm	A1 mm	B3 mm	C81 mm
40/20	○	SK40	20	52	105	80
40/25	●	SK40	25	61	105	80
40/32	○	SK40	32	73	105	85
50/16	○	SK50	16	45	105	65
50/20	○	SK50	20	52	105	80
50/25	○	SK50	25	61	105	80
50/32	○	SK50	32	73	120	105





N° article	241606 extra long	C2	C71 mm	A1 mm	B3 mm	C81 mm
40/20	○	SK40	20	52	120	80
40/32	○	SK40	32	73	120	85

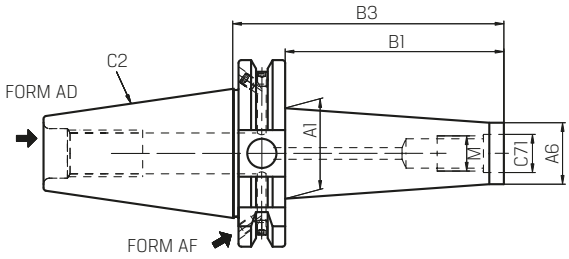
Screw-in chucks ISO 7388-1

PREMUS

ISO 7388-1 | Form AD/AF | G 2,5 25.000 min⁻¹

Use:
For mounting screw-in milling cutters with thread

Note:
Also available in cylindrical version
Matching accessories see page 24/472.





N° article	241079 extra short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
40×M6	○	SK40	6,5	13	10	44	25	M6
40×M8	○	SK40	8,5	15	13	44	25	M8
40×M10	○	SK40	10,5	20	18	44	25	M10

N° article	241079 extra short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
40×M12	○	SK40	12,5	24	21	44	25	M12
40×M16	●	SK40	17	29	29	44	25	M16

N° article	241080 short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
40×M6	○	SK40	6,5	20	10	69	50	M6
40×M8	●	SK40	8,5	23	13	69	50	M8
40×M10	●	SK40	10,5	23	18	69	50	M10
40×M12	●	SK40	12,5	23	21	69	50	M12
40×M16	●	SK40	17	34	29	69	50	M16

N° article	241080 short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
50×M8	○	SK50	8,5	23	13	69	50	M8
50×M10	○	SK50	10,5	23	18	69	50	M10
50×M12	○	SK50	12,5	24	21	69	50	M12
50×M16	●	SK50	17	34	29	69	50	M16

N° article	241081 long	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
40×M6	○	SK40	6,5	23	10	94	75	M6
40×M8	○	SK40	8,5	23	13	94	75	M8
40×M10	●	SK40	10,5	28	18	94	75	M10
40×M12	●	SK40	12,5	31	21	94	75	M12
40×M16	●	SK40	17	34	29	94	75	M16

N° article	241081 long	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
50×M8	○	SK50	8,5	25	13	119	100	M8
50×M10	○	SK50	10,5	32	18	119	100	M10
50×M12	○	SK50	12,5	33	21	119	100	M12
50×M16	●	SK50	17	36	29	119	100	M16

N° article	241082 overlong	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
40×M8	○	SK40	8,5	25	13	119	100	M8
40×M10	●	SK40	10,5	32	18	119	100	M10
40×M12	●	SK40	12,5	32	21	119	100	M12
40×M16	●	SK40	17	36	29	119	100	M16

N° article	241082 overlong	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
50×M8	○	SK50	8,5	30	13	169	150	M8
50×M10	○	SK50	10,5	36,5	18	169	150	M10
50×M12	○	SK50	12,5	40	21	169	150	M12
50×M16	○	SK50	17	43	29	169	150	M16

Test mandrel ISO 7388-1

PREMUS

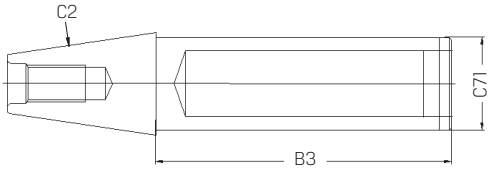
ISO 7388-1 | Form A

Design:
- made of alloyed case-hardening steel, groand
- tensile strength of min 800 N/mm², hardened, (min. HRC 56)
- permissible radial run-out 0.003 mm, diameter tolerance ± 0.003

Use:
For certification of machine tools in accordance with ISO recommendations R230, for runout testing and machine spindle aligning

Delivery:
With wooden stand and measurement report

Info:
Can be used as DIN 2080 with annular grooves



N° article	240690	C2	C71 mm	B3 mm
40×40	●	SK40	40	300
50×50	●	SK50	50	350



Weldon chucks ISO 7388-2

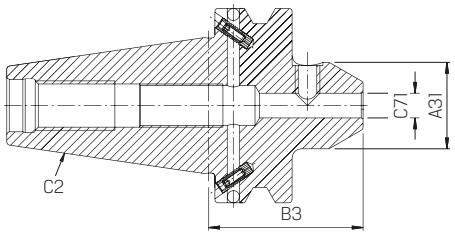
HAIMER PREMUS PRETEC

ISO 7388-2 | Form JD | Form JD/JF | DIN 6359 | CAD

Use:
- for clamping of milling cutters with parallel shank and lateral drive surface to DIN 1835-B and DIN 6535-HB, similar to DIN 6359 with steep taper
- ISO 7388-2 shape JD/JF with central coolant supply and resealable coolant ducts at the collar (BT40 & BT50)

Delivery:
With clamping screw

Note
241003, 241004, 241007: C71 ≤ 10 ∅ conical





N° article	240990 PRETEC Shape JD, ultra short, G6.3 at 15,000 1/min	240995 PREMUS Shape JD/JF, ultra short, G6.3 at 15,000 1/min	C2	C71 mm	240990 A1 mm	240990 B3 mm	240995 A1 mm	240995 B3 mm
30/06	○	–	BT30	6	25	35	–	–
30/08	○	–	BT30	8	28	35	–	–
30/10	○	–	BT30	10	35	35	–	–
30/12	○	–	BT30	12	42	35	–	–
30/14	○	–	BT30	14	42	35	–	–
30/16	●	–	BT30	16	42	35	–	–
30/18	○	–	BT30	18	43	35	–	–
30/20	●	–	BT30	20	43	35	–	–
30/25	●	–	BT30	25	46	35	–	–
40/16	–	○	BT40	16	–	–	44	35
40/20	–	○	BT40	20	–	–	44	35
40/25	–	○	BT40	25	–	–	49	60
40/32	–	○	BT40	32	–	–	72	70
50/16	–	○	BT50	16	–	–	70	44
50/20	–	○	BT50	20	–	–	70	44
50/25	–	○	BT50	25	–	–	70	44
50/32	–	○	BT50	32	–	–	80	44

N° article	241002 PRETEC Form JD, kurz, G6,3 bei 15.000 1/min	241000 PREMUS Shape JD/JF, short, G6.3 at 15,000 1/min	241001 HAIMER Shape JD/JF, short, G2.5 at 22,000 1/min	C2	C71 mm	241002 A1 mm	241002 B3 mm	241000 A1 mm	241000 B3 mm	241001 A1 mm	241001 B3 mm
30/06	●	–	–	BT30	6	25	50	–	–	–	–
30/08	●	–	–	BT30	8	28	50	–	–	–	–
30/10	●	–	–	BT30	10	35	50	–	–	–	–
30/12	●	–	–	BT30	12	42	55	–	–	–	–
30/14	○	–	–	BT30	14	44	63	–	–	–	–
30/16	●	–	–	BT30	16	48	63	–	–	–	–
30/18	○	–	–	BT30	18	50	63	–	–	–	–
30/20	●	–	–	BT30	20	52	70	–	–	–	–
40/06	●	●	○	BT40	6	25	50	25	50	25	50
40/08	●	●	○	BT40	8	28	50	28	50	28	50
40/10	●	●	○	BT40	10	35	63	35	63	35	63
40/12	●	●	○	BT40	12	42	63	42	63	42	63
40/14	●	○	○	BT40	14	44	63	44	63	44	63
40/16	●	●	○	BT40	16	48	63	48	63	48	63
40/18	○	○	○	BT40	18	50	63	50	63	50	63
40/20	●	●	○	BT40	20	52	63	52	63	52	63
40/25	●	●	○	BT40	25	65	90	65	90	59	90
40/32	●	●	○	BT40	32	72	100	72	100	72	100
40/40	●	–	–	BT40	40	80	105	–	–	–	–
50/06	○	○	○	BT50	6	25	63	25	63	25	63
50/08	○	○	○	BT50	8	28	63	28	63	28	63
50/10	○	○	○	BT50	10	35	70	35	80	35	70
50/12	○	○	○	BT50	12	42	80	42	80	42	80
50/14	○	○	–	BT50	14	44	80	44	80	–	–
50/16	○	○	○	BT50	16	48	80	48	80	48	80
50/18	○	○	–	BT50	18	50	80	50	80	–	–
50/20	○	○	○	BT50	20	52	80	52	80	52	80
50/25	○	○	○	BT50	25	65	100	65	100	65	100
50/32	○	○	○	BT50	32	72	105	72	105	72	105
50/40	○	○	○	BT50	40	80	120	80	120	78	115
50/50	–	○	–	BT50	50	–	–	100	125	–	–

Weldon chucks ISO 7388-2

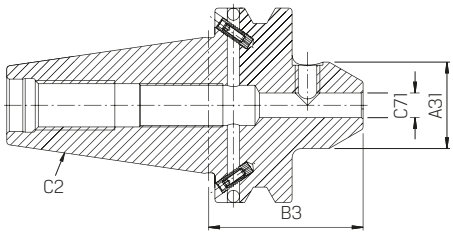
HAIMER PREMUS PRETEC

ISO 7388-2 | Form JD | Form JD/JF | DIN 6359 | CAD

Use:
- for clamping of milling cutters with parallel shank and lateral drive surface to DIN 1835-B and DIN 6535-HB, similar to DIN 6359 with steep taper
- ISO 7388-2 shape JD/JF with central coolant supply and resealable coolant ducts at the collar (BT40 & BT50)

Delivery:
With clamping screw

Note:
241003/241004, 241007: C71 10 Ø conical





N° article	241003 PRETEC Shape JD, long, G6.3 at 15,000 1/min	241004 PREMUS Shape JD/JF, long, G6.3 at 15,000 1/min	241005 HAIMER Shape JD/JF, long, G2.5 at 22,000 1/min	C2	C71 mm	A1 mm	B3 mm
40/06	●	○	○	BT40	6	25	100
40/08	●	○	○	BT40	8	28	100
40/10	●	○	○	BT40	10	35	100
40/12	●	○	○	BT40	12	42	100
40/14	○	○	–	BT40	14	44	100
40/16	●	○	○	BT40	16	48	100
40/18	○	○	–	BT40	18	50	100
40/20	○	○	○	BT40	20	52	100
50/06	–	○	–	BT50	6	25	100
50/08	–	○	–	BT50	8	28	100
50/10	–	○	–	BT50	10	35	100
50/12	–	○	–	BT50	12	42	100
50/14	–	○	–	BT50	14	44	100
50/16	–	○	–	BT50	16	48	100
50/18	–	○	–	BT50	18	50	100
50/20	–	○	–	BT50	20	52	100

N° article	241007 PREMUS Shape JD/JF, overlong, G6.3 at 15,000 1/min	C2	C71 mm	A1 mm	B3 mm
40/06	●	BT40	6	25	160
40/08	○	BT40	8	28	160
40/10	○	BT40	10	35	160
40/12	○	BT40	12	42	160
40/14	○	BT40	14	44	160
40/16	○	BT40	16	48	160
40/18	○	BT40	18	50	160
40/20	○	BT40	20	52	160
40/25	○	BT40	25	65	160
40/32	○	BT40	32	72	160
50/06	○	BT50	6	25	160
50/08	○	BT50	8	28	160
50/10	○	BT50	10	35	160
50/12	○	BT50	12	42	160
50/14	○	BT50	14	44	160
50/16	○	BT50	16	48	160
50/18	○	BT50	18	50	160
50/20	○	BT50	20	52	160
50/25	○	BT50	25	65	160
50/32	○	BT50	32	72	160
50/40	○	BT50	40	80	160

Combi shell mill arbor ISO 7388-2

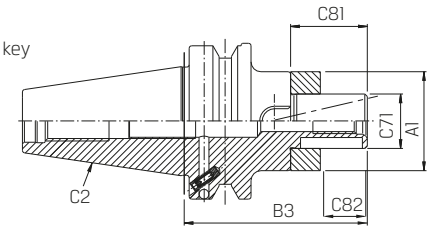
HAIMER PRETEC

ISO 7388-2 | Form JD | Form JD/JF

Use:
- for clamping shell end mills DIN 841 and DIN 1880 as well as angular milling cutters DIN 842 and cutters DIN 1830, similar to DIN 6358 with steep taper ISO 7388-2 shapes AD and ADB
- shape JD/JF with central coolant supply and resealable coolant ducts at the collar (BT40 & BT50)

Delivery:
Complete with milling cutter tightening bolt, driving ring and feather key

Note:
- 241050 BT30 balanced with G2.5 at 25,000 1/min
- matching accessories see page 24/443 et seq.





N° article	241050 PRETEC Shape JD, short, G6.3 at 15,000 1/min	241048 HAIMER Shape JD/JF, short, G2.5 at 22,000 1/min	C2	C71 mm	A1 mm	241050 B3 mm	241048 B3 mm	C81 mm	C82 mm
30×16	○	–	BT30	16	32	67	–	27	17
30×22	○	–	BT30	22	40	69	–	31	19
30×27	○	–	BT30	27	48	76	–	33	21
40×16	●	○	BT40	16	32	84	72	27	17
40×22	●	○	BT40	22	40	74	74	31	19
40×27	●	○	BT40	27	48	76	76	33	21
40×32	●	○	BT40	32	58	84	84	38	24

N° article	241050 PRETEC Shape JD, short, G6.3 at 15,000 1/min	241048 HAIMER Shape JD/JF, short, G2.5 at 22,000 1/min	C2	C71 mm	A1 mm	241050 B3 mm	241048 B3 mm	C81 mm	C82 mm
40×40	○	○	BT40	40	70	87	97	41	27
50×16	○	–	BT50	16	32	87	–	27	17
50×22	○	–	BT50	22	40	89	–	31	19
50×27	○	–	BT50	27	48	91	–	33	21
50×32	○	–	BT50	32	58	94	–	38	24
50×40	○	–	BT50	40	70	97	–	41	27

N° article	241051 PRETEC Shape JD, long, G6.3 at 15,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
40×16	●	BT40	16	32	117	27	17
40×22	●	BT40	22	40	119	31	19
40×27	●	BT40	27	48	121	33	21
40×32	○	BT40	32	58	124	38	24
40×40	○	BT40	40	70	127	41	27

N° article	241051 PRETEC Shape JD, long, G6.3 at 15,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
50×16	○	BT50	16	32	117	27	17
50×22	○	BT50	22	40	119	31	19
50×27	○	BT50	27	48	121	33	21
50×32	○	BT50	32	58	124	38	24
50×40	○	BT50	40	70	127	41	27

Cutter head holder ISO 7388-2

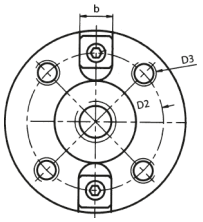
HAIMER PREMUS PRETEC

ISO 7388-2 | Form JD | Form JD/JF

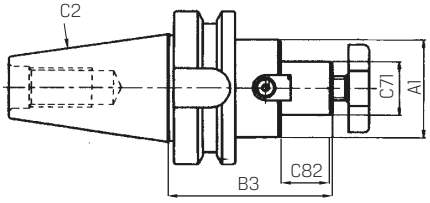
Design:
- for holding cutting heads and milling cutters with transverse groove DIN 1880
- from Ø 40 mounting to DIN 2079 possible (4 additional thread holes)
- similar to DIN 6357 with steep taper ISO 7388-2 form JD and JF
- form JD/JF with central coolant supply and resealable coolant ducts at the collar

Delivery:
Complete with tightening bolt for milling cutter

Note:
- coolant supply bore at front for milling cutter and internal cooling (only 241041 and 241042)
- matching accessories see page 24/443 et seq.



from size 40





N° article	241040 PRETEC Shape JD, short, G6.3 at 15,000 1/min	241042 PREMUS Shape JD/JF, short, G2.5 at 25,000 1/min with coolant duct	241041 HAIMER Shape JD/JF, short, G2.5 at 22,000 1/min with coolant duct	C2	C71 mm	241040, 241042 A1 mm	241040, 241042 B3 mm	241041 A1 mm	241041 B3 mm	C82 mm
30×16	○	–	○	BT30	16	38	52	36	52	17
30×22	○	–	○	BT30	22	48	59	42	54	19
30×27	○	–	○	BT30	27	58	61	42	56	21
40×16	–	○	○	BT40	16	38	62	36	52	17
40×22	–	●	○	BT40	22	48	64	48	54	19
40×27	–	○	○	BT40	27	58	66	59	56	21
40×32	–	○	○	BT40	32	78	74	78	89	24
40×40	–	○	○	BT40	40	88	82	87	97	27
50×16	–	○	–	BT50	16	38	77	–	–	17
50×22	–	○	○	BT50	22	48	79	48	74	19
50×27	–	○	○	BT50	27	58	81	60	76	21
50×32	–	○	○	BT50	32	78	84	78	79	24
50×40	–	○	○	BT50	40	88	87	89	82	27
50×60	–	○	–	BT50	60	129	112	–	–	32

N° article	241046 PREMUS Shape JD/JF, long, G2.5 at 25,000 1/min with coolant duct	241044 HAIMER Shape JD/JF, long, G2.5 at 22,000 1/min with coolant duct	C2	C71 mm	241046 A1 mm	241044 A1 mm	B3 mm	C82 mm
40×16	●	–	BT40	16	38	–	117	17
40×22	●	○	BT40	22	48	48	119	19
40×27	●	○	BT40	27	48	59	121	21
40×32	○	–	BT40	32	78	–	124	24
40×40	○	–	BT40	40	88	–	127	27

N° article	241046 PREMUS Shape JD/JF, long, G2.5 at 25,000 1/min with coolant duct	241044 HAIMER Shape JD/JF, long, G2.5 at 22,000 1/min with coolant duct	C2	C71 mm	241046 A1 mm	241044 A1 mm	B3 mm	C82 mm
50×16	○	–	BT50	16	38	–	117	17
50×22	○	–	BT50	22	48	48	119	19
50×27	○	–	BT50	27	48	60	121	21
50×32	○	–	BT50	32	78	78	124	24
50×40	○	–	BT50	40	88	–	127	27

Collet chuck ER ISO 7388-2

HAIMER PREMUS PRETEC

Use:
- for clamping tools with cylindrical shank in collets according to DIN 15488 with steep taper ISO 7388-2 form JD and JF
- form JD/JF with central coolant supply and resealable coolant ducts at the collar

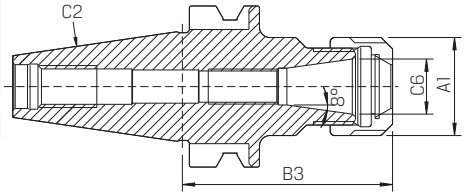
Delivery:
Complete with clamping nut (balanced, with slide coating for increased clamping power)

Note:
- 241020 BT30 balanced with G2.5 at 25,000 1/min
- up to and including ER20 with hexagon nut (only for 241018, 241019 and 241029)
- matching accessories see page 24/445 et seq.

ISO 7388-2 | Form JD | Form JD/JF



N° article	241018 HAIMER Shape JD, ultra short, G2.5 at 22,000 1/min	C2	C6	A1 mm	B3 mm	Clamping range mm
30/ER11	○	BT30	ER11	19	50	0,5 - 7
30/ER16	○	BT30	ER16	28	50	0,5 - 10
30/ER20	○	BT30	ER20	34	50	1,5 - 13



N° article	241020 PRETEC Shape JD, short, G6.3 at 15,000 1/min	241030 PREMUS Shape JD/JF, short, G6.3 at 15,000 1/min	241019 HAIMER Shape JD, short, G2.5 at 22,000 1/min	240919 HAIMER Basic Shape JD, short, G2.5 at 22,000 1/min	241029 HAIMER Shape JD/JF, short, G2.5 at 22,000 1/min	*	C2	C6	241020 A1 mm	241020 B3 mm	241030 A1 mm	241030 B3 mm	240919, 241019, 241029 A1 mm	240919, 241019, 241029 B3 mm	Clamping range mm
30/ER11	–	–	○	–	–		BT30	ER11	–	–	–	–	19	60	0,5 - 7
30/ER16	●	–	○	○	–		BT30	ER16	28	50	–	–	28	60	0,5 - 10
30/ER20	–	–	○	–	–		BT30	ER20	–	–	–	–	34	60	1,5 - 13
30/ER25	○	–	○	○	–		BT30	ER25	42	55	–	–	42	60	1 - 16
30/ER32	●	–	–	–	–		BT30	ER32	50	50	–	–	–	–	1,5 - 20
40/ER16	●	○	–	○	○	*	BT40	ER16	32	70	32	70	28	70	0,5 - 10
40/ER20	–	–	–	–	○		BT40	ER20	–	–	–	–	34	70	1,5 - 13
40/ER25	●	●	–	○	○		BT40	ER25	42	70	42	70	42	70	1 - 16
40/ER32	●	●	–	○	○		BT40	ER32	50	70	50	70	50	70	1,5 - 20
40/ER40	●	○	–	–	○		BT40	ER40	63	70	63	70	63	70	2,5 - 26
50/ER16	–	○	–	–	○	*	BT50	ER16	–	–	32	80	28	70	0,5 - 10
50/ER20	–	–	–	–	○		BT50	ER20	–	–	–	–	34	70	1,5 - 13
50/ER25	○	○	–	–	○		BT50	ER25	42	70	42	80	42	70	1 - 16
50/ER32	○	○	–	–	○		BT50	ER32	50	70	50	80	50	70	1,5 - 20
50/ER40	○	○	–	–	○		BT50	ER40	63	80	63	80	63	80	2,5 - 26

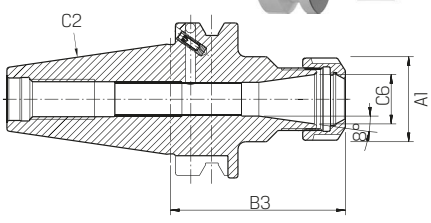
N° article	241031 HAIMER Shape JD ZG80, G2.5 at 22,000 1/min	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER16	○	BT30	ER16	28	80	32,5	0,5 - 10
30/ER20	○	BT30	ER20	34	80	38,5	1,5 - 13
30/ER25	○	BT30	ER25	42	80	41	1 - 16

N° article	241032 HAIMER Form JD ZG90, G2,5 bei 22.000 1/min	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER16	○	BT30	ER16	28	90	32,5	0,5 - 10
30/ER20	○	BT30	ER20	34	90	38,5	1,5 - 13
30/ER25	○	BT30	ER25	42	90	41	1 - 16

N° article	241021 PRETEC Shape JD, long, G2.5 at 25,000 1/min	241022 HAIMER Shape JD/JF, long, G2.5 at 22,000 1/min	241023 PREMUS Shape JD/JF, long, G6.3 at 15,000 1/min	241033 HAIMER Shape JD, long, G2.5 at 22,000 1/min	C2	C6	241021 241023 A1 mm	241022 241033 A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER11	–	–	–	○	BT30	ER11	–	19	100	26,5	0.5 - 7
30/ER16	○	–	–	○	BT30	ER16	28	28	100	32,5	0.5 - 10
30/ER20	–	–	–	○	BT30	ER20	–	34	100	38,5	1.5 - 13
30/ER25	–	–	–	○	BT30	ER25	–	42	100	41	1 - 16
40/ER16	○	○	○	–	BT40	ER16	32	28	100	–	0.5 - 10
40/ER20	–	○	–	–	BT40	ER20	–	34	100	41,5	1.5 - 13
40/ER25	●	○	○	–	BT40	ER25	42	42	100	57	1 - 16
40/ER32	●	○	○	–	BT40	ER32	50	50	100	64	1.5 - 20
40/ER40	○	○	○	–	BT40	ER40	63	63	100	73	2.5 - 26
50/ER16	–	○	○	–	BT50	ER16	32	28	100	–	0.5 - 10
50/ER20	–	○	–	–	BT50	ER20	–	34	100	41,5	1.5 - 13
50/ER25	–	○	○	–	BT50	ER25	42	42	100	57	1 - 16
50/ER32	–	○	○	–	BT50	ER32	50	50	100	64	1.5 - 20
50/ER40	–	○	○	–	BT50	ER40	63	63	100	73	2.5 - 26

N° article	241025 PRETEC Shape JD, overlong, G6.3 at 15,000 1/min	241026 HAIMER Shape JD/JF, overlong, G2.5 at 22,000 1/min	241027 PREMUS Shape JD/JF, overlong, G6.3 at 15,000 1/min	C2	C6	241025 241027 A1 mm	241026 A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER16	●	○	○	BT40	ER16	32	28	160	–	0.5 - 10
40/ER20	–	○	–	BT40	ER20	–	34	160	41,5	1.5 - 13
40/ER25	○	○	○	BT40	ER25	42	42	160	57	1 - 16
40/ER32	●	○	○	BT40	ER32	50	50	160	64	1.5 - 20
40/ER40	○	○	○	BT40	ER40	63	63	160	73	2.5 - 26
50/ER16	–	○	○	BT50	ER16	32	28	160	–	0.5 - 10
50/ER25	–	○	○	BT50	ER25	42	42	160	57	1 - 16
50/ER32	–	○	○	BT50	ER32	50	50	160	64	1.5 - 20
50/ER40	–	○	○	BT50	ER40	63	63	160	73	2.5 - 26



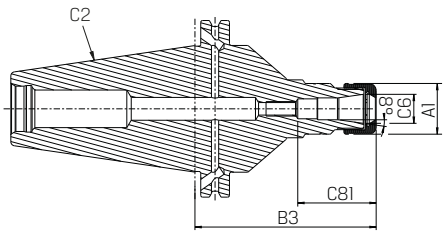


Collet chuck High Precision ISO 7388-2

HAIMER

Design and use:
- especially suitable for micro and fine machining
- with specially coated smooth locknut optimally balanced ⟨ 1 gmm
- for highest cutting performance at HSM operations
- high stiffness with vibration damping and noise reduction
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488 (Attention: When used with standard collets the B3 dimension becomes longer)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws
- BT30 balanced U ⟨ 1 gmm
- BT40 balanced G 2.5 30,000 min^{-1}

ISO 7388-2	Form JD/JF	U ⟨ 1 gmm	G 2,5 25.000 min^{-1}	G 2,5 30.000 min^{-1}



N° article	240900 HP ultra short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER16	○	BT30	ER16	28	55	43	2 - 10
30/ER25	○	BT30	ER25	42	55	51	2 - 16
30/ER32	○	BT30	ER32	50	55	53	2 - 20

N° article	240902 HP short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER16	○	BT30	ER16	28	80	43	2 - 10
30/ER25	○	BT30	ER25	42	80	51	2 - 16
30/ER32	○	BT30	ER32	50	80	53	2 - 20
40/ER16	○	BT40	ER16	28	70	43	2 - 10
40/ER25	○	BT40	ER25	42	70	51	2 - 16
40/ER32	○	BT40	ER32	50	70	64	2 - 20
50/ER16	○	BT50	ER16	28	100	43	2 - 10
50/ER25	○	BT50	ER25	42	100	51	2 - 16
50/ER32	○	BT50	ER32	50	100	53	2 - 20

N° article	240906 HP ZG130	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
50/ER16	○	BT50	ER16	28	130	43	2 - 10
50/ER25	○	BT50	ER25	42	130	51	2 - 16
50/ER32	○	BT50	ER32	50	130	53	2 - 20

Note:
- matching collets see ander 248910, 248920 and 248930 on page 24/456
- fitting tightening bolts see ander 246542 on page 24/445



N° article	240904 HP long	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER16	○	BT40	ER16	28	100	43	2 - 10
40/ER25	○	BT40	ER25	42	100	51	2 - 16
40/ER32	○	BT40	ER32	50	100	53	2 - 20

N° article	240908 HP overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER16	○	BT40	ER16	28	160	43	2 - 10
40/ER25	○	BT40	ER25	42	160	51	2 - 16
40/ER32	○	BT40	ER32	50	160	53	2 - 20

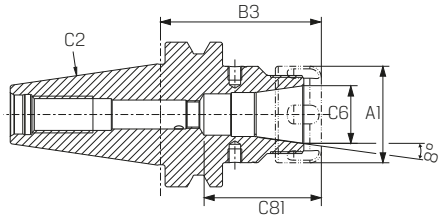
Collet chuck ER ISO 7388-2

HAIMER

Design:
- for highest cutting performance at HSM operations
- high rigidity with vibration damping
- universally applicable also with standard collets
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488 (Attention: When used with standard collets the B3 dimension becomes longer)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws (except 241034)

Note:
Matching collets see ander 248910, 248920 and 248930 on page 24/456.

ISO 7388-2	Form JD/JF	HPC	HSC	G 2,5 25.000 min^{-1}	CAD



N° article	241034 Power, ultra short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER16	○	BT30	ER16	28	55	43	2 - 10
30/ER25	○	BT30	ER25	42	55	51	2 - 16
30/ER32	○	BT30	ER32	50	55	53	2 - 20

N° article	241035 Power, short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
30/ER16	○	BT30	ER16	28	80	43	2 - 10
30/ER25	○	BT30	ER25	42	80	51	2 - 16
30/ER32	○	BT30	ER32	50	80	53	2 - 20
40/ER16	○	BT40	ER16	28	70	43	2 - 10
40/ER25	○	BT40	ER25	42	70	51	2 - 16
40/ER32	○	BT40	ER32	50	70	64	2 - 20
50/ER16	○	BT50	ER16	28	100	43	2 - 10
50/ER25	○	BT50	ER25	42	100	51	2 - 16
50/ER32	○	BT50	ER32	50	100	53	2 - 20

N° article	241037 Power, ZG130	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
50/ER16	○	BT50	ER16	28	130	43	2 - 10
50/ER25	○	BT50	ER25	42	130	51	2 - 16
50/ER32	○	BT50	ER32	50	130	53	2 - 20



N° article	241036 Power, long	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER16	○	BT40	ER16	28	100	43	2 - 10
40/ER25	○	BT40	ER25	42	100	51	2 - 16
40/ER32	○	BT40	ER32	50	100	53	2 - 20

N° article	241038 Power, overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER16	○	BT40	ER16	28	160	43	2 - 10
40/ER25	○	BT40	ER25	42	160	51	2 - 16
40/ER32	○	BT40	ER32	50	160	53	2 - 20

Collet chuck HG ISO 7388-2

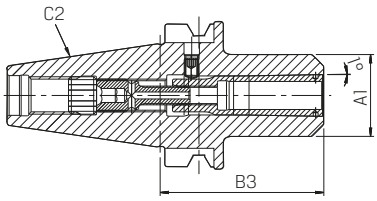
HAIMER

ISO 7388-2 | Form JD/JF | G 2,5 25.000 min⁻¹

Use:
- for highly precise clamping of tools with cylindrical shank with special collets
- excellent for high-speed machining, with steep taper,ISO 7388-2 BT 40 / BT 50 shape JD/JF
- form JD/JF with central coolant supply and resealable coolant ducts at the collar
- shank tolerance h6

Delivery:
- HG chuck with clamping screw
- extraction hook

Note:
Fitting collets see ander 241320 on page 24/460.



N° article	241310 short	C2	C6	A1 mm	B3 mm	Clamping range mm
40/HG01	○	BT40	HG01	30	65	2 - 8
40/HG02	○	BT40	HG02	35	70	10 - 14
40/HG03	○	BT40	HG03	48	75	16 - 20



Collet chuck HDC ISO 7388-2

FAHRION
FAR BEYOND PRECISION

ISO 7388-2 | Form JD | G 2,5 25.000 min⁻¹

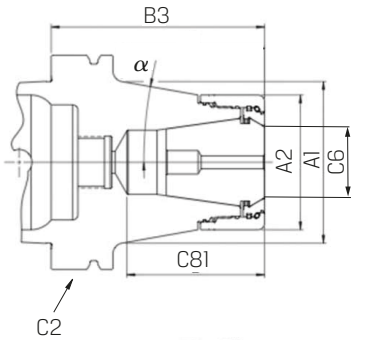
Design:
- highest possible holding torque for high radial and axial forces
- collet sits completely in the cone, thus providing the largest possible contact surface and guidance
- no clamping bridging for optimum fit
- clamping nut with ball bearings for high holding torque to prevent rotation of the collet (up to over 700 Nm holding torque)
- bearing shells with specially treated surface
- trapezoidal fine thread for higher clamping forces
- multi-part clamping nut for additional damping of the entire system
- maximum security against twisting, micro-creep and pull-out

Use:
The use of a FAHRION wedge collet leads to a positive fit on the Weldon surface of the tool, which reliably prevents micro-creep or pull-out of the tool.

Note:
Fitting collets:
GERC32-W (248480)
GERC32-W (248482)

Scope of delivery:
Including clamping nut

NEW





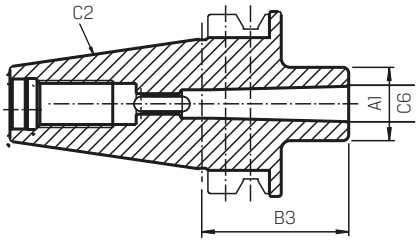
N° article	241309 HDC32, Heavy Duty Chuck	C2	C6	A1 mm	A2 mm	B3 mm	C81 mm	α°
40/ER32/60	○	BT40	ER32	–	53	60	80	–
40/ER32/90	○	BT40	ER32	–	53	90	85	–
50/ER32/75	○	BT50	ER32	55	53	75	114	10
50/ER32/105	○	BT50	ER32	65	53	105	140	10

Intermediate sleeve ISO 7388-2

PRETEC

Use:
For holding tools with morse taper shank with tang according to DIN 228-1 shape B, similar to DIN 6383 with steep taper, SO 7388-2 BT 40/50 shape JD.

ISO 7388-2	Form JD	G 6,3 8.000 min⁻¹





N° article	241060 short	C2	C6	A1 mm	B3 mm
40×1	●	BT40	MK1	25	50
40×2	●	BT40	MK2	32	50
40×3	●	BT40	MK3	40	70
40×4	●	BT40	MK4	48	95

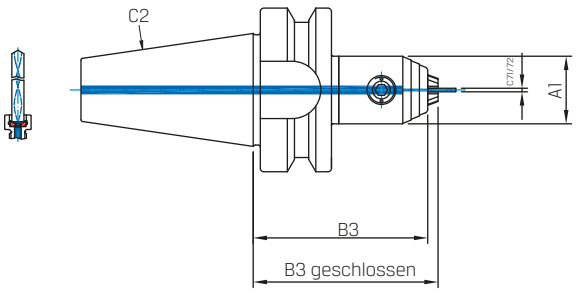
Universal chuck ISO 7388-2

WTE MAPAL GROUP

Design:
- large clamping range from ∅ 0.2 to 6.4 mm and 0.2 to 3.4 mm
- low interfering contour
- secure and quick clamping
- easy handling
- for speeds up to 60,000 max.$^{-1}$
- high concentricity ‹ 0.005

Use:
- suitable for medical technology, watch industry or precision engineering and electronics sector
- even for secure clamping of micro tools with internal cooling

ISO 7388-2	Form JD	G 2,5 25.000 min⁻¹





N° article	241062 Micro	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
30/03	○	BT30	0,2	3,4	19	48	51	0,47
30/06	○	BT30	0,2	6,4	25	58	62	0,9

Universal chuck ISO 7388-2

WTE MAPAL GROUP

Specification:
- for right and left rotation
- compact construction, short length
- runout 0.05 mm, max. perm. speed 7,000 rpm^{-1}
- high holding torque (through bevel gears) lateral clamped with hex T-key
- holding torque at 15 Nm starting torque 30 N/m - 35 N/m
- holding torque at 20 Nm starting torque 70 N/m - 80 N/m
- tool change possible directly in the machine (with the machine spindle at standstill)
- brief clamping and changeover times

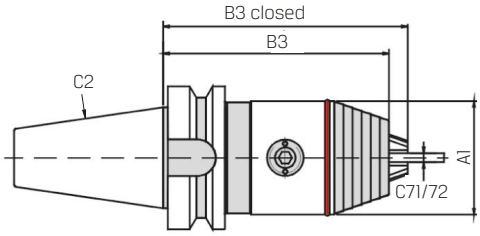
Design:
Steep taper shank according to ISO 7388-2 form A with tightening thread for manual clamping and ring groove for automatic clamping (e.g. Maho, Deckel, Mikron)

Use:
Only for drilling and countersinking in NC machines, slowly rotating machines and for older machinery

Delivery:
Chuck with hexagonal T-key, operating manual and test report

Balancing:
Short drill chucks standard can not be balanced

ISO 7388-2 | Form A

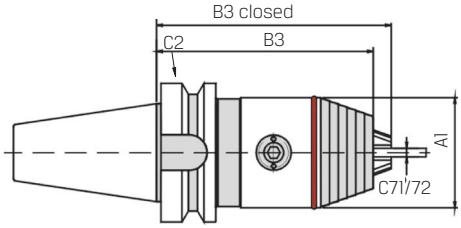




N° article	241064 Standard	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
40/13	●	BT40	0,5	13	50	94	100	1,8
40/16	●	BT40	2,5	16	57	84	102	2

Design:
- for right and left hand rotation, like 240064
- steep taper shank according to ISO 7388-2 shape A

ISO 7388-2 | Form A | G 6,3 25.000 min^{-1}





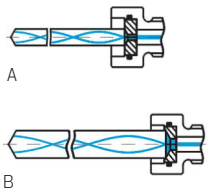
N° article	241066 Precision	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
30/08	344,00	BT30	0,3	8	36	74	77	0,7
30/13	344,00	BT30	0,5	13	50	96	102	1,3
40/08	330,00	BT40	0,3	8	36	78	81	1,4
40/13	283,00	BT40	0,5	13	50	98	104	1,8
40/16	298,00	BT40	2,5	16	57	103	109	2
50/13	341,00	BT50	0,5	13	50	110	116	4,4
50/16	357,00	BT50	2,5	16	57	115	121	4,7

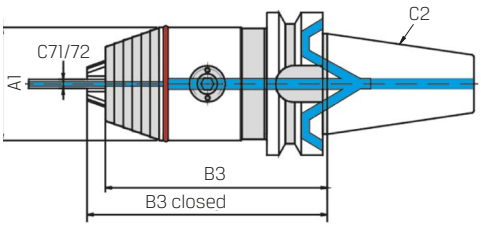
Design:
- for right and left hand rotation, like 240064
- steep taper shank according to ISO 7388-2 shape JD/JF with internal coolant supply either through the centre (shape JD) or via the collar (shape JF) for automatic tool changing

ISO 7388-2 | Form JD/JF | ICS | G 6,3 25.000 min^{-1}

Note:
A: Sealing washer WTE 13 (Ø 2.05 mm) included in delivery. For coolant duct drill 3-6 mm, with smooth shank according to DIN 6535 shape HA.

B: Sealing washer WTE 13 (Ø 4.2 mm) installed in the drill chuck head. For coolant duct drill 6-13 mm, with smooth shank according to DIN 6535 shape HA.







N° article	241067 Precision, ICS	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
40/08	○	BT40	0,3	8	36	81	84	1,3
40/13	○	BT40	0,5	13	50	98	104	1,8
40/16	○	BT40	2,5	16	57	103	109	2
50/13	○	BT50	0,5	13	50	110	116	4,5
50/16	○	BT50	2,5	16	57	115	121	4,7

Quick-change tapping chuck ISO 7388-2

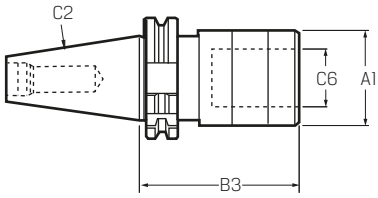
PREMUS

ISO 7388-2 | Form A | G 6,3 8.000 min⁻¹

Design:
- short version with max. length compensation and small weight
- smooth-running length compensation on pressure and tension
- to adjust the difference between machine feed and thread lead by use of a ball cage
- adjustable intensifier for initial cutting pressure
- thread depth controllable within ±0.1 mm
- balanced G6.3 at 8,000 1/min

Use:
Standard chuck to mount taps on mechanically and NC controlled lathes, drilling and milling machines and machining centres

Note:
Matching accessories see page 24/463.





N° article	241069	C2	C6	A1 mm	B3 mm	for taps	Length compensation compression/traction
40/M3 - 12	●	BT40	Gr. 1	36	68	M3-M12	9/ 9
50/M3 - 12	○	BT50	Gr. 1	36	77	M3-M12	9/ 9
40/M6 - 20	●	BT40	Gr. 2	53	95	M6-M20	15/15
50/M6 - 20	○	BT50	Gr. 2	53	103	M6-M20	15/15
50/M14 - 33	○	BT50	Gr. 3	78	143	M14-M33	24/24

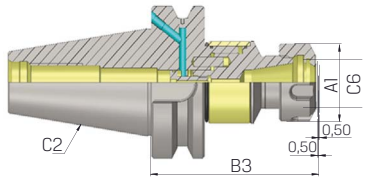
Synchro tapping chuck ISO 7388-2

PREMUS

ISO 7388-2 | Form JD/JF | G 2,5 25.000 min⁻¹

Design:
- with minimal length compensation for synchro tapping chucks
- for compensating pitch differences
- minimum length compensation on pressure/tension (+/- 0.5 mm).
- with internal coolant supply
- high concentricity
- secure clamping of the taps with **ER tap collects** and **ER tap collets with quick-change system** (248883-248891) see page 24/457

Delivery:
With sealable clamping nut.





N° article	241072	C2	C6	A1 mm	B3 mm	for taps
40/ER16	○	BT40	ER16	32	79	M3-M12
40/ER16M	○	BT40	ER16-M	22	79	M3-M12
40/ER25	○	BT40	ER25	42	89	M3-M14
40/ER32	○	BT40	ER32	50	110	M4-M27
40/ER40	○	BT40	ER40	63	115	M4-M33

Shrink-fit chuck ISO 7388-2

HAIMER

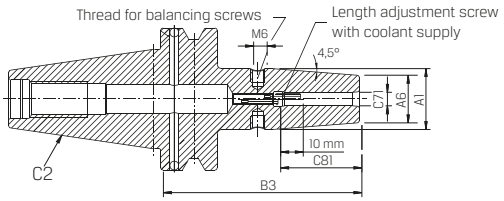
ISO 7388-2 | Form JD | G 2,5 25.000 min⁻¹ | CAD

Design and use:
Suitable for inductive, contact and hot air shrink-fit units

- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and carbide tools
- shank tolerance h6
- concentricity ‹ 3 µm
- BT30 = shape JD / BT40 = shape JD/JF

Delivery:
With length adjustment screw

Note:
- fine balancing with balancing screws possible
- *without adjustment screws, without threads for balancing screws, with slots in the clamping bore for coolant supply
- **without adjustment screws, without threads for balancing screws
- matching accessories see page 24/464 et seq.





N° article	242730 ultra short Shape JD	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
30/03	○	*	BT30	3	–	10	60	9
30/04	○	*	BT30	4	–	10	60	12
30/05	○	*	BT30	5	–	10	60	15
30/06	○	**	BT30	6	–	23	60	36
30/08	○	**	BT30	8	–	23	60	36
30/10	○	**	BT30	10	–	27	60	42

N° article	242730 ultra short Shape JD	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
30/12	○	**	BT30	12	–	27	60	47
30/14	○	**	BT30	14	–	30	65	47
30/16	○	**	BT30	16	–	30	65	50
30/18	○	**	BT30	18	40,5	35,5	70	50
30/20	○	**	BT30	20	40,5	35,5	70	52

Shrink-fit chuck ISO 7388-2

HAIMER

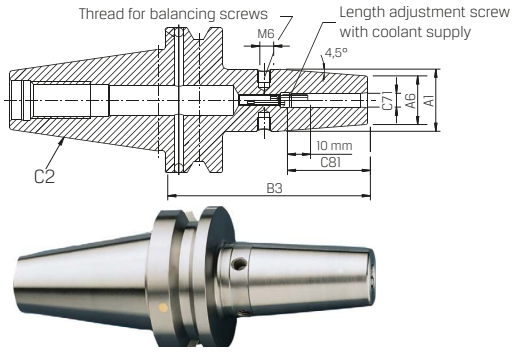
Design and use:
Suitable for inductive, contact and hot air shrink-fit units

- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and carbide tools
- shank tolerance h6
- concentricity < 3 µm
- BT30 = shape JD / BT40 = shape JD/JF

Delivery:
With length adjustment screw

Note:
- fine balancing with balancing screws possible
- *without adjustment screws, without threads for balancing screws, with slots in the clamping bore for coolant supply
- **without adjustment screws, without threads for balancing screws
- matching accessories see page 24/464 et seq.

ISO 7388-2 | Form JD | Form JD/JF | G 2,5 25.000 min⁻¹



N° article	242733 Basic Shape JD, short	242731 short Form JD/JF	242732 short, with Cool Jet Shape JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
30/03	○	○	–		–	3	–	10	80	9
30/04	○	○	–		–	4	–	10	80	12
30/06	○	○	–		–	6	27	21	80	36
30/05	–	○	–	*	BT30	5	–	10	80	15
30/08	○	○	–	**	BT30	8	27	21	80	36
30/10	○	○	–	**	BT30	10	32	24	80	42
30/12	○	○	–	**	BT30	12	32	24	80	47
30/14	–	○	–	**	BT30	14	34	27	80	47
30/16	○	○	–	**	BT30	16	34	27	80	50
30/18	–	○	–	**	BT30	18	40,5	33	90	50
30/20	○	○	–	**	BT30	20	40,5	33	90	52
40/03	○	○	–	*	BT40	3	–	10	90	9
40/04	○	○	–	*	BT40	4	–	10	90	12
40/05	–	○	–	*	BT40	5	–	10	90	15
40/06	○	○	○	**	BT40	6	27	21	90	36
40/08	○	○	○	**	BT40	8	27	21	90	36
40/10	○	○	○	**	BT40	10	32	24	90	42

N° article	242733 Basic Shape JD, short	242731 short Form JD/JF	242732 short, with Cool Jet Shape JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/12	○	○	○	**	BT40	12	32	24	90	47
40/14	○	○	○	**	BT40	14	34	27	90	47
40/16	○	○	○	**	BT40	16	34	27	90	50
40/18	○	○	–	**	BT40	18	42	33	90	50
40/20	○	○	○	**	BT40	20	42	33	90	52
40/25	○	○	○	**	BT40	25	53	44	100	58
40/32	–	○	–	**	BT40	32	53	44	100	58
50/06	○	○	–	**	BT50	6	27	21	100	36
50/08	○	○	–	**	BT50	8	27	21	100	36
50/10	○	○	–	**	BT50	10	32	24	100	42
50/12	○	○	–	**	BT50	12	32	24	100	47
50/14	○	○	–	**	BT50	14	34	27	100	47
50/16	○	○	–	**	BT50	16	34	27	100	50
50/18	○	○	–	**	BT50	18	42	33	100	50
50/20	○	○	–	**	BT50	20	42	33	100	52
50/25	○	○	–	**	BT50	25	53	44	100	58
50/32	–	○	–	**	BT50	32	53	44	100	58

N° article	242735 ZG130 Form JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/06	○		BT40	6	27	21	130	36
40/08	○		BT40	8	27	21	130	36
40/10	○		BT40	10	32	24	130	42
40/12	○		BT40	12	32	24	130	47
40/14	○		BT40	14	34	27	130	47
40/16	○		BT40	16	34	27	130	50
40/18	○		BT40	18	42	33	130	50
40/20	○		BT40	20	42	33	130	52
40/25	○		BT40	25	53	44	130	58
50/06	○		BT50	6	27	21	130	36

N° article	242735 ZG130 Form JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/08	○		BT50	8	27	21	130	36
50/10	○		BT50	10	32	24	130	42
50/12	○		BT50	12	32	24	130	47
50/14	○		BT50	14	34	27	130	47
50/16	○		BT50	16	34	27	130	50
50/18	○		BT50	18	42	33	130	50
50/20	○		BT50	20	42	33	130	52
50/25	○		BT50	25	53	44	130	58
50/32	○		BT50	32	53	44	130	58

N° article	242737 overlong Form JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/06	○		BT40	6	27	21	160	36
40/08	○		BT40	8	27	21	160	36
40/10	○		BT40	10	32	24	160	42
40/12	○		BT40	12	32	24	160	47
40/14	○		BT40	14	34	27	160	47
40/16	○		BT40	16	34	27	160	50
40/18	○		BT40	18	42	33	160	50
40/20	○		BT40	20	42	33	160	52
40/25	○		BT40	25	53	44	160	58
50/06	○		BT50	6	27	21	160	36

N° article	242737 overlong Form JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/08	○		BT50	8	27	21	160	36
50/10	○		BT50	10	32	24	160	42
50/12	○		BT50	12	32	24	160	47
50/14	○		BT50	14	34	27	160	47
50/16	○		BT50	16	34	27	160	50
50/18	○		BT50	18	42	33	160	50
50/20	○		BT50	20	42	33	160	52
50/25	○		BT50	25	53	44	160	58
50/32	○		BT50	32	53	44	160	58

N° article	242739 ZG200 Form JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/06	○		BT40	6	27	21	200	36
40/08	○		BT40	8	27	21	200	36
40/10	○		BT40	10	32	24	200	42
40/12	○		BT40	12	32	24	200	47
40/14	○		BT40	14	34	27	200	47
40/16	○		BT40	16	34	27	200	50
40/18	○		BT40	18	42	33	200	50
40/20	○		BT40	20	42	33	200	52
40/25	○		BT40	25	53	44	200	58
50/06	○		BT50	6	27	21	200	36

N° article	242739 ZG200 Form JD/JF	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/08	○		BT50	8	27	21	200	36
50/10	○		BT50	10	32	24	200	42
50/12	○		BT50	12	32	24	200	47
50/14	○		BT50	14	34	27	200	47
50/16	○		BT50	16	34	27	200	50
50/18	○		BT50	18	42	33	200	50
50/20	○		BT50	20	42	33	200	52
50/25	○		BT50	25	53	44	200	58
50/32	○		BT50	32	53	44	200	58

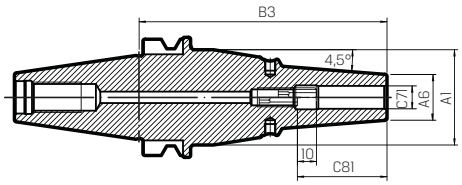
Shrink-fit chuck ISO 7388-2

ISO 7388-2 | Form JD/JF | HPC | HSC | G 2,5 25.000 min⁻¹

Design and use:
- for highest cutting performance at HSM operations
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- smoother running results in better surface quality and spares tools, spindle and machine
- better dimensional stability
- with closable Cool Jet holes
- with threaded holes for balancing screws

The long versions (B3 = 130-200 mm) with slim tip are especially versatile in use
- high rigidity
- slim at the tip
- vibration-damping
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- universally applicable, saves space in the tool magazine
- concentricity ‹ 3 µm

Note:
- all versions also available with® SAFE-LOCK
- matching accessories see page 24/464 et seq.







N° article	242830 Power, ultrashort	C2	C71 mm	A6 mm	B3 mm	C81 mm
40/06	○	BT40	6	22	70	36
40/08	○	BT40	8	22	70	36
40/10	○	BT40	10	26,5	70	42
40/12	○	BT40	12	26,5	70	47
40/14	○	BT40	14	29,5	75	47
40/16	○	BT40	16	29,5	75	50
40/18	○	BT40	18	35,5	75	50
40/20	○	BT40	20	35,5	75	52
40/25	○	BT40	25	45,5	85	58
40/32	○	BT40	32	45,5	85	58

N° article	242831 Power, short	C2	C71 mm	A6 mm	B3 mm	C81 mm
50/06	○	BT50	6	21	100	36
50/08	○	BT50	8	21	100	36
50/10	○	BT50	10	27	100	42
50/12	○	BT50	12	27	100	47
50/14	○	BT50	14	33,3	100	47
50/16	○	BT50	16	33,3	100	50
50/18	○	BT50	18	44,7	100	50
50/20	○	BT50	20	44,7	100	52
50/25	○	BT50	25	44,7	100	58

N° article	242835 Power, ZG130	C2	C71 mm	A6 mm	B3 mm	C81 mm
40/06	○	BT40	6	21	130	36
40/08	○	BT40	8	21	130	36
40/10	○	BT40	10	24	130	42
40/12	○	BT40	12	24	130	47
40/14	○	BT40	14	27	130	47
40/16	○	BT40	16	27	130	50
40/18	○	BT40	18	33	130	50
40/20	○	BT40	20	33	130	52

N° article	242837 Power, overlong	C2	C71 mm	A6 mm	B3 mm	C81 mm
40/06	○	BT40	6	21	160	36
40/08	○	BT40	8	21	160	36
40/10	○	BT40	10	24	160	42
40/12	○	BT40	12	24	160	47
40/14	○	BT40	14	27	160	47
40/16	○	BT40	16	27	160	50
40/18	○	BT40	18	33	160	50
40/20	○	BT40	20	33	160	52
50/06	○	BT50	6	21	160	36
50/08	○	BT50	8	21	160	36
50/10	○	BT50	10	27	160	42
50/12	○	BT50	12	27	160	47
50/14	○	BT50	14	33	160	47
50/16	○	BT50	16	33	160	50
50/18	○	BT50	18	44	160	50
50/20	○	BT50	20	44	160	52
50/25	○	BT50	25	44	160	58

N° article	242839 Power, ZG200	C2	C71 mm	A6 mm	B3 mm	C81 mm
50/06	○	BT50	6	21	200	36
50/08	○	BT50	8	21	200	36
50/10	○	BT50	10	27	200	42
50/12	○	BT50	12	27	200	47
50/14	○	BT50	14	33	200	47
50/16	○	BT50	16	33	200	50
50/18	○	BT50	18	44	200	50
50/20	○	BT50	20	44	200	52
50/25	○	BT50	25	44	200	58

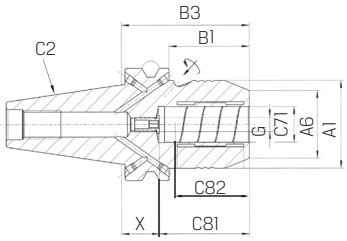
Hydraulic expansion chuck ISO 7388-2

SCHUNK

ISO 7388-2 | Form JD/JF | HPC | HSC | G 2,5 25.000 min⁻¹

Design:
- short, heavy-duty version, with axial length adjustment
- for automatic tool change
- with vibration damping and radial rigidity
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- clamping without peripheral equipment, simply with an Allen key, all commercially available shank types can be clamped

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.



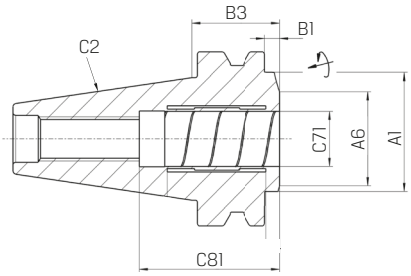


N° article	241410 TENDO E compact, short, heavy	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/12	○	BT40	12	42	32	58	31	12	46	36	M8×1	110	1,2
40/16	○	BT40	16	49,25	38	72,5	45,5	21,5	51	41	M8×1	350	1,3
40/20	○	BT40	20	49,25	38	72,5	45,5	21,5	51	41	M8×1	520	1,4
50/32	○	BT50	32	72	58,5	90	52	29	61	51	M8×1	900	4,6

Design:
- extra short version, for automatic tool change
- with vibration damping and radial rigidity
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- clamping without peripheral equipment, simply with an Allen key, all commercially available shank types can be clamped

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.

ISO 7388-2 | Form JD | HPC | HSC | G 2,5 25.000 min⁻¹





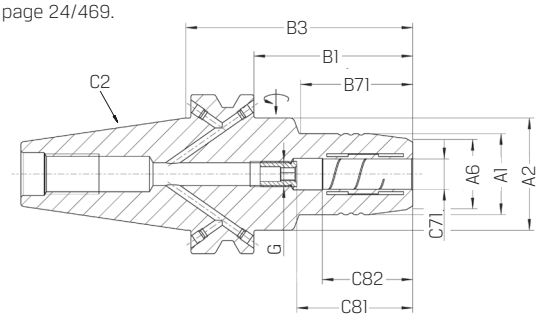
N° article	241411 TENDO ES	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	C81 mm	Torque min. Nm	Weight kg
40/20	○	BT40	20	49,5	34	32,5	5,5	51,7	330	1,3

Design:
- with adjusting screw for axial length adjustment
- for automatic tool holder change
- voltage without peripheral devices
- concentricity ‹ 0.003 mm at 2.5×D
- holes for mould JF sealed with grub screws on delivery
- hole for data carrier optional

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.

ISO 7388-2 | Form JD/JF | HPC | HSC | G 2,5 25.000 min⁻¹

NEW





N° article	241421 TENDO Silver	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/06	○	BT40	6	26	44,5	22	90	63	43	37	27	M5	16	1,4
40/08	○	BT40	8	28	44,5	24	90	63	44,5	37	27	M6	23	1,4
40/10	○	BT40	10	30	44,5	26	90	63	44,5	41	31	M8×1	45	1,4
40/12	○	BT40	12	32	44,5	28	90	63	44,5	46	36	M10×1	90	1,4
40/16	○	BT40	16	38	44,5	34	90	63	47,5	49	39	M12×1	185	1,5
40/20	○	BT40	20	42	44,5	38	90	63	47,5	51	41	M16×1	330	1,5
40/32	○	BT40	32	62	–	59	100	73	–	61	51	M16×1	650	2,55

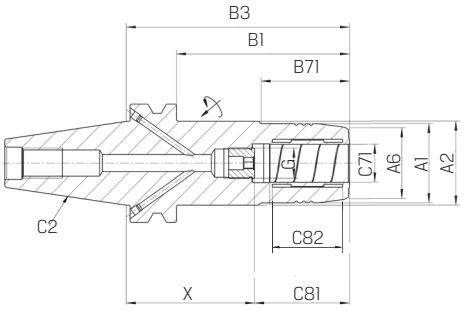
Hydraulic expansion chuck ISO 7388-2

SCHUNK

Design:
- slim version with axial length adjustment
- vibration damping
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- maximum speed 50,000 rpm^{-1}

ISO 7388-2	Form JD/JF	HPC	HSC	G 2,5 25.000 min^{-1}

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.





N° article	241414 TENDO, short	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/06	○	BT40	6	26	44,5	22	90	63	43	53	37	27	M5	16	1,4
40/08	○	BT40	8	28	44,5	24	90	63	44,5	53	37	27	M6	23	1,4
40/10	○	BT40	10	30	44,5	26	90	63	44,5	49	41	31	M8×1	45	1,4
40/12	○	BT40	12	32	44,5	28	90	63	44,5	44	46	36	M10×1	90	1,4
40/16	○	BT40	16	38	44,5	34	90	63	47,5	41	49	39	M12×1	185	1,5
40/20	○	BT40	20	42	44,5	38	90	63	47,5	39	51	41	M16×1	330	1,5
40/32-100	○	BT40	32	62	–	58,5	100	73	63	39	61	51	M16×1	650	2,6
50/12	○	BT50	12	32	44,5	28	90	52	34	44	46	36	M10×1	90	4
50/20	○	BT50	–	42	44,5	38	90	52	34	39	51	41	M16×1	330	4

N° article	241416 TENDO, long	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/06	○	BT40	6	44,5	22	140	113	43	103	37	27	M5	16	2
40/08	○	BT40	8	44,5	24	140	113	44,5	103	37	27	M6	23	2
40/10	○	BT40	10	44,5	26	140	113	44,5	99	41	31	M8×1	45	2
40/12	○	BT40	12	44,5	28	140	113	44,5	94	46	36	M10×1	90	2
40/16	○	BT40	16	44,5	34	140	113	47,5	91	49	39	M12×1	185	2,1
40/20	○	BT40	20	44,5	38	140	113	47,5	89	51	41	M16×1	330	2,1
50/12	○	BT50	12	44,5	28	140	102	34	94	46	36	M10×1	90	4,6
50/20	○	BT50	20	44,5	38	140	102	34	89	51	14	M16×1	330	4,7

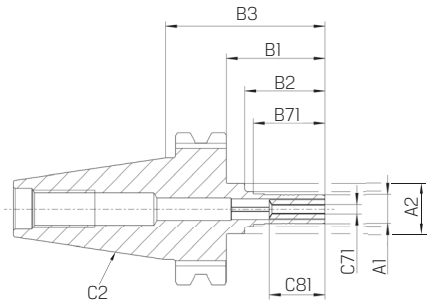
Polygonal chuck TRIBOS ISO 7388-2

SCHUNK

Design:
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- for automatic tool change
- without length adjustment screw
- tool shank quality h6
- optimum tool for light-duty machining; please observe radial forces

ISO 7388-2	Form JD	HSC	G 2,5 25.000 min^{-1}

Note:
Matching accessories see page 24/470.

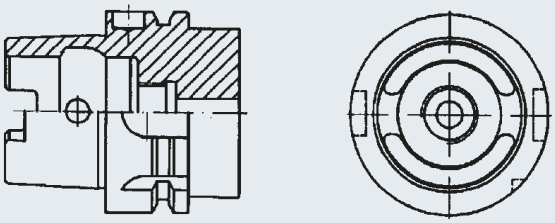




N° article	241425 Mini	C2	C71 mm	A1 mm	A2 mm	B3 mm	B1 mm	B2 mm	B71 mm	C81 mm	Torque min. Nm	Weight kg
3001	○	BT30	1	9	11	52	30	25,2	22,5	17,8	–	0,25
30015	○	BT30	1,5	9	11	52	30	25,2	22,5	17,8	–	0,25
3002	○	BT30	2	9	11	52	30	25,2	22,5	17,8	1	0,25
3003	○	BT30	3	9	11	52	30	25,2	22,5	17,8	1,5	0,25
3004	○	BT30	4	9	11	52	30	25,2	22,5	17,8	2,5	0,25
3006	○	BT30	6	9	11	52	30	25,2	22,5	17,8	4,5	0,25

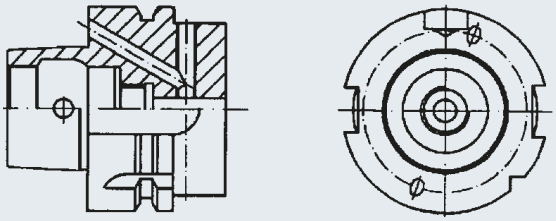
Forms and versions of hollow taper shanks ISO 12164- 1

Form A
Central coolant supply via coolant tube



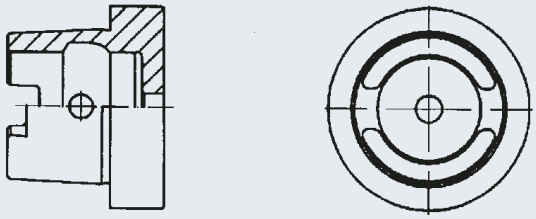
Use:
For machining centres with automatic tool change

Form B
Coolant supply via collar or centrally via coolant tube



Use:
For machining centres and lathes with automatic tool change, enlarged mounting collar

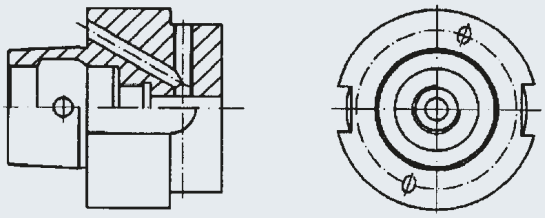
Form C
Central coolant supply



Use:
Preferably in transfer lines and special machines

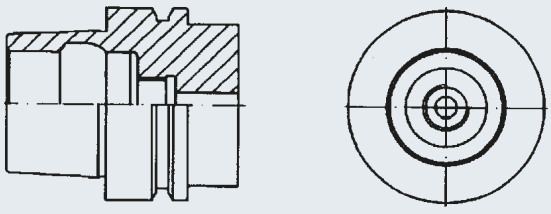
with manual tool change.

Form D
Coolant supply via collar or centrally via coolant tube



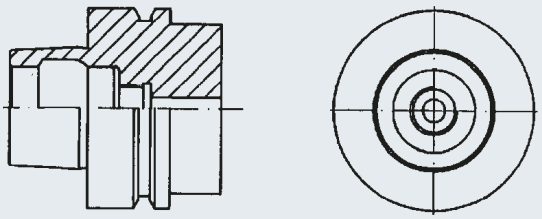
Use:
For operations where a good support by flat contact surface is required.
Manual tool change, enlarged mounting collar

Form E
Central coolant supply via coolant tube possible



Use:
For HSC processing, symmetrical, without driving slots.

Form F
Central coolant supply via coolant tube possible



Use:
Enlarged mounting collar.

Advantages of HSK interface

Product information

Advantages of the HSK interface compared to the steep taper

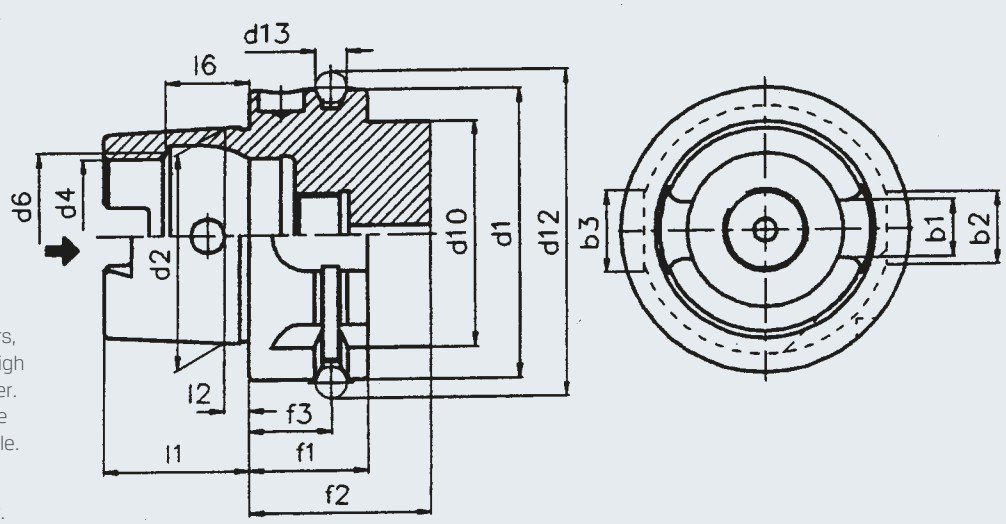
- **fixed axial positioning due to the planar contact**
- **high repeatability when changing tools**
- **no pull stud required**
- **suitable for high speeds**

Design:
All HSK holders are made of high-alloy case-hardened steel with a tensile strength of at least 985 N/m2. Hardened to reduce distortion with a minimum hardness depth of 0.6 mm. HRC 58 +/-2. All insert surfaces are ground.

The flat contact results in a very high repeat accuracy in the positioning of the tools as well as optimal rigidity in the clamping.

Due to the significantly lower mass compared to comparable steep tapers, HSK holders are very well suited for high speeds. The overall lengths are shorter. The clamping is very stable due to the complete system in and on the spindle.

Torque transmission via two driver grooves at the end of the taper. Two collar grooves for tool magazine, position notch. Hole for data carrier DIN 69873 in the collar



Use:
For machining centers with automatic tool change. Central coolant supply via coolant pipe.

Technical data of the HSK holder Form A

	HSK 32	HSK 40	HSK 50	HSK 63	HSK 100
b1	7,05	8,05	10,54	12,54	20,02
b2	7,00	9,00	12,00	16,00	20,00
b3	9,00	11,00	14,00	18,00	22,00
d1	32,00	40,00	50,00	63,00	100,00
d2	24,00	30,00	38,00	48,00	75,00
d4	17,00	21,00	26,00	34,00	53,00
d6	19,00	23,00	29,00	37,00	58,00
d10	26,00	34,00	42,00	53,00	85,00
d12	37,00	45,00	59,30	72,30	109,75
d13	4,00	4,00	7,00	7,00	7,00
f1	20,00	20,00	26,00	26,00	29,00
f2	35,00	35,00	42,00	42,00	45,00
f3	16,00	16,00	18,00	18,00	20,00
l1	16,00	20,00	25,00	32,00	50,00
l2	3,20	4,00	5,00	6,30	10,00
l6	8,92	11,42	14,13	18,13	28,56

Weldon chucks ISO 12164-1

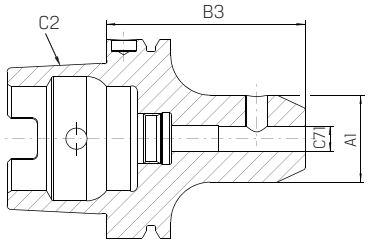
HAIMER PREMUS

Use:
- for clamping of milling cutters with parallel shank and lateral drive surface to DIN 1835-B and DIN 6535-HB

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min⁻¹ | CAD

Delivery:
With clamping screw

Note:
242212, 242216 + 242217: C71 25 × conical





N° article	242204 PREMUS short	242211 PREMUS short, with coolant duct bores	242203 HAIMER short	C2	C71 mm	A1 mm	B3 mm
32/06	–	–	○	HST-A32	6	25	60
32/08	–	–	○	HST-A32	8	28	60
32/10	–	–	○	HST-A32	10	35	65
40/06	–	–	○	HST-A40	6	25	60
40/08	–	–	○	HST-A40	8	28	60
40/10	–	–	○	HST-A40	10	35	60
40/12	–	–	○	HST-A40	12	42	70
40/14	–	–	○	HST-A40	14	44	75
40/16	–	–	○	HST-A40	16	48	75
50/06	–	–	○	HST-A50	6	25	65
50/08	–	–	○	HST-A50	8	28	65
50/10	–	–	○	HST-A50	10	35	65
50/12	–	–	○	HST-A50	12	42	80
50/16	–	–	○	HST-A50	16	48	80
50/20	–	–	○	HST-A50	20	52	80
63/06	●	●	○	HST-A63	6	25	65
63/08	●	●	○	HST-A63	8	28	65
63/10	●	●	○	HST-A63	10	35	65
63/12	●	●	○	HST-A63	12	42	80
63/14	●	●	○	HST-A63	14	44	80
63/16	●	●	○	HST-A63	16	48	80
63/18	●	●	○	HST-A63	18	50	80

N° article	242204 PREMUS short	242211 PREMUS short, with coolant duct bores	242203 HAIMER short	C2	C71 mm	A1 mm	B3 mm
63/20	●	●	○	HST-A63	20	52	80
63/25	●	●	○	HST-A63	25	65	110
63/32	●	●	○	HST-A63	32	72	110
63/40	●	●	–	HST-A63	40	80	125
80/06	–	–	○	HST-A80	6	25	80
80/10	–	–	○	HST-A80	10	35	80
80/16	–	–	○	HST-A80	16	48	100
80/25	–	–	○	HST-A80	25	65	100
80/32	–	–	○	HST-A80	32	72	110
100/06	●	●	○	–	6	25	80
100/08	○	●	○	HST-A100	8	28	80
100/10	●	●	○	HST-A100	10	35	80
100/12	●	●	○	HST-A100	12	42	80
100/14	○	●	○	HST-A100	14	44	80
100/16	●	●	○	HST-A100	16	48	100
100/18	○	●	○	HST-A100	18	50	100
100/20	●	●	○	HST-A100	20	52	100
100/25	●	●	○	HST-A100	25	65	100
100/32	○	●	○	HST-A100	32	72	100
100/40	○	●	–	HST-A100	40	80	120
100/50	○	–	–	HST-A100	50	100	130

N° article	242206 PREMUS long	242207 PREMUS long, with cooling channel holes	C2	C71 mm	242206 A1 mm	242206 B3 mm	242207 A1 mm	242207 B3 mm
63/06	●	●	HST-A63	6	25	100	25	120
63/08	●	●	HST-A63	8	28	100	28	120
63/10	●	●	HST-A63	10	35	100	35	120
63/12	●	●	HST-A63	12	42	100	42	120
63/14	●	●	HST-A63	14	44	100	44	120

N° article	242206 PREMUS long	242207 PREMUS long, with cooling channel holes	C2	C71 mm	242206 A1 mm	242206 B3 mm	242207 A1 mm	242207 B3 mm
63/06	●	●	HST-A63	6	25	100	25	120
63/16	●	●	HST-A63	16	48	100	48	120
63/18	●	●	HST-A63	18	50	100	50	120
63/20	●	●	HST-A63	20	52	100	52	120
63/20	●	●	HST-A63	20	52	100	52	120

N° article	242216 PREMUS overlong	242212 PREMUS overlong, with coolant duct exit bores	242213 HAIMER overlong	C2	C71 mm	A1 mm	B3 mm
100/06	●	–	○	HST-A63	6	25	160
100/08	●	–	○	HST-A63	8	28	160
100/10	●	–	○	HST-A63	10	35	160
100/12	●	–	○	HST-A63	12	42	160
100/14	○	–	○	HST-A63	14	44	160
100/16	●	–	○	HST-A63	16	48	160
100/18	○	–	○	HST-A63	18	50	160
100/20	●	–	○	HST-A63	20	52	160
100/25	●	–	○	HST-A63	25	65	160
100/32	–	–	○	HST-A63	32	72	160
100/40	○	●	○	HST-A100	6	25	160

N° article	242216 PREMUS overlong	242212 PREMUS overlong, with coolant duct exit bores	242213 HAIMER overlong	C2	C71 mm	A1 mm	B3 mm
–	○	●	○	HST-A100	8	28	160
–	○	●	○	HST-A100	10	35	160
–	○	●	○	HST-A100	12	42	160
–	○	●	○	HST-A100	14	44	160
–	○	●	○	HST-A100	16	48	160
–	○	●	○	HST-A100	18	50	160
–	○	●	○	HST-A100	20	52	160
–	○	●	○	HST-A100	25	65	160
–	○	●	○	HST-A100	32	72	160
–	○	–	–	HST-A100	40	80	160

N° article	242217 PREMUS extra long	C2	C71 mm	A1 mm	B3 mm
100/06	○	HSK-A100	6	18	200
100/08	○	HSK-A100	8	22	200
100/10	○	HSK-A100	10	30	200
100/12	○	HSK-A100	12	34	200
100/14	○	HSK-A100	14	36	200
100/16	○	HSK-A100	16	42	200

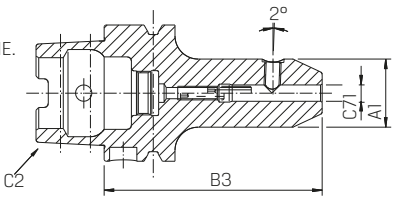
N° article	242217 PREMUS extra long	C2	C71 mm	A1 mm	B3 mm
100/18	○	HSK-A100	18	44	200
100/20	○	HSK-A100	20	45	200
100/25	○	HSK-A100	25	55	200
100/32	○	HSK-A100	32	72	200
100/40	○	HSK-A100	40	80	200

Whistle Notch chuck ISO 12164-1

HAIMER PREMUS

Use:
For clamping of milling cutters with parallel shank and inclined clamping surfaces to DIN 1835-E and DIN 6535-HE.

Delivery:
Complete with clamping screw and adjusting screw





ISO 12164-1 | Form A | HPC | HSC

CAD

N° article	242230 PREMUS short, G2.5 at 25,000 1/min	242228 HAIMER short, G6.3 at 8,000 1/min	C2	C71 mm	242230 A1 mm	242230 B3 mm	242228 A1 mm	242228 B3 mm
63/06	○	–	HSK-A63	6	25	80	–	–
63/08	○	–	HSK-A63	8	28	80	–	–
63/10	○	–	HSK-A63	10	35	80	–	–
63/12	○	–	HSK-A63	12	42	90	–	–
63/14	○	–	HSK-A63	14	44	90	–	–
63/16	○	–	HSK-A63	16	48	100	–	–
63/18	○	–	HSK-A63	18	50	100	–	–
63/20	○	○	HSK-A63	20	52	100	52	100
63/25	○	○	HSK-A63	25	65	110	64	110
63/32	○	○	HSK-A63	32	72	115	72	110
100/06	○	–	HSK-A100	6	25	90	–	–

N° article	242230 PREMUS short, G2.5 at 25,000 1/min	242228 HAIMER hort, G6.3 at 8,000 1/min	C2	C71 mm	242230 A1 mm	242230 B3 mm	242228 A1 mm	242228 B3 mm
100/08	○	–	HSK-A100	8	28	90	–	–
100/10	○	–	HSK-A100	10	35	90	–	–
100/12	○	–	HSK-A100	12	42	100	–	–
100/14	○	–	HSK-A100	14	44	100	–	–
100/16	○	–	HSK-A100	16	48	100	–	–
100/18	○	–	HSK-A100	18	50	100	–	–
100/20	○	○	HSK-A100	20	52	100	52	110
100/25	○	○	HSK-A100	25	65	120	64	120
100/32	○	○	HSK-A100	32	72	120	72	120
100/40	○	–	HSK-A100	40	80	130	–	–

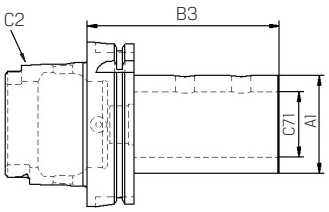
Drill holder ISO 12164-1

PREMUS

Design:
For clamping indexable insert drills with parallel shank and lateral driving surface to DIN 1835-B and DIN 6535-HB

ISO 12164-1 | Form A | HPC | G 6,3 20.000 min⁻¹

N° article	242235 E1, short	C2	C71 mm	A1 mm	B3 mm
63/20	●	HSK-A63	20	40	80
63/25	●	HSK-A63	25	45	90
63/32	●	HSK-A63	32	52	90
63/40	●	HSK-A63	40	60	110
100/20	●	HSK-A100	20	40	90
100/25	●	HSK-A100	25	45	95
100/32	○	HSK-A100	32	52	100
100/40	○	HSK-A100	40	60	110
100/50	○	HSK-A100	50	75	130





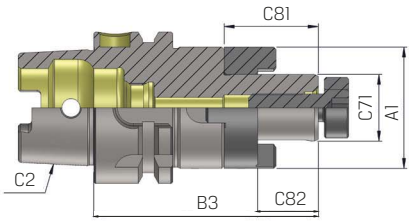
Combi shell mill arbor ISO 12164-1

HAIMER PREMUS

Use:
- for clamping shell end mills DIN 841 and DIN 1880
- for clamping angular milling cutters DIN 842 and cutters DIN 1830

Delivery:
- with tightening bolt
- driving ring
- feather key
- cooling duct bores on front for an additional charge

Note:
- by using the tightening bolt 247201, internal cooling can be achieved
- matching accessories see page 24/443 et seq.





N° article	242284 PREMUS long, G6,3 at 20,000 1/min	242285 HAIMER long, G2.5 at 25,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
63/16	●	○	HSK-A63	16	32	117	27	17
63/22	●	○	HSK-A63	22	40	119	31	19
63/27	●	○	HSK-A63	27	48	121	33	21
63/32	●	○	HSK-A63	32	58	124	38	24
63/40	○	○	HSK-A63	40	70	127	41	27
100/16	○	–	HSK-A100	16	32	117	27	17
100/22	○	–	HSK-A100	22	40	119	31	19
100/27	○	–	HSK-A100	27	48	121	33	21
100/32	○	–	HSK-A100	32	58	124	38	24
100/40	○	–	HSK-A100	40	70	127	41	27

N° article	242288 PREMUS overlong, G6.3 at 20,000 1/min	242289 HAIMER overlong, G2.5 at 25,000 1/min	C2	C71 mm	A1 mm	B3 mm	C81 mm	C82 mm
63/16	○	○	HSK-A63	16	32	177	27	17
63/22	○	○	HSK-A63	22	40	179	31	19
63/27	○	○	HSK-A63	27	48	181	33	21
63/32	○	○	HSK-A63	32	58	184	38	24
63/40	○	○	HSK-A63	40	70	187	41	27
100/16	○	–	HSK-A100	16	32	177	27	17
100/22	○	–	HSK-A100	22	40	179	31	19
100/27	○	–	HSK-A100	27	48	181	33	21
100/32	○	–	HSK-A100	32	58	184	38	24
100/40	○	–	HSK-A100	40	70	187	41	27

N° article	242279 PREMUS short, G6.3 at 20,000 1/min	242277 HAIMER short, G2.5 at 25,000 1/ min	C2	C71 mm	242279 A1 mm	242279 B3 mm	242277 A1 mm	242277 B3 mm	C81 mm	C82 mm
63/16	●	○	HSK-A63	16	32	77	32	77	27	17
63/22	●	○	HSK-A63	22	40	79	40	79	31	19
63/27	●	○	HSK-A63	27	48	81	48	81	33	21
63/32	●	○	HSK-A63	32	58	89	58	84	38	24
63/40	○	○	HSK-A63	40	70	97	70	87	41	27
100/16	○	–	HSK-A100	16	32	82	–	–	27	17
100/22	○	–	HSK-A100	22	40	84	–	–	31	19
100/27	○	–	HSK-A100	27	48	86	–	–	33	21
100/32	○	–	HSK-A100	32	58	94	–	–	38	24
100/40	○	–	HSK-A100	40	70	97	–	–	41	27

Cutter head holder ISO 12164-1

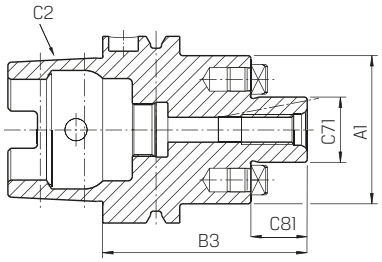
HAIMER PREMUS

ISO 12164-1 | Form A | HPC

Use:
- for milling cutters with transverse groove DIN 1880 with internal cooling
- from clamping Ø 40 mounting to DIN 2079 possible (4 additional threaded holes)

Delivery:
Incl. tightening bolt

Note:
- coolant outlet holes on the front face for milling cutters with internal cooling
- fitting tightening bolts see ander 247200 on page 24/443.





Item no.	242304 PREMUS short, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	242295 HAIMER short, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	C2	C71 mm	242304 A1 mm	242304 B3 mm	242295 A1 mm	242295 B3 mm	C81 mm
40/16	–	○	HST-A40	16	–	–	36	67	17
40/22	–	○	HST-A40	22	–	–	48	79	19
50/16	–	○	HST-A50	16	–	–	36	67	17
50/22	–	○	HST-A50	22	–	–	48	79	19
50/27	–	○	HST-A50	27	–	–	60	81	21
63/16	●	○	HST-A63	16	38	62	36	67	17
63/22	●	○	HST-A63	22	48	69	48	69	19
63/27	●	○	HST-A63	27	58	76	60	61	21

Item no.	242304 PREMUS short, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	242295 HAIMER short, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	C2	C71 mm	242304 A1 mm	242304 B3 mm	242295 A1 mm	242295 B3 mm	C81 mm
63/32	●	○	HST-A63	32	78	84	78	84	24
63/40	○	○	HST-A63	40	88	87	87	87	27
100/16	○	○	HST-A100	16	38	72	36	67	17
100/22	○	○	HST-A100	22	48	74	48	69	19
100/27	○	○	HST-A100	27	58	76	60	71	21
100/32	○	○	HST-A100	32	78	84	78	74	24
100/40	○	○	HST-A100	40	88	92	87	87	27

N° article	242306 PREMUS long, G2.5 at 25,000 1/min with coolant duct exit bore	242297 HAIMER long, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	C2	C71 mm	242306 A1 mm	242306 B3 mm	242297 A1 mm	242297 B3 mm	C81 mm
63/16	●	–	16	38	38	117	–	–	17
63/22	●	○	22	48	48	119	48	119	19
63/27	●	○	27	58	58	121	60	121	21
63/32	●	○	32	78	78	124	78	124	24
63/40	○	○	40	88	88	127	87	127	27

N° article	242306 PREMUS long, G2.5 at 25,000 1/min with coolant duct exit bore	242297 HAIMER long, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	C2	C71 mm	242306 A1 mm	242306 B3 mm	242297 A1 mm	242297 B3 mm	C81 mm
100/16	●	○	16	38	38	117	36	117	17
100/22	○	○	22	48	48	119	48	119	19
100/27	○	○	27	58	58	121	60	121	21
100/32	○	○	32	78	78	124	78	124	24
100/40	○	○	40	88	88	127	87	127	27

N° article	242308 overlong, G2.5 at 25,000 1/min with coolant duct exit bore	242299 HAIMER overlong, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	C2	C71 mm	242308 A1 mm	242308 B3 mm	242299 A1 mm	242299 B3 mm	C81 mm
63/16	●	–	HST-A63	27	58	177	–	–	17
63/22	●	○	HST-A63	32	78	179	48	179	19
63/27	●	○	HST-A63	40	88	181	60	181	21
63/32	○	○	HST-A100	16	38	184	78	184	24
63/40	○	–	HST-A100	22	48	187	–	–	27

N° article	242308 overlong, G2.5 at 25,000 1/min with coolant duct exit bore	242299 HAIMER overlong, G2.5 at 25,000 1/min with coolant duct exit bore on the front side	C2	C71 mm	242308 A1 mm	242308 B3 mm	242299 A1 mm	242299 B3 mm	C81 mm
100/16	●	○	HST-A100	16	38	177	36	177	17
100/22	○	○	HST-A100	22	48	179	48	179	19
100/27	○	○	HST-A100	27	58	181	60	181	21
100/32	○	○	HST-A100	32	78	184	78	184	24
100/40	○	○	HST-A100	40	88	187	87	187	27

N° article	242312 PREMUS extra long, G2.5 at 25,000 1/min with coolant duct exit bore	C2	C71 mm	A1 mm	B3 mm	C81 mm
63×16	●	HST-A63	16	38	217	17
63×22	○	HST-A63	22	48	219	19
63×27	●	HST-A63	27	58	221	21
63×32	○	HST-A63	32	78	224	24
63×40	○	HST-A63	40	88	227	27

N° article	242312 PREMUS extra long, G2.5 at 25,000 1/min with coolant duct exit bore	C2	C71 mm	A1 mm	B3 mm	C81 mm
100×16	○	HST-A100	16	38	217	17
100×22	○	HST-A100	22	48	219	19
100×27	●	HST-A100	27	58	221	21
100×32	○	HST-A100	32	78	224	24
100×40	○	HST-A100	40	88	227	27

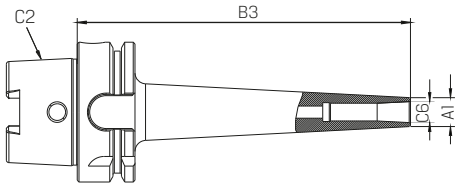
Collet chucks DMC ISO 12164-1

PREMUS

Design and use:
- narrow, slim outer diameter
- especially suited for tool and mould making due to 3° inclination
- the extremely slim construction allows machining even in hard-to-reach places
- very flexible thanks to collets instead of shrink-fit chucks
- made of case-hardening steel, all functional surfaces groand
- tensile strength in core of min. 800 N/mm², hardened, (min. HRC 56)
- high concentricity of ‹ 5 µm
- the collet is clamped through the chuck from behind by means of a clamping nut

Note:
Fitting collets see ander 247900 on page 24/448.

ISO 12164-1	Form A	HSC	G 2,5 25.000 min⁻¹





N° article	242240 long	C2	C6	A1 mm	B3 mm	Clamping range mm
63/DMC6	○	HST-A63	DMC6	13	120	3 - 6

N° article	242241 overlong	C2	C6	A1 mm	B3 mm	Clamping range mm
63/DMC6	○	HST-A63	DMC6	13	160	3 - 6

Collet chuck ER ISO 12164-1

HAIMER PREMUS

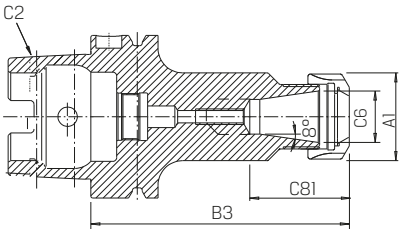
Use:
- for clamping tools with cylindrical shank in collets to ISO 15488

Note:
- *without thread for setting screw
- matching accessories see page 24/448

ISO 12164-1	Form A	ISO 15488	HSC	G 2,5 25.000 min⁻¹

Delivery:
A32/40/50: Complete with clamping nut type HS (High speed, fine balanced for increased clamping power)

A63/80/100: complete with clamping nut (balanced, with sliding coating for increased clamping power)





N° article	242245 HAIMER ultra short	*	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
32/ER16	○	*	HST-A32	ER16	28	55	32,5	0.5 - 10
40/ER11	○	*	HST-A40	ER11	19	60	23,5	0.5 - 7
40/ER16	○	*	HST-A40	ER16	28	60	32,5	0.5 - 10
40/ER25	○	*	HST-A40	ER25	42	70	41	1 - 16
40/ER32	○	*	HST-A40	ER32	50	70	47	1.5 - 20
50/ER11	○	*	HST-A50	ER11	19	60	26,5	0.5 - 7
50/ER16	○	*	HST-A50	ER16	28	60	32,5	0.5 - 10
50/ER25	○	*	HST-A50	ER25	42	70	41	1 - 16

N° article	242245 HAIMER ultra short	*	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
50/ER32	○	*	HST-A50	ER32	50	80	47	1.5 - 20
50/ER40	○	*	HST-A50	ER40	63	80	53	2.5 - 26
63/ER11	○	*	HST-A63	ER11	19	75	26,5	0.5 - 7
63/ER16	○	*	HST-A63	ER16	28	75	46,5	0.5 - 10
63/ER25	○	*	HST-A63	ER25	42	75	48	1 - 16
63/ER32	○	*	HST-A63	ER32	50	75	47	1.5 - 20
63/ER40	○	*	HST-A63	ER40	63	85	53	2.5 - 26

N° article	242256 PREMUS short	242248 HAIMER short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
32/ER16	–	○	HST-A32	ER16	28	80	32,5	0.5 - 10
32/ER25	–	○	HST-A32	ER25	42	80	41	1 - 16
40/ER16	–	○	HST-A40	ER16	28	80	32,5	0.5 - 10
40/ER25	–	○	HST-A40	ER25	42	80	41	1 - 16
50/ER16	–	○	HST-A50	ER16	28	100	32,5	0.5 - 10
50/ER25	–	○	HST-A50	ER25	42	100	41	1 - 16
50/ER32	–	○	HST-A50	ER32	50	100	47	1.5 - 20
50/ER40	–	○	HST-A50	ER40	63	120	53	2.5 - 26
63/ER11	–	○	HST-A63	ER11	19	100	27	0.5 - 7
63/ER16 NEW	●	○	HST-A63	ER16	28	100	32,5	0.5 - 10

N° article	242256 PREMUS short	242248 HAIMER short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
63/ER25 NEW	●	○	HST-A63	ER25	42	100	41	1 - 16
63/ER32	●	○	HST-A63	ER32	50	100	47	1.5 - 20
63/ER40	●	○	HST-A63	ER40	63	120	53	2.5 - 26
80/ER16	–	○	HST-A80	ER16	28	100	32,5	0.5 - 10
80/ER25	–	○	HST-A80	ER25	42	100	41	1 - 16
80/ER32	–	○	HST-A80	ER32	50	100	47	1.5 - 20
100/ER16	–	○	HST-A100	ER16	28	100	32,5	0.5 - 10
100/ER25	○	○	HST-A100	ER25	42	100	41	1 - 16
100/ER32	●	○	HST-A100	ER32	50	100	47	1.5 - 20
100/ER40	○	○	HST-A100	ER40	63	120	53	2.5 - 26

N° article	242257 PREMUS overlong	242253 HAIMER overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
63/ER16	–	○	HST-A63	ER16	28	160	32,5	0.5 - 10
63/ER25	–	○	HST-A63	ER25	42	160	41	1 - 16
63/ER32	●	○	HST-A63	ER32	50	160	47	1.5 - 20
63/ER40	○	○	HST-A63	ER40	63	160	53	2.5 - 26

N° article	242257 PREMUS overlong	242253 HAIMER overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
100/ER16	–	○	HST-A100	ER16	28	160	32,5	0.5 - 10
100/ER25	●	○	HST-A100	ER25	42	160	41	1 - 16
100/ER32	○	○	HST-A100	ER32	50	160	47	1.5 - 20
100/ER40	○	○	HST-A100	ER40	63	160	53	2.5 - 26

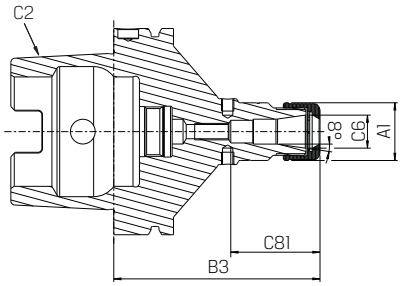
Collet chuck High Precision ISO 12164-1

HAIMER

Design and use:
- especially suitable for micro and fine machining
- with specially coated smooth locknut optimally balanced < 1 gmm
- high stiffness with vibration damping and noise reduction
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488 (Attention: B3 size changes)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws
- HST-A32, 40, 50 balanced U < 1 gmm
- HST-A63 balanced G 2.5 30,000 min^{-1}
- HST-A100 balanced G 2.5 25,000 min^{-1}

Note:
- matching collets see page 24/452 et seq.
- fitting tightening bolts see ander 246542 on page 24/445

ISO 12164-1	Form A	G 2,5 25.000 min^{-1}	G 2,5 30.000 min^{-1}	U < 1 gmm





N° article	242260 HP ultra short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
32/ER16	○	HST-A32	ER16	28	50	32	2 - 10
32/ER25	○	HST-A32	ER25	42	60	39	2 - 16
40/ER16	○	HST-A40	ER16	28	50	31	2 - 10
40/ER25	○	HST-A40	ER25	42	60	38,5	2 - 16
40/ER32	○	HST-A40	ER32	50	70	47	2 - 20
50/ER16	○	HST-A50	ER16	28	60	32	2 - 10
50/ER25	○	HST-A50	ER25	42	65	39	2 - 16
50/ER32	○	HST-A50	ER32	50	75	48	2 - 20
63/ER16	○	HST-A63	ER16	28	75	28,5	2 - 10
63/ER25	○	HST-A63	ER25	42	75	36	2 - 16
63/ER32	○	HST-A63	ER32	50	75	42	2 - 20
100/ER16	○	HST-A100	ER16	28	85	43	2 - 10
100/ER25	○	HST-A100	ER25	42	85	51	2 - 16
100/ER32	○	HST-A100	ER32	50	85	53	2 - 20

N° article	242262 HP, short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
63/ER16	○	HST-A63	ER16	28	100	43	2 - 10
63/ER25	○	HST-A63	ER25	42	100	51	2 - 16
63/ER32	○	HST-A63	ER32	50	100	53	2 - 20
100/ER16	○	HST-A100	ER16	28	100	43	2 - 10
100/ER25	○	HST-A100	ER25	42	100	51	2 - 16
100/ER32	○	HST-A100	ER32	50	100	53	2 - 20

N° article	242264 HP, long	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
100/ER16	○	HST-A100	ER16	28	130	43	2 - 10
100/ER25	○	HST-A100	ER25	42	130	51	2 - 16
100/ER32	○	HST-A100	ER32	50	130	53	2 - 20

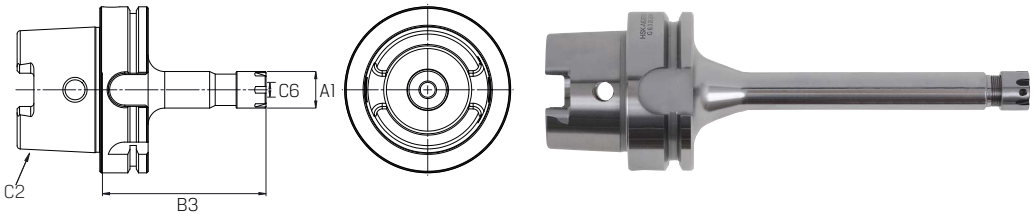
N° article	242268 HP, overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
63/ER16	○	HST-A63	ER16	28	160	43	2 - 10
63/ER25	○	HST-A63	ER25	42	160	51	2 - 16
63/ER32	○	HST-A63	ER32	50	160	53	2 - 20
100/ER16	○	HST-A100	ER16	28	160	43	2 - 10
100/ER25	○	HST-A100	ER25	42	160	51	2 - 16
100/ER32	○	HST-A100	ER32	50	160	53	2 - 20

Collet chuck ER Mini ISO 12164-1

PREMUS

Use:
- for collets type ER/ESX
- for clamping tools with straight shank in collets type ER/ESX
- version M with mini clamping nut
- collets ER11 - ER40 see 248407-248659 on page 24/???
- hook spanner for clamping nuts see 506200 on page 50/???

ISO 12164-1	Form A	HSC	ISO 15488	G 2,5 25.000 min^{-1}



N° article	242258 long	C2	C6	A1 mm	B3 mm	Clamping range mm
63/ER11M	●	HST-A63	ER11-M	16	100	0.5 - 7
63/ER16M	●	HST-A63	ER16-M	22	100	0.5 - 10
63/ER25M	●	HST-A63	ER25-M	35	100	1 - 16
100/ER16M	○	HST-A100	ER16-M	22	100	0.5 - 10

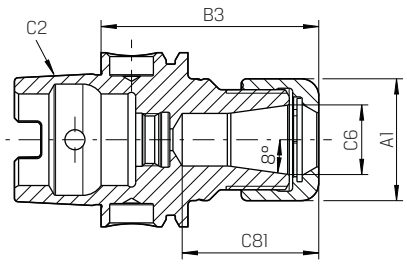
N° article	242259 overlong	C2	C6	A1 mm	B3 mm	Clamping range mm
63/ER11M	●	HST-A63	ER11-M	16	160	0.5 - 7
63/ER16M	●	HST-A63	ER16-M	22	160	0.5 - 10
63/ER25M	●	HST-A63	ER25-M	35	160	1 - 16
100/ER16M	●	HST-A100	ER16-M	22	160	0.5 - 10
100/ER25M	○	HST-A100	ER25-M	35	160	1 - 16

Collet chuck ER ISO 12164-1

HAIMER

Design:
- high rigidity with vibration damping
- universally applicable also with standard collets
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488 (Attention: B3 size changes)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws (except 242246 and 242249 HST40)
- **from size HST63 conical execution**

ISO 12164-1 | Form A | HPC | HSC | U (1 gmm | CAD



Note:
Matching collets see page 24/452 et seq.





N° article	242246 Power, ultra short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
32/ER16	○	HST-A32	ER16	28	50	32	2 - 10
32/ER25	○	HST-A32	ER25	42	60	39	2 - 16
40/ER16	○	HST-A40	ER16	28	50	31	2 - 10
40/ER25	○	HST-A40	ER25	42	60	38,5	2 - 16
40/ER32	○	HST-A40	ER32	50	70	47	2 - 20
50/ER16	○	HST-A50	ER16	28	60	32	2 - 10
50/ER25	○	HST-A50	ER25	42	65	39	2 - 16
50/ER32	○	HST-A50	ER32	50	75	48	2 - 20
63/ER16	○	HST-A63	ER16	28	75	43	2 - 10
63/ER25	○	HST-A63	ER25	42	75	51	2 - 16
63/ER32	○	HST-A63	ER32	50	75	53	2 - 20
100/ER16	○	HST-A100	ER16	28	85	43	2 - 10
100/ER25	○	HST-A100	ER25	42	85	51	2 - 16
100/ER32	○	HST-A100	ER32	50	85	53	2 - 20

N° article	242251 Power, ZG130	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
100/ER16	○	HST-A100	ER16	28	130	43	2 - 10
100/ER25	○	HST-A100	ER25	42	130	51	2 - 16
100/ER32	○	HST-A100	ER32	50	130	53	2 - 20

N° article	242249 Power, short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
63/ER16	○	HST-A63	ER16	28	100	43	2 - 10
63/ER25	○	HST-A63	ER25	42	100	51	2 - 16
63/ER32	○	HST-A63	ER32	50	100	53	2 - 20
100/ER16	○	HST-A100	ER16	28	100	43	2 - 10
100/ER25	○	HST-A100	ER25	42	100	51	2 - 16
100/ER32	○	HST-A100	ER32	50	100	53	2 - 20

N° article	242254 Power, overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
63/ER16	○	HST-A63	ER16	28	160	43	2 - 10
63/ER25	○	HST-A63	ER25	42	160	51	2 - 16
63/ER32	○	HST-A63	ER32	50	160	53	2 - 20
100/ER16	○	HST-A100	ER16	28	160	43	2 - 10
100/ER25	○	HST-A100	ER25	42	160	51	2 - 16
100/ER32	○	HST-A100	ER32	50	160	53	2 - 20

Collet chuck ER ISO12164-1

FAHRION

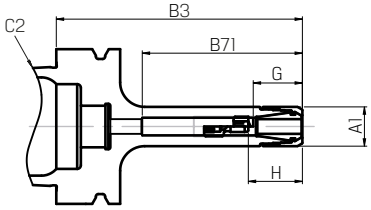
In order to achieve utmost flexibility in the fields of application, chuck, clamping nut, collet and accessories have to be defined separately

ISO 12164-1 | Form A | HSC | G 2,5 25.000 min⁻¹

B3: Dimension for clamping nut without sealing washer
B71: Max. insertion depth without stop

Delivery:
Without clamping nut

Note:
Matching accessories see page 24/445 et seq.





N° article	241228 CENTRO|P, Mini	C2	A1 mm	B3 mm	B71 mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CP11M-HSK-A63-A=100	●	HST-A63	16	100	78	36/18	26/12	1 - 7 GER11-HP/HPD/HPDD
CP16M-HSK-A63-A=70	●	HST-A63	22	70	46	34/27	20/14	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CP16M-HSK-A63-A=100	●	HST-A63	22	100	71	44/27	30/14	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD

Collet chuck ER ISO 12164-1

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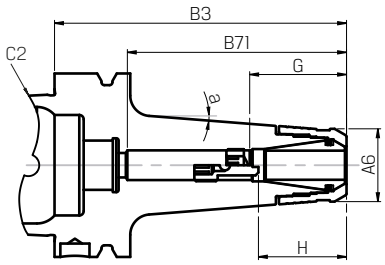
In order to achieve utmost flexibility in the fields of application, chuck, clamping nut, collet and accessories have to be defined separately

ISO 12164-1 | Form A | HSC | G 2,5 25.000 min⁻¹

B3: Dimension for clamping nut without sealing washer
B71: Max. insertion depth without stop

Delivery:
Without clamping nut

Note:
Matching accessories see page 24/445 et seq.





N° article	241229 CENTRO|P, conical	C2	A6 mm	B3 mm	B51°	B71 mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CP16-HSK-A40-A=60	○	HST-A40	30	60	–	40	32/28	–	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CPC16-HSK-A63-A=100	●	HST-A63	24	100	4,5	75	48/28	35/20	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CPC16-HSK-A63-A=160	○	HST-A63	24	160	2,5	105	48/28	35/20	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD

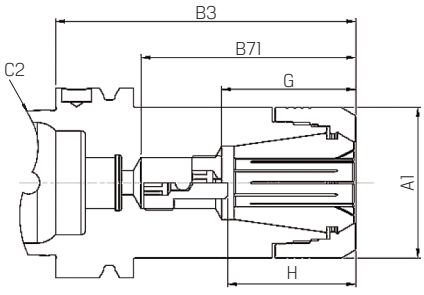
In order to achieve utmost flexibility in the fields of application, chuck, clamping nut, collet and accessories have to be defined separately
The sizes CP16-HST-A63-A=55/CP25-HST-A63-A=60/CP32-HST-A63-A=70/CP40-HST-A63-A=80 extra short version without internal stop

ISO 12164-1 | Form A | HSC | G 2,5 25.000 min⁻¹

B3: Dimension for clamping nut without sealing washer
B71: Max. insertion depth without stop

Delivery:
Without clamping nut

Note:
Matching accessories see page 24/445 et seq.





N° article	241230 CENTRO|P	C2	A1 mm	B3 mm	B71 mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CP16-HSK-A63-A=55	●	HST-A63	30	55	32	–	–	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CP16-HSK-A63-A=100	●	HST-A63	30	100	71	45/28	31/16	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CP16-HSK-A63-A=160	○	HST-A63	30	160	136	45/28	31/16	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CP16-HSK-A100-A=100	●	HST-A100	30	100	70	48/28	35/16	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CP16-HSK-A100-A=160	○	HST-A100	30	160	130	48/28	35/16	1 - 10 GER16-HP/HPD/HPDD/GBD/GBDD
CP25-HSK-A63-A=60	●	HST-A63	40	60	37	–	–	1 - 16 GER25-HP/HPD/HPDD/GBD/GBDD
CP25-HSK-A63-A=100	●	HST-A63	40	100	70	55/35	37/24	1 - 16 GER25-HP/HPD/HPDD/GBD/GBDD
CP25-HSK-A63-A=130	○	HST-A63	50	130	89	60/37	42/12	1 - 16 GER25-HP/HPD/HPDD/GBD/GBDD
CP25-HSK-A63-A=160	○	HST-A63	40	160	128	60/35	42/24	1 - 16 GER25-HP/HPD/HPDD/GBD/GBDD
CP25-HSK-A100-A=100	●	HST-A100	40	100	71	56/38	40/20	1 - 16 GER25-HP/HPD/HPDD/GBD/GBDD
CP25-HSK-A100-A=160	○	HST-A100	40	160	105	68/38	50/20	1 - 16 GER25-HP/HPD/HPDD/GBD/GBDD
CP32-HSK-A63-A=70	●	HST-A63	50	70	46	–	–	2 - 20 GER32-HP/HPD/HPDD/GBD/GBDD
CP32-HSK-A63-A=100	●	HST-A63	50	100	71	57/41	39/26	2 - 20 GER32-HP/HPD/HPDD/GBD/GBDD
CP32-HSK-A100-A=100	●	HST-A100	50	100	70	59/42	40/24	2 - 20 GER32-HP/HPD/HPDD/GBD/GBDD
CP32-HSK-A100-A=160	○	HST-A100	50	160	99	70/42	52/24	2 - 20 GER32-HP/HPD/HPDD/GBD/GBDD
CP40-HSK-A63-A=80	●	HST-A63	63	80	56	–	–	3 - 26 GER40-HP/HPD/HPDD/GBD/GBDD

Collet chuck HDC ISO 12164-1

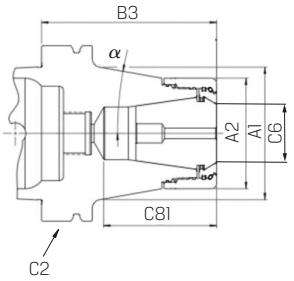
FAHRION®
FAR BEYOND PRECISION

ISO 12164-1 | G 2,5 25.000 min⁻¹

Design:
- highest possible holding torque for high radial and axial forces
- collet sits completely in the cone, thus providing the largest possible contact surface and guidance
- no clamping bridging for optimum fit
- clamping nut with ball bearings for high holding torque to prevent rotation of the collet (up to over 700 Nm holding torque)
- bearing shells with specially treated surface
- trapezoidal fine thread for higher clamping forces
- multi-part clamping nut for additional damping of the entire system
- maximum security against twisting, micro-creep and pull-out

NEW

Use:
The use of a FAHRION wedge collet leads to a positive fit on the Weldon surface of the tool, which reliably prevents micro-creep or pull-out of the tool.



Note:
Fitting collets:
GERC32-W (248480)
GERC32-W (248482)

Scope of delivery:
Including clamping nut



N° article	241232 HDC32, Heavy Duty Chuck	C2	C6	A1 mm	A2 mm	B3 mm	C81 mm	α°
63/ER32/70	○	HST-A63	ER32	–	53	70	45	–
63/ER32/100	○	HST-A63	ER32	–	53	100	72	–
100/ER32	○	HST-A100	ER32	67	53	100	68	10

Collet chuck HG ISO 12164-1

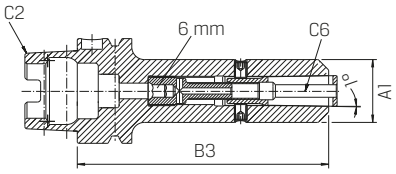
HAIMER

ISO 12164-1 | Form A | HSC | G 2,5 25.000 min⁻¹ | CAD

Use:
- for highly precise clamping of tools with cylindrical shank or with clamping flats
- very well suited for high-speed machining
- shank tolerance h6

Delivery:
- HG chuck with clamping screw
- extraction hook

Note:
Fitting collets see ander 241320 on page 24/460





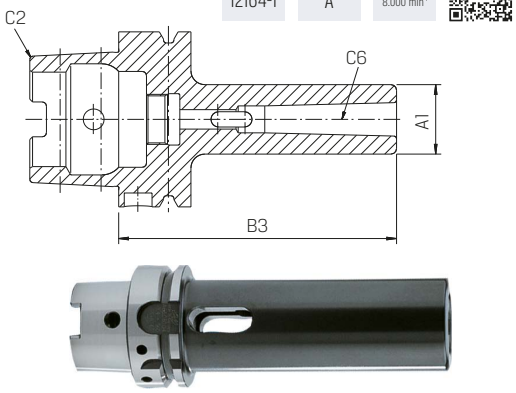
N° article	241315 long	C2	C6	A1 mm	B3 mm	Clamping range mm
63/HG01	○	HST-A63	HG01	30	120	2 - 8
63/HG02	○	HST-A63	HG02	35	120	10 - 14
63/HG03	○	HST-A63	HG03	48	120	16 - 20
100/HG01	○	HST-A100	HG01	30	120	2 - 8
100/HG02	○	HST-A100	HG02	35	120	10 - 14
100/HG03	○	HST-A100	HG03	48	120	16 - 20

Intermediate sleeve ISO 12164-1

HAIMER PREMUS

Use:
For holding tools with morse tapers with tang according to DIN 228-1 form B

ISO 12164-1 | Form A | G 6,3 8.000 min⁻¹



N° article	242265 PREMUS	242263 HAIMER	C2	C6	A1 mm	B3 mm
63/1	●	○	HSK-A63	MK1	25	100
63/2	●	○	HSK-A63	MK2	32	120
63/3	●	○	HSK-A63	MK3	40	140
63/4	●	○	HSK-A63	MK4	48	160
100/1	○	○	HSK-A100	MK1	25	110
100/2	●	○	HSK-A100	MK2	32	120
100/3	○	○	HSK-A100	MK3	40	150
100/4	○	○	HSK-A100	MK4	48	170
100/5	○	–	HSK-A100	MK5	63	200

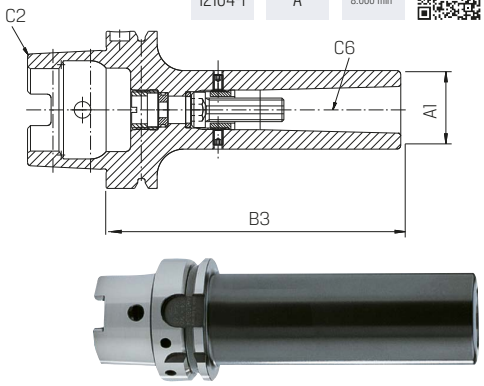
Intermediate sleeve ISO 12164-1

HAIMER

Use:
For holding tools with morse taper shanks and thread to DIN 228-1 shape A

Delivery:
With tightening bolt

ISO 12164-1 | Form A | G 6,3 8.000 min⁻¹



N° article	242273	C2	C6	A1 mm	B3 mm
100/1	○	HSK-A100	MK1	25	110
100/2	○	HSK-A100	MK2	32	120
100/3	○	HSK-A100	MK3	40	150
100/4	○	HSK-A100	MK4	48	170

Universal chuck ISO 12164-1

WTE MAPAL GROUP

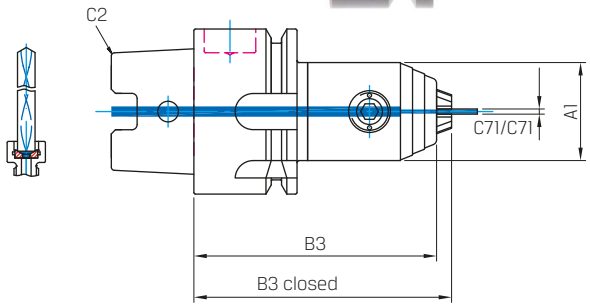
Design:
- large clamping range from Ø 0.2 to 6.4 mm and 0.2 to 3.4 mm
- low interfering contour
- secure and quick clamping
- easy handling
- for speeds up to 60,000 max.$^{-1}$
- high concentricity ‹ 0.005

ISO 12164-1 | Form AD

G 2,5 25.000 min⁻¹ | ICS

Use:
- suitable for medical technology, watch industry or precision engineering and electronics sector
- for secure clamping of micro tools with internal cooling

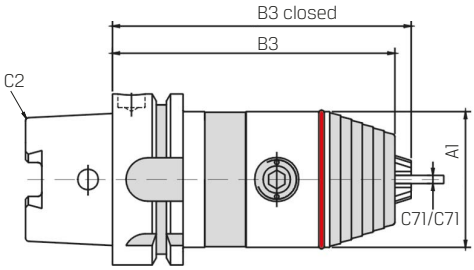




N° article	242274 Micro, IKZ	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	Weight kg
32/03	○	HSK-A32	0,2	3,4	19	46	49	0,16
32/06	○	HSK-A32	0,2	6,4	25	54	58	0,3
40/03	○	HSK-A40	0,2	3,4	19	46	49	0,24
40/06	○	HSK-A40	0,2	6,4	25	54	58	0,4
50/03	○	HSK-A50	0,2	3,4	19	52	55	0,43
50/06	○	HSK-A50	0,2	6,4	25	61	65	0,4

Design:
- for right and left rotation
- hollow taper shank according to ISO 12164-1

ISO 12164-1 | Form A | G 6,3 25.000 min⁻¹





N° article	242313 Precision	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm
40/08	○	HST-A40	0,3	8	36	91	94
63/08	○	HST-A63	0,3	8	36	96	99
63/13	●	HST-A63	0,5	13	50	104	110
63/16	●	HST-A63	2,5	16	57	109	115
100/13	○	HST-A100	0,5	13	50	111	117
100/16	○	HST-A100	2,5	16	57	116	122

Universal chuck ISO 12164-1

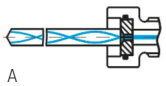
WTE MAPAL GROUP

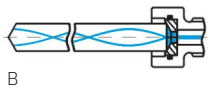
ISO 12164-1 | Form AD | ICS | G 6,3 25.000 min⁻¹

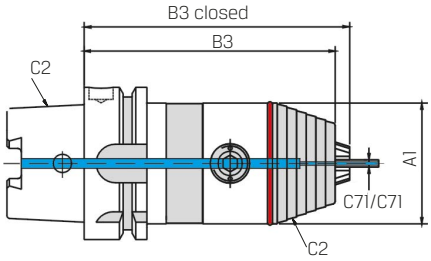
Design:
- for right and left rotation
- hollow taper shank according to ISO 12164-1

Note:
A: Sealing washer WTE 13 2.05 mm included in delivery. For coolant duct drill 3-6 mm, with smooth shank according to DIN 6535 shape HA.

B: Sealing washer WTE 13 4.2 mm installed in the drill chuck head. For coolant duct drill 6-13 mm, with smooth shank according to DIN 6535 shape HA.









N° article	242314 Precision, ICS	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm
50/13	○	HST-A50	0,5	13	50	116	122
50/16	○	HST-A50	2,5	16	57	121	127
63/08	○	HST-A63	0,3	8	36	96	99
63/13	●	HST-A63	0,5	13	50	104	110
63/16	●	HST-A63	2,5	16	57	109	115
100/13	○	HST-A100	0,5	13	50	111	117
100/16	○	HST-A100	2,5	16	57	116	122

Quick-change tapping chuck ISO 12164-1

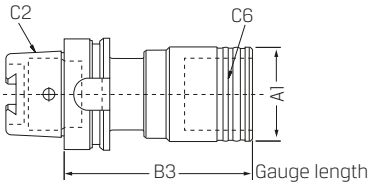
PREMUS

ISO 12164-1 | Form A | G 6,3 8.000 min⁻¹

Design:
- short dimensions and low weight
- for holding quick-change adaptors with and without safety coupling
- for horizontal and vertical use, for right and left hand rotation
- sizes 1 to 3 are supplied with ball bearing bush

Use:
For mounting taps on mechanically and NC controlled lathes, drilling and milling machines and machining centres

Note:
Matching inserts see page 24/463.





N° article	242320	C2	C6	A1 mm	B3 mm	for taps	Length compensation compression/traction
63/M3 - 12	●	HST-A63	Sz. 1	36	81	M3-M12	7.5/7.5
63/M8 - 20	●	HST-A63	Sz. 2	53	119	M5-M20	7.5/7.5
63/M14 - 33	○	HST-A63	Sz. 3	78	176	M14-M33	20.0/20.0
100/M3 - 12	●	HST-A100	Sz. 1	36	90	M3-M12	12.5/12.5
100/M8 - 20	●	HST-A100	Sz. 2	53	138	M5-M20	12.5/12.5
100/M14 - 33	○	HST-A100	Sz. 3	78	190	M14-M33	20.0/20.0

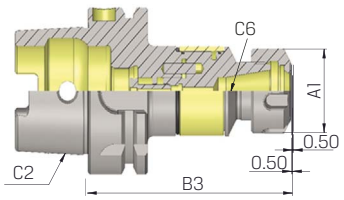
Synchro tapping chuck ISO 12164-1

PREMUS

ISO 12164-1 | Form A | G 6,3 8.000 min⁻¹ | ICS

Design:
- the minimal length compensation balances out deviations between thread pitch and spindle feed, which means less pressure on the thread flanks of the tools and thus considerably longer tool life
- with internal coolant supply (max. 50 bar)
- safe clamping of taps with collets DIN ISO 15488 (ER) and internal square drive drills or taps
- collets with quick-change system (see main catalogue page 24/457)
- with Balluffchip bore for tool identification

Delivery:
With sealable clamping nut.





N° article	242325	C2	C6	A1 mm	B3 mm	for taps
63/ER16	●	HST-A63	ER16	32	89	M3-M12
63/ER16M	○	HST-A63	ER16-M	22	89	M3-M12
63/ER20	○	HST-A63	ER20	35	90	M3-M12
63/ER25	●	HST-A63	ER25	42	94	M3-M14
63/ER32	●	HST-A63	ER32	50	105	M4 - M27
63/ER40	○	HST-A63	ER40	63	133	M4-M33
100/ER16	●	HST-A100	ER16	32	96	M3-M12
100/ER16M	●	HST-A100	ER16-M	22	97	M3-M12
100/ER20	○	HST-A100	ER20	35	97	M3-M12
100/ER32	●	HST-A100	ER32	50	110	M3-M14
100/ER40	●	HST-A100	ER40	63	133	M4-M33
100/ER50	○	HST-A100	ER50	63	133	M10 - M42

Shrink-fit chuck ISO 12164-1

HAIMER

Design and use:
Suitable for inductive, contact and hot air shrink-fit units

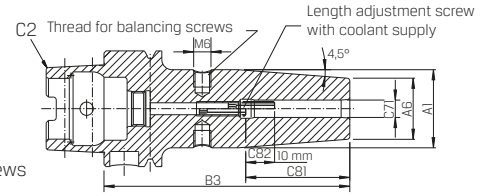
- fine balancing with balancing screws possible
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- concentricity ‹ 3 µm

Delivery:
With length setting screw without coolant duct

Note:
Matching accessories see page 24/464 et seq.

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min⁻¹ | CAD

*without set screw, without threads for balancing screws, without slits along the clamping bore for coolant supply
**without threads for balancing screws
***without adjustment screws, without threads for balancing screws





N° article	242741 short	242742 short, Cool Jet	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
32/03	○	–	*	HST-A32	3	–	10	60	9
32/04	○	–	*	HST-A32	4	–	10	60	12
32/05	○	–	*	HST-A32	5	–	10	60	15
32/06	○	–	**	HST-A32	6	27	21	70	36
32/08	○	–	**	HST-A32	8	27	21	70	36
32/10	○	–	**	HST-A32	10	32	24	80	42
40/03	○	–	*	HST-A40	3	–	10	60	9
40/04	○	–	*	HST-A40	4	–	10	60	12
40/05	○	–	*	HST-A40	5	–	10	60	15
40/06	○	–		HST-A40	6	27	21	80	36
40/08	○	–		HST-A40	8	27	21	80	36
40/10	○	–		HST-A40	10	32	24	80	42
40/12	○	–		HST-A40	12	32	24	90	47
40/14	○	–		HST-A40	14	34	27	90	47
40/16	○	–		HST-A40	16	34	27	90	50
50/03	○	–	*	HST-A50	3	–	10	60	9
50/04	○	–	*	HST-A50	4	–	10	60	12
50/05	○	–	*	HST-A50	5	–	10	60	15
50/06	○	–		HST-A50	6	27	21	80	36
50/08	○	–		HST-A50	8	27	21	80	36
50/10	○	–		HST-A50	10	32	24	85	42
50/12	○	–		HST-A50	12	32	24	90	47
50/14	○	–		HST-A50	14	34	27	90	47
50/16	○	–		HST-A50	16	34	27	95	50
63/03	○	–	***	HST-A63	3	–	10	80	9
63/04	○	–	***	HST-A63	4	–	10	80	12
63/05	○	–	***	HST-A63	5	–	10	80	15
63/06	○	○		HST-A63	6	27	21	80	36
63/08	○	○		HST-A63	8	27	21	80	36

N° article	242741 short	242742 short, Cool Jet	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
63/10	○	○		HST-A63	10	32	24	85	42
63/12	○	○		HST-A63	12	32	24	90	47
63/14	○	○		HST-A63	14	34	27	90	47
63/16	○	○		HST-A63	16	34	27	95	50
63/18	○	○		HST-A63	18	42	33	95	50
63/20	○	○		HST-A63	20	42	33	100	52
63/25	○	○		HST-A63	25	53	44	115	58
63/32	○	○		HST-A63	32	53	44	120	58
80/06	○	–		HST-A80	6	27	21	85	36
80/08	○	–		HST-A80	8	27	21	85	36
80/10	○	–		HST-A80	10	32	24	90	42
80/12	○	–		HST-A80	12	32	24	95	47
80/14	○	–		HST-A80	14	34	27	95	47
80/16	○	–		HST-A80	16	34	27	100	50
80/18	○	–		HST-A80	18	42	33	100	50
80/20	○	–		HST-A80	20	42	33	105	52
80/25	○	–		HST-A80	25	53	44	115	58
80/32	○	–		HST-A80	32	53	44	120	58
100/06	○	–		HST-A100	6	27	21	85	36
100/08	○	–		HST-A100	8	27	21	85	36
100/10	○	–		HST-A100	10	32	24	90	42
100/12	○	–		HST-A100	12	32	24	95	47
100/14	○	–		HST-A100	14	34	27	95	47
100/16	○	–		HST-A100	16	34	27	100	50
100/18	○	–		HST-A100	18	42	33	100	50
100/20	○	–		HST-A100	20	42	33	105	52
100/25	○	–		HST-A100	25	53	44	115	58
100/32	○	–		HST-A100	32	53	44	120	58

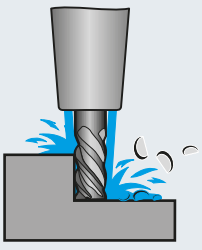
COOL JET - So that you only cut the chip once

Product information

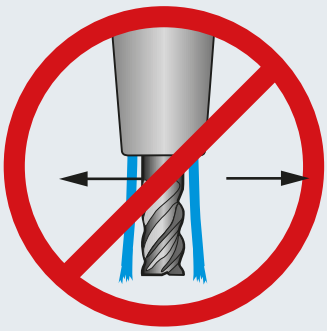
HAIMER



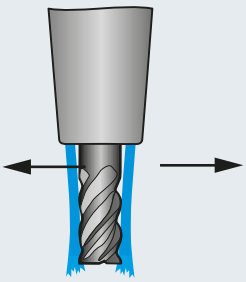
standard



Cool Jet



straight



Cool Jet

- optimal jet guidance right up to the cutting edge
- up to 100% longer service life
- increased process reliability
- no chip clumps on the tool

Behavior at high speed

Previous coolant holes: straight
Optimised coolant hole: angled

Shrink-fit chuck ISO 12164-1

HAIMER

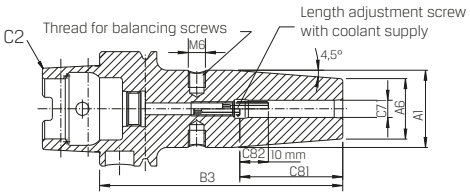
Use:
Suitable for inductive, contact and hot air shrink-fit units

- fine balancing with balancing screws possible
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- concentricity ‹ 3 µm

Delivery:
With length setting screw without coolant duct

Note:
Matching accessories see page 24/464 et seq.

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min⁻¹





N° article	242745 ZG130	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/06	○	HST-A50	6	27	21	130	36
50/08	○	HST-A50	8	27	21	130	36
50/10	○	HST-A50	10	32	24	130	42
50/12	○	HST-A50	12	32	24	130	47
50/16	○	HST-A50	16	34	27	130	50
63/06	○	HST-A63	6	27	21	130	36
63/08	○	HST-A63	8	27	21	130	36
63/10	○	HST-A63	10	32	24	130	42
63/12	○	HST-A63	12	32	24	130	47
63/14	○	HST-A63	14	34	27	130	47
63/16	○	HST-A63	16	34	27	130	50
63/18	○	HST-A63	18	42	33	130	50

N° article	242745 ZG130	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
63/20	○	HST-A63	20	42	33	130	52
63/25	○	HST-A63	25	53	44	130	58
100/06	○	HST-A100	6	27	21	130	36
100/08	○	HST-A100	8	27	21	130	36
100/10	○	HST-A100	10	32	24	130	42
100/12	○	HST-A100	12	32	24	130	47
100/14	○	HST-A100	14	34	27	130	47
100/16	○	HST-A100	16	34	27	130	50
100/18	○	HST-A100	18	42	33	130	50
100/20	○	HST-A100	20	42	33	130	52
100/25	○	HST-A100	25	53	44	130	58
100/32	○	HST-A100	32	53	44	130	58

N° article	242747 overlong	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
63/06	○	HST-A63	6	27	21	160	36
63/08	○	HST-A63	8	27	21	160	36
63/10	○	HST-A63	10	32	24	160	42
63/12	○	HST-A63	12	32	24	160	47
63/14	○	HST-A63	14	34	27	160	47
63/16	○	HST-A63	16	34	27	160	50
63/18	○	HST-A63	18	42	33	160	50
63/20	○	HST-A63	20	42	33	160	52
63/25	○	HST-A63	25	53	44	160	58
63/32	○	HST-A63	32	53	44	160	58

N° article	242747 overlong	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
100/06	○	HST-A100	6	27	21	160	36
100/08	○	HST-A100	8	27	21	160	36
100/10	○	HST-A100	10	32	24	160	42
100/12	○	HST-A100	12	32	24	160	47
100/14	○	HST-A100	14	34	27	160	47
100/16	○	HST-A100	16	34	27	160	50
100/18	○	HST-A100	18	42	33	160	50
100/20	○	HST-A100	20	42	33	160	52
100/25	○	HST-A100	25	53	44	160	58
100/32	○	HST-A100	32	53	44	160	58

N° article	242749 ZG200	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
63/06	○	HST-A63	6	27	21	200	36
63/08	○	HST-A63	8	27	21	200	36
63/10	○	HST-A63	10	32	24	200	42
63/12	○	HST-A63	12	32	24	200	47
63/14	○	HST-A63	14	34	27	200	47
63/16	○	HST-A63	16	34	27	200	50
63/18	○	HST-A63	18	42	33	200	50
63/20	○	HST-A63	20	42	33	200	52
63/25	○	HST-A63	25	53	44	200	58
63/32	○	HST-A63	32	53	44	200	58

N° article	242749 ZG200	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
100/06	○	HST-A100	6	27	21	200	36
100/08	○	HST-A100	8	27	21	200	36
100/10	○	HST-A100	10	32	24	200	42
100/12	○	HST-A100	12	32	24	200	47
100/14	○	HST-A100	14	34	27	200	47
100/16	○	HST-A100	16	34	27	200	50
100/18	○	HST-A100	18	42	33	200	50
100/20	○	HST-A100	20	42	33	200	52
100/25	○	HST-A100	25	53	44	200	58
100/32	○	HST-A100	32	53	44	200	58

Shrink-fit chuck ISO 12164-1

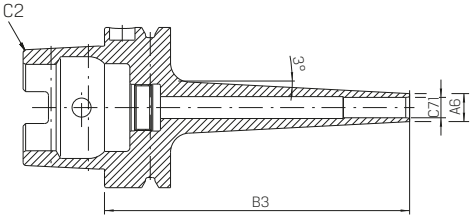
HAIMER

Design and use:
- **ultra slim** for fine machining and for working in particularly hard-to-reach places
- no interfering edges
- optimal rigidity
- ideal shrinking with Haimer Power Clamp
- for all carbide tools with shank tolerance h6
- 3° bevel, fitting for mould inclines
- seat fine balanced
- concentricity ‹ 3 µm

Delivery:
Without coolant duct

Note:
Matching accessories see page 24/464 et seq.

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min⁻¹





N° article	242751 Mini, short	C2	C71 mm	A6 mm	B3 mm
63/06	○	HST-A63	6	9	80
63/08	○	HST-A63	8	11	80
63/10	○	HST-A63	10	13	80
63/12	○	HST-A63	12	15	80

N° article	242753 Mini, ZG120, extra slim	C2	C71 mm	A6 mm	B3 mm
63/03	○	HST-A63	3	6	120
63/04	○	HST-A63	4	7	120
63/05	○	HST-A63	5	8	120
63/06	○	HST-A63	6	9	120
63/08	○	HST-A63	8	11	120
63/10	○	HST-A63	10	13	120
63/12	○	HST-A63	12	15	120

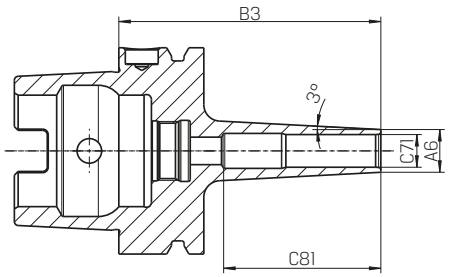
Shrink-fit chuck ISO 12164-1

HAIMER

ISO 12164-1 | Form A | G 2,5 25.000 min⁻¹

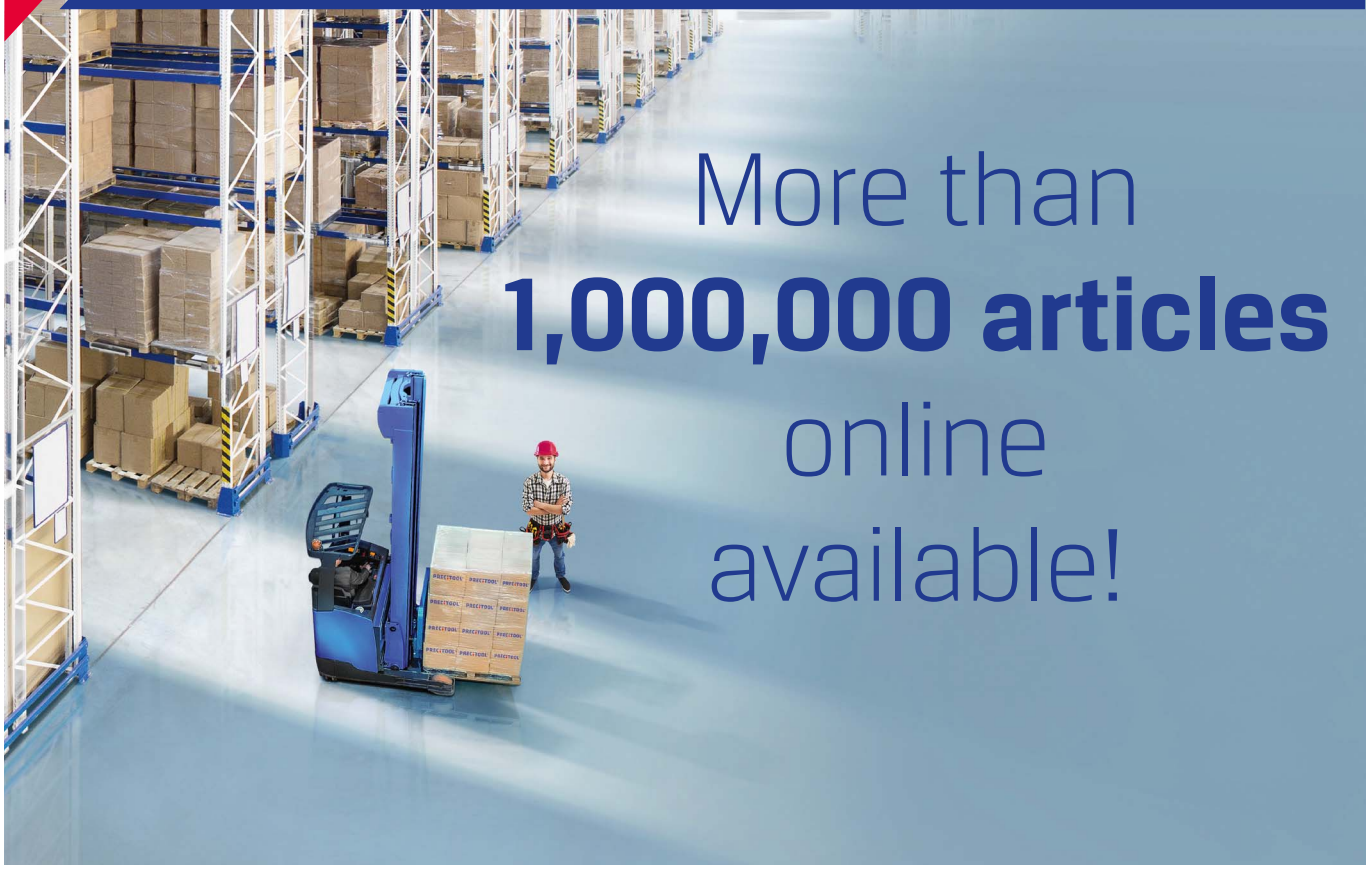
Design and use:
Shrink fit chucks for all types of shrink fit equipment.
- with high holding force
- no interfering edges
- highest concentricity 3 µm
- precision cast in one piece
- even hard to reach places are accessible
- optimal rigidity
- ideal shrinking with HAIMER Power Clamp
- for all carbide tools with shank tolerance h6
- heat resistant hot-working steel
- hardened 54-2 HRC
- 3° bevel, fitting for mould inclines
- seat fine balanced
- supplied without coolant pipe

Attention:
Shrink and cooling sleeves are required for shrinking on most shrink machines. When using the Power Clamp i4.0 Sprint / Air or Nano machines with motorised coil and scanner, the sleeves are not necessary





N° article	242752 Mini, ZG120	C2	C71 mm	A6 mm	B3 mm	C82 mm
63/03	○	HST-A63	3	9	120	–
63/04	○	HST-A63	4	10	120	–
63/05	○	HST-A63	5	11	120	–
63/06	○	HST-A63	6	12	120	–
63/08	○	HST-A63	8	14	120	–
63/10	○	HST-A63	10	16	120	68
63/12	○	HST-A63	12	18	120	75
63/16	○	HST-A63	16	24	120	75

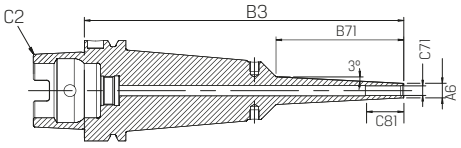
Your full-range provider
For every application the proper tool!
PRECITOOL®


Shrink-fit chuck ISO 12164-1

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min⁻¹

Design and use:
- for 5-axis machining in mould making and medical technology
- efficient milling even with large protruding of tilted tools possible
- **extremely slender tip**, reinforced at the base
- wall thickness 3 mm
- 3° incline in the tip area
- with threaded holes for balancing screws
- for carbide tools with shank tolerance h6
- shrinking only with shrink and cooling sleeves
- concentricity ‹ 3 µm

Note:
Matching accessories see page 24/464 et seq.







N° article	242855 Power, Mini, ZG130	C2	C71 mm	A6 mm	B3 mm	B71 mm	C81 mm
63/03	○	HST-A63	3	9	130	50	–
63/04	○	HST-A63	4	10	130	50	–
63/05	○	HST-A63	5	11	130	50	–
63/06	○	HST-A63	6	12	130	50	–
63/08	○	HST-A63	8	14	130	50	–
63/10	○	HST-A63	10	16	130	50	68
63/12	○	HST-A63	12	18	130	50	75
63/16	○	HST-A63	16	24	130	50	75

N° article	242857 Power, Mini, overlong	C2	C71 mm	A6 mm	B3 mm	B71 mm	C81 mm
63/03	○	HST-A63	3	9	160	80	–
63/04	○	HST-A63	4	10	160	80	–
63/05	○	HST-A63	5	11	160	80	–
63/06	○	HST-A63	6	12	160	80	–
63/08	○	HST-A63	8	14	160	80	–
63/10	○	HST-A63	10	16	160	80	68
63/12	○	HST-A63	12	18	160	80	75
63/16	○	HST-A63	16	24	160	80	75

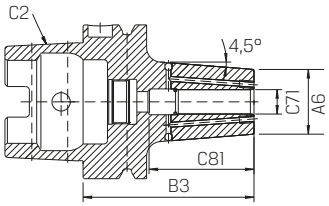
N° article	242859 Power, Mini, ZG200	C2	C71 mm	A6 mm	B3 mm	B71 mm	C81 mm
63/03	○	HST-A63	3	9	200	80	–
63/04	○	HST-A63	4	10	200	80	–
63/05	○	HST-A63	5	11	200	80	–
63/06	○	HST-A63	6	12	200	80	–
63/08	○	HST-A63	8	14	200	80	–
63/10	○	HST-A63	10	16	200	80	68
63/12	○	HST-A63	12	18	200	80	75
63/16	○	HST-A63	16	24	200	80	75

Design and use:
- for highest cutting performance at HSM operations
- increased cutting performance due to higher speeds, higher feed rates and greater clamping depth
- shorter machining times
- smoother running results in better surface quality and spares tools, spindle and machine
- better dimensional stability
- with closable Cool Jet holes
- with threaded holes for balancing screws

Note:
- all versions also available with® SAFE-LOCK
- matching accessories see page 24/464 et seq.

The long versions (B3 = 130-200 mm) with slim tip are especially versatile in use
- high rigidity
- slim at the tip
- vibration-damping
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- universally applicable, saving space in the tool magazine
- concentricity ‹ 3 µm

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min⁻¹







N° article	242840 Power, ultra short	C2	C71 mm	A6 mm	B3 mm	C81 mm
63/06	○	HST-A63	6	22	70	38
63/08	○	HST-A63	8	22	70	38
63/10	○	HST-A63	10	26,5	70	43
63/12	○	HST-A63	12	26,5	70	46
63/14	○	HST-A63	14	29,5	75	48
63/16	○	HST-A63	16	29,5	75	49
63/18	○	HST-A63	18	35,5	75	49
63/20	○	HST-A63	20	35,5	75	49
63/25	○	HST-A63	25	45	85	57
63/32	○	HST-A63	32	45	85	59

N° article	242841 Power, short	C2	C71 mm	A6 mm	B3 mm	C81 mm
100/06	○	HST-A100	6	21	85	36
100/08	○	HST-A100	8	21	85	36
100/10	○	HST-A100	10	27	90	42
100/12	○	HST-A100	12	27	95	47
100/14	○	HST-A100	14	33	95	47
100/16	○	HST-A100	16	33	100	50
100/18	○	HST-A100	18	44	100	50
100/20	○	HST-A100	20	44	105	52
100/25	○	HST-A100	25	44	115	58

N° article	242845 Power, ZG130	C2	C71 mm	A6 mm	B3 mm	C81 mm
63/06	○	HST-A63	6	21	130	36
63/08	○	HST-A63	8	21	130	36
63/10	○	HST-A63	10	24	130	42
63/12	○	HST-A63	12	24	130	47
63/14	○	HST-A63	14	27	130	47
63/16	○	HST-A63	16	27	130	50
63/18	○	HST-A63	18	33	130	50
63/20	○	HST-A63	20	33	130	52
63/25	○	HST-A63	25	44	130	58
63/32	○	HST-A63	32	44	130	58

N° article	242847 Power, overlong	C2	C71 mm	A6 mm	B3 mm	C81 mm
63/06	○	HST-A63	6	21	160	36
63/08	○	HST-A63	8	21	160	36
63/10	○	HST-A63	10	24	160	42
63/12	○	HST-A63	12	24	160	47
63/14	○	HST-A63	14	27	160	47
63/16	○	HST-A63	16	27	160	50
63/18	○	HST-A63	18	33	160	50
63/20	○	HST-A63	20	33	160	52
63/25	○	HST-A63	25	44	160	58
63/32	○	HST-A63	32	44	160	58
100/06	○	HST-A100	6	21	160	36
100/08	○	HST-A100	8	21	160	36
100/10	○	HST-A100	10	27	160	42
100/12	○	HST-A100	12	27	160	47
100/14	○	HST-A100	14	33	160	47
100/16	○	HST-A100	16	33	160	50
100/18	○	HST-A100	18	44	160	50
100/20	○	HST-A100	20	44	160	52
100/25	○	HST-A100	25	44	160	58

N° article	242849 Power, ZG200	C2	C71 mm	A6 mm	B3 mm	C81 mm
100/06	○	HST-A100	6	21	200	36
100/08	○	HST-A100	8	21	200	36
100/10	○	HST-A100	10	27	200	42
100/12	○	HST-A100	12	27	200	47
100/14	○	HST-A100	14	33	200	47
100/16	○	HST-A100	16	33	200	50
100/18	○	HST-A100	18	44	200	50
100/20	○	HST-A100	20	44	200	52
100/25	○	HST-A100	25	44	200	58

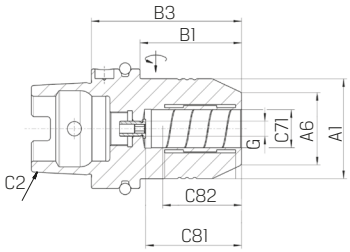
Hydraulic expansion chuck ISO 12164-1

SCHUNK

Design:
- short, heavy-duty version, with axial length adjustment
- for automatic tool change
- with vibration damping and radial rigidity
- maximum speed 50,000 rpm^{-1}
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ‹ 0.003 mm

ISO 12164-1	Form A	HPC	HSC	G 2,5 25.000 min^{-1}

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469





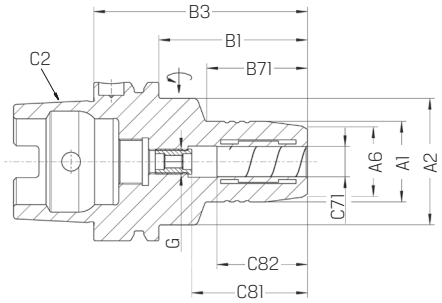
N° article	241420 TENDO E Compact	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
63/12	○	HST-A63	12	42	32	80	54	46	31	M8×1	110	1,3
63/16	○	HST-A63	16	52,5	38	80	54	51	37	M8×1	350	1.3
63/20	○	HST-A63	20	51,5	33	80	54	51	36,5	M8×1	360	1.3

Design:
- with adjusting screw for axial length adjustment
- for automatic tool holder change
- voltage without peripheral devices
- concentricity ‹ 0.003 mm at 2.5×D
- hole for data carrier according to DIN 69873

ISO 12164-1	Form A	HPC	HSC	G 2,5 25.000 min^{-1}

NEW

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.





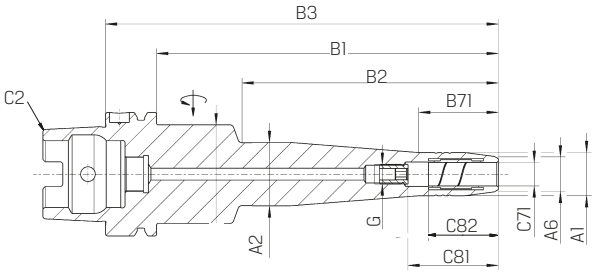
N° article	241424 TENDO Silver	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	G	Torque min. Nm
63/06	○	HST-A63	6	26	50	22	70	44	24	37	27	M5	16
63/08	○	HST-A63	8	28	50	24	70	44	25	37	27	M6	23
63/10	○	HST-A63	10	30	50	26	80	54	35	41	31	M8×1	45
63/12	○	HST-A63	12	32	50	28	85	59	40	46	36	M10×1	90
63/14	○	HST-A63	14	34	50	30	85	59	40	46	36	M10×1	110
63/16	○	HST-A63	16	38	50	34	90	64	46	49	39	M12×1	185
63/18	○	HST-A63	18	40	50	36	90	64	47	49	39	M12×1	240
63/20	○	HST-A63	20	42	50	38	90	64	48	51	41	M16×1	330
63/25	○	HST-A63	25	57	–	53	120	94	–	57	47	M16×1	400
63/32	○	HST-A63	32	62	–	58	125	99	–	61	51	M16×1	650
100/06	○	HST-A100	6	26	50	22	75	46	26	37	27	M5	16
100/08	○	HST-A100	8	28	50	24	75	46	26	37	27	M6	23
100/10	○	HST-A100	10	30	50	26	90	61	42	41	31	M8×1	45
100/12	○	HST-A100	12	32	50	28	95	66	47	46	36	M10×1	90
100/14	○	HST-A100	14	34	50	30	95	66	47	46	36	M10×1	110
100/16	○	HST-A100	16	38	50	34	100	71	53	49	39	M12×1	185
100/18	○	HST-A100	18	40	50	36	100	71	53	49	39	M12×1	240
100/20	○	HST-A100	20	42	50	38	105	76	59	51	41	M16×1	330
100/25	○	HST-A100	25	57	63	53	110	81	62	57	47	M16×1	400
100/32	○	HST-A100	32	64	75	60	110	81	62	61	51	M16×1	650

Hydraulic expansion chuck ISO 12164-1

SCHUNK

Design:
- long, super slim version with axial length adjustment
- for automatic tool change
- with vibration damping
- balancing quality G2.5 at 25,000 min^{-1}
- permanent concentricity and alternating repeatability < 0.006 mm

ISO 12164-1	Form A	G 2,5 25.000 min^{-1}





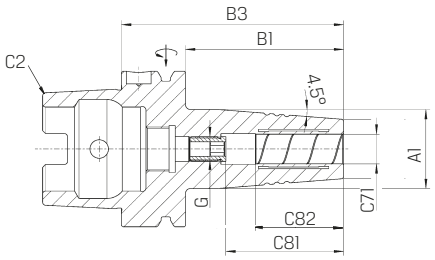
N° article	241427 TENDO LSS	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B2 mm	B71 mm	C81 mm	C82 mm	G
63/06	○	HST-A63	6	16	26,2	12	200	174	129	40,5	37	27	M5
63/08	○	HST-A63	8	18	28,2	14	200	174	130	40,5	37	27	M6
63/10	○	HST-A63	10	20	30,2	16	200	174	130	40,5	41	31	M8×1
63/12	○	HST-A63	12	22	32,2	18	200	174	130	40,5	46	36	M10×1
63/14	○	HST-A63	14	24	34,2	20	200	174	131	40,5	46	36	M10×1
63/16	○	HST-A63	16	26	36,2	22	200	174	131	40,5	49	39	M12×1
63/20	○	HST-A63	20	30	40,2	26	200	174	132	40,5	51	41	M16×1

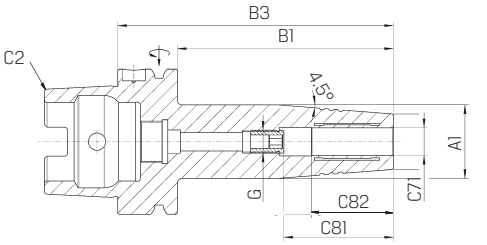
Hydraulic expansion chuck ISO 12164-1

SCHUNK

Design:
- with axial length adjustment
- for automatic tool change
- balancing quality G2.5 at 25,000 min^{-1}
- permanent concentricity and alternating repeatability < 0.003 mm

ISO 12164-1	Form A	G 2,5 25.000 min^{-1}









N° article	241428 TENDO, slim, short	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	G
63/06	○	HST-A63	6	27	80	54	38,2	28,2	M10×1
63/08	○	HST-A63	8	27	80	54	38,2	28,2	M10×1
63/10	○	HST-A63	10	32	85	59	42,7	32,7	M10×1
63/12	○	HST-A63	12	32	90	64	47,7	37,7	M10×1
63/14	○	HST-A63	14	34	90	64	48,7	38,7	M10×1
63/16	○	HST-A63	16	34	95	69	53,2	43,2	M12×1
63/20	○	HST-A63	20	42	100	74	55,7	45,7	M16×1

N° article	241429 TENDO, slim, long	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	G
63/06	○	HST-A63	6	27	120	94	38,2	28,2	M5×0.8
63/08	○	HST-A63	8	27	120	94	38,2	28,2	M7×1
63/10	○	HST-A63	10	32	120	94	43,2	33,2	M8×1
63/12	○	HST-A63	12	32	120	94	47,7	37,7	M10×1
63/14	○	HST-A63	14	34	120	94	48,7	38,7	M10×1
63/16	○	HST-A63	16	34	120	94	53,2	43,2	M12×1
63/20	○	HST-A63	20	42	120	94	55,7	45,7	M16×1

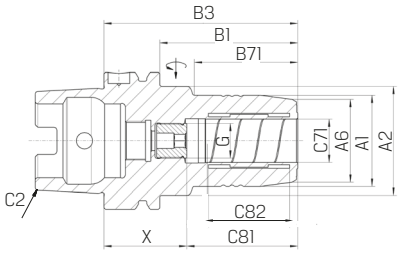
Hydraulic expansion chuck ISO 7388-2

SCHUNK

Design:
- with axial length adjustment
- for automatic tool change
- with vibration damping
- maximum speed 50,000 rpm^{-1}
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ⟨ 0.003 mm

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min^{-1}



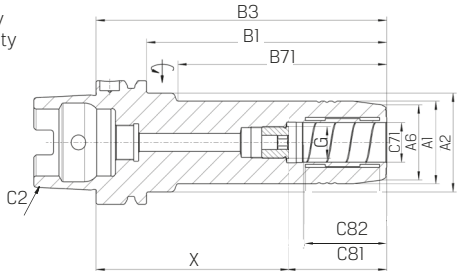


N° article	241422 TENDO E, short	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
32/06	○	HST-A32	6	32	40	28	90	–	29	44	46	36	M6	90	0.5
32/08	○	HST-A32	8	30	40	26	85	–	29	44	41	31	M6	45	0.5
32/12	○	HST-A32	12	26	40	22	80	–	40	43	37	27	M5	16	0.5
40/06	○	HST-A40	6	26	33,5	22	70	50	36	33	37	27	M5	16	0.4
40/08	○	HST-A40	8	28	33,5	24	70	50	36	33	37	27	M6	23	0.5
40/10	○	HST-A40	10	30	33,5	26	75	55	42	34	41	31	M6	45	0.5
40/12	○	HST-A40	12	32	33,5	28	80	60	48	34	46	36	M6	90	0.5
40/14	○	HST-A40	14	34	53	29,5	85	65	32	39	46	36	M10×1	110	0.7
40/16	○	HST-A40	16	38	53	33,5	90	70	37	41	49	39	M12×1	185	0.8
40/18	○	HST-A40	18	40	53	35,5	95	75	42	46	49	39	M12×1	240	0.8
40/20	○	HST-A40	20	42	53	37,5	100	80	47	49	51	41	M16×1	330	1
50/06	○	HST-A50	6	26	40	22	70	44	28	33	37	27	M5	16	0.7
50/08	○	HST-A50	8	28	40	24	70	44	28	33	37	27	M6	23	0.7
50/10	○	HST-A50	10	30	40	26	75	49	34	34	41	31	M8×1	45	0.7
50/12	○	HST-A50	12	32	40	28	85	59	44	39	46	36	M10×1	90	0.8
50/14	○	HST-A50	14	34	40	30	85	59	44	39	46	36	M10×1	110	0.8
50/16	○	HST-A50	16	38	53	34	90	64	30	41	49	39	M12×1	185	1.1
50/18	○	HST-A50	18	40	57	36	90	64	30	41	49	39	M12×1	240	1
50/20	○	HST-A50	20	42	60	38	90	64	29	39	51	41	M16×1	330	1.1
63/06	○	HST-A63	6	26	50	22	70	44	24	33	37	27	M5	16	1
63/08	○	HST-A63	8	28	50	24	70	44	25	33	37	27	M6	23	1
63/10	○	HST-A63	10	30	50	26	80	54	35	39	41	31	M8×1	45	1.1
63/12	○	HST-A63	12	32	50	28	85	59	40	39	46	36	M10×1	90	1.1
63/14	○	HST-A63	14	34	50	30	85	59	40	39	46	36	M10×1	110	1.1
63/16	○	HST-A63	16	38	50	34	90	64	46	41	49	39	M12×1	185	1.2
63/18	○	HST-A63	18	40	50	36	90	64	47	41	49	39	M12×1	240	1.3
63/20	○	HST-A63	20	42	50	38	90	64	48	39	51	41	M16×1	330	1.3
63/25	○	HST-A63	25	57	63	53	120	94	59	63	57	47	M16×1	400	2.2
63/32	○	HST-A63	32	64	75	60	125	99	63	64	61	51	M16×1	650	2.7
100/06	○	HST-A100	6	26	50	22	75	64	26	38	37	27	M5	16	2.5
100/08	○	HST-A100	8	28	50	24	75	46	26	38	37	27	M6	23	2.5
100/10	○	HST-A100	10	30	50	26	90	61	42	49	41	31	M8×1	45	2.5
100/12	○	HST-A100	12	32	50	28	95	66	47	49	46	36	M10×1	90	2.6
100/14	○	HST-A100	14	34	50	30	95	66	47	49	46	36	M10×1	110	2.6
100/16	○	HST-A100	16	38	50	34	100	71	53	51	49	39	M12×1	185	2.7
100/18	○	HST-A100	18	40	50	36	100	71	53	51	49	39	M12×1	240	2.8
100/20	○	HST-A100	20	42	50	38	105	76	59	54	51	41	M16×1	330	2.8
100/25	○	HST-A100	25	57	63	53	110	81	62	53	57	57	M16×1	400	3.7
100/32	○	HST-A100	32	64	75	60	110	81	62	49	61	51	M16×1	650	3.8

Design:
- long, slim version with axial length adjustment
- for automatic tool change
- with vibration damping
- maximum speed 50,000 rpm^{-1}
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ⟨ 0.003 mm

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469

ISO 12164-1 | Form A | HPC | HSC | G 2,5 25.000 min^{-1}





N° article	241426 TENDO LS	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
63/06	○	HST-A63	6	26	50	22	150	124	103	113	37	37	M5	16	1.4
63/08	○	HST-A63	8	28	50	24	150	124	104	113	37	27	M6	23	1.4
63/10	○	HST-A63	10	30	50	26	150	124	104	109	41	27	M8×1	45	1.5
63/12	○	HST-A63	12	32	50	28	150	124	105	104	46	31	M10×1	90	1.5
63/14	○	HST-A63	14	34	50	30	150	124	105	104	46	36	M10×1	110	1.6
63/16	○	HST-A63	16	38	50	34	150	124	106	101	49	39	M12×1	185	1.8
63/18	○	HST-A63	18	40	50	36	150	124	107	101	49	39	M12×1	240	1.8
63/20	○	HST-A63	20	42	50	38	150	124	108	99	51	41	M16×1	330	1.9

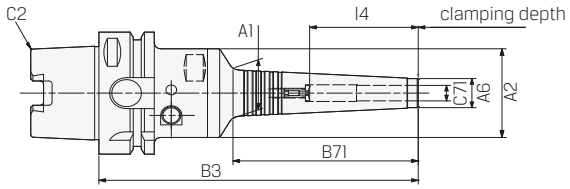
Hydraulic expansion chuck ISO 12164-1

ISO 12164-1	Form A	HPC	HSC	G 2,5 25.000 min⁻¹

Design:
- with the flexibility of a collet chuck and with high clamping forces
- CAD data free of charge
- concentricity 0.003 mm
- maximum speed 20,000 rpm-1
- shank tolerance h6
- internal coolant supply possible, air outlet holes are to be closed with two screws M4 × 5
- for chuck size 63/12 HS clamping sleeve to reduce the diameter

Use:
For universal milling, drilling and reaming

Note:
- coolant duct included in delivery
- fitting collet sleeves see under 241499 on page 24/470.





N° article	241494 PHC-S, short, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C82 mm
63/03	○	HST-A63	3	18,5	46	11	135	71	18
63/04	○	HST-A63	4	18,5	46	11	135	71	24
63/06	○	HST-A63	6	20,5	46	13	135	71	29
63/08	○	HST-A63	8	22,6	46	15	135	72	29
63/10	○	HST-A63	10	24,6	46	17	135	72	40
63/12	○	HST-A63	12	26,7	46	19	135	73	40
63/16	○	HST-A63	16	30,6	52,5	23	135	72	40

N° article	241496 PHC-SB, overlong, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C82 mm
63/06	○	HST-A63	6	20,5	46	13	135	71	29
63/08	○	HST-A63	8	22,6	46	15	135	72	29
63/10	○	HST-A63	10	24,6	46	17	135	72	40
63/12	○	HST-A63	12	26,7	46	19	135	73	40
63/16	○	HST-A63	16	30,6	52,5	23	135	72	40

N° article	241495 PHC-SB, long, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C82 mm
63/06	○	HST-A63	6	20,5	46	13	135	71	29
63/08	○	HST-A63	8	22,6	46	15	135	72	29
63/10	○	HST-A63	10	24,6	46	17	135	72	40
63/12	○	HST-A63	12	26,7	46	19	135	73	40
63/20	○	HST-A63	20	34,7	62	28	150	63	40

N° article	241497 PHC-SB, extra long, super slim	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C82 mm
63/06	○	HST-A63	6	20,5	46	13	135	71	29
63/08	○	HST-A63	8	22,6	46	15	135	72	29
63/10	○	HST-A63	10	24,6	46	17	135	72	40
63/12	○	HST-A63	12	26,7	46	19	135	73	40
63/16	○	HST-A63	16	30,6	52,5	23	135	72	40
63/20	○	HST-A63	20	34,7	62	28	150	63	40

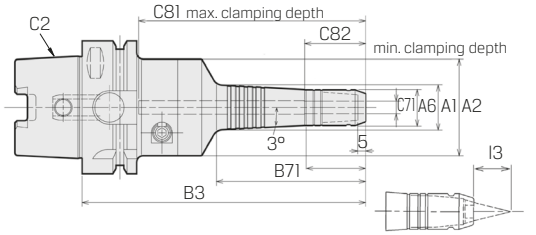
Hydraulic expansion chuck ISO 12164-1

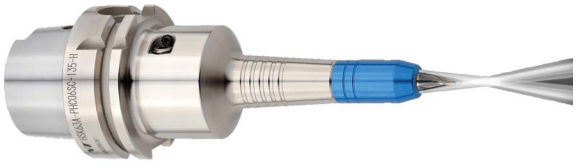
ISO 12164-1	Form A	HPC	HSC	G 2,5 20.000 min⁻¹

Design:
- with the flexibility of a collet chuck and with high clamping forces
- concentricity 0.003 mm
- maximum speed 20,000 rpm^{-1}
- shank tolerance h6
- super slim construction
- 3° draught
- **with patented Jet-Cap coolant seal**

Use:
For highly efficient milling, drilling and reaming Mould construction and die making Applications in the aerospace and automotive industries

Note:
Length adjustment screw optional





N° article	241505 PHC-SB-NC, short	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C81 mm	C82 mm	l_3 mm
63/04	○	HST-A63	4	19,5	46	15	140	76	118	29	20
63/06	○	HST-A63	6	21,5	46	17	140	76	113	34	30
63/08	○	HST-A63	8	23,6	46	19	140	77	113	34	40
63/10	○	HST-A63	10	25,6	46	21	140	77	113	45	50
63/12	○	HST-A63	12	27,7	46	23	140	78	113	45	60

N° article	241508 PHC-SB-NC, long	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	C81 mm	C82 mm	l_3 mm
63/12	○	HST-A63	12	27,7	46	23	140	78	113	45	60

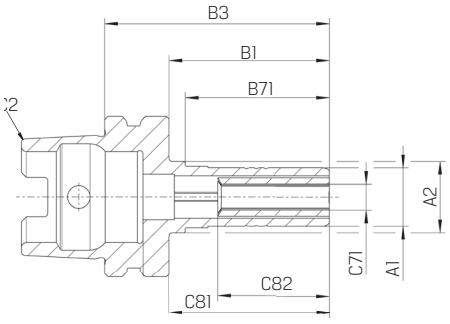
Polygonal chuck TRIBOS ISO 12164-1

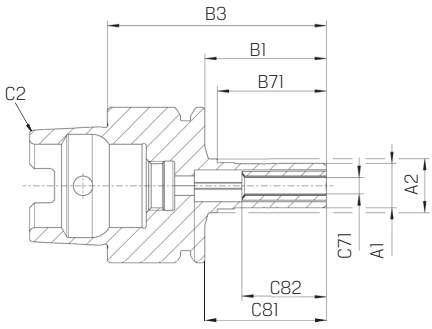
SCHUNK

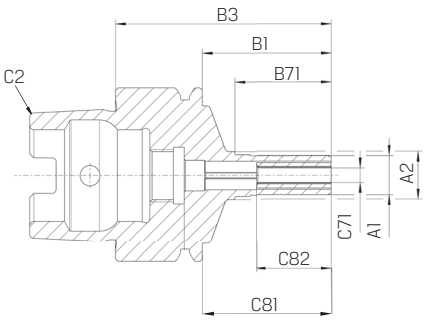
Design:
- for automatic tool change
- without length adjustment screw
- tool shank quality h6
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- HST-A 32 / HST-A 40 with thread for coolant duct connection
- HST-A 25 without thread for coolant duct connection
- optimum tool for light-duty machining; please observe radial forces

Note:
Matching accessories see page 24/470

ISO 12164-1 | Form A | HSC | G 2,5 25.000 min⁻¹









HSK-A 25



HSK-A 32



HSK-A 40

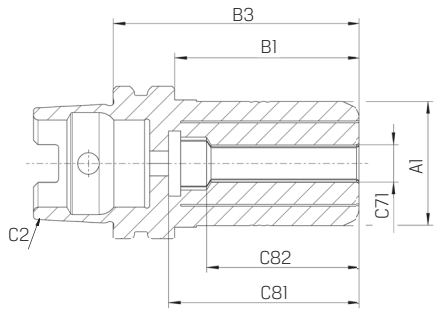
N° article	241435 Mini	C2	C71 mm	A1 mm	A2 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
2501	○	HST-A25	1	9	11	35	25	22,5	29	17,5	–	0.05
25015	○	HST-A25	1,5	9	11	35	25	22,5	29	17,5	–	0.05
2502	○	HST-A25	2	9	11	35	25	22,5	29	17,5	1	0.05
2503	○	HST-A25	3	9	11	35	25	22,5	29	17,5	1.5	0.05
2504	○	HST-A25	4	9	11	35	25	22,5	29	17,5	2.5	0.05
2506	○	HST-A25	6	9	11	35	25	22,5	29	17,5	4.5	0.05
3201	○	HST-A32	1	9	11	45	25	22,5	27	17,5	–	0.13
32015	○	HST-A32	1,5	9	11	45	25	22,5	27	17,5	–	0.13
3202	○	HST-A32	2	9	11	45	25	22,5	27	17,5	1	0.13

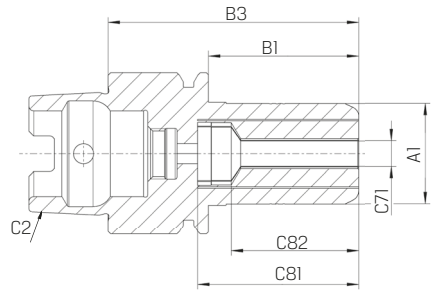
N° article	241435 Mini	C2	C71 mm	A1 mm	A2 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
3203	○	HST-A32	3	9	11	45	25	22,5	27	17,5	1.5	0.13
3204	○	HST-A32	4	9	11	45	25	22,5	27	17,5	2.5	0.13
3206	○	HST-A32	6	9	11	45	25	22,5	27	17,5	4.5	0.13
4001	○	HST-A40	1	9	11	50	30	22,5	34	17,5	–	0.23
40015	○	HST-A40	1,5	9	11	50	30	22,5	34	17,5	–	0.23
4002	○	HST-A40	2	9	11	50	30	22,5	34	17,5	1	0.23
4003	○	HST-A40	3	9	11	50	30	22,5	34	17,5	1.5	0.23
4004	○	HST-A40	4	9	11	50	30	22,5	34	17,5	2.5	0.23
4006	○	HST-A40	6	9	11	50	30	22,5	34	17,5	4.5	0.23

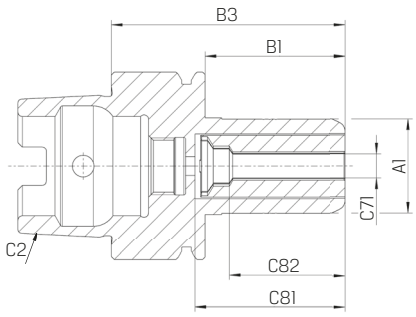
Design:
- for automatic tool change
- without length adjustment screw
- tool shank quality h6
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- HST-A 32 / HST-A 40 with thread for coolant duct connection
- HST-A 25 without thread for coolant duct connection

Note:
Matching accessories see page 24/470.

ISO 12164-1 | Form A | HSC | G 2,5 25.000 min⁻¹









HSK-A 25



HSK-A 32



HSK-A 40

N° article	241440 RM	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
2503	○	HST-A25	3	20	40	30	31	25	3	0.12
2504	○	HST-A25	4	20	40	30	31	25	4	0.12
2506	○	HST-A25	6	20	40	30	31	25	10	0.12
2508	○	HST-A25	8	20	40	30	31	25	15	0.12
2510	○	HST-A25	10	20	40	30	31	29	20	0.12
3203	○	HST-A32	3	20	50	30	32	25	3	0.25
3204	○	HST-A32	4	20	50	30	32	25	4	0.25
3206	○	HST-A32	6	20	50	30	32	25	10	0.25
3208	○	HST-A32	8	20	50	30	32	25	15	0.25

N° article	241440 RM	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
3210	○	HST-A32	10	20	50	30	32	29,5	20	0.25
3212	○	HST-A32	12	20	50	30	32	29,5	20	0.25
4003	○	HST-A40	3	20	50	30	32	25	3	0.41
4004	○	HST-A40	4	20	50	30	32	25	4	0.41
4006	○	HST-A40	6	20	50	30	32	25	10	0.41
4008	○	HST-A40	8	20	50	30	32	25	15	0.41
4010	○	HST-A40	10	20	50	30	32	29,5	20	0.41
4012	○	HST-A40	12	20	50	30	32	29,5	20	0.41

Screw-in chucks ISO 12164-1

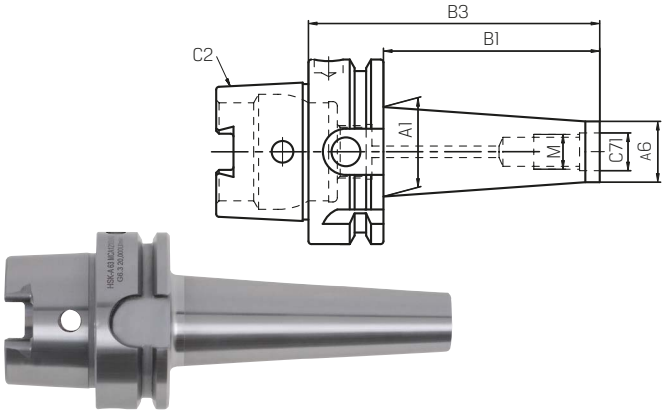
PREMUS

Use:
For mounting screw-in milling cutters with thread

ISO 12164-1 | Form A | HPC

Note:
Also available completely in cylindrical design
Matching accessories see page 24/472.

HSC | G 2,5 25.000 min⁻¹



N° article	241084 extra short (RG 2403)	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
63×M6	○	HST-A63	6,5	13	10	51	25	M6
63×M8	○	HST-A63	8,5	15	13	51	25	M8
63×M10	○	HST-A63	10,5	20	18	51	25	M10
63×M12	○	HST-A63	12,5	24	21	51	25	M12
63×M16	○	HST-A63	17	29	29	51	25	M16

N° article	241085 short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
63×M8	○	HST-A63	8,5	23	13	76	50	M8
63×M10	●	HST-A63	10,5	23	18	76	50	M10
63×M12	●	HST-A63	12,5	24	21	76	50	M12
63×M16	●	HST-A63	17	34	29	76	50	M16
100×M8	○	HST-A100	8,5	23	13	79	50	M8
100×M10	○	HST-A100	10,5	23	18	79	50	M10
100×M12	○	HST-A100	12,5	24	21	79	50	M12
100×M16	○	HST-A100	17	34	29	79	50	M16

N° article	241086 long	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
63×M8	○	HST-A63	8,5	23	13	101	75	M8
63×M10	●	HST-A63	10,5	28	18	101	75	M10
63×M12	●	HST-A63	12,5	31	21	101	75	M12
63×M16	●	HST-A63	17	34	29	101	75	M16

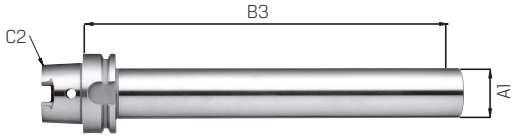
N° article	241087 overlong	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	M
63×M8	○	HST-A63	8,5	26	13	126	100	M8
63×M10	○	HST-A63	10,5	32	18	126	100	M10
63×M12	●	HST-A63	12,5	33	21	126	100	M12
63×M16	●	HST-A63	17	36	29	126	100	M16
100×M10	○	HST-A100	10,5	32	18	129	100	M10
100×M12	○	HST-A100	12,5	33	21	129	100	M12
100×M16	○	HST-A100	17	36	29	129	100	M16

Test mandrel ISO 12164-1

PREMUS

Delivery:
With wooden stand and test certificate

ISO 12164-1 | Form A



N° article	242281	C2	A1 mm	B3 mm
63/40	●	HST-A63	40	300
100/50	●	HST-A100	50	300

Power chuck CTS ISO 12164-1

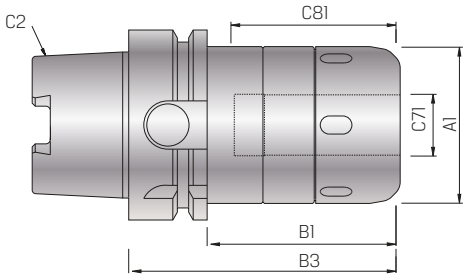
NT

Design:
- concentricity 0.005 mm
- maximum speed 20,000 rpm^{-1}
- internal coolant supply through coolant duct
- corrosion-protected

ISO 12164-1 | Form A | HPC

Delivery:
Incl. coolant tube

Note:
Matching accessories see page 24/471.





N° article	241608 short	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm
63/16	○	HST-A63	16	45	90	64	60
63/20	○	HST-A63	20	52	90	64	60

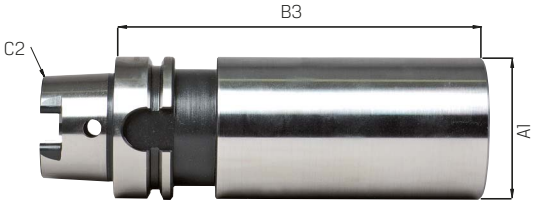
N° article	241610 long	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm
63/20	○	HST-A63	20	52	105	79	75
63/25	○	HST-A63	25	61	105	–	75
63/32	○	HST-A63	32	73	105	–	75
100/16	○	HST-A100	16	45	105	–	70
100/20	○	HST-A100	20	52	105	–	70
100/25	○	HST-A100	25	61	105	–	70
100/32	○	HST-A100	32	73	105	76	70

Blank ISO 12164-1

PREMUS

Design:
- for the production of special tools
- HST cone and collar groand and hardened
- cylindrical section soft for further processing

ISO 12164-1 | Form A



N° article	242309	C2	A1 mm	B3 mm
63×63×160	●	HST-A63	63	160
63×63×250	○	HST-A63	63	250
63×80×250	○	HST-A63	80	250
100×63×200	○	HST-A100	63	200
100×80×250	○	HST-A100	80	250
100×97×315	○	HST-A100	97	315

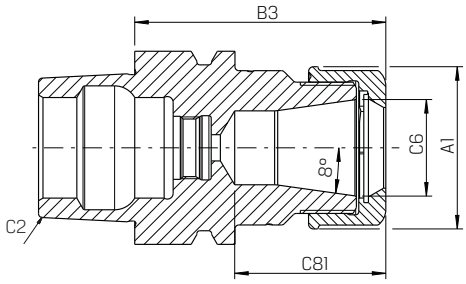
Collet chuck ER High Precision ISO 12164-1

HAIMER

ISO 12164-1 | Form E | ISO 15488 | U < 1 gmm

Design and use:
- especially suitable for micro and fine machining
- with specially coated smooth locknut optimally balanced < 1 gmm
- for highest cutting performance at HSM operations
- high stiffness with vibration damping and noise reduction
- high concentricity of 0.003 mm at 3×A1 with Haimer power collets
- also for standard collets ER to ISO 15488 (Attention: When used with standard collets the B3 dimension becomes longer)
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws

Note:
- matching collets see ander 248910, 248920 and 248930 on page 24/456
- fitting tightening bolts see ander 246542 on page 24/445





N° article	242900 ultra short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
25/ER16	○	HST-E25	ER16	28	45	31	2 - 10
32/ER16	○	HST-E32	ER16	28	50	32	2 - 10
32/ER25	○	HST-E32	ER25	42	60	39	2 - 16
40/ER16	○	HST-E40	ER16	28	50	31	2 - 10
40/ER25	○	HST-E40	ER25	42	60	38,5	2 - 16

N° article	242900 ultra short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER32	○	HST-E40	ER32	50	70	47	2 - 20
50/ER16	○	HST-E50	ER16	28	60	32	2 - 10
50/ER25	○	HST-E50	ER25	42	65	39	2 - 16
50/ER32	○	HST-E50	ER32	50	75	48	2 - 20

N° article	242902 short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER16	○	HST-E40	ER16	28	80	43	2 - 10
40/ER25	○	HST-E40	ER25	42	80	51	2 - 16

N° article	242902 short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
40/ER32	○	HST-E40	ER32	50	80	53	2 - 20

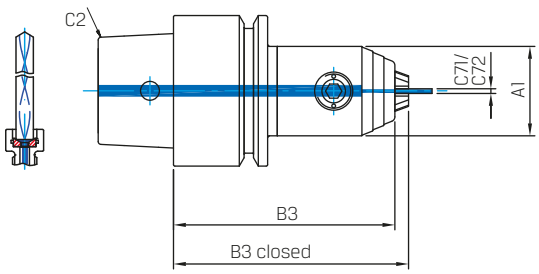
Universal chuck ISO 12164-1

WTE MAPAL GROUP

ISO 12164-1 | Form E | G 2,5 25.000 min⁻¹

Design:
- large clamping range from Ø 0.2 to 6.4 mm and 0.2 to 3.4 mm
- low interfering contour
- secure and quick clamping
- easy handling
- for speeds up to 60,000 max.$^{-1}$
- high concentricity < 0.005

Use:
- suitable for medical technology, watch industry or precision engineering and electronics sector
- for secure clamping of micro tools with internal cooling





N° article	242330 Micro, ICS	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm
25/03	○	HST-E25	0,2	3,4	19	37	40
25/06	○	HST-E25	0,2	6,4	25	57	61
32/03	○	HST-E32	0,2	3,4	19	46	49

N° article	242330 Micro, ICS	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm
32/06	○	HST-E32	0,2	6,4	25	54	58
40/03	○	HST-E40	0,2	3,4	19	46	49
40/06	○	HST-E40	0,2	6,4	25	54	58

Shrink-fit chuck ISO 12164-1

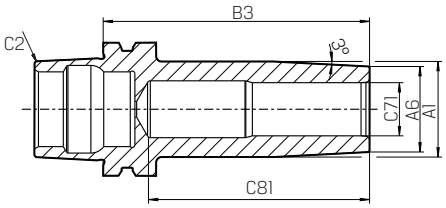
ISO 12164-1 | Form E | HSC | U < 1 gmm | CAD

Design and use:
- low cutting performance at high speeds
- particularly suitable for the demands of micro machining
- no interfering contours, even hard to reach places accessible
- concentricity < 0.003 mm

HST-E40/50
- precision cast in one piece
- optimal rigidity
- for all carbide tools with shank tolerance h6
- 3° bevel, fitting for mould inclines
- high retaining power

Delivery:
Without coolant duct

Note:
- shrinking only with shrink-fit and cooling sleeves
- matching accessories see page 24/464 et seq.





N° article	243001 Mini, ultra short	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
25/03	○	HST-E25	3	–	9	35	15
25/04	○	HST-E25	4	–	10	35	18
25/05	○	HST-E25	5	–	11	35	23
25/06	○	HST-E25	6	–	12	40	27,5
25/08	○	HST-E25	8	–	14	40	27
25/10	○	HST-E25	10	18	16	40	26,5
25/12	○	HST-E25	12	20	18	40	26

N° article	243001 Mini, ultra short	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/03	○	HST-E40	3	–	9	60	–
40/04	○	HST-E40	4	–	10	60	–
40/05	○	HST-E40	5	–	11	60	–
40/06	○	HST-E40	6	–	12	60	–
40/08	○	HST-E40	8	–	14	60	–
40/10	○	HST-E40	10	–	16	60	–
40/12	○	HST-E40	12	–	18	60	–

N° article	243002 Mini, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
25/03	○	HST-E25	3	–	9	45	15
25/04	○	HST-E25	4	–	10	45	18
25/05	○	HST-E25	–	–	11	45	28
25/06	○	HST-E25	–	–	12	45	37,5
25/08	○	HST-E25	8	–	14	50	27
25/10	○	HST-E25	10	18	16	50	41,5
25/12	○	HST-E25	12	20	18	50	35,5
40/03	○	HST-E40	3	–	9	70	–
40/04	○	HST-E40	4	–	10	70	–
40/05	○	HST-E40	5	–	11	70	–
40/06	○	HST-E40	6	–	12	70	–

N° article	243002 Mini, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/08	○	HST-E40	8	–	14	70	–
40/10	○	HST-E40	10	–	16	70	–
40/12	○	HST-E40	12	–	18	70	–
50/03	○	HST-E50	3	–	9	70	–
50/04	○	HST-E50	4	–	10	70	–
50/05	○	HST-E50	5	–	11	70	–
50/06	○	HST-E50	6	–	12	70	–
50/08	○	HST-E50	8	–	14	70	–
50/10	○	HST-E50	10	–	16	70	–
50/12	○	HST-E50	12	–	18	70	–

N° article	243003 Mini, ZG80	C2	C71 mm	A6 mm	B3 mm
40/03	○	HST-E40	3	9	80
40/04	○	HST-E40	4	10	80
40/05	○	HST-E40	5	11	80
40/06	○	HST-E40	6	12	80
40/08	○	HST-E40	8	14	80
40/10	○	HST-E40	10	16	80
40/12	○	HST-E40	12	18	80

N° article	243003 Mini, ZG80	C2	C71 mm	A6 mm	B3 mm
50/03	○	HST-E50	3	9	80
50/04	○	HST-E50	4	10	80
50/05	○	HST-E50	5	11	80
50/06	○	HST-E50	6	12	80
50/08	○	HST-E50	8	14	80
50/10	○	HST-E50	10	16	80
50/12	○	HST-E50	12	18	80

N° article	243004 Mini, long	C2	C71 mm	A6 mm	B3 mm
50/05	○	HST-E50	5	11	100
50/06	○	HST-E50	6	12	100
50/08	○	HST-E50	8	14	100

N° article	243004 Mini, long	C2	C71 mm	A6 mm	B3 mm
50/10	○	HST-E50	10	16	100
50/12	○	HST-E50	12	18	100

Shrink-fit chuck ISO 12164-1

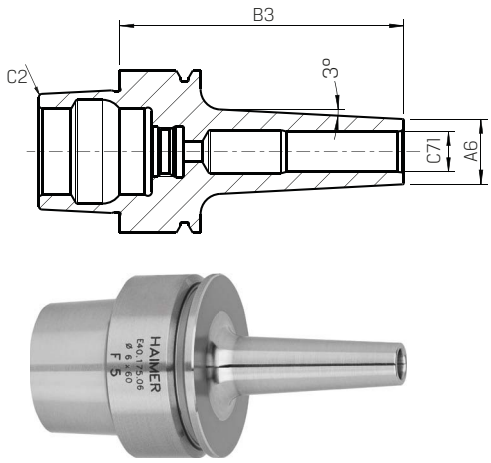
HAIMER

Design and use:
- **ultra slim construction**
- no interfering edges
- concentricity ‹ 0.003 mm
- precision cast in one piece
- optimal rigidity
- for all carbide tools with shank tolerance h6
- 3° bevel, fitting for mould inclines
- ultra slim for precision machining and for operations in hard to reach areas

Delivery:
Without coolant duct

Note:
- shrinking only with shrink-fit and cooling sleeves
- matching accessories see page 24/464 et seq.

ISO 12164-1	Form E	HSC	G 2,5 25.000 min⁻¹



N° article	243005 Mini, extra slim, ultra short	C2	C71 mm	A6 mm	B3 mm
40/03	○	HST-E40	3	6	60
40/04	○	HST-E40	4	7	60
40/05	○	HST-E40	5	8	60
40/06	○	HST-E40	6	9	60

N° article	243005 Mini, extra slim, ultra short	C2	C71 mm	A6 mm	B3 mm
40/08	○	HST-E40	8	11	60
40/10	○	HST-E40	10	13	60
40/12	○	HST-E40	12	15	60

N° article	243006 Mini, extra slim, short	C2	C71 mm	A6 mm	B3 mm
40/03	○	HST-E40	3	6	70
40/04	○	HST-E40	4	7	70
40/05	○	HST-E40	5	8	70
40/06	○	HST-E40	6	9	70
40/08	○	HST-E40	8	11	70
40/10	○	HST-E40	10	13	70
40/12	○	HST-E40	12	15	70

N° article	243006 Mini, extra slim, short	C2	C71 mm	A6 mm	B3 mm
50/03	○	HST-E50	3	6	70
50/04	○	HST-E50	4	7	70
50/05	○	HST-E50	5	8	70
50/06	○	HST-E50	6	9	70
50/08	○	HST-E50	8	11	70
50/10	○	HST-E50	10	13	70
50/12	○	HST-E50	12	15	70

N° article	243007 Mini, extra slim, ZG80	C2	C71 mm	A6 mm	B3 mm
40/03	○	HST-E40	3	6	80
40/04	○	HST-E40	4	7	80
40/05	○	HST-E40	5	8	80
40/06	○	HST-E40	6	9	80
40/08	○	HST-E40	8	11	80
40/10	○	HST-E40	10	13	80
40/12	○	HST-E40	12	15	80

N° article	243007 Mini, extra slim, ZG80	C2	C71 mm	A6 mm	B3 mm
50/03	○	HST-E50	3	6	80
50/04	○	HST-E50	4	7	80
50/05	○	HST-E50	5	8	80
50/06	○	HST-E50	6	9	80
50/08	○	HST-E50	8	11	80
50/10	○	HST-E50	10	13	80
50/12	○	HST-E50	12	15	80

N° article	243008 Mini, extra slim, ZG100	C2	C71 mm	A6 mm	B3 mm
50/05	○	HST-E50	5	8	100
50/06	○	HST-E50	6	9	100
50/08	○	HST-E50	8	11	100

N° article	243008 Mini, extra slim, ZG100	C2	C71 mm	A6 mm	B3 mm
50/10	○	HST-E50	10	13	100
50/12	○	HST-E50	12	15	100

Shrink-fit chuck ISO 12164-1

HAIMER

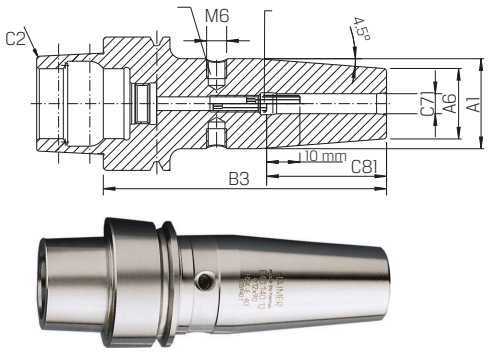
Design and use:
- suitable for inductive, contact and hot air shrink-fit units
- with threaded holes for balancing screws
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6

Scope of delivery:
With length adjustment screw. Without coolant duct

Note:
Matching accessories see page 24/464 et seq.

*Without setting screw Without threads for balancing screws With slots in the clamping bore for coolant supply
**Without setting screw and without threads for balancing screws
***Without threads for balancing screws
****Without setting screw Without threads for balancing screws Without threads for coolant supply duct

ISO 12164-1	Form E	HSC	G 2,5 25.000 min⁻¹



N° article	243011 ultra short	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/06	○	**	HST-E40	6	28,7	22,5	60	36
40/08	○	**	HST-E40	8	28,7	22,5	60	36
40/10	○	****	HST-E40	10	32	26,5	60	42

N° article	243011 ultra short	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/12	○	****	HST-E40	12	32	26,5	60	47
40/14	○	****	HST-E40	14	33	30	60	47
40/16	○	****	HST-E40	16	33	30	60	50

N° article	243012 short	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
32/03	○	*	HST-E32	3	–	10	60	9
32/04	○	*	HST-E32	4	–	10	60	12
32/05	○	*	HST-E32	5	–	10	60	15
32/06	○	***	HST-E32	6	27	21	70	36
32/08	○	***	HST-E32	8	27	21	70	36
32/10	○	***	HST-E32	10	32	24	80	42
40/03	○	*	HST-E40	3	–	10	60	9
40/04	○	*	HST-E40	4	–	10	60	12
40/05	○	*	HST-E40	5	–	10	60	15
40/06	○		HST-E40	6	27	21	80	36
40/08	○		HST-E40	8	27	21	80	36
40/10	○		HST-E40	10	32	24	80	42

N° article	243012 short	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
40/12	○		HST-E40	12	32	24	90	47
40/14	○		HST-E40	14	34	27	90	47
40/16	○		HST-E40	16	34	27	90	50
50/03	○	*	HST-E50	3	–	10	60	9
50/04	○	*	HST-E50	4	–	10	60	12
50/05	○	*	HST-E50	5	–	10	60	15
50/06	○		HST-E50	6	27	21	80	36
50/08	○		HST-E50	8	27	21	80	36
50/10	○		HST-E50	10	32	24	85	42
50/12	○		HST-E50	12	32	24	90	47
50/14	○		HST-E50	14	34	27	90	47
50/16	○		HST-E50	16	34	27	95	50

N° article	243019 ZG130	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/06	○		HST-E50	6	27	21	130	36
50/08	○		HST-E50	8	27	21	130	36
50/10	○		HST-E50	10	32	24	130	42

N° article	243019 ZG130	*	C2	C71 mm	A1 mm	A6 mm	B3 mm	C81 mm
50/12	○		HST-E50	12	32	24	130	47
50/14	○		HST-E50	14	33	27	130	47
50/16	○		HST-E50	16	33	27	130	50

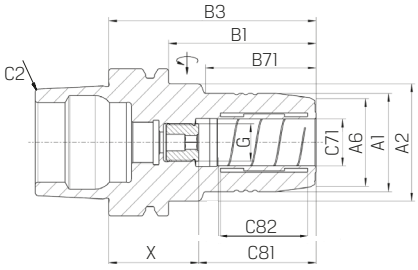
Hydraulic expansion chuck ISO 12164-1

SCHUNK

Design:
- with axial length adjustment, for automatic tool change
- with vibration damping
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability < 0.003 m
- maximum speed 50,000 rpm^{-1}

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.

ISO 12164-1	Form E	HPC	HSC	G 2,5 25.000 min⁻¹





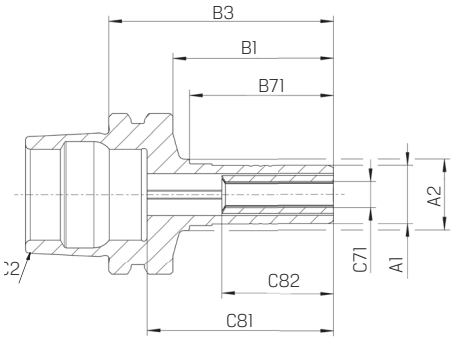
N° article	241442 TENDO, short	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
40/06	○	HST-E40	6	26	33,5	22	70	50	36	33	37	27	M5	16	0.5
40/08	○	HST-E40	8	28	33,5	24	70	50	36	33	37	27	M6	23	0.5
40/10	○	HST-E40	10	30	33,5	26	75	55	42	34	41	31	M6	45	0.5
40/12	○	HST-E40	12	32	33,5	28	80	60	48	34	46	36	M6	90	0.6
50/06	○	HST-E50	6	26	40	22	70	44	28	33	37	27	M5	16	0.7
50/08	○	HST-E50	8	28	40	24	70	44	28	33	37	27	M6	23	0.7
50/10	○	HST-E50	10	30	40	26	75	49	34	34	41	31	M8×1	45	0.7
50/12	○	HST-E50	12	32	40	28	85	59	44	39	46	36	M10×1	90	0.8
50/16	○	HST-E50	16	38	53	34	90	64	30	41	49	39	M12×1	185	1
50/20	○	HST-E50	20	42	60	38	90	64	29	39	51	41	M16×1	330	1.1

Polygonal chuck TRIBOS ISO 12164-1

Design:
- for automatic tool change
- without length adjustment screw
- tool shank quality h6
- HST-E 25 without thread for coolant duct connection
- permanent concentricity and alternating repeatability ⟨ 0.003 mm
- HST-E 32 / HST-E 40 with thread for coolant duct connection
- HST-E 40 with access hole
- optimum tool for light-duty machining; please observe radial forces

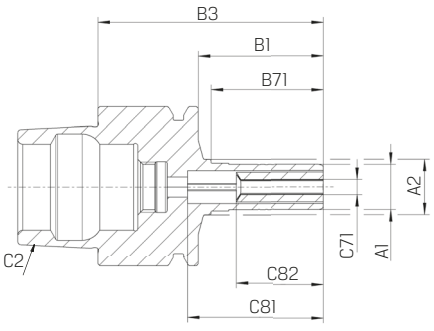
Note:
Matching accessories see page 24/470

ISO 12164-1	Form E	HSC	G 2,5 25.000 min⁻¹



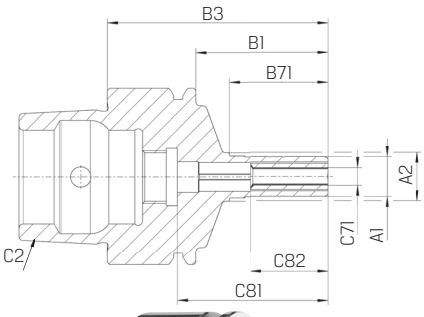


HSK-E 25





HSK-E 32





HSK-E 40

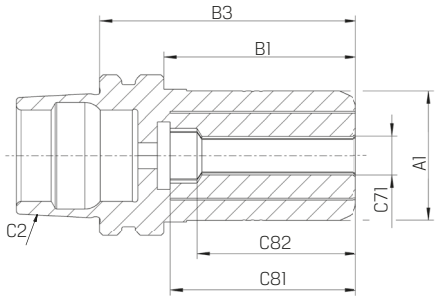
N° article	241460 Mini	C2	C71 mm	A1 mm	A2 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
2501	○	HST-E25	1	9	11	35	25	22,5	29	17,5	–	0.05
25015	○	HST-E25	1,5	9	11	35	25	22,5	29	17,5	–	0.05
2502	○	HST-E25	2	9	11	35	25	22,5	29	17,5	1	0.05
2503	○	HST-E25	3	9	11	35	25	22,5	29	17,5	1.5	0.05
2504	○	HST-E25	4	9	11	35	25	22,5	29	17,5	2.5	0.05
2506	○	HST-E25	6	9	11	35	25	22,5	29	17,5	4.5	0.05
3201	○	HST-E32	1	9	11	45	25	22,5	27	17,5	–	0.13
32015	○	HST-E32	1,5	9	11	45	25	22,5	27	17,5	–	0.13
3202	○	HST-E32	2	9	11	45	25	22,5	27	17,5	1	0.13

N° article	241460 Mini	C2	C71 mm	A1 mm	A2 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
3203	○	HST-E32	3	9	11	45	25	22,5	27	17,5	1.5	0.13
3204	○	HST-E32	4	9	11	45	25	22,5	27	17,5	2.5	0.13
3206	○	HST-E32	6	9	11	45	30	22,5	27	17,5	4.5	0.13
4001	○	HST-E40	1	9	11	50	30	22,5	34	17,5	–	0.23
40015	○	HST-E40	1,5	9	11	50	30	22,5	34	17,5	–	0.23
4002	○	HST-E40	2	9	11	50	30	22,5	34	17,5	1	0.23
4003	○	HST-E40	3	9	11	50	30	22,5	34	17,5	1.5	0.23
4004	○	HST-E40	4	9	11	50	30	22,5	34	17,5	2.5	0.23
4006	○	HST-E40	6	9	11	50	30	22,5	34	17,5	4.5	0.23

Design:
- for automatic tool change
- without length adjustment screw
- tool shank quality h6
- HST-E 25 without thread for coolant duct connection
- permanent concentricity and alternating repeatability ⟨ 0.003 mm
- HST-E 32 / HST-E 40 with thread for coolant duct connection
- HST-E 40 with access hole

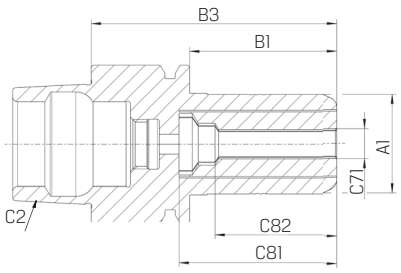
Note:
Matching accessories see page 24/470

ISO 12164-1	Form E	HSC	G 2,5 25.000 min⁻¹



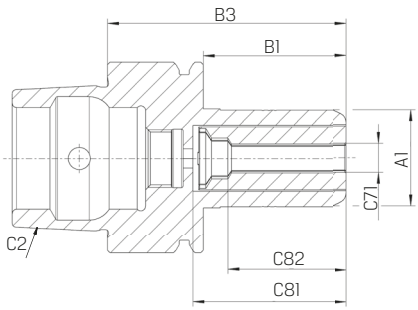


HSK-E 25





HSK-E 32





HSK-E 40

N° article	241465 RM	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
2503	○	HST-E25	3	20	40	30	31	25	3	0.12
2504	○	HST-E25	4	20	40	30	31	25	4	0.12
2506	○	HST-E25	6	20	40	30	31	25	10	0.12
2508	○	HST-E25	8	20	40	30	31	25	15	0.12
2510	○	HST-E25	10	20	40	30	31	25	20	0.12
3203	○	HST-E32	3	20	50	30	32	25	3	0.25
3204	○	HST-E32	4	20	50	30	32	25	4	0.25
3206	○	HST-E32	6	20	50	30	32	25	10	0.25
3208	○	HST-E32	8	20	50	30	32	25	15	0.25

N° article	241465 RM	C2	C71 mm	A1 mm	B3 mm	B1 mm	C81 mm	C82 mm	Torque min. Nm	Weight kg
3210	○	HST-E32	10	20	50	30	32	29	20	0.25
3212	○	HST-E32	12	20	50	30	32	29	20	0.25
4003	○	HST-E40	3	20	50	30	32	25	3	0.41
4004	○	HST-E40	4	20	50	30	32	25	4	0.41
4006	○	HST-E40	6	20	50	30	32	25	10	0.41
4008	○	HST-E40	8	20	50	30	32	25	15	0.41
4010	○	HST-E40	10	20	50	30	32	29	20	0.41
4012	○	HST-E40	12	20	50	30	32	29	20	0.41

Weldon chucks ISO 26623-1

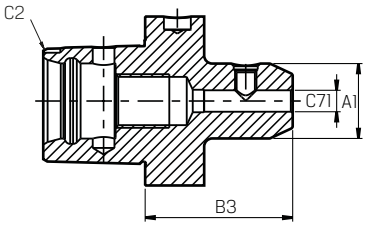
HAIMER

ISO 26623-1 | HPC | HSC | G 2,5 25.000 min⁻¹ | CAD

Use:
- for clamping of milling cutters with parallel shank and lateral drive surface to DIN 1835-B and DIN 6935-HB
- interface with polygonal taper and face contact
- exact positioning in the peripheral direction
- very high concentricity
- high torque and high rigidity
- suitable for machining on turning and milling centres alike

Delivery:
With clamping screw

Note:
Spare clamping screw 240570 see page 24/443.





N° article	242361 short	C2	C71 mm	A1 mm	B3 mm
C6/06	○	PSC63	6	25	55
C6/08	○	PSC63	8	28	55
C6/10	○	PSC63	10	35	60
C6/12	○	PSC63	12	42	60
C6/14	○	PSC63	14	44	60
C6/16	○	PSC63	16	48	65

N° article	242361 short	C2	C71 mm	A1 mm	B3 mm
C6/18	○	PSC63	18	50	65
C6/20	○	PSC63	20	52	65
C6/25	○	PSC63	25	64	80
C6/32	○	PSC63	32	72	90
C6/40	○	PSC63	40	80	100

Cutter head holder ISO 26623-1

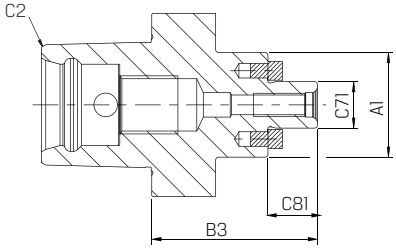
HAIMER

ISO 26623-1 | HPC | HSC | G 2,5 25.000 min⁻¹ | CAD

Use:
- for holding cutting heads and milling cutters with transverse groove DIN 1880
- with cooling duct bores on the front side
- interface with polygonal taper and plane surface contact
- exact positioning in the peripheral direction
- very high concentricity
- high torque and high rigidity
- suitable for machining on turning and milling centres alike

Delivery:
With cutter tightening screw and slot nuts.

Note:
Matching accessories see page 24/443 et seq.





N° article	242381 short	C2	C71 mm	A1 mm	B3 mm	C81 mm
C6/16	○	PSC63	16	36	40	57
C6/22	○	PSC63	22	48	25	44
C6/27	○	PSC63	27	60	25	46

N° article	242381 short	C2	C71 mm	A1 mm	B3 mm	C81 mm
C6/32	○	PSC63	32	63	25	49
C6/40	○	PSC63	40	70	40	67

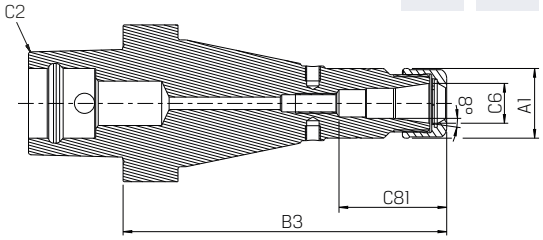
Collet chuck ER High Precision ISO 26623-1

HAIMER

ISO 26623-1 | G 2,5 30.000 min⁻¹

Design:
- with specially coated smooth locknut optimally balanced < 1 gmm
- for highest cutting performance at HSM operations
- high stiffness with vibration damping and noise reduction
- high concentricity of 0.003 mm at 3×D with Haimer Power Collets
- also for standard collets ER to ISO 15488 (Attention: When used with standard collets the B3 dimension becomes longer)
- higher running smoothness thanks to vibration absorbing geometry, therefore better surface quality
- increased chipping capacity due to higher speed, greater feed and greater cutting depth
- shorter machining times
- better dimensional stability
- high clamping power
- equally suitable for high-speed machining and heavy-duty cutting
- with threaded holes for balancing screws

Note:
- matching collets see ander 248910, 248920 and 248930 on page 24/456
- fitting tightening bolts see ander 246542 on page 24/445





N° article	242388 overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER16	○	PSC63	ER16	28	130	43	2.0 - 10
C6/ER25	○	PSC63	ER25	42	130	51	2.0 - 16
C6/ER32	○	PSC63	ER32	50	130	53	2.0 - 20

Collet chuck ER ISO 26623-1

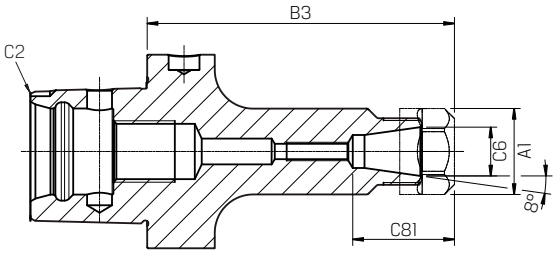
HAIMER

Use:
- for clamping tools with cylindrical shank in collets to ISO 15488
- interface with polygonal taper and face contact
- exact positioning in the peripheral direction
- very high concentricity
- high torque and high rigidity
- suitable for machining on turning and milling centres alike

ISO 26623-1 | HPC | HSC | ISO 15488 | G 2,5 25.000 min⁻¹

Delivery:
Complete with clamping nut (balanced, with slide coating for increased clamping power)

Note:
- with hex nut
- matching accessories see page 24/445 et seq.





N° article	242370 short	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER16	○	PSC63	ER16	28	60	–	0.5 - 10
C6/ER20	○	PSC63	ER20	34	60	–	1.5 - 13
C6/ER25	○	PSC63	ER25	42	60	48,5	1 - 16
C6/ER32	○	PSC63	ER32	50	60	47,5	1.5 - 20
C6/ER40	○	PSC63	ER40	63	65	53,5	2.5 - 26

N° article	242373 long	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER16	○	PSC63	ER16	28	100	33	0.5 - 10
C6/ER20	○	PSC63	ER20	34	100	39	1.5 - 13
C6/ER25	○	PSC63	ER25	42	100	41,5	1 - 16
C6/ER32	○	PSC63	ER32	50	100	47,5	1.5 - 20
C6/ER40	○	PSC63	ER40	63	100	53,5	2.5 - 26

N° article	242375 ZG130	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER16	○	PSC63	ER16	28	130	33	0.5 - 10
C6/ER20	○	PSC63	ER20	34	130	39	1.5 - 13
C6/ER25	○	PSC63	ER25	42	130	41,5	1 - 16
C6/ER32	○	PSC63	ER32	50	130	47,5	1.5 - 20
C6/ER40	○	PSC63	ER40	63	130	53,5	2.5 - 26

N° article	242376 overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER16	○	PSC63	ER16	28	160	33	0.5 - 10
C6/ER20	○	PSC63	ER20	34	160	39	1.5 - 13
C6/ER25	○	PSC63	ER25	42	160	41,5	1 - 16
C6/ER32	○	PSC63	ER32	50	160	47,5	1.5 - 20
C6/ER40	○	PSC63	ER40	63	160	53,5	2.5 - 26

N° article	242378 Mini, long	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER11	○	PSC63	ER11	16	100	25,5	0.5 - 7
C6/ER16	○	PSC63	ER16	22	100	39,5	0.5 - 10

N° article	242379 Mini, overlong	C2	C6	A1 mm	B3 mm	C81 mm	Clamping range mm
C6/ER11	○	PSC63	ER11	16	160	25,5	0.5 - 7
C6/ER16	○	PSC63	ER16	22	160	39,5	0.5 - 10

Universal chuck ISO 26623-1

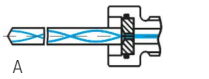
WTE MAPAL GROUP

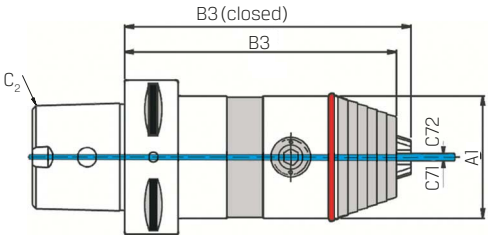
Design:
- for right and left rotation
- clutch size PSC63 following ISO 26623-1
- optionally without any coolant supply at all or with one through the centre

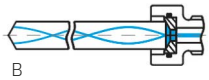
ISO 26623-1 | ICS

Note:
A: Sealing washer WTE 13 (2.05 mm) included in delivery. For coolant duct drill 3-6 mm, with smooth shank according to DIN 6535 shape HA.

B: Sealing washer WTE 13 (4.2 mm) installed in the drill chuck head. For coolant duct drill 6-13 mm, with smooth shank according to DIN 6535 shape HA.









N° article	241211 Precision, ICS	C2	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm
C6/08	○	PSC63	0,3	8	36	90	93
C6/13	○	PSC63	0,5	13	50	112	118
C6/16	○	PSC63	2,5	16	57	117	123

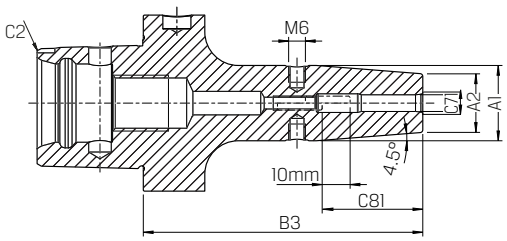
Shrink-fit chuck ISO 26623-1

ISO 26623-1 | HPC | HSC | G 2,5 25.000 min⁻¹ | CAD

Design and use:
Suitable for inductive, contact and hot air shrink-fit units
- fine balancing with balancing screws possible
- heat resistant hot-working steel
- hardened 54-2 HRC
- for HSS and SC tools
- shank tolerance h6
- interface with polygonal taper and face contact
- exact positioning in the peripheral direction
- very high concentricity, high torque and high rigidity
- suitable for machining on turning and milling centres alike

Delivery:
With length setting screw (except 242760)

Note:
Matching accessories see page 24/464 et seq.





N° article	242760 ultra short, with Cool Jet	C2	C71 mm	A2 mm	B3 mm	C81 mm
C6/06	○	PSC63	6	22	65	36
C6/08	○	PSC63	8	22	65	36
C6/10	○	PSC63	10	26,5	65	42
C6/12	○	PSC63	12	26,5	65	47
C6/14	○	PSC63	14	29,5	70	47
C6/16	○	PSC63	16	29,5	70	50
C6/18	○	PSC63	18	35,5	70	50
C6/20	○	PSC63	20	35,5	70	52
C6/25	○	PSC63	25	45	80	58
C6/32	○	PSC63	32	45	80	60

N° article	242763 long	C2	C71 mm	A1 mm	A2 mm	B3 mm	C81 mm
C6/06	○	PSC63	6	27	21	100	36
C6/08	○	PSC63	8	27	21	100	36
C6/10	○	PSC63	10	32	24	100	42
C6/12	○	PSC63	12	32	24	100	47
C6/14	○	PSC63	14	34	27	100	47
C6/16	○	PSC63	16	34	27	100	50
C6/18	○	PSC63	18	42	33	100	50
C6/20	○	PSC63	20	42	33	100	52

N° article	242767 overlong	C2	C71 mm	A1 mm	A2 mm	B3 mm	C81 mm
C6/06	○	PSC63	6	27	21	160	36
C6/08	○	PSC63	8	27	21	160	36
C6/10	○	PSC63	10	32	24	160	42
C6/12	○	PSC63	12	32	24	160	47
C6/14	○	PSC63	14	34	27	160	47
C6/16	○	PSC63	16	34	27	160	50
C6/18	○	PSC63	18	42	33	160	50
C6/20	○	PSC63	20	42	33	160	52
C6/25	○	PSC63	25	53	44	160	58
C6/32	○	PSC63	32	53	44	160	58

N° article	242761 short	242772 Basic short	C2	C71 mm	A1 mm	A2 mm	B3 mm	C81 mm
C6/03	○	○	PSC63	3	–	10	80	9
C6/04	○	○	PSC63	4	–	10	80	12
C6/05	○	○	PSC63	5	–	10	80	15
C6/06	○	○	PSC63	6	27	21	80	36
C6/08	○	○	PSC63	8	27	21	80	36
C6/10	○	○	PSC63	10	32	24	80	42
C6/12	○	○	PSC63	12	32	24	80	47
C6/14	○	○	PSC63	14	34	27	85	47
C6/16	○	○	PSC63	16	34	27	85	50
C6/18	○	○	PSC63	18	42	33	85	50
C6/20	○	○	PSC63	20	42	33	85	52
C6/25	○	○	PSC63	25	53	44	90	58
C6/32	○	–	PSC63	32	53	44	95	58

N° article	242765 ZG130	C2	C71 mm	A2 mm	B3 mm	C81 mm	C81 mm
C6/03	○	PSC63	3	10	130	9	9
C6/04	○	PSC63	4	10	130	12	12
C6/05	○	PSC63	5	10	130	15	15
C6/06	○	PSC63	6	27	21	130	36
C6/08	○	PSC63	8	27	21	130	36
C6/10	○	PSC63	10	32	24	130	42
C6/12	○	PSC63	12	32	24	130	47
C6/14	○	PSC63	14	34	27	130	47
C6/16	○	PSC63	16	34	27	130	50
C6/18	○	PSC63	18	42	33	130	50
C6/20	○	PSC63	20	42	33	130	52
C6/25	○	PSC63	25	53	44	130	58
C6/32	○	PSC63	32	53	44	130	58

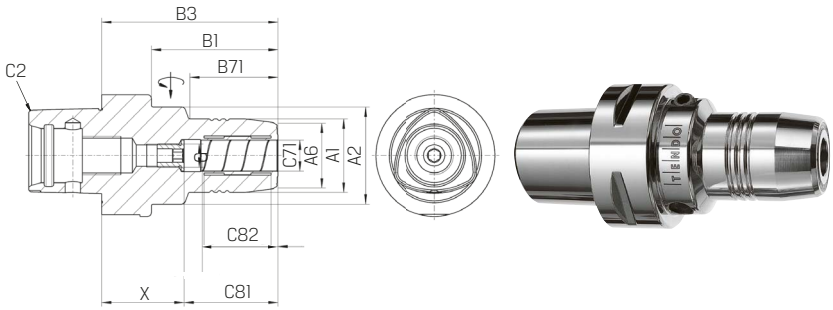
Hydraulic expansion chuck ISO 26623-1

SCHUNK

Design:
- with axial length setting and vibration damping
- clamping without peripherals, only with an Allen key
- permanent concentricity and alternating repeatability ‹ 0.003 mm
- maximum speed 50,000 rpm^{-1}

SCHUNK CAPTO™ | HPC | HSC | G 2,5 25.000 min^{-1}

Note:
Intermediate sleeve see 241461 and 241462 on page 24/469.



N° article	241450 TENDO, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm
C4/06	○	C4	6	26	22	66	35	29	37	27	M5	16
C4/08	○	C4	8	28	24	66	36	29	37	27	M6	23
C4/10	○	C4	10	30	26	76	41	35	41	31	M8×1	45
C4/12	○	C4	12	32	28	81	47	35	46	36	M8×1	90

N° article	241453 TENDO, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm
C5/06	○	C5	6	26	22	70	30	33	37	27	M5	16
C5/08	○	C5	8	28	24	70	30	33	37	27	M6	23
C5/10	○	C5	10	30	26	80	35	39	41	31	M8×1	45
C5/12	○	C5	12	32	28	85	44	39	46	36	M10×1	90
C5/14	○	C5	14	34	30	85	46	39	46	36	M10×1	110
C5/16	○	C5	16	38	34	90	51	41	49	39	M12×1	185
C5/18	○	C5	18	40	36	90	51	41	49	39	M12×1	240
C5/20	○	C5	20	42	38	90	52	39	51	41	M16×1	330

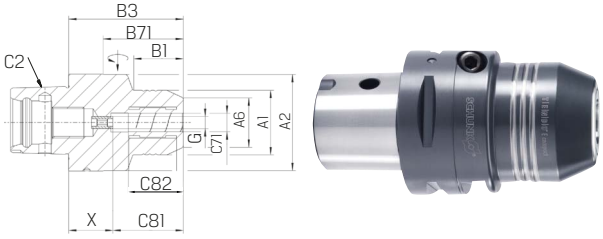
N° article	241456 TENDO, short	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B2 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm
C6/06	○	C6	6	26	50	46	72	25	25	27	37	27	M5	16
C6/08	○	C6	8	28	50	46	72	25	25	27	37	27	M6	23
C6/10	○	C6	10	30	50	56	82	36	36	31	41	31	M8×1	45
C6/12	○	C6	12	32	50	61	87	39	39	36	46	36	M10×1	90
C6/16	○	C6	16	38	50	66	92	46	46	39	49	39	M12×1	185
C6/20	○	C6	20	42	–	–	97	55	55	41	51	41	M16×1	330
C6/25	○	C6	25	57	–	–	102	61	61	47	57	47	M16×1	400
C6/32	○	C6	32	62,5	–	–	110	62	62	51	61	51	M16×1	650

Design:
- highly robust
- torque up to 900 Nm
- short heavy-duty version
- with vibration damping and radial rigidity
- permanent concentricity and alternating repeatability ‹ 0.003 mm

SCHUNK CAPTO™ | HPC | HSC | G 2,5 25.000 min^{-1}

Use:
For volume machining, reaming, drilling, countersinking/chamfering and threading

Note:
Intermediate bushings 241461 and 241462 see page 24/469.



N° article	241430 TENDO E Compact, short	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B71 mm	X mm	C81 mm	C82 mm	G	Torque min. Nm	Weight kg
C4/12	○	C4	12	39,5	–	32	65	44	36	46	31	M8×1	110	0.65
C4/20	○	C4	20	46	–	38	83	63	41	51	37	M8×1	440	0.85
C5/12	○	C5	12	42	52,5	32	70	50	36	46	31	M8×1	110	0.9
C5/20	○	C5	20	52,5	–	38	75	54	41	51	37	M8×1	440	1
C6/12	○	C6	12	42	62,5	32	75	53	36	46	31	M8×1	110	1.5
C6/20	○	C6	20	52,5	62,5	38	80	57	41	51	31	M8×1	400	1.6
C6/32	○	C6	32	62,5	–	58,5	90	67	51	61	44	M8×1	800	1.95

Collet chuck ER DIN 1835

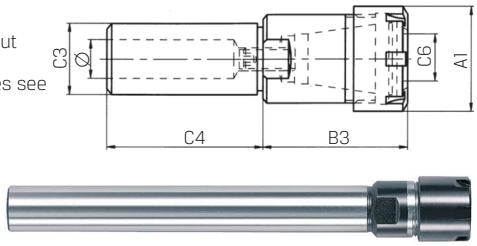
PREMUS

Design:
- with Mini clamping nut, for collets type ER ISO 15488
- cylindrical shank, from Ø 20 with clamping flat

1835 B shank | G 6,3 8.000 min⁻¹

Use:
As chuck extension

Note:
- size 16×60/ER16: Cylinder shank without clamping flat
- matching accessories see page 24/445 et seq.



N° article	246410 short	C3 mm	C6	A1 mm	B3 mm	C4 mm	Clamping range mm
20×50/ER11	●	20	ER11	16	22	50	1 - 7
20×100/ER11	●	20	ER11	16	22	100	1 - 7
16×60/ER16	●	16	ER16	22	37	60	1 - 10
20×60/ER16	●	20	ER16	22	30	60	1 - 10
20×100/ER16	●	20	ER16	22	30	100	1 - 10
20×160/ER16	●	20	ER16	22	30	160	1 - 10
20×200/ER16	●	20	ER16	22	30	200	1 - 10
20×60/ER20	●	20	ER20	28	37	60	1 - 13
20×100/ER20	●	20	ER20	28	37	100	1 - 13
20×120/ER20	○	20	ER20	28	37	120	1 - 13
20×200/ER20	●	20	ER20	28	37	200	1 - 13
20×60/ER25	●	20	ER25	35	46	60	1 - 16
20×100/ER25	●	20	ER25	35	46	100	1 - 16

Collet chuck ER DIN 1835

FAHRION® FAR BEYOND PRECISION

Design:
- collet chuck with cylindrical shank
- for HPCM mini nuts
- suitable for internal coolant supply

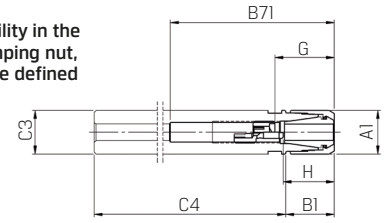
1835 A shank | ICS | G 2,5 25.000 min⁻¹

Use:
As chuck extension

In order to achieve utmost flexibility in the fields of application, chuck, clamping nut, collet and accessories have to be defined separately

Delivery:
Without clamping nut

Note:
Matching accessories see page 24/445 et seq.



N° article	241206 CENTRO|P	C3 mm	A1 mm	B1 mm	B71 mm	C4 mm	max./min. Insertion depth stop form U G mm	max./min. Insertion depth stop form W H mm	Clamping range / collets
CP11M-Z16-L=150	●	16	16	17	68	133	36/18	26/12	1 - 7 GER11-HP/ HPD/HPDD
CP11M-Z16-L=200	●	16	16	17	68	183	36/18	26/12	1 - 7 GER11-HP/ HPD/HPDD
CP16M-Z20-L=150	●	20	20	33	68	117	48/28	35/16	1 - 10 GER16-HP/ HPD/HPDD/ GBD/GBDD
CP16M-Z20-L=200	○	20	20	33	68	167	48/28	35/16	1 - 10 GER16-HP/ HPD/HPDD/ GBD/GBDD

Universal chuck DIN 1835

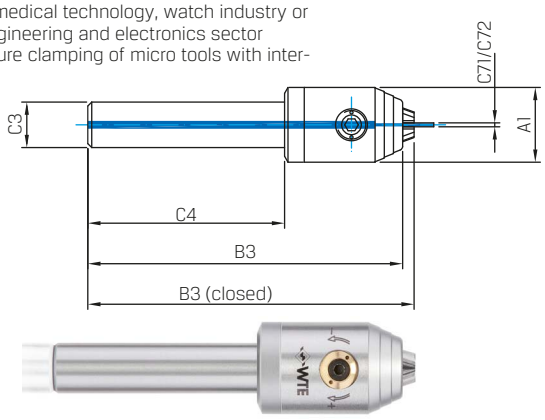
WTE MAPAL GROUP

Design:
- large clamping range from Ø 0.2 to 6.4 mm and 0.2 to 3.4 mm
- low interfering contour
- secure and quick clamping
- easy handling
- for speeds up to 60,000 max.$^{-1}$
- high concentricity ‹ 0.005

1835 A shank | Form AD

ICS | G 2,5 25.000 min⁻¹

Use:
- suitable for medical technology, watch industry or precision engineering and electronics sector
- even for secure clamping of micro tools with internal cooling



N° article	246412 Micro, ICS	C3 mm	C71 mm	C72 mm	A1 mm	B3 mm	B3 (closed) mm	C4 mm
0001	○	10	0,2	3,4	19	70	73	40
0002	○	10	0,2	3,4	19	100	103	70
0003	○	10	0,2	3,4	19	160	163	130
0004	○	16	0,2	3,4	19	80	83	50
0005	○	16	0,2	3,4	19	100	103	70
0006	○	16	0,2	3,4	19	160	163	130
0007	○	20	0,2	3,4	19	80	83	52
0008	○	20	0,2	3,4	19	100	103	72
0009	○	20	0,2	3,4	19	160	163	132
0011	○	16	0,2	6,4	25	100	104	60
0012	○	16	0,2	6,4	25	150	154	110
0013	○	16	0,2	6,4	25	200	204	160
0014	○	20	0,2	6,4	25	100	104	60
0015	○	20	0,2	6,4	25	150	154	110
0016	○	20	0,2	6,4	25	200	204	100

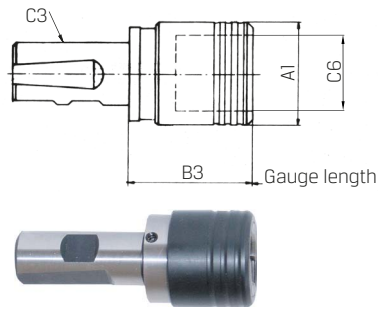
Quick-change tapping chuck DIN 1835

PREMUS

Design:
- form B/E parallel shank with lateral drive face
- type KF with ball bearing bush

DIN 1835 B/E | G 6,3 8.000 min⁻¹

Note:
Matching accessories see page 24/463



N° article	246414 With length compensation	C3 mm	C6	A1 mm	B3 mm	for taps	Length compensation compression/traction
25/M3 - 12	●	25	Sz. 1	36	40	M3-M12	7.5/7.5
25/M8 - 20	●	25	Sz. 2	53	63	M5-M20	12.5/12.5
32/M14 - 33	●	32	Sz. 3	78	125	M14-M33	20/20

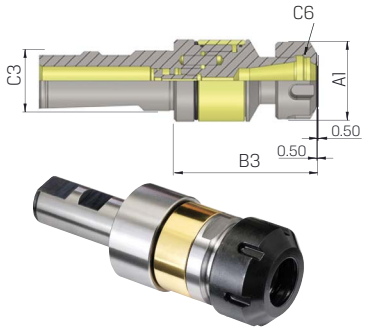
Synchro tapping chuck DIN 1835 B/E

PREMUS

DIN 1835 B/E | Form AD | ICS

Design:
- the minimal length compensation balances out deviations between thread pitch and spindle feed, which means less pressure on the thread flanks of the tools and thus considerably longer tool life
- with internal coolant supply (max. 50 bar)
- safe clamping of taps with collets DIN ISO 15488 (ER) and internal square drive drills or taps
- collets with quick-change system (see main catalogue page 24/463)

Delivery:
With sealable clamping nut.



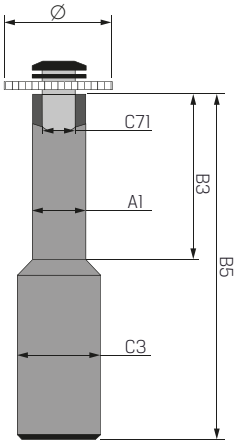
N° article	246415	C3 mm	C6	A1 mm	B3 mm	for taps
20/ER16M	●	20	ER16-M	22	58	M3-M12
25/ER20	●	25	ER20	35	56	M3-M12
25/ER25	●	25	ER25	42	56	M3-M14
25/ER32	●	25	ER32	50	56	M4 - M27
32/ER40	○	32	ER40	63	108	M4-M33

Saw blade mount DIN 1835

PREMUS

Design and use:
For holding circular metal cutting saw blades 150000 - 150405. Easy, secure and fast clamping of the blade, self-locking. Any saw blade thicknesses clampable. Very precise concentricity







1835 B shank

N° article	246418 6-piece, in case	Design:
SATZ	●	consisting of saw blade holder Ø 20 to 63 mm

N° article	246418	C3 mm	C71 mm	A1 mm	B3 mm	B5 mm	Saw blade Ø mm
20	●	20	5	10	30	94	20
25	●	20	8	13	42	104	25
32	●	20	8	16	53	110	32
40	●	20	10	19,5	60	114	40
50	●	25	13	24,5	77	141	50
63	●	25	16	24,5	77	141	63
80	●	25	22	34	92	160	80
100	●	25	22	39,5	92	160	100

Quick-change tapping chuck DIN 228 B

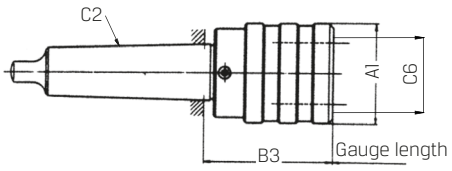
PREMUS

DIN 228 B

Design:
- short dimensions and low weight
- for holding quick-change adaptors with and without safety coupling
- adjustable intensifier for initial cutting pressure
- for horizontal and vertical use, for right and left hand rotation
- sizes 1 to 3 also available with ball bearing bushes

Use:
For mounting taps on mechanically and NC controlled lathes, drilling and milling machines and machining centres

Note:
Matching accessories see page 24/463





N° article	246422 With length compensation	C2	C6	A1 mm	B3 mm	Length compensation compression/traction
MK2/M3 - 12	●	MK2	Sz. 1	36	46	7.5/7.5
MK3/M3 - 12	●	MK3	Sz. 1	36	46	7.5/7.5
MK3/M8 - 20	●	MK3	Sz. 2	53	70	12.5/12.5
MK4/M8 - 20	●	MK4	Sz. 2	53	71	12.5/12.5

Thread cutting device DIN 228 B

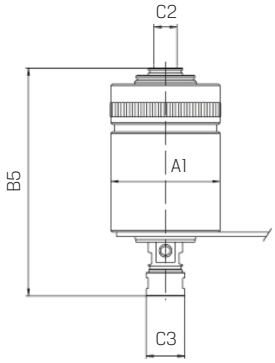
TAPMATIC

Design:
- with adjustable friction coupling and quick rewind
- length compensation compensates for the difference between machine feed rate and thread pitch
- short feed pressure cushioning spring prevents wasting of the thread
- the tap runs faster in the return direction 1.75:1
- multi-range collets RUBBER-FLEX, two collets cover the entire cutting zone
- adjustable square drive for tap
- interchangeable shanks

Use:
On bench drills and column drills with manual feed and without a possibility to reverse the spindle's direction of rotation

Scope of delivery:
Operating key, **without** collets and without shank

Note:
Drill chuck tapers (Shanks) see ander 201400 on page 20/284.





N° article	246426 Type X	C2	C3 mm	A1 mm	B5 mm	Thread cutting performance in steel	Permissible speed min $^{-1}$	Jacobs Rubber Flex standard collets	Jacobs Rubber Flex collets extra
B12/M1,4 - 7	○	B12	19	48	113	M1.4-M7	2000	J116 2.5 - 4.5 J117 4.5 - 6.5	J115 1 - 2.5
B16/M3 - 12	○	B16	27	70	153	M3-M12	1500	J421 3.5 - 6.5 J422 6.5 - 10	J423 2 - 4.5 J420 4.5 - 8
B18/M5 - 18	○	B18	36	76	176	M5-M18	1200	J443 2.8 - 7 J440 7 - 13	J441 4.5 - 10 J445 9 - 15

Replacement clamping screw for Weldon chuck

HAIMER

Design:
Clamping screw to DIN 1835B, with hex socket



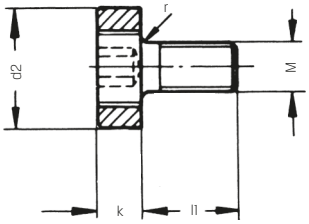
N° article	240570	Metric thread	Length mm	for chuck ∅ mm
M6	●	M6	10	6
M8	●	M8	10	8
M10	●	M10	12	10
M12	●	M12	16	12 + 14
M14	●	M14	16	16 + 18
M16	●	M16	16	20 + 22
M18	●	M18	20	25
M20	●	M20	20	32 + 40

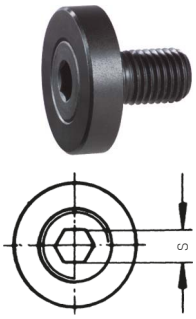
Milling cutter tightening bolt roand

PREMUS

Design:
- made of special steel
- the removable fine-thread ring increases the clamping force and securely holds all milling heads
- by using the screw 247201, every cutter head holder can be converted to internal cooling

Use:
For mounting milling cutters, but mainly cutter heads to shell mill arbours.





N° article	247200 with internal hex	247201 with hexagon socket and IC	M	for mandrel diameter mm	d_2 mm	k mm	l_1 mm	s mm	r mm
M8	●	●	M8	16	20	7	25	5	1.6
M10	●	●	M10	22	28	8	25	6	2
M12	●	●	M12	27	35	9	35	8	2.5
M16	●	●	M16	32	42	10	35	10	3
M20	●	○	M20	40	52	11	40	12	3
M24	○	○	M24	50	63	13	45	14	–

Wrench for milling arbors

amf

Design:
Made of special steel, hardened and burnished

DIN 6368

Use:
For releasing or fastening of tightening bolts **247100**.



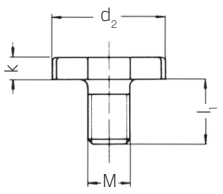
N° article	247000	for mandrel diameter mm	l_1 mm	for screws ∅
16	●	16	180	M8
22	●	22	200	M10
27	●	27	225	M12
32	●	32	250	M16
40	●	40	280	M20

Milling cutter tightening bolt cross-shaped

PREMUS

Design:
Made of special steel, hardened and burnished

DIN 6367





N° article	247100	M	for mandrel diameter mm	d_2 mm	k mm	l_1 mm
M8	●	M8	16	20	6	16
M10	●	M10	22	28	7	18
M12	●	M12	27	35	8	22
M16	●	M16	32	42	9	26
M20	●	M20	40	52	10	30

Rings for mill arbors

buna PRÄZISION

Design:
- punched out of spring-hard special steel and deburred
- latitudinal deviance and its parallelism depend on tolerance of the initial semi-finished product

DIN 2084

Minimum order quantity 30 pieces per size



N° article	247350 Shape A	Inner diameter mm	b_1 mm	Outer diameter mm
13×0,03	●	13	0,03	21
13×0,04	●	13	0,04	21
13×0,05	●	13	0,05	21
13×0,1	●	13	0,1	21
13×0,2	●	13	0,2	21
13×0,3	●	13	0,3	21
13×0,5	●	13	0,5	21
13×0,6	○	13	0,6	21
13×1,0	●	13	1	21
16×0,03	●	16	0,03	25
16×0,04	●	16	0,04	25
16×0,05	●	16	0,05	25
16×0,1	●	16	0,1	25
16×0,2	●	16	0,2	25

N° article	247350 Shape A	Inner diameter mm	b_1 mm	Outer diameter mm
16×0,3	●	16	0,3	25
16×0,5	●	16	0,5	25
16×0,6	●	16	0,6	25
16×1,0	●	16	1	25
22×0,03	●	22	0,03	33
22×0,04	●	22	0,04	33
22×0,05	●	22	0,05	33
22×0,1	●	22	0,1	33
22×0,2	●	22	0,2	33
22×0,3	●	22	0,3	33
22×0,5	●	22	0,5	33
22×0,6	●	22	0,6	33
22×1,0	●	22	1	33
27×0,03	●	27	0,03	39

N° article	247350 Shape A	Inner diameter mm	b_1 mm	Outer diameter mm
27×0,04	●	27	0,04	39
27×0,05	●	27	0,05	39
27×0,1	●	27	0,1	39
27×0,2	○	27	0,2	39
27×0,3	○	27	0,3	39
27×0,5	●	27	0,5	39
27×0,6	○	27	0,6	39
27×1,0	●	27	1	39
32×0,03	○	32	0,03	45
32×0,04	○	32	0,04	45
32×0,05	●	32	0,05	45
32×0,1	●	32	0,1	45
32×0,2	●	32	0,2	45
32×0,3	●	32	0,3	45

N° article	247350 Shape A	Inner diameter mm	b_1 mm	Outer diameter mm
32×0,5	●	32	0,5	45
32×0,6	○	32	0,6	45
32×1,0	●	32	1	45
40×0,03	●	40	0,03	54
40×0,04	○	40	0,04	54
40×0,05	●	40	0,05	54
40×0,1	●	40	0,1	54
40×0,2	●	40	0,2	54
40×0,3	●	40	0,3	54
40×0,5	●	40	0,5	54
40×0,6	○	40	0,6	54
40×1,0	●	40	1	54

Design:
- alloyed case-hardening steel, hardened, plane-parallel ground and lapped
- permissible deviation of parallelism for width is IT3 in relation to the bore

DIN 2084

N° article	247400 Form B	Inner diameter mm	b_1 mm	Outer diameter mm
13×2	○	13	2	22
13×3	○	13	3	22
13×4	○	13	4	22
13×5	○	13	5	22
13×10	○	13	10	22
13×20	○	13	20	22
13×30	○	13	30	22
16×2	●	16	2	27
16×3	●	16	3	27
16×4	●	16	4	27
16×5	●	16	5	27
16×10	●	16	10	27
16×20	●	16	20	27

N° article	247400 Form B	Inner diameter mm	b_1 mm	Outer diameter mm
16×30	○	16	30	27
22×2	●	22	2	34
22×3	●	22	3	34
22×4	●	22	4	34
22×5	●	22	5	34
22×10	●	22	10	34
22×20	●	22	20	34
22×30	●	22	30	34
22×60	○	22	60	34
22×100	○	22	100	34
27×2	●	27	2	41
27×3	●	27	3	41
27×4	●	27	4	41

N° article	247400 Form B	Inner diameter mm	b_1 mm	Outer diameter mm
27×5	●	27	5	41
27×10	●	27	10	41
27×20	●	27	20	41
27×30	●	27	30	41
27×60	○	27	60	41
27×100	○	27	100	41
32×2	●	32	2	47
32×3	●	32	3	47
32×4	●	32	4	47
32×5	●	32	5	47
32×10	●	32	10	47
32×20	●	32	20	47
32×30	●	32	30	47

N° article	247400 Form B	Inner diameter mm	b_1 mm	Outer diameter mm
32×60	○	32	60	47
32×100	○	32	100	47
40×2	●	40	2	55
40×3	●	40	3	55
40×4	○	40	4	55
40×5	●	40	5	55
40×10	●	40	10	55
40×20	●	40	20	55
40×30	●	40	30	55
40×60	○	40	60	55
40×100	○	40	100	55

Design:
Set consisting of milling arbor rings form A, 247350

DIN 2084

Delivery:
In plastic pouch

Assortment 1: Content 60 pieces (width mm / number of pcs),
0.03/10×|0.04/10×|0.05/10×|0.1/10×|0.2/5×|0.3/5×|0.5/4×|0.6/3×|1.0/2×|1.5/1×

Assortment 2: Content 35 pieces (width mm / number of pcs),
0.03/5×|0.04/5×|0.05/5×|0.1/6×|0.2/3×|0.3/3×|0.5/3×|0.6/2×|1.0/2×|1.5/1×

N° article	247420 Milling arbor ring assortment 1	247430 Milling arbor ring assortment 2	Inner Ømm
16	○	●	16
22	○	●	22

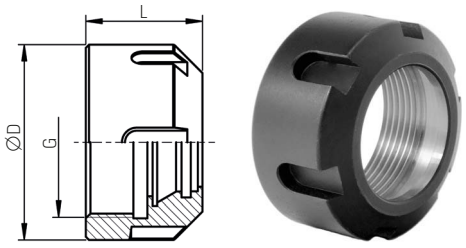
N° article	247420 Milling arbor ring assortment 1	247430 Milling arbor ring assortment 2	Inner Ømm
27	○	●	27
32	○	○	32

N° article	247420 Milling arbor ring assortment 1	247430 Milling arbor ring assortment 2	Inner Ømm
40	○	○	40

Clamping nut for collet chuck ER DIN 6499

PREMUS

ISO 15488



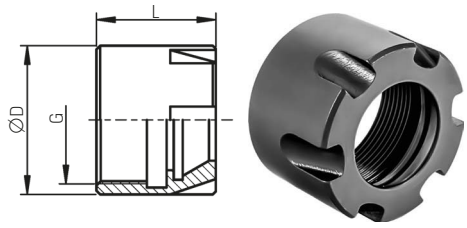
ER25 - ER40

N° article	246501 pre-balanced	for collet	G	D mm	Shape	L mm	max. tightening torque Nm
ER11	●	ER11	M14 × 0.75	19	hexagonal	11,3	25
ER16	●	ER16	M22 × 1.5	28	hexagonal	17,5	50
ER20	●	ER20	M25 × 1.50	34	hexagonal	19	75
ER25	●	ER25	M32 × 1.5	42	with groove	20	85
ER32	●	ER32	M40 × 1.5	50	with groove	22,5	105
ER40	●	ER40	M50 × 1.5	63	with groove	25,5	150

Clamping nut Mini for collet chuck ER

PREMUS

ISO 15488



N° article	246571 pre-balanced (RG 2417)	for collet	G	D mm	L mm	max. tightening torque Nm
ER08M	●	ER8M	M10 × 0.75	12	10,8	8
ER11M	●	ER11M	M13 × 0.75	16	12	18
ER16M	●	ER16M	M19 × 1	22	18,4	28
ER20M	●	ER20M	M24 × 1	28	19	35
ER25M	●	ER25M	M30 × 1	35	20	40

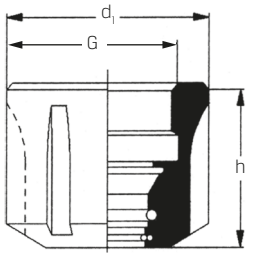
Clamping nut for collet chuck ER DIN 6499

ROBERT KOCH

Design:
- one-piece clamping nut, without sealing ring
- ER16 and ER20 hexagonal

ISO 15488

Use:
For tools with internal coolant supply

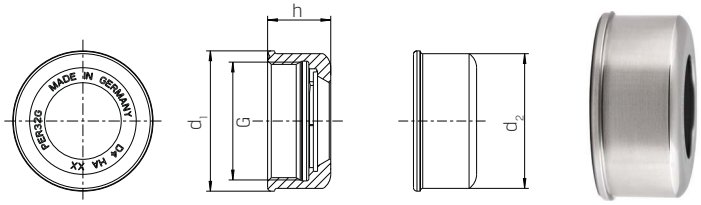


N° article	246540 sealable	for collet	d_1 mm	G	Shape	h mm
ER16	●	ER16	28	M22 × 1.5	hexagonal	25
ER20	○	ER20	34	M25 × 1.5	hexagonal	26.5
ER25	●	ER25	42	M32 × 1.5	with groove	27.5
ER32	●	ER32	50	M40 × 1.5	with groove	30.5
ER40	●	ER40	63	M50 × 1.5	with groove	34

Clamping nut for collet chuck HP

HAIMER

Design:
- highest concentricity
- no wear and high clamping force due to special sliding coating
- low vibrations due to pre-balancing
- noise-reducing



N° article	246542	for collet	d_1 mm	d_2 mm	G	h mm
ER16	○	ER16	28	27	M23 × 1.5	17.8
ER25	○	ER25	42	40	M34 × 1.5	20
ER32	○	ER32	50	48	M42 × 1.5	22.5

Clamping nut Mini for precision collet chuck CENTRO|P Mini

FAHRION

Design:
- highest concentricity
- no wear and high clamping force due to special sliding coating
- low vibrations due to pre-balancing
- noise-reducing



N° article	246544	Design	for chuck	Collet size
HPC11M	●	Mini	CP11M	GERC11-HP/HPD/HPDD
HPC16MS	●	Mini	CP16M	GERC16-HP/HPD/HPDD/GBD/GBDD
HPC16MS-DI	●	Mini for sealing rings	CP16M	GERC16-HP

Clamping nut for precision collet chuck CENTRO|P

FAHRION® FAR BEYOND PRECISION

Design:
- counterweight for high speeds
- trapezoidal thread & low-friction coating for high clamping forces
- for high-precision and powerful clamping (only the nominal dimension can be clamped)



N° article	246545	Design	for chuck	Collet size
HPC16	●	Standard	CP 16	GERC16-HP/HPD/HPDD/GBD/GBDD
HPC16-DI	●	Standard for sealing rings	CP 16	GERC16-HP
HPC16C	●	conical	CPC 16	GERC16-HP/HPD/HPDD/GBD/GBDD
HPC16C-DI	●	conical for sealing rings	CPC 16	GERC16-HP
HPC25	●	Standard	CP 25	GERC25-HP/HPD/HPDD/GBD/GBDD
HPC25-DI	●	Standard for sealing rings	CP 25	GERC25-HP
HPC32	●	Standard	CP 32	GERC32-HP/HPD/HPDD/GBD/GBDD
HPC32-DI	●	Standard for sealing rings	CP 32	GERC32-HP
HPC40	●	Standard	CP 40	GERC40-HP/HPD/HPDD/GBD/GBDD
HPC40-DI	●	Standard for sealing rings	CP 40	GERC40-HP

Heavy-duty clamping nut

FAHRION® FAR BEYOND PRECISION

Note:
For 241222, 241232, 241309 and 243238.



N° article	246549 Clamping nut with thrust collar
ER32	○

Sealing washer for collet chuck CENTRO|P

FAHRION® FAR BEYOND PRECISION

Design:
Vulcanised sealing washer for tools with internal cooling and for protection against contamination.



N° article	246551 DI16, clamping range 1.0-10.0 mm	d_4 mm	d_1 mm	h mm
1,0	○	1	12.6	2
2,0	○	2	12.6	2
3,0	●	3	12.6	2
4,0	●	4	12.6	2

N° article	246551 DI16, clamping range 1.0-10.0 mm	d_4 mm	d_1 mm	h mm
5,0	●	5	12.6	2
6,0	●	6	12.6	2
7,0	○	7	12.6	2
8,0	●	8	12.6	2

N° article	246551 DI16, clamping range 1.0-10.0 mm	d_4 mm	d_1 mm	h mm
9,0	○	9	12.6	2
10,0	●	10	12.6	2

N° article	246552 DI25, clamping range 2.0 - 16.0 mm	d_4 mm	d_1 mm	h mm
2,0	○	2	20.2	2
3,0	○	3	20.2	2
4,0	○	4	20.2	2
5,0	○	5	20.2	2
6,0	●	6	20.2	2

N° article	246552 DI25, clamping range 2.0 - 16.0 mm	d_4 mm	d_1 mm	h mm
7,0	○	7	20.2	2
8,0	●	8	20.2	2
9,0	○	9	20.2	2
10,0	●	10	20.2	2
11,0	○	11	20.2	2

N° article	246552 DI25, clamping range 2.0 - 16.0 mm	d_4 mm	d_1 mm	h mm
12,0	●	12	20.2	2
13,0	○	13	20.2	2
14,0	○	14	20.2	2
15,0	○	15	20.2	2
16,0	○	16	20.2	2

N° article	246554 DI32, clamping range 2.0-20.0 mm	d_4 mm	d_1 mm	h mm
2,0	○	2	26.2	2
3,0	○	3	26.2	2
4,0	●	4	26.2	2
5,0	○	5	26.2	2
6,0	●	6	26.2	2
7,0	○	7	26.2	2
8,0	●	8	26.2	2

N° article	246554 DI32, clamping range 2.0-20.0 mm	d_4 mm	d_1 mm	h mm
9,0	○	9	26.2	2
10,0	●	10	26.2	2
11,0	○	11	26.2	2
12,0	●	12	26.2	2
13,0	○	13	26.2	2
14,0	●	14	26.2	2
15,0	○	15	26.2	2

N° article	246554 DI32, clamping range 2.0-20.0 mm	d_4 mm	d_1 mm	h mm
16,0	●	16	26.2	2
17,0	○	17	26.2	2
18,0	●	18	26.2	2
19,0	○	19	26.2	2
20,0	●	20	26.2	2

N° article	246555 DI40, clamping range 3.0 - 26.0 mm	d_4 mm	d_1 mm	h mm
3,0	○	3	34.2	2
4,0	○	4	34.2	2
5,0	○	5	34.2	2
6,0	○	6	34.2	2
7,0	○	7	34.2	2
8,0	○	8	34.2	2
9,0	○	9	34.2	2
10,0	○	10	34.2	2

N° article	246555 DI40, clamping range 3.0 - 26.0 mm	d_4 mm	d_1 mm	h mm
11,0	○	11	34.2	2
12,0	○	12	34.2	2
13,0	○	13	34.2	2
14,0	○	14	34.2	2
15,0	○	15	34.2	2
16,0	○	16	34.2	2
17,0	○	17	34.2	2
18,0	○	18	34.2	2

N° article	246555 DI40, clamping range 3.0 - 26.0 mm	d_4 mm	d_1 mm	h mm
19,0	○	19	34.2	2
20,0	○	20	34.2	2
21,0	○	21	34.2	2
22,0	○	22	34.2	2
23,0	○	23	34.2	2
24,0	○	24	34.2	2
25,0	○	25	34.2	2
26,0	○	26	34.2	2

Clamping wrench for collet chuck ER Mini

PREMUS



N° article	246566	for collet
ER08M	●	ER8M
ER11M	●	ER11M
ER16M	●	ER16M
ER20M	●	ER20M
ER25M	●	ER25M

Clamping wrench for collet chuck HP

HAIMER

Design:
For clamping high-precision clamping nuts



N° article	246564 Roller bearing wrench	for collet
ER16	○	ER16
ER25	○	ER25
ER32	○	ER32

Clamping wrench for collet chuck ER

PREMUS



N° article	246560	for collet
ER16	●	ER16
ER20	●	ER20
ER25	●	ER25
ER32	●	ER32
ER40	●	ER40

Torque wrench for collet chuck ER Mini

PREMUS

Design:
- predefined force when tightening the nut (repeatability)
- reduction of concentricity errors due to excessive tightening
- reduction of damage to the nut and the tool holder
- greatly reduced risk of injury



N° article	246562 Standard	for collet	min. torque Nm	max. torque Nm	Total length mm	Shape clamping nut
ER11	●	ER11	–	18	150	hexagonal
ER16	●	ER16	35	55	340	–
ER16/SECHS	●	ER16	35	55	340	hexagonal
ER20	●	ER20	40	70	340	–
ER20/SECHS	●	ER20	40	70	350	hexagonal
ER25	●	ER25	55	90	390	–
ER32	●	ER32	70	130	395	–

N° article	246568 Mini	for collet	Torque Nm	Total length mm
ER08M	●	ER8M	8	140
ER11M	●	ER11M	18	150
ER16M	●	ER16M	28	150
ER20M	●	ER20M	35	150
ER25M	●	ER25M	40	150

Clamping wrench for Power collet chuck

HAIMER

Design:
- clamping and torque wrench
- for highest true running, no unilateral clamping
- optimal power transmission due to even force distribution
- torque wrench for highest clamping accuracy and repeatability with dial gauge
- maximum torque for highest holding forces
- no overload at smaller clamping diameters
- exchangeable inserts, also fit for standard ER nuts



N° article	240728 Clamping / torque wrench	Design:
0016	○	Clamping wrench ER16
0025	○	Clamping wrench ER25
0032	○	Clamping wrench ER32
0100	○	Torque Wench
0116	○	Bits for torque wrench Power ER16
0125	○	Bits for torque wrench Power ER25
0132	○	Bits for torque wrench Power ER32
0216	○	Bits for torque wrench Standard ER16
0225	○	Bits for torque wrench Standard ER25
0232	○	Bits for torque wrench Standard ER32

Clamping wrench for collet chuck

FAHRION®





N° article	246596 Roller bearing wrench	for clamping nuts
RH16	●	HPC11M/HPC11M-DI
R022	●	HPC16MS/HPC16MS-DI
R024	●	HPC16C/HPC16C-DI
R030	●	HPC16/HPC16-DI
R032	●	HPC20/HPC20-DI
R040	●	HPC25/HPC25-DI
R050	●	HPC32/HPC32-DI, Kat.-Nr. 246490, 246500/-20/-30/-40 ER32
R053	○	HDC32
R063	○	HPC40/HPC40-DI cat. no. 246490, 246500/-20/-30/-40 ER40

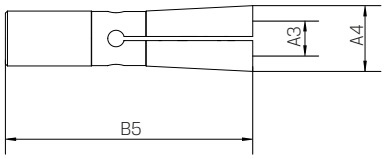
N° article	246598 Torque roller bearing torque wrench adapter	for clamping nuts	Square seat mm
DRH16	●	HPC11M/HPC11M-DI	9 × 12
DR022	○	HPC16MS/HPC16MS-DI	9 × 12
DR024	○	HPC16C/HPC16C-DI	9 × 12
DR030	●	HPC16/HPC16-DI	14 × 18
DR032	○	HPC20/HPC20-DI	14 × 18
DR040	●	HPC25/HPC25-DI	14 × 18
DR050	●	HPC32/HPC32-DI, HPC225/HPC225-DI, cat. no. 246490, 246500/-20/-30/-40 ER32	14 × 18
DR053	○	HDC32	14 × 18
DR063	○	HPC40/HPC40-DI cat. no. 246490/246500/-20/-30/-40 ER40	14 × 18

Collet chuck DMC

PREMUS®

Factory standard

Design and use:
- suitable for extra narrow/slim collet chuck
- concentricity 5 µm
- ultra slim construction
- fully hardened and groand
- the collet is pulled into the correct position from behind through the chuck





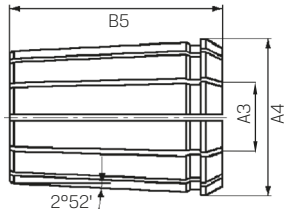
N° article	247900	A3 mm	A4 mm	B5 mm
002	○	2	9,6	36
003	●	3	9,6	36
004	●	4	9,6	36
005	○	5	9,6	36
006	●	6	9,6	36

Collet chuck GOZ-DG

FAHRION®

ISO 10897 (OZ)

Design:
- concentricity and repeatability 6 µm in 415E/462E and 6 µm in 467E system OZ
- to DIN ISO 10897-B
- clamping bridging -0.5 mm for clamping cylindrical tool shanks
- DG = double slotted (10-fold slotted up to Ø 10.0 mm and 12-fold slotted on larger Ø)





Use:
For precise machining results in milling chucks with taper 1:10

N° article	248020 415E, Form B	A3 mm	A4 mm	B5 mm
2,0	○	2	25,5	40
2,5	○	2,5	25,5	40
3,0	●	3	25,5	40
3,5	○	3,5	25,5	40
4,0	●	4	25,5	40
4,5	○	4,5	25,5	40
5,0	●	5	25,5	40
5,5	○	5,5	25,5	40
6,0	●	6	25,5	40
6,5	○	6,5	25,5	40
7,0	○	7	25,5	40
7,5	○	7,5	25,5	40
8,0	●	8	25,5	40
8,5	○	8,5	25,5	40
9,0	○	9	25,5	40
9,5	○	9,5	25,5	40
10,0	●	10	25,5	40
10,5	○	10,5	25,5	40
11,0	○	11	25,5	40
11,5	○	11,5	25,5	40
12,0	●	12	25,5	40
12,5	○	12,5	25,5	40
13,0	○	13	25,5	40
13,5	○	13,5	25,5	40
14,0	○	14	25,5	40
14,5	○	14,5	25,5	40
15,0	○	15	25,5	40
15,5	○	15,5	25,5	40
16,0	●	16	25,5	40

N° article	248120 462E, form B	A3 mm	A4 mm	B5 mm
2,0	●	2	35,5	52
2,5	○	2,5	35,5	52
3,0	●	3	35,5	52
4,0	●	4	35,5	52
4,5	○	4,5	35,5	52
5,0	●	5	35,5	52
5,5	○	5,5	35,5	52
6,0	●	6	35,5	52
6,5	○	6,5	35,5	52
7,0	○	7	35,5	52
7,5	○	7,5	35,5	52
8,0	●	8	35,5	52
8,5	○	8,5	35,5	52
9,0	○	9	35,5	52
9,5	○	9,5	35,5	52
10,0	●	10	35,5	52
11,0	●	11	35,5	52
12,0	●	12	35,5	52
13,0	○	13	35,5	52
14,0	●	14	35,5	52
15,0	○	15	35,5	52
16,0	●	16	35,5	52
17,0	○	17	35,5	52
18,0	●	18	35,5	52
19,0	○	19	35,5	52
20,0	●	20	35,5	52
21,0	○	21	35,5	52
22,0	○	22	35,5	52
23,0	○	23	35,5	52
24,0	○	24	35,5	52
25,0	●	25	35,5	52

N° article	248220 462E, form B	A3 mm	A4 mm	B5 mm
4,0	○	4	43,7	60
4,5	○	4,5	43,7	60
5,0	○	5	43,7	60
5,5	○	5,5	43,7	60
6,0	○	6	43,7	60
6,5	○	6,5	43,7	60
7,0	○	7	43,7	60
7,5	○	7,5	43,7	60
8,0	○	8	43,7	60
8,5	○	8,5	43,7	60
9,0	○	9	43,7	60
9,5	○	9,5	43,7	60
10,0	●	10	43,7	60
11,0	○	11	43,7	60
12,0	●	12	43,7	60
13,0	○	13	43,7	60
14,0	○	14	43,7	60
15,0	○	15	43,7	60
16,0	●	16	43,7	60
17,0	○	17	43,7	60
18,0	○	18	43,7	60
19,0	○	19	43,7	60
20,0	●	20	43,7	60
21,0	○	21	43,7	60
22,0	○	22	43,7	60
23,0	○	23	43,7	60
24,0	○	24	43,7	60
25,0	●	25	43,7	60
26,0	○	26	43,7	60
27,0	○	27	43,7	60
28,0	○	28	43,7	60
29,0	○	29	43,7	60
30,0	●	30	43,7	60
31,0	○	31	43,7	60
32,0	●	32	43,7	60

The advantages of FAHRION precision collets DIN ISO 15488

GERC-B and GERC-HP (ER/ESX)

FAHRION has the largest selection of shapes and designs for different applications for collets DIN ISO 15488 (ER/ESX).

Precise

FAHRION collets DIN ISO 15488-B (ER/ESX) set the standard in terms of concentricity and repeatability, which is 5 µm for the GERC11-B to GERC40-B and 2 µm for the GERC11-HP to GERC40-HP.

Stable

Only 12 slots are enough to achieve the required clamping diameter bridging according to DIN ISO 15488.
This is possible thanks to a steel specially manufactured for us and a hardening process specially tailored to this purpose. In comparison to 16-slotted collets, our collets have a much lower tendency to interlock in the lower clamping area.

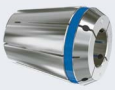
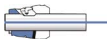
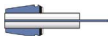
Gentle

All longitudinal edges are not only deburred, but also rounded, which protects the inner cone of the collet chuck from possible markings.
These points are a prerequisite for ensuring consistently high concentricity. Increased holding forces and rigidity, higher load-bearing ratio, higher system concentricity and higher corrosion resistance with GERC-B and GERC-HP thanks to the super-finished version with FAHRION|Protect!



Not only slots deburred on all sides, but also Rz surface area , µm

The features of the collets DIN ISO 15488 (ER/ESX)

Form/Use	GERC-**HP**	GERC-**HPD**	GERC-**HPDD**	GERC-**W**	GERC-**WD**	GERC-**B**	GERC-**BD**	GERC-**GBD**	GERC-**GBDD**
									
	Standard	Sealed	Sealed with spray nozzles	Pull-out protection	Sealed with pull-out protection	Standard	Sealed	Sealed for taps	Sealed with spray nozzles for taps
									
Standard collet chuck	◪	◪	◪	□	□	■	■	■	■
Precision collet chuck CENTRO|P	■	■	■	◪	◪	◪	◪	■	■
Heavy-Duty chuck HDC	■	■	■	■	■	◪	◪	■	■
Concentricity e.g. Ø 12,0 mm	2 µm	2 µm	2 µm	3 µm	3 µm	5 µm	5 µm	10 µm	10 µm
Repeatability	2 µm	2 µm	2 µm	3 µm	3 µm	3 µm	3 µm	5 µm	5 µm
Clamping tolerance tool shank	h10	h8	h8	h8	h8	h10	h8	h8	h8
Cooling through cutting edge	□	■	□	□	■	□	■	■	□

Use: ■ preferred ◪ limited □ not applicable

Precision collets GERC - DIN ISO 15488 (ER / ESX)

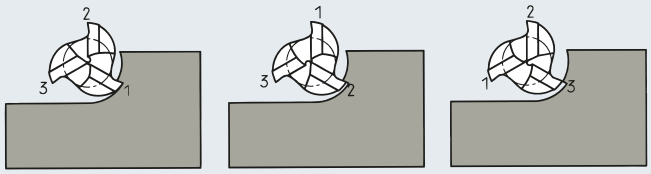
Quality pays off



The FAHRION quality mark for tested quality

Longer tool life,
lower tool costs and
setup times
= Lower production costs,
better surface quality and
tighter manufacturing tolerances
= Better quality

Effect of the runout error on the tool cutting edge

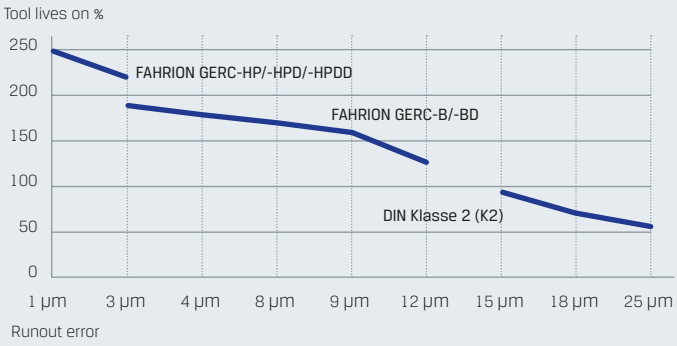


Irregular load on the cutting edge

Tool wearincreases, surface quality becomes worse

Feed rate must be reduced

Influence of concentricity error on the service life of solid carbide tools



Variations of coolant supply through the appropriate collet

One system, several variants. The choice of collet determines the type of coolant supply.
This means for you:

- better surface quality
- longer tool service life
- problem-free chip removal
- cooling and lubrication of the tool cutting edge



Without coolant supply:
GERC-HP
GERC-B



Without coolant supply:
GERC-HPD
GERC-BD
GERC-GBD



Peripheral cooling:
GERC-HPDD
GERC-GBDD

Your benefits:

Stops corrosion.
Ends the problems.

The comparison with conventional unprotected collets shows that without a coating, the collet will be attacked by corrosion within a short time - whether from humidity, coolants, cleaning solutions, salts or gases. This not only damages the collet itself, but your entire system



FAHRION|Protect optimises your work in many ways:

Long-term high precision

- The target geometry between the collet and the conical seat in the chuck is maintained for a long time - for a permanently flat system without corrosion-related irregularities.
- The parts in production remain within the specified tolerances for longer. The number of defective items is reduced.
- You keep production processes at a high level for longer, save time and can also guarantee tight delivery times.

Longer tool life

- Collets need to be replaced less often and can be used for longer for precise applications.

Longer collet life

- Collets need to be replaced less often and can be used for longer for precise applications.

Longer service life of the machine spindles

- Less imbalance on the tools permanently relieves the load on the machine spindle – your maintenance costs are reduced.

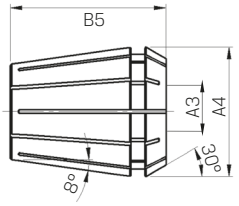
This means that coated collets from FAHRION offer corrosion protection, quality protection and investment protection in one.

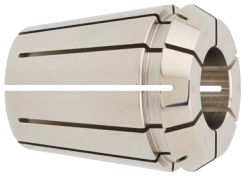
Collet ER-B

FAHRION PROTECT · FAHRION® FAR BEYOND PRECISION · PREMUS®

Design:
- concentricity/repeatability 5 µm, except GERC8-B 10 µm, CER K2 = 15/10 µm,
- clamping bridging minus 1.0 mm for clamping cylindrical tool shanks
- double slotted (12-fold slotted)

Use:
Can be used for all tools with a straight shank for high-precision and powerful clamping in high-precision machining or heavy-duty cutting.

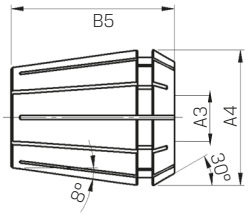




ISO 15488-B

GERC-B

GERC-**B**





CER-K2

N° article	248401 FAHRION® 4004E GERC8-B	A3 mm	A4 mm	B5 mm
1,0	●	1	8,5	13,6
1,5	●	1,5	8,5	13,6
2,0	●	2	8,5	13,6
2,5	○	2,5	8,5	13,6
3,0	●	3	8,5	13,6

N° article	248401 FAHRION® 4004E GERC8-B	A3 mm	A4 mm	B5 mm
3,5	●	3,5	8,5	13,6
4,0	●	4	8,5	13,6
4,5	○	4,5	8,5	13,6
5,0	●	5	8,5	13,6

N° article	248403 FAHRION® 4008E GERC11-B	A3 mm	A4 mm	B5 mm
1,0	●	1	11,3	18
1,5	●	1,5	11,3	18
2,0	●	2	11,3	18
2,5	●	2,5	11,3	18
3,0	●	3	11,3	18
3,5	●	3,5	11,3	18
4,0	●	4	11,3	18

N° article	248403 FAHRION® 4008E GERC11-B	A3 mm	A4 mm	B5 mm
4,5	●	4,5	11,3	18
5,0	●	5	11,3	18
5,5	○	5,5	11,3	18
6,0	●	6	11,3	18
6,5	●	6,5	11,3	18
7,0	●	7	11,3	18

N° article	248404 FAHRION® 426E GERC16-B	248459 PREMUS® 426E CER16-K2	A3 mm	A4 mm	B5 mm
1,0	●	●	1	17	28
1,5	●	–	1,5	17	28
2,0	●	●	2	17	28
2,5	●	–	2,5	17	28
3,0	●	●	3	17	28
4,0	●	●	4	17	28

N° article	248404 FAHRION® 426E GERC16-B	248459 PREMUS® 426E CER16-K2	A3 mm	A4 mm	B5 mm
5,0	●	●	5	17	28
6,0	●	●	6	17	28
7,0	●	●	7	17	28
8,0	●	●	8	17	28
9,0	●	●	9	17	28
10,0	●	●	10	17	28

N° article	248405 FAHRION® 428E GERC20-B	248509 PREMUS® 428E CER 20-K2	A3 mm	A4 mm	B5 mm
1,0	●	○	1	21	32
1,5	●	–	1,5	21	32
2,0	●	●	2	21	32
2,5	●	–	2,5	21	32
3,0	●	●	3	21	32
4,0	●	●	4	21	32
5,0	●	●	5	21	32
6,0	●	●	6	21	32

N° article	248405 FAHRION® 428E GERC20-B	248509 PREMUS® 428E CER 20-K2	A3 mm	A4 mm	B5 mm
7,0	●	●	7	21	32
8,0	●	●	8	21	32
9,0	●	●	9	21	32
10,0	●	●	10	21	32
11,0	●	●	11	21	32
12,0	●	●	12	21	32
13,0	●	○	13	21	32

N° article	248406 FAHRION® 430E GERC25-B	248559 PREMUS® 430E CER 25-K2	A3 mm	A4 mm	B5 mm
1,0	●	–	1	26	34
1,5	●	–	1,5	26	34
2,0	●	●	2	26	34
2,5	●	–	2,5	26	34
3,0	●	●	3	26	34
4,0	●	●	4	26	34
5,0	●	●	5	26	34
6,0	●	●	6	26	34
7,0	●	●	7	26	34

N° article	248406 FAHRION® 430E GERC25-B	248559 PREMUS® 430E CER 25-K2	A3 mm	A4 mm	B5 mm
8,0	●	●	8	26	34
9,0	●	●	9	26	34
10,0	●	●	10	26	34
11,0	●	●	11	26	34
12,0	●	●	12	26	34
13,0	●	●	13	26	34
14,0	●	●	14	26	34
15,0	●	●	15	26	34
16,0	●	●	16	26	34

N° article	248407 FAHRION® 470E GERC32-B	248609 PREMUS® 470E CER 32-K2	A3 mm	A4 mm	B5 mm
2,0	●	●	2	33	40
2,5	●	○	2,5	33	40
3,0	●	●	3	33	40
4,0	●	●	4	33	40
5,0	●	●	5	33	40
6,0	●	●	6	33	40
7,0	●	●	7	33	40
8,0	●	●	8	33	40
9,0	●	●	9	33	40
10,0	●	●	10	33	40

N° article	248407 FAHRION® 470E GERC32-B	248609 PREMUS® 470E CER 32-K2	A3 mm	A4 mm	B5 mm
11,0	●	●	11	33	40
12,0	●	●	12	33	40
13,0	●	●	13	33	40
14,0	●	●	14	33	40
15,0	●	●	15	33	40
16,0	●	●	16	33	40
17,0	●	●	17	33	40
18,0	●	●	18	33	40
19,0	●	●	19	33	40
20,0	●	●	20	33	40

N° article	248408 FAHRION® 472E GERC40-B	248659 PREMUS® 472E CER 40-K2	A3 mm	A4 mm	B5 mm
3,0	●	●	3	41	46
4,0	●	●	4	41	46
5,0	●	●	5	41	46
6,0	●	●	6	41	46
7,0	●	●	7	41	46
8,0	●	●	8	41	46
9,0	●	●	9	41	46
10,0	●	●	10	41	46
11,0	●	●	11	41	46
12,0	●	●	12	41	46
13,0	●	●	13	41	46
14,0	●	●	14	41	46

N° article	248408 FAHRION® 472E GERC40-B	248659 PREMUS® 472E CER 40-K2	A3 mm	A4 mm	B5 mm
15,0	●	●	15	41	46
16,0	●	●	16	41	46
17,0	○	●	17	41	46
18,0	●	●	18	41	46
19,0	●	●	19	41	46
20,0	●	●	20	41	46
21,0	○	○	21	41	46
22,0	●	●	22	41	46
23,0	○	●	23	41	46
24,0	○	●	24	41	46
25,0	●	●	25	41	46
26,0	●	●	26	41	46

Collet set ER-B

FAHRION PROTECT · FAHRION® FAR BEYOND PRECISION · PREMUS®

Design:
- concentricity/repeatability 5 µm
- clamping bridging minus 1.0 mm for clamping cylindrical tool shanks
- double slotted (12-fold slotted)

Use:
Can be used for all tools with a straight shank for high-precision and powerful clamping in high-precision machining or heavy-duty cutting.





ISO 15488-B

N° article	248409 FAHRION® GERC-B in wooden box	Parts	ER size/E no.	Set content bore from-to mm	in each case increasing by mm
1,0 - 7,0	●	13	ER11/4008E	1 - 7	0,5
1,0 - 10,0	●	10	ER16/426E	1 - 10	1
2,0 - 13,0	●	12	ER20/428E	2 - 13	1
2,0 - 16,0	●	15	ER25/430E	2 - 16	1
3,0 - 20,0	●	18	ER32/470E	3 - 20	1
4,0 - 26,0	●	23	ER40/472E	4 - 26	1

N° article	248769 PREMUS® CER-K2 on wooden board	Parts	ER size/E no.	Set content bore from-to mm	in each case increasing by mm
1,0 - 10,0	●	10	ER 16/426 E	1 - 10	1
2,0 - 13,0	●	12	ER 20/428 E	2 - 13	1
2,0 - 16,0	●	15	ER 25/430 E	2 - 16	1
3,0 - 20,0	●	18	ER 32/470 E	3 - 20	1
4,0 - 26,0	●	23	ER 40/472 E	4 - 26	1

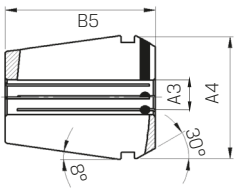
Collet GERC-BD

FAHRION PROTECT

Design:
- concentricity / repeatability 5 µm
- clamping range bridging h8, i.e. only nominal size can be clamped
- with sealing for internal cooling, applicable up to 60 bar
- similar to DIN ISO 15488-A

Use:
Can be used for all tools with a straight shank for high-precision and powerful clamping in high-precision machining or heavy-duty cutting.

GERC-**BD**





GERC-BD

N° article	248413 4012E GERC11-BD, sealed	A3 mm	A4 mm	B5 mm
3,0	●	3	11,2	18
4,0	●	4	11,2	18
5,0	○	5	11,2	18
6,0	●	6	11,2	18

N° article	248414 425E GERC16-BD, sealed	A3 mm	A4 mm	B5 mm
3,0	●	3	16,7	27,5
4,0	●	4	16,7	27,5
5,0	●	5	16,7	27,5
6,0	●	6	16,7	27,5
7,0	○	7	16,7	27,5
8,0	●	8	16,7	27,5
9,0	○	9	16,7	27,5
10,0	●	10	16,7	27,5

N° article	248415 427E GERC20-BD, sealed	A3 mm	A4 mm	B5 mm
3,0	○	3	20,7	31,5
4,0	●	4	20,7	31,5
5,0	○	5	20,7	31,5
6,0	●	6	20,7	31,5
7,0	○	7	20,7	31,5
8,0	●	8	20,7	31,5
9,0	○	9	20,7	31,5
10,0	●	10	20,7	31,5
11,0	○	11	20,7	31,5
12,0	●	12	20,7	31,5

N° article	248416 429E GERC25-BD, sealed	A3 mm	A4 mm	B5 mm
3,0	●	3	25,7	34
4,0	●	4	25,7	34
5,0	●	5	25,7	34
6,0	●	6	25,7	34
7,0	○	7	25,7	34
8,0	●	8	25,7	34
9,0	○	9	25,7	34
10,0	●	10	25,7	34
11,0	○	11	25,7	34
12,0	●	12	25,7	34
13,0	○	13	25,7	34
14,0	●	14	25,7	34
15,0	○	15	25,7	34
16,0	●	16	25,7	34

N° article	248417 469E GERC32-BD, sealed	A3 mm	A4 mm	B5 mm
3,0	●	3	32,7	40
4,0	●	4	32,7	40
5,0	○	5	32,7	40
6,0	●	6	32,7	40
7,0	○	7	32,7	40
8,0	●	8	32,7	40
9,0	○	9	32,7	40
10,0	●	10	32,7	40
11,0	●	11	32,7	40
12,0	●	12	32,7	40
13,0	○	13	32,7	40
14,0	●	14	32,7	40
15,0	○	15	32,7	40
16,0	●	16	32,7	40
17,0	○	17	32,7	40
18,0	●	18	32,7	40
19,0	○	19	32,7	40
20,0	●	20	32,7	40

N° article	248418 471E GERC40-BD, sealed	A3 mm	B5 mm
6,0	●	6	46
8,0	●	8	46
10,0	●	10	46
12,0	●	12	46
14,0	●	14	46
16,0	●	16	46
18,0	○	18	46
20,0	●	20	46
22,0	○	22	46
25,0	●	25	46

Collet GERC-HP

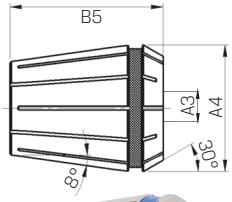
FAHRION PROTECT

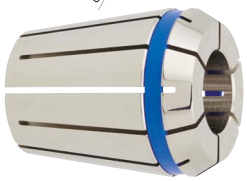
Design:
- concentricity/repeatability 2 µm
- system accuracy in the CENTRO|P high-performance collet chuck 3 µm (with 3xD overhang)
- corrosion-protected by FAHRION|Protect
- the Blue ring as a badge has no sealing function and must be removed when used in the standard collet chuck

ISO 15488-B

GERC-**HP**

Use:
Can be used for all tools with a straight shank for high-precision and powerful clamping in high-precision machining or heavy-duty cutting.





GERC-HP

N° article	248423 4008E GERC11-HP	A3 mm	A4 mm	B5 mm
1,0	●	1	11,3	18
1,5	●	1,5	11,3	18
2,0	●	2	11,3	18
2,5	●	2,5	11,3	18
3,0	●	3	11,3	18
3,5	●	3,5	11,3	18
4,0	●	4	11,3	18
4,5	●	4,5	11,3	18
5,0	●	5	11,3	18
5,5	○	5,5	11,3	18
6,0	●	6	11,3	18
6,5	○	6,5	11,3	18
7,0	●	7	11,3	18

N° article	248424 426E GERC16-HP	A3 mm	A4 mm	B5 mm
1,0	●	1	17	27,5
1,5	●	1,5	17	27,5
2,0	●	2	17	27,5
3,0	●	3	17	27,5
4,0	●	4	17	27,5
5,0	●	5	17	27,5
6,0	●	6	17	27,5
7,0	●	7	17	27,5
8,0	●	8	17	27,5
9,0	●	9	17	27,5
10,0	●	10	17	27,5

N° article	248427 470E GERC32-HP	A3 mm	A4 mm	B5 mm
2,0	●	2	33	40
3,0	●	3	33	40
4,0	●	4	33	40
5,0	●	5	33	40
6,0	●	6	33	40
7,0	○	7	33	40
8,0	●	8	33	40
9,0	○	9	33	40
10,0	●	10	33	40
11,0	○	11	33	40
12,0	●	12	33	40
13,0	○	13	33	40
14,0	●	14	33	40
15,0	○	15	33	40
16,0	●	16	33	40
17,0	○	17	33	40
18,0	●	18	33	40
19,0	○	19	33	40
20,0	●	20	33	40

N° article	248426 430E GERC25-HP	A3 mm	A4 mm	B5 mm
2,0	○	2	26	34
3,0	●	3	26	34
4,0	●	4	26	34
5,0	●	5	26	34
6,0	●	6	26	34
7,0	●	7	26	34
8,0	●	8	26	34
9,0	○	9	26	34
10,0	●	10	26	34
11,0	○	11	26	34
12,0	●	12	26	34
13,0	○	13	26	34
14,0	●	14	26	34
15,0	○	15	26	34
16,0	●	16	26	34

N° article	248428 472E GERC40-HP	A3 mm	A4 mm	B5 mm
3,0	○	3	41	46
4,0	○	4	41	46
5,0	○	5	41	46
6,0	○	6	41	46
7,0	○	7	41	46
8,0	○	8	41	46
9,0	○	9	41	46
10,0	○	10	41	46
11,0	○	11	41	46
12,0	○	12	41	46
13,0	○	13	41	46
14,0	○	14	41	46
15,0	○	15	41	46
16,0	○	16	41	46
17,0	○	17	41	46
18,0	○	18	41	46
19,0	○	19	41	46
20,0	○	20	41	46
25,0	●	25	41	46

Collet set GERC-BD

FAHRION PROTECT



N° article	248419 GERC-BD, sealed, in wooden case	Parts	ER size/E no.	Set contents holes
3,0 - 10,0	●	6	ER16/425E	3 | 4 | 5 | 6 | 8 | 10
3,0 - 12,0	○	7	ER20/427E	3 | 4 | 5 | 6 | 8 | 10 | 12
4,0 - 16,0	●	7	ER25/429E	4 | 6 | 8 | 10 | 12 | 14 | 16
4,0 - 20,0	●	8	ER32/469E	4 | 6 | 8 | 10 | 12 | 14 | 16 | 20

Collet set GERC-HP

FAHRION PROTECT

ISO 15488-B



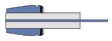
N° article	248429 GERC-HP in wooden case	Parts	ER size/E no.	Set contents holes
3,0 - 10,0	●	6	ER16/426E	3 | 4 | 5 | 6 | 8 | 10
4,0 - 16,0	●	7	ER25/430E	4 | 6 | 8 | 10 | 12 | 14 | 16
4,0 - 20,0	●	8	ER32/470E	4 | 6 | 8 | 10 | 12 | 14 | 16 | 20

Collet GERC-HPD

FAHRION PROTECT

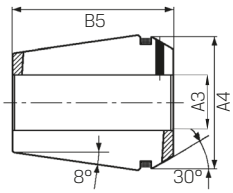
FAHRION® FAR BEYOND PRECISION

Design:
- with sealing for internal cooling up to 60 bar
- concentricity and repeatability 2 µm
- similar to DIN ISO 15488-A
- clamping range bridging h8 in CENTRO|P and in standard collet chucks, that means only nominal size can be clamped
- the blue ring as a badge has no sealing function and must be removed when used in the standard collet chuck
- shanks with lateral clamping surface can only be used to a limited extent, i.e. the surface must be behind the rubber plug in order to achieve a sealing effect



GERC-**HPD**

Use:
Can be used for all tools with a straight shank for high-precision and powerful clamping in high-precision machining or heavy-duty cutting.





GERC-HPD

N° article	248434 425E GERC16-HPD	A3 mm	A4 mm	B5 mm
3,0	●	3	16,7	27,5
4,0	●	4	16,7	27,5
5,0	●	5	16,7	27,5
6,0	●	6	16,7	27,5

N° article	248434 425E GERC16-HPD	A3 mm	A4 mm	B5 mm
7,0	○	7	16,7	27,5
8,0	●	8	16,7	27,5
9,0	○	9	16,7	27,5
10,0	●	10	16,7	27,5

N° article	248435 427E GERC20-HPD	A1 mm	A3 mm	B5 mm
3,0	○	20,7	3	31,5
4,0	●	20,7	4	31,5
5,0	○	20,7	5	31,5
6,0	●	20,7	6	31,5
7,0	○	20,7	7	31,5

N° article	248435 427E GERC20-HPD	A1 mm	A3 mm	B5 mm
8,0	●	20,7	8	31,5
9,0	○	20,7	9	31,5
10,0	●	20,7	10	31,5
11,0	○	20,7	11	31,5
12,0	●	20,7	12	31,5

N° article	248436 429E GERC25-HPD	A3 mm	A4 mm	B5 mm
3,0	●	3	25,7	34
4,0	●	4	25,7	34
5,0	●	5	25,7	34
6,0	●	6	25,7	34
7,0	○	7	25,7	34
8,0	●	8	25,7	34
9,0	○	9	25,7	34

N° article	248436 429E GERC25-HPD	A3 mm	A4 mm	B5 mm
10,0	●	10	25,7	34
11,0	○	11	25,7	34
12,0	●	12	25,7	34
13,0	○	13	25,7	34
14,0	●	14	25,7	34
15,0	○	15	25,7	34
16,0	●	16	25,7	34

N° article	248437 469E GERC32-HPD	A3 mm	A4 mm	B5 mm
3,0	○	3	32,7	40
4,0	●	4	32,7	40
5,0	○	5	32,7	40
6,0	●	6	32,7	40
7,0	○	7	32,7	40
8,0	●	8	32,7	40
9,0	○	9	32,7	40
10,0	●	10	32,7	40
11,0	○	11	32,7	40

N° article	248437 469E GERC32-HPD	A3 mm	A4 mm	B5 mm
12,0	●	12	32,7	40
13,0	○	13	32,7	40
14,0	●	14	32,7	40
15,0	○	15	32,7	40
16,0	●	16	32,7	40
17,0	○	17	32,7	40
18,0	●	18	32,7	40
19,0	○	19	32,7	40
20,0	●	20	32,7	40

N° article	248438 471E GERC40-HPD	A3 mm	A4 mm	B5 mm
6,0	●	6	40,7	46
8,0	●	8	40,7	46
10,0	○	10	40,7	46
12,0	○	12	40,7	46
14,0	○	14	40,7	46

N° article	248438 471E GERC40-HPD	A3 mm	A4 mm	B5 mm
16,0	●	16	40,7	46
18,0	○	18	40,7	46
20,0	●	20	40,7	46
22,0	○	22	40,7	46
25,0	●	25	40,7	46

Collet set GERC-HPD

FAHRION PROTECT

FAHRION® FAR BEYOND PRECISION



N° article	248439 GERC-HPD, in wooden case	Parts	ER size/E no.	Set contents holes
3,0 - 10,0	●	6	ER16/425E	3|4|5|6|8|10
3,0 - 12,0	○	7	ER20/427E	3|4|5|6|8|10|12
4,0 - 16,0	●	7	ER25/429E	4|6|8|10|12|14|16
4,0 - 20,0	●	8	ER32/469E	4|6|8|10|12|14|16|20

Collet GERC-HPDD

FAHRION PROTECT

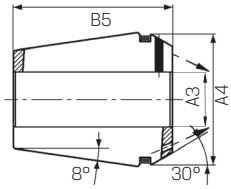
FAHRION® FAR BEYOND PRECISION

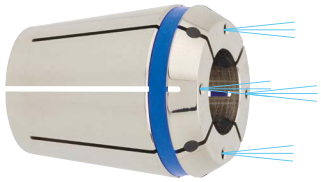
Design:
- with sealing for internal cooling up to 60 bar and additional spray nozzles
- concentricity and repeatability 2 µm
- similar to DIN ISO 15488-A
- clamping range bridging h8 in CENTRO|P and in standard collet chucks, that means only nominal size can be clamped
- the coloured ring as a badge (without sealing function) has to be removed when used in standard collet chucks
- shanks with lateral clamping surface can only be used to a limited extent, i.e. the surface must be behind the rubber plug in order to achieve a sealing effect



GERC-**HPDD**

Use:
Can be used for all tools with a straight shank for high-precision and powerful clamping in high-precision machining or heavy-duty cutting.





GERC-HPDD

N° article	248444 425E GERC16-HPDD	A3 mm	A4 mm	B5 mm
3,0	NEW ●	3	16,7	27,5
4,0	●	4	16,7	27,5
6,0	●	6	16,7	27,5

N° article	248444 425E GERC16-HPDD	A3 mm	A4 mm	B5 mm
8,0	●	8	16,7	27,5
10,0	NEW ●	10	16,7	27,5

N° article	248446 429E GERC25-HPDD	A3 mm	A4 mm	B5 mm
4,0	●	4	20,7	34
6,0	●	6	20,7	34
8,0	●	8	20,7	34
10,0	●	10	20,7	34

N° article	248446 429E GERC25-HPDD	A3 mm	A4 mm	B5 mm
12,0	●	12	20,7	34
14,0	●	14	20,7	34
16,0	NEW ●	16	20,7	34

N° article	248447 469E GERC32-HPDD	A3 mm	A4 mm	B5 mm
4,0	●	4	32,7	40
6,0	●	6	32,7	40
8,0	●	8	32,7	40
10,0	●	10	32,7	40
12,0	●	12	32,7	40

N° article	248447 469E GERC32-HPDD	A3 mm	A4 mm	B5 mm
14,0	●	14	32,7	40
16,0	●	16	32,7	40
18,0	○	18	32,7	40
20,0	●	20	32,7	40

N° article	248448 471E GERC40-HPDD	A3 mm	A4 mm	B5 mm
10,0	○	10	40,7	46
12,0	○	12	40,7	46
14,0	NEW ○	14	40,7	46
16,0	○	16	40,7	46

N° article	248448 471E GERC40-HPDD	A3 mm	A4 mm	B5 mm
18,0	NEW ○	18	40,7	46
20,0	○	20	40,7	46
25,0	○	25	40,7	46

Wedge collet GERC- W

FAHRION

Design:
- coated
- high-precision
- concentricity 3 µm
- pull-out stop

Use:
If the GERC-W wedge collet is used in conjunction with the HDC (Heavy Duty Chuck), a positive fit is obtained in addition to a high clamping force to secure the pull-out.

NEW




GERC-**W**


GERC-**WD**

N° article	248480 GERC32-W	248482 GERC32-WD	A3 mm	A4 mm	B5 mm
12,0	○	○	12	33	40
16,0	○	○	16	33	40
20,0	○	–	20	33	40

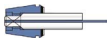
Tapping collet GERC-GBD

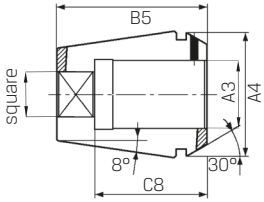
FAHRION PROTECT

FAHRION

Design:
For tapping and forming threads in FAHRION precision collet chucks CENTRO|P, in milling cutter chucks System Rego-Fix/Schaublin and in tapping chucks SYNCHRO|T with internal square for positive drive of the tap, but without length compensation.

Use:
- with sealing for internal cooling up to 60 bar
- concentricity 10 µm
- repeatability 6 µm
- clamping range bridging h8 in CENTRO|P and in standard collet chucks, that means only nominal size can be clamped
- suitable for standard collet chucks, tapping chucks and driven tools


GERC-**GBD**




GERC-GBD

N° article	248464 4031E GERC16-GBD	A3 mm	A4 mm	B5 mm	C8 mm	Square mm
2,8×2,1	NEW ●	2,8	16,7	27,5	18	2,1
3,5×2,7	●	3,5	16,7	27,5	18	2,7
4,0×3,2	●	4	16,7	27,5	18	3,2
4,5×3,55	●	4,5	16,7	27,5	18	3,55
5,0×4,0	●	5	16,7	27,5	18	4
5,5×4,5	○	5,5	16,7	27,5	18	4,5
6,0×5,0	●	6	16,7	27,5	18	5
7,0×5,6	●	7	16,7	27,5	18	5,6
8,0×6,3	●	8	16,7	27,5	22	6,3
9,0×7,1	●	9	16,7	27,5	22	7,1

N° article	248465 4276E GERC20-GBD	A3 mm	A4 mm	B5 mm	C8 mm	Square mm
3,5×2,7	●	3,5	20,7	31,5	18	2,7
4,0×3,2	○	4	20,7	31,5	18	3,2
4,5×3,55	●	4,5	20,7	31,5	18	3,55
5,5×4,5	○	5,5	20,7	31,5	18	4,5
6,0×5,0	●	6	20,7	31,5	18	5
7,0×5,6	●	7	20,7	31,5	18	5,6
8,0×6,3	●	8	20,7	31,5	22	6,3
9,0×7,1	●	9	20,7	31,5	22	7,1
10,0×8,0	●	10	20,7	31,5	25	8
11,0×9,0	○	11	20,7	31,5	25	9
12,0×9,0	NEW ●	12	20,7	31,5	25	9

N° article	248466 4282E GERC25-GBD	A3 mm	A4 mm	B5 mm	C8 mm	Square mm
3,5×2,7	●	3,5	25,7	34	18	2,7
4,0×3,2	○	4	25,7	34	18	3,2
4,5×3,55	●	4,5	25,7	34	18	3,55
5,0×4,0	NEW ●	5	25,7	34	18	4
5,5×4,5	○	5,5	25,7	34	18	4,5
6,0×5,0	●	6	25,7	34	18	5
7,0×5,6	●	7	25,7	34	18	5,6
8,0×6,3	●	8	25,7	34	22	6,3
9,0×7,1	●	9	25,7	34	22	7,1
10,0×8,0	●	10	25,7	34	25	8
11,0×9,0	●	11	25,7	34	25	9
12,0×9,0	●	12	25,7	34	25	9
14,0×11,2	●	14	25,7	34	25	11,2
16,0×12,5	●	16	25,7	34	25	12,5

N° article	248467 4537E GERC32-GBD	A3 mm	A4 mm	B5 mm	C8 mm	Square mm
4,0×3,2	●	4	32,7	40	18	3,2
4,5×3,55	●	4,5	32,7	40	18	3,55
5,0×4,0	●	5	32,7	40	18	4
5,5×4,5	NEW ●	5,5	32,7	40	18	4,5
6,0×5,0	●	6	32,7	40	18	5
6,3×5,0	○	6,3	32,7	40	18	5
7,0×5,6	●	7	32,7	40	18	5,6
8,0×6,3	●	8	32,7	40	22	6,3
9,0×7,1	●	9	32,7	40	22	7,1
10,0×8,0	●	10	32,7	40	25	8
11,0×9,0	●	11	32,7	40	25	9
12,0×9,0	●	12	32,7	40	25	9
12,5×10,0	○	12,5	32,7	40	25	10
14,0×11,2	●	14	32,7	40	25	11,2
16,0×12,5	●	16	32,7	40	25	12,5
18,0×14,5	●	18	32,7	40	30	14,5
20,0×16,0	●	20	32,7	40	30	16

N° article	248468 4716E GERC40-GBD	A3 mm	A4 mm	B5 mm	C8 mm	Square mm
6,0×5,0	○	6	40,7	46	18	5
7,0×5,6	○	7	40,7	46	18	5,6
8,0×6,3	●	8	40,7	46	22	6,3
9,0×7,1	●	9	40,7	46	22	7,1
10,0×8,0	●	10	40,7	46	25	8
11,0×9,0	○	11	40,7	46	25	9
12,0×9,0	●	12	40,7	46	25	9
12,5×10,0	NEW ●	12,5	40,7	46	25	10
14,0×11,2	○	14	40,7	46	25	11,2
16,0×12,5	●	16	40,7	46	25	12,5
18,0×14,5	●	18	40,7	46	33	14,5
20,0×16,0	●	20	40,7	46	33	16
22,0×18,0	●	22	40,7	46	33	18
25,0×20,0	NEW ●	25	40,7	46	33	20

Tapping collet GERC-GBDD

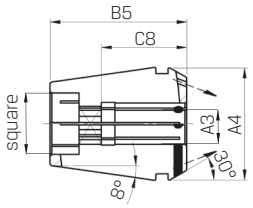
FAHRION PROTECT

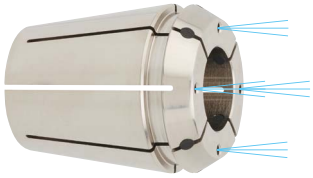
FAHRION®
FAR BEYOND PRECISION

GERC-**GBDD**

Design:
For tapping and forming threads in FAHRION precision collet chucks CENTRO|P, in milling cutter chucks System Rego-Fix/Schaublin and in tapping chucks SYNCHRO|T with internal square for positive drive of the tap, but without length compensation.

Use:
- with sealing for internal cooling up to 60 bar and additional spray nozzles
- concentricity ‹ 10 µm
- repeatability ‹ 6 µm
- clamping range bridging h8 in CENTRO|P and in standard collet chucks, that means only nominal size can be clamped
- suitable for standard collet chucks, tapping chucks and driven tools





GERC-GBDD

N° article	248474 4031E GERC16-GBDD		A3 mm	A4 mm	B5 mm	C8 mm	Square mm
3,5×2,7	●		3,5	16,7	27,5	18	2,7
4,5×3,55	●		4,5	16,7	27,5	18	3,55
6,0×5,0	●		6	16,7	27,5	18	5
7,0×5,6	○		7	16,7	27,5	18	5,6
8,0×6,3	●		8	16,7	27,5	22	6,3
9,0×7,1	●	NEW	9	16,7	27,5	22	7,1

N° article	248475 4276E GERC20-GBDD		A3 mm	A4 mm	B5 mm	C8 mm	Square mm
4,5×3,55	○		4,5	20,7	31,5	18	3,55
6,0×5,0	○		6	20,7	31,5	18	5
7,0×5,6	○		7	20,7	31,5	18	5,6
8,0×6,3	○		8	20,7	31,5	22	6,3
9,0×7,1	○		9	20,7	31,5	22	7,1
10,0×8,0	○		10	20,7	31,5	25	8
11,0×9,0	●	NEW	11	20,7	31,5	25	9
12,0×9,0	●	NEW	12	20,7	31,5	25	9

N° article	248476 4282E GERC25-GBDD		A3 mm	A4 mm	B5 mm	C8 mm	Square mm
4,5×3,55	●		4,5	25,7	34	18	3,55
6,0×5,0	●		6	25,7	34	18	5
7,0×5,6	○		7	25,7	34	18	5,6
8,0×6,3	●		8	25,7	34	22	6,3
9,0×7,1	●		9	25,7	34	22	7,1
10,0×8,0	●		10	25,7	34	25	8
11,0×9,0	●		11	25,7	34	25	9
12,0×9,0	●		12	25,7	34	25	9
14,0×11,2	○		14	25,7	34	25	11,2
16,0×12,5	●	NEW	16	25,7	34	25	12,5

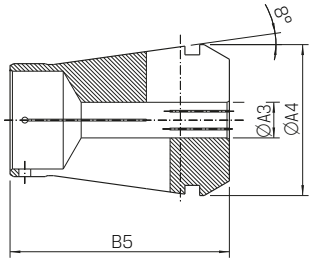
N° article	248477 4537E GERC32-GBDD		A3 mm	A4 mm	B5 mm	C8 mm	Square mm
4,5×3,55	●		4,5	32,7	40	18	3,55
6,0×5,0	●		6	32,7	40	18	5
7,0×5,6	●		7	32,7	40	18	5,6
8,0×6,3	●		8	32,7	40	22	6,3
9,0×7,1	●		9	32,7	40	22	7,1
10,0×8,0	●		10	32,7	40	25	8
11,0×9,0	●		11	32,7	40	25	9
12,0×9,0	●		12	32,7	40	25	9
14,0×11,2	●		14	32,7	40	25	11,2
16,0×12,5	●		16	32,7	40	25	12,5
18,0×14,5	●		18	32,7	40	30	14,5
20,0×16,0	○		20	32,7	40	30	16

Chuck ER-Power Collet

HAIMER

Design:
- concentricity 0.003 mm
- superior retaining forces
- for tools with cylindrical shank and shank tolerance h 10
- collet sealed and guided in a sleeve

Note:
Cool Jet bores for power collets optional
*self-sealing for internal cooling





N° article	248910 ER16	*	A3 mm	A4 mm	B5 mm
0002	○	*	2	16,45	30
0003	○		3	16,45	30
0004	○	*	4	16,45	30
0005	○	*	5	16,45	30
0006	○	*	6	16,45	30
0008	○	*	8	16,45	30
0010	○	*	10	16,45	30

N° article	248920 ER25	*	A3 mm	A4 mm	B5 mm
0002	○	*	2	25,45	37
0003	○		3	25,45	37
0004	○		4	25,45	37
0005	○	*	5	25,45	37
0006	○	*	6	25,45	37
0008	○	*	8	25,45	37
0010	○	*	10	25,45	37
0012	○	*	12	25,45	37
0014	○	*	14	25,45	37
0016	○	*	16	25,45	37

N° article	248930 ER32	*	A3 mm	A4 mm	B5 mm
0002	○	*	2	32,48	45
0003	○		3	32,48	45
0004	○		4	32,48	45
0005	○	*	5	32,48	45
0006	○	*	6	32,48	45
0008	○	*	8	32,48	45
0010	○	*	10	32,48	45
0012	○	*	12	32,48	45
0014	○	*	14	32,48	45
0016	○	*	16	32,48	45
0018	○	*	18	32,48	45
0020	○	*	20	32,48	45

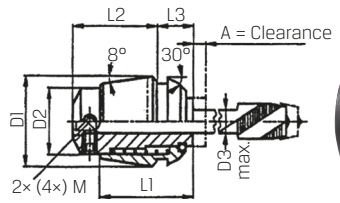
Tapping collet ER-GB

FAHRION® FAR BEYOND PRECISION

Design:
- with built-in axial compensation form ET
- concentricity to DIN/ISO class 2
- repeatability 10 µm
- clamping range bridging h7, i.e. only the nominal size can be clamped

ISO 15488-A

Use:
- for tapping, but not in the CENTROIP collet chuck
- on CNC machines you use regular cycles with only 95% (on small) up to 99% (on large threads) feed rate or pitch in order to compensate the length at non-synchronised spindles
- this tapping collet only compensates for tension when at rest, but not for compression





N° article	248882 4033E CET 16-GB	A3 mm	For tap DIN 371	For tap DIN 376
2,2	○	2,2	–	M3
2,8	●	2,8	M2	M4
3,5	●	3,5	M3	M5
4,5	●	4,5	M4	M6
6,0	●	6	M5-M6	M8

N° article	248884 4284E CET 20-GB	A3 mm	For tap DIN 371	For tap DIN 376
2,2	○	2,2	–	M3
2,8	○	2,8	M2	M4
3,5	○	3,5	M3	M5
4,5	○	4,5	M4	M6
6,0	●	6	M5-M6	M8
7,0	○	7	–	M10

N° article	248886 4285E CET 25-GB	A3 mm	For tap DIN 371	For tap DIN 376
2,8	○	2,8	M2	M4
3,5	●	3,5	M3	M5
4,5	●	4,5	M4	M6
6,0	●	6	M5-M6	M8
7,0	●	7	–	M10
8,0	●	8	M8	–
9,0	●	9	–	M12
10,0	●	10	M10	–

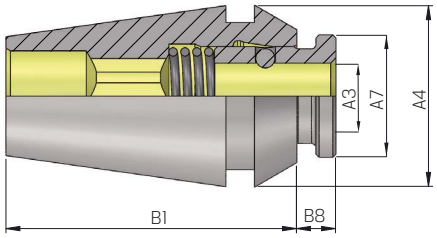
N° article	248888 4538E CET 32-GB	A3 mm	For tap DIN 371	For tap DIN 376
4,5	●	4,5	M4	M6
6,0	●	6	M5-M6	M8
7,0	●	7	–	M10
8,0	●	8	M8	–
9,0	●	9	–	M12
10,0	●	10	M10	–
11,0	●	11	–	M14
12,0	●	12	–	M16

N° article	248890 4717E CET 40-GB	A3 mm	For tap DIN 371	For tap DIN 376
6,0	○	6	M5-M6	M8
7,0	○	7	–	M10
8,0	○	8	M8	–
9,0	○	9	–	M12
10,0	○	10	M10	–
11,0	○	11	–	M14
12,0	○	12	–	M16
14,0	○	14	–	M18
16,0	○	16	–	M20

Tapping collet ER

PREMUS®

Design:
Suitable for Synchro tapping chucks with standard ER clamping nut.



N° article	248883 ER16, with quick-change system	A3 mm	A4 mm	A7 mm	B1 mm	B8 mm	for threads	Square mm
3,5×2,7	●	3,5	17	11,5	28	3,7	M3, M5	2,7
4,0×3,0	●	4	17	11,5	28	3,7	M3,5	3
4,5×3,4	●	4,5	17	11,5	28	3,7	M4, M6	3,4
6,0×4,9	●	6	17	11,5	28	3,7	M5, M6, M8	4,9

N° article	248885 ER20, with quick-change system	A3 mm	A4 mm	A7 mm	B1 mm	B8 mm	for threads	Square mm
3,5×2,7	○	3,5	21	14	32	4,3	M3, M5	2,7
4,0×3,0	○	4	21	14	32	4,3	M3,5	3
4,5×3,4	○	4,5	21	14	32	4,3	M4, M6	3,4
6,0×4,9	○	6	21	14	32	4,3	M5, M6, M8	4,9
7,0×5,5	○	7	21	14	32	4,3	M7, M10	5,5

N° article	248887 ER25, with quick-change system	A3 mm	A4 mm	A7 mm	B1 mm	B8 mm	for threads	Square mm
3,5×2,7	○	3,5	26	18	34	4,3	M3, M5	2,7
4,0×3,0	○	4	26	18	34	4,3	M3,5	3
4,5×3,4	●	4,5	26	18	34	4,3	M4, M6	3,4
6,0×4,9	●	6	26	18	34	4,3	M5, M6, M8	4,9
7,0×5,5	○	7	26	18	34	4,3	M7, M10	5,5
8,0×6,2	●	8	26	18	34	4,3	M8	6,2
9,0×7,0	●	9	26	18	34	4,3	M12	7
10,0×8,0	○	10	26	18	34	4,3	M10	8

N° article	248889 ER32, with quick-change system	A3 mm	A4 mm	A7 mm	B1 mm	B8 mm	for threads	Square mm
3,5×2,7	●	3,5	33	24,5	40	7,5	M3, M5	2,7
4,0×3,0	●	4	33	24,5	40	7,5	M3,5	3
4,5×3,4	●	4,5	33	24,5	40	7,5	M4, M6	3,4
6,0×4,9	●	6	33	24,5	40	7,5	M5, M6, M8	4,9
7,0×5,5	●	7	33	24,5	40	7,5	M7, M10	5,5
8,0×6,2	●	8	33	24,5	40	7,5	M8	6,2
9,0×7,0	●	9	33	24,5	40	7,5	M12	7
10,0×8,0	●	10	33	24,5	40	7,5	M10	8
11,0×9,0	●	11	33	24,5	40	7,5	M14	9
12,0×9,0	●	12	33	24,5	40	7,5	M16	9
14,0×11,0	●	14	33	24,5	40	7,5	M18	11

N° article	248891 ER40, with quick-change system	A3 mm	A4 mm	A7 mm	B1 mm	B8 mm	for threads	Square mm
3,5×2,7	○	3,5	41	29,5	46	7,5	M3, M5	2,7
4,0×3,0	○	4	41	29,5	46	7,5	M3,5	3
4,5×3,4	○	4,5	41	29,5	46	7,5	M4, M6	3,4
6,0×4,9	○	6	41	29,5	46	7,5	M5, M6, M8	4,9
7,0×5,5	○	7	41	29,5	46	7,5	M7, M10	5,5
8,0×6,2	○	8	41	29,5	46	7,5	M8	6,2
10,0×8,0	○	10	41	29,5	46	7,5	M10	8
11,0×9,0	○	11	41	29,5	46	7,5	M14	9
12,0×9,0	○	12	41	29,5	46	7,5	M16	9
14,0×11,0	○	14	41	29,5	46	7,5	M18	11
16,0×12,0	○	16	41	29,5	46	7,5	M20	12
18,0×14,5	○	18	41	29,5	46	7,5	M22, M24	14,5

Shrink collet

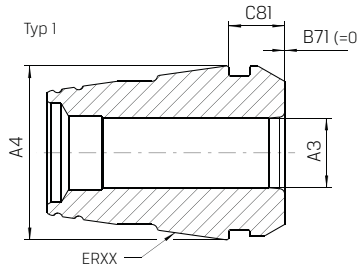
HAIMER

Design and use:
- low susceptibility to soiling due to dense mono-design
- high concentricity and holding forces
- compatible with all common clamping nuts
- reduced set-up times due to external shrinking and adjusting
- high number of variants ideally suited for driven units and spindles with ER interface

Factory standard

N° article	248999 ER11	A3 mm	A4 mm	B71 mm	C81 mm
0300	○	3	11	0	4,55
0310	○	3	11	10	14,55
0320	○	3	11	20	24,55
0400	○	4	11	0	4,55
0410	○	4	11	10	14,55
0420	○	4	11	20	24,55
0500	○	5	11	0	4,55
0600	○	6	11	0	4,55







248903



N° article	248901 ER16	A3 mm	A4 mm	B71 mm	C81 mm
0300	○	3	16	0	6,7
0310	○	3	16	10	16,7
0320	○	3	16	20	26,7
0325	○	3	16	25	31,7
0330	○	3	16	30	36,7
0335	○	3	16	35	41,7
0400	○	4	16	0	6,7
0410	○	4	16	10	16,7
0420	○	4	16	20	26,7
0425	○	4	16	25	31,7
0430	○	4	16	30	36,7
0435	○	4	16	35	41,7
0500	○	5	16	0	6,7

N° article	248901 ER16	A3 mm	A4 mm	B71 mm	C81 mm
0510	○	5	16	10	16,7
0520	○	5	16	20	26,7
0525	○	5	16	25	31,7
0530	○	5	16	30	36,7
0535	○	5	16	35	41,7
0600	○	6	16	0	6,7
0610	○	6	16	10	16,7
0620	○	6	16	20	26,7
0625	○	6	16	25	31,7
0630	○	6	16	30	36,7
0635	○	6	16	35	41,7
0800	○	8	16	0	6,7
1000	○	10	16	0	6,7

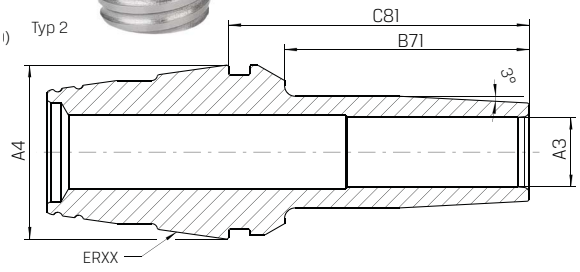
N° article	248902 ER20	A3 mm	A4 mm	B71 mm	C81 mm
0300	○	3	20	0	7,52
0325	○	3	20	25	32,52
0335	○	3	20	35	42,52
0400	○	4	20	0	7,52
0425	○	4	20	25	32,52
0435	○	4	20	35	42,52
0500	○	5	20	0	7,52
0525	○	5	20	25	32,52
0535	○	5	20	35	42,52

N° article	248902 ER20	A3 mm	A4 mm	B71 mm	C81 mm
0600	○	6	20	0	7,52
0625	○	6	20	25	32,52
0635	○	6	20	35	42,52
0800	○	8	20	0	7,52
0825	○	8	20	25	32,52
0835	○	8	20	35	42,52
1000	○	10	20	0	7,52
1200	○	12	20	0	7,52

N° article	248903 ER25	A3 mm	A4 mm	B71 mm	C81 mm
0300	○	3	25	0	8
0310	○	3	25	10	18
0320	○	3	25	20	28
0325	○	3	25	25	33
0330	○	3	25	30	38
0335	○	3	25	35	43
0400	○	4	25	0	8
0410	○	4	25	10	18
0420	○	4	25	20	28
0425	○	4	25	25	33
0430	○	4	25	30	38
0435	○	4	25	35	43
0500	○	5	25	0	8
0510	○	5	25	10	18
0520	○	5	25	20	28
0525	○	5	25	25	33
0530	○	5	25	30	38
0535	○	5	25	35	43
0600	○	6	25	0	8
0610	○	6	25	10	18

N° article	248903 ER25	A3 mm	A4 mm	B71 mm	C81 mm
0620	○	6	25	20	28
0625	○	6	25	25	33
0630	○	6	25	30	38
0635	○	6	25	35	43
0800	○	8	25	0	8
0810	○	8	25	10	18
0820	○	8	25	20	28
0825	○	8	25	25	33
0830	○	8	25	30	38
0835	○	8	25	35	43
1000	○	10	25	0	8
1010	○	10	25	10	18
1020	○	10	25	20	28
1025	○	10	25	25	33
1030	○	10	25	30	38
1035	○	10	25	35	43
1200	○	12	25	0	8
1400	○	14	25	0	8
1600	○	16	25	0	8





Shrink collet

HAIMER

Factory standard

Design and use:
- low susceptibility to soiling due to dense mono-design
- high concentricity and holding forces
- compatible with all common clamping nuts
- reduced set-up times due to external shrinking and adjusting
- high number of variants ideally suited for driven units and spindles with ER interface

N° article	248904 ER32	A3 mm	A4 mm	B71 mm	C81 mm
0300	○	3	32	0	9
0335	○	3	32	35	44
0400	○	4	32	0	9
0435	○	4	32	35	44
0500	○	5	32	0	9
0535	○	5	32	35	44
0600	○	6	32	0	9
0635	○	6	32	35	44
0800	○	8	32	0	9
0835	○	8	32	35	44
1000	○	10	32	0	9
1035	○	10	32	35	44
1200	○	12	32	0	9
1235	○	12	32	35	44
1400	○	14	32	0	9
1435	○	14	32	35	44
1600	○	16	32	0	9
1635	○	16	32	35	44
1800	○	18	32	0	9
2000	○	20	32	0	9



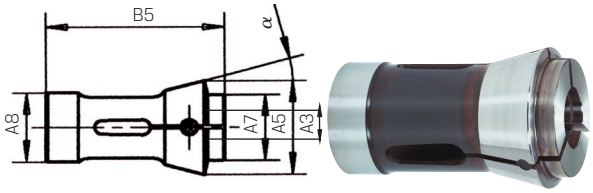
Dead length collet 173E

FAHRION
FAR BEYOND PRECISION

DIN 6343 | 173 E

Design:
- concentricity to DIN class 2
- DIN 6343
- clamping range bridging h9, i.e. only nominal size can be clamped
- hole execution up to Ø 8 mm smooth, above that with transverse grooves Collets with smooth bore available on request

Use:
- for bar stock, cut-to-length and pre-worked workpieces
- for workpiece clamping (bar or chuck work) in conventional single spindle lathes and CNC lathes directly in the spindle or collet chuck



N° article	249300 roand	249320 hexagonal	A3 mm	A5 mm	A7 mm	A8 mm	B5 mm
1,0	●	–	1	60	50	48	94
1,5	●	–	1,5	60	50	48	94
2,0	●	–	2	60	50	48	94
2,5	●	–	2,5	60	50	48	94
3,0	●	–	3	60	50	48	94
3,5	●	–	3,5	60	50	48	94
4,0	●	–	4	60	50	48	94
4,5	●	–	4,5	60	50	48	94
5,0	●	–	5	60	50	48	94
5,5	○	–	5,5	60	50	48	94
6,0	●	○	6	60	50	48	94
6,5	○	–	6,5	60	50	48	94
7,0	●	○	7	60	50	48	94
7,5	○	–	7,5	60	50	48	94
8,0	●	○	8	60	50	48	94
8,5	○	–	8,5	60	50	48	94
9,0	●	○	9	60	50	48	94
9,5	●	–	9,5	60	50	48	94
10,0	●	●	10	60	50	48	94
10,5	●	–	10,5	60	50	48	94
11,0	●	●	11	60	50	48	94
11,5	○	–	11,5	60	50	48	94
12,0	●	●	12	60	50	48	94
12,5	●	–	12,5	60	50	48	94
13,0	●	●	13	60	50	48	94
13,5	○	–	13,5	60	50	48	94
14,0	●	●	14	60	50	48	94
14,5	○	–	14,5	60	50	48	94

N° article	249300 roand	249320 hexagonal	A3 mm	A5 mm	A7 mm	A8 mm	B5 mm
15,0	●	○	15	60	50	48	94
15,5	●	–	15,5	60	50	48	94
16,0	●	○	16	60	50	48	94
16,5	●	–	16,5	60	50	48	94
17,0	●	●	17	60	50	48	94
17,5	○	–	17,5	60	50	48	94
18,0	●	–	18	60	50	48	94
18,5	○	–	18,5	60	50	48	94
19,0	●	●	19	60	50	48	94
19,5	○	–	19,5	60	50	48	94
20,0	●	–	20	60	50	48	94
20,5	●	–	20,5	60	50	48	94
21,0	●	–	21	60	50	48	94
21,5	●	–	21,5	60	50	48	94
22,0	●	●	22	60	50	48	94
22,5	○	–	22,5	60	50	48	94
23,0	●	–	23	60	50	48	94
23,5	○	–	23,5	60	50	48	94
24,0	●	●	24	60	50	48	94
24,5	●	–	24,5	60	50	48	94
25,0	●	–	25	60	50	48	94
25,5	●	–	25,5	60	50	48	94
26,0	●	–	26	60	50	48	94
26,5	○	–	26,5	60	50	48	94
27,0	●	●	27	60	50	48	94
27,5	○	–	27,5	60	50	48	94
28,0	●	–	28	60	50	48	94
28,5	○	–	28,5	60	50	48	94

N° article	249300 roand	249320 hexagonal	A3 mm	A5 mm	A7 mm	A8 mm	B5 mm
29,0	●	–	29	60	50	48	94
29,5	○	–	29,5	60	50	48	94
30,0	●	●	30	60	50	48	94
30,5	○	–	30,5	60	50	48	94
31,0	●	–	31	60	50	48	94
31,5	○	–	31,5	60	50	48	94
32,0	●	●	32	60	50	48	94
32,5	○	–	32,5	60	50	48	94
33,0	●	–	33	60	50	48	94
33,5	○	–	33,5	60	50	48	94
34,0	●	–	34	60	50	48	94
34,5	○	–	34,5	60	50	48	94
35,0	●	–	35	60	50	48	94
35,5	○	–	35,5	60	50	48	94
36,0	●	●	36	60	50	48	94
36,5	○	–	36,5	60	50	48	94
37,0	●	–	37	60	50	48	94
37,5	○	–	37,5	60	50	48	94
38,0	●	–	38	60	50	48	94
38,5	○	–	38,5	60	50	48	94
39,0	●	–	39	60	50	48	94
39,5	○	–	39,5	60	50	48	94
40,0	●	–	40	60	50	48	94
40,5	●	–	40,5	60	50	48	94
41,0	●	–	41	60	50	48	94
41,5	○	–	41,5	60	50	48	94
42,0	●	–	42	60	50	48	94

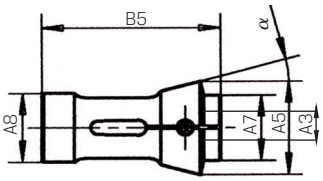
Dead length collet 185E

FAHRION®
FAR BEYOND PRECISION

DIN 6343 | 185 E

Design:
- concentricity to DIN class 2
- DIN 6343
- clamping range bridging h9, i.e. only nominal size can be clamped
- bore execution up to Ø 8 mm smooth, above with transverse grooves

Use:
- for bar stock, cut-to-length and pre-worked workpieces (for profile type roand)
- for workpiece clamping (bar or chuck work) in conventional single spindle lathes and CNC lathes directly in the spindle or collet chuck
- for main and counter spindles on different machine types



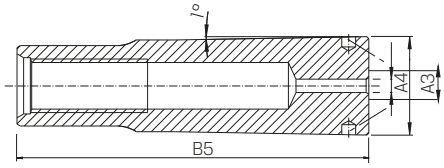


N° article	249350 roand	A3 mm	A5 mm	A7 mm	A8 mm	B5 mm	N° article	249350 roand	A3 mm	A5 mm	A7 mm	A8 mm	B5 mm
4,0	●	4	84	73	66	110	33,0	○	33	84	73	66	110
5,0	●	5	84	73	66	110	34,0	●	34	84	73	66	110
6,0	●	6	84	73	66	110	35,0	●	35	84	73	66	110
7,0	○	7	84	73	66	110	36,0	●	36	84	73	66	110
8,0	●	8	84	73	66	110	37,0	○	37	84	73	66	110
9,0	○	9	84	73	66	110	38,0	●	38	84	73	66	110
10,0	●	10	84	73	66	110	39,0	○	39	84	73	66	110
11,0	●	11	84	73	66	110	40,0	●	40	84	73	66	110
12,0	●	12	84	73	66	110	41,0	●	41	84	73	66	110
13,0	●	13	84	73	66	110	42,0	○	42	84	73	66	110
14,0	●	14	84	73	66	110	43,0	●	43	84	73	66	110
15,0	●	15	84	73	66	110	44,0	●	44	84	73	66	110
16,0	●	16	84	73	66	110	45,0	●	45	84	73	66	110
17,0	○	17	84	73	66	110	46,0	●	46	84	73	66	110
18,0	●	18	84	73	66	110	47,0	●	47	84	73	66	110
19,0	○	19	84	73	66	110	48,0	●	48	84	73	66	110
20,0	●	20	84	73	66	110	49,0	○	49	84	73	66	110
21,0	○	21	84	73	66	110	50,0	●	50	84	73	66	110
22,0	●	22	84	73	66	110	51,0	●	51	84	73	66	110
23,0	●	23	84	73	66	110	52,0	○	52	84	73	66	110
24,0	●	24	84	73	66	110	53,0	○	53	84	73	66	110
25,0	●	25	84	73	66	110	54,0	○	54	84	73	66	110
26,0	●	26	84	73	66	110	55,0	●	55	84	73	66	110
27,0	○	27	84	73	66	110	56,0	●	56	84	73	66	110
28,0	●	28	84	73	66	110	57,0	●	57	84	73	66	110
29,0	○	29	84	73	66	110	58,0	●	58	84	73	66	110
30,0	●	30	84	73	66	110	59,0	○	59	84	73	66	110
31,0	●	31	84	73	66	110	60,0	●	60	84	73	66	110
32,0	●	32	84	73	66	110							

Collet chuck HG

HAIMER

Design:
For clamping tools with cylindrical shank with utmost precision in HG chucks





N° article	241320	A3 mm	A4 mm	B5 mm	N° article	241320	A3 mm	A4 mm	B5 mm	N° article	241320	A3 mm	A4 mm	B5 mm
2,00	○	2	14,7	52,5	6,00	○	6	14,7	52,5	12,00	○	12	17,87	64,2
2,50	○	2,5	14,7	52,5	6,30	○	6,3	14,7	52,5	12,50	○	12,5	17,87	64,2
3,00	○	3	14,7	52,5	7,00	○	7	14,7	52,5	14,00	○	14	17,87	64,2
4,00	○	4	14,7	52,5	8,00	○	8	14,7	52,5	16,00	○	16	26,14	69,7
4,50	○	4,5	14,7	52,5	9,00	○	9	14,7	52,5	18,00	○	18	26,14	69,7
5,00	○	5	14,7	52,5	10,00	○	10	17,87	64,2	20,00	○	20	26,14	69,7
5,50	○	5,5	14,7	52,5	11,00	○	11	17,87	64,2					

Chuck head for manual chuck Manok/Torok

Design:
- profile roand
- pitch by 0.5 mm
- concentricity ‹ 0.01 mm possible

249800+249802 with stem
249801 with shortened stem

Use:
- for use in manual chuck TOROK and vice MANOK 277900
- **for clamping of blanks**



N° article	249800 Sz. 42, total length 47 mm	Clamping Ø mm	Kind of corrugation
0040	○	4	smooth
0050	○	5	smooth
0060	○	6	smooth
0070	○	7	smooth
0080	○	8	Cross grooves
0090	○	9	Cross grooves
0100	○	10	Cross grooves
0110	○	11	Cross/lengthwise grooves
0120	○	12	Cross/lengthwise grooves
0130	○	13	Cross/lengthwise grooves
0140	○	14	Cross/lengthwise grooves
0150	○	15	Cross/lengthwise grooves
0160	○	16	Cross/lengthwise grooves

N° article	249800 Sz. 42, total length 47 mm	Clamping Ø mm	Kind of corrugation
0170	○	17	Cross/lengthwise grooves
0180	○	18	Cross/lengthwise grooves
0190	○	19	Cross/lengthwise grooves
0200	○	20	Cross/lengthwise grooves
0210	○	21	Cross/lengthwise grooves
0220	○	22	Cross/lengthwise grooves
0230	○	23	Cross/lengthwise grooves
0240	○	24	Cross/lengthwise grooves
0250	○	25	Cross/lengthwise grooves
0260	○	26	Cross/lengthwise grooves
0270	○	27	Cross/lengthwise grooves
0280	○	28	Cross/lengthwise grooves
0290	○	29	Cross/lengthwise grooves

N° article	249800 Sz. 42, total length 47 mm	Clamping Ø mm	Kind of corrugation
0300	○	30	Cross/lengthwise grooves
0310	○	31	Cross/lengthwise grooves
0320	○	32	Cross/lengthwise grooves
0330	○	33	Cross/lengthwise grooves
0340	○	34	Cross/lengthwise grooves
0350	○	35	Cross/lengthwise grooves
0360	○	36	Cross/lengthwise grooves
0370	○	37	Cross/lengthwise grooves
0380	○	38	Cross/lengthwise grooves
0390	○	39	Cross/lengthwise grooves
0400	○	40	Cross/lengthwise grooves
0410	○	41	Cross/lengthwise grooves
0420	○	42	Cross/lengthwise grooves

N° article	249801 Sz. 52, total length 46 mm	Clamping Ø mm	Kind of corrugation
0040	○	4	smooth
0050	○	5	smooth
0060	○	6	smooth
0070	○	7	smooth
0080	○	8	Cross grooves
0090	○	9	Cross grooves
0100	○	10	Cross grooves
0110	○	11	Cross/lengthwise grooves
0120	○	12	Cross/lengthwise grooves
0130	○	13	Cross/lengthwise grooves
0140	○	14	Cross/lengthwise grooves
0150	○	15	Cross/lengthwise grooves
0160	○	16	Cross/lengthwise grooves
0170	○	17	Cross/lengthwise grooves
0180	○	18	Cross/lengthwise grooves
0190	○	19	Cross/lengthwise grooves
0200	○	20	Cross/lengthwise grooves

N° article	249801 Sz. 52, total length 46 mm	Clamping Ø mm	Kind of corrugation
0210	○	21	Cross/lengthwise grooves
0220	○	22	Cross/lengthwise grooves
0230	○	23	Cross/lengthwise grooves
0240	○	24	Cross/lengthwise grooves
0250	○	25	Cross/lengthwise grooves
0260	○	26	Cross/lengthwise grooves
0270	○	27	Cross/lengthwise grooves
0280	○	28	Cross/lengthwise grooves
0290	○	29	Cross/lengthwise grooves
0300	○	30	Cross/lengthwise grooves
0310	○	31	Cross/lengthwise grooves
0320	○	32	Cross/lengthwise grooves
0330	○	33	Cross/lengthwise grooves
0340	○	34	Cross/lengthwise grooves
0350	○	35	Cross/lengthwise grooves
0360	○	36	Cross/lengthwise grooves
0370	○	37	Cross/lengthwise grooves

N° article	249801 Sz. 52, total length 46 mm	Clamping Ø mm	Kind of corrugation
0380	○	38	Cross/lengthwise grooves
0390	○	39	Cross/lengthwise grooves
0400	○	40	Cross/lengthwise grooves
0410	○	41	Cross/lengthwise grooves
0420	○	42	Cross/lengthwise grooves
0430	○	43	Cross/lengthwise grooves
0440	○	44	Cross/lengthwise grooves
0450	○	45	Cross/lengthwise grooves
0460	○	46	Cross/lengthwise grooves
0470	○	47	Cross/lengthwise grooves
0480	○	48	Cross/lengthwise grooves
0490	○	49	Cross/lengthwise grooves
0500	○	50	Cross/lengthwise grooves
0510	○	51	Cross/lengthwise grooves
0520	○	52	Cross/lengthwise grooves

N° article	249802 Sz. 65, total length 58 mm	Clamping Ø mm	Kind of corrugation
0040	○	4	smooth
0050	○	5	smooth
0060	○	6	smooth
0070	○	7	smooth
0080	○	8	Cross grooves
0090	○	9	Cross grooves
0100	○	10	Cross grooves
0110	○	11	Cross/lengthwise grooves
0120	○	12	Cross/lengthwise grooves
0130	○	13	Cross/lengthwise grooves
0140	○	14	Cross/lengthwise grooves
0150	○	15	Cross/lengthwise grooves
0160	○	16	Cross/lengthwise grooves
0170	○	17	Cross/lengthwise grooves
0180	○	18	Cross/lengthwise grooves
0190	○	19	Cross/lengthwise grooves
0200	○	20	Cross/lengthwise grooves
0210	○	21	Cross/lengthwise grooves
0220	○	22	Cross/lengthwise grooves
0230	○	23	Cross/lengthwise grooves
0240	○	24	Cross/lengthwise grooves

N° article	249802 Sz. 65, total length 58 mm	Clamping Ø mm	Kind of corrugation
0250	○	25	Cross/lengthwise grooves
0260	○	26	Cross/lengthwise grooves
0270	○	27	Cross/lengthwise grooves
0280	○	28	Cross/lengthwise grooves
0290	○	29	Cross/lengthwise grooves
0300	○	30	Cross/lengthwise grooves
0310	○	31	Cross/lengthwise grooves
0320	○	32	Cross/lengthwise grooves
0330	○	33	Cross/lengthwise grooves
0340	○	34	Cross/lengthwise grooves
0350	○	35	Cross/lengthwise grooves
0360	○	36	Cross/lengthwise grooves
0370	○	37	Cross/lengthwise grooves
0380	○	38	Cross/lengthwise grooves
0390	○	39	Cross/lengthwise grooves
0400	○	40	Cross/lengthwise grooves
0410	○	41	Cross/lengthwise grooves
0420	○	42	Cross/lengthwise grooves
0430	○	43	Cross/lengthwise grooves
0440	○	44	Cross/lengthwise grooves
0450	○	45	Cross/lengthwise grooves

N° article	249802 Sz. 65, total length 58 mm	Clamping Ø mm	Kind of corrugation
0460	○	46	Cross/lengthwise grooves
0470	○	47	Cross/lengthwise grooves
0480	○	48	Cross/lengthwise grooves
0490	○	49	Cross/lengthwise grooves
0500	○	50	Cross/lengthwise grooves
0510	○	51	Cross/lengthwise grooves
0520	○	52	Cross/lengthwise grooves
0530	○	53	Cross/lengthwise grooves
0540	○	54	Cross/lengthwise grooves
0550	○	55	Cross/lengthwise grooves
0560	○	56	Cross/lengthwise grooves
0570	○	57	Cross/lengthwise grooves
0580	○	58	Cross/lengthwise grooves
0590	○	59	Cross/lengthwise grooves
0600	○	60	Cross/lengthwise grooves
0610	○	61	Cross/lengthwise grooves
0620	○	62	Cross/lengthwise grooves
0630	○	63	Cross/lengthwise grooves
0640	○	64	Cross/lengthwise grooves
0650	○	65	Cross/lengthwise grooves

Chuck head for manual chuck Manok/Torok

HAINBUCH SPANNENDE TECHNIK

Design:
- profile roand
- pitch by 0.5 mm
- kind of corrugation smooth
- concentricity ⟨ 0.01 mm possible
- with shortened stem

Use:
- for use in manual chuck TOROK and vice MANOK 277900
- **for clamping of finished parts**



N° article	249810 Sz. 42, total length 42 mm	Clamping ∅ mm
0030	○	3
0040	○	4
0050	○	5
0060	○	6
0070	○	7
0080	○	8
0090	○	9
0100	○	10
0110	○	11
0120	○	12
0130	○	13
0140	○	14
0150	○	15
0160	○	16

N° article	249810 Sz. 42, total length 42 mm	Clamping ∅ mm
0170	○	17
0180	○	18
0190	○	19
0200	○	20
0210	○	21
0220	○	22
0230	○	23
0240	○	24
0250	○	25
0260	○	26
0270	○	27
0280	○	28
0290	○	29
0300	○	30

N° article	249810 Sz. 42, total length 42 mm	Clamping ∅ mm
0310	○	31
0320	○	32
0330	○	33
0340	○	34
0350	○	35
0360	○	36
0370	○	37
0380	○	38
0390	○	39
0400	○	40
0410	○	41
0420	○	42

N° article	249811 Sz. 52, total length 46 mm	Clamping ∅ mm
0030	○	3
0040	○	4
0050	○	5
0060	○	6
0070	○	7
0080	○	8
0090	○	9
0100	○	10
0110	○	11
0120	○	12
0130	○	13
0140	○	14
0150	○	15
0160	○	16
0170	○	17
0180	○	18
0190	○	19

N° article	249811 Sz. 52, total length 46 mm	Clamping ∅ mm
0200	○	20
0210	○	21
0220	○	22
0230	○	23
0240	○	24
0250	○	25
0260	○	26
0270	○	27
0280	○	28
0290	○	29
0300	○	30
0310	○	31
0320	○	32
0330	○	33
0340	○	34
0350	○	35
0360	○	36

N° article	249811 Sz. 52, total length 46 mm	Clamping ∅ mm
0370	○	37
0380	○	38
0390	○	39
0400	○	40
0410	○	41
0420	○	42
0430	○	43
0440	○	44
0450	○	45
0460	○	46
0470	○	47
0480	○	48
0490	○	49
0500	○	50
0510	○	51
0520	○	52

N° article	249812 Sz. 65, total length 53 mm	Clamping ∅ mm
0030	○	3
0040	○	4
0050	○	5
0060	○	6
0070	○	7
0080	○	8
0090	○	9
0100	○	10
0110	○	11
0120	○	12
0130	○	13
0140	○	14
0150	○	15
0160	○	16
0170	○	17
0180	○	18
0190	○	19
0200	○	20
0210	○	21
0220	○	22
0230	○	23

N° article	249812 Sz. 65, total length 53 mm	Clamping ∅ mm
0240	○	24
0250	○	25
0260	○	26
0270	○	27
0280	○	28
0290	○	29
0300	○	30
0310	○	31
0320	○	32
0330	○	33
0340	○	34
0350	○	35
0360	○	36
0370	○	37
0380	○	38
0390	○	39
0400	○	40
0410	○	41
0420	○	42
0430	○	43
0440	○	44

N° article	249812 Sz. 65, total length 53 mm	Clamping ∅ mm
0450	○	45
0460	○	46
0470	○	47
0480	○	48
0490	○	49
0500	○	50
0510	○	51
0520	○	52
0530	○	53
0540	○	54
0550	○	55
0560	○	56
0570	○	57
0580	○	58
0590	○	59
0600	○	60
0610	○	61
0620	○	62
0630	○	63
0640	○	64
0650	○	65

Changeover device for clamping head

HAINBUCH SPANNENDE TECHNIK

Design:
Universally

NEW



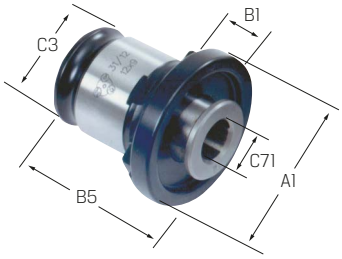
N° article	249821 manual	Clamping range mm
0065	○	65
4252	○	42/52

Quick-change tapping chuck

PREMUS

Design/Use:
- without safety coupling
- to be used in conjunction with the various threading quick-change chucks on single and multip- le spindle machines with manual, mechanical or numerical control
- quick-change inserts sizes 4 and 5 available on request

246430: A1 = 30 mm, C3 = 19 mm, B5 = 28,5 mm, B1 = 7 mm
246431: A1 = 48 mm, C3 = 31 mm, B5 = 46 mm, B1 = 11 mm
246432: A1 = 70 mm, C3 = 48 mm, B5 = 69,5 mm, B1 = 14 mm



N° article	246430 Size 1	246431 Size 2	246432 Size 3	C71 mm
3,5×2,7	●	–	–	3,5
4,5×3,4	●	–	–	4,5
6×4,9	●	●	–	6
7×5,5	●	●	–	7
8×6,2	●	●	–	8

N° article	246430 Size 1	246431 Size 2	246432 Size 3	C71 mm
9×7	●	●	–	9
10×8	●	●	–	10
11×9	–	●	○	11
12×9	–	●	○	12
14×11	–	●	○	14

N° article	246430 Size 1	246431 Size 2	246432 Size 3	C71 mm
16×12	–	●	○	16
18×14,5	–	●	●	18
22×18	–	–	●	22
25×20	–	–	○	25
28×22	–	–	●	28

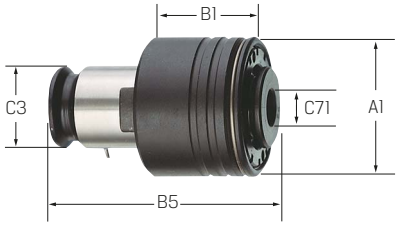
Quick-change tapping chuck

PREMUS

Design:
Quick clamping adapter for changing taps without auxiliary tools. **With preset safety coupling** to prevent breakage of the tap when it becomes blunt or touches the bottom of the hole. For diverse shank sizes of the taps different inserts are required. The tap shanks should have a minimum hardness of HRC 40. Length adjustment for presetting inserts outside the machine. Quick-change inserts sizes 4 and 5 available on request

Use:
Quick-change adapters can be used in conjunction with the various tapping quick-change chucks on single and multi-spindle machines with manual, mechanical or numerical control

246436: A1 = 32 mm, C3 = 19 mm, B5 = 46,5 mm, B1 = 25 mm
246437: A1 = 50 mm, C3 = 31 mm, B5 = 69,0 mm, B1 = 34 mm
246438: A1 = 72 mm, C3 = 48 mm, B5 = 100,5 mm, B1 = 45 mm



N° article	246436 Size 1	246437 Size 2	246438 Size 3	C71 mm
M3/3,5×2,7	●	–	–	3,5
M4/4,5×3,4	●	–	–	4,5
M5/6×4,9	●	–	–	6
M6/4,5×3,4	●	–	–	4,5
M6/6×4,9	●	●	–	6
M8/6×4,9	●	●	–	6
M8/8×6,2	●	●	–	8

N° article	246436 Size 1	246437 Size 2	246438 Size 3	C71 mm
M10/7×5,5	●	●	–	7
M10/10×8	●	●	–	10
M12/9×7	●	●	–	9
M14/11×9	–	●	○	11
M16/12×9	–	●	●	12
M18/14×11	–	●	○	14
M20/16×12	–	●	●	16

N° article	246436 Size 1	246437 Size 2	246438 Size 3	C71 mm
M22/18×14,5	–	–	●	18
M24/18×14,5	–	–	●	18
M27/20×16	–	–	●	20
M30/22×18	–	–	●	22
M33/25×20	–	–	●	25

HAIMER
Quality Wins.

5 important reasons for HAIMER shrinking technology

1. For Ø 3 - 50 mm for solid carbide and HSS tools

2. Shrinking and cooling in record time
- Tool change at the touch of a button
- Water-cooled cooling bodies
- Concentrated cooling efficiency due to contact cooling
- Even cooling: No material deformation

3. Universal shrinking technology with flexible modular system
- Suitable for all applications
- Also for extremely long tools

4. Handling adapted to workshop practices
- Hot parts do not need to be touched
- No heating of the taper
- No heating of the tool
- Easy handling

5. Minimal heating due to manual operation
- Long tool life of the tool holder
- Short cooling rate
- Low energy consumption due to precisely metered energy supply



HAIMER Shrinking Technology – everything from a single source by the market leader.

Technical Data:	
Output	ca. 13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-16 mm
Max. length of the shrink-fit chuck	230 mm
Width × depth × height	715×600×630 mm
Weight	75 kg

Design:
- shrink-fit unit for small tools
- easy tool handling due to horizontal shrinking



N° article	242671 Power Clamp Nano
NANO	○ +

Technical Data:	
Output	13 kW
Connection	3×400-480V, 16A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	570 mm
Width × depth × height	880×750×1100 mm
Weight	105 kg

Design:
- shrink-fit unit for all tools
- coil with 5 stop discs
- single-user version
- incl. 1 basic holder and 1 receptacle



N° article	242702 Power Clamp Basic without cooling
0001	○ +

Technical Data:	
Output	13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	570 mm
Width × depth × height	860×600×990 mm
Weight	70 kg

Design:
- for all tools
- high-performance shrink-fit unit single-user version
- with integrated contact cooling
- incl. Cool Manager
- incl. 1 basic holder and 1 receptacle
- incl. new NG coil technology



N° article	242704 Economic Plus NG
0001	○ +

Technical Data:	
Output	13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	570 mm
Width × depth × height	860×650×970 mm
Weight	70 kg

Design:
- for all tools
- with intelligent NG coil
- rotary table with 3 stations
- with integrated contact cooling
- incl. Cool Manager
- with 1 receiving support for rotary table



N° article	242706 Comfort NG
0001	○ +

Shrink-fit unit

HAIMER

Technical Data:	
Output	13 kW
Connection	3×400-480V, 16A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	Schrumpfen: 570 mm Kühlen: 260 mm
Width × depth × height	880×750×1100 mm
Weight	105 kg

Design:
- with integrated cooling for all types of tools
- industry-4.0-ready
- 7" touch display and new intuitive software for ease of use
- perfectly suitable and designed for shrink collets and small receptacles with thin walls
- with NG coil
- gentle and clean, contour-independent cooling of all shrink fit chucks and shrink fit collets by air, without dirt and water residues
- contour-independent air cooling with temperature control
- pneumatic brake of the cooling bonnet is triggered via release-by-touch
- cooling process is terminated automatically
- scanner for reading the shrink parameters of Data-Matrix codes for easy, automated shrinking (optional)
- length presetting (optional)
- incl. 2 precision base holders and 2 precision chuck supports
- incl. craining boxes for accessories
- including cooling manager



N° article	242701 Power Clamp Air i4.0 Eco
0001	○ +

Technical Data:	
Output	13 kW
Connection	3×400-480V, 16A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	Schrumpfen: 570 mm Kühlen: 260 mm
Width × depth × height	880×750×1100 mm
Weight	105 kg

Design:
- with integrated cooling for all types of tools
- industry-4.0-ready
- 7" touch display and new intuitive software for ease of use
- perfectly suitable and designed for shrink collets and small receptacles with thin walls
- with automated motor coil
- gentle and clean, contour-independent cooling of all shrink fit chucks and shrink fit collets by air, without dirt and water residues
- contour-independent air cooling with temperature control
- pneumatic brake of the cooling bonnet is triggered via release-by-touch
- cooling process is terminated automatically
- with scanner for reading out the shrinking parameters of tool holders (Data-Matrix Code)
- length presetting (optional)
- incl. 2 precision base holders and 2 precision chuck supports
- incl. craining boxes for accessories
- including cooling manager



N° article	242703 Power Clamp Air i4.0 Comfort
0001	○ +

System trolley

HAIMER

Technical Data:	
Width × depth × height	1000×620×840 mm

Design:
- trolley for shrink-fit units and accessories
- for a clearly arranged and tidy workplace
- ergonomic working height
- everything immediately at hand
- optional Drawer insert for storing accessories

NEW



N° article	242716 System trolley for Power Clamp
0001	○ +

Shrink-fit unit

Technical Data:	
Output	13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	570 mm
Width × depth × height	850×660×970 mm
Weight	115 kg

Design:
- network-compatible and industry 4.0 ready
- with 7" touch display and intuitive software
- with height stop for length adjustment
- with intelligent NG coil
- single-user version
- with integrated contact cooling
- including cooling manager
- incl. 2 precision base holders and 2 precision chuck supports
- incl. craining boxes for accessories



N° article	242712 Power Clamp Preset i4.0
0001	○ +

Technical Data:	
Output	13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	570 mm
Width × depth × height	850×660×970 mm
Weight	115 kg

Design:
- network-compatible and industry 4.0 ready
- with 7" touch display and intuitive software
- with intelligent NG coil
- rotary table with 3 stations
- with integrated contact cooling
- including cooling manager
- with 1 receiving support for rotary table
- incl. craining boxes for accessories
- optionally available with system cart



N° article	242713 Power Clamp Comfort i4.0
0001	○ +

Technical Data:	
Output	13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	535 mm
Width × depth × height	1340×962×2560 mm (max. working height)
Weight	550 kg (includes base cabinet)

Design:
- network-compatible and industry 4.0 ready
- with 7" touch display and intuitive software
- with NG coil
- gentle and clean contour-independent cooling of all shrink chucks and shrink collets by air and spray mist without dirt and water residues
- temperature monitoring for optimised and safe cooling
- no damage at the edges of the cutting tool
- incl. 2 precision base holders and 2 precision chuck supports
- integrated drawer in base cabinet

Delivery includes base cabinet.



N° article	242714 Power Clamp Sprint i4.0
0001	○ +

Shrink-fit unit

HAIMER

Technical Data:	
Output	13 kW
Connection	3× 400-480 V, 16 A
Tools made of	HM and HSS
Tool ∅	3-32 mm
Max. length of the shrink-fit chuck	535 mm
Width × depth × height	1340×962×2560 mm (max. working height)
Weight	550 kg (includes base cabinet)



Design:
- network-compatible and industry 4.0 ready
- with 7" touch display and intuitive software
- with NG coil
- new TME cooling system with temperature monitoring
- integrated contact cooling with five cooling bodies
- linear guided cooling bodies with automatic signalling of the rightcooling station
- no damage at the edges of the cutting tool
- incl. speed cooler and cooling manager
- incl. 2 precision base holders and 2 precision chuck supports
- integrated drawer in base cabinet

Delivery includes base cabinet.

N° article	242715 Power Clamp Premium i4.0
0001	○ +

Holder for shrink fit device

HAIMER

N° article	242708 for single user system	242709 for rotary tables, with 3 adapter discs	for taper size
0030	○	○	SK30
0040	○	○	SK40
0045	○	○	SK45
0050	○	○	SK50
1025	○	○	HSK25
1032	○	○	HSK32

N° article	242708 for single user system	242709 for rotary tables, with 3 adapter discs	for taper size
1040	○	○	HSK40
1050	○	○	HSK50
1063	○	○	HSK-A63
1080	○	○	HSK80
1100	○	○	HSK-A100

Shrink and cooling sleeves Mini

HAIMER

Design and use:
- protects shrink-fit chucks from overheating
- extends the service life of shrink-fit chucks
- only one parameter setting for all holders
- cooling with standard heat sink diameter 6-8 mm

N° article	249500 Standard	A3 mm
0003	○	3
0004	○	4
0005	○	5
0006	○	6
0008	○	8
0010	○	10



249500

N° article	249501 extra slim	A3 mm
0003	○	3
0004	○	4
0005	○	5
0006	○	6
0008	○	8
0010	○	10


249502

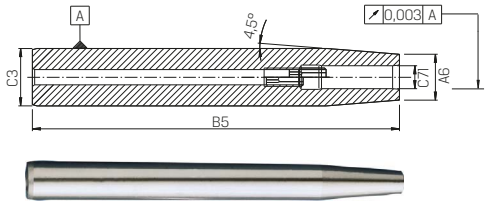
N° article	249502 in set with wooden base, 12 pieces	min. ∅ mm	max. ∅ mm
SATZ	○	3	12

Shrink-fit chuck extension

HAIMER

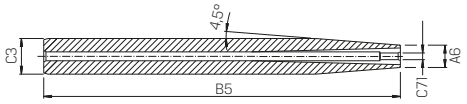
The universal solution for your machining issues:
- highest runout accuracy
- optimum and almost unlimited extensions possible
- universally applicable and reusable again and again
- the more economical way of processing special solutions
- for carbide and HSS shanks
- delivered without cooling adapter

Design:
- with length setting screw (adjustment travel 10 mm)
- shank tolerance h6
- cooling through cooling unit Ø 6 - 8 mm or 14 - 16 mm



N° article	242754	C3 mm	C71 mm	A6 mm	B5 mm	N° article	242754	C3 mm	C71 mm	A6 mm	B5 mm
16/06	○	16	6	10	160	25/16	○	25	16	22	160
20/06	○	20	6	14	160	32/10	○	32	10	24	160
20/08	○	20	8	14	160	32/12	○	32	12	24	160
25/08	○	25	8	19	160	32/14	○	32	14	27	160
25/10	○	25	10	20	160	32/16	○	32	16	27	160
25/12	○	25	12	20	160	32/18	○	32	18	27	160
25/14	○	25	14	20	160	32/20	○	32	20	27	160

Design:
like 245754, but
- without length setting screw
- with optimum coolant supply from outside through slots
- with variable length adjustment (telescope)
- with shank tolerance h4 / h6
- with cooling through cooling unit Ø 6 - 8 mm or 14 - 16 mm

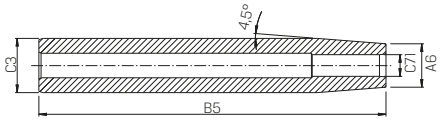


N° article	242756	C3 mm	C71 mm	A6 mm	B5 mm	N° article	242756	C3 mm	C71 mm	A6 mm	B5 mm
12/03	○	12	3	8	160	16/04	○	16	4	10	160
12/04	○	12	4	8	160	16/05	○	16	5	10	160
16/03	○	16	3	10	160	20/05	○	20	5	14	160

Shrink-fit chuck extension

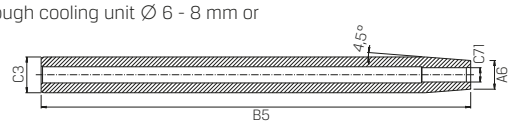
HAIMER

Design:
like 242754, but
- without length setting screw
- with variable length adjustment (telescope)
- with shank tolerance h4 / h6
- with cooling through cooling unit Ø 14-16 mm



N° article	242755	C3 mm	C71 mm	A6 mm	B5 mm	N° article	242755	C3 mm	C71 mm	A6 mm	B5 mm
12/03	○	12	3	8	160	25/10	○	25	10	20	160
12/04	○	12	4	8	160	25/12	○	25	12	20	160
16/03	○	16	3	10	160	25/14	○	25	14	20	160
16/04	○	16	4	10	160	25/16	○	25	16	22	160
16/05	○	16	5	10	160	32/10	○	32	10	24	160
16/06	○	16	6	10	160	32/12	○	32	12	24	160
20/05	○	20	5	14	160	32/14	○	32	14	27	160
20/06	○	20	6	14	160	32/16	○	32	16	27	160
20/08	○	20	8	14	160	32/18	○	32	18	27	160
25/08	○	25	8	19	160	32/20	○	32	20	27	160

Design:
like 242754, but
- without length setting screw
- with variable length adjustment (telescope)
- with shank tolerance h6
- with cooling through cooling unit Ø 6 - 8 mm or 14 - 16 mm



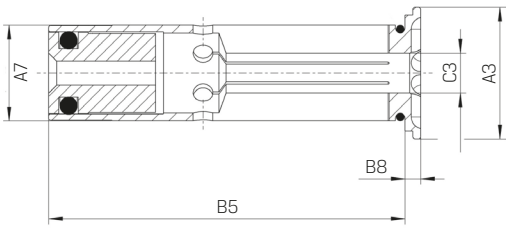
N° article	242757	C3 mm	C71 mm	A6 mm	B5 mm	N° article	242757	C3 mm	C71 mm	A6 mm	B5 mm
20/06	○	20	6	14	300	25/16	○	25	16	22	300
20/08	○	20	8	14	300	32/10	○	32	10	24	300
25/08	○	25	8	19	300	32/12	○	32	12	24	300
25/10	○	25	10	20	300	32/14	○	32	14	27	300
25/12	○	25	12	20	300	32/16	○	32	16	27	300
25/14	○	25	14	20	300	32/20	○	32	20	27	300

Intermediate sleeve for hydraulic expansion chuck TENDO

SCHUNK

Design 241461:
- for internal coolant supply
- collar closed
- coolant-proof up to max. 80 bar

Design 241462:
- with peripheral cooling
- collar slotted
- not coolant-tight

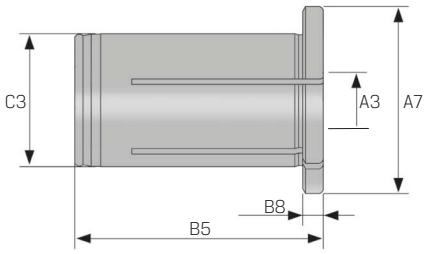




N° article	241461 closed	241462 slotted, with peripheral cooling	C3 mm	A3 mm	A7 mm	B5 mm	B8 mm	Weight kg	N° article	241461 closed	241462 slotted, with peripheral cooling	C3 mm	A3 mm	A7 mm	B5 mm	B8 mm	Weight kg
12/03	○	○	3	16,5	12	45	2	0,1	20/12	○	○	12	24	20	50,5	2	0,1
12/04	○	○	4	16,5	12	45	2	0,1	20/13	○	–	13	24	20	50,5	2	0,1
12/05	○	○	5	16,5	12	45	2	0,1	20/14	○	○	14	24	20	50,5	2	0,1
12/06	○	○	6	16,5	12	45	2	0,1	20/15	○	–	15	24	20	50,5	2	0,1
12/08	○	○	8	16,5	12	45	2	0,1	20/16	○	○	16	24	20	50,5	2	0,1
20/03	○	○	3	24	20	50,5	2	0,1	32/06	○	○	6	35,5	32	60,5	2	0,3
20/04	○	○	4	24	20	50,5	2	0,1	32/08	○	○	8	35,5	32	60,5	2	0,3
20/05	○	–	5	24	20	50,5	2	0,1	32/10	○	○	10	35,5	32	60,5	2	0,3
20/06	○	○	6	24	20	50,5	2	0,1	32/12	○	○	12	35,5	32	60,5	2	0,3
20/07	○	–	7	24	20	50,5	2	0,1	32/14	○	○	14	35,5	32	60,5	2	0,3
20/08	○	○	8	24	20	50,5	2	0,1	32/16	○	○	16	35,5	32	60,5	2	0,3
20/09	○	–	9	24	20	50,5	2	0,1	32/18	○	○	18	35,5	32	60,5	2	0,3
20/10	○	○	10	24	20	50,5	2	0,1	32/20	○	○	20	35,5	32	60,5	2	0,3
20/11	○	–	11	24	20	50,5	2	0,1	32/25	○	○	25	35,5	32	60,5	2	0,3

Intermediate sleeve for hydraulic expansion chucks PHC-S

Design:
for internal coolant supply.



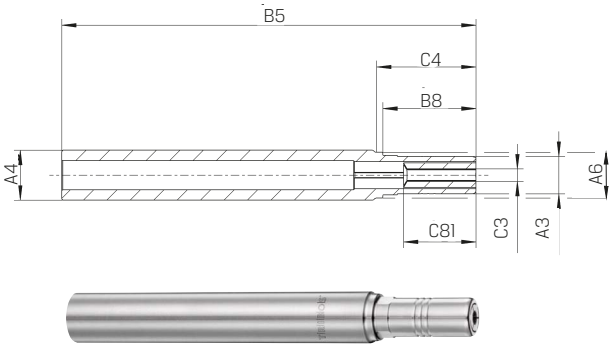


N° article	241499	C3 mm	A3 mm	A7 mm	B5 mm	B8 mm
1203	○	12	3	16	44	4
1204	○	12	4	16	44	4
1206	○	12	6	16	44	4
1208	○	12	8	16	44	4
1210	○	12	10	16	44	4

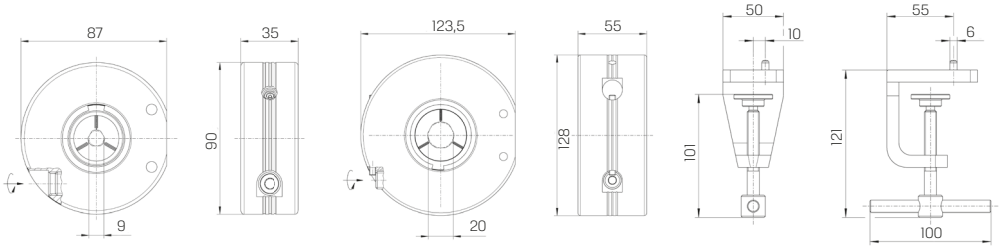
Chucks extension TRIBOS®

Design:
- permanent run-out and repeat accuracy ≤ 0,003 mm
- dimension C81 mm without stop
- tool shank quality h6

N° article	241470 Extensions	C3 mm	A3 mm	A4 mm	A6 mm	B5 mm	B8 mm	C4 mm	C81 mm	Torque min. Nm	Weight kg
00005	○	0,5	9	12	11	100	22,5	24	17,5	–	0,08
0001	○	1	9	12	11	100	22,5	24	17,5	–	0,08
00015	○	1,5	9	12	11	100	22,5	24	17,5	–	0,08
0002	○	2	9	12	11	100	22,5	24	17,5	–	0,08
00025	○	2,5	9	12	11	100	22,5	24	17,5	–	0,08
0003	○	3	9	12	11	100	22,5	24	17,5	1,5	0,08
00035	○	3,5	9	12	11	100	22,5	24	17,5	2	0,08
0004	○	4	9	12	11	100	22,5	24	17,5	2,5	0,08
00045	○	4,5	9	12	11	100	22,5	24	17,5	3	0,08
0005	○	5	9	12	11	100	22,5	24	17,5	3,5	0,08
0006	○	6	9	12	11	100	22,5	24	17,5	4,5	0,08



Clamping / mounting device TRIBOS®




0001


0002



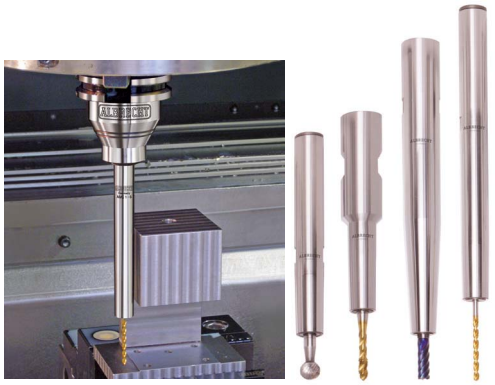
N° article	241472	Design
0001	○	Clamping device TRIBOS® SVP-Mini
0002	○	Clamping device TRIBOS® SVP-RM
0005	○	Mounting fixture TRIBOS® SVP Mini/-RM

Chucks extension APC

ALBRECHT
Präzisions Spannfutter

Design and use:
- 14 mm slim version for hard-to-reach machining sections
- for chuck extension in precision chucks or in any commercial shrink, hydraulic expansion or collet chucks
- centre clamping screw with a flat taper
- operated from behind through supplied hex key

Design:
Hardened, ground and coated for long tool life





N° article	246405	Total length mm	AF mm	Clamping range mm	Tool holder	Shank ∅ mm (h6)
14×100	●	100	–	1 - 6	6535 HA	14
14×150	●	150	13	1 - 6	6535 HB	14
20×100	○	100	–	1 - 6	6535 HA	20
20×150	○	150	16	1 - 6	6535 HB	20

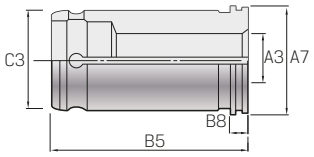
N° article	246408 Clamping sleeve for chuck extension	Clamping diameter mm
1	○	1
2	○	2
3	●	3
4	●	4
5	○	5
6	●	6

Intermediate sleeve for power chucks CTS

Design 241620:
- slotted
- for reducing the clamping diameter
- increased flexibility and reduced costs

Design 241622:
- for internal coolant supply
- due to short slots completely sealed
- no additional sealants required

Design 241624:
- for peripheral cooling
- due to short slots completely sealed
- two coolant grooves in the inner bore for effective cooling of the cutting periphery




241622


241620


241624

N° article	241620 Type MC, slotted	241622 type MC-OH, for internal coolant supply	241624 Type MC-C, for peripheral cooling	C3 mm	A3 mm	A7 mm	B5 mm	B8 mm
1606	○	○	○	16	6	19	50	4
1608	○	○	○	16	8	19	50	4
1610	○	○	○	16	10	19	50	4
1612	○	○	○	16	12	19	50	4
2003	○	–	–	20	3	24	60	4
2004	○	–	○	20	4	24	60	4
2006	○	●	○	20	6	24	60	4
2008	○	○	○	20	8	24	60	4
2010	○	●	○	20	10	24	60	4
2012	○	○	○	20	12	24	60	4
2014	○	○	○	20	14	24	60	4
2016	○	●	○	20	16	24	60	4
2018	○	○	–	20	18	24	60	4
2506	○	○	○	25	6	29	60	4
2508	○	○	○	25	8	29	60	4
2510	○	○	○	25	10	29	60	4
2512	○	○	○	25	12	29	60	4
2516	○	○	○	25	16	29	60	4
2520	○	○	○	25	20	29	60	4
3206	○	○	○	32	6	36	72	4
3208	○	○	○	32	8	36	72	4
3210	○	○	○	32	10	36	72	4
3212	○	○	○	32	12	36	72	4
3214	○	○	○	32	14	36	72	4
3216	○	○	○	32	16	36	72	4
3218	○	○	○	32	18	36	72	4
3220	○	○	○	32	20	36	72	4
3225	○	○	○	32	25	36	72	4

Clamping wrench for power chucks CTS

Design:
- for functional clamping
- prevents overload and breakage
- slim version of the clamping surfaces, therefore commercially available wrenches cannot be used

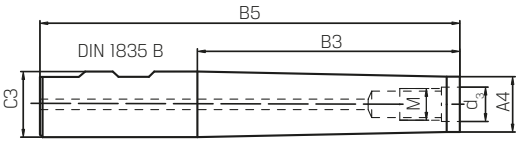
N° article	241626	for chuck size
1 - 16	○	16
2 - 20	○	20
2,5 - 25	○	25
3 - 32	○	32

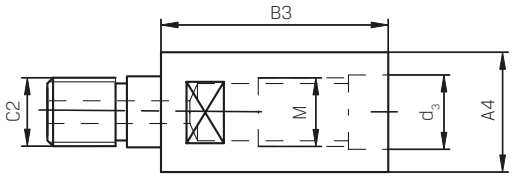


Extension for screw-in chuck

PREMUS

DIN 1835





N° article	241088	C3 mm	d_3 mm	A4 mm	B3 mm	B5 mm	M
16×60	○	16	8,5	12,8	60	115	M8
16×100	○	16	8,5	12,8	100	160	M8
20×60	○	20	10,5	17,8	60	120	M10
20×100	○	20	10,5	17,8	100	160	M10
25×100	○	25	12,5	20,8	100	160	M12
32×100	○	32	17,0	28,8	100	160	M16

N° article	241089	C2	d_3 mm	A4 mm	B3 mm	M
M8×M8	○	M8	8,5	12,8	40	M8
M10×M8	○	M10	8,5	17,8	30	M8
M10×M10	○	M10	10,5	17,8	30	M10
M12×M8	○	M12	8,5	20,8	35	M8
M12×M10	○	M12	10,5	20,8	35	M10
M12×M12	○	M12	12,5	20,8	40	M12
M16×M10	○	M16	10,5	28,8	40	M10
M16×M12	○	M16	12,5	28,8	60	M12
M16×M16	○	M16	17,0	28,8	40	M16

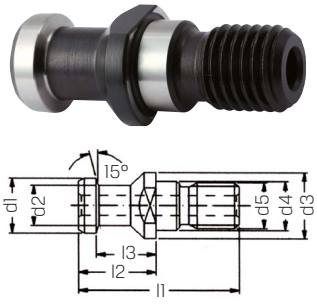
Pull studs

HAIMER ROBERT KOCH

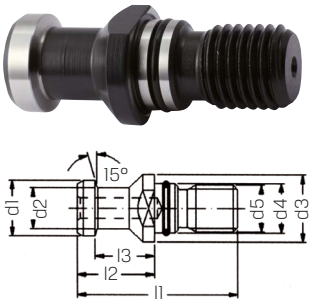
ISO 7388-3 | Form AF | Form AD

Design:
Pull studs are an important connector between machine and tool. The requirements concerning accuracy, rigidity and reliability are very high. Pull studs of minor quality not only decrease the performance of the machine, they are even a safety risk. A breaking pull stud might cause severe damage on machine and workpiece and even injuries on persons

- made of special steel with high rigidity
- elaborate heat treatment in several steps
- spots with highest stress tempered specifically
- high impact strength
- all functional surfaces fine finished after hardening
- highest security and reliability



246650



246656

N° article	246650 ROBERT KOCH shape AD, with through hole	246651 HAIMER shape AD, with through hole	246655 ROBERT KOCH shape AF, sealed	246656 HAIMER shape AF, sealed	for taper size	d_1 mm	d_2 mm	d_3 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	d_5	Nm	SW mm
30	●	–	●	–	SK30	13	9	17	13	44	24	19	M12	50	14
40	●	●	●	●	SK40	19	14	23	17	54	26	20	M16	100	19
50	●	●	●	●	SK50	28	21	36	25	74	34	25	M24	200	30

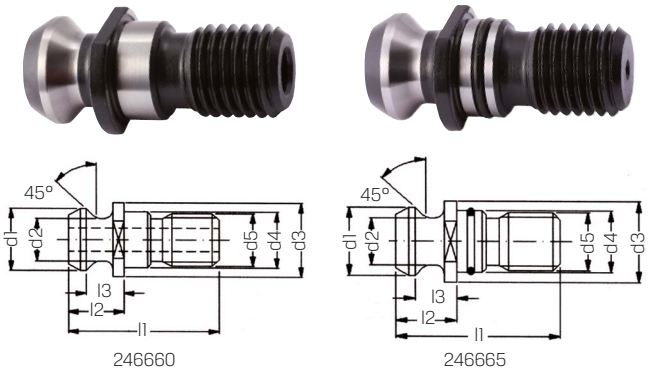
Pull studs

HAIMER ROBERT KOCH

Design:
Pull studs are an important connector between machine and tool. The requirements concerning accuracy, rigidity and reliability are very high. Pull studs of minor quality not only decrease the performance of the machine, they are even a safety risk. A breaking pull stud might cause severe damage on machine and workpiece and even injuries on persons

- made of special steel with high rigidity
- elaborate heat treatment in several steps
- spots with highest stress tempered specifically
- high impact strength
- all functional surfaces fine finished after hardening
- highest security and reliability

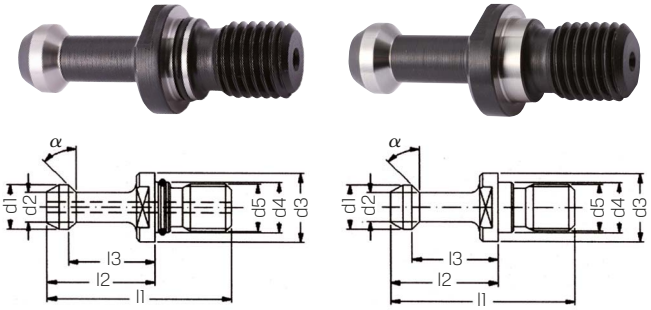
ISO 7388-3 | Form UD | Form UF



246660 246665

N° article	246660 ROBERT KOCH form UD, with through hole	246661 HAIMER shape UD, with through hole	246665 ROBERT KOCH shape UF, sealed	246666 HAIMER form UF, sealed	for taper size	d_1 mm	d_2 mm	d_3 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	d_5	Nm	SW mm
40	●	●	●	●	SK40	18,95	12,95	22,5	17	44,5	16,40	11,15	M16	100	18
50	●	●	●	●	SK50	29,1	19,60	37	25	65,5	25,55	17,95	M24	200	30

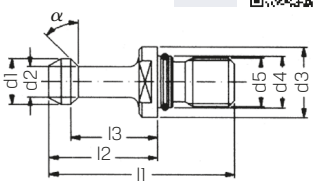
ISO 7388-3 | Form JF | Form JD



246675 246670

N° article	246670 ROBERT KOCH JF, without through hole	246671 HAIMER JF, without through hole	246675 ROBERT KOCH JD, with through hole, sealed	246676 HAIMER JD, with through hole, sealed	for taper size	d_1 mm	d_2 mm	d_3 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	d_5	Nm	SW mm
30/30	–	●	–	–	BT30	11	7	16,5	12,5	43	23	18	M12	50	13
30/45	●	●	–	–	BT30	11	7	16,5	12,5	43	23	18	M12	50	13
40/30	–	●	–	–	BT40	15	10	23	17	60	35	28	M16	100	19
40/45	●	●	●	●	BT40	15	10	23	17	60	35	28	M16	100	19
40/90	●	–	●	–	BT40	15	10	23	17	60	35	28	M16	100	19
50/30	–	○	–	–	BT50	23	17	38	25	85	45	35	M24	200	100
50/45	–	○	●	–	BT50	23	17	38	25	85	45	35	M24	200	100
50/60	–	–	●	–	BT50	23	17	38	25	85	45	35	M24	200	30

ISO 7388-3 CAD



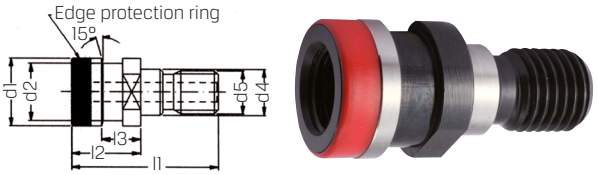
N° article	246681 HAIMER BT, without through hole	for taper size	d_1 mm	d_2 mm	d_3 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	d_5	Nm	SW mm
40/45	●	BT40	15	10	23	17	57,15	32,15	25,15	M16	100	19

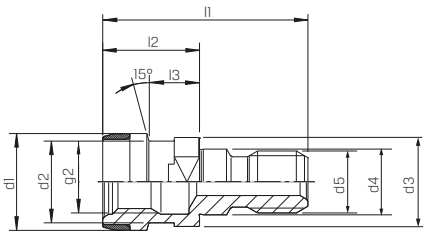
Pull studs

HAIMER ROBERT KOCH

Design:
Pull studs are an important connector between machine and tool. The requirements concerning accuracy, rigidity and reliability are very high. Pull studs of minor quality not only decrease the performance of the machine, they are even a safety risk.
A breaking pull stud might cause severe damage on machine and workpiece and even injuries on persons

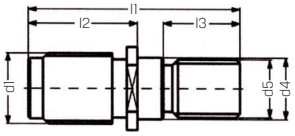
- made of special steel with high rigidity
- elaborate heat treatment in several steps
- spots with highest stress tempered specifically
- high impact strength
- all functional surfaces fine finished after hardening
- highest security and reliability





247006

N° article	247001 with ring groove and through hole	247005 with radial groove and internal thread	247006 HAIMER with ring groove and internal thread	for taper size	d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	d_5	Nm	SW mm
40	●	●	●	SK40	25	21,1	17	53	25	13,6	M16	100	22
50	–	●	●	SK50	39,3	32	25	65	25	13,35	M24	200	30





N° article	247020 with buttress thread	247021 HAIMER with internal thread	for taper size	d_1 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	d_5	Nm	SW mm
40	●	●	SK40	S20×2	17	53	25	21	M16	100	19

Clamping wrench for pull studs

ISO 7388-3

N° article	247030 SK	Mount
0040	●	SK 40
0050	●	SK 50

N° article	247032 BT	Mount
0040	●	BT 40
0050	●	BT 50



Coolant tube HSK

HAIMER

Design:
- prevents contamination of the spindle
- necessary for all HST machines with internal cooling
- two O-rings for better flexibility of the tube
- special coating with extreme smooth surface, protects the sealing systems of spindles of all makes



N° article	242283	HSK	G	d_3 mm	l_1 mm	l_2 mm
32	●	32	M10×1,0	6	26	5
40	●	40	M12×1,0	8	29,5	7
50	●	50	M16×1,0	10	33	9
63	●	63	M18×1,0	12	36,5	11
80	○	80	M20×1,5	14	40	13
100	●	100	M24×1,5	16	44	15

Coolant tube

PREMUS®

Design:
- gentle, smooth surface prevents damage to the spindle seal
- 2 O-rings for highest safety and maximum mobility

ISO 26623-1

Use:
- required for all rotating polygon spindles
- sealed transfer of the coolant into the tool holder
- prevents coolant entering the spindle and thus damage
- dimension and finish according to spindle manufacturer's specifications



N° article	237187 for polygon receptacles	for taper	M mm	D mm	L mm	L1 mm
1032	●	PSC-32	12×1,5	5	22,3	10
1040	●	PSC-40	14×1,5	6	25	12
1050	●	PSC-50	16×1,5	7	28,3	14
1063	●	PSC-63	20×2,0	8	31	15
1080	●	PSC-80	20×2,0	8	33,2	15
1100	○	PSC-100	24×2,0	14	47	22

Mounting key for coolant tube

PREMUS®

Design:
- blade made of hardened special steel
- handle made of impact-proof plastic, cadmium free, black

ISO 26623-1

Use:
Allows the exact installation of the coolant pipes to the required depth



N° article	237188 Installation wrench for polygon coolant pipes	for taper
1032	●	PSC-32
1040	●	PSC-40
1050	●	PSC-50
1063	●	PSC-63
1080	●	PSC-80
1100	○	PSC-100

Mounting device for tool holder

FAHRION®

Design:
- size of base plate 120×195 mm

Use:
- for assembly and disassembly of tool holders and modular tool systems
- simple and secure clamping of the tool holders on the collar without damage due to rollers
- self-locking via frictional locking and therefore ideal for HSK moulds A/E and F as well as polygon shank mounts
- without new setup for each step of the working operation in optimum position (also with downward mounting, for mounting pull studs)



N° article	246480 Mounting device with ball bearing	for taper
25	○	HSK25
32	●	HSK/PSC32
40	○	HSK/PSC40
46	○	BT30
50	○	SK30, HSK/PSC50

N° article	246480 Mounting device with ball bearing	for taper
63	●	SK40, HSK/PSC63, BT40, BBT40, CAT40
80	○	HSK/PSC80
97,5	○	SK50
100	○	HSK100, BT50, CAT50

Mounting device for tool holder

Use:
For quick and safe mounting and removal of ST sockets in horizontal and vertical position without tool damage

Size 1 for socket DIN 2080
Size 2 for socket ISO 7388-1
Size 3 for socket ISO 7388-2

L×W×H = 276×110×155 mm



N° article	246420 SK	for taper size	Size
30/1	○	SK30	1
40/1	●	SK40	1
50/1	○	SK50	1
30/2	○	SK30	2
40/2	●	SK40	2
50/2	●	SK50	2
30/3	○	SK30	3
40/3	○	SK40	3
50/3	○	SK50	3

N° article	246425 HSK	for taper size
63	●	HSK63
100	○	HSK100

N° article	246435 VDI	Tool holder
20	○	VDI20
25	○	VDI25
30	●	VDI30
40	●	VDI40
50	○	VDI50
60	○	VDI60

Mounting device for tool holder

Design:
- rotatable, for mounting of tools without reclamping, minimal locking force required
- size of base plate 120×195 mm

Use:
For assembly and disassembly of tool holders and modular tool systems



246475 246470 246460 246455 246450

N° article	246475 Tool holder	for taper size0
C3	○	PSC32
C4	○	PSC40
C5	○	PSC50
C6	●	PSC63
C8	○	PSC80

N° article	246470 Tool holder	for taper size
50	○	HSK-A50
63	●	HSK-A63
80	○	HSK-A80
100	●	HSK-A100

N° article	246460 Tool aufnahme	Tool aufnahme
20	○	VDI20
30	●	VDI30
40	○	VDI40
50	○	VDI50

N° article	246455 Tool holder	for taper size
30	○	SK30
40	●	SK40
50	●	SK50

N° article	246450 Basic device without tool holder
GRAndGERAET	●

Tool for mounting aid

PRETEC®

Design:
- 4×90° rotatable, for mounting of tools without reclamping; low effort and space requirement
- aluminium housing

Use:
For assembly and disassembly of tool holders and modular tool systems

N° article	246484 Basic device without tool holder
0001	●

N° article	246485 Tool holder	for taper size
30	○	SK30
40	●	SK40
50	●	SK50

N° article	246486 Tool holder	for taper size
40	○	HSK40
50	○	HSK50
63	●	HSK63
80	○	HSK80
100	○	HSK100

N° article	246487 Tool holder	for taper size
20	○	VDI 20
30	○	VDI 30
40	○	VDI 40
50	○	VDI 50

N° article	246488 Tool holder	for taper size
32	○	PSC32
40	○	PSC40
50	○	PSC50
63	○	PSC63
80	○	PSC80





Basic device with HKS63-adapter

Zero setter mechanical

Design:
- spring supported probe face, height 50 mm (with pointer at zero position) and Ø of 48 mm
- casing Ø 65 mm, casing height 49.5 mm
- accuracy 0.01 mm

50M:
With magnet

Use:
For precise positioning of workpiece surfaces or tool lengths in the Z-direction on milling and turning machines

Delivery:
With measuring protocol and dial gauge



N° article	250800 Set/Sets	Design
50	●	without magnet
50M	●	with magnet

Design:
- simple setting: Press stylus, turn small pointer to -2 mm, turn scale for large pointer to 0
- housing Ø 54.5 mm
- tracer Ø 42 mm
- accuracy 0.01 mm

Use:
For precise positioning of workpiece surfaces or tool lengths in the Z-direction on milling and turning machines

Delivery:
Zero setter in wooden case with serial number and test certificate



N° article	250802 Micro	Design
100	●	without magnet
100M	●	with magnet

Edge finders optically and acoustically

Delivered in case

Design:
2D:
- flexible probe ball
- LED light
- distance measurements of 5 mm (= radius of the ball Ø 10 mm)

3D:
- 3D version with additional safety spring travel

10/20A acoustic model:
- like optical edge finder plus additional acoustic signal

Use:
For accurate determination of workpiece zero points and hole centres in relation to the spindle

Note:
To protect the built-in electronics, all edge finders must be secured against the ingress of moisture





mit federnder Kugel

251450 10/20



N° article	251450 2D	251455 3D	d_1 mm	d_2 mm	l_1 mm
10/12	●	●	10	12	99
10/16	●	●	10	16	99
10/20	●	●	10	20	94
10/20/A	●	●	10	20	119

Zero setter optical

Design:
- for precise positioning of workpiece surfaces or tool lengths in the Z-direction on milling and turning machines
- shank diameter 39 mm
- probe diameter 19 m
- height 50 mm (+/- 0.01 mm)

Use:
The device is placed on the workpiece. Then the non-rotating spindle is carefully driven against the device. Once the LED lights up, the reference dimension of 50 mm has been reached. A safety suspension travel of about 2 mm for passing the 50 mm has been installed. For horizontal use a magnetic version is available

Scope of delivery:
Zero setter with serial number and test certificate





N° article	250801 optical	Design
50	●	without magnet
50M	●	with magnet

Edge finders mechanical

Delivered in case

Design:
- spring supported probe face, height 50 mm (with pointer at zero position) and of 48 mm
- accuracy 0.01 mm

Use:
For aligning workpiece reference surfaces and reference edges







Art.-Nr.	251400	d_1 mm	d_2 mm	l_1 mm
6N	●	6	6	48
10N	●	10	8	82
10/4N	●	4	8	88
10/K	●	10	10	82
10/4K	●	4	10	88

Art.-Nr.	251410 Ersatzfeder	suitable for
106	●	10N | 10/4N | 10/K | 10/4K
107	●	6N

3D universal probe
with adjustable concentricity

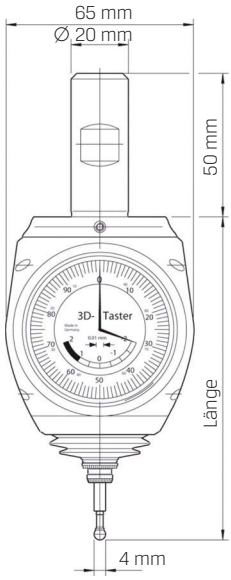
HAIMER

IP67 | 3D | ISO 7388-1 | ISO 7388-2 | Form A | 1835 B shank | Delivered in case | CAD

Design:
- with parallel shank and clamping surface or short adapter
- reading accuracy 0.01 mm
- short and long styluses available
- no recalibration of the probe required
- extended travel distance

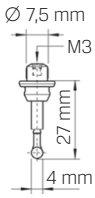
Use:
- for milling and eroding machines (insulated probe insert)
- for zero-setting of workpieces and length measurements
- any probing direction (X-, Y-, Z-axis)

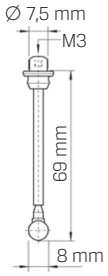
Note:
The specified precision of 0.01 mm only applies if the original HAIMER probe tips are used
Probe tips see **251520** and **251530:**





N° article	251500 analogue	Mount	Length mm	Probe ball Ø mm
U3D	●	cylindrical 20 mm	113	4
BT40	●	ISO 7388 - 2 BT40	138,6	4
SK40	●	ISO 7388 - 1 SK40	138,6	4





N° article	251520 Spare probe	Probe ball Ø mm
4	●	4

N° article	251530 Spare probe	Probe ball Ø mm
8	●	8

3D universal probe

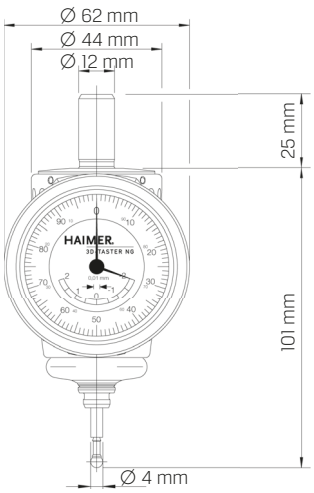
HAIMER

IP67 | 3D | 1835 A shank | Delivered in case | CAD

Design:
- compact and handy casing, no restriction to working area
- reading accuracy 0.01 mm
- marked overrun distance (safety distance)

Functions:
- aligning spindle to workpiece and reference edges (X-, Y- and Z-axis)
- setting zero point
- centring bores and shafts
- measuring lengths and depths
- testing the straightness and evenness of surfaces
- aligning workpieces and clamping devices
- quickly, without calculation, without sign error

Note:
The specified precision of 0.01 mm only applies if the original HAIMER probe tips are used
Probe tips see **251520** and **251530**.



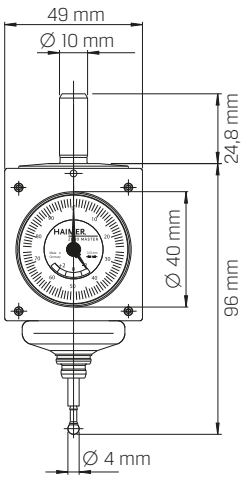


N° article	251501 New Generation, analogue	Mount	Length (without shank) mm	Probe ball Ø mm
U3D-NG	●	cylindrical 12 mm	101	4

Design and use:
- usage, mode of operation and accuracy like 251501
- clamping shank diameter 10 mm
- applicable for machines with ST 30 or small HST spindles
- shortened housing allows measuring even of large workpieces
- reading via a small analogue dial gauge
- equipped with short (sphere Ø 4 mm) or long (sphere Ø 8 mm) probe tip

IP67 | 3D | 1835 B shank | Delivered in case | CAD

Note:
The specified precision of 0.01 mm only applies if the original HAIMER probe tips are used
Probe tips see **251520** and **251530**.





N° article	251540 Zero Master, analogue	Mount	Length (without shank) mm	Probe ball Ø mm
U3D-ZM	●	cylindrical 10 mm	96	4

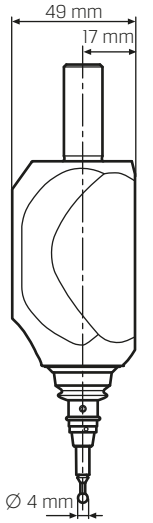
3D universal probe

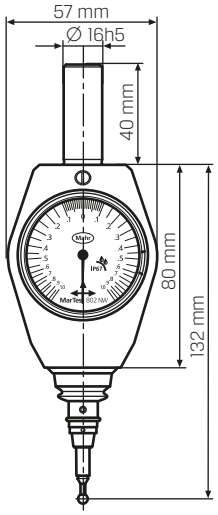
Mahr

Design:
- compact metal housing and long probe arm
- shock- and splash-proof
- very good readability
- large range in all axes (X, Y, Z)
- high accuracy and linearity

Use:
- for use on milling and EDM machines
- on machines with a tool changers
- for determining the zero position, the bore centre, the workpiece alignment
- for measurement of lengths and depths
- measurement covering the entire working range is possible.

IP65 | 3D | calibrated | 1835 A shank | Delivered in case







N° article	251550 analogue	Scale division mm	accuracy mm	Dial Ø mm	Clamping shank Ø h6 mm	Tolerance
802NW	●	0,010	0,001	50	16	h6

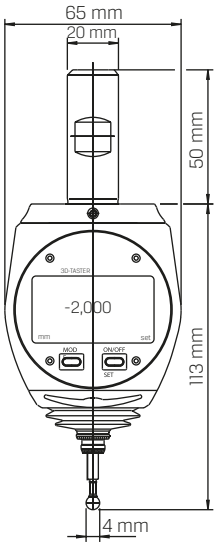
N° article	251555 Measuring inserts	Length mm	Probe ball diameter mm
802NWT	●	56,6	6

3D universal probe

HAIMER

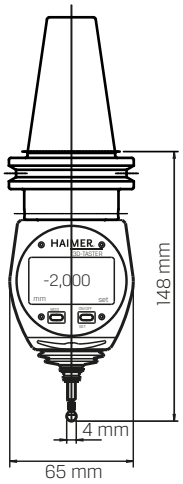
Design and use:
- for probing workpiece edges on milling and eroding machines
- spindle or countersunk head can be positioned quickly and safely at reference edges
- the approaching process can be monitored at the digital display and the zero position is found immediately
- without calculation, the measuring system of the machine can be zeroed
- 0.001 mm display with large digits

Note:
The specified precision of 0.001 mm only applies if the original HAIMER probe tips are used Probe tips see **251520** and **251530**.





IP64 | 3D | ISO 7388-1 | Form A | 1835 B shank | Delivered in case





N° article	251601 digital	Mount	Length (without shank) mm	Probe ball Ø mm
D3D	●	cylindrical 20 mm	113	4
SK40	●	ISO 7388-1 SK40	148	4

3D universal probe

Mahr

Design:
- compact metal housing and long probe arm
- shock-proof and splashproof for use on machines with a tool changer
- large range, 7 mm in all axes (X, Y, Z) prohibits damage to the stylus
- very good readability due to combined read-out:
  Bar display for dynamic path information, digital display for exact reading
- high accuracy and linearity

Use:
- on milling and EDM machines for zero point determination on workpieces
- determination of bore centres
- correction of the workpiece alignment
- for measurement of lengths and depths

Delivery:
With battery



Measuring of lenght



Zero point determination



Determination and correction of tool alignment



Hole centre determination

IP65 | 3D | 1835 A shank



N° article	251610 digital	Measuring range X, Y, Z axis mm	Reading mm	Display range of the bar display mm
802EW	●	-2 to 5	0,005	±2

N° article	251615 Spare probe	Length mm	Probe ball Ø mm
802EWT	●	31	4

Tool presetter

Your benefit:
- easy operation and quick familiarisation with minimal training
- fast measurement, setting and testing of tools (length and diameter)
- large number of measuring programs, e. g. to measure radial and axial run-out at the tool cutting edge
- fast and convenient printing of measurement results
- easy creation of the tool contour with the PRECImax software function



N° article	256490 ImageControllerbasic	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
3500	○ +	go-350	320	350	0
4200	○ +	go-420	420	420	100
6000	○ +	go-600	420	600	100

Your additional benefits with ICbasic:
- fast measurement, setting and testing of tools (length, diameter, radius and two cutting edge angles)
- 20-fold magnification of the cutting edge in incident light for quality control
- easy positioning of the camera to measure nominal values on the tool by means of the PRECInavigator compass needle
- spindle for power-operated tool clamping (optional)



N° article	256500 ImageController1	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
3500	○ +	IC1 - 350	320	350	0
4200	○ +	IC1 - 420	420	420	100
6000	○ +	IC1 - 600	420	600	100
6057	○ +	IC1 - 600/570	570	600	0

Your benefit in addition to IC1:
- simple and µm-accurate measuring and storage of tools
- integrated tool management, e. g. to store target values and tolerances and to create set-up sheets for workpiece production
- output of measurement results by label, list or directly to the CNC machine
- rotational centre measuring with monochrome camera
- 20-fold magnification of the cutting edge in incident light for quality control



N° article	256510 ImageController2, 13.3" touch screen monitor	256511 ImageController2, 24" touch screen monitor	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
3500	○ +	○ +	IC2 - 350	320	350	0
4200	○ +	○ +	IC2 - 420	420	420	100
6000	○ +	○ +	IC2 - 600	420	600	100
6057	○ +	○ +	IC2 - 600/570	570	600	0

Tool presetter

PREMUS

Your benefit in addition to IC2:
- integrated tool management, e. g. to store target values and tolerances and to create set-up sheets for workpiece production, including graphics management and tool management
- optional autofocus (automatic focusing of the tool blade)
- 28-fold magnification of the cutting edge in incident light for quality control



N° article	256515 ImageController3	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
3500	○ +	IC3 - 350	320	350	0
4200	○ +	IC3 - 420	420	420	100
6000	○ +	IC3 - 600	420	600	100
6057	○ +	IC3 - 600/570	570	600	0

Accessories for tool presetter

PREMUS

Design:
Adapter with integrated calibration edges (Capto only C3 and C4)

ST
- adapter ST 50 / ST 25, 30, 40, 45

HST
- adapter ST 50 / HST 32, 40, 50, 63, 80, 100
- for tools with/without coolant duct

HST eccentric
- adapter ST 50 / HST 32, 40, 50, 63, 80, 100
- manual eccentric tool clamping
- for tools with/without coolant duct

VDI
- adapter ST 50 / VDI 16, 20, 25, 30, 40, 50, 60 VDI 40 - 50 - 60
- not for power-driven tools

Capto eccentric
- adapter ST 50 / C4-E, C5-E, C6-E, C8-E
- manual tool clamping approx. 3/4 revolution

Measuring range losses can occur.



N° article	256520 Adapter
SK50/SK15	○
SK50/SK20	○
SK50/SK25	○
SK50/SK30	○
SK50/SK35	○
SK50/SK40	○
SK50/SK45	○
SK50/HSK32	○
SK50/HSK40	○
SK50/HSK50	○
SK50/HSK63	○

N° article	256520 Adapter
SK50/HSK80	○
SK50/HSK100	○
SK50/HSK-E25	○
SK50/HSK-E32	○
SK50/HSK-E40	○
SK50/HSK-E50	○
SK50/HSK-E63	○
SK50/HSK-E80	○
SK50/HSK-E100	○
SK50/VDI16	○
SK50/VDI20	○

N° article	256520 Adapter
SK50/VDI25	○
SK50/VDI30	○
SK50/VDI40	○
SK50/VDI50	○
SK50/VDI60	○
SK50/C4	○
SK50/C5	○
SK50/C6	○
SK50/C8	○

N° article	256525 Adapter
SK30	○
SK40	○
SK50	○
HSKA25	○
HSKA32	○
HSKA40	○
HSKA50	○
HSKA63	○

Version type SK50 vacuum:
- vacuum clamping, in addition to the 360° spindle brake and 4× 90° spindle indexing
- pneumatic activation via membrane keypad

Design type 0010:
- power-operated tool clamping with direct universal mounting of the adapters in the spindle
- direct mounting of the adapters and power clamping of the tool holders for high accuracy



N° article	256555	Design
0010	○	Universal spindle, power-operated
SK50VAKUUM	○	Vacuum spindle SK50

N° article	256552 Spindle brake and indexing	Design
SPINDLE-BRAKE	○	Spindle brake
SPINDLE-INDEX	○	Spindle indexing 4× 90°

N° article	256553 Programmes	Design
ICBINSPECT	○	Cutting edge inspection
ICBSW-PACK1	○	Measuring extension
ICBSW-PACK2	○	Measurement programs
ICBSW-TOOLS	○	Tool memory

Design:
Automated focusing of the tool blade

N° article	256556	Design
AUTOFOKUS	○	for IC2 and IC3

N° article	256558 Turning centre measuring device	Design
PRECITURN	○	for IC2

Accessories for tool presetter

PREMUS

N° article	256554 Keyboard and mouse incl. shelf	Design
0002	○	for IC, IC2 and IC3

N° article	256575 Software	Design
DOP	○	Data output package

N° article	256577 Programmes	Design
DNC	○	Data input, data output IC2
EINRICHTUNG	○	Setup management IC2
GRAFIK	○	Graphics management IC2

N° article	256576 Software	Design
DOPF	○	Post processor

N° article	256578	Design
SERVICE	○	Daily flat rate for commissioning/training
WARTUNG	○	Quality control and maintenance for tool presetters

N° article	256579 Transport	Design
FRACHT	○	Shipment
PACK	○	Standard packaging
PACK-SW	○	Wooden packaging, standard

N° article	256580 Printer	Design
EZLABEL-T	○	Labels 25 × 75 mm / white matt / 950 pieces (roll)
PRINT	○	Printer narrow for TH labels 25 - 54 mm plus 1 roll with 950 labels

N° article	256592 Barcode	Design
QR	○	QR barcode printing
ZIDF	○	Barcode scanner fix

N° article	256595	Design
EZPUTTY	●	Cleaning compound



Design:
- for carefree preparation of the compressed air supply directly at the tool presetter



Design:
- PVC dust cover to protect the presetting unit
- fitting for measuring ranges 400 and 600 as well as for IC1 and IC2

N° article	256596	Design
WARTUNGSEINHEIT	○	Maintenance unit

N° article	256598	Design
PROTECTION	○	Dust cover
SPINDLE-PROTECTION	○	Spindle cover

Data clip for tool holders

Design:
For tool holders ST-CAT40, HST-PSK63.



N° article	256600 Plastic	Design
0020	●	Data clip for tool holders, ∅ 63 mm
0025	●	Labels for data clips, roll of 950 pieces

Tool presetter UNO

Design:
- robust, durable grey cast iron construction
- thermally optimised material combination
- manual operation
- repeatability ± 5 µm
- precision spindle SK50, manually
- concentricity at the spindle 3 µm
- energy saving mode
- 7.0" colour touch screen
- memory for 99 zero points



N° article	257000 UNO smart, manual	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
0001	○ +	20|40	400	400	0
0003	○ +	20|70	400	700	0

Design:
- robust, durable grey cast iron construction
- motorised fine adjustment of the C-axis
- release-by-touch function
- repeatability ± 2 µm
- ultra-precision spindle SK50, autofocus with rotary encoder
- concentricity at the spindle 2 µm
- 24" touch screen
- spindle brake, motorised
- Heidenhain encoder in the C-axis
- motorised indexing 4 × 90° and 3 × 120°
- vacuum clamping
- ultra-precision spindle SK50, autofocus with rotary encoder
- premium base cabinet incl. shelf for up to 6 adapters
- memory for 1,000 zero points, tools and tool lists
- USB / LAN data output
- edge finder
- incident light
- label printer



N° article	257002 UNO autofocus, semi-automatic	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
0001	○ +	20|40	400	400	0
0003	○ +	20|70	400	700	0

Design:
- automatic tool measurement in 3 axes
- motorised fine adjustment
- release-by-touch function
- repeatability ± 2 µm
- concentricity at the spindle 2 µm
- 24" touch screen
- spindle brake, motorised
- motorised indexing 4 × 90° and 3 × 120°
- Heidenhain rotary encoder
- ultra-precision spindle SK50, autofocus
- vacuum clamping
- premium base cabinet incl. shelf for up to 6 adapters
- sigma function
- memory for 1,000 zero points, tools and tool lists
- USB / LAN data output
- edge finder
- incident light
- label printer



N° article	257003 UNO automatic drive, fully automated	Design	Measuring range X mm	Measuring range Z mm	Snap gauge mm
0001	○ +	20|40	400	400	0
0003	○ +	20|70	400	700	0

VIO basic, manual

- robust, durable gray cast iron construction
- manual fine adjustment
- tool weight up to 160 kg
- repeatability ± 2 µm
- concentricity on the spindle 2 µm
- 24" touch screen
- ultra-precision spindle SK50, manual
- spindle brake
- vacuum clamping
- premium base cabinet incl. storage for up to 9 adapter
- Sigma function
- unlimited tool storage
- operator management
- swiveling control panel
- USB / LAN data output
- Edge finder
- incident light
- label printer
- memory for 1.000 zero points, tools and tool lists





VIO linear, fully automatic

- highly precise axis positioning through linear drive
- motorized fine adjustment
- tool weight up to 160 kg
- repeatability ± 2 µm
- concentricity on the spindle 2 µm
- 24" touch screen
- ultra-precision spindle SK50, autofocus with rotary encoder
- premium base cabinet including storage for up to 9 adapter
- Sigma function
- unlimited tool storage
- operator management
- swiveling control panel
- USB/LAN data output
- Edge finder
- incident light
- label printer
- memory for 1.000 zero points, tools and tool lists
- vacuum clamping
- release-by-touch

VIO linear toolshrink, fully automatic

- highly precise axis positioning through linear drive
- fully automatic HAIMER induction unit
- concentricity on the spindle 2 µm
- ISS-U universal ultra-precision spindle with automatic adapter recognition, motorized indexing 4× 90° and 3× 120°
- best shrinking results
- automatic monitoring of the shrinking parameters
- suction device with filter
- contact cooling
- tool weight up to kg
- 24" multi-touch screen
- premium base cabinet including storage for up to 9 adapter
- spindle brake
- incident light
- edge finder
- release-by-touch
- memory for zero points, tools and tool lists
- Sigma function
- operator management
- label printer
- USB/LAN data output





ON-CALL SERVICE

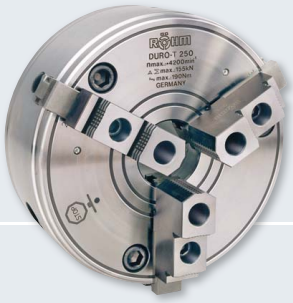
FOR TOOLS

THE FASTEST DELIVERY TIMES are the be-all and end-all for you. We know that! The answer to that: Our hotline. If we receive your order by 9 pm, it will be delivered the next working day*. And by the way: Our central warehouse is located right in the very heart of Germany. Therefore your tool will always find the shortest route to you. That´s our notion of tool logistics in the 21st century.

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* Only dispatch of items in stock (suitable for parcel service). We guarantee processing of the order MO – FR 5 p.m. – 9 p.m. and SA 8 a.m. – 11.30 a.m. on the day the order is received. We cannot guarantee the punctual delivery of the goods by the parcel service commissioned with the delivery.



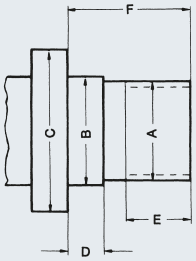
Centring adapter and machine spindle heads

Lathe chucks with cylindrical centring adapter to DIN 6350 and DIN 6351

These lathe chucks are screwed onto spindle heads to DIN 800 via a flange. The fixing is done with cylinder head screws. With a short taper flange, these chucks can also be used on spindle heads to DIN 55021, 55011 and 55029, but lathe chucks with a short taper are preferable due to the small projection.

A Tol. medium	B_g5	C Minimum dimension	D	E	F
M 20	21	30	6.3	10	20
M 24	25	36	8	12	24
M 33	34	50	9	14	30
M 39	40	56	10	16	35
M 45	46	67	11	18	40
M 52	55	80	12	20	45
M 60	62	90	14	22	50
M 76 × 6	78	112	16	30	63
M 105 × 6	106	150	20	40	80





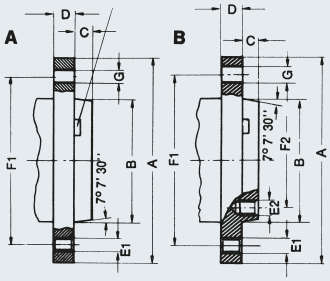
DIN 800, with thread

Lathe chucks with short taper to DIN 55021

These lathe chucks are mounted directly on spindle heads to DIN 55021.
Form A is fastened with studs and nuts, form B with hexagon socket screws.
Form A Threaded holes and through holes in the flange (without inner bolt circle). From plug size 4 onwards with tang.
Form B Threaded holes and through holes in the flange (outer bolt circle) and threaded holes in the inner bolt circle. From plug size 4 onwards with tang.

Spindle head size	A	B	C	D	Number of holes on outer bolt circle (F1)		F1 (outer bolt circle)	Number of holes inner bolt circle	F2 (inner bolt circle)
					E1	G			
3	102	53.985	11	16	3 × M10	3 × 10.5	750	–	–
4	112	63.525	11	20	3 × M10	3 × 10.5	850	–	–
5	135	82.575	13	22	7 × M10	4 × 10.5	104.8	8 × M10	61.9
6	170	106.390	14	25	7 × M12	4 × 13.0	133.4	8 × M12	82.6
8	220	139.735	16	28	7 × M16	4 × 17.0	171.4	8 × M16	111.1
11	290	196.885	18	35	12 × M20	6 × 21.0	2350	11 × M20	165.1
15	380	285.800	20	42	12 × M24	6 × 25.0	330.2	11 × M24	247.6
20	520	412.800	21	48	12 × M24	6 × 25.0	463.6	11 × M24	368.3





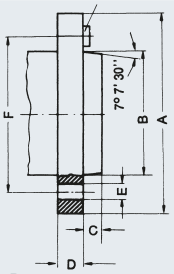
DIN 55021

Lathe chucks with short taper to DIN 55027 and DIN 55022

These lathe chucks are mounted directly on spindle heads to DIN 55027.
Fastening with stud bolt, collar nut and the bayonet mount attached to the spindle head. From plug size 4 onwards with tang.

Spindle head Size	A	B	C	D	Number of holes × E	F
3	102	53.985	11	16	3 × 21	75.0
4	112	63.525	11	20	3 × 21	85.0
5	135	82.575	13	22	4 × 21	104.8
6	170	106.390	14	25	4 × 23	133.4
8	220	139.735	16	28	4 × 29	171.4
11	290	196.885	18	35	6 × 36	235.0
15	400	285.800	19	42	6 × 43	330.2
20	540	412.800	21	48	6 × 43	463.6





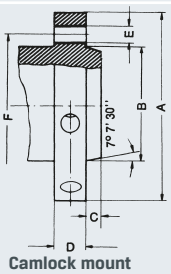
Bayonet mount (ISO 702/III)

Lathe chucks with short taper to DIN 55029 and ASA B 5.9 D 1

These lathe chucks are mounted directly on spindle heads to ASA B 5.9 type D 1
The mounting is done with Camlock studs.

Spindle head size	A	B	C	D	E	F
3	92.1	53.985	11.1	31.8	3 × 15.1	70.66
4	117.5	63.525	11.1	33.3	3 × 16.7	82.55
5	146.0	82.575	12.7	38.1	6 × 19.8	104.80
6	181.0	106.390	14.3	44.5	6 × 23.0	133.40
8	225.4	139.735	15.9	50.8	6 × 26.2	171.40
11	298.5	196.885	17.5	60.3	6 × 31.0	235.00
15	403.0	285.800	19.0	69.9	6 × 35.7	330.20





Camlock mount (ISO 702/III)

Three-jaw scroll chuck

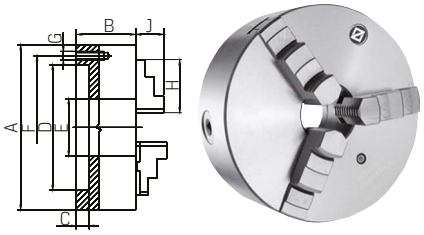
PRETEC

Design:
- with cylindrical centring socket to DIN 6350
- system Cushman
- chuck body made of top-grade special cast or forged steel
- concentricity and lateral accuracy to DIN 6386
- complete with hardened outside and inside jaws and spanner

Use:
Lathe chucks for lathes, drills, milling machines, welders, woodworking machines, dividing attachments, indexing rotary tables etc.

DIN 6350

Nº article	262001 Cast body (RG 2600)	262101 Steel body (RG 2600)	262001 B mm	262001 E mm	262001 max. speed min⁻¹	262101 B mm	262101 E mm	262101 max. speed min⁻¹	A mm	C mm	D mm	f mm	G mm	H mm	J mm	Weight kg
100	●	●	50	20	3500	50	20	5200	100	3	70	83	3×M8	42	17	2,8
125	●	●	56	32	3200	59,5	35,5	4800	125	4	95	108	3×M8	51	20	5
160	●	●	64	42	3000	68	42	4500	160	4	125	140	6×M10	70	32	10
200	●	●	75	55	2500	78	55	4000	200	4	160	176	6×M10	85	29	17,5
250	●	● +	85	76	2000	89	76	3500	250	5	200	224	6× M12	105	34	29
315	● +	● +	94	103	1500	96,2	103	2800	315	5	260	286	6× M16	125	43	50

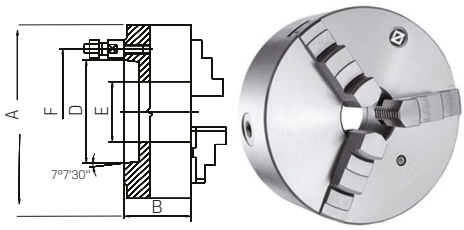


Design:
- with short taper mounting DIN 55027
- system Cushman, with forged steel body
- concentricity and lateral accuracy to DIN 6386
- complete with stud bolt, collar nuts
- hardened outside and inside jaws and spanner

Use:
Lathe chucks for lathes, drills, milling machines, welders, woodworking machines, dividing attachments, indexing rotary tables etc.

DIN 55027

Nº article	262201 Steel body	Taper size	A mm	B mm	D mm	E mm	f mm	max. speed min⁻¹	Weight kg
125/3	○	3	125	59,5	54	35,5	75	4800	5
125/4	○	4	125	59,5	63,5	35,5	85	4800	5
160/4	○	4	160	68	63,5	42	85	4500	9
160/5	○	5	160	68	82,6	42	104,8	4500	9
200/5	○	5	200	78	82,6	55	104,8	4000	19
200/6	○	6	200	78	106,4	55	133,4	4000	19
250/6	● +	6	250	89	106,4	76	133,4	3500	32
250/8	○ +	8	250	89	139,7	76	171,4	3500	32
315/6	○ +	6	315	96,2	106,4	103	133,4	2800	51
315/8	○ +	8	315	96,2	139,7	103	171,4	2800	51



Lathe chuck jaw set for three-jaw scroll chuck

PRETEC

Fitting for 262001, 262101, 262201, set = 3 jaws

A = jaw length
B = jaw width
C = jaw height

Nº article	262301 Drill jaws, outward stepped, hardened	for chuck ∅ mm	A mm	B mm	C mm
100	○	100	42	15	32
125	●	125	51	20	40
160	●	160	70	20	53
200	●	200	85	25	54
250	●	250	105	28	63
315	○	315	125	32	73



Nº article	262321 Turning jaws, inwardly stepped, hardened	for chuck ∅ mm	A mm	B mm	C mm
100	●	100	42	15	32
125	○	125	51	20	40
160	○	160	70	20	53
200	○	200	85	25	54
250	●	250	105	28	63
315	○	315	125	32	73



Nº article	262351 Soft block jaws, case-hardening possible	for chuck ∅ mm	A mm	B mm	C mm
100	●	100	42	15	32
125	●	125	51	20	40
160	●	160	70	20	53
200	●	200	85	25	54
250	●	250	105	28	63
315	●	315	125	32	73



Nº article	262381 Base jaws, hardened, without screws	for chuck ∅ mm	A mm	B mm	C mm
125	○	125	54	20	28
160	●	160	65	20	29
200	●	200	79	25	33
250	●	250	92	28	36
315	●	315	110	32	40



Nº article	262421 Soft top jaw, casehardening possible	for chuck ∅ mm	A mm	B mm	C mm
125	●	125	64	22	38.5
160	●	160	78	25	41.5
200	●	200	90	27	43.5
250	●	250	106	32	51.5
315	●	315	120	37	55



Spare screw set

PRETEC

Design:
- for soft and hard top jaws
- fitting for 262421, set = 3 jaws
- quality 8.8

Nº article	262430	for chuck ∅ mm	Contents
0125	●	125	3× M8×25 / 6× M8×20
0160	●	160	3× M10×30 / 6× M10×20
0200	●	200	3× M10×30 / 6× M10×20
0250	●	250	3× M12×40 / 6× M12×25
0315	●	315	3× M12×40 / 6× M12×25



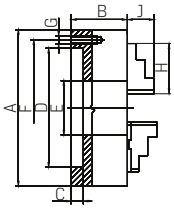
Four-jaw scroll chuck

PRETEC

DIN 6350

Design:
- with cylindrical centring socket to DIN 6350
- system Cushman
- chuck body made of top-grade special cast or forged steel
- concentricity and lateral accuracy to DIN 6386
- with hardened outside and inside jaws and spanner

Use:
Lathe chucks for lathes, drills, milling machines, dividing attachments, indexing rotary tables etc.





Item no.	262501 Cast body	262601 Steel body	A mm	262501 B mm	262501 E mm	262501 max. speed min⁻¹	262601 B mm	262601 E mm	262601 max. speed min⁻¹	C mm	D mm	f mm	G mm	H mm	J mm	Weight kg
100	–	○	100	-	–	-	50	20	5200	3	70	83	3×M8	42	17	2,8
125	●	○	125	56	32	3.200	59,5	35,5	4800	4	95	108	3×M8	51	20	5
160	●	○	160	64	42	3.000	68	42	4500	4	125	140	6×M10	70	32	10
200	●	○	200	75	55	2.500	78	55	4000	4	160	176	6×M10	85	29	17,5
250	●	○ +	250	85	76	2.000	89	76	3500	5	200	224	6× M12	105	34	29
315	○ +	○ +	315	94	103	1.500	96,2	103	2800	5	260	286	6× M16	125	43	50

Lathe chuck jaw set for four-jaw scroll chuck

PRETEC

Fitting for 262501, 262601, set = 4 jaws

A = jaw length
B = jaw width
C = jaw height



N° article	262801 Drill jaws, outward stepped, hardened	for chuck ∅ mm	A mm	B mm	C mm
100	○	100	42	15	32
125	○	125	51	20	40
160	○	160	70	20	53
200	○	200	85	25	54
250	○	250	105	28	63
315	○	315	125	32	73



N° article	262821 Turning jaws, inwards stepped, hardened	for chuck ∅ mm	A mm	B mm	C mm
100	○	100	42	15	32
125	○	125	51	20	40
160	○	160	70	20	53
200	○	200	85	25	54
250	○	250	105	28	63
315	○	315	125	32	73



N° article	262851 Soft block jaws, hardenable in use	for chuck ∅ mm	A mm	B mm	C mm
100	○	100	42	15	32
125	○	125	51	20	40
160	●	160	70	20	53
200	●	200	85	25	54
250	●	250	105	28	63
315	○	315	125	32	73



N° article	262881 Base jaws, hardened, (without screws)	for chuck ∅ mm	A mm	B mm	C mm
125	○	125	54	20	28
160	○	160	65	20	29
200	○	200	79	25	33
250	●	250	92	28	36
315	○	315	110	32	40



N° article	262921 Soft top jaws, hardenable in use	for chuck ∅ mm	A mm	B mm	C mm
125	○	125	64	22	38.5
160	○	160	78	25	41.5
200	○	200	90	27	43.5
250	○	250	106	32	51.5
315	○	315	120	37	55

Spare screw set

PRETEC

Design:
- for soft and hard top jaws
- fitting for 262921, set = 4 jaws
- quality 8.8



N° article	262930	for chuck ∅ mm	Contents
0125	●	125	4× M8×25 / 8× M8×20
0160	●	160	4× M10×30 / 8× M10×20
0200	●	200	4× M10×30 / 8× M10×20
0250	●	250	4× M12×40 / 8× M12×25
0315	●	315	4× M12×40 / 8× M12×25

Three-jaw scroll chuck DURO-M

Design and use:
- chuck body (and all other components) made of steel
- centrically clamping via face spiral
- face spiral drop-forged and highly quenched and tempered, thread flanks ground on both sides
- jaws in chuck ground for concentricity
- high concentricity
- jaws always burnished
- minimal interference contour
- high power transmission
- drip edge for coolant

Note:
Matching jaws and accessories shelves from page 26/492 onwards.

Scope of delivery:
Chuck, chuck key, jaws..

NEW



DIN 6350

N° article	263052 Steel body	∅ mm	Mount mm	Fixing screw thread	Torque Nm	Continuity mm	Jaw height mm	Chuck height mm	max. speed min $^{-1}$	Clamping force kN	Weight kg
80	○	80	56	3×M6	30	19	14	39,5	7000	13	1,5
100	○	100	70	3× M8	60	20	18	50	6300	27	3,3
125	○	125	95	3× M8	80	32	22,5	56	5500	31	5,4
160	○	160	125	3×M10	110	42	26	65	4600	47	8,8
200	○	200	160	3×M10	140	55	32,5	73,5	4000	55	15,2
250	○	250	200	3×M12	150	76	40	82	3000	63	25,6
315	○	315	260	3×M16	180	103	46	95	2300	69	51,2
400	○	400	330	3×M16	240	136	43	105	1800	92	80,5
500	○	500	420	3×M16	260	190	54,5	120	1300	100	124
630	○	630	545	3×M16	280	240	54,5	135	850	105	267

DIN 55027

N° article	263152 Steel body	∅ mm	Mount mm	Short taper	Torque Nm	Continuity mm	Jaw height mm	Chuck height mm	max. speed min $^{-1}$	Clamping force kN	Weight kg
125/4	○	125	63,5	4	80	32	22,5	69	5500	31	6,2
160/4	○	160	63,5	4	110	42	26	66	4600	47	9,5
160/5	○	160	82,5	5	110	42	26	66	4600	47	9,5
200/5	○	200	82,5	5	140	55	32,5	74,5	4000	55	16,7
200/6	○	200	106,4	6	140	55	32,5	74,5	4000	55	16,7
250/6	○	250	106,4	6	150	76	40	83	3000	63	27,5
250/8	○	250	139,7	8	150	76	40	83	3000	63	28,4
315/6	○	315	106,4	6	180	103	46	96	2300	69	52,5
315/8	○	315	139,7	8	180	103	46	96	2300	69	53

Four-jaw scroll chuck DURO-M

Design and use:
- chuck body (and all other components) made of steel
- centrically clamping via face spiral
- face spiral drop-forged and highly quenched and tempered, thread flanks ground on both sides
- jaws in chuck ground for concentricity
- high concentricity
- jaws always burnished
- minimal interference contour
- high power transmission
- drip edge for coolant

Note:
You can find suitable jaws and accessories at page 26/492.

Scope of delivery:
Chuck, chuck key, jaws

NEW



DIN 6350

N° article	263252 Steel body	∅ mm	Mount mm	Fixing screw thread	Torque Nm	Continuity mm	Jaw height mm	Chuck height mm	max. speed min $^{-1}$	Clamping force kN	Weight kg
80	○	80	56	3×M6	30	19	14	39,5	7000	13	1,7
100	○	100	70	3×M8	60	20	18	50	6300	27	3,3
125	○	125	95	3×M8	80	32	22,5	56	5500	31	5,3
160	○	160	125	3×M10	110	42	26	65	4600	47	9,2
200	○	200	160	3×M10	140	55	32,5	73,5	4000	55	15,8
250	○	250	200	3×M12	150	76	40	82	3000	63	26,8
315	○	315	260	3×M16	180	103	46	95	2300	69	52,3
400	○	400	330	3×M16	240	136	43	105	1800	92	84,5
500	○	500	420	6×M16	260	190	54,5	120	1300	100	149
630	○	630	545	6×M16	280	240	54,5	135	850	105	225

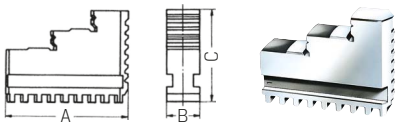
DIN 55027

N° article	263352 Steel body	∅ mm	Mount mm	Short taper	Torque Nm	Continuity mm	Jaw height mm	Chuck height mm	max. speed min $^{-1}$	Clamping force kN	Weight kg
125/4	○	125	63,5	4	80	32	22,5	69	5500	31	6,7
160/4	○	160	63,5	4	110	42	26	66	4600	47	9,9
160/5	○	160	82,5	5	110	42	26	66	4600	47	9,8
200/5	○	200	82,5	5	140	55	32,5	74,5	4000	55	17,2
200/6	○	200	106,4	6	140	55	32,5	74,5	4000	55	17,3
250/6	○	250	106,4	6	150	76	40	83	3000	63	28,8
250/8	○	250	139,7	8	150	76	40	83	3000	63	30,3
315/6	○	315	106,4	6	180	103	46	96	2300	69	55,3
315/8	○	315	139,7	8	180	103	46	96	2300	69	57,1

Lathe chuck jaw set for RÖHM three- and four-jaw chucks DIN 6350

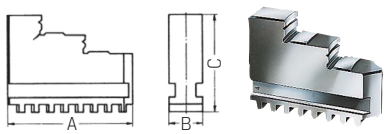
Design:
- hardened
- stepped outwards

Note:
After insertion into the chuck, hard jaws must be ground to concentricity on the lathe under light preload, e. g. during a general overhaul



N° article	263500 Drill jaws (Set = 3 pieces)	263550 Drill jaws (Set = 4 pieces)	for chuck ∅ mm	A mm	B mm	C mm
80	○	○	80	37	12	26
100	○	○	100	48	14	33,5
125	○	○	125	52	18	41,5
160	●	○	160	61	18	47,5
200	●	●	200	69	20	53,5
250	●	○	250	90	24	67,5
315	○	○	315	130	34	79,5
350/400	○	○	350	130	34	79,5
500	○	○	500	190	42	95
630	○	○	630	190	42	95

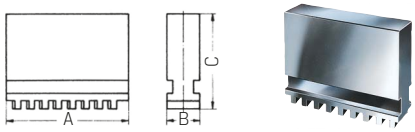
Design:
- hardened
- stepped inwards



N° article	263600 Turning jaws (Set = 3 pieces)	263650 Turning jaws (Set = 4 pieces)	for chuck ∅ mm	A mm	B mm	C mm
80	○	○	80	37	12	26
100	○	○	100	48	14	33,5
125	○	○	125	52	18	41,5
160	●	○	160	61	18	47,5
200	●	○	200	69	20	53,5
250	○	○	250	90	24	67,5
315	○	○	315	130	34	79,5
350/400	○	○	350	130	34	79,5
500	○	○	500	190	42	95
630	○	○	630	190	42	95

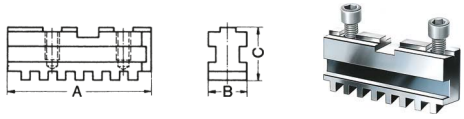
Lathe chuck jaw set for RÖHM three- and four-jaw chucks DIN 6350

Design:
- case hardenable
- material 16MnCr5



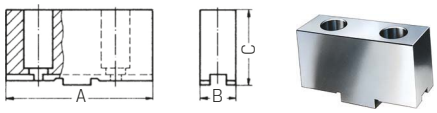
Art.-Nr.	263700 Soft block jaws (Set = 3 pcs)	263750 Soft block jaws (Set = 4 pcs)	ffor chuck ∅ mm	A mm	B mm	C mm
80	●	○	80	37	12	26
100	●	○	100	48	14	33,5
125	●	○	125	52	18	41,5
160	●	●	160	61	18	47,5
200	●	●	200	69	20	53,5
250	●	●	250	90	24	67,5
315	●	●	315	130	34	79,5
350/400	○	○	350	130	34	79,5
500	○	○	500	190	42	95
630	○	○	630	190	42	95

Design:
- hardened
- with mounting screws



Art.-Nr.	263800 Base jaw (Set = 3 pieces)	263850 Base jaw (Set = 4 pieces)	ffor chuck ∅ mm	A mm	B mm	C mm
100	○	○	100	46	14	22
125	○	○	125	55	18	27
160	●	○	160	65	18	30
200	●	○	200	78	20	31
250	●	○	250	92	24	38
315	●	○	315	108	34	43
350/400	○	○	350	127	34	48
500	○	○	500	165	42	52
630	○	○	630	203	42	52

Design:
- case hardenable
- material 16MnCr5

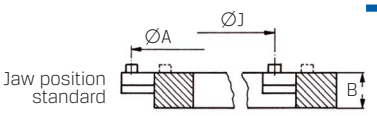


Art.-Nr.	263960 Soft top jaws (Set = 3 pcs)	263980 Soft top jaws (Set = 4 pcs)	for chuck ∅ mm	A mm	B mm	C mm
100	○	○	100	53	22,5	30
125	○	○	125	62	26,5	38
160	●	○	160	74	28,5	42
200	●	○	200	87	30,5	43
250	●	○	250	103	36,5	53

Art.-Nr.	263960 Soft top jaws (Set = 3 pcs)	263980 Soft top jaws (Set = 4 pcs)	for chuck ∅ mm	A mm	B mm	C mm
315	●	○	315	120	42,5	58
350/400	○	○	350	137	42,5	65
500	○	○	500	140	50,5	80
630	○	○	630	140	50,5	80

Accessories for lathe chucks

Design and use:
- for turning of unhardened and grinding of hardened jaws
- integrated drop-forged spiral ring
- the ring moves 3 reversible setting jaws steplessly inwards or outwards
- suited for internal grinding or regrinding of hardened top jaws to concentricity

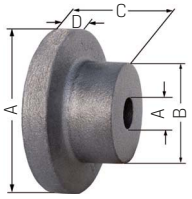


N° article	264500 for three-jaw chucks	Outer diameter mm	Inner diameter mm	Attach area ∅ position J mm	Attach area ∅ position A mm	Weight kg	mainly for lathe chucks mm
153/110	○	153	110	50 - 115	150 - 215	1,6	125/200/250
176/110	○	176	110	35 - 125	170 - 260	3,4	125/200/250
215/135	○	215	135	70 - 140	215 - 285	5	125/200/250
244/162	○	244	162	100 - 175	240 - 315	5,7	250
290/208	○	290	208	145 - 215	290 - 360	6,9	315
342/260	○	342	260	160 - 270	330 - 440	8,5	400





Design:
- for cylindrical seats
- the raw flange has to be machined and adapted to the machine as well as to the chuck end



N° article	264600 Raw flange	A mm	Chuck diameter mm	Inch	B mm	C mm	D mm	E mm
135	○	135	125	5	80	58	20	25
170	○	170	160	6 1/4	80	58	20	30
210	○	210	200	8	92	66	22	40

Design:
- stud bolts and locknuts or stud bolts for Camlock
- stud bolts and locknuts DIN 55027 or Camlock bolts DIN 55029 are strength class 8.8 DIN 267/3

Stud bolt and collar nut DIN 55027



N° article	264720 Stud bolt with collar nut	for taper size	required number of pieces per set	Thread size x length mm
4	○	4	3	M10×39
5	●	5	4	M10×43
6	●	6	4	M12×50
8	●	8	4	M16×60
11	●	11	6	M20×75

N° article	264740 Camlock bolt	for taper size	required number of pieces per set	Thread size x length mm
4	○	4	3	7/16 - 20×37.0
5	○	5	6	1/2 - 20×43.0
6	○	6	6	5/8 - 18×49.0
8	○	8	6	3/4 - 16×55.5
11	○	11	6	7/8 - 14×67.0

Stud bolt for Camlock DIN 55029



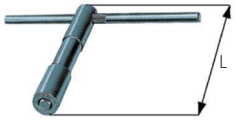
Accessories for lathe chucks

Use:
For scroll chucks

Lathe chuck key
Cat. no. 264750



Lathe chuck
safety key
Cat. no. 264780



N° article	264750	264780 with spring-loaded pin, normal length	264750 L mm	264780 L mm	for chuck diameter mm	Square mm
80	○	○	62	110	80	6
100	●	○	75	130	100	8
125	○	○	80	130	125	9
140	●	○	80	130	140	9
160	●	●	90	160	160	10
200	●	●	100	160	200	11

N° article	264750	264780 with spring-loaded pin, normal length	264750 L mm	264780 L mm	for chuck diameter mm	Square mm
250	●	●	100	160	250	12
315	●	○	110	200	315	14
350	○	○	140	200	350	14
400	●	○	140	250	400	17
500	○	○	150	250	500	19
630	○	○	150	250	630	19

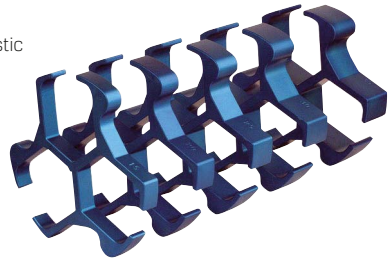
Lathe chuck stop with magnet

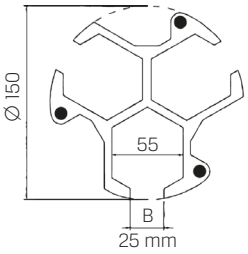
PREMUS®

Design:
- with Posistop it is uncomplicated to machine small and short pieces on the lathe
- axial stop for workpieces
- replaces all sorts of spacers
- available in 5 heights (15, 20, 25, 30 and 35 mm), attached by 3 magnets to the rotary body

Scope of delivery:
Blister box made of recycled plastic with euro hole suspension

SET:
In wooden box, 5-partite







N° article	264550	Design
SET	●	SET 15 / 20 / 25 / 30 / 35 mm

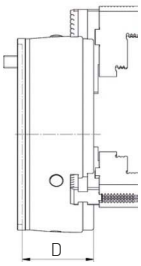
N° article	264550	Jaw width mm	Expandable mm	Height mm	Plane parallelism mm	Weight kg
0015	●	24	56	15	0.01	0,145
0020	●	24	56	20	0.01	0,19
0025	●	24	56	25	0.01	0,236
0030	●	24	56	30	0.01	0,282
0035	○	24	56	35	0.01	0,328

Three-jaw key bar chuck DURO, with jaw locking system

Design:
- with cylindrical centre mount
- for threaded spindle heads to DIN 800
- steel body drop-forged
- jaw guides hardened and ground
- extremely narrow dimensional and angular tolerances of the functional parts
- the chucks are balanced
- due to the key bar drive, the concentricity accuracy is twice as high as required by DIN 6386
- top jaws, screwed together with the base jaws to form a unit
- with locking slide
- for turning operations with extreme demands to concentricity and repeatability and high gripping force

DIN 6350



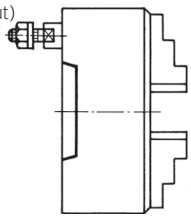


N° article	265010 with one-piece reversible jaws	265020 with base and reversible top jaws	Chuck Ø mm	Clamping range outside mm	Clamping range inside mm	Through hole mm	Bore can be drilled out to mm	max. speed min^{-1}	Clamping force, max. N
160	○	○	160	5-161	67-174	42	45	5400	61
200	○	○	200	7-207	71-214	52	55	4600	95
250	○ +	○ +	250	8-253	99-261	62	75	4200	155
315	○ +	○ +	315	12-323	102-319	87	102	3300	200
400	○ +	○ +	400	16-413	120-412	102	130	2200	230
500	○ +	○ +	500	64-501	166-500	162	180	1900	255

N° article	265070 with base and reversible top jaws	Chuck Ø mm	Taper size	Clamping range outside mm	Clamping range inside mm	Through hole mm	Bore can be drilled out to mm	max. speed min^{-1}	Clamping force, max. N
160/5	○	160	5	5-161	67-174	42	45	5400	61
200/5	○	200	5	7-207	71-214	52	55	4600	95
200/6	○	200	6	7-207	71-214	52	55	4600	95
250/6	○ +	250	6	8-253	99-261	62	75	4200	155
250/8	○ +	250	8	8-253	99-261	62	75	4200	155
315/8	○ +	315	8	12-323	102-319	87	102	3300	200
315/11	○ +	315	11	12-323	102-319	87	102	3300	200
400/8	○ +	400	8	16-413	120-412	102	130	2200	230
400/11	○ +	400	11	16-413	120-412	102	130	2200	230

Design:
- with short taper mount for spindle heads DIN 55027
- DIN 55022 and ISO 702/III (with stud bolt and collar nut)

DIN 55027



Lathe chuck jaw set for DURO key bar chucks

Note:
Subsequently purchased jaws must be ground in the chuck
Set = 3 jaws

A = jaw length
B = jaw width
C = jaw height

N° article	265075 One-piece jaw EB hardened	for chuck ∅ mm	A mm	B mm	C mm
160	○	160	77,7	20	45
200	○	200	94,7	22	60
250	○	250	114	26	70
315	○	315	130	32	79
400	○	400	167	45	93
500	○	500	167	45	93



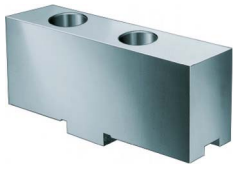
N° article	265077 Block jaws BL unhardened	for chuck ∅ mm	A mm	B mm	C mm
160	○	160	84,4	20	45
200	○	200	98,4	22	60
250	●	250	118,7	26	70
315	○	315	136,6	32	79
400	○	400	173,6	45	93
500	○	500	173,6	45	93



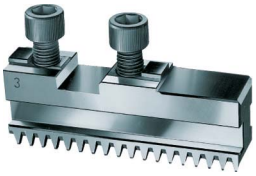
N° article	265080 Reversible top jaws UB hardened	for chuck ∅ mm	A mm	B mm	C mm
160	○	160	61,5	20,4	32.5
200	○	200	70,5	24,4	38
250	○	250	92	34,4	50
315	○	315	107	35,7	56
400	○	400	130	50,4	72
500	○	500	130	50,4	72



N° article	265082 Unstepped top jaws AB, untempered	for chuck ∅ mm	A mm	B mm	C mm
160	●	160	85	20,3	36.5
200	●	200	105	22	40
250	●	250	125	30,4	50
315	●	315	145	34,3	50
400	○	400	180	50,5	73
500	○	500	180	50,5	73



N° article	265084 Base jaws GB, with mounting bolts	for chuck ∅ mm	A mm	B mm
160	●	160	74	20
200	●	200	90	22
250	●	250	110	26
315	●	315	125	32
400	○	400	160	45
500	○	500	160	45



Accessories for DURO key bar chucks

N° article	265086 Lathe chuck key	265088 Lathe chuck safety key	for chuck ∅ mm
160	○	○	160
200	○	●	200
250	○	○	250
315	○	○	315
400	○	○	400
500	○	○	500



245086



245088

Manual chuck ROTA-S plus

Design and use:
- with quick jaw change system ROTA-S plus (helically toothed base jaws)
- optimum clamping results, especially on cycle controlled lathes
- the key bar type drive guarantees utmost precision, true running and repeatability as well as highest clamping power
- no reworking of jaws required

Scope of delivery:
- manual chuck ROTA-S plus
- 1 set of stepped block jaws (ground out on the chuck)
- spanner and mounting bolts

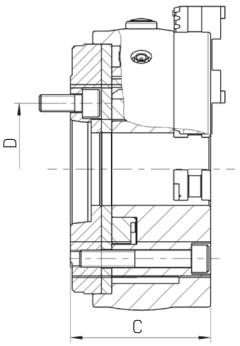
DIN 6353



N° article	265300 DIN 6353	Spindle	max. torque Nm	Clamping force, max. N	max. speed min⁻¹	Travel/ jaw mm	Tooth pitch mm	Weight kg
160	○	Z145	70	60	5200	6.5	4,8	8,5
200	○	Z185	100	95	4600	6.8	4,8	16,9
250	○ +	Z235	200	160	4000	7.5	6	29,9
315	○ +	Z300	210	180	3200	9.7	7	56

DIN 55028

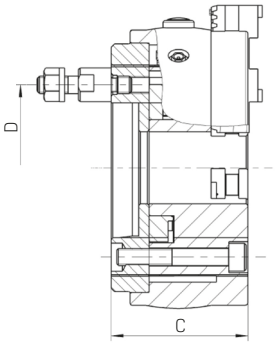
DIN 55028 A
ISO 702/IA
ASA B5.9



N° article	265301 DIN 55028 A	Spindle	max. torque Nm	Clamping force, max. N	max. speed min⁻¹	Travel/ jaw mm	Tooth pitch mm	Weight kg
160/4	○	A4	70	60	5200	6.5	4,8	13,5
160/5	○	A5	70	60	5200	6.5	4,8	10,3
200/4	○	A4	100	95	4600	6.8	4,8	19,6
200/5	○	A5	100	95	4600	6.8	4,8	19,6
250/5	○ +	A5	200	160	4000	7.5	6	31,1
250/6	○ +	A6	200	160	4000	7.5	6	31,2
250/8	○ +	A8	200	160	4000	7.5	6	31,3
315/6	○ +	A6	210	180	3200	9.7	7	59
315/8	○ +	A8	210	180	3200	9.7	7	58
315/11	○ +	A11	210	180	3200	9.7	7	62

DIN 55028

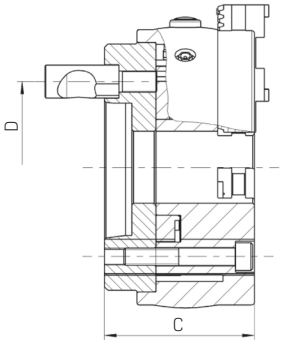
DIN 55028 C
ISO 702/III
ASA B5.9



N° article	265302 DIN 55028 C	Spindle	max. torque Nm	Clamping force, max. N	max. speed min⁻¹	Travel/ jaw mm	Tooth pitch mm	Weight kg
160/4	○	C4	70	60	5200	6.5	4,8	9,2
160/5	○	C5	70	60	5200	6.5	4,8	9,4
160/6	○	C6	70	60	5200	6.5	4,8	10,1
200/4	○ +	C4	100	95	4600	6.8	4,8	18,6
200/5	○	C5	100	95	4600	6.8	4,8	18,7
200/6	○	C6	100	95	4600	6.8	4,8	18,6
200/8	○	C8	100	95	4600	6.8	4,8	21,5
250/5	○ +	C5	200	160	4000	7.5	6	33,4
250/6	○ +	C6	200	160	4000	7.5	6	33,3
250/8	○ +	C8	200	160	4000	7.5	6	33,5
315/6	○ +	C6	210	180	3200	9.7	7	63
315/8	○ +	C8	210	180	3200	9.7	7	63
315/11	○ +	C11	210	180	3200	9.7	7	62

DIN 55029

DIN 55029
ISO 702/II
ASA B5.9 D



N° article	265303 DIN 55029	Spindle	max. torque Nm	Clamping force, max. N	max. speed min⁻¹	Travel/ jaw mm	Tooth pitch mm	Weight kg
160/4	○	D4	70	60	5200	6.5	4,8	10,1
160/5	○	D5	70	60	5200	6.5	4,8	10,3
160/6	○	D6	70	60	5200	6.5	4,8	10
200/4	○	D4	100	95	4600	6.8	4,8	19,5
200/5	○	D5	100	95	4600	6.8	4,8	19,5
200/6	○	D6	100	95	4600	6.8	4,8	19,8
250/5	○ +	D5	200	160	4000	7.5	6	34,5
250/6	○ +	D6	200	160	4000	7.5	6	35,4
250/8	○ +	D8	200	160	4000	7.5	6	35,5
315/6	○ +	D6	210	180	3200	9.7	7	65
315/8	○ +	D8	210	180	3200	9.7	7	66
315/11	○ +	D11	210	180	3200	9.7	7	66

Accessories for manual chuck Rota-S

Design:
- special grease LINOMAX plus
- homogeneous, highly water-resistant grease paste based on a specially selected mineral oil/ synthetic oil combination with a high proportion of compatible highly effective micro-white solid lubricants

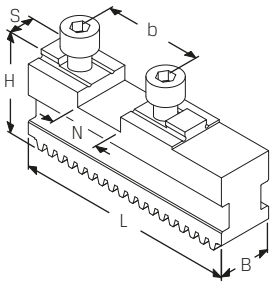
Product properties:
- constant low friction coefficients
- very high adhesion
- extreme reduction of fretting corrosion risk
- light-coloured, clean in application and use
- corrosion protection and water resistance
- not subject to labelling requirements
- very high pressure resistance
- long tool life
- suitable for non-ferrous metals

N° article	265312 Special grease	Design
0500	○	Special grease, cartridge 0.5 kg
1000	○	Special grease, can 1 kg

Lathe chuck jaw set hard base jaw

Design:
- with cylinder screws
- hardened and precision ground

Delivery:
Set of 3 pieces each



N° article	265320 Standard, type SFG	Type of toothing	B mm	H mm	N mm	S mm	L mm	b mm	Total weight kg	Chucks
160	○	inclined	20	29,5	18	8	74	32	0,8	ROTA-S 160 | ROTA-S plus 160
200	○	inclined	22	35	20	8	90	40	1,2	ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | THW 210-F
250	○	inclined	26	40	20	8	110	40	2	ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | THW 250 - 265-F
315	○	inclined	32	46	26	12	125	54	3,1	ROTA-S 315 | ROTA-S plus 315 | THW 315 - 400-F
400	○	inclined	45	55	30	18	160	60	6,6	ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | THW 500-F
630	○	inclined	65	62	40	24	230	82	17,1	ROTA-S 630 | ROTA-S plus 630
630/4	○	inclined	65	62	30	18	230	60	16,2	ROTA-S 630 | ROTA-S plus 630

N° article	265321 shortened version, type SFGK	Type of toothing	B mm	H mm	N mm	S mm	L mm	b mm	Total weight kg	Chucks
200	○	inclined	22	35	20	10	80	40	1,1	ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | THW 210-F
250	○	inclined	26	40	20	12	91	40	1,6	ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | THW 250 - 265-F

N° article	265322 extended version, type SFGL	Type of toothing	B mm	H mm	N mm	S mm	L mm	b mm	Total weight kg	Chucks
200	○	inclined	22	35	20	10	110	40	1,5	ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | THW 210-F
250	○	inclined	26	40	20	12	122	40	2,3	ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | THW 250 - 265-F
315	○	inclined	32	46	26	12	160	54	4	ROTA-S 315 | ROTA-S plus 315 | THW 315 - 400-F
400	○	inclined	45	55	30	18	200	60	8,6	ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | THW 500-F

N° article	265324 Standard, type GBK	Type of toothing	B mm	H mm	N mm	S mm	L mm	b mm	Total weight kg	Chucks
160	○	straight	20	30	18	8	65	32	0,6	ROTA-G 160 | ROTA NCW 185 | ROTA THW 165 | ROTA THW plus 165 - 185 | THW 165
200	○	straight	22	32	20	10	85	40	1	ROTA-G 200 | ROTA NCW 225 | ROTA THW 210 | ROTA THW plus 215 | THW 210-R | ROTA THW vario 215
250	○	straight	26	40	20	12	104	40	1,8	ROTA-G 250 | ROTA NCW 265 | ROTA THW 250 | ROTA THW plus 260 | THW 250 - 265-R
315	○	straight	32	46	20	12	115	40	3	ROTA-G 315 | ROTA NCW 315 | ROTA THW 315 | ROTA THW plus 315 | THW 315-R
400	○	straight	32	46	26	12	125	54	3	ROTA-G 400 | ROTA THW 400 | THW 400-R
500	○	straight	45	61	30	18	160	60	8,6	ROTA-G 500 | ROTA THW 500 | THW 500-R
630	○	straight	45	61	30	18	203	60	10,5	ROTA THW 630 | THW 630-R | ROTA THW 800

N° article	265325 extended version, type GBKL	Type of toothing	B mm	H mm	N mm	S mm	L mm	b mm	Total weight kg	Chucks
200	○	straight	22	32	20	10	105	40	1,2	ROTA-G 200 | ROTA NCW 225 | ROTA THW 210 | ROTA THW plus 215 | THW 210-R | ROTA THW vario 215
250	○	straight	26	40	20	12	126	40	2,4	ROTA-G 250 | ROTA NCW 265 | ROTA THW 250 | ROTA THW plus 260 | THW 250 - 265-R
315	○	straight	32	46	20	12	137	40	3,5	ROTA-G 315 | ROTA NCW 315 | ROTA THW 315 | ROTA THW plus 315 | THW 315-R

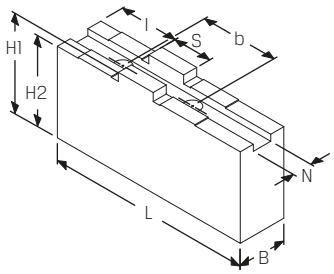
N° article	265326 with 1/2 tooth pitch, type GBK-V	Type of toothing	B mm	H mm	N mm	S mm	L mm	b mm	Total weight kg	Chucks
160	○	straight	20	30	18	8	65	32	0,6	ROTA-G 160 | ROTA NCW 185 | ROTA THW 165 | ROTA THW plus 165 - 185 | THW 165
200	○	straight	22	32	20	10	85	40	1	ROTA-G 200 | ROTA NCW 225 | ROTA THW 210 | ROTA THW plus 215 | THW 210-R | ROTA THW vario 215
250	○	straight	26	40	20	12	104	40	1,8	ROTA-G 250 | ROTA NCW 265 | ROTA THW 250 | ROTA THW plus 260 | THW 250 - 265-R
315	○	straight	32	46	20	12	115	40	3	ROTA-G 315 | ROTA NCW 315 | ROTA THW 315 | ROTA THW plus 315 | THW 315-R
400	○	straight	32	46	26	12	125	54	3	ROTA-G 400 | ROTA THW 400 | THW 400-R

Lathe chuck jaw set soft top jaw

Design:
- with tongue and groove
- steel 16 MnCr 5
- case-hardenable

Delivery:
Set of 3 pieces each

Note:
630: Please order 2 sets with 3 pieces each = 1 set for a six-jaw chuck!



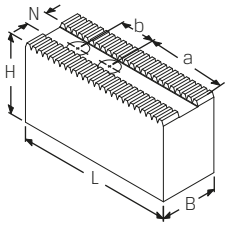
N° article	265330 Type SFA	B mm	High$_1$ mm	High$_2$ mm	N mm	S mm	L mm	b mm	l mm	Total weight kg	Chucks
160	○	20	40	36	8	18	85	32	25	1,2	ROTA-G 160 | ROTA NCW 185 | ROTA-S 160 | ROTA-S plus 160 | ROTA THW 165 | ROTA NCR 200[1)] | ROTA THW plus 165 - 185 | THW 165
160/1	○	30	55,5	51,5	8	18	85	32	19	2,7	ROTA-G 160 | ROTA NCW 185 | ROTA-S 160 | ROTA-S plus 160 | ROTA THW 165 | ROTA NCR 200[1)] | ROTA THW plus 165 - 185 | THW 165
160/2	○	35	40	36	8	18	63	32	19	1,6	ROTA-G 160 | ROTA NCW 185 | ROTA-S 160 | ROTA-S plus 160 | ROTA THW 165 | ROTA NCR 200[1)] | ROTA THW plus 165 - 185 | THW 165
160/3	○	40	60	56	8	18	70	32	19	3,3	ROTA-G 160 | ROTA NCW 185 | ROTA-S 160 | ROTA-S plus 160 | ROTA THW 165 | ROTA NCR 200[1)] | ROTA THW plus 165 - 185 | THW 165
160/4	○	40	80	76	8	18	85	32	19	5,6	ROTA-G 160 | ROTA NCW 185 | ROTA-S 160 | ROTA-S plus 160 | ROTA THW 165 | ROTA NCR 200[1)] | ROTA THW plus 165 - 185 | THW 165
200	○	22	47	43	10	20	105	40	35	2	ROTA-G 200 | ROTA NCW 225 | ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | ROTA THW 210 | ROTA THW plus 215 | ROTA THWB 210 | THW 210 R/F | ROTA THW vario 215
200/1	○	30	55,5	51,5	10	20	100	40	23	3,2	ROTA-G 200 | ROTA NCW 225 | ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | ROTA THW 210 | ROTA THW plus 215 | ROTA THWB 210 | THW 210 R/F | ROTA THW vario 215
200/2	○	22	55,5	51,5	10	20	100	40	23	2,2	ROTA-G 200 | ROTA NCW 225 | ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | ROTA THW 210 | ROTA THW plus 215 | ROTA THWB 210 | THW 210 R/F | ROTA THW vario 215
200/3	○	40	40	36	10	20	70	40	23	2,1	ROTA-G 200 | ROTA NCW 225 | ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | ROTA THW 210 | ROTA THW plus 215 | ROTA THWB 210 | THW 210 R/F | ROTA THW vario 215
200/4	○	40	60	56	10	20	85	40	23	4	ROTA-G 200 | ROTA NCW 225 | ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | ROTA THW 210 | ROTA THW plus 215 | ROTA THWB 210 | THW 210 R/F | ROTA THW vario 215
200/5	○	40	80	76	10	20	95	40	23	6,1	ROTA-G 200 | ROTA NCW 225 | ROTA NCWF 210 | ROTA-S 200 | ROTA-S plus 200 | ROTA THW 210 | ROTA THW plus 215 | ROTA THWB 210 | THW 210 R/F | ROTA THW vario 215
250	○	30	55,5	50,5	12	20	125	40	35	3,7	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/1	○	40	60	55,5	12	20	90	40	26	3,9	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/2	○	40	60	55,5	12	20	125	40	26	5,6	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/3	○	40	80	75	12	20	125	40	26	7,7	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/4	○	40	100	95	12	20	125	40	26	9,8	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/5	○	40	120	115	12	20	125	40	26	11,8	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/6	○	60	60	55	12	20	90	40	26	6	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/7	○	80	60	55	12	20	90	40	26	8,5	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
250/8	○	80	100	95	12	20	125	40	26	20,9	ROTA-G 250 - 315 | ROTA NCW 265 - 315 | ROTA NCWF 250 - 315 | ROTA-S 250 | ROTA-S plus 250 | ROTA THW 250 - 315 | ROTA THW plus 260 - 315 | ROTA THWB 265 | THW 250 - 265-R/F | THW 315-R
315	○	35	60	54	12	26	145	54	45	5,6	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/1	○	40	60	54	12	26	110	54	30	4,9	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/2	○	40	60	54	12	26	145	54	30	6,6	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/3	○	40	100	94	12	26	145	54	30	11,4	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/4	○	40	120	114	12	26	145	54	30	13,8	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/5	○	40	150	114	12	26	145	54	30	17,5	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/51	○	50	80	74	12	26	145	54	30	11,4	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/6	○	60	60	54	12	26	110	54	30	7,6	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/7	○	80	60	54	12	26	110	54	30	10,3	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
315/8	○	80	80	74	12	26	110	54	30	14,2	ROTA-G 400 | ROTA-S 315 | ROTA-S plus 315 | ROTA THW 400 | ROTA THWB 315 | THW 315-F | THW 400-R/F
400	○	50	80	73	18	30	180	60	50	13,5	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
400/1	○	60	80	73	18	30	130	60	35	11,8	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
400/3	○	60	100	93	18	30	155	60	35	21,5	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
400/4	○	60	120	113	18	30	155	60	35	22,4	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
400/5	○	80	80	73	18	30	130	60	35	16	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
400/6	○	60	180	173	18	30	160	60	35	35,1	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
400/7	○	96	115	108	18	30	115	60	35	25,9	ROTA-G 500 | ROTA-S 400 - 500 | ROTA-S plus 400 - 500 | ROTA THW 500 - 630 - 800 | ROTA THWB 400 - 500 | THW 500-R/F | THW 630-R
500	○	60	90	82	18	40	220	76	58	23,9	F 500 S
630	○	65	118	110	24	40	260	82	70	39,6	ROTA-G 630 | ROTA-S 630 - 800 | ROTA-S plus 630 - 800

Lathe chuck jaw set soft top jaw

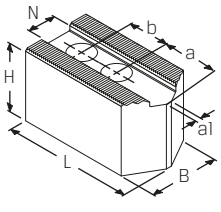
Design:
- ground
- steel 16 MnCr 5 or aluminium
- case-hardenable

Version 1: Standard
Version 2: 120° bevelled for smaller clamping diameters
Version 3: 120° bevelled for smaller clamping diameters
Version 4: Offset toothing

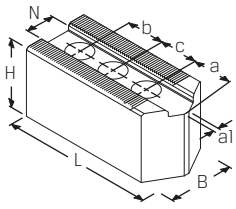
Delivery:
Set of 3 pieces each



Version 1



Version 2



Version 3

N° article	265333 Steel, type SWB	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	1	1/16"×90°	40	60	17	70	22	33	M12
165	○	1	1/16"×90°	35	60	14	68	20	33	M10
200	○	1	1/16"×90°	40	60	17	90	22	43	M12
250	○	1	1/16"×90°	50	80	21	120	28	62	M16
400	○	1	3/32"×90°	60	90	25,5	155	35	90	M20

N° article	265334 Aluminium, type SWB-AL	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	1	1/16"×90°	40	60	17	70	22	33	M12
165	○	1	1/16"×90°	35	60	14	80	20	45	M10
200	○	1	1/16"×90°	40	60	17	90	22	43	M12
250	○	1	1/16"×90°	50	80	21	120	28	62	M16
400	○	1	3/32"×90°	60	100	25,5	155	35	90	M20

N° article	265335 Steel, type SWB-FR	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	c mm	Screws DIN 912
130	○	3	1/16"×90°	25	30	10	55	12	20,5	12	M6
132	○	1	1/16"×90°	22	47	10	53	12	20	12	M6
133	○	3	1/16"×90°	32	32	10	62	12	29	12	M6
160	○	1	1/16"×90°	30	38	12	55	15	31,5	–	M8
161	○	1	1/16"×90°	30	55	12	55	15	31	–	M8
162	○	2	1/16"×90°	35	40	12	72	15	45	–	M8
200	○	1	1/16"×90°	40	60	17	70	19	39	–	M12
250	○	1	1/16"×90°	40	60	17	90	19	59	–	M12
315	○	1	1/16"×90°	50	60	21	105	25	65	–	M16

N° article	265336 Steel, type SWBL	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	2	1/16"×90°	35	40	17	78	22	41	M12
165	○	2	1/16"×90°	35	40	14	80	20	45	M10
200	○	2	1/16"×90°	35	40	17	98	22	61	M12
250	○	2	1/16"×90°	50	50	21	120	28	72	M16
315	○	2	1/16"×90°	50	50	21	140	28	82	M16

N° article	265337 Steel, type CWB	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	1	1/16"×90°	35	40	17	70	22	33	M12
200	○	1	1/16"×90°	40	40	17	90	22	43	M12
251	○	1	1/16"×90°	50	60	21	95	28	52	M16
400	○	1	3/32"×90°	60	80	25,5	140	35	75	M20

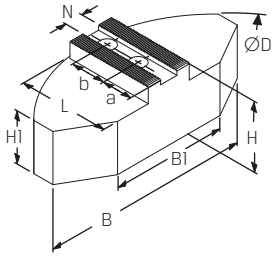
N° article	265338 Steel, type SP-WB	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	Screws DIN 912
125	○	1	1/16"×90°	30	40	11	55	18	27,5	M8
400	○	1	3/32"×90°	60	100	25,5	155	40	80	M18
500	○	1	3/32"×90°	60	100	25,5	195	40	118	M18
630	○	4	3/32"×90°	75	90	30	240	65	133	M24

N° article	265339 Steel, type 2 SWK (Set á 2 pieces each)	Version	Serration	B mm	H mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	1	1/16"×90°	60	60	17	70	22	36	M12
200	○	1	1/16"×90°	80	80	21	95	28	45	M16
250	○	1	1/16"×90°	80	80	25,5	110	35	55	M20
315	○	1	1/16"×90°	80	80	25,5	125	35	62	M20
400	○	1	3/32"×90°	80	80	25,5	150	35	87	M20

Lathe chuck jaw set Soft segment jaw

Design:
- for extensive clamping
- clamping force transmission to large clamping surface
- low-distortion clamping of workpieces sensitive to deformation
- with serration 90°
- steel 16MnCr5 (265340), aluminium (265341)
- case-hardenable

Delivery:
Set of 3 pieces each



N° article	265340 Steel, type SWB-SM	D mm	Version	Serration	B mm	B_1 mm	H mm	$High_1$ mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	160	1	1/16"×90°	120	40	60	50	17	60	22	25	M12
165	○	160	1	1/16"×90°	120	40	60	50	14	60	20	25	M10
200	○	200	1	1/16"×90°	140	64	60	50	17	70	22	35	M12
201	○	200	1	1/16"×90°	140	64	75	65	17	70	22	35	M12
250/21	○	250	1	1/16"×90°	180	104	70	55	21	80	28	30	M16
251	○	250	1	1/16"×90°	180	104	100	85	21	80	28	30	M16
315	○	320	1	1/16"×90°	240	120	70	55	21	110	28	60	M16
400	○	440	1	3/32"×90°	330	150	85	55	25,5	155	35	85	M20

N° article	265341 Aluminium, type SWB-SA	D mm	Version	Serration	B mm	B_1 mm	H mm	$High_1$ mm	N mm	L mm	b mm	a mm	Screws DIN 912
160	○	165	1	1/16"×90°	120	40	58	48	17	59,5	22	22	M12
165	○	165	1	1/16"×90°	120	40	58	48	14	59,5	20	25	M10
200	○	200	1	1/16"×90°	140	50	58	48	17	72,5	22	35	M12
201	○	200	1	1/16"×90°	140	50	75	65	17	72,5	22	35	M12
250/21	○	250	1	1/16"×90°	180	70	78	63	21	87,5	28	40	M16
251	○	250	1	1/16"×90°	180	70	100	85	21	87,5	28	40	M16
315	○	320	1	1/16"×90°	240	80	78	63	21	117	28	70	M16
400	○	440	1	3/32"×90°	330	150	98	68	25,5	160	35	85	M20

Lathe chuck jaw soft jaw blank

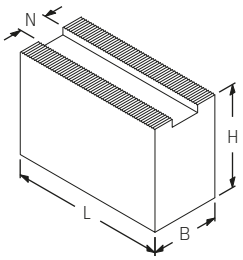
Design:
Undrilled and ground. Steel 16 MnCr 5, case-hardenable

Groove width 17.0 mm
Groove width 21.0 mm
Groove width 25.5 mm

* = serrated side offset 40×5 mm
** = serrated side offset 50×5 mm
*** = serrated side offset 60×5 mm

Delivery:
Separate

Note:
Drilled version available on request.



N° article	265344 undrilled, type SBM	Serration	B mm	H mm	N mm	L mm	kg/piece (undrilled)
0031	○	1/16"×90°	40	40	17	70	0.9
0032	○	1/16"×90°	40	40	17	90	1.1
0033	○	1/16"×90°	40	40	17	105	1.2
0034	○	1/16"×90°	40	60	17	70	1.3
0035	○	1/16"×90°	40	60	17	90	1.7
0036	○	1/16"×90°	40	60	17	105	2
0038	○	1/16"×90°	60	60	17	90	2.4
0040	○	1/16"×90°	80	60	17	90	3.3
0361	○	1/16"×90°	40	60	17	120	2.2
0368	○	1/16"×90°	40	80	17	90	2.3
3610	○	1/16"×90°	40	100	17	90	2.7
3612	○	1/16"×90°	40	120	17	90	3.4
3615	○	1/16"×90°	50	80	17	90	2.7

N° article	265346 undrilled, type SBM	Serration	B mm	H mm	N mm	L mm	kg/piece (undrilled)
0041	○	1/16"×90°	50	60	21	90	2.1
0042	○	1/16"×90°	50	60	21	105	2.4
0043	○	1/16"×90°	60	60	21	90	2.4
0046	○	1/16"×90°	60	80	21	105	3.8
0047	○	1/16"×90°	60	80	21	120	4.4
0048	○	1/16"×90°	80	60	21	90	3.2
0428	○	1/16"×90°	50	80	21	120	3.7
0498	○	1/16"×90°	80	80	21	120	5.9
4210	○	1/16"×90°	50	100	21	120	5
4212	○	1/16"×90°	50	120	21	120	5.6
4215	○	1/16"×90°	50	150	21	120	7
4281	○	1/16"×90°	50	80	21	150	4.6

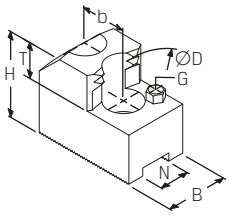
N° article	265348 undrilled, type SBM	Serration	B mm	H mm	N mm	L mm	kg/piece (undrilled)
0050	○	3/32"×90°	60	60	25,5	140	4
0051	○	3/32"×90°	60	80	25,5	140	5
0052	○	3/32"×90°	60	100	25,5	140	6.5
0053	○	3/32"×90°	60	100	25,5	155	7.2
0057	○	3/32"×90°	80	80	25,5	155	7.2
0058	○	3/32"×90°	100	100	25,5	155	11.6
0531	○	3/32"×90°	60	100	25,5	195	9.1
5312	○	3/32"×90°	60	120	25,5	155	8.7
5315	○	3/32"×90°	60	160	25,5	155	11.5
5320	○	3/32"×90°	60	200	25,5	155	14.2

Lathe chuck jaw set Hard clawed jaw

SCHUNK

Design:
- with serration, up to type 3113 = 1/16" x 90°, from type 4011 = 3/32 x 90°
- steel 16 MnCr 5
- case-hardened

Delivery:
Set of 3 pieces each

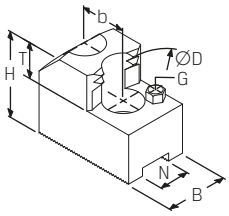


N° article	265350 for O.D. clamping, type SZA	fitting for chucks	Clamping range mm	Oscillating circuit mm	B mm	H mm	N mm	T mm	G	b mm	Screws DIN 912
1610	○	HSG 160 ROTA NCD 160 - 165	35 - 64 32 - 70	171 178	32	40	12	20	M5	2×15	M8
1611	○	HSG 160 ROTA NCD 160 - 165	63 - 104 60 - 98	181 176	32	40	12	20	M5	2×15	M8
1612	○	HSG 160 ROTA NCD 160 - 165	83 - 134 85 - 118	191 176	32	40	12	20	M5	2×15	M8
1630	○	HSL 165 ROTA NC/TH 165 | ROTA NCF/THF 165	43 - 61 38 - 60	173 173	35	50	17	20	M5	19	M12
1631	○	HSL 165 ROTA NC/TH 165 | ROTA NCF/THF 165	62 - 82 58 - 79	175 173	35	50	17	20	M5	19	M12
1632	○	HSL 165 ROTA NC/TH 165 | ROTA NCF/THF 165	83 - 103 79 - 102	174 173	35	50	17	20	M5	19	M12
1633	○	HSL 165 ROTA NC/TH 165 | ROTA NCF/THF 165	102 - 122 98 - 120	182 181	40	50	17	20	M5	19	M12
1634	○	HSL 165 ROTA NC/TH 165 | ROTA NCF/THF 165	123 - 143 119 - 142	202 201	40	50	17	20	M5	19	M12
1701	○	TP 160 | ROTA TP 160 ROTA NCK plus 165	34 - 66 33 - 64	182 187	30	47	14	20	M6	20	M10
1702	○	TP 160 | ROTA TP 160 ROTA NCK plus 165	56 - 83 48 - 87	185 189	30	47	14	20	M6	20	M10
1703	○	TP 160 | ROTA TP 160 ROTA NCK plus 165	82 - 110 74 - 114	186 190	30	47	14	20	M6	20	M10
1704	○	TP 160 | ROTA TP 160 ROTA NCK plus 165	108 - 136 100 - 140	193 198	35	47	14	20	M6	20	M10
2014	○	ROTA NCD 185 HSL 210 ROTA NC/TH 210 | ROTA NCF/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	32 - 45 32 - 62 32 - 66 23 - 67 32 - 73 32 - 79	193 210 213 216 221 228	35	50	17	25	M6	22	M12
2015	○	ROTA NCD 185 HSL 210 ROTA NC/TH 210 | ROTA NCF/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	37 - 73 60 - 92 54 - 96 43 - 95 60 - 100 47 - 107	193 213 213 216 221 228	35	50	17	25	M6	22	M12
2016	○	ROTA NCD 185 HSL 210 ROTA NC/TH 210 | ROTA NCF/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	54 - 102 88 - 121 82 - 124 70 - 123 88 - 129 75 - 136	192 212 212 215 220 231	40	50	17	25	M6	22	M12
2017	○	ROTA NCD 185 HSL 210 ROTA NC/TH 210 | ROTA NCF/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	83 - 131 117 - 150 111 - 153 99 - 152 116 - 158 103 - 164	196 216 216 219 224 231	40	50	17	25	M6	22	M12
2018	○	ROTA NCD 185 HSL 210 ROTA NC/TH 210 | ROTA NCF/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	113 - 161 148 - 181 142 - 184 129 - 183 147 - 188 133 - 195	220 241 240 243 248 255	40	50	17	25	M6	22	M12
2506	○	HSG 250 ROTA NCK plus 250	58 - 89 52 - 118	260 274	35	55	17	25	M6	22	M12
2507	○	HSG 250 ROTA NCK plus 250	89 - 138 68 - 133	259 255	35	55	17	25	M6	22	M12
2508	○	HSG 250 ROTA NCK plus 250	148 - 196 126 - 192	266 262	40	55	17	25	M6	22	M12
2509	○	HSG 250 ROTA NCK plus 250	182 - 231 160 - 227	301 297	40	55	17	25	M6	22	M12
2537	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	49 - 93 47 - 95 40 - 104 54 - 110	264 264 273 279	50	58	21	25	M8	28	M16

Lathe chuck jaw set Hard clawed jaw

Design:
- with serration, up to type 3113 = 1/16" x 90°, from type 4011 = 3/32 x 90°
- steel 16 MnCr 5
- case-hardened

Delivery:
Set of 3 pieces each

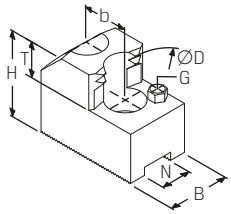


N° article	265350 for O.D. clamping, type SZA	fitting for chucks	Clamping range mm	Oscillating circuit mm	B mm	H mm	N mm	T mm	G	b mm	Screws DIN 912
2538	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	88 - 133 86 - 135 80 - 144 94 - 150	261 264 273 281	50	58	21	25	M8	28	M16
2539	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	138 - 182 136 - 184 129 - 193 144 - 200	269 266 273 281	50	58	21	25	M8	28	M16
2540	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	182 - 229 182 - 231 174 - 241 190 - 247	300 303 312 318	50	58	21	25	M8	28	M16
3110	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	63 - 130 54 - 136 51 - 132 49 - 137 59 - 151 46 - 135	330 337 333 338 353 336	50	58	21	25	M8	28	M16
3111	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	120 - 187 113 - 187 107 - 189 105 - 195 111 - 209 104 - 192	331 354 346 351 366 349	50	58	21	25	M8	28	M16
3112	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	187 - 253 178 - 263 174 - 255 171 - 261 176 - 275 169 - 258	330 340 332 337 352 335	50	58	21	25	M8	28	M16
3113	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	251 - 317 242 - 315 237 - 315 233 - 315 241 - 315 233 - 315	389 388 388 387 390 395	50	58	21	25	M8	28	M16
4011	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400	65 - 165 86 - 158 75 - 157 60 - 161	429 440 438 426	60	78	25,5	33	M8	35	M20
4012	○	HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	86 - 220 108 - 205 74 - 234	429 587 577	60	78	25,5	33	M8	35	M20
4013	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400 HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	140 - 220 158 - 233 148 - 248 134 - 236 186 - 320 206 - 345 133 - 334	445 455 474 462 445 571 561	60	78	25,5	33	M8	35	M20
4014	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400 HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	225 - 325 241 - 317 232 - 317 217 - 321 270 - 425 290 - 429 216 - 419	446 438 454 442 446 551 541	60	78	25,5	33	M8	35	M20
4015	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400 HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	295 - 395 314 - 383 299 - 388 297 - 391 340 - 495 360 - 500 286 - 490	486 479 495 483 486 592 582	60	78	25,5	33	M8	35	M20
4016	○	ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	440 - 500 366 - 500	637 633	60	78	25,5	33	M8	35	M20

Lathe chuck jaw set Hard clawed jaw

Design:
- with serration, up to type 3113 = 1/16" x 90°, from type 4011 = 3/32 x 90°
- steel 16 MnCr 5
- case-hardened

Delivery:
Set of 3 pieces each

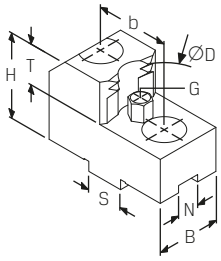


N° article	265351 for I.D. clamping, type SZI	fitting for chucks	Clamping range mm	Oscillating circuit mm	B mm	H mm	N mm	T mm	b mm	G	Screws DIN 912
2010	○	HSL 210 ROTA NC/TH 210 | ROTA NCT/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	69 - 102 61 - 103 62 - 104 68 - 109 62 - 106	215 216 217 222 220	35	50	17	20	22	M6	M12
2011	○	HSL 210 ROTA NC/TH 210 | ROTA NCT/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	97 - 130 91 - 136 79 - 132 96 - 137 84 - 135	215 216 217 222 220	40	50	17	20	22	M6	M12
2012	○	HSL 210 ROTA NC/TH 210 | ROTA NCT/THF 210 ROTA NCD 210 TP 200 | ROTA TP 200 ROTA NCK plus 210	129 - 167 121 - 165 110 - 163 127 - 168 115 - 166	215 216 217 222 220	40	50	17	20	22	M6	M12
2517	○	HSG 250 ROTA NCK plus 250	90 - 133 73 - 143	269 281	35	55	17	25	22	M6	M12
2518	○	HSG 250 ROTA NCK plus 250	122 - 165 98 - 167	263 267	40	55	17	25	22	M6	M12
2519	○	HSG 250 ROTA NCK plus 250	185 - 228 161 - 231	273 277	40	55	17	25	22	M6	M12
2534	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	83 - 121 81 - 121 81 - 132 84 - 139	267 267 277 285	50	58	21	25	28	M8	M16
2535	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	117 - 163 116 - 162 111 - 174 125 - 180	269 269 281 287	50	58	21	25	28	M8	M16
2536	○	HSL 250 ROTA NC/TH 250 | ROTA NCF/THF 250 ROTA NCD 250 TP 250 | ROTA TP 250	164 - 214 160 - 208 155 - 220 170 - 226	275 269 281 287	50	58	21	25	28	M8	M16
3111	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	91 - 157 81 - 157 82 - 150 81 - 163 82 - 172 81 - 161	241 344 337 345 360 348	50	58	21	25	28	M8	M16
3112	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	146 - 217 130 - 211 125 - 204 128 - 213 129 - 227 125 - 215	341 336 329 337 352 340	50	58	21	25	28	M8	M16
3113	○	HSG 315 HSL 315 ROTA NC/TH 315 | ROTA NCF/THF 315 ROTA NCD 315 TP 315 | ROTA TP 315 ROTA NCK plus 315	217 - 283 204 - 215 199 - 278 195 - 287 202 - 301 199 - 289	333 336 329 337 352 340	50	58	21	25	28	M8	M16
4011	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400	104 - 199 110 - 185 98 - 185 101 - 188	425 412 412 416	60	78	25,5	33	35	M8	M20
4012	○	HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	148 - 285 156 - 278 125 - 283	550 545 551	60	78	25,5	33	35	M8	M20
4013	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400 HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	183 - 278 182 - 265 177 - 265 165 - 268 230 - 375 238 - 361 164 - 366	453 440 440 444 550 537 543	60	78	25,5	33	35	M8	M20
4014	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400 HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	263 - 358 268 - 344 259 - 359 243 - 347 310 - 455 316 - 440 242 - 445	453 440 456 444 550 537 543	60	78	25,5	33	35	M8	M20
4015	○	HSG 400 HSL 400 ROTA NC/TH 400 | ROTA NCF/THF 400 ROTA NCD 400 HSG 500 ROTA NC/TH 500 | ROTA NCF/THF 500 ROTA NCD 500	326 - 421 331 - 408 319 - 407 307 - 411 373 - 518 386 - 520 300 - 509	461 448 448 452 558 561 551	60	78	25,5	33	35	M8	M20

Lathe chuck jaw set Hard clawed jaw

Design:
With tongue and groove Steel 16 MnCr 5, case-hardened

Delivery:
Set of 3 pieces each

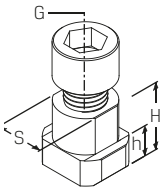


N° article	265352 for O.D. clamping, type SZKA	fitting for chucks	Clamping range mm	Oscillating circuit mm	B mm	H mm	N mm	S mm	T mm	b mm	G	Base jaw position
163	○	ROTA-G 160 ROTA-S plus 160 THW 165-R ROTA THW plus 165 ROTA THW plus 185	63 - 116/81 - 133 55 - 109/89 - 144 55 - 87/71 - 104 64 - 98/72 - 116 74 - 138	206/213 217/225 177/185 190/198 220	40	40	8	18	20	32	M6	I, II
167	○	ROTA-G 160 ROTA-S plus 160 THW 165-R ROTA THW plus 165	113 - 167/131 - 185 104 - 160 104 - 137/122 - 155 105 - 149/123 - 167	228/246 221 199/217 212/230	30	40	8	18	20	32	M6	I, II
169	○	ROTA-G 160 ROTA-S plus 160 THW 165-R ROTA THW plus 165 ROTA THW plus 185	32 - 87 41 - 97 26 - 57 33 - 68 27 - 90	207 217 177 190 212	26	40	8	18	20	32	M6	I
212	○	ROTA-G 200 ROTA-S plus 200 THW 210-R ROTA NCWF 210 ROTA THW plus 215	34 - 107 34 - 83 28 - 82 36 - 83 31 - 96	278 254 248 254 264	26	45	10	20	25	40	M6	I
213	○	ROTA-G 200 ROTA-S plus 200 THW 210-R ROTA NCWF 210 ROTA THW plus 215	73 - 145/110 - 184 64 - 128/109 - 175 66 - 119/103 - 157 78 - 115/101 - 157 96 - 171	274/276 267/267 250/248 254/254 264	30	45	10	20	25	40	M6	I, II
216	○	ROTA-G 200 ROTA-S plus 200 THW 210-R ROTA NCWF 210 ROTA THW plus 215	145 - 220 141 - 208 138 - 192 142 - 198 131 - 207	282 244 254 260 270	30	45	10	20	25	40	M6	I
263	○	ROTA-G 250 ROTA-S plus 250 THW 250-R ROTA NCWF 250 ROTA THW plus 260 ROTA-G 315 THW 315-R ROTA NCWF 315 ROTA THW plus 315	33 - 126/86 - 181 31 - 99 31 - 86 32 - 80 37 - 100 39 - 147/111 - 232 31 - 112 36 - 127 41 - 138	334/334 322 297 303 313 381/385 346 343 373	30	50	12	20	25	40	M6	I, II
266	○	ROTA-G 250 ROTA-S plus 250 THW 250-R ROTA NCWF 250 ROTA THW plus 260 THW 315-R ROTA NCWF 315	140 - 237 74 - 154/148 - 229 82 - 143/144 - 207 80 - 137/155 - 213 82 - 157/145 - 221 86 - 170 80 - 185	336 324/328 297/301 303/307 313/317 346 343	40	50	12	20	25	40	M6	I, II
268	○	ROTA-G 250 ROTA-S plus 250 THW 250-R ROTA NCWF 250 ROTA THW plus 260 ROTA-G 315 THW 315-R ROTA NCWF 315 ROTA THW plus 315	176 - 250 181 - 263 177 - 240 119 - 171/188 - 246 178 - 255 201 - 318 119 - 204/206 - 291 124 - 217/188 - 293 119 - 228/202 - 313	348 336 315 303/321 331 394 346/366 343/369 373/389	40	50	12	20	25	40	M6	I, II
321	○	ROTA-S plus 315 ROTA-G 400 ROTA THW 400	44 - 133/85 - 210 50 - 178/159 - 225 44 - 154	400/400 445/445 435	40	53	12	26	25	54	M8	I, II
324	○	ROTA-S plus 315 ROTA-G 400 ROTA THW 400	115 - 233/190 - 315 212 - 286/267 - 364 134 - 262/211 - 340	402/402 453/453 433/429	40	53	12	26	25	54	M8	I, II
409	○	ROTA-S plus 400 ROTA-G 500 ROTA-S plus 500 ROTA THW 500	51 - 168 54 - 196 66 - 196 55 - 177	507 532 532 520	50	71	18	30	33	60	M8	II
412	○	ROTA-S plus 400 ROTA-G 500 ROTA-S plus 500 ROTA THW 500	119 - 266/230 - 382 153 - 337/270 - 452 162 - 328/288 - 465 145 - 279/265 - 400	509/509 574/570 575/585 520/520	50	71	18	30	33	60	M8	I, II

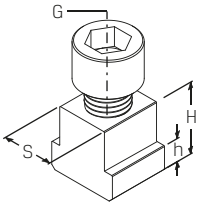
Accessories for lathe chucks

SCHUNK

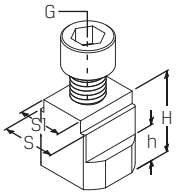
Design:
- T-nuts
- tempered and precision ground
- incl. cylinder screws DIN 912-12.9



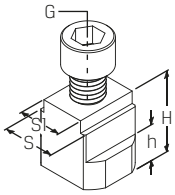
Version **I**



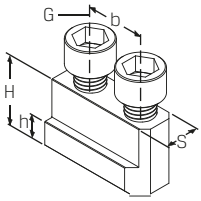
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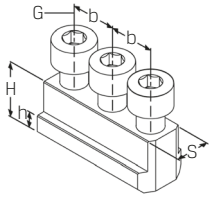
Version **III**



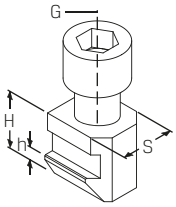
Version **IV**



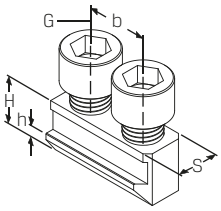
Version **V**



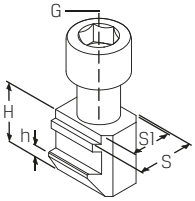
Version **VI**



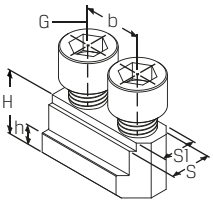
Version **VII**



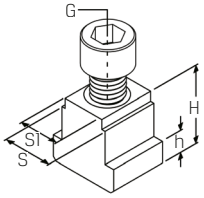
Version **VIII**



Version **IX**



Version **X**



Version **XI**

N° article	265362 Type NJ	Version	S/S$_{1g6}$ mm	H mm	h mm	b mm	G	Cylinder screws DIN 912	max. tightening torque Nm
NJ61	○	V	12	22	7	20	M10	M10×25	50
NJ62	○	V	12	18,5	7,5	20	M10	M10×25	50
NJ80	○	V	14	24,5	8,5	25	M12	M12×35	70
NJ82	○	V	14	20,5	8,5	25	M12	M12×30	70
NJ100	○	V	16	24,5	8,5	30	M12	M12×35	70
NJ103	○	V	16	21,5	8,5	30	M12	M12×30	70
NJ120	○	V	18	27,5	9,5	30	M14	M14×40	130
NJ121	○	V	18	33,5	13,5	30	M14	M14×45	130
NJ124	○	V	21	28	11,5	30	M16	M16×40	150
NJ152	○	X	24/22	45,5	16,5	43	M20	M20×60	300

N° article	265363 Type NK	Version	S/S$_{1g6}$ mm	H mm	h mm	b mm	G	Cylinder screws DIN 912	max. tightening torque Nm
NK60	○	VI	10.0	13,7	5,5	2×12	M6	M6×18	16
NK81	○	VI	12.0	17,2	7	2×15	M8	M8×22	30
NK121	○	V	17.0	23	9	22	M12	M12×30	70
NK122	○	V	17.0	21,5	9	19	M12	M12×25	70
NK160	○	V	21.0	27	11	28	M16	M16×35	150
NK200	○	V	25.5	29	11	35	M20	M20×40	220

N° article	265364 Type NKA	Version	S/S$_{1g6}$ mm	H mm	h mm	b mm	G	Cylinder screws DIN 912	max. tightening torque Nm
NKA1	○	VIII	14	18,5	6,5	20	M10	M10×25	50
NKA2	○	VIII	17	20,5	7,5	22	M12	M12×25	70
NKA3	○	VIII	21	26,5	10	28	M16	M16×35	150

N° article	265365 Type NKS	Version	S/S$_{1g6}$ mm	H mm	h mm	G	Cylinder screws DIN 912	max. tightening torque Nm
NKS1	○	VII	14	18,5	6,5	M10	M10×25	50
NKS2	○	VII	17	20,5	7,5	M12	M12×25	70
NKS3	○	VII	21	26,5	10	M16	M16×35	150
NKS3-17	○	IX	21/17	26,5	10	M12	M12×30	70

N° article	265366 Type NS	Version	S/S$_{1g6}$ mm	H mm	h mm	G	Cylinder screws DIN 912	max. tightening torque Nm
NS17-21	○	III	17/21	24	9	M12	M12×30	70
NS21-17	○	IV	21/17	27	11	M12	M12×30	70
NS25-21	○	IV	25.5/21	29	11	M16	M16×35	150
NS80	○	I	12.0	17,2	7	M8	M8×22	30
NS120	○	I	17.0	23	9	M12	M12×30	70
NS124	○	I	17.0	22	9	M12	M12×25	70
NS160	○	I	21.0	27	11	M16	M16×35	150
NS164	○	I	21.0	30	11	M16	M16×35	150
NS200	○	I	25.5	29	11	M20	M20×40	220
NS201	○	I	25.5	33,7	15,5	M20	M20×45	300
NS205	○	II	25.5	34,5	14,5	M20	M20×55	220
NS242	○	XI	30/25.5	41	15	M20	M20×50	220

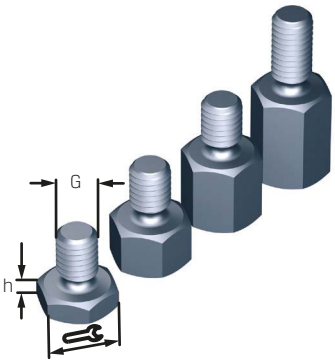
Accessories for lathe chucks

SCHUNK

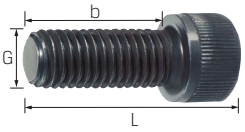
Design:
Support pin
- for clawed and pendulum jaws
- for changing the clamping depth T

Note:
- if necessary, to be reduced to the desired height
- can also be used for workpiece-specific special jaws
- crest inductive hardenable

N° article	265360 Type AB	h mm	AF mm	G
AB55	○	5	8	M5
AB105	○	10	8	M5
AB155	○	15	8	M5
AB56	○	5	10	M6
AB106	○	10	10	M6
AB156	○	15	10	M6
AB206	○	20	10	M6
AB256	○	25	10	M6
AB58	○	5	14	M8
AB108	○	10	14	M8
AB158	○	15	14	M8
AB208	○	20	14	M8
AB258	○	25	14	M8
AB308	○	30	14	M8



Design:
- for base jaw type F
- **minimum order:** 30 pieces



N° article	265369 Mounting screw for jaws	G	thread pitch mm	b mm	L mm	Design
0082	○	M8	1	20	28	for SFG 160, 200 | SFGK 160, 200 | SFG-V 160, 200 | SFGL 200 | GB 160, 200
1230	○	M12	1,5	30	42	for SFG 250 | SFGK 250 | SFG-V 250 | SFGL 250 | GB 250
1235	○	M12	1,5	35	47	for SFG 315 | SFGL 315 | SFG-V 315 | GB 400
1640	○	M16	1,5	40	56	for SFG 400 | SFGL 400

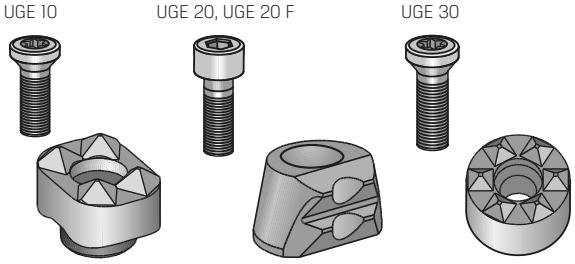
Accessories for lathe chucks

SCHUNK

Design:
- claw jaws with exchangeable inserts producible from jaw blanks
- worn clamping insert can be changed in seconds
- secure clamping of blanks, forgings, castings or workpieces made of high-strength materials
- transmission of high torques for heavy cuts

PU

Note:
Supplied as a set in the specified quantity. Price per set



N° article	265368 Clamping inserts type UGE	Type	Design	PU
0010	○	UGE 10	For exterior and interior clamping or flat or round clamping surfaces Supports round or flat. Attachment from the front. Clamp insert seat: Groove (round or flat) and thread easy to manufacture. Hardening of the jaws obligatory. Scope of delivery: Clamp insert with TORX®profile screw M4×13.5 and installation instructions	10
0021	○	UGE 20	Carbide For exterior and interior clamping. Attachment from above. Pull-down through wedge shape. Self-centring/oscillating. Clamp insert seat: Milling and thread easily adjustable with angular milling cutter. No hardening of the jaw blank necessary Scope of delivery: Clamp insert with socket head screw M4×12 (DIN 912) and installation instructions.	6
0022	○	UGE 20 F	Investment casting. For exterior and interior clamping. Attachment from above. Pull-down through wedge shape. Self-centring/oscillating. Clamp insert seat: Milling and thread easily adjustable with angular milling cutter. No hardening of the jaw blank necessary Scope of delivery: Clamp insert with socket head screw M4×12 (DIN 912) and installation instructions.	6
0030	○	UGE 30	The clamp insert for prismatic jaws and vices. For interior and exterior clamping of cubic parts. For turning jaws, vice jaws or fixtures. Attachment from the front. Clamp insert seat: Hole and thread easy to manufacture. Base 120° (standard drill) or spade drill. Hardening of the jaws for continuous use recommended. Scope of delivery: Clamp insert with TORX®profile screw M4×13.5 and installation instructions	10

Lathe chuck safety guard

Design:
- folding
- made of acrylic glass with a sturdy steel frame
- with safety micro switch
- easy mounting on the back of the headstock
- adjustable bracket
- the diameter of the hood should be about 150-200 mm larger than the chuck

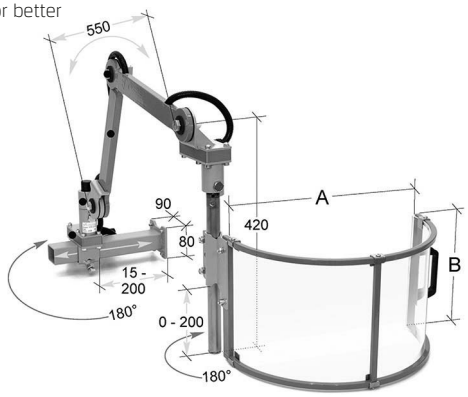
Use:
To protect against chips, water and coolant splashing



N° article	266500	for chuck Ø, min. mm	for chuck Ø, max. mm	Length mm	Width mm	Height mm	Adjustment range, min. mm	Adjustment range, max. mm
0300	●	80	140	300	200	180	0	215
0400	●	160	200	400	235	230	0	150
0500	●	250	315	500	235	280	0	150
0600	●	350	400	600	235	330	0	150

Design:
- with movable articulated arms
- shield can be opened horizontally
- entire safety guard can be swivelled out of the workplace for better accessibility
- with double micro safety switch

Use:
To protect against chips, water and coolant splashing



N° article	266501	A × B mm
0300	○	300 × 200
0400	○	400 × 235
0500	○	500 × 235
0600	○	600 × 235

Three-jaw boring ring RotoRi

Design:
for three-jaw chucks
- rings made of high-strength special steel, each with three curve segments (3×120°)
- internal and external clamping with 1 ring
- infinitely variable clamping range for all chuck sizes
- 1/10 mm precise adjustment of the turning diameter
- low set-up costs thanks to RotoFix clamping bolts
- high cost savings on clamping jaws
- optimum accessibility of the turning tool
- suitable for chuck sizes 80 - 630 mm

Use:
Thanks to the multiple patented rings, it is possible to turn out clamping jaws precisely under clamping pressure or to grind out hard clamping jaws. Thanks to the infinitely variable adjustment option via the patented curve segments, you can remove exactly as much material as you need.

Scope of delivery:
Boring rings including RotoFix clamping bolts.

Note:
Further boring rings available on request.



NEW



Nº article	265503 Premium	Chuck size mm	Rings 6 mm	Rings 10 mm	Clamping bolt
S	○ +	80 - 200	20	–	M8 - M10
L	○ +	80 - 250	29	–	M8 / M10 / M12
LX	○ +	80 - 315	16	13	M10 / M12 / M16
XL	○ +	315 - 630	–	10	M16 / M20

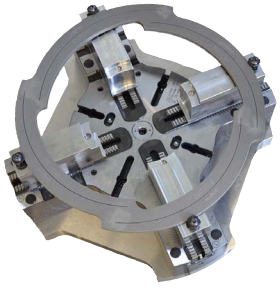
Four-jaw boring ring RotoRi

Design:
- for four-jaw chuck
- rings made of high-strength special steel, each with four curve segments (4×90°)
- internal and external clamping with 1 ring
- infinitely variable clamping range for all chuck sizes
- 1/10 mm precise adjustment of the turning diameter
- low set-up costs thanks to RotoFix clamping bolts
- high cost savings on clamping jaws
- optimum accessibility of the turning tool
- suitable for chuck sizes 80 - 500 mm

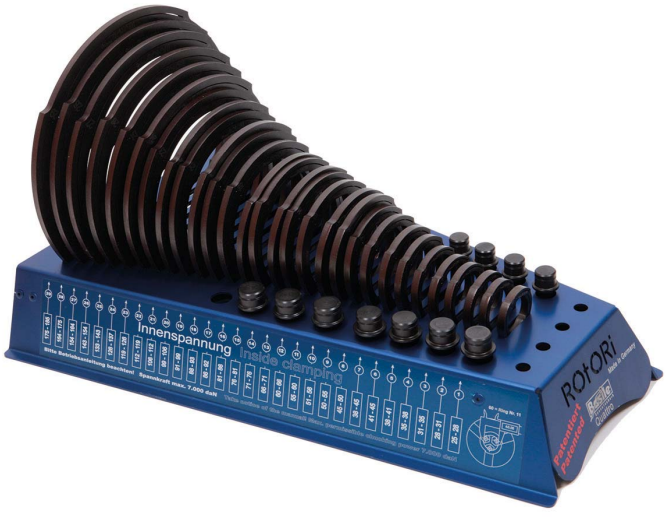
Use:
Thanks to the multiple patented rings, it is possible to turn out clamping jaws precisely under clamping pressure or to grind out hard clamping jaws. Thanks to the infinitely variable adjustment option via the patented curve segments, you can remove exactly as much material as you need.

Scope of delivery:
Boring rings including RotoFix clamping bolts.

Note:
Further boring rings available on request.



NEW



Nº article	265504 Premium	Chuck size mm	Rings 6 mm	Rings 10 mm	Clamping bolt
L	○ +	80 - 250	29	–	M8 / M10 / M12
XL	○ +	200 - 500	2	13	M10 / M12 / M16

Drilling machine vice

ROHM

Design:
- body made of special cast metal
- large clamping range
- long guide for movable jaws also in the outer clamping range
- mounting possibilities on side and end
- reversible clamping jaws, one side smooth, ground on both sides
- stationary jaws with one longitudinal prism and two transverse prisms
- both jaws offset at the top for clamping flat parts

Use:
For secure clamping of workpieces on drilling machines and drill stands

N° article	271050 Type BOF	271060 Pair of replacement jaws	Jaw width mm	Clamping range mm	Jaw height mm	Total length mm	Body length mm	Width mm	Height mm	Weight kg
90	●	○	90	90	25	356	195	145	60	5,4
110	●	○	110	130	32	470	315	175	72,5	10,15
135	●	●	135	160	40	580	365	205	80,5	14
160	●	○	160	220	50	692	445	245	95,5	25,5



Design:
- one-hand operation
- clamping jaws reversible, hardened and ground
- one jaw smooth or with transversal or longitudinal V grooves, resp., second jaw grooved
- both jaws offset at the top for clamping flat parts
- long guidance of the movable jaw
- mounting possibilities on side and end
- open body for unhindered passage of the drill

Use:
For rapid clamping and releasing, esp. suited for batch production
Fitting replacement jaws: 271060

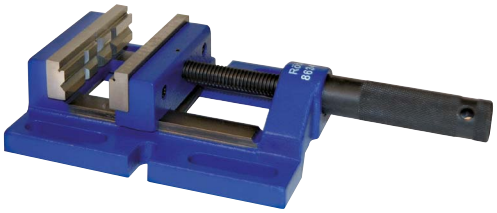
N° article	271100 Type BSS	Jaw width mm	Clamping range mm	Jaw height mm	Total length mm	Body length mm	Width mm	Height mm	Weight kg
110	○	110	130	32	510	315	175	72,5	11,05
135	○	135	160	40	587	365	205	80,5	14



Design:
- light-weight, handy version
- movable jaw, laterally guided
- stationary jaw with three vertical V grooves and one horizontal V groove
- both jaws with contact surface for clamping flat workpieces
- universal mounting options by clamping slots and oblong holes

Use:
For clamping of workpieces on drilling machines and drill stands

N° article	271200 Type DPV standard	Jaw width mm	Clamping range mm	Jaw height mm	Total length mm	Body length mm	Width mm	Height mm	Weight kg
80	●	80	70	30	234	154	142	58	3,1
100	●	100	92	30	272	175	152	63,5	4
120	●	120	110	30	345	225	180	63,5	6,5

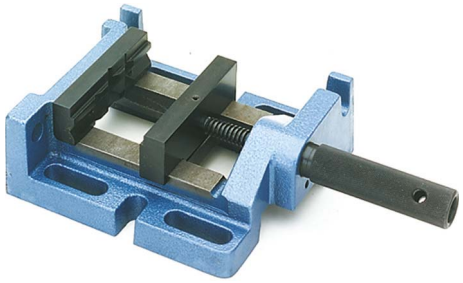


Design:
- light-weight, handy version
- movable jaw, laterally guided
- stationary jaw with three vertical V grooves and one horizontal V groove
- both jaws with contact surface for clamping flat workpieces
- universal mounting options due to clamping slots and oblong holes

Use:
For clamping of workpieces on drilling machines and drill stands

N° article	271400 Type DBV with 3 clamping options	Jaw width mm	Clamping range mm	Jaw height mm	Total length mm	Body length mm	Width mm	Height mm	Weight kg
100	●	100	93	30	279	189	159	65	5,15



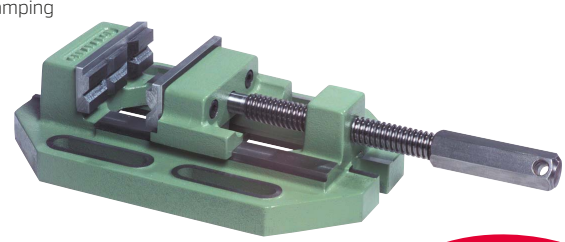


Drilling machine vice

CEKABA

Design:
- body and movable jaws made of special cast
- low construction, high precision and large clamping range
- the body has an open centre, granting free passage for the drill
- exchangeable jaws with horizontal and vertical prisms
- stepped for clamping of flat material
- threaded spindle with hex handle and bore to insert a T-handle for sensitive and secure clamping

N° article	271680 Type BON	Jaw width mm	Clamping range mm	Jaw height mm	Length mm	Width mm	Height mm	Weight kg
80	●	80	70	30	150	140	62	4
100	●	100	110	35	280	180	74	9
125	●	125	130	40	350	205	85	15
160	● +	160	225	50	460	255	102	29



Machine vice

Design:
- low, robust construction made of special cast
- mechanic clamping system
- centric clamping through LH and RH thread of the spindle
- working area of the spindle covered
- the lateral jaw guidance allows simple and precise positioning

Use:
- centric clamping for milling and planing
- the centric clamping allows the machining of different workpiece widths without affecting the centre position of the workpiece
- jaws SGN reversible, one side smooth, the other grooved

Optional accessories:
- extensive assortment of jaws
- rotating plate (276100)



N° article	273950 Type UZ	Jaw width mm	Clamping range mm	Jaw height mm	Length mm	Width mm	Height mm	Clamping force, max. N	Weight kg
113	○	113	110	31,6	358	132	93,5	15	12,8
135	○	135	140	39,6	408	152	106	22	19
160	○ +	160	180	49,6	495	180	124,5	24	31,4
200	○ +	200	300	62,6	655	200	142,5	25	51

Design:
- clamping system mechanic/hydraulic
- mechanical drive with hand crank
- hydraulic power transmission via hydraulic unit with standard jaws
- large clamping range
- high accuracy
- rapid clamping range adjustment
- long guidance of the movable jaw
- all wearing parts, above all the jaw guides, are hardened and ground
- for use on a rotation plate with graduation
- base equipped with longitudinal grooves for accurate fixing on the machine table



N° article	276010 RB-K (power boosted)	Jaw width mm	Clamping range mm	Size	Length mm	Width mm	Height mm	Clamping force, max. N	Weight kg
92	○	92	100	1	490	160	91	25	15,5
113	○	113	170	2	583	160	97	30	24
135	○ +	135	220	3	679	200	112	40	39
160	○ +	160	310	4	817	240	133	50	60
200	○ +	200	350	5	1022	280	171	100	112

Rotary table for machine vice

Design:
Rotary plate with fixing screws and T-nuts

Use:
Fitting for 276010



113-160



200

N° article	276015	for jaw width mm
113	○	113
135	●	135
160	○	160
200	○	200

Design:
- with polished contact edge and graduation
- with mounting screws

Use:
Fitting for 273950



N° article	276100	for jaw width mm
113	○	113
135	○	135
160	○	160
200	○	200

Clamping claw for machine vice
Type UZ and RB

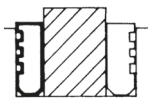
Design:
For machine vices type UZ, 273950 and type RB, 276010 and 276011

276200: One side smooth, one side grooved, hardened and ground
276220: With horizontal and vertical ground V-grooves. Hardened, for combination with standard jaw SGN

Delivery:
Type SGN and SPR per piece

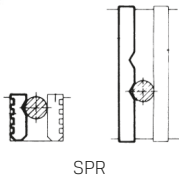
N° article	276200 Standard jaw SGN	Jaw width mm
92	○	92
113	●	113
125	○	125
135	●	135
160	●	160
200	○	200





SGN





SPR

N° article	276220 V-jaw SPR	Jaw width mm
92	○	92
113	○	113
135	●	135
160	○	160
200	○	200

Machine vice

Design:
- particularly suitable for use on machining centres
- **Size 92** clamping system mechanical-hydraulic with power intensifier, manually operated
- **size 125/160/200:** clamping system mechanical-mechanical with power intensifier, manually operated
- can be clamped horizontally, laterally and, in conjunction with a base plate, vertically, e.g. back-to-back
- stable chip guard prevents penetration of chips
- drive spindle with clamping force presetting
- clamping surface for clamping claws
- central lubrication of guides and spindle threads
- thread for angle drive mounting
- sturdy steel base
- all guides are hardened and ground on all sides
- long retracting handle slide with transverse grooves, hardened on all sides, functional surfaces ground
- threaded holes to accept all flat clamping jaws with jaw width 125/160 mm



N° article	276111 RKE with stepped jaws	Jaw width mm	Clamping range mm	Jaw height mm	Length mm	Width mm	Height mm	Clamping force, max. N	Weight kg
92	○ +	92	208	32	345	94	112	25	15
125	○ +	125	312	40	478	126	140	40	41
160	○ +	160	451	50	633	162	165	60	79
200	○ +	200	451	60	633	162	175	60	85

Clamping claw for machine vice
Type RKE

Delivery:
In pairs



N° article	276411 Stepped jaw SB, reversible	Jaw width mm
92	○	92
125	○	125
160	○	160
200	○	200

Clamping claw for machine vice
Type RKE

Design:
- for face and base fixing

Delivery:
Piecewise



N° article	277750 SPE	T-slot mm	Thread
12	○	12	M10×50
14	○	14	M12×55
16	○	16	M12×60
18	○	18	M16×60
20	○	20	M16×65

Fixed T-nuts for machine vice
Type RKE

Design:
- hardened and ground
- with mounting screw

Delivery:
As set



N° article	277850 NTS	Size	Total length mm
12	○	12	22
14	○	14	25
16	○	16	25
18	○	18	25
20	○	20	22

Hand crank for machine vice
Type RKE

Design:
- rotating ball handle
- with external hexagon



N° article	277860 Type RKE	for jaw width mm	Hexagon mm	Length mm	Height mm
12	○	92	12	90	60
14	○	125/160/200	14	160	104

Angle drive for machine vice Type RKE

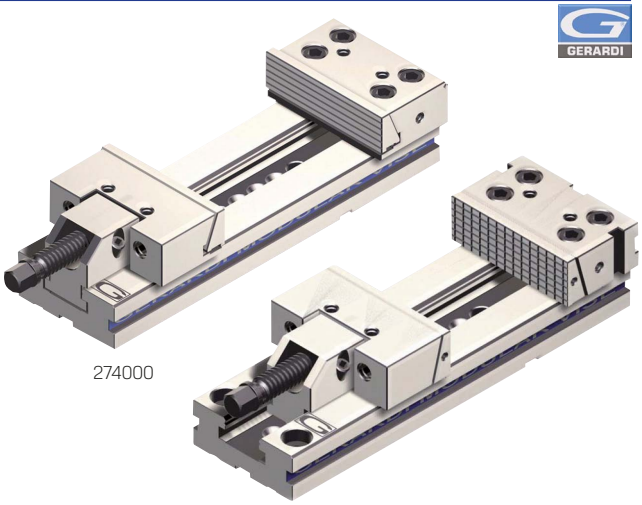


N° article	277870 90°	for jaw width mm	Length mm	Width mm	Height mm
92	○	92	113,5	83,5	90
125	○	125	133	98	106

Precision modular vice

Design:
- vice in modular principle
- with pull-down jaws or quick-change jaws
- case-hardened HRC 60
- accuracy 0.02 mm

N° article	274000 with adjustable pull-down jaws	274001 with quick-change jaw	Jaw width mm	Clamping range mm	Length mm	Width mm	Height mm	Weight kg
121	–	○	121	150	345	95	40	12,9
125	●	–	125	150	345	95	40	12,9
146	–	○ +	146	200	420	125	50	25,5
146/1	–	○ +	146	300	520	125	50	29
150	● +	–	150	200	420	125	50	25,5
150/1	● +	–	150	300	520	125	50	29
171	–	○ +	171	200	455	145	58	37
171/1	–	○ +	171	300	555	145	58	42
175	○ +	–	175	200	455	145	58	37
175/1	○ +	–	175	300	555	145	58	42



274000

274001

Clamping jaw for vice with pull-down and quick-change jaws

N° article	274007 Intermediate jaw, with double step 5 mm	Jaw width mm
125	○	125
150	○	150
175	○	175



N° article	274009 Angular top jaw, smooth	Jaw width mm
125	○	125
150	○	150
175	○	175



N° article	274011 Angular top jaw, inclined	Jaw width mm
125	○	125
150	○	150
175	○	175



N° article	274012 Clamping claw	Jaw width mm
125	●	125
150	●	150



N° article	274008 Parallel supports, 6 pairs, magnetic	Jaw width mm	Height mm
125	○	125	15 | 20 | 25 | 30 | 35 | 37
150	○	150	20 | 30 | 40 | 43 | 45 | 47
175	○	175	20 | 30 | 40 | 45 | 50 | 55



N° article	274010 Angular top jaw, V-block	Jaw width mm
125	○	125
150	○	150
175	○	175



Hinweis:
Preis pro Paar.

N° article	274013 Positioning T-nut	Length mm	Width mm	Height mm
16×12	○	16	12	10
16×14	●	16	14	10
16×16	●	16	16	10
16×18	●	16	18	12
16×22	○	16	22	12
16×28	○	16	28	12

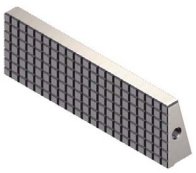


Clamping jaw for vice with quick change jaws

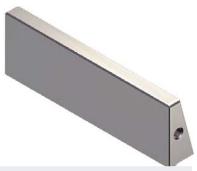
N° article	274015 soft	Jaw width mm
121	○	121
146	●	146
171	○	171



N° article	274017 corrugated	Jaw width mm
121	○	121
146	○	146
171	○	171



N° article	274016 smooth and hard	Jaw width mm
121	○	121
146	○	146
171	○	171



N° article	274018 with step 5 mm	Jaw width mm
121	○	121
146	●	146
171	○	171



N° article	274019 Prism	Jaw width mm
121	○	121
146	○	146
171	○	171

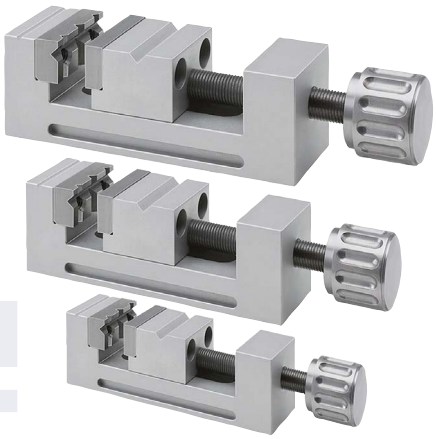


Precision vice for inspection

SPREITZER

Design:
Stationary jaws with V-blocks, provide versatile clamping options for cylindrical parts. An additional V-block on the stationary jaw plus the clamping grooves at the longitudinal side further increase the possible use
- precision vice made of hard chrome-plated brass or anodised aluminium
- for clamping small parts on a measuring microscope, profile projector and other applications
- angle accuracy 0.02 mm
- exchangeable jaws made of hardened, stainless steel and plastic
- material Aluminium
- finish anodised

Delivery:
1 mini precision vice
1 pair of plastic clamping jaws
1 pair of clamping jaws, hardened steel, non-rusting



N° article	274050	Jaw width mm	Clamping range mm	Length mm	Width mm	Height mm	Design
0020	NEW ○	15	14	50	15	15	Aluminium
0025	○	25	24,5	75	25	25	Aluminium
0035	○	35	34,5	100	35	35	Aluminium

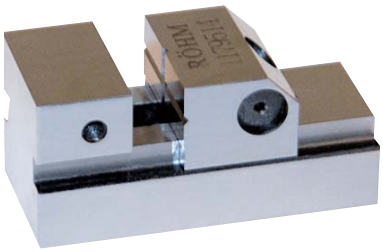
Precision vice

RÖHM

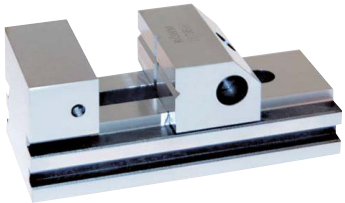
Design:
Made of alloyed tool steel, hardened and precision ground on all sides. Manufactured with outstanding accuracy. With quick adjustment **Size 34** with vertical and **Size 45** with horizontal ground prism

Use:
Predominantly in tool manufacturing, on grinding, milling and engraving machines, for measurement and control tasks and for manufacturing processes which require the highest standards of clamping accuracy. The precision vices with quick adjustment (PL-S MICRO and PL-S) are particularly suitable for eroding work

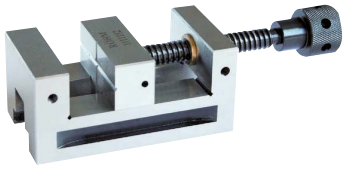
274100: Pull-down effect and ground-in prism
274120: Pull-down effect and horizontal and vertical ground-in prism **Size 120** only with horizontal ground-in prism
274150: With threaded spindle and horizontal ground-in V jaw



N° article	274100 PL-S MICRO	Jaw width mm	Squareness mm	Parallelism mm	Clamping range mm	Jaw height mm	Length mm	Height mm	Weight kg
34	●	34	0,005	0,002	25	15	75	35	0,546
45	●	45	0,005	0,002	50	20	110	45	1,196



N° article	274120 PL-S	Jaw width mm	Squareness mm	Parallelism mm	Clamping range mm	Jaw height mm	Length mm	Height mm	Weight kg
70	●	70	0,005	0,002	80	30	160	62	3,35
90	●	90	0,005	0,002	120	40	210	80	6,65
120	●	120	0,005	0,002	150	40	280	90	14,7



N° article	274150 PL-G	Jaw width mm	Squareness mm	Parallelism mm	Clamping range mm	Jaw height mm	Length mm	Height mm	Weight kg
60	●	60	0,005	0,002	55	25	110	50	1,65
73	●	73	0,005	0,002	80	35	210	67	5,9
88	●	88	0,005	0,002	120	40	250	80	9,55

Tower clamping module HILMA.TS

ROEMHELD HILMA ▪ STARK

Design:
- maximum stability and precision thanks to the monobloc design
- optimum protection against soiling thanks to patented guide and seal
- 4 clamping sides (4 × 90°)
- 2 sizes (jaw widths 100 and 125)
- mechanically operated
- with 3. hand function and one spindle or as 2-spindle system
- base plate 400x400 mm

Use:
- for horizontal machining centres
- 5-axis machining centres
- clamping of 4, 8 or 16 workpieces with standard jaws
- clamping of different workpiece dimensions on the same side
- simple and safe operation
- for manual loading, pallet stations and fully automated systems

Note:
Hydraulic operated version on request.

Delivery:
Without clamping jaws.

Technical data

NEW



Nº article	275100 HILMA.TS	Design	Jaw width mm	Stroke mm	Height mm	Length mm	Width mm	Clamping force kN	Weight kg
100/1	○ +	Vector 1 centre jaw	100	2 × 44	599	400	400	25	116
100/2	○ +	Vector 2 stationary jaws	100	2 × 40	599	400	400	25	115
100/3	○ +	3. -hand function	100	2 × 44	562	400	400	25	109
125/1	○ +	Vector 1 centre jaw	125	2 × 47	750	400	400	40	228
125/2	○ +	Vector 2 stationary jaws	125	2 × 47	745	400	400	40	224
125/3	○ +	3. -hand function	125	2 × 48	707	400	400	40	214

Design:
- maximum stability and precision thanks to the monobloc design
- optimum protection against soiling thanks to patented guide and seal
- 3 clamping sides (3 × 120°)
- 2 sizes (jaw widths 100 and 125)
- mechanically operated
- with 3. hand function and one spindle or as 2-spindle system
- base plate 400x400 mm

Use:
- for horizontal machining centres
- 5-axis machining centres
- clamping of 3, 6 or 12 workpieces with standard jaws
- clamping of different workpiece dimensions on the same side
- simple and safe operation
- for manual loading, pallet stations and fully automated systems

Note:
Hydraulic operated version on request.

Delivery:
Without clamping jaws.

Technical data

NEW



Nº article	275103 HILMA.TS TriStar	Design	Jaw width mm	Stroke mm	Height mm	Length mm	Width mm	Clamping force kN	Weight kg
100/1	○ +	Vector 1 centre jaw	100	2 × 44	599	400	400	25	107
100/2	○ +	Vector 2 stationary jaws	100	2 × 40	599	400	400	25	107
100/3	○ +	3. -hand function	100	2 × 44	562	400	400	25	104
125/1	○ +	Vector 1 centre jaw	125	2 × 47	750	400	400	40	185
125/2	○ +	Vector 2 stationary jaws	125	2 × 47	745	400	400	40	183
125/3	○ +	3. -hand function	125	2 × 48	707	400	400	40	174

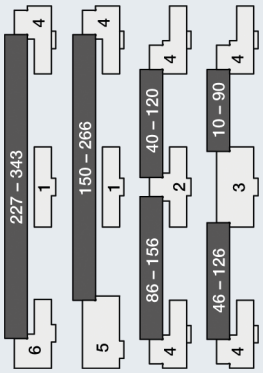
TS 100 und TS 100 TriStar

Design:

- 3rd-hand-function and Vector with 1 central jaw

Position	Design	N° article		
1	Guidance plate	275884 100		○
2	Stepped central jaw 26 mm	275875 100		○
3	Stepped central jaw 86 mm	275877 100		○
4	Stepped reversible jaw	275879 100		○
5	Stepped stationary jaw	275880 100		○
6	Stepped stationary jaw	275117 100	NEW	○

Clamping jawn for interchangeable inserts available on request.



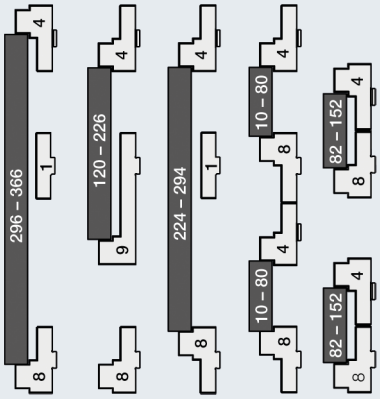
TS 100 und TS 100 TriStar

Design:

- TS Vector with 2 fixed jaws

Position	Design	N° article		
1	Guidance plate	275112 100	NEW	○
4	Stepped reversible jaw	275879 100		○
8	Stepped invertible jaw, stationary	275123 100	NEW	○
9	Stepped jaw, long, stationary	275119 100	NEW	○

Clamping jawn for interchangeable inserts available on request.



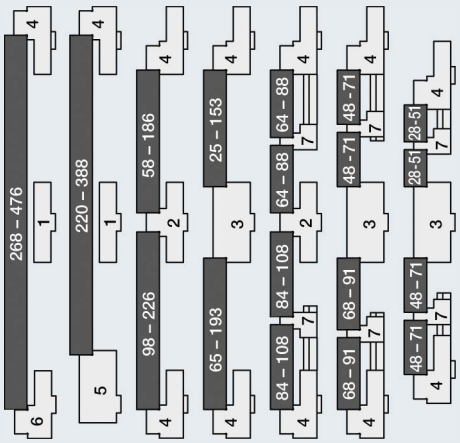
TS 125 und TS 125 TriStar

Design:

- 3rd-hand-function and Vector with 1 central jaws

Position	Design	N° article		
1	Guidance plate	275110 125	NEW	○
2	Stepped centre jaw 26 mm	275129 125	NEW	○
3	Stepped centre jaw 86 mm	275131 125	NEW	○
4	Stepped reversible jaw	275879 125		○
5	Stepped stationary jaw	275115 125	NEW	○
6	Stepped stationary jaw	275117 125	NEW	○
7	Floating central jaw	275133 125	NEW	○

Clamping jawn for interchangeable inserts available on request.



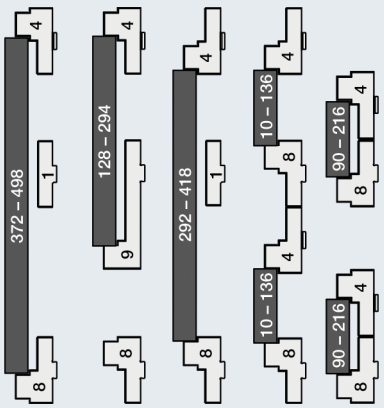
TS 125 und TS 125 TriStar

Design:

- TS Vector with 2 fixed jaws

Position	Design	N° article		
1	Guidance plate	275112 125	NEW	○
4	Stepped reversible jaw	275879 125		○
8	Stepped invertible jaw, stationary	275123 125	NEW	○
9	Stepped jaw, long, stationary	275119 125	NEW	○

Clamping jawn for interchangeable inserts available on request.



Machine vice HILMA.NC

ROEMHELD HILMA ▪ STARK

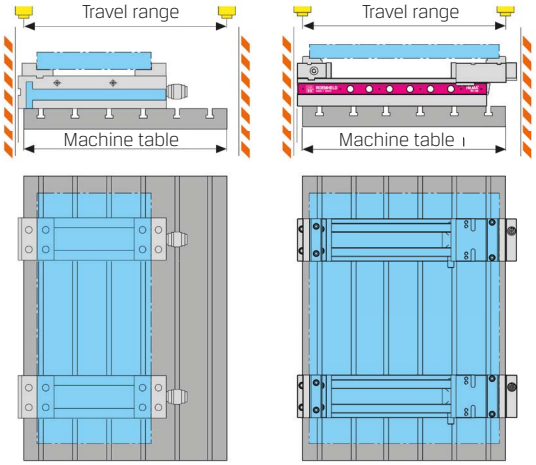
Design:
- mechanic-hydraulic
- steel version
- guideways hardened and ground
- rapid adjustment of clamping range via locking pins
- bottom with longitudinal and transversal grooves for alignment
- clamping range extension using top and segment jaws (accessories)
- clamping force display for exact transmission, reproducibility and monitoring of the clamping force (optional)
- optimum adaptation to machine table and movements thanks to different lengths
- holes for retractable nipples in the lower part as standard, suitable for STARK zero point clamping systems (tools catalogue page 28/529)

Use:
- tool and mould making, jig and fixture construction
- production on vertical machining centres

Delivery:
- standard reversible jaws smooth/serrated
- hand crank and operating instruction

Note:
Hydraulically actuated NC machine vices, customised versions as a double clamping system or in segment construction, additional groove (fixed jaw), cross groove (positioning) or fastening grid are available on request.

Technical data



Clamping force display in kN





N° article	275300 HILMA.NC	275301 HILMA.NC, clamping force indicator	Jaw width mm	Lower part length mm	Clamping range mm	Length mm	Width mm	Height mm	Clamping force, max. N	Weight kg
100	○ +	○ +	100	380	205	466	100	103,5	25	18,5
100/540	NEW ○ +	NEW ○ +	100	540	365	626	100	103,5	25	23,5
125	● +	● +	125	430	225	528	125	126	40	32,5
125/560	○ +	○ +	125	560	355	658	125	126	40	38,5
125/720	○ +	○ +	125	720	515	818	125	126	40	45,5
125/1000	NEW ○ +	NEW ○ +	125	1000	795	1098	125	126	40	58,5
125/1200	NEW ○ +	NEW ○ +	125	1200	995	1298	125	126	40	67,5
160	● +	● +	160	550	308	684	160	148	50	59
160/750	NEW ○ +	NEW ○ +	160	750	508	884	160	148	50	71,5
160/1000	NEW ○ +	NEW ○ +	160	1000	758	1134	160	148	50	87
160/1200	NEW ○ +	NEW ○ +	160	1200	958	1334	160	148	50	99,5

Top jaw for machine vice
HILMA.NC

ROEMHELD HILMA ▪ STARK

Use:
- for slide and stationary jaw
- for machine vice HILMA.NC
- to achieve very large clamping widths

Note:
- delivery incl. screws
- price per set
- 275651: 2 pcs.
- 275655: 4 pcs.



NEW



N° article	275651 Stepped jaw, smooth	275655 Segment jaw, gripp	Jaw width mm
100-SET	○	○	100
125-SET	○	○	125
160-SET	○	○	160

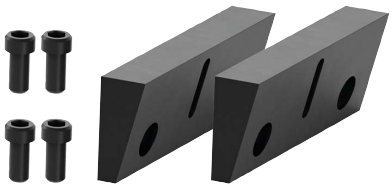
Clamping claw for machine vice
HILMA.NC

ROEMHELD HILMA ▪ STARK

Design:
- QIS- quick-change jaw with pull-down effect
- base jaw with two permanent magnets
- jaw change without use of tools

Use:
For machine vice HILMA.NC.

Note:
- delivery incl. screws
- price per PU



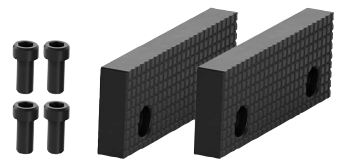
N° article	275850 QIS base jaw with 2 permanent magnets	Jaw width mm	PU
100-SET	○	100	2
125-SET	○	125	2
160-SET	○	160	2

Clamping claw for machine vice HILMA.NC

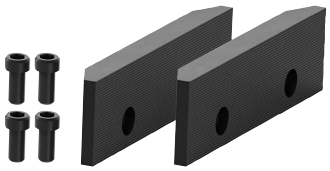
Use:
For machine vice HILMA.NC.

Note:
- delivery incl. screws
- price per PU

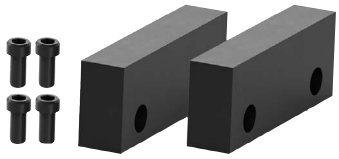
N° article	275600 Standard jaw, smooth/cross-grooved	Jaw width mm	PU
100-SET	○	100	2
125-SET	○	125	2
160-SET	○	160	2



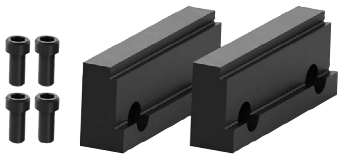
N° article	275620 Jaw extra wide	Jaw width mm	PU
100-SET	○	125	2
125-SET	○	160	2
160-SET	○	200	2



N° article	275630 Jaw, soft (16 MnCr5)	Jaw width mm	PU
100-SET	○	100	2
125-SET	○	125	2
160-SET	○	160	2



N° article	275640 Precision stepped jaw	Jaw width mm	PU
100-SET	○	100	2
125-SET	○	125	2
160-SET	○	160	2



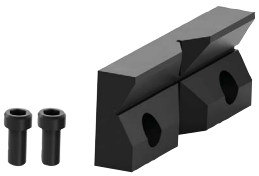
Note:
HILMA.NC with clamping force indicator is recommended.

NEW

N° article	275645 Claw jaw with fine step	Jaw width mm	PU
100-SET	○	100	2
125-SET	○	125	2
160-SET	○	160	2



N° article	275680 V jaw horizontal/ vertical	Jaw width mm	PU
100-SET	○	100	1
125-SET	○	125	1
160-SET	○	160	1



Design:
- swivel range max. 5°

Note:
HILMA.NC with clamping force indicator recommended.

NEW

N° article	275722 Pendulum jaw, gripp	Jaw width mm	PU
125-SET	○	125	1
160-SET	○	160	1



Note:
HILMA.NC with clamping force indicator recommended.

NEW

N° article	275750 Jaw with interchangeable inserts, gripp	Jaw width mm	PU
100-SET	○	100	2
125-SET	○	125	2
160-SET	○	160	2

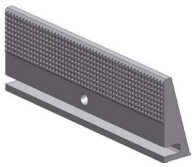


Note:
Price per piece

N° article	275852 QIS jaw insert, smooth	Jaw width mm
100	○	100
125	●	125
160	●	160



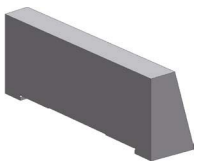
N° article	275854 QIS jaw insert, serrated	Jaw width mm
100	○	100
125	○	125
160	○	160



N° article	275858 QIS exchangeable jaw, with steps	Jaw width mm
100	○	100
125	●	125
160	●	160



N° article	275864 QIS interchangeable jaw, soft 16MnCr5	Jaw width mm
100	○	100
125	○	125
160	○	160



Exchangeable inserts for machine vice HILMA.

ROEMHELD HILMA ▪ STARK

Note:
- delivery incl. screws
- price per PU

NEW

N° article	275757 Gripp/ smooth	for jaw width mm	PU
100	○	100	1
125	○	125	1
160	○	160	1



N° article	275759 Grip round	for jaw width mm	PU
100	○	100	2
125	○	125	2
160	○	160	2

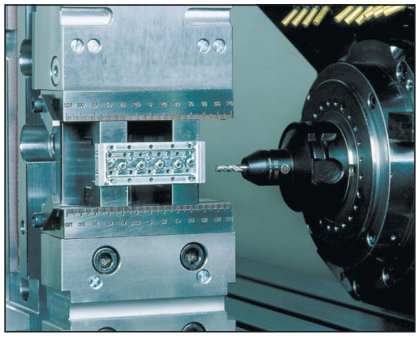


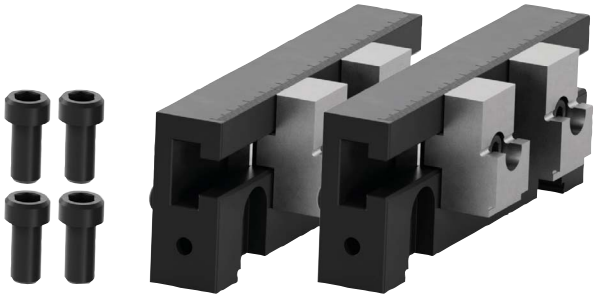
Clamping claw for machine vice HILMA.NC

ROEMHELD HILMA ▪ STARK

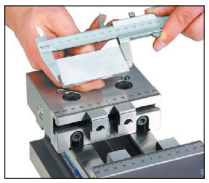
Design:
- optimised 3-sided machining of small components
- reversible and replaceable inserts
- fast setup
- incl. stepped inserts

Technical data





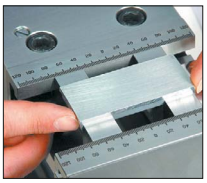
Design standard



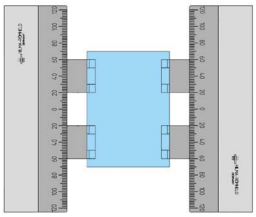
The blank is approx. 2 mm larger than the finished workpiece.



Adjust the jaws approx. 2 mm below the finished dimensions.



Place the blank by visual judgement in a central position and clamp it.



N° article	275772 Slimflex jaw system with stepped retaining pieces	Jaw width mm
100-SET	○	100
125-SET	○	125
160-SET	○	160

Accessories for machine vices Type UC

ROEMHELD HILMA ▪ STARK

Design:
- set = 4 pieces
- incl. screws

N° article	275866 Clamping claw set	for jaw width mm	Screws DIN 912 (8.8)
100/M12	113,20	100	M12 × 45
125/160/M12	114,20	125/160	M12 × 45
125/160/M16	115,20	125/160	M16 × 50



N° article	275820 Workpiece stop, swivelling	for jaw width mm	Thread
100/125/160	●	100/125/160	M12
160EL/NC	○	160	M20



Use:
For machine vice HILMA.NC.

N° article	275780 Angle drive	for jaw width mm
100	○	100
125	●	125
160	●	160



N° article	275830 Clamping force preselection 6-stage	for jaw width mm
100	○	100
125	●	125
160	○	160



Machine vice HILMA.MCP

ROEMHELD HILMA ▪ STARK

Design:
- patented segment construction
- compact construction
- high precision and accuracy of the manufactured workpieces due to high rigidity
- high zero point stability
- robust construction and good chip protection
- large clamping range
- clamping of raw and finished parts without retooling
- maintenance-friendly

Technical data



Delivery:
Without clamping jaws and exchangeable inserts

Note:
Select the desired clamping jaws and exchangeable inserts on page 27/515
Hydraulic double-acting versions and other lengths and heights available on request.

N° article	275420 HILMA.MCP, clamping against fixed jaws	275421 HILMA.MCP Z, centric clamping	275422 HILMA.MCP Z Balance, positions-flexibel	275420 Clamping width, min. mm	275420 Clamping width, max. mm	275420 Weight kg	275421 Clamping width, min. mm	275421 Clamping width, max. mm	275421 Weight kg	275422 Clamping width, min. mm	275422 Clamping width, max. mm	275422 Weight kg	Jaw width mm	Clamping force, max. kN	Stroke mm
0060	○ +	○ +	○ +	6	150	4,7	6	150	4,7	6	150	4,7	60	15	30
0100	○ +	○ +	○ +	18	204	17,5	18	204	17,7	18	204	17,5	100	25	50
0125	○ +	○ +	○ +	18	215	30,5	18	400	52,3	18	400	52,3	125	35	101

Clamping claw for machine vice HILMA.MCP

ROEMHELD HILMA ▪ STARK

Design:
- hardened and ground
- delivered incl. fixing screws

Delivery:
Without interchangeable inserts.

Note:
Fitting exchangeable inserts see under 275430 - 275433

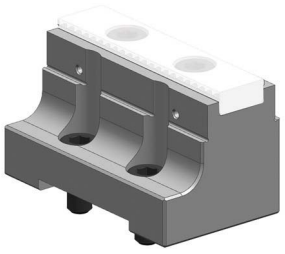
*Support height including HILMA.MCP.
**Height with interchangeable insert.

Technical data

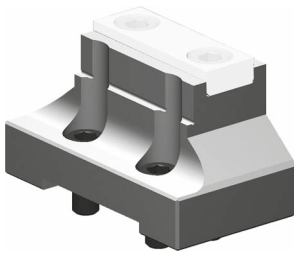
N° article	275424 flat, for exchangeable insert	Jaw width mm	Clamping range, min. mm	Clamping range max. mm	Support height mm	Length mm	Width mm	Height mm
0060	○	60	12	126	88*	56	60	22**
0100	○	100	18	204	125*	59	100	29**
0125	○	125	18	400	160*	91	125	34**



N° article	275425 for interchangeable insert	Jaw width mm	Clamping range, min. mm	Clamping range max. mm	Support height mm	Length mm	Width mm	Height mm
0060	○	60	12	126	100*	56	60	34**
0100	○	100	18	204	150*	59	100	54**
0125	○	125	18	400	192*	91	125	66**



N° article	275426 Width offset, for inter-changeable insert	Jaw width mm	Jaw width offset mm	Clamping range, min. mm	Clamping range max. mm	Support height mm	Length mm	Width mm	Height mm
0060	○	60	35	12	126	100*	56	60	34**
0100	○	100	65	18	204	150*	59	100	54**
0125	○	125	80	18	400	192*	91	125	66**



N° article	275427 Width offset, for inter-changeable insert	Jaw width mm	Jaw width offset mm	Clamping range, min. mm	Clamping range max. mm	Support height mm	Length mm	Width mm	Height mm
0100	○	100	32	18	204	150*	59	100	54**

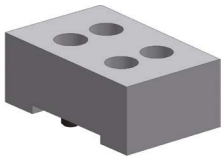


Clamping claw for machine vice HILMA.MCP

ROEMHELD HILMA ▪ STARK

Use:
For machine vice HILMA.MCP.

N° article	275428 Block jaw, soft	Jaw width mm	Jaw height mm
0060	○	60	25
0100	●	100	35
0125	○	125	55



Interchangeable inserts for machine vices

ROEMHELD HILMA ▪ STARK

Design and use:

Grip / grip round:
- clamping of unmachined parts

Grip
- for use on saw cuts or cast surfaces with larger angular errors

Grip round
- for clamping non-cubic workpieces or forged and cast parts
- in connection with pendulum jaws angle errors up to several millimetres can be compensated

TUC:
- for use with drawn, sawn and ground workpieces with small angular errors
- hardness 80 HRC, roughness RA 10

Technical data





N° article	275430 Gripp	for jaw width mm	Ideal for
6035	○	35	Clamping jaw MCP60
6060	○	60	Clamping jaw MCP60
10032	○	32	Clamping jaw MCP100
10065	○	65	Clamping jaw MCP100
100100	○	100	Clamping jaw MCP100
12580	○	80	Clamping jaw MCP125
125125	○	125	Clamping jaw MCP125

N° article	275432 TUC	for jaw width mm	Ideal for
6035	○	35	Clamping jaw MCP60
6060	○	60	Clamping jaw MCP60
10032	○	32	Clamping jaw MCP100
10065	○	65	Clamping jaw MCP100
100100	○	100	Clamping jaw MCP100
12580	○	80	Clamping jaw MCP125
125125	○	125	Clamping jaw MCP125

N° article	275433 Grip round	for jaw width mm	Ideal for
0100	○	100	Clamping jaw MCP100
0125	○	125	Clamping jaw MCP125



Accessories for machine vices Type UC

ROEMHELD HILMA ▪ STARK

Design:
- set = 4 pieces
- incl. screws

N° article	275866 Clamping claw set	for jaw width mm	Screws DIN 912 (8.8)
60/M10	○	60	M10
60/M12	○	60	M12
100/M12	●	100	M12×45
125/160/M12	●	125/160	M12×45
125/160/M16	●	125/160	M16×50



Machine vice HILMA.UC 125

Design:
- 5-axis clamping system, centric clamping
- high stability due to closed power transmission
- no bending force impact on the lower part
- active pull-down of the workpiece
- optimum accessibility, compact design, minimal interfering contour
- precise and repeatable
- modular structure, clamping range expandable up to 600 mm
- positive locking jaw programme for workpieces of all shapes and surfaces
- customised mounting on T-slot table, STARK zero-point clamping system, adapter plate (accessory) or quick-change system 96×96 mm

Technical data

Use:
- clamping from small workpieces to large panels
- suitable for cubic and round workpieces
- suitable for 3-, 4- or 5-axis machining centres and milling/turning centres

Delivery:
2 pull-down jaws, smooth, width 125 mm, mounted
1 short pull spindle and 1 short clamping nut, mounted
1 long pull spindle and 1 long clamping nut

NEW

Note:
Quick and precise retooling in combination with adapter plates (accessories)



N° article	275440 HILMA.UC 125	Jaw width mm	Lower part length mm	Clamping range mm	Length mm	Width mm	Height mm	Weight kg	Tensile force max. kN
125	○ +	125	350	200	350	149	135	20	52

Accessories for machine vices HILMA.UC 125

ROEMHELD HILMA ▪ STARK

Note:
- supplied as a set, including screws
- price per set (2 pieces)

NEW



N° article	275442 Raising set 35 mm	for jaw width mm
35	○	125

Use:
Extension of the clamping range up to 600 mm.

Note:
The overall length of the vice increases by the maximum clamping range when using an extension.

NEW



N° article	275444 Extension set	for jaw width mm	Clamping range, min. mm	Clamping range, max. mm
400	○	125	196	400
600	○	125	396	600

Accessories for machine vices HILMA.UC 125

ROEMHELD HILMA ▪ STARK

Note:
- supplied as a set, including screws
- price per set (2 pieces)

NEW



N° article	275445 Clamping jaws, smooth	Jaw width mm
125	○	125

Note:
- supplied as a set, including screws
- price per set (2 pieces)

NEW



N° article	275446 Clamping jaw, grip pin	Jaw width mm	Jaw width offset mm
125	○	125	–
125/60	○	125	60

Note:
Support rails (275454) required

NEW



N° article	275447 Clamping jaw, high, smooth	Jaw width mm	Jaw width offset mm
125	○	125	–
125/60	○	125	60

NEW



N° article	275448 Jaw, soft	Jaw width mm
125	○	125

Note:
Support rails (275454) optional

NEW



N° article	275449 Prismatic jaw, hardened	Jaw width mm
125	○	125

NEW



N° article	275450 Clamping jaw with round clamping bolt	Jaw width mm	Clamping diameter mm
125	○	125	30 - 200

Accessories for machine vices HILMA.UC 125

ROEMHELD HILMA ▪ STARK

Note:
- supplied as a set, including screws
- price per set (5 pieces)

NEW



N° article	275451 Clamping claw set	for jaw width mm	Screws DIN 912 (8.8)
0001	○	125	M12×30

Note:
- supplied as a set
- price per set (10 pieces)

NEW



N° article	275453 Clamping "grip pin"
0001	○

Note:
- supplied as a set, including screws
- price per set (2× 5 pieces)
- hardened, contact surface 3.5 mm

NEW



N° article	275454 Seating ledges 3/8 & 5/10
0001	○

Note:
- consisting of:
  2 fitting T-nuts
  2 T-slot nuts
  for groove 14 and 18 mm
  including screws
- price per set

NEW



N° article	275455 Mounting kit	for jaw width mm
0001	○	125

Adapter plate for machine vice HILMA.UC 125

ROEMHELD HILMA ▪ STARK

Design:
- grid 25 mm
- with lateral clamping edge

Use:
For quick and precise retooling of the HILMA.UC 125 clamping system in a wide range of superstructures and clamping areas.

NEW



150×400



400×400



600×400

N° article	275459 Adapter plate	for jaw width mm	Length mm	Width mm	Height mm
150×400	○ +	125	400	150	22
400×400	○ +	125	400	400	22
400×600	○ +	125	400	600	22

Double clamping system HILMA.DS

ROEMHELD HILMA ▪ STARK

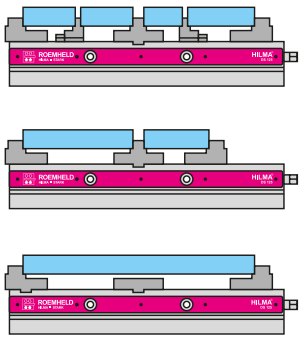
Design:
- mechanically or hydraulically operated
- for clamping of 1 - 4 workpieces (BB 125)
- one-sided spindle actuation with third-hand function
- simultaneous clamping of workpieces with different dimensions in succession
- spindle entirely encapsulated
- precise clamping force transmission via torque wrench

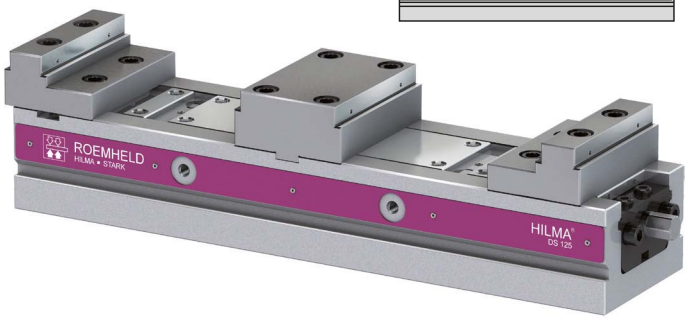
Use:
- production on vertical machining centres
- for efficient double and multiple clamping

Delivery:
- incl. instruction manual
- without jaws

Note:
- machine-specific positioning and fastening on request
- hydraulically actuated version on request

Technical data





N° article	275870 HILMA.DS, mechanic	Jaw width mm	Stroke mm	Clamping range mm	Total length mm	Clamping force, max. N	Weight kg
100	○ +	100	44	1 × 266 | 2 × 156	420	25	19,5
125/510	○ +	125	44	1 × 350 | 2 × 204 | 4 × 97	510	40	34

Clamping jaws for double clamping system HILMA.DS

ROEMHELD HILMA ▪ STARK

Design:
- jaw hardened and ground (except soft jaw)
- thread M4 for workpiece supports
- delivered incl. fixing screws

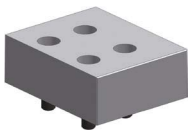
Technical data






N° article	275875 Stepped central jaw 26 mm	275877 Stepped central jaw 86 mm	275879 Stepped reversible jaw	275880 Stepped stationary jaw	Jaw width mm
100	○	○	○	○	100
125	○	○	○	○	125



N° article	275882 Floating central jaw	275884 Guidance plate	275886 Centre jaw soft (material C45)	275888 Reversible jaw soft (Material C45)	Jaw width mm
100	–	○	○	○	100
125	○	○	○	○	125

Accessories for machine vices Type UC

ROEMHELD HILMA ▪ STARK

Design:
- set = 4 pieces
- incl. screws

N° article	275866 Clamping claw set	for jaw width mm	Screws DIN 912 (8.8)
100/M12	●	100	M12 × 45
125/160/M12	●	125/160	M12 × 45
125/160/M16	●	125/160	M16 × 50



Clamping claw for machine vice

PRETEC

Design/Use:
- for quick and precise clamping of workpieces of all kinds
- loose supports become obsolete
- largely maintenance-free use due to purely mechanical functioning
- compressed air can be applied via valves at both ends
- sturdy and robust design
- closed on all sides when installed, thus minimising contaminations
- recommended air pressure 5.5 bar
- high-quality tool steel, hardened, ground and treated with a special oxidation process
- patented



N° article	275901 with positioning pins (for Kesel, Röhm, Gressel)	275903 with positioning pins (for HILMA)	Jaw width mm
125	●	●	125
160	●	●	160

Manual vice MANOK

HAINBUCH SPANNENDE TECHNIK

Design/Use:
- very simple construction
- sensitive clamping by hand possible
- ideal for 5-sided machining
- repeatability ‹ 0.01 mm possible
- extremely versatile applicable on machining centres, measuring, shaping, broaching, upright drilling and laser marking machines etc.
- clamping with workpiece stop and front stop possible
- workpiece stabilization by axial pull against workpiece stop
- short, stable clamping possible
- easy to set up, full passage, parallel clamping, optimal power conversion, extreme rigidity and superior holding power as well as low wear and tear

0042: Size 42
0052: Size 52
0065: Size 65

Note:
Matching accessories see page 24/461

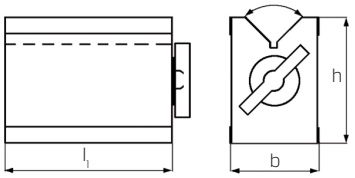


N° article	277900 manual	Clamping range, min. mm	Clamping range max. mm	Mounting hole spacing mm	Front stop mount (F)	Bolt circle stop	Length mm	Height totale mm	Width mm	Weight kg
0042	○	3	42	184	∅ 132 f7	LK ∅ 120 [3×M6]	214	124	159	14,3
0052	○	3	52	184	∅ 132 f7	LK ∅ 120 [3×M6]	214	124	159	14,1
0065	○	3	65	184	∅ 132 f7	LK ∅ 120 [3×M6]	214	124	159	12,9

Permanent magnet

Design:
Four magnetic contact surfaces (top and bottom side plus two faces). By turning-on prismatic and opposed faces are magnetised. The angled magnets are entirely sealed
Accuracy: Plane parallelism below 0.01 mm

Use:
For grinding and marking work at irregularly shaped round and rectangular workpieces

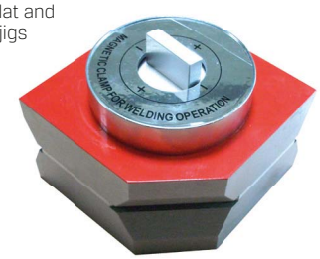




N° article	278100	l_1 mm	b mm	h mm	for shaft ∅ mm	Weight kg
80	●	80	60	73	5 - 50	2

Design:
Strong magnetic power, continuous adjustment of magnetic force to align the workpieces

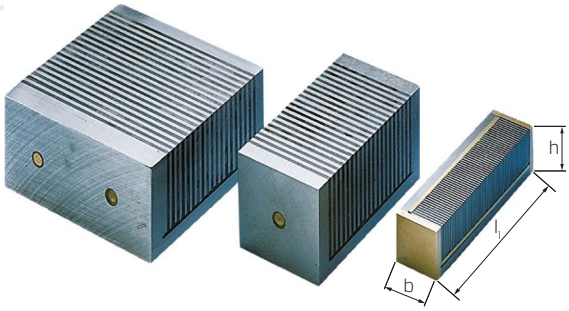
Use:
As welding aid for tubes, round material, flat and sectional iron. As clamping aid for drilling jigs



N° article	279000 Hexagon holder	Width across corners mm	l_1 mm	b mm	Weight kg
140	○	140	108	108	6

Design:
With fine and transverse pole division. 1, 2 or 3 magnetic clamping faces. Standard version made of OXIT, permanent magnet system for diverse materials

Use:
For profiling and grinding of small parts. Good supplement for permanent or electro magnetic chucks, since a non-magnetic base exists. Size 4 is ideal for handling extremely flat workpieces

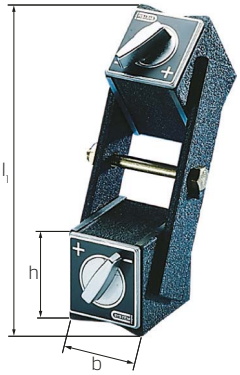


N° article	278900 Clamping block	l_1 (± 0.15) mm	b (± 0.15) mm	h (± 0.15) mm	Pole pitch mm	Adhesive surface top, l_1 mm	Adhesive surface top, b mm	Lateral adhesive surface, l_1 mm	Adhesive surface side, b mm	Number of adhesive surfaces on the side	Weight kg
1	○	100	100	50	4	100	50	100	50	2	3,2
2	●	100	50	50	4	100	50	100	50	2	1,6
3	●	100	25	25	4	100	50	100	25	1	0,4
4	○	100	25	25	1,3	100	50	100	25	1	0,4

Permanent magnet

Design:
Two individually switchable prismatic magnetic blocks connected by struts

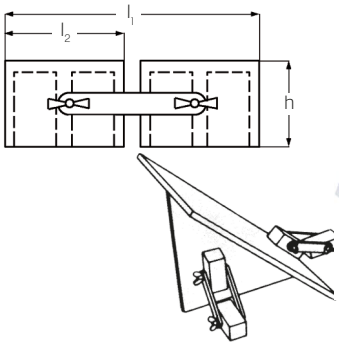
Use:
Indispensable welding aid for sheet metal, round and flat material, for all desired angles



N° article	279050 Prism joint	l_1 mm	b mm	h mm	Weight kg
60	○	220	48	50	2

Design:
Two permanent magnetic blocks joined by struts Any angle adjustable, lockable with two wing screws

Use:
As welding aid to hold sheet steel, flat iron etc.



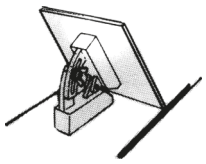


N° article	279100 Joint	l_2 mm	l_1 mm	b mm	h mm	Weight kg
126	●	60	126	25	25	0,4

Design:
- robust construction, both faces magnetic
- max. application temperature 100 °C

279200: with permanent 90° angle
279220: adjustable from 45° up to 90° (with scaling)

Use:
For efficient retaining of sheets, sectional iron, flat material in welding and as a tool for assembly work.

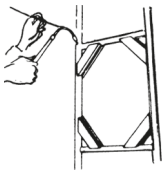


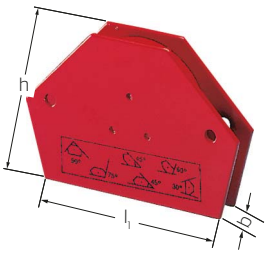


Art.-Nr.	279200 fest	279220 verstellbar	l_1 mm	b mm	Weight kg
120	○	–	120	30	1
138	–	○	138	30	1,2

Design:
Split adhesive surface with top-grade permanent magnetic core

Use:
For holding sheet metal in different angular positions



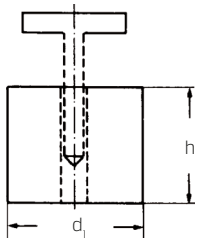


N° article	279250 Angled magnet	l_1 mm	b mm	h mm	Weight kg
96	●	96	12	64	0,3

Permanent-Magnet

Design:
Strong adhesive power. The handle also serves for easy lifting off of the magnet from the workpiece

Use:
For retaining jigs and assembly welding operations



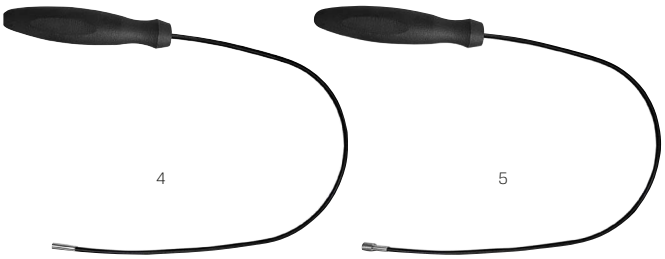


N° article	279500 Pot magnet	d_1 mm	h mm	Adhesion, min. N	Weight kg	G metric
30	●	30	25	150	0,11	M6
40	●	40	30	300	0,24	M8
50	●	50	40	500	0,5	M8

Mini magnetic pick-up tool flexible

Design:
- flexible shaft of coated copper wire
- with PP hexagonal handle

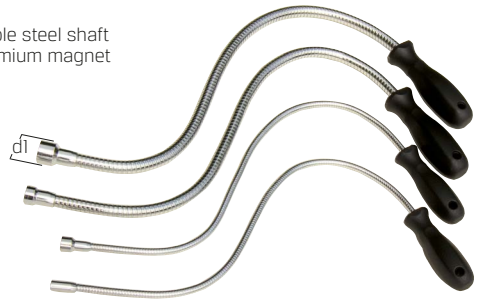
Use:
For retrieving heavy metal parts from small interstices



N° article	279549 flexible	Magnet Ø mm	Length mm	Adhesive power g	Weight kg
4	●	4	400	120	0,12
5	●	5	400	270	0,27

Magnetic pick-up tool

Design:
- flexible, good alignable steel shaft
- with powerful neodymium magnet



N° article	279550 flexible	d_1 mm	Magnet Ø mm	Length mm	Adhesion, min. N	Weight g
8	●	8	6	460	5	0,7
12	●	12	10	460	10	0,76
15	●	15	13	520	18	0,212
19	●	19	17	520	30	0,276

Permanent magnet

Design:
Head made of chrome-plated metal sleeve, powerful permanent magnet

Use:
To clean blind holes and threaded holes



N° article	279680	Magnet Ø mm	Magnet length mm	Total length mm
1,6	○	1,6	35	65
3	○	3	38	90
5	○	5	35	130
8	○	8	40	150
11	○	11	42	180

Permanent magnet

Design:
- hard magnet in aluminium housing and steel encasement
- application temperature up to 450 °C

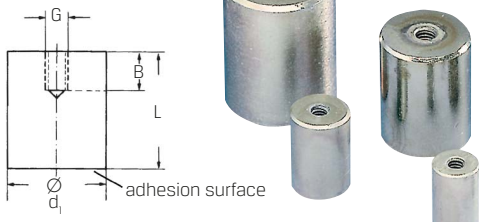
Use:
For installation to jigs and fixtures, to retain, to lift



N° article	279600 Pot magnet with threaded hole	d_1 mm	h mm	Adhesion, min. N	G metric
17	●	17	16	18	M6
21	●	21	19	28	M6
27	●	27	25	65	M6
35	●	35	30	115	M6

Design:
Magnet systems with galvanised metal jacket. The rear side has a metric female thread. Application temperature up to max. 80 °C.
Length tolerance ± 0.2 mm

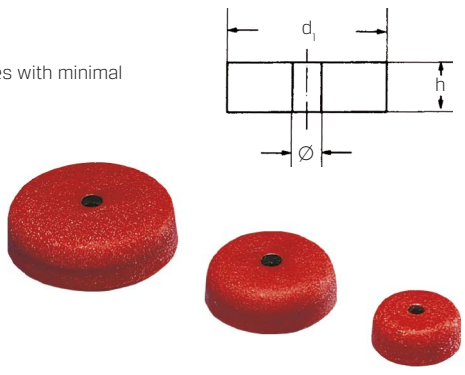
Use:
Round bar magnets are used for installation in steel and iron



N° article	279620 Blind hole magnet	d_1 mm	L mm	B mm	Adhesion, min. N	G metric
8	●	8	12	3	12	M3
10	●	10	16	7	24	M4
13	●	13	18	3	60	M4
16	●	16	20	6	90	M4
20	●	20	25	9	135	M5
25	●	25	30	10	190	M6
35	●	35	40	10	300	M8
50	●	50	50	13	550	M12

Design:
Powerful magnet with steel jacket and through hole. Application temperature up to 450 °C

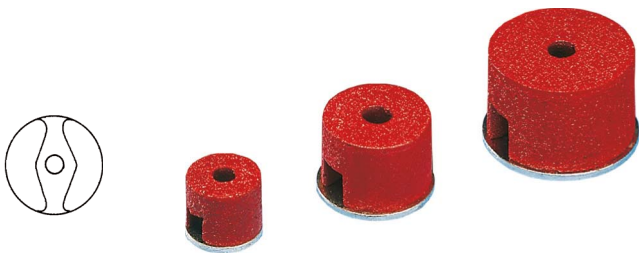
Use:
For installation to fixtures with minimal space requirements



N° article	279720 Flat pot magnet	d_1 mm	h mm	Ø mm	Adhesion, min. N	Weight kg
19	●	19	8	3,5	30	0,018
29	●	29	9	5	55	0,046
38	●	38	10	5	95	0,097

Design:
- split adhesive surface
- through hole for mounting
- application temperature up to 450 °C

Use:
For laboratory purposes, measurements, retaining of metal objects

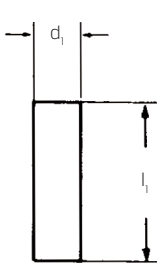


N° article	279750 Pot magnet	d_1 mm	h mm	Ø mm	Adhesion, min. N	Weight kg
13	●	13	10	4,2	7	0,007
19	●	19	13	5,4	19	0,02
25	●	25	16	5,4	29	0,056

Permanent magnet

Design:
Round cross-section. Pole marked by notch. Delivery always in pairs. Application temperature up to 450 °C

Use:
For stringing together single magnets up to any desired length

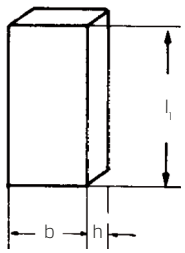




N° article	279780 Bar magnet	d_1 mm	l_1 mm
6×20	●	6	20
8×25	●	8	25
10×30	●	10	30

Design:
Rectangular cross-section. Pole marked by notch. Delivery always in pairs. Application temperature up to 450 °C

Use:
For stringing together single magnets up to any desired length

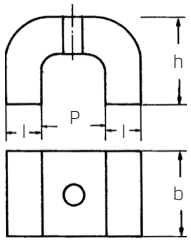




N° article	279790 Bar magnet	b mm	h mm	l_1 mm
10×5×20	●	10	5	20
12×5×60	○	12	5	60
12,5×5×40	○	12,5	5	40
15×5×60	○	15	5	60
15×10×75	○	15	10	75
15×10×100	○	15	10	100

Design:
Arch form magnet with high holding power, with through hole for mounting. Application temperature up to 450 °C

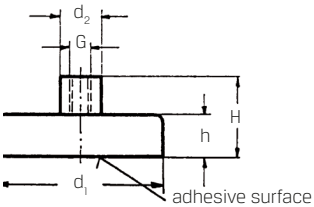
Use:
For holding, lifting and sorting





N° article	279850	h mm	Pole spacing/cross section mm	Adhesion N	Weight kg
1	●	20	5/8 × 20.0	45	0,065
2	●	25	20/10 × 25.0	90	0,15
3	●	30	22/11 × 29.0	120	0,22
4	●	35	35/11 × 35.5	230	0,38

Design:
With threaded bush, application temperature up to 200 °C. Flat pot magnets made of ceramic permanent magnet material OXIT 380 are provided with a shielding pot made of soft iron. Surface galvanised





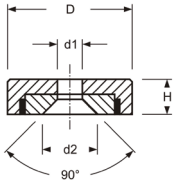
N° article	279900 Flat gripper, made of OXIT	d_1 mm	h mm	d_2 mm	H mm	G metric	Adhesion, min. N	Weight g
10	●	10	4,5	6	11,5	M3	4	4
13	●	13	4,5	6	11,5	M3	10	5
16	●	16	4,5	6	11,5	M3	18	6
20	●	20	6	6	13	M3	30	11
25	●	25	7	8	15	M4	40	22
32	●	32	7	8	15	M4	80	32
40	●	40	8	10	18	M5	125	60
50	●	50	10	12	22	M6	220	110
63	●	63	14	15	30	M8	350	240

Flat gripper Neodymium

Bauer Böcker

Design:
- with bore and countersink
- nickel-plated magnetic coating
- max. operating temperature 80° C
- galvanized steel casing
- Application area: for flat construction and high adhesive force requirements

NEW





N° article	279973 countersunk centre hole	Diameter mm	d_1 mm	d_2 mm	H mm	Tol. D	Tol. H	Adhesion N	quality
10	○	10	2,6	5,2	4,5	± 0,1	± 0,1	19	N35
13	○	13	3,5	6,6	4,5	± 0,1	± 0,1	40	N35
16	○	16	3,5	6,6	4,5	± 0,1	± 0,1	75	N35
20	○	20	4,5	9	6	± 0,1	± 0,1	105	N35
25	○	25	4,5	9	7	± 0,1	± 0,2	160	N35
32	○	32	5,5	11	7	± 0,1	± 0,2	310	N35
40	●	40	5,5	10,6	8	± 0,1	± 0,2	500	N35

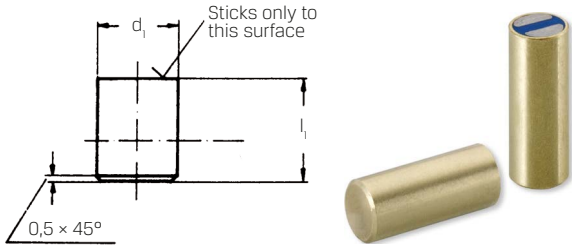
Permanent magnet

Design:
Without threaded bushing; shielded system
Made of neodymium, application temperature up to 80 °C.



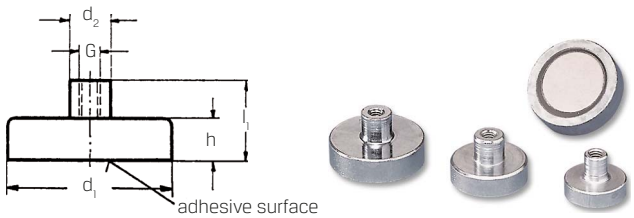
N° article	279920 Flat gripper	d_1 mm	h mm	Adhesion, min. N	Weight g
6	●	6	4	5	1
8	●	8	4	13	1,5
10	●	10	4	25	2,5
13	●	13	4	60	4,5
16	●	16	4	95	6,5
20	●	20	6	140	15
25	●	25	7	200	22
32	●	32	7	350	40

Design:
Smooth execution with fit tolerance h6, application temperature up to 80 °C



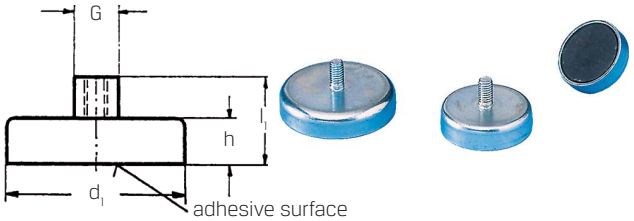
N° article	279930 Bar gripper in neodymium	d_1 mm	l_1 mm	Distance to iron walls mm²	Adhesion, min. N	Weight g
6	●	6	20	1,5	10	4,5
8	●	8	20	1,5	25	8
10	●	10	20	2	45	12,5
13	●	13	20	2,5	70	20
16	●	16	20	3	150	32
20	●	20	20	3	150	32
25	●	25	25	4	280	60
32	●	32	40	6	700	250

Design:
With threaded bush, application temperature up to 200 °C. These flat grippers are characterized through extremely good holding force in relation to their size

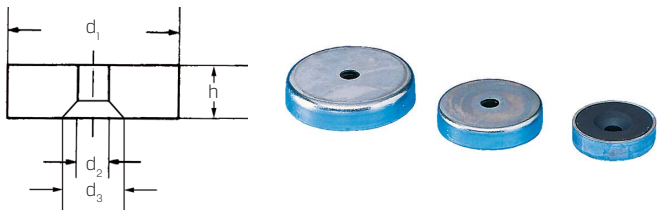


N° article	279940 Flat gripper made of samarium cobalt	d_1 mm	h mm	d_2 mm	l_1 mm	G metric	Adhesion, min. N	Weight g
6	●	6	4,5	6	11,5	M3	5	1,5
8	●	8	4,5	6	11,5	M3	11	2
10	●	10	4,5	6	11,5	M3	20	3
13	●	13	4,5	6	11,5	M3	40	5
16	●	16	4,5	8	11,5	M4	60	7,5
20	●	20	6	8	13	M4	90	16
25	●	25	7	8	14	M4	150	25
32	●	32	7	10	15	M5	220	48

Design:
With male thread, application temperature up to 200 °C

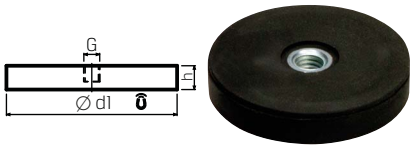


N° article	279960 Flat gripper, made of OXIT	d_1 mm	h mm	l_1 mm	G metric	Adhesion, min. N	Weight g
10	○	10	4,5	11,5	M3	4	2
13	○	13	4,5	11,5	M3	10	3
16	●	16	4,5	11,5	M3	18	5
20	●	20	6	13	M3	30	10
25	●	25	7	15	M4	40	19
32	●	32	7	15	M4	80	30



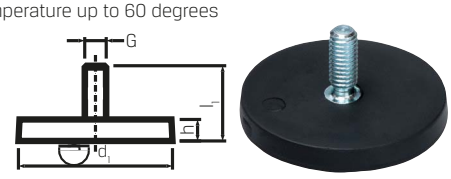
N° article	279970 Flat gripper, made of OXIT	d_1 mm	h mm	d_2 mm	d_3 mm	Adhesion, min. N	Weight g
16	●	16	4,5	3,3	7	14	4
20	●	20	6	4,2	9	27	9
25	●	25	7	5,5	11	36	17
32	●	32	7	5,5	11	72	27
40	●	40	8	5,5	11	90	52

Design:
- optimum hold on thin sheets with sensitive surfaces
- with internal thread
- high holding force
- high lateral static friction forces
- max. application temperature
Ø 31 / 43 mm = 60 °C
Ø 66 / 88 mm = 80 °C



N° article	279975 Flat pot magnets of neodymium with neoprene protective coating	d_1 mm	h mm	G metric	Adhesion, min. N	Weight g
18	○	18	6	M4	25	6
31	●	31	6	M5	75	21
43	●	43	6	M4	85	29
66	●	66	8,5	M6	180	100
88	●	88	8,5	M6	550	186

Design:
- optimum hold on thin sheets with sensitive surfaces
- with threaded stem
- high holding force
- high lateral static friction forces
- maximum operating temperature up to 60 degrees



N° article	279977 Flat pot magnets of neodymium with neoprene protective coating	d_1 mm	h mm	l_1 mm	G metric	Adhesion, min. N	Weight g
12	○	12	7	15,5	M4	13	4,5
18	○	18	6	12	M4	37	7,6
31	○	31	6	17	M6	80	24
43	○	43	6	21	M6	85	32
66	○	66	8,2	23,5	M8	180	107
88	○	88	8,2	23,5	M8	420	193

VERO-S NSE the set-up time optimiser
Highest holding forces – high-precision repeatability

More efficient, faster, more precise - the VERO-S zero-point clamping system from SCHUNK is the new benchmark in terms of precision and cost-effectiveness in machine tools.

VERO-S is the consistent further development of the SCHUNK UNLOCK, which has been tried and tested ten thousand times.

The completely new set-up time killer ensures longer machine running times and more efficient production from batch size 1. SCHUNK is thus supporting the trend towards more production variability.

To further increase service life and process reliability, the base body and all functional parts such as clamping bolts and clamping slides are made of hardened, rust-proof stainless steel. Hermetically sealed against dirt, the modules are absolutely maintenance-free.

The extensive standard module program for both manual and automated palletizing is available from stock.

Benefit from more precision, cost-effectiveness, process reliability and efficiency thanks to the competence leader for clamping technology and gripping systems as well as from the innovation potential of the family-run company SCHUNK.

- patented rapid and clamping stroke guarantees pull-in forces of 9,000 N
- up to 300% more pull-in force thanks to turbo function for higher machining parameters up to 40,000 N
- 90% less setup costs for more efficient production
- highly precise taper centering - repeat accuracy ⟨ 0.005 mm for maximum precision
- permanent and secure clamping thanks to the combination of self-locking and spring actuation
- standard interface for a wide variety of machines and processes
- a consistent clamping bolt size for all modules



Zero-point clamping system VERO-S

Design:
- positioning and clamping in one step
- for 3-, 4- and 5-axis machining centres
- 150 % higher stiffness for transmitting high shear forces and tilting torques
- pull-in force
- **1400:** 32kN
- **1600:** 48kN
- actuating pressure 6 bar

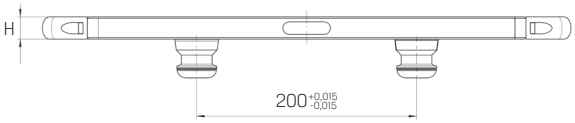
Scope of delivery:
1400:
4-fold clamping station incl. NSE3 138 modules, mounting brackets, operating instructions, without tensioning bolts
1600:
6-fold clamping station incl. NSE3 138 modules, mounting brackets, operating instructions, without tensioning bolts





N° article	283000 NSL3	Weight kg
1400	○ +	35,7
1600	○ +	54,4

Zero-point clamping system VERO-S





N° article	283001 Steel	Parallelism mm	Panel thickness mm	Ideal for	Scope of delivery	Weight kg
0001	○	0,02	20	Clamping station NSL plus 200, Clamping station NSD plus 200, Clamping station NSL plus 400, Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAL S 1 clamping bolt each type SPA 40 RF and type SPB 40 RF 2 handles aluminium	10,6
0003	○	0,02	20	Clamping station NSD plus 150, Clamping station NSD plus 200, Clamping station NSL plus 150	1 clamping pallet PAL S 1 clamping bolt type SPC 40 RF 2 handles aluminium	4,2
0005	○	0,02	20	Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAL S 1 clamping bolt each type SPA 40 RF, type SPB 40 RF and type SPC 40 RF 2 handles aluminium	15,6
0008	○	0,02	20	Clamping station NSL plus 400, Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAL S 1 clamping bolt each type SPA 40 RF and type SPB 40 RF 2 clamping bolts type SPC 40 RF 2 handles aluminium	28
1008	○ +	0,05	45	Clamping station NSL plus 400, Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet with clamping slots PAN-S 400 1 clamping bolt each type SPA 40 RF and type SPB 40 RF 2 clamping bolts type SPC 40RF 4 eyebolts M12	46
1010	○ +	0,05	45	Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAN-S 600 1 clamping bolt each type SPA 40 RF and type SPB 40 RF 2 clamping bolts type SPC 40RF 4 eyebolts M12	70

N° article	283002 Aluminium	Parallelism mm	Panel thickness mm	Ideal for	Scope of delivery	Weight kg
0001	○	0,05	25	Clamping station NSL plus 200, Clamping station NSD plus 200, Clamping station NSL plus 400, Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAL A 1 clamping bolt each type SPA 40 RF and type SPB 40 RF 2 handles aluminium	5,1
0003	○	0,05	25	Clamping station NSD plus 150, Clamping station NSD plus 200, Clamping station NSL plus 150	1 clamping pallet PAL A 1 clamping bolt type SPA 40RF 2 handles aluminium	2,2
0005	○	0,05	25	Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAL A 1 clamping bolt each type SPA 40 RF, type SPB 40 RF and type SPC 40 RF 2 handles aluminium	7,4
0008	○	0,05	25	Clamping station NSL plus 400, Clamping station NSL plus 600, Clamping station NSL plus 800	1 clamping pallet PAL A 1 clamping bolt each type SPA 40 RF and type SPB 40 RF 2 clamping bolts type SPC 40 RF 2 handles aluminium	12

Zero-point clamping system VERO-S

SCHUNK

Design:
- release pressure 6 bar
- repeatability 0.005 mm

Delivery:
- 1 zero point clamping module NSE3 138
- 4 O-rings Ø 9 × 1.5
- 6 cover caps
- 6 fixing screws M8
- operating instructions
- without clamping bolts



N° article	283004 NSE3	Pull-in force kN	Adhesive power* kN	Weight kg
1138	○	8,0 | 28 with turbo	35 (M10) | 50 (M12) | 75 (M16)	4,4

Design:
- release pressure 6 bar
- repeatability 0.005 mm

Delivery:
- 1 tower clamping module NSE-T3 138
- 2 O-rings Ø 9 × 1.5
- 6 cover caps
- 6 fixing screws M8
- operating instructions
- without clamping bolts



N° article	283005 NSE-T3 138	Pull-in force kN	Adhesive power* kN	Weight kg
1138	○	7 | 24 with turbo	35 kN (M10) | 50 kN (M12) | 75 kN (M16)	3,5

Design:
- material stainless steel
- weight 0.3 kg

*with cylinder screw DIN EN ISO 4762-12.9



N° article	283007 SPA / SPB / SPC	Adhesive power* kN	Design
0005	○	35 (M10)	Centring pin SPA
0010	○	35 (M10)	Positioning pin SPB
0015	○	35 (M10)	Retention bolt with centring play 0.1 mm SPC
0025	○	50 (M12)	Centring pin SPA
0030	○	50 (M12)	Positioning pin SPB
0035	○	50 (M12)	Retaining pin with centring spindle 0.1 mm SPC



N° article	283009 Protective cover SDE	Ideal for	Weight kg
0005	○	Clamping module NSE plus 90, Clamping module NSE plus 176, Clamping module NSE plus 138	0,1
0010	○	Clamping module NSE plus 138	0,5
0015	○	Clamping module NSE plus 176	0,7

Design:
0150: Mounting hole through post-processing on the part of the customer
0200: Scope of delivery 6 pieces

N° article	283009 Cover cap ADK	Ideal for
0200	○	M8 high head

N° article	283009 Cylindrical clamp blank BRR 50	Ideal for	Weight kg
0150	○	Clamping station NSL plus 150, Clamping station NSL plus 200, Clamping station NSL plus 400, Clamping station NSL plus 600, Clamping station NSL plus 800, Clamping station NSD plus 200, Clamping station NSD plus 150	0,5



Zero-point clamping system STARK.classic

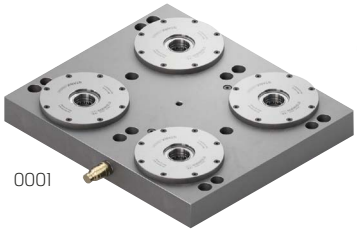
ROEMHELD HILMA ▪ STARK

Design:
- quick-locking plate made of steel ground on both sides for various groove spacings (63, 100 and 125 mm)
- including clamping elements STARK.classic.2
- mechanically clamped with spring force, hydraulically released
- up to 120 kN active pull-in force
- gauge 200 × 200 mm

Use:
Can be used on 3/4/5-axis machines for all common machining operations such as milling, grinding and eroding.

Note:
- only compatible with STARK.classic.2 clamping elements
- matching retractable nipples 283117

NEW


0001


0005

N° article	283100 classic	Weight kg	Number of clamping elements	Width mm	Length mm	Height mm
0001	○ +	50	4	396	346	46
0005	○ +	75	6	596	346	46

Zero point clamping element STARK.classic.NG

ROEMHELD HILMA ▪ STARK

NEW

Design:
- made from high-quality tool steel
- hydraulic single-acting
- with release and support control

Use:
- repeatability ⟨ 0.005 mm
- release pressure min. 40 bar, max. 80 bar

Note:
Supplied pre-assembled

Technical data


0001


0002


0003

N° article	283110 Standard, 3. Hand	Design	Weight kg	Diameter mm	Adhesive power kN	Pull-in force kN
0001	○	NG1	1,6	108	25	8
0002	○	NG2	2,5	139	38	22
0003	○	NG3	7,6	190	55	38

Retractable nipples STARK.classic.NG

ROEMHELD HILMA ▪ STARK

Design:
Made from high-quality tool steel.

Use:
For clamping modules STARK.classic.NG.3 and STARK.classic.1.

NEW



N° article	283115 NG.3, Standard	Design
0001	○	Zero point
0003	○	Compensation
0005	○	without centring

Design:
Made from high-quality tool steel.

Use:
For clamping modules STARK.classic.NG.2 and STARK.classic.2.

NEW



N° article	283117 NG.2, Standard	Design
0001	○	Zero point
0003	○	Compensation
0005	○	without centring

Design:
Made from high-quality tool steel.

Use:
For clamping modules STARK.classic.NG.3 & STARK.classic.3.

NEW



N° article	283119 NG.3, Standard	Design
0001	○	Zero point
0003	○	Compensation
0005	○	without centring

Zero-point clamping system STARK.basic

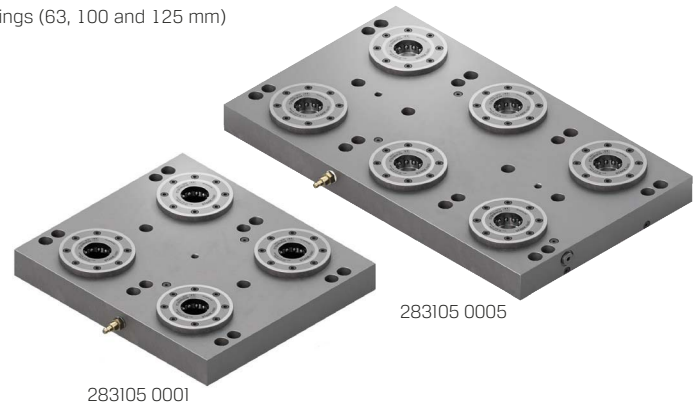
ROEMHELD HILMA ▪ STARK

Design:
- quick-locking plate made of steel ground on both sides for various groove spacings (63, 100 and 125 mm)
- including clamping elements STARK.classic.2
- mechanically clamped with spring force, pneumatic released
- up to 54 kN holding force
- gauge 200 × 200 mm

Use:
Can be used on 3/4/5-axis machines for all common machining operations such as milling, grinding and eroding.

Note:
- only compatible with STARK.basic.M clamping elements
- matching retractable nipples 283139

NEW



283105 0005

283105 0001

N° article	283105 basic	Weight kg	Number of clamping elements	Width mm	Length mm	Height mm
0001	○ +	50	4	396	346	46
0005	○ +	74	6	596	346	46

Zero point clamping element STARK.basic

ROEMHELD HILMA ▪ STARK

Design:
- made from high-quality tool steel
- pneumatic single-acting
- compact construction

Use:
- repeatability ‹ 0.01 mm
- release pressure
  basic.Y: 5 bar
  basic.S: 5.5 bar
  basic.M: 4 bar

Technical data

NEW



0001



0002



0003

N° article	283130 Standard	Design	Weight kg	Diameter mm	Adhesive power kN
0001	○	Y	0,1	26	1,5
0002	○	S	0,5	78	5
0003	○	M	1,5	112	9

Retractable nipples STARK.basic

ROEMHELD HILMA ▪ STARK

NEW

Use:
For clamping modules STARK.basic.Y.



N° article	283135 basic.Y	Design
0001	○	Zero point
0003	○	Compensation
0005	○	without centring

Use:
For clamping modules STARK.basic.S.



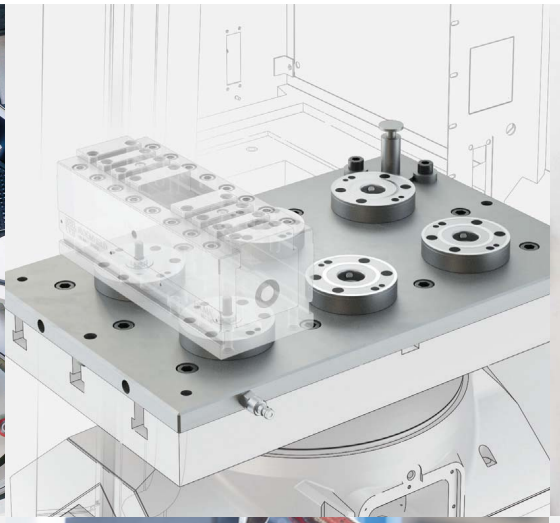
N° article	283137 basic.S	Design
0001	○	Zero point
0003	○	Compensation
0005	○	without centring

Use:
For clamping modules STARK.basic.M.



N° article	283139 basic.M	Design
0001	○	Zero point
0003	○	Compensation
0005	○	without centring

ROEMHELD
HILMA ▪ STARK





STARK

INNOVATIVE
PROFICIENT
INDIVIDUAL
RELIABLE

STARK Spannsysteme

A company of the ROEMHELD Group

The high-tech company STARK Spannsysteme, founded in 1977 in Rankweil, Austria, develops and manufactures zero point clamping systems and vise systems of the highest quality and precision.

STARK Spannsysteme products are a byword for minimal set-up times, faster production, and high flexibility.

HILMA vises can be perfectly complemented and combined with STARK zero point clamping systems.

stark-roemheld.com

Zero point clamping element
STARK.easyclick

ROEMHELD HILMA ▪ STARK

Design:
- clamping process by pushing in
- pneumatic single-acting
- with support ring

Use:
- repeatability ⟨ 0.01 mm
- release pressure 4 bar

Technical data

NEW



N° article	283151 Standard	Weight kg	Diameter mm	Adhesive power kN
0001	○	0,7	85	10

Retractable nipples

ROEMHELD HILMA ▪ STARK

Use:
For clamping modules STARK.easyclick.

NEW



N° article	283155 easyclick	Design
0001	○	Zero point
0003	○	Compensation
0005	○	Without centring

Zero point clamping element STARK.metec

ROEMHELD HILMA ▪ STARK

Design:
- mechanically clamping
- robust construction

Technical data

NEW



N° article	283170 metec	Design	Weight kg	Diameter mm	Plate thickness min. mm	Adhesive power kN	Length mm
0001	○	1	0,3	25	40	12	80
0002	○	2	0,6	30	45	20	125
0003	○	3	2,3	50	80	50	187

Retractable nipples STARK.metec

ROEMHELD HILMA ▪ STARK

NEW

Use:
For clamping modules STARK.metec.1.



N° article	283175 metec.1	Design
0001	○	Zero point
0003	○	Compensation
0005	○	Without centring

Use:
For clamping modules STARK.metec.2.



N° article	283177 metec.2	Design
0001	○	Zero point
0003	○	Compensation
0005	○	Without centring

Use:
For clamping modules STARK.metec.3.

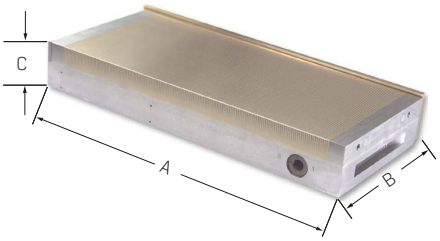


N° article	283179 metec.3	Design
0001	○	Zero point
0003	○	Compensation
0005	○	Without centring

Permanent magnet plate

Design:
- with finest transverse pole pitch
- magnetic system with neodymium magnets
- fine pole pitch p=1.9 mm (1.4 mm St / 0.5 mm Ne)
- removable key
- **holding power max. 100 N/cm²**
- **height of magnetic field 5 mm**
- **abrasability pole plate 6 mm**
- **if applied pairwise, please specify when ordering**

Use:
- for clamping very small, thin-walled workpieces for grinding and eroding
- perfect for pallet systems due to the very low dead weight

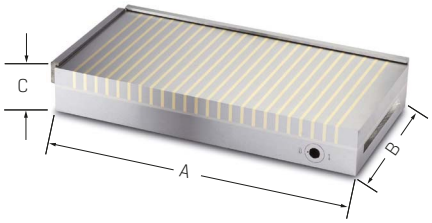


N° article	288021	C mm	Weight kg	A mm	B mm
175×100	○ +	48	7	175	100
250×150	○ +	51	16	250	150
255×130	○ +	48	13	255	130
300×150	○ +	51	19	300	150
350×150	○ +	51	22	350	150
400×200	○ +	51	33	400	200
600×300	○ +	56	81	600	300

Permanent magnet

Design:
- reinforced construction, solid housing with hard soldered pole plate
- removable switch key
- reinforced duplex ceramic magnet system
- with transverse pole partition p = 15 mm (4 and 11)
- **- holding power max. 180 N/cm²**
- **height of magnetic field approx. 10 mm**
- **- wearability of pole plate approx. 6 mm**
- **if applied pairwise, please specify when ordering**

Use:
- for milling, planing, drilling, grinding etc.
- for heavy-duty machining of medium and large volume workpieces



N° article	288022	C mm	Number of switching points	Weight kg	A mm	B mm
250×150	○	56	1	17	250	150
300×150	○	56	1	18	300	150
350×150	●	56	1	24	350	150
400×200	○ +	56	1	35	400	200
500×200	○ +	56	1	44	500	200
500×300	○ +	56	1	56	500	300
600×300	○ +	56	1	78	600	300

Permanent magnet strip

Design:
- two opposing clamping surfaces, each separately switchable, parallelism 0.02 mm
- pole pitch p=1.3 mm, very low magnetic field
- completely sealed system; prevents the penetration of liquids during grinding, eroding etc.
- no disturbing magnetic field during eroding
- **holding force 50 N/cm²**
- **height of magnetic field 6 mm**
- **abrasability pole plate 6 mm**
- supplied in pairs

Use:
As clamping devices for holding workpieces on machine tools and eroding machines, for fixtures, etc.

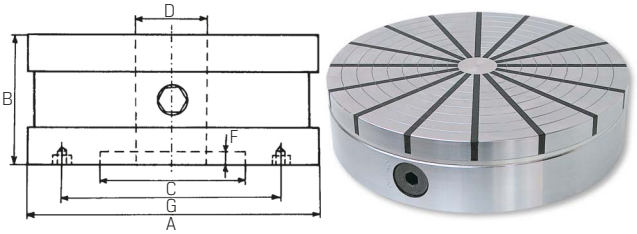


N° article	288023	Length mm	Width mm	Height mm	Weight kg
125×50	○	125	52	50	2,5
180×50	○	180	52	50	3,6
250×50	○	250	52	50	5

Permanent magnet chuck

Design:
- with radial pole pitch
- clamping power continuously adjustable
- concentric grooves facilitate workpiece centring
- on request an end-to-end centre bore is available to mount centring devices or coolant supply
- **holding power max. 140 N/cm²**
- **height of magnetic field approx. 12 mm**
- **abrasability pole plate 5 mm**
- **if applied pairwise, please specify when ordering**

Use:
- for turning and grinding
- to clamp annular workpieces, like bearings, bushings, spacer rings, etc.
- balanced construction suited for high speed, especially designed for hard turning



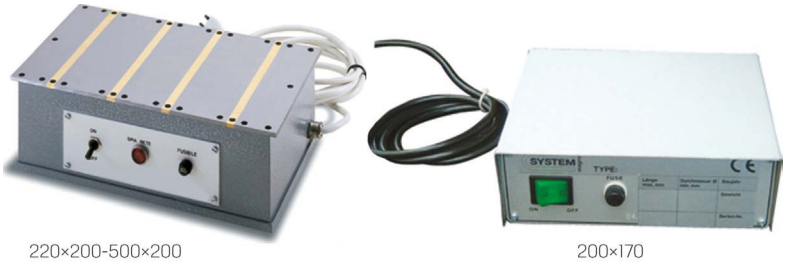
N° article	288401	A mm	B mm	C mm	D mm	E mm	f mm	G mm	Tapped holes in E and G	max. speed min⁻¹	Weight kg
130	○	130	57	50	20		5	100	4×M6×12	2500	6
150	○	150	57	50	24	80	5	120	4×M6×12	2500	8
200	○	200	57	60	30	110	5	180	4×M6×12	2000	13
250	○	250	70	80	50	140	5	220	4×M6×12	1500	24
300	○ +	300	73	150	58	180	6	260	4×M8×16	1200	36

Plate demagnetiser

Design:
- parted pole plate, laminated, made of silicon sheet metal
- a pilot lamp signals operating status
- voltage 230 V/50 Hz

Use:
For demagnetising of workpieces with residual magnetism

Size 200×170has no parted pole plate



220×200-500×200 200×170

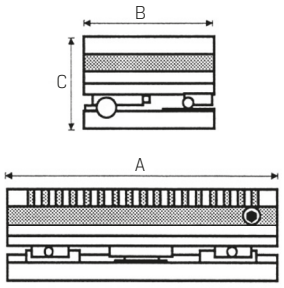
N° article	288450	Pole face length mm	Pole face width mm	Output VA	Length mm	Width mm	Height mm	Weight kg
200×170	○ +	200	170	150	200	170	70	3
220×200	○ +	220	200	220	220	200	125	20
350×200	○ +	350	200	440	375	200	125	32
500×200	○ +	500	200	700	525	200	125	46

Sinus table easily swivelling

Design:
- swivelling around the long axis
- all-steel construction with magnetic clamping plate
- base body and contact surface 55-62 HRC hardened
- swivelling through clamping mechanism mounted underneath the magnetic plate
- angular accuracy ± 5 sec.
- plane-parallelism ± 0.005/100 mm
- **max. holding force 70 N/cm²**
- **height of magnetic field approx. 8 mm**
- **abrasability pole plate 5 mm**
- **pole pitch 1.8 mm**

Use:
- for grinding, eroding or measuring
- for machining and measuring of precision parts in angular position

Note:
Angles are determined after the sinus principle by use of the final dimensions up to 45°
Sinus chart included in delivery





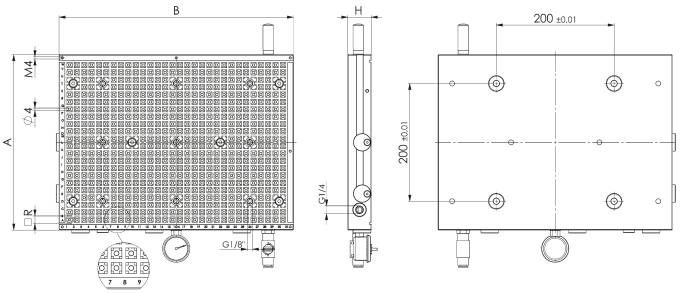
N° article	288460	Length mm	Width mm	Height mm	Weight kg
175×100	○	175	100	117	10
255×130	○	255	130	117	20
300×150	○	300	150	117	27
350×150	○ +	350	150	122	35
400×200	○ +	400	200	125	52

Vacuum clamping plate

Design:
- the vacuum clamping plate has grooves and suction points on the upper side
- by inserting the sealing cord, one or more fields can be defined for the desired workpiece size
- easy positioning thanks to holes for stop pins or height-adjustable eccentric stops on the side
- the vacuum clamping plate can be attached to a base plate (e.g. machine table) using the lateral grooves or the mounting holes (for M8)
- the vacuum clamping plate can also be easily integrated into the AMF zero point clamping system size K20 (M12) using the existing mounting holes
- for use we recommend a pneumatic hose Ø 10 mm

Note:
operation only with dry and non-lubricated compressed air!
Medium temperature 0 °C - 60 °C
Ambient temperature 10 °C - 50 °C

Scope of delivery:
- aluminium vacuum clamping plate
- integrated Venturi nozzle
- muffler
- vacuum gauge
- stop valve
- 6 eccentric stops
- 2 m pneumatic hose
- plug nipple for compressed air connection
- 10 m sealing cord Ø 4 mm (black)
- 10 m sealing cord Ø 4 mm (grey)



NEW



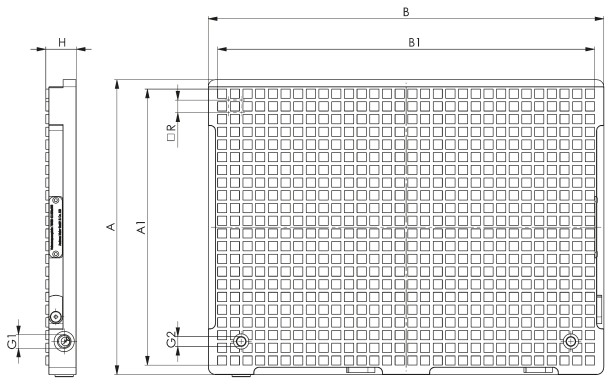
N° article	288502 Premium Line	Operating pressure for max. vacuum (bar)	max. vacuum (%)	number of suction points	A mm	B mm	H ± 0.1	R mm	Number of mounting holes of the Zero-Point-System	Weight kg
300×200	○	3,5	92	3	300	200	40	12.5	2	6
300×400	○	3,5	92	9	300	400	40	12.5	4	12
400×400	○	3,5	92	9	400	400	40	12.5	4	16

Vacuum clamping plate

Design:
- the vacuum clamping plate has grooves and suction points on the upper side
- by inserting the sealing cord, one or more fields can be defined for the desired workpiece size
- easy positioning due to lateral eccentric stops
- with lateral clamping rim for fixing the vacuum clamping plate on a base plate (e.g. machine table)
- subsequent drilling for ZPS K10 (M8) is possible
- drilling plans are available on request
- for use we recommend a pneumatic hose Ø 10 mm

Note:
operation only with dry and non-lubricated compressed air!
Medium temperature 0 °C - 60 °C
Ambient temperature 10 °C - 50 °C

Scope of delivery:
- aluminium vacuum clamping plate
- suction filter
- 10 m sealing cord Ø 4 mm (black)



NEW



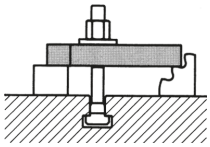
N° article	288501 Sealing cord á 10 meters for vacuum clamping plate	Size
0010	●	4 mm × 10 m

N° article	288504 Basic	number of suction points	A mm	B mm	H ± 0.1	R mm	A1 mm	B1 mm	G1	G2	Weight kg
190×290	○	1	190	290	30	12.5	171,5	271.5	G1/4"	G1/8"	4,1
290×390	○	2	290	390	30	12.5	271,5	371.5	G1/4"	G1/8"	8,5
390×390	○	2	390	390	30	12.5	371,5	371.5	G1/4"	G1/8"	11,5

Clamps

Design:
- made of tempered steel, varnished
- plane-parallel clamping and support surfaces

DIN 6314

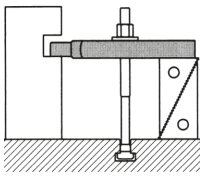




N° article	291000	Slot width mm	Total length mm	for clamping screws	Width mm	Height mm
6,6×50	●	6,6	50	M6	20	10
9×60	●	9	60	M8	25	12
11×80	●	11	80	M10	30	15
14×100	●	14	100	M12/M14	40	20
14×125	●	14	125	M12/M14	40	20
18×125	●	18	125	M16/M18	50	25
18×160	●	18	160	M16/M18	50	25
22×160	●	22	160	M20/M22	60	30
22×200	●	22	200	M20/M22	60	30
26×200	●	26	200	M24	70	30
26×250	●	26	250	M24	70	35
33×315	○	33	315	M30	80	50

Design:
- made of tempered steel, varnished
- with round lug and forked opening

DIN 6315 C

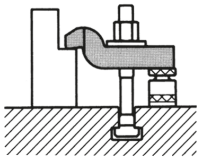


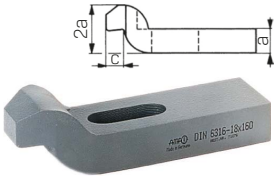


N° article	291060	Slot width mm	Lug ∅ mm	Total length mm	for clamping screws	Width mm	Height mm
14×160	○	14	20	160	M12/M14	40	25
18×200	●	18	24	200	M16/M18	50	30
18×250	○	18	24	250	M16/M18	50	30
22×250	●	22	30	250	M20/M22	60	40
26×250	○	26	38	250	M24	70	40

Design:
- made of tempered steel, varnished
- plane-parallel clamping and support surfaces
- cranked

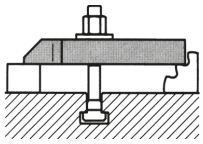
DIN 6316





N° article	291120	Slot width mm	Total length mm	for clamping screws	Width mm	a mm	2a mm	c mm
6,6×60	○	6,6	60	M6	20	10	20	8
9×80	○	9	80	M8	25	12	24	9
11×100	●	11	100	M10	30	15	30	12
14×125	●	14	125	M12/M14	40	20	40	16
18×125	●	18	125	M16/M18	50	25	50	20
18×160	●	18	160	M16/M18	50	25	50	20
22×160	●	22	160	M20/M22	60	30	60	24
22×200	●	22	200	M20/M22	60	30	60	24
26×200	●	26	200	M24	70	35	70	25
26×250	●	26	250	M24	70	35	70	25

Design:
- made of tempered steel, varnished
- with nose and fork opening

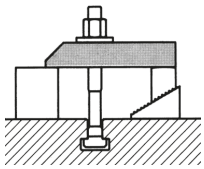




N° article	291050	Slot width mm	Total length mm	for clamping screws	Width mm	Height mm
9×100	○	9	100	M8	30	15
11×125	●	11	125	M10	30	20
14×160	●	14	160	M12/M14	40	25
14×200	●	14	200	M12/M14	40	25
18×200	●	18	200	M16/M18	50	30
18×250	●	18	250	M16/M18	50	30
22×250	●	22	250	M20/M22	60	40
22×315	●	22	315	M20/M22	60	40
26×250	●	26	250	M24	70	40
26×315	●	26	315	M24	70	40
33×315	○	33	315	M30	80	50
33×400	○	33	400	M30	80	50

Design:
- made of tempered steel, varnished
- with bevelled forked opening

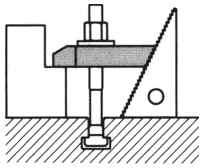
DIN 6315 B





N° article	291100	Slot width mm	Total length mm	for clamping screws	Width mm	Height mm
6,6×60	●	6,6	60	M6	19	12
9×80	●	9	80	M8	25	15
11×100	●	11	100	M10	31	20
14×125	●	14	125	M12/M14	38	25
14×160	●	14	160	M12/M14	38	25
14×200	●	14	200	M12/M14	38	25
18×160	●	18	160	M16/M18	48	30
18×200	●	18	200	M16/M18	48	30
18×250	●	18	250	M16/M18	48	40
22×200	●	22	200	M20/M22	52	40
22×250	●	22	250	M20/M22	62	40
22×315	●	22	315	M20/M22	62	40
26×200	●	26	200	M24	66	40
26×250	●	26	250	M24	66	40
26×315	●	26	315	M24	66	40
33×250	○	33	250	M30	74	50
33×315	○	33	315	M30	74	50
33×400	●	33	400	M30	74	50

Design:
- made of tempered steel, varnished
- with trapezoidal steps, straight form

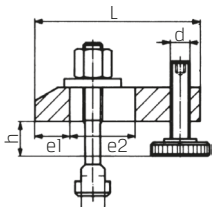




N° article	291150	Slot width mm	Total length mm	for clamping screws	Width mm	Height mm
6,6×50	●	6,6	50	M6	20	10
6,6×80	○	6,6	80	M6	20	10
9×60	○	9	60	M8	25	12
11×80	●	11	80	M10	30	15
14×100	●	14	100	M12/M14	40	20
14×160	●	14	160	M12/M14	40	20
18×125	●	18	125	M16/M18	50	25
18×200	●	18	200	M16/M18	50	25
22×160	●	22	160	M20/M22	60	30
26×200	○	26	200	M24	70	30

Clamps

Design:
- clamp bevelled, varnished DIN 6314
- complete with adjusting support screw and T-slot screw DIN 787
- individual support screws are available at short notice on request

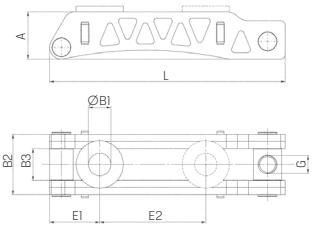




N° article	291200 adjustable	Groove width mm	T-bolts DIN 787	Width mm	Height mm	e_1 mm	e_2 mm	h mm	L mm
10	●	10	M 10×10× 80	30	15	15	30	8-32	80
12	●	12	M 12×12×100	40	20	20	40	10-40	100
14	●	14	M 14×12×100	40	20	20	40	10-38	100
16	●	16	M 16×16×125	50	25	26	45	13-48	125
18	●	18	M 18×16×125	50	25	26	45	13-46	125
22	●	22	M 22×20×160	60	30	30	60	16-65	160

Design:
- made of tempered steel, burnished
- with support screw
- clamping screws DIN 787, studs DIN 6379 or socket head cap screws ISO 4762 can be used optionally for clamping

Delivery:
With adjustable support screw,
with DIN 787, DIN 6340, DIN 6330B.
Tempered steel burnished

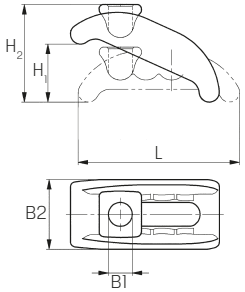




N° article	291240 Lightweight construction	T-slot mm	with clamping screws	$High_1$ mm	D×LS mm	B_1 mm	B_2 mm	B_3 mm	L mm	A mm	E_1 mm	E_2 mm
20×160	○	20	M20×20×160	8- 58	M20 69	22	49	25	200	44	45	77
20×200	○	20	M20×20×200	8- 98	M20 109	22	49	25	200	44	45	77
24×200	○	24	M24×28×200	10- 81	M24 87	26	54	30	250	44	46	116
24×250	○	24	M24×28×250	10-130	M24 137	26	54	30	250	44	59	116
36×315	○	36	M30×36×315	7-214	M30 180	33	72	40	315	71	59	152
48×400	○	48	M36×42×400	7-153	M30 180	43	102	54	400	80	74	209

Clamping claw

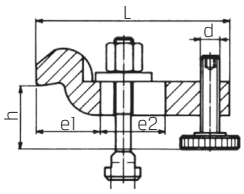
Design:
- short, through U-bend continuously adjustable
- tempered, galvanised
- without clamping screw





N° article	291420 forged	L mm	for clamping screws	$High_1$ mm	$High_2$ mm	B_2 mm	for T-slots nominal dimension mm	B1 mm
13	●	88	M 12	0-35	30- 55	38	12, 14	13
18	●	130	M 16	0-55	42- 84	56	16, 18	18
22	●	144	M 20	0-65	50-100	66	20, 22	22
26	○	174	M 24	0-75	54-111	76	24, 28	26
32	○	200	M 30	0-80	62-125	90	36	32

Design:
- clamp varnished DIN 6316
- complete with adjusting support screw and T-slot screw DIN 787
- individual support screws are available at short notice on request

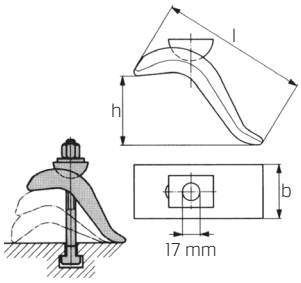




N° article	291220 adjustable and cranked	Groove width mm	T-bolts DIN 787	Width mm	Height mm	e_1 mm	e_2 mm	h mm	L mm
10	○	10	M 10×10× 80	30	15	36	32	22-46	100
12	○	12	M 12×12×100	40	20	44	40	28-58	125
14	●	14	M 14×12×100	40	20	44	40	28-56	125
16	○	16	M 16×16×125	50	25	51,5	50	36-71	160
18	○	18	M 18×16×125	50	25	51,5	50	36-69	160

Clamping claw

Design and use:
- steel, forged and tempered, galvanised
- complete with T-slot screw DIN 787, DIN 6340, DIN 6330B and U-piece
- for bridging different clamping heights without additional support
- for highest loads
- suited for clamping of cutting and punching tools

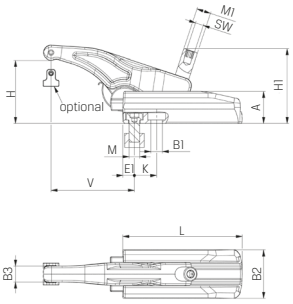




N° article	291400 adjustable	Groove width mm	T-bolts DIN 787	b mm	h mm	l mm
12	●	12	M 12×12×125	50	0-50	140
14	●	14	M 14×12×125	50	0-50	140
16	●	16	M 16×16×160	50	0-75	140
18	●	18	M 18×16×160	50	0-75	140

Power clamp

Design:
- low construction
- infinitely adjustable outreach
- made of alloyed heat-treated steel, forged, black galvanised
- complete with mounting set

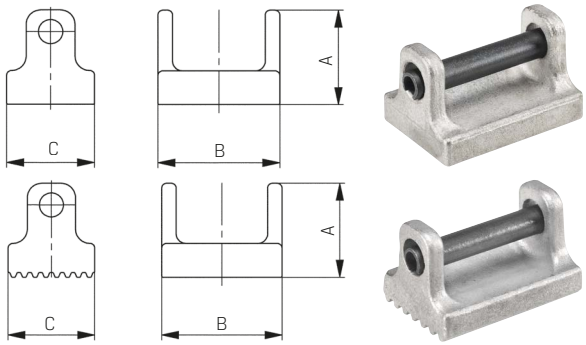




N° article	291455 long version	Clamping force, max. N	Metric thread	Groove width mm	H mm	V mm
0001	○	30	M12	14	6-68	20-110
0002	○	30	M16	18	6-68	24-113
0003	○	43	M16	18	6-80	29-134
0004	○	49	M20	22	7-88	36-135

Pressure pads for power clamps

Design:
- complete with dowel pin
- made of stainless steel



N° article	291456 smooth	291457 corrugated	B mm	C mm	
0001	○	○	25	18	
0002	○	○	30	20	
0003	○	○	36	25	

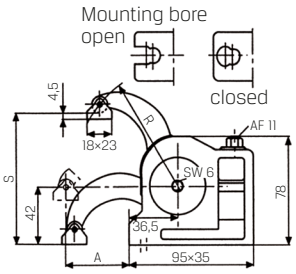
Clamping system BAS

Design:
- housing made of stainless steel 42 CrMo 4 quenched and tempered
- size 95 x 35 x 78 mm (L x W x H)
- continuous clamping height from 0 up to 97 mm
- with special plastic sealing
- surface of housing with special organic coating

291700: Mounting hole in an open construction for screws M10 and M12
291720: Mounting hole in a closed construction for screws M10 and M12

Note:
Accessories for welding tables see 587816

*delivered without AL pressure shoe

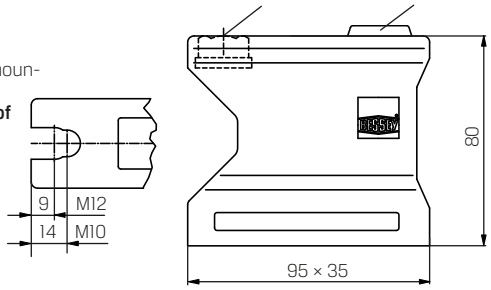




N° article	291700 BAS open	291720 BAS closed	S mm	A mm	R mm	Mounting bore	Clamping force N	Scope of delivery
BAS-C9-4	●	–	88	40	75	open	16000	with AL pressure pad
BAS-C10-6	●	–	97	60	94	open	12000	with AL pressure pad
BAS-C10-6SP	○	–	97	60	94	open	12000	without AL pressure pad
BASB-C9-4	–	○	88	40	75	closed	16000	with AL pressure pad
BASB-C10-6	–	●	97	60	94	closed	12000	with AL pressure pad
BASB-C10-6SP	–	○	97	60	94	closed	12000	without AL pressure pad

Clamping system BAS

Design and use:
The offset constructed housing allows time saving and easy clamping and fixing with t-bar wrench. Centring shoulder to prevent lateral offset. Open mounting hole, for bolts M10 and M12, cast-in hex nut M10. Screw supplied.
For clamping heights above 88/97 mm up to 10 bases clampable on top of each other, height per base 80 mm

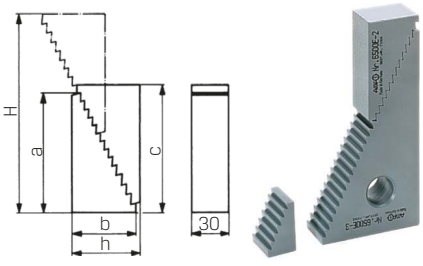




N° article	291740 Compact clamp BAS 0-C
80	●

Clamping supports

Design:
- Q & T steel, varnished, toothed stepwise
- for use in pairs 291050 or for single use 291150

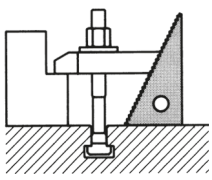


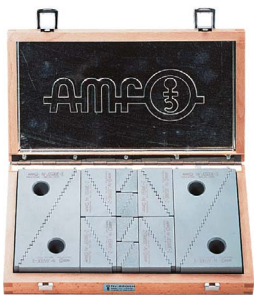
N° article	292020 serrated in steps	h-H mm	a mm	b mm	c mm
1	●	23 - 51	33	19.0	33
2	●	39 - 107	66	35.5	66
3	●	71 - 208	131	68.0	131

Support block set

Design:
- in solid wooden box with hinged lid
- tempered steel, varnished
- serrated in steps

Delivered in case





N° article	292500 in wooden case	h-H mm	Wooden box mm	Contents
20	●	22 - 208	280 × 155 × 40	8× 29202 sz.1 8× 29202 sz.2 4× 29202 sz.3

Screw jack

Design:
- made of tempered steel, varnished
- with centring hole 12 mm Ø (from size 52)
- to receive setting elements 295800 to 295880
- spindle with trapezoidal thread, self-locking, with end stop

Use:
Support, aligning and marking of workpieces of any kind in different levels and heights, under high load



Spherical attachment 295800

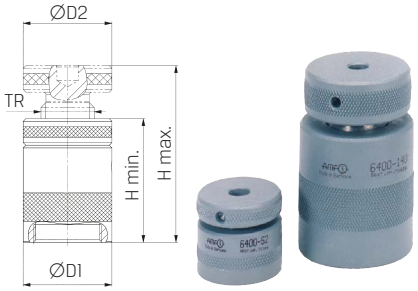
Vee attachment 295820

Centering plate (Fixing attachment) 295850

N° article	293000 with flat support and steel base	H max. mm	H min. mm	D_1 mm	D_2 mm	Carrying capacity kN
50	●	50	38	31	31	25
52	●	52	42	50	50	100
70	●	70	50	50	50	100
100	●	100	70	50	50	100
140	●	140	100	68	68	120
200	●	200	140	100	80	350
210	●	210	140	80	70	170
300	●	300	190	100	80	350

Design:
- tempered steel, varnished
- centring hole Ø 12 mm
- spindle with trapezoidal thread, self-locking, with end stop
- magnetic base for use in vertical clamping position

Use:
These screw jacks are suited for clamps with a slot width of approx. 12 - 22 mm



N° article	293010 with flat support and magnetic base	H max. mm	H min. mm	D_1 mm	D_2 mm	D_3 mm	Carrying capacity kN
62	●	62	52	50	50	55	100
80	●	80	60	50	50	55	100
110	●	110	80	50	50	55	100

Design:
Like 293000, albeit with aluminium base

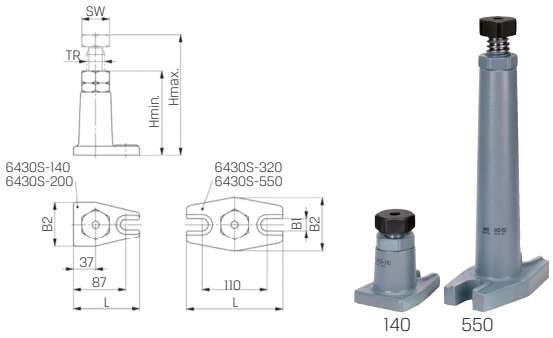
Advantage:
- steel chips do not penetrate into the machine table, but into the aluminium base
- useful for all machine tool tables, surface plates and plane tables with precision faces
- larger cutting heights can be reached by using the centring plate 295850 and the screw jacks 293000 (sizes 52, 70 or 100)



70 100

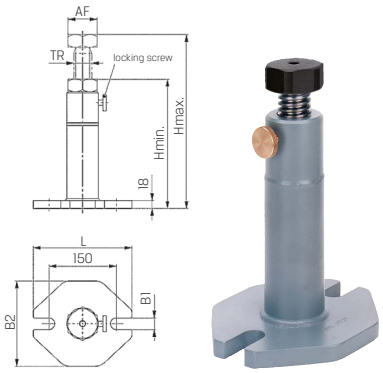
N° article	293100 with flat support and aluminium base	H max. mm	H min. mm	D_1 mm	D_2 mm	Carrying capacity kN
52	○	52	42	50	50	30
70	●	70	50	50	50	30
100	●	100	70	50	50	30

Design:
- with centring hole 12 mm Ø
- to receive setting elements 295800 to 295880
- with trapezoidal spindle
- tempered steel, body grey cast iron, varnished
- when using clamps DIN 6315B, DIN 6315C and DIN 6315GN from 26 mm slot width, we recommend the use of fixing attachment 295880



N° article	293500 with counter nut	H max. mm	H min. mm	Carrying capacity kN	B_1 mm	B_2 mm	AF mm	L mm
140	●	140	100	60	18	75	46	110
200	●	200	140	60	18	75	46	110
320	●	320	200	40	22	90	46	160
550	●	550	320	25	22	90	46	160

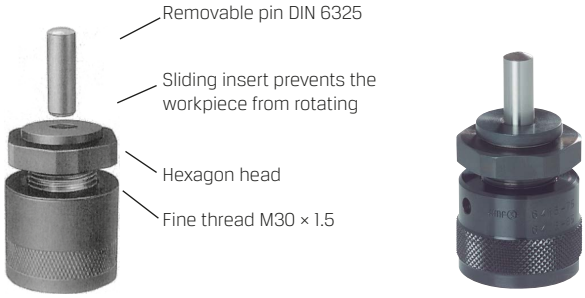
Design:
- like 293500, heavy
- with brass locking screw
- when using clamps DIN 6315B, DIN 6315C and DIN 6315GN from 26 mm slot width, we recommend the use of fixing attachment 295880



N° article	295000 with locking screw	H max. mm	H min. mm	Carrying capacity kN	B_1 mm	B_2 mm	AF mm	L mm
300	○	300	200	80	26	190	65	220
470	●	470	290	60	26	190	65	220
750	●	750	430	50	26	190	65	220
1250	●	1250	710	40	26	190	65	220

Height-setting screw jack

Design:
- made of tempered steel, burnished
- with centring hole 12 mm Ø
- to receive setting elements 295800 to 295880
- fine-threaded spindle with end lock for sensitive alignment up to a support height of 1370 mm
- height-setting screw jack can also be used without a dowel pin or with the attachments 295800 to 295850
- with centring pad 295850 combinations with all screw jacks are possible
- press-fitted plain bearing bush prevents the workpiece which is resting on the slide attachment from rotating

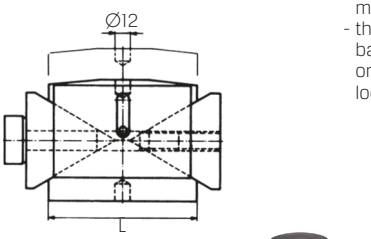


N° article	295500 with steel base	H max. mm	H min. mm	D_1 mm	Carrying capacity kN	AF mm
75	○	75	55	50	30	46
115	●	115	75	50	30	46

Height alignment wedge

Design:
- made of nodular cast iron and tempered steel
- burnished
- wedge faces precision machined
- with centring hole 12 mm Ø
- to receive setting elements 295800 to 295880
- with one ball pad on each wedge

Use:
- this sturdy wedge allows easy adjustment of workpieces up to some tons of weight
- for a smooth and sensitive adjustment within 1/10 mm
- dual wedge effect ensures a large travel and precise vertical movement without lateral deviation
- the wedge block works well on difficult castings or forgings on large machine tools
- the additional locating hole in its base plate allows its positioning on heavy screw jacks by using a locating pin





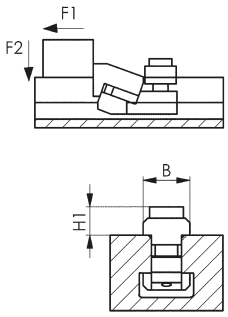
N° article	295700 Herkules	H max. mm	H min. mm	Height adjustment per spindle revolution mm	Carrying capacity kN	L mm	B mm
63	●	68	50	0,86	40	63	40
125	●	125	100	1,16	100	125	115
190	○	190	170	2,02	250	175	145

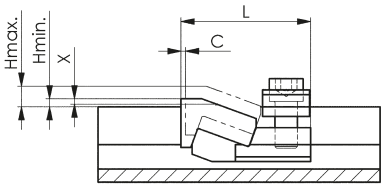
Flat clamp

Design:
- with mounting screws ISO 4762 (8.8)
- hexagon screwdriver ISO 2936
- annealed and burnished

Use:
- horizontal forces are transmitted by a screw corresponding to the size of the groove which perfectly clamps the tensioner without damaging the table
- at maximal T-slot depth to DIN 650
- to achieve low clamping heights with minimum groove depth the clamping piece can be ground off by X mm

Available only in pairs



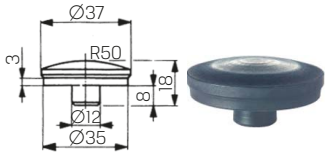




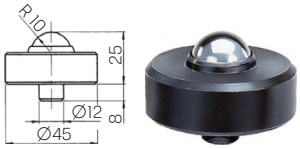
N° article	296000 Mini Bulle	Nut mm	H min. mm	H max. mm	H1 mm	L mm	X mm	B mm	C mm
12	○	12	2,5	13,5	11	52	5	18	1.8
14	○	14	1,5	13,5	11	55	5	22	1.8
16	●	16	2,5	17	15	68	6	25	2.5
18	●	18	1,5	16	15	71	6	28	2.5
22	○	22	4,5	21,5	20	89	9	35	3

Setting attachment for screw jacks and wedge blocks

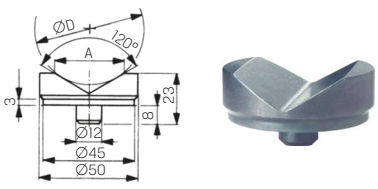
Note:
Made of tempered steel, burnished



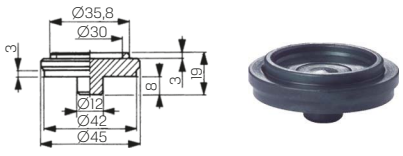
N° article	295800 Ball pad
37	●



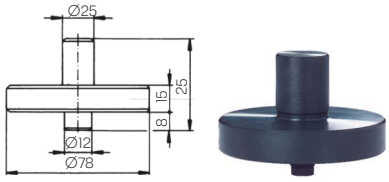
N° article	295810 Adapter with rotating sphere, sphere hardened
45	●



N° article	295820 V-block attachment	D min. mm	D max. mm
45	●	10	50



N° article	295850 Centring pad (for positioning several screw jacks on top of each other)
45	●

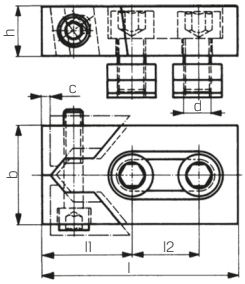


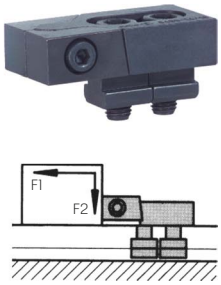
N° article	295880 Fixing attachment (for fork clamps from 26 mm slot width)
78/25	○

Low-height clamping jaw Bulle

Design:
- annealed and burnished
- with mounting screws ISO 4762 (10.9)
- nuts for T-slots DIN 508
- hexagon screwdriver ISO 2936

Available only in pairs



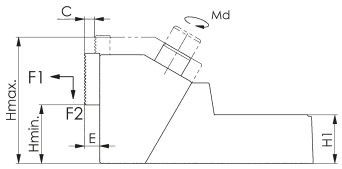


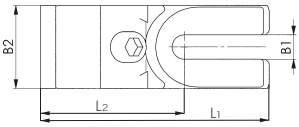
N° article	296500	Groove width mm	h mm	l mm	l_1 mm	b mm	l_2 mm	d mm
12	○	12	20	80	39	40	26	M10
14	●	14	20	80	39	40	26	M12
16	○	16	25	100	46	50	34	M14
18	●	18	25	100	46	50	34	M16
20	○	20	25	100	46	50	34	M16
22	●	22	30	140	65	78	50	M20
24	○	24	30	140	65	78	50	M20
28	○	28	30	140	65	78	50	M24
30	○	30	30	140	65	78	50	M24

Stable clamping jaw

Design:
- reversible jaw
- high version with precise V-guide
- made of malleable iron, jaws made of case-hardened steel

Use:
- suitable for lateral clamping of high workpieces
- reversible jaw
- with a smooth side for machined workpieces and a grooved side for unprocessed clamping surfaces





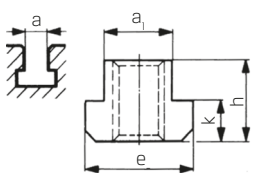


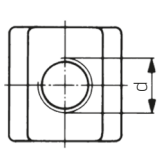
N° article	296700	T-slot mm	B1 mm	B2 mm	C mm	E mm	H min. mm	H max. mm	H1 mm	H2 mm	L1 mm	L2 mm	F1 kn	F2 kn
65	●	12 14 16 18	19	65	8	12	46	99	38	40	179	112,5	8 15 20 28	1,2 2,2 3 4,2
75	●	20 22 24 28 30	26	75	11	12	61	118	45	40	230	138,5	25 25 32 32 36	4,5 4,5 4,8 4,8 5,4
90	○	32 36 42	38	90	15	12	89	145	56	40	265	158	50	7,5

Nut for T-grooves

DIN 508

Design:
- annealed, with female thread, strength class 10
- made of tempered steel 0.35-0.45% C
- full loadability of the T-slot nuts will only be achieved by screwing the entire thread length together
- 297550 = blank, not tempered and without female thread






297500


297550

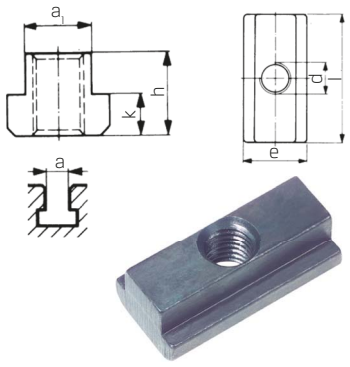
N° article	297500 with internal thread	297500 a mm	297550 Blank	297550 a mm	d metric	h mm	a_1 mm	e mm	k mm
6/M5	●	6	–	–	M5	8	5.7	10	4
8/M6	●	8	–	–	M6	10	7.7	13	6
8	–	8	●	8	–	10	7.7	13	6
10/M8	●	10	–	–	M8	12	9.7	15	6
10	–	10	●	10	–	12	9.7	15	6
12/M10	●	12	–	–	M10	14	11.7	18	7
12	–	12	●	12	–	14	11.7	18	7
14/M12	●	14	–	–	M12	16	13.7	22	8
14	–	14	●	14	–	16	13.7	22	8
16/M14	●	16	–	–	M14	18	15.7	25	9
16	–	16	●	16	–	18	15.7	25	9
18/M16	●	18	–	–	M16	20	17.7	28	10

N° article	297500 with internal thread	297500 a mm	297550 Blank	297550 a mm	d metric	h mm	a_1 mm	e mm	k mm
18	–	18	●	18	–	20	17.7	28	10
20/M18	●	20	–	–	M18	24	19.7	32	12
20	–	20	●	20	–	24	19.7	32	12
22/M20	●	22	–	–	M20	28	21.7	35	14
22	–	22	●	22	–	28	21.7	35	14
24/M22	●	24	–	–	M22	32	23.7	40	16
24	–	24	●	24	–	32	23.7	40	16
28/M24	●	28	–	–	M24	36	27.7	44	18
28	–	28	●	28	–	36	27.7	44	18
36/M30	●	36	–	–	M30	44	35.6	54	22
36	–	36	○	36	–	44	35.6	54	22

Nut for T-grooves

Design:
Annealed, with female thread, strength class 10

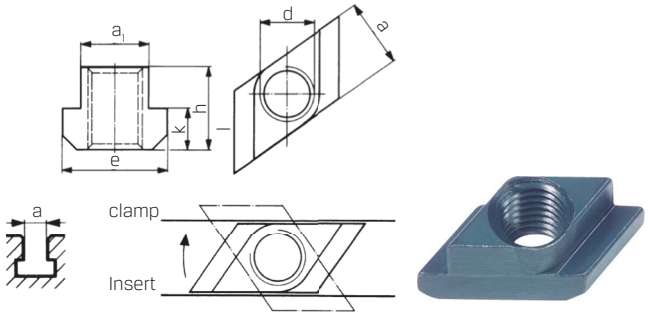
Use:
Suited to safeguard the T-slots of machine tables of precision machines



N° article	297600 long	a mm	d metric	h mm	a_1 mm	e mm	k mm	l mm
8/M6	●	8	M6	10	7.7	13	6	26
10/M8	●	10	M8	12	9.7	15	6	30
12/M10	●	12	M10	14	11.7	18	7	36
14/M12	●	14	M12	16	13.7	22	8	44
16/M14	●	16	M14	18	15.7	25	9	50
18/M16	●	18	M16	20	17.7	28	10	56
20/M18	○	20	M18	24	19.7	32	12	64
22/M20	●	22	M20	28	21.7	35	14	70
28/M24	●	28	M22	36	27.7	44	18	88
36/M30	○	36	M30	44	35.6	54	22	108

Design:
- tempered, with female thread
- the reduced contact area inside the T-slot reduces the loading capacity below that of the comparable sizes DIN 508

Use:
- insert top down
- for long T-slots, or when the lateral insertion of clamping screws or sliding blocks is not possible



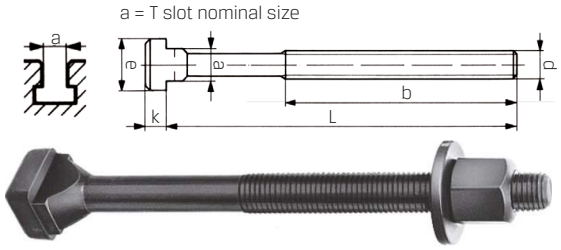
N° article	297650 Rhombus	a mm	d metric	h mm	a_1 mm	e mm	k mm	Strength category
12/M10	●	12	M10	14	11.7	18	7	8
14/M12	●	14	M12	16	13.7	22	8	8
16/M14	●	16	M14	18	15.7	25	9	6
18/M16	●	18	M16	20	17.7	28	10	6
20/M18	●	20	M18	24	19.7	32	12	6
22/M20	●	22	M20	28	21.7	35	14	6
28/M24	●	28	M24	36	27.7	44	18	6

Screw for T-slots

Design:
- forged, milled guide faces, thread rolled
- M8 - M12 tempered to strength class 10.9
- M14 - M24 tempered to strength class 8.8
- with hex nut DIN 6330 B
- extra thick washer DIN 6340 hardened

DIN 787

a = T slot nominal size



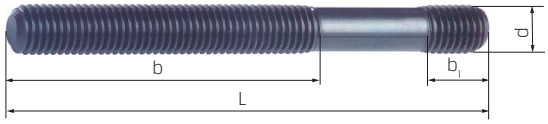
N° article	297000 complete	d metric	L mm	a mm	a_1 mm	b mm	e mm	k mm
8/M8×32	○	M8	32	8	7.7	22	13	6
8/M8×50	●	M8	50	8	7.7	35	13	6
8/M8×80	○	M8	80	8	7.7	50	13	6
10/M10×40	●	M10	40	10	9.7	30	15	6
10/M10×63	●	M10	63	10	9.7	45	15	6
10/M10×100	●	M10	100	10	9.7	60	15	6
12/M12×50	●	M12	50	12	11.7	35	18	7
12/M12×63	●	M12	63	12	11.7	40	18	7
12/M12×80	●	M12	80	12	11.7	55	18	7
12/M12×125	●	M12	125	12	11.7	75	18	7
12/M12×200	●	M12	200	12	11.7	120	18	7
14/M12×50	●	M12	50	14	13.7	35	22	8
14/M12×63	●	M12	63	14	13.7	45	22	8
14/M12×80	●	M12	80	14	13.7	55	22	8
14/M12×125	●	M12	125	14	13.7	75	22	8
14/M12×200	●	M12	200	14	13.7	120	22	8
16/M14×63	●	M14	63	16	15.7	45	25	9
16/M14×100	●	M14	100	16	15.7	65	25	9
16/M14×160	●	M14	160	16	15.7	100	25	9
16/M14×250	●	M14	250	16	15.7	120	25	9
16/M16×80	●	M16	80	16	15.7	55	25	9
16/M16×100	●	M16	100	16	15.7	65	25	9
16/M16×160	●	M16	160	16	15.7	100	25	9
16/M16×200	●	M16	200	16	15.7	125	25	9
16/M16×250	●	M16	250	16	15.7	150	25	9

N° article	297000 complete	d metric	L mm	a mm	a_1 mm	b mm	e mm	k mm
18/M16×63	●	M16	63	18	17.7	45	28	10
18/M16×80	●	M16	80	18	17.7	55	28	10
18/M16×100	●	M16	100	18	17.7	65	28	10
18/M16×160	●	M16	160	18	17.7	100	28	10
18/M16×200	●	M16	200	18	17.7	125	28	10
18/M16×250	●	M16	250	18	17.7	150	28	10
20/M20×100	●	M20	100	20	19.7	65	32	12
20/M20×125	●	M20	125	20	19.7	85	32	12
20/M20×160	●	M20	160	20	19.7	110	32	12
20/M20×200	●	M20	200	20	19.7	125	32	12
20/M20×315	○	M20	315	20	19.7	190	32	12
22/M20×80	●	M20	80	22	21.7	55	35	14
22/M20×100	●	M20	100	22	21.7	65	35	14
22/M20×125	●	M20	125	22	21.7	85	35	14
22/M20×160	●	M20	160	22	21.7	110	35	14
22/M20×200	●	M20	200	22	21.7	125	35	14
22/M20×250	●	M20	250	22	21.7	150	35	14
22/M20×315	●	M20	315	22	21.7	190	35	14
24/M24×100	○	M24	100	24	23.7	70	40	16
24/M24×125	○	M24	125	24	23.7	85	40	16
24/M24×160	●	M24	160	24	23.7	110	40	16
24/M24×250	●	M24	250	24	23.7	150	40	16
24/M24×315	●	M24	315	24	23.7	190	40	16
24/M24×400	○	M24	400	24	23.7	240	40	16

Stud screw

Design:
- corresponding to the standard sizes
- rolled thread
- M6 - M12 tempered to strength class 10.9
- M14 - M30 tempered to strength class 8.8

Use:
Individual combination with T-nuts, extension nuts, collar nuts, washers etc. possible



DIN 6379

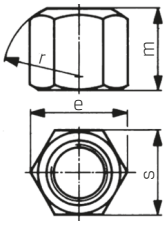
N° article	297700	d metric	L mm	b mm	b_1 mm
M6×40	●	M6	40	20	9
M6×63	●	M6	63	40	9
M6×80	●	M6	80	50	9
M8×40	●	M8	40	20	11
M8×63	●	M8	63	40	11
M8×100	●	M8	100	63	11
M8×160	●	M8	160	100	11
M10×50	●	M10	50	25	13
M10×80	●	M10	80	50	13
M10×100	●	M10	100	75	13
M10×125	●	M10	125	75	13
M10×160	●	M10	160	100	13
M10×200	●	M10	200	122	13
M12×50	●	M12	50	25	15
M12×63	●	M12	63	32	15
M12×80	●	M12	80	50	15
M12×100	●	M12	100	63	15
M12×125	●	M12	125	75	15
M12×160	●	M12	160	100	15
M12×200	●	M12	200	122	15
M14×63	●	M14	63	32	17
M14×100	●	M14	100	63	17

N° article	297700	d metric	L mm	b mm	b_1 mm
M14×160	●	M14	160	100	17
M14×200	●	M14	200	122	17
M14×250	●	M14	250	160	17
M16×63	●	M16	63	32	19
M16×80	●	M16	80	50	19
M16×100	●	M16	100	63	19
M16×125	●	M16	125	75	19
M16×160	●	M16	160	100	19
M16×200	●	M16	200	122	19
M16×250	●	M16	250	160	19
M16×315	●	M16	315	180	19
M16×500	●	M16	500	315	19
M18×80	○	M18	80	50	23
M18×125	●	M18	125	75	23
M18×160	●	M18	160	100	23
M18×200	●	M18	200	122	23
M20×80	●	M20	80	32	27
M20×125	●	M20	125	70	27
M20×160	●	M20	160	100	27
M20×200	●	M20	200	122	27
M20×250	●	M20	250	160	27
M20×315	●	M20	315	200	27

N° article	297700	d metric	L mm	b mm	b_1 mm
M20×400	●	M20	400	250	27
M20×500	●	M20	500	315	27
M22×160	○	M22	160	100	31
M22×200	●	M22	200	122	31
M22×250	●	M22	250	160	31
M22×315	●	M22	315	180	31
M22×400	○	M22	400	250	31
M24×100	●	M24	100	45	35
M24×125	●	M24	125	70	35
M24×160	●	M24	160	100	35
M24×200	●	M24	200	122	35
M24×250	●	M24	250	160	35
M24×315	●	M24	315	200	35
M24×400	●	M24	400	250	35
M24×500	●	M24	500	315	35
M24×630	●	M24	630	315	35
M30×125	○	M30	125	56	43
M30×200	○	M30	200	122	43
M30×315	●	M30	315	200	43
M30×500	○	M30	500	315	43
M30×700	○	M30	700	400	43

Hexagon nut

Design:
- tempered steel, strength class 10
- high nut with spherical end for use with spherical washers DIN 6319 D and with flat end for plain washers DIN 6340

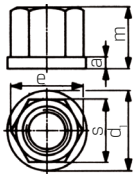




DIN 6330 B

N° article	297750	m mm	s mm	e mm
M6	●	9	10	11,05
M8	●	12	13	14,38
M10	●	15	16	17,77
M12	●	18	18	20,03
M14	●	21	21	23,36
M16	●	24	24	26,75
M18	●	27	27	30,14
M20	●	30	30	33,53
M22	○	33	34	37,72
M24	●	36	36	39,98
M30	○	45	46	51,28

Design:
- made of tempered steel, strength class 10
- flat end for plain washers 297850
- with collar





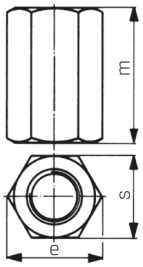
DIN 6331

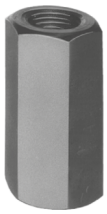
N° article	297780 turned and milled	297790 forged	m mm	s mm	e mm	d_1 mm	a mm
M6	●	●	9	10	11,05	14	3
M8	●	●	12	13	14,38	18	3,5
M10	●	●	15	16	18,9	22	4
M12	●	●	18	18	20,03	25	4
M14	●	–	21	21	23,36	28	4,5
M16	●	●	24	24	26,75	31	5
M18	●	●	27	27	30,14	34	5
M20	●	●	30	30	33,53	37	6
M22	●	–	33	34	37,72	40	6
M24	●	●	36	36	39,98	45	6
M30	○	●	45	46	51,28	58	8

Extension nut

Design:
Made of tempered steel, strength class 10

Use:
- the extension nut no. 6334 serves as a connecting element between DIN 787 (screw for T-slot) and DIN 6379 (stud) and cannot be screwed through
- minimum screw-in length = 1.2 x diameter





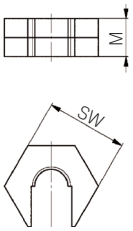
N° article	297800	d metric	m mm	s mm	e mm
M6	●	M6	18	10	11,05
M8	●	M8	24	13	14,38
M10	●	M10	30	16	17,77
M12	●	M12	36	18	20,03
M14	●	M14	42	21	23,36
M16	●	M16	48	24	26,75
M18	●	M18	54	27	30,14
M20	●	M20	60	30	33,53
M22	●	M22	66	34	37,72
M24	●	M24	72	36	39,98
M30	○	M30	90	46	51,28

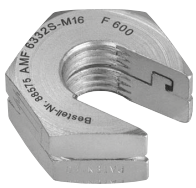
Quick-action clamping nut

Design:
Made of tempered steel galvanised, grade 6

Use:
- slide the nut sideways on the screw thread to the clamping point and lock it
- lock the upper with the lower part by ¼ to ½ revolution

Quick-action clamping nut also available with collar in size M16-M24





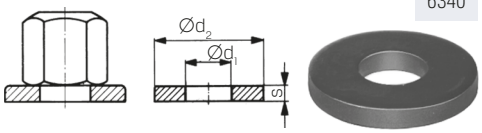
N° article	297820 without collar	d metric	M mm	AF mm
M6	●	M8	9	16
M8	●	M8	10.5	19
M10	○	M10	12.5	22
M12	●	M12	15	27
M16	●	M16	16	34
M20	○	M20	22	41

Washer

Design:
Tempered (350 + 80 HV 30), punched and gauged

DIN 6340

Use:
With clamp,
high nuts etc.

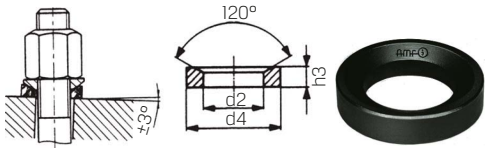


N° article	297850	d metric for	d_1 mm	d_2 mm	s mm
M6	●	M6	6,4	17	3
M8	●	M8	8,4	23	4
M10	●	M10	10,5	28	4
M12	●	M12	13	35	5
M14	●	M14	15	40	5
M16	●	M16	17	45	6
M18	●	M18	19	45	6
M20	●	M20	21	50	6
M22	●	M22	23	50	8
M24	●	M24	25	60	8
M30	●	M30	31	68	10

Spherical washer

Design and use:
- case-hardened and phosphatised
- designed for screw strength in compliance with 8.8
- limited for use on flat closed ring surfaces
- not permitted for slotted holes
- for that purpose we recommend spherical washers DIN 6319G

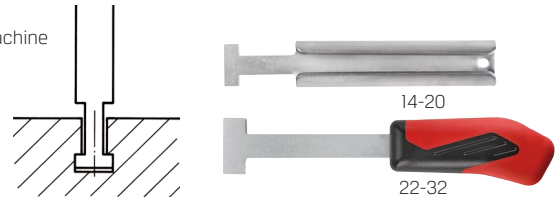
DIN 6319 D



N° article	297870	d metric for	d_2 mm	d_4 mm	h_3 mm	Clamping force, max. N
M6	○	M6	7,1	12	2,8	9
M8	●	M8	9,6	17	3,5	17
M10	●	M10	12	21	4,2	26
M12	●	M12	14,2	24	5	38
M14	○	M14	16,5	28	5,6	53
M16	●	M16	19	30	6,2	73
M20	●	M20	23,2	36	7,5	117
M24	●	M24	28	44	9,5	168
M30	●	M30	35	56	12	269

T-slot scraper

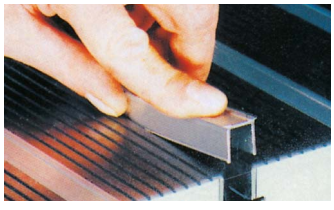
Use:
For cleaning
T-slots in machine
tables



N° article	297940	Groove width, min. mm	Groove width, max. mm
14 - 20	●	14	20
22 - 32	●	22	32

Design:
- made of aluminium
- easily sawn to desired length with a fine saw blade

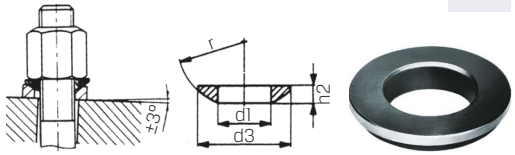
N° article	297948 1000 mm length	Groove width mm
12	●	12
14	●	14
16	●	16
18	●	18
20	○	20
22	●	22
24	○	24
28	●	28
36	○	36
42	○	42



Spherical washer

Design:
Case-hardened and phosphatised

DIN 6319 C

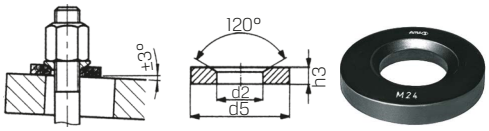


N° article	297860	d metric for	d_1 mm	d_3 mm	h_2 mm	h_2 mm
M6	○	M6	6,4	12	12	2.3
M8	●	M8	8,4	17	17	3.2
M10	●	M10	10,5	21	21	4
M12	●	M12	13	24	24	4.6
M14	●	M14	15	28	28	5
M16	●	M16	17	30	30	5.3
M20	●	M20	21	36	36	6.3
M24	●	M24	25	44	44	8.2
M30	●	M30	31	56	56	11.2

Spherical washer

Design and use:
- DIN, punched, pressed and tempered
- suited to match slotted clamps

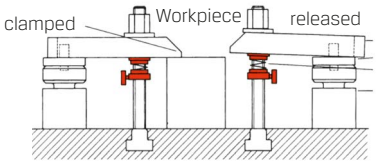
DIN 6319 G

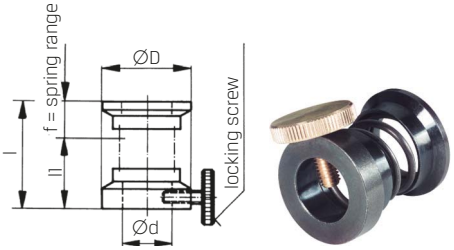


N° article	297880	d metric for	d_2 mm	h_3 mm	d_5 mm
M6	●	M6	7,1	4	17
M8	○	M8	9,6	5	24
M10	●	M10	12	5	30
M12	●	M12	14,2	6	36
M14	●	M14	16,5	6	40
M16	●	M16	19	7	44
M20	●	M20	23,2	8	50
M24	●	M24	28	10	60
M30	○	M30	35	12	68

Spring-type clamp support

Design and use:
- with brass locking screw
- spring-type clamp support holds the clamp while the workpiece is mounted and dismounted
- for fast and safe release





N° article	297930 elastic	D mm	d mm	l mm	l_1 mm	f mm	for screws Ø
1	○	22	10.5	30	22	8	M8-M10
2	●	26	14.5	32	22	10	M12-M14
3	○	32	18.5	38	26	12	M16-M18
4	○	38	22.5	40	28	12	M20-M22
5	○	45	27.5	44	32	12	M24 - M27

Clamping screw set for T-slots

Design:
- all items tempered
- strength class 8 or 10
- in wooden case

Delivered in case

Description:
DIN 787 = bolts for T-slots no. 297000
DIN 6379 = studs no. 297700
DIN 508 = nuts for T-slots no. 297500
DIN 6330 B = hex nuts no. 297750
DIN 6334 = extension nuts no. 297800
DIN 6319 C and G = spherical discs and dished washers no. 297860 and 297880
DIN 6340 = plain washers no. 297850

1) = T-nuts 297500 not suitable for this size
2) = M18 x 20 contains instead of 297000 four additional studs 297700 125 mm and 2 pieces 80 mm, with T-nuts 297500 and washers 297850 each. All parts are also available separately

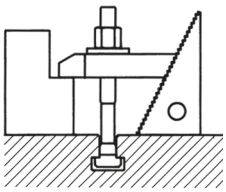


N° de Cat. + Groupe de remise + texte		M12×12	M12×14	M14×16	M16×16	M16×18	M18×20	M20×22	M24×28
297950		○	●	○	○	●	○	○	○
Metric thread		M12X12	M12X14	M14X16	M16X16	M16X18	M18/20	M20X22	M24X28
T-bolts (Cat. no. 297000)	piece	10	6	6	10	6	2)	6	6
Stud bolts (Cat. no. 297700)	piece	12	16	16	12	16	22	16	16
Nut for T-bolts (cat. no. 297500)	piece	1)	4	4	1)	4	10	4	4
Hexagon nuts (Cat. no. 297750)	piece	4	4	4	4	4	4	4	4
Stud bolts (Cat. no. 297800)	piece	4	4	4	4	4	4	4	4
Spherical washers/Conical cups (Cat. no. 297920)	pcs.	4	4	4	4	4	–	4	4
Washers (Cat. no. 297850)	piece	4	4	4	4	4	10	4	4
Length	mm	278	278	317	339	339	359	358	444
Width	mm	234	234	239	294	294	342	342	409
Height	mm	36	36	44	48	48	56	56	72
Weight	kg	3,2	3,5	5,4	7,4	7,4	11	13,5	23,6

Clamping support block set

Design:
- with low height clamping jaws and lubrication paste
- all items tempered
- strength class 8 or 10
- in wooden case

Delivered in case

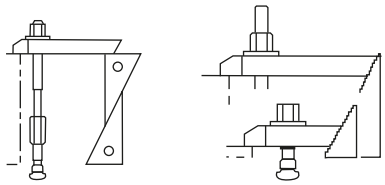




Size		M12×12	M12×14	M16×16	M16×18
297960		●	●	●	●
Metric thread		M12X12	M12X14	M16X16	M16X18
Contents		292020: 4× size 2, 4× size 3 291150: 4×14×100 297000: 4× length 125, 4× length 80, 2× length 50 297700: 4× length 100 297750: 6× M12 297880: 6× M12 297800: 4× M12 296500: 4× 12 1 combination wrench 18×18	292020: 4× size 2, 4× size 3 291150: 4×14×100 297000: 4× length 125, 4× length 80, 2× length 50 297700: 4× length 100 297750: 6× M12 297880: 6× G M12 297800: 4× M12 296500: 4× 16 1 T-slot scraper 14-20 1 combination wrench 18×18	292020: 4× size 2, 4× size 3 291150: 4×18×125 297000: 4× length 160, 4× length 100, 2× length 63 297700: 4× length 125 297750: 6× M16 297880: 6× G M16 297800: 4× M16 296500: 4× 16 1 T-slot scraper 14-20 1 combination wrench 24×24	292020: 4× size 2, 4× size 3 291150: 4×18×125 297000: 4× length 160, 4× length 100, 2× length 63 297700: 4× length 125 297750: 6× M16 297880: 6× G M16 297800: 4× M16 296500: 4× 18 1 T-slot scraper 14-20 1 combination wrench 24×24
Length	mm	460	460	510	510
Width	mm	330	330	415	415
Height	mm	50	50	50	50
Weight	kg	14,3	14,6	21,5	21,5

Clamping assortment

Use:
- for conventional clamping on machine tables with T-slots
- for tool making, production and for training facilities





Size		M12×14	M16×18
297980		●	●
Metric thread		M12X14	M16X18
Contents		Clamp with stepped teeth (291150): 2× length 100, 2× length 160 Universal clamping support (292020): 4× size 2, 4× size 3 Screw for T-grooves: 2× length 50, 4× length 80, 4× length 125 Studs (297700): 2× length 100, 2× length 160 Hex nuts (297750): 6× M12 Washers (297800): 6× M12 Extension nuts (297850): 2× M12	Clamp with stepped teeth (291150): 2×18×125, 2×18×200 Universal clamping support (292020): 4× size 2, 4× size 3 Screw for T-grooves: 2 each M16×18×63, 4× M16×18×100, 4× M16×18×160 Studs (297700): 2 each M16×100, M16×160 Hex nuts (297750): 6× M16 Washers (297800): 6× M16 Extension nuts (297850): 4× M16
Clamping height with 2 stations	mm	165	205
Clamping height with 4 stations	mm	70	130
Clamping force, max.	N	20	40
Weight	kg	10	15,2

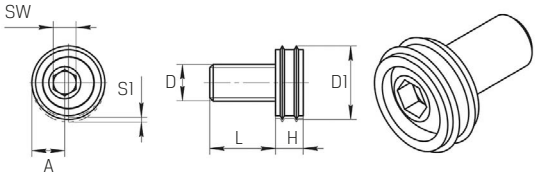
Eccentric tension clamp with knife edge washer

Design:
- hardened hexagon socket clamping screw with eccentrically offset head
- the low overall height allows easy machining of the workpiece surface
- the eccentric causes the clamping movement and the clamping force (up to 27 kN = 2.7 t)
- the position of the clamping claws does not have to be taken into account during CNC programming
- space-saving multiple clamping due to the small construction dimensions

Use:
- fast and strong clamping due to patented eccentric head screw
- for a variety of different clamping tasks
- easy machining even of flat workpieces due to low overall height of the clamps
- space-saving multiple clamping due to compact dimensions
- particularly suitable for clamping unmachined and cast parts

NEW



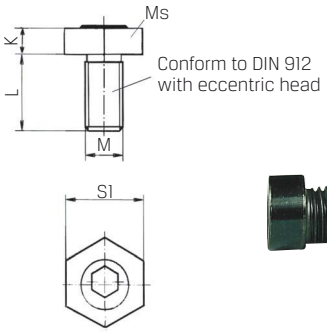


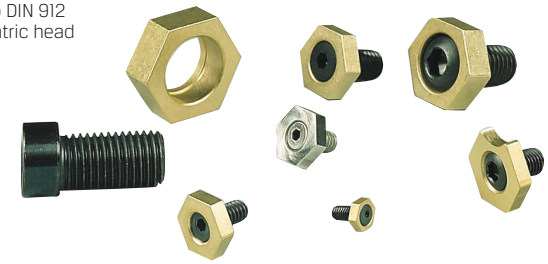


N° article	297982 with knife edge asher	Thread	S1 mm	D1 mm	L mm	H mm	Hexagon socket mm	Clamping force, max. N
M10	○	M10	1.6	20.6	20	6.35	7	9
M12	●	M12	2	25.4	22.5	9.6	8	18
M16	○	M16	2.5	30.1	26.8	12.7	12	27

Eccentric tension clamp

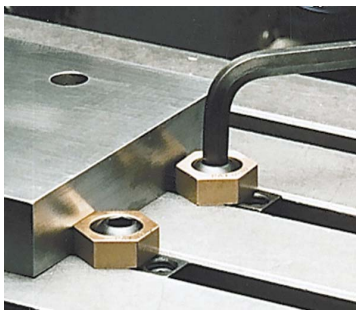
Design:
- for the fixture plate
- universal clamping system
- for arbitrarily shaped workpieces
- the clamp adapts to the workpiece contour
- universal application
- no need for special fixtures
- simple construction
- secure clamping
- tension clamp can also be used as a stop
- multi-sided machining
- low construction
- clamping force up to 27 kN





N° article	297983 for the fixture plate	M metric	Eccentric travel mm	S1 mm	K mm	L mm	Female square	Clamping force, max. N	PU
M4	○	M4	0.8	8	2.8	10	3	0,9	10
M6	○	M6	1.3	16	4.8	12	4	3,4	10
M8	○	M8	1	20	4.8	16	5	3,6	12
M10	●	M10	1.6	20	6.4	20	7	8,9	10
M12	●	M12	2	25	9.5	25	8	17,8	8
M16	●	M16	2.5	30	12.7	30	12	26,7	4

Design:
- with T-nut for the fixture plate and for T-slots at the machine table
- universal clamping system for workpieces of any shape
- the clamp adapts to the workpiece contour

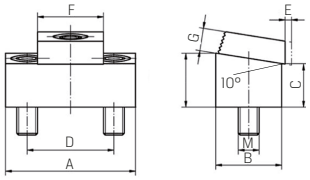


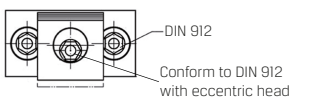
N° article	297984 for T-slots	M metricM metric	A mm	S1 mm	B mm	K mm	H mm	Thread length mm	Female square	Eccentric travel C mm	Clamping force, max. N	PU
0008	○	M6×1.00	8	16	23.2	4.8	9.5	12	3	1	3,4	2
0010	○	M6×1.00	10	16	23.2	4.8	14.2	12	4	1	3,4	2
0012	○	M8×1.25	12	21	27.9	4.8	15.9	16	5	1	3,6	2
0014	○	M10×1.50	14	21	30.5	6.4	22.2	20	7	1.6	8,9	2
0016	○	M12×1.75	16	25	30.9	9.5	22.2	25	8	2	17,8	2
0018	○	M12×1.75	18	25	34.7	9.5	28.6	25	8	2	17,8	2
0020	○	M16×2.00	20	30	39.2	12.7	31.8	30	12	2	26,7	2
0022	○	M16×2.00	22	30	44.3	12.7	41.3	30	12	2	26,7	2

Combi pull-down clamp

Design:
- for fixture base plates
- the pull-down effect presses the workpiece onto the support
- the front side acts as clamp, the back can be used as stop
- clamping disc with serrated surface for blanks and smooth surface for machined parts
- clamping power 18 kN





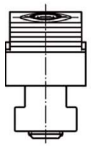


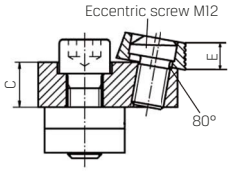
N° article	297985	Eccentric travel mm	A mm	Eccentric screw	Mounting screw	B mm	C mm	D mm	E mm	f mm	G mm	Clamping force, max. N	PU
M10	○	1.6	43.2	M10×1.5	M8×16	19.0	12.7	25,4	1,6	19	6.4	8,9	1
M12	●	2	54	M12×1.75	M10×20	25.4	11.4	33,5	2	25,4	9.7	17,8	1
M16	○	2.5	75	M16× 2	M12×30	38.1	25.5	50,8	2,5	38,1	12.7	26,7	1

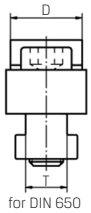
Pull-down clamping claw

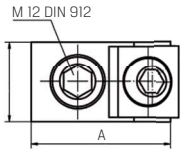
Design:
- the pull-down effect presses the workpiece onto the support
- for T-slots 14, 16, 18 mm and for direct mounting on the fixture base plate or the machine table
- eccentric clamping screw M12 for clamping power 18 kN
- body and clamping plate case-hardened
- with serrated section for blanks and smooth section for machined parts
- adapts to the angular characteristics of the workpiece, i.e. the workpiece does not have to be at right angles







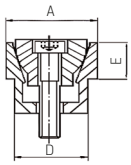


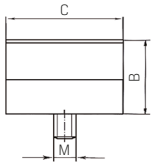


N° article	297986	Groove width mm	G	A mm	B mm	C (rear) mm	C (front) mm	E mm	D mm
0001	○	–	without T-nut	50	28.4	16	12.7	2	25,5
0014	○	14	M10×1.5	50	28.4	16	12.7	2	25,5
0016	●	16	M12×1.75	50	28.4	16	12.7	2	25,5
0018	○	18	M16×2	50	28.4	16	12.7	2	25,5

Double wedge clamp

Design:
- for fixture base plates
- made of coated aluminium profile
- steel wedge tempered
- clamping of 2 pieces simultaneously
- space-saving for multiple clamping
- low construction
- for round and cubic pieces











N° article	297987 Double wedge clamp for the fixture plate	A mm	B mm	C mm	D mm	E mm	Allen size mm	Clamping force, max. N	max. tightening torque Nm	M	PU
0001	○	6.1 - 6.7	6.9	8.1	5,3	3.6	1.5	0,9	1	M2	6
0002	○	9.1 - 10	9.7	11.9	7,9	4.7	2	1,3	2	M2.5	6
0003	●	12.3 - 13.2	14.5	15.9	10,4	5.6	3	2,2	3	M4	8
0004	●	18.6 - 20.3	19.0	23.8	16,1	9.5	5	6,7	14	M6	6
0005	○	24.8 - 26.9	25.9	31.7	20,8	12.7	6	8,9	14	M8	4
0006	○	37.3 - 39.9	38.6	47.6	30,8	19	10	15,6	38	M12	2
0007	○	49.7 - 53	51.5	63.5	41,2	25.4	14	26,7	75	M16	2

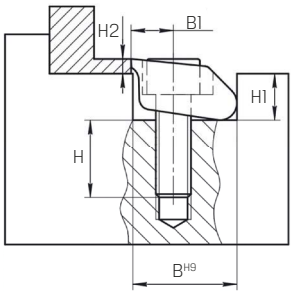
Tension clamp PITBULL

Design:
- high clamping forces (up to 50 kN)
- safe, precise clamping
- extremely low overall height, no interfering contours
- no tool interfering edges
- clamping body made of tool steel A2
- clamping piece including hexagon socket screw DIN912 with oil-proof O-ring
- screw DIN912 12.9

Use:
- for clamping of raw parts or for second machining
- for fixture plates
- ideal for multi-side machining and multiple clamping
- knife edge (297988) for blanks
- blunt edge (297978) for general purpose work

NEW







N° article	297978 PITBULL®clamp with blunt edge	297988 PITBULL®clamp with knife edge	Thread	Clamping force, max. N	Starting torque Nm	B1 mm	B H9 mm	H mm	H1 mm	H2 mm	Clamping distance mm
0001	○	○	M2.5	2,8	1,8	3.8	9.5	6,6	3.6	1,9	0.15
0002	○	●	M4	6,6	5,6	5.1	12.7	9,9	4.8	2,6	0.4
0003	●	○	M6	16	22,5	7.6	19.05	14,48	7.2	3,8	0.6
0004	○	○	M10	26	40	10.2	25.4	18,03	11.4	6,3	1.7
0005	○	○	M12	50	145	15.2	38.1	19,56	16.3	9,5	1.9

Clamping mandrel for through hole

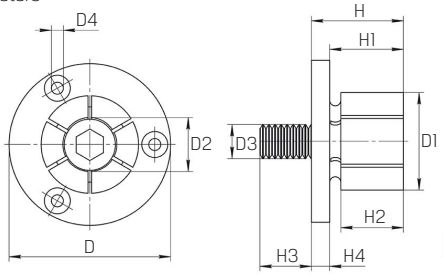
MITEE-BITE PRODUCTS INC.

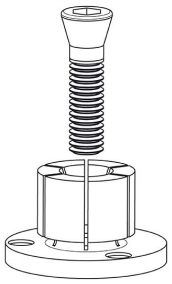
NEW

Design and use:
- base body made of mild steel with black oxide coating, into which the contour of the workpiece can be easily inserted (297989 0012 made of aluminium)
- 5-sided machining possible without interfering clamping devices
- space-saving construction
- very good repeatability
- easy to machine through turning and milling to desired diameters

Use:
- for internal clamping of workpieces with an existing hole
- the clamping mandrel must be clamped 0.1 mm larger when machining the clamping surfaces

Note:
The dimension 'D2' is the smallest diameter to which D1 can be milled or turned.







N° article	297989 XPA	Clamping force kN	D mm (h9)	D1 mm	D2 mm	D3	H mm	H1 mm	H2 mm	High$_3$ mm	H4 mm
0002	●	4,2	29.72	12.4	7.2	M4	21.8	16	15	8	5,9
0003	●	8,5	31.5	14.2	12.2	M6	24.9	19	15	12	5,9
0004	●	11,1	37.5	20	13.5	M8	24.9	19	15	14	5,9
0005	●	20	50	27	18	M10	28.6	22.2	17,5	17	6,4
0006	○	26,3	56	35.3	23	M12	31.8	25.4	20,6	21	6,4
0007	○	44,5	69.5	42	29.3	M16	39.6	31.8	27	22	7,9
0008	●	44,5	75.5	51.5	29.3	M16	39.6	31.8	27	22	7,9
0009	○	44,5	107.5	77.7	29.3	M16	45.5	37.6	32,3	20	7,9
0010	○	44,5	132.9	103	29.3	M16	45.5	37.6	32,3	20	7,9
0011	○	44,5	132.9	175	29.3	M16	45.5	37.6	32,3	20	7,9
0012	○	44,5	152.4	250.2	29.3	M16	45.5	37.6	32,3	20	7,9

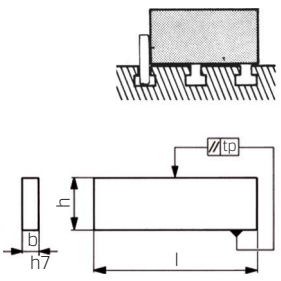
Parallel stops

amf

Design:
- case-hardened
- ground in pairs plane-parallel in height
- pair tolerance tp in height IT 5
- nominal size tolerance in width h7
- nominal size tolerance in height and remaining dimensions to DIN ISO 2760m

Use:
- for machine grooves, also applicable as parallel supports
- parallel stops are primarily intended for small to medium sized machines
- thickness aligned to machine grooves with tolerance H8
- several matched pairs available on request

N° article	298000	Groove width mm	b mm	h mm	l mm	in pairs tp mm
8	○	8	8	25	100	0.009
10	○	10	10	32	100	0.011
12	○	12	12	40	100	0.011
14	●	14	14	50	100	0.011
16	○	16	16	50	160	0.011
18	●	18	18	63	160	0.013
20	○	20	20	63	160	0.013
22	●	22	22	80	160	0.013
24	○	24	24	80	160	0.013
28	○	28	28	100	160	0.015





Workpiece stop

PREMUS

Design and use:
- very solid construction of anodised aluminium
- adjustable in five axes
- for use on drilling and milling machines or as assembly aid
- quick adjustable
- mounting thread M8 for slot-nut or direct mounting

Delivery:
With T-slot nut M8 × 12 mm.

Note:
By exchanging the T-nut applicable on different machines



N° article	298150
150	●

Parallel support set

PREMUS

DIN 6346

Delivered in case

Design:
- plane parallel fine ground in pairs, case-hardened
- size specifications on each parallel piece
- pair tolerance in height tp2 and width tp1 to IT5
- nominal size tolerance in height and width to ISO 2868m
- remaining sizes to DIN ISO 2768m

The geometric gradation allows full utilization of the support height:
Set size 2.5 - 25 over 40 combinations of heights from 2.5 to 45 mm
Set size 4.0 - 40 over 40 combinations of heights from 4.0 to 72 mm
Set size 8.0 - 63 over 40 combinations of heights from 8.0 to 113 mm
Set size 20 - 100 over 14 combinations of heights from 20.0 to 180 mm

N° article	298500 Standard	Height min. mm	Height max. mm	Contents 1 pair each 63 mm	Contents 1 pair each 100 mm	Contents 1 pair each 160 mm	Contents 1 pair each 250 mm
2,5 - 25	○	2,5	25	8×2.5 10×3.2 12×4 16×5 20×6.3	12×4 16×5 20×6.3 25×8	–	–
4 - 32	●	4	32	–	12×4 16×5 20×6.3 25×8 32×10	–	–
4 - 40	○	4	40	–	12×40 16×5 20×6.3 25×8	25×8 32×10 40×12	–
8 - 50	○	8	50	–	–	25×8 32×10 40×12 50×16	–
8 - 63	○	8	63	–	25×8 32×10 40×12	50×16 63×20	–
20 - 100	○	20	100	–	–	–	63×20 80×25 100×32





Parallel support set

PRETEC

Delivered in case

Design:
- plane parallel fine ground in pairs, case-hardened
- size specifications on each parallel piece
- pair tolerance in height ± 0.01 mm
- nominal size tolerance in length ± 0.5 mm

Use:
- as supports for various machining operations
- for parallel clamping of workpieces

N° article	298640 horizontal, 14 pieces	Contents
0150	●	1 pair each (length 150 mm): 14×10 | 16×10 | 18×10 | 20×10 | 22×10 | 24×10 | 26×10 | 28×10 | 30×10 | 32×10 | 35×10 | 40×10 | 45×10 | 50×10 mm 1 wooden box



Design:
- made of special steel
- fine ground in pairs and hardened
- parallelism 0.010 mm
- tolerance ± 0.005 mm
- 24 parts upright in wooden stand

Delivered in case

N° article	298641	Quantity	Length mm	Contents
100×09	●	9	100	1 pair each (W×H mm) 4×10 | 4×14 | 4×18 | 4×22 | 4×26 | 4×30 | 4×34 | 4×38 | 4×42
160×09	●	9	160	1 pair each (W×H mm) 4×10 | 4×14 | 4×18 | 4×22 | 4×26 | 4×30 | 4×34 | 4×38 | 4×42
120×12	●	12	120	1 pair each (W×H mm) 10×14 | 10×16 | 10×18 | 10×20 | 10×22 | 10×24 10×26 | 10×28 | 10×30 | 10×32 | 10×35 | 10×40
150×14	●	14	150	1 pair each (W×H mm) 10×14 | 10×16 | 10×18 | 10×20 | 10×22 | 10×24 | 10×26 10×28 | 10×30 | 10×32 | 10×35 | 10×40 | 10×45 | 10×50
100×20	●	20	100	1 pair each (W×H mm) 2×5 | 2×10 | 2×15 | 2×20 | 3×6 | 3×11 | 3×16 | 3×21 | 4×7 | 4×12 4×17 | 4×22 | 5×8 | 5×13 | 5×18 | 5×23 | 6×14 | 6×19 | 6×24
125×24	●	24	125	1 pair each (W×H mm) 8×11 | 8×16 | 8×21 | 8×26 | 8×31 | 8×36 10×13 | 10×18 | 10×23 | 10×28 | 10×33 | 10×38 12×15 | 12×20 | 12×25 | 12×30 | 12×35 | 12×40 14×17 | 14×22 | 14×27 | 14×32 | 14×37 | 14×42
150×24	●	24	150	1 pair each (W×H mm) 8×11 | 8×16 | 8×21 | 8×26 | 8×31 | 8×36 10×13 | 10×18 | 10×23 | 10×28 | 10×33 | 10×38 12×15 | 12×20 | 12×25 | 12×30 | 12×35 | 12×40 14×17 | 14×22 | 14×27 | 14×32 | 14×37 | 14×42



Parallel support set

PRETEC

Design:
- plane parallel fine ground in pairs, case-hardened
- size specifications on each parallel piece
- pair tolerance in height ± 0.01 mm
- nominal size tolerance in length ± 0.5 mm

Use:
- as supports for various machining operations
- for parallel clamping of workpieces

Delivery:
Upright in a wooden stand.





N° article	298655 upright	Quantity	Contents
0100	●	20	1 pair each (length 100 mm): 2×5 | 2×10 | 2×15 | 2×20 | 3×6 | 3×11 | 3×16 | 3×21 | 4×7 | 4×12 | 4×17 | 4×22 | 5×8 | 5×13 | 5×18 | 5×23 | 6×9 | 6×14 | 6×19 | 6×24 mm 1 wooden stand
0125	●	24	1 pair each (length 125 mm): 8×11 | 8×16 | 8×21 | 8×26 | 8×31 | 8×36 | 10×13 | 10×18 | 10×23 | 10×28 | 10×33 | 10×38 | 12×15 | 12×20 | 12×25 | 12×30 | 12×35 | 12×40 | 14×17 | 14×22 | 14×27 | 14×32 | 14×37 | 14×42 mm 1 wooden stand
0150	●	24	1 pair each (length 150 mm): 8×11 | 8×16 | 8×21 | 8×26 | 8×31 | 8×36 | 10×13 | 10×18 | 10×23 | 10×28 | 10×33 | 10×38 | 12×15 | 12×20 | 12×25 | 12×30 | 12×35 | 12×40 | 14×17 | 14×22 | 14×27 | 14×32 | 14×37 | 14×42 mm 1 wooden stand
0200	●	24	1 pair each (length 200 mm): 8×11 | 8×16 | 8×21 | 8×26 | 8×31 | 8×36 | 10×13 | 10×18 | 10×23 | 10×28 | 10×33 | 10×38 | 12×15 | 12×20 | 12×25 | 12×30 | 12×35 | 12×40 | 14×17 | 14×22 | 14×27 | 14×32 | 14×37 | 14×42 mm 1 wooden stand

Parallel support set

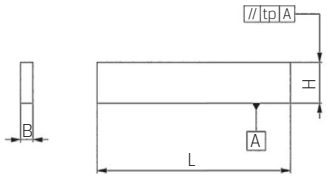
AMF

Design:
- plane-parallel precision-ground in pairs

- pair tolerance tp in height IT5
- nominal size tolerance in height ± 0.01 mm
- remaining sizes to DIN ISO 2768m

Use:
As supports for various machining operations

Delivery:
Upright in a wooden stand.





N° article	298670 upright	Quantity	Length mm	Contents
24	○	24	125	1 pair each (W×H mm) 3×11 | 3×13 | 3×15 | 3×16 | 3×17 | 3×18 3×20 | 3×21 | 3×22 | 3×23 | 3×25 | 3×26 3×27 | 3×28 | 3×30 | 3×31 | 3×32 | 3×33 3×35 | 3×36 | 3×37 | 3×38 | 3×40 | 3×42
32	○	32	125	1 pair each (W×H mm) 3×11 | 3×12 | 3×13 | 3×14 | 3×15 | 3×16 | 3×17 | 3×1 pair (B×H mm): 18 3×19 | 3×20 | 3×21 | 3×22 | 3×23 | 3×24 | 3×25 | 3×26 3×27 | 3×28 | 3×29 | 3×30 | 3×31 | 3×32 | 3×33 | 3×34 3×35 | 3×36 | 3×37 | 3×38 | 3×39 | 3×40 | 3×41 | 3×42

Parallel support set

AMF

Design:
- spring steel hardened and tempered
- height gradation 2 mm
- material thickness 0.3 mm
- pair tolerance tp in height IT5
- nominal size tolerance 10 in height ± 0.004 mm
- remaining sizes to DIN ISO 2768m
- no swarf on the support surface

Delivered in case

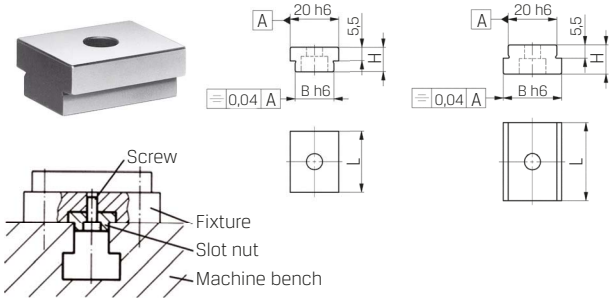


N° article	298675 undulated	L mm	Contents	Height min. mm	Height max. mm
9 - 23	●	110	1 pair each (W×H mm) 0.3×9 | 0.3×11 | 0.3×13 | 0.3×15 0.3×17 | 0.3×19 | 0.3×21 | 0.3×23	9	23
25 - 39	●	110	1 pair each (W×H mm) 0.3×25 | 0.3×27 | 0.3×29 | 0.3×31 0.3×33 | 0.3×35 | 0.3×37 | 0.3×39	25	39

Fixed t-nuts

Design:
- C15, case-hardened
- standardised in pairs, 20 mm wide aligning groove

Use:
- exchange of the T-nuts allows different groove widths on the machine
- for extra heavy fixtures loose type T-nuts 298880

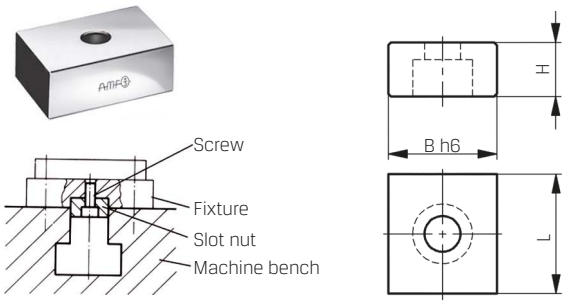


N° article	298850	B mm	H mm	L mm	DIN 84 or DIN 912
12	●	12	10	22	M6 × 10
14	●	14	10	25	M6 × 16
16	●	16	10	25	M6 × 16
18	●	18	10	25	M6 × 16
22	●	22	12	32	M6 × 16
28	○	28	12	32	M6 × 16

Flat slot nuts

Design:
C15, case-hardened and ground

Use:
- cost-effective and practical, in cases where a fixture is always used on the same machine
- for extra heavy fixtures loose type T-nuts 298880



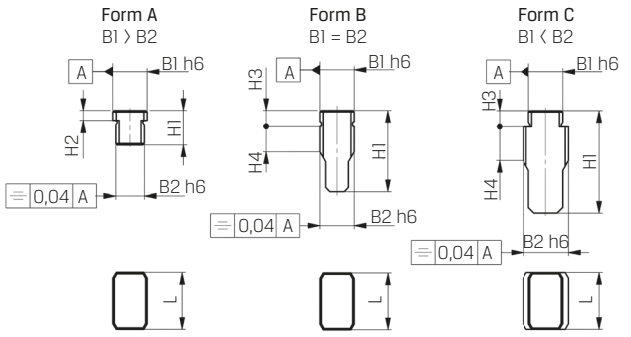
N° article	298870	B mm	H mm	L mm	DIN 84 or DIN 912
12	●	12	8	20	M5 × 12
14	●	14	10	22	M6 × 16
16	●	16	10	22	M6 × 16
18	●	18	10	22	M6 × 16
20	●	20	10	22	M6 × 16
22	●	22	12	32	M6 × 16

Loose T-nuts

DIN 6323

Design:
C15, case-hardened and ground

Use:
- for extra heavy fixtures
- after rough alignment of a fixture the T-nuts are inserted into the T-slot from the side
- no protruding stationary T-nuts can obstruct the fixture during transport and thus damage the table



N° article	298880	L mm	B_2 mm	B_1 mm	Shape	$High_1$ mm	$High_2$ mm	$High_3$ mm	$High_4$ mm
10	○	20	10	12	A	12	3,6	–	–
12/12	○	20	12	12	B	28,6	–	5,5	9
12/20	●	32	12	20	A	14	5,5	–	–
14	●	32	14	20	A	14	5,5	–	–
16	●	32	16	20	A	14	5,5	–	–
18	●	32	18	20	A	14	5,5	–	–
20	○	32	20	20	B	45,5	–	7	16
22	●	40	22	20	C	50,5	–	7	18



Vertical toggle clamp

Design and use 299100:
- horizontal toggle clamp, with open holding arm and horizontal base
- galvanised and passivated
- ergonomic handle made of red, oil-resistant plastic-
- from size 2 case-hardened and pre-lubricated bearing bushes
- with tempered and galvanised clamping screw, slidable and captive
- safety spanner with finger protection
- for mounting on plates etc.

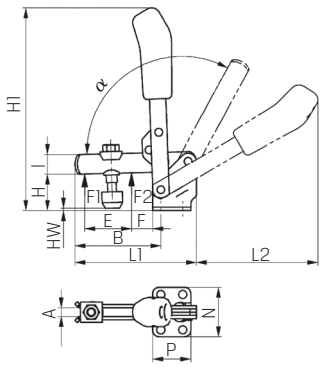
Note:
Also available in stainless steel

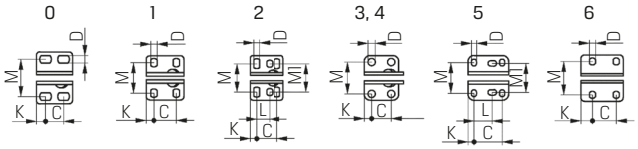
Design 299101:
- vertical clamp with twist-proof bushes (except size 1)
- rivets made of stainless steel
- galvanised and passivated
- media resistant plastic handle
- safety spanner
- long support arm guidance
- large operating space for the hand in open position

Delivery:
Incl. pressure spindle


299100


299101



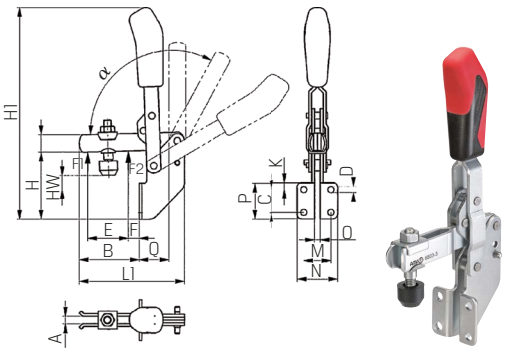


Size		0	1	2	3	4	5	6
299100		●	●	●	●	●	●	○
299101		–	●	●	●	●	○	–
Hole distance **C × M** mm	299100	8,5 - 13,5 × 23,0	16 × 22,5 - 26,0	20 × 23,0 - 31,0	20 × 32,5	32 × 43,0 - 46,5	45 × 45,0 - 50,0	50,5 × 67,5 - 72,5
	299101	–	16 × 23,4	12,7 × 26,9	19 × 32	32 × 45	32 × 45	–
Bore-**D** mm	299100	4,5	4,5	5,5	7,5	8,6	8,5	13
	299101	–	4,4	5,1	7,1	8,3	8,7	–
Clamping height **H** mm	299100	18	19	23	33	42,5	55,8	81
	299101	–	19	23	32	42	50,8	–
Clamping force **F1** N	299100	500	600	800	1.200	1.700	3.000	3.400
	299101	–	–	–	–	–	–	–
Clamping force **F2** N	299100	700	1.100	1.200	2.500	3.000	5.000	5.500
	299101	–	450	1.500	2.500	3.400	3.600	–
Total height **H1** mm	299100	81	98,5	139,5	186	221	224	333
	299101	–	77	111	175	218	224	–
Total length **L1** mm	299100	49	61	78	112	141	195	231
	299101	–	50,4	69,9	90	143	176	–
Clamping screw	299100	M4 × 25	M5 × 30	M6 × 35	M8 × 45	M8 × 65	M12 × 80	M12 × 110
	299101	–	M5 × 30	M6 × 50	M8 × 45	M10 × 75	M12 × 80	–

Vertical toggle clamp

Design and use:
Like 299100
Vertical toggle clamp, with open arm and angled mount

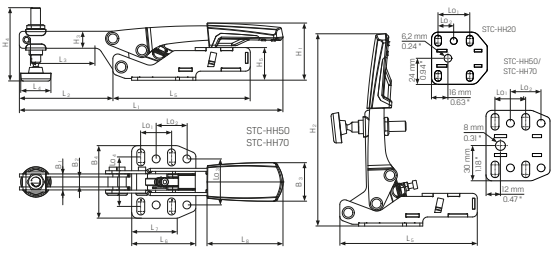
Note:
Also available in stainless steel



Size	1	2	3	4
299250	●	●	●	○
Hole distance **C × M** mm	14 × 20	20 × 25,5	24 × 28,5	32 × 32
Bore ∅ mm	4,5	6,1	6,5	8,5
Clamping height mm	45	60	71	101,5
Clamping force **F1** N	600	800	1200	1700
Clamping force **F2** N	1.100	1.200	2.500	3.000
Total height mm	125	176,5	223	280
Total length mm	61	77	110	141
Clamping screw	M5 × 30	M6 × 35	M8 × 45	M8 × 65

Variable horizontal clamp

Design:
- in clamping position the lever is horizontal
- automatic, continuous adjustment of the travel with constant clamping force
- adjustable clamping force up to 2500 N, depending on the setting of the adjusting screw in the joint
- stable, quenched and tempered metal sheets
- hole pattern of the base plate suited for mm and inch
- high-quality 2-component plastic handle



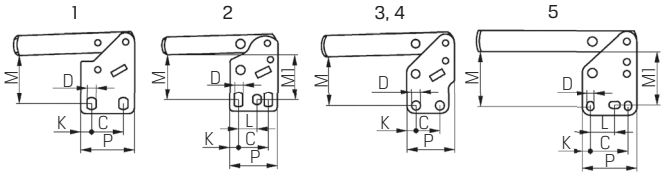


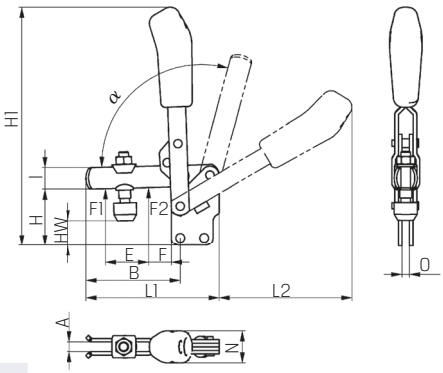
N° article	299350 STC-HH	Clamping range mm	Clamping force, max. N	autom. adjustment mm
40	●	40	2500	35
60	●	60	2500	35

Vertical toggle clamp

Design and use:
Like 299100 and 299101
299200: Vertical toggle clamp, with open holding arm and vertical base
299201: Vertical toggle clamp, with closed holding arm and vertical base

Note:
Also available in stainless steel





Size			1	2	3	4	5
299200			○	●	●	○	○
299201			–	●	●	○	○
Hole distance **C**	mm	299200	16	20	20	32	45
		299201	–	12,7	19	32	31,8
Bore-**D**	mm	299200	4,5	5,5	7,5	8,6	8,5
		299201	–	5,2	7,1	8,3	8,7
Clamping height **H**	mm	299200	29	38	48	65	77
		299201	–	28,5	40,4	54,5	57,4
Clamping force **F1**	N	299200	600	800	1.200	1.700	3.000
		299201	–	–	–	–	–
Clamping force **F2**	N	299200	1.100	1.200	2.500	3.000	5.000
		299201	–	1.100	1.700	2.800	3.600
Hauteur totale **H1**	mm	299200	109	154	200	244	301
		299201	–	122	190	240	240
Total length **L1**	mm	299200	61	78	112	141	195
		299201	–	71,2	90,2	142	179
Clamping screw			M5×30	M6×35	M8×45	M8×65	M12×80


299200


299201

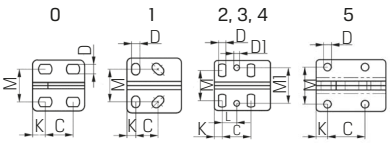
Horizontal toggle clamp

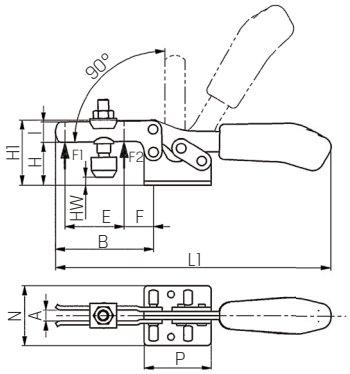
Design and use 299300:
- like 299100
- reverse clamping and operating arms
- very low-built
- horizontal toggle clamp, with open holding arm and horizontal base

Note:
Also available in stainless steel

Delivery:
Incl. pressure spindle

Design 299301:
- with base mounting
- twist-proof sockets (except size 1)
- rivets made of stainless steel
- galvanised and passivated
- ergonomic, media resistant plastic handle
- safety spanner
- long arm guidance (sizes 1-4)
- bend-shaped lever arm (size 0)
- horizontal toggle clamp, with closed holding arm





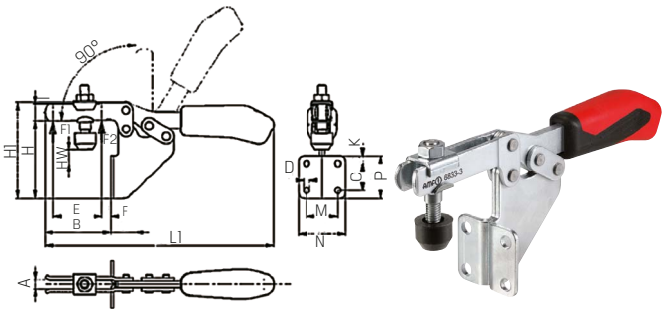
Size			0	1	2	3	4	5
299300			●	●	●	●	●	●
299301			●	●	●	●	●	–
Hole distance **C × M**	mm	299300	15,6 - 11,5 × 16	14,5 - 13 × 18 - 21,5	26 × 19,5 - 29,5	25,7 × 22 - 31,8	41 × 29 - 43	41,5 × 41,5
		299301	11,1 × 16	13,5 × 19	26 × 28	26 × 31	41,2 × 43	–
Bore-**D**	mm	299300	4,6	5,2	5,6	6,5	8,5	8,5
		299301	6,8	5,2	5,5	6,6	8,7	–
Clamping height **H**	mm	299300	14,5	19	25	32	45	46
		299301	7,4	19	25	34	45	–
Clamping force **F1**	N	299300	250	800	1.000	1.800	2.000	3.000
		299301	–	–	–	–	–	–
Clamping force **F2**	N	299300	400	1.100	1.200	2.500	3.000	5.000
		299301	380	700	900	2.200	3.400	–
Hauteur totale **H1**	mm	299300	23	30	45	48,5	75	73
		299301	17	38,5	49	51,5	68,8	–
Total length **L1**	mm	299300	79	120	162	206	287	321
		299301	68	105	162	189	269	–
Clamping screw		–	M4 × 25	M5×30	M6×35	M8×45	M8×65	M8×65
P × N	mm		25,5×25,0	34×34	38×42	50,0×45,5	57×58	77×58


299300


299301

Horizontal toggle clamp

Design and use:
- like 299100
- reverse clamping and operating arms
- very low-built
- horizontal toggle clamp, with open arm and angled mount

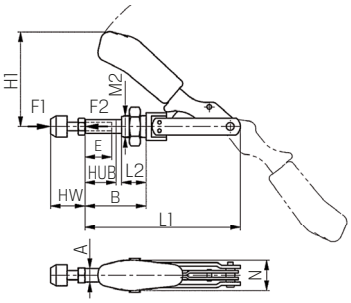


Size		1	2	3	4
299450		●	●	●	○
Hole distance **C × M**	mm	13,5 × 19	20 × 25,5	24 × 28,5	32 × 32
Bore ∅	mm	5,2	5,6	6,8	8,5
Clamping height	mm	57	73	70	102
Tensioning force **F1**	N	800	1.000	1.800	2.000
Tensioning force **F2**	N	1.100	1.200	2.500	3.000
Total height	mm	68	94	86,5	133
Total length	mm	120	162	206	282
Clamping screw		M5 × 30	M6 × 35	M8 × 45	M8 × 65

Push-pull type toggle clamp

Design:
Like 299500

Use:
Lever may be set to any angle relative to base





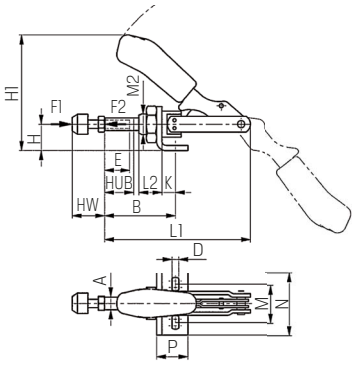
Size		0	1	2	3	5
299550 without angled mount		○	●	●	●	●
Stroke	mm	16	20	26	32	40
Tensioning force **F1**	N	800	1.000	2.000	2.500	4.500
Tensioning force **F2**	N	800	1.000	2.000	2.500	4.500
Total height	mm	37	45,5	66	82,5	99
Total length	mm	66,5	91	114	140	171,5
Clamping screw		M4 × 20	M4 × 20	M6 × 25	M8 × 35	M12 × 50

Push-pull type toggle clamp

Design and use 299500:
- push-pull type toggle clamp
- long push-rod guidance with mounting thread and nut
- galvanised and passivated
- rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings
- lever parts and push-rod made of Q & T steel
- bearings greased
- ergonomic, oil-resistant handle with large hand rest area and soft component
- with tempered, galvanised clamping screw
- with front thread for direct installation in sheet metal walls or in fixtures

Design 299501:
- with base mounting
- push-rod with female thread
- rivets made of stainless steel
- steel, galvanised and passivated
- media resistant plastic handle
- push-rod honed

Delivery:
Incl. pressure spindle




299500


299501

Size			0	1	2	3	5
299500 with angular base			●	●	●	●	●
299501 with angular base			●	–	–	–	–
P × N	mm	299500	16 × 25	20 × 30	34 × 50	30 × 60	35 × 65
		299501	33 × 27	–	–	–	–
Bore-**D**	mm	299500	4,5	4,5	5,6	6,5	8,5
		299501	4,4	–	–	–	–
Clamping force **F1**	N	299500	800	1.000	2.000	2.500	4.500
		299501	450	–	–	–	–
Clamping force **F2**	N	299500	800	1.000	2.000	2.500	4.500
		299501	450	–	–	–	–
Gesamthöhe **H1**	mm	299500	49,3	60,5	85,5	108	129,5
		299501	35	–	–	–	–
Hauteur totale **L1**	mm	299500	66,5	91	114	140	171,5
		299501	68	–	–	–	–
Stroke	mm		16	20	26	32	40
Clamping screw			M4 × 20	M4 × 20	M6 × 25	M8 × 35	M12 × 50

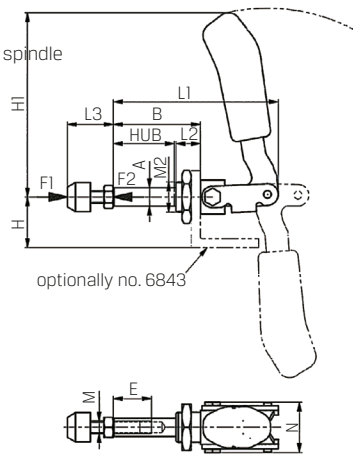
Push-pull type toggle clamp

Design 299580:
- push-pull type toggle clamp
- long push-rod guidance with mounting thread and nut
- galvanised and passivated, rivets made of stainless steel
- fitting screws tempered
- bearings greased
- ergonomic handle made of red, oil-resistant plastic-
- with tempered, galvanised clamping screw
- with front thread for direct installation in sheet metal walls or in fixtures
- flange mounting possible with angle base 299600

Note:
These clamps are also available in stainless steel

Design 299581:
- with base mounting
- frontal male thread for direct mounting
- push-rod with female thread
- rivets made of stainless steel
- galvanised and passivated
- ergonomic, media resistant plastic handle
- push-rod honed

Delivery:
Incl. pressure spindle



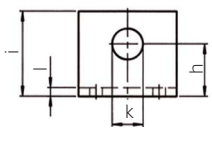

299580

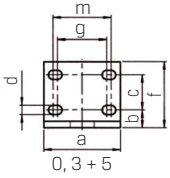

299581

Size			2	3	5
299580 AMF short, without angular base			●	●	●
299581 PRETEC short, without angular base			●	○	–
Stroke	mm	299580	21,5	40	67
		299581	19,7	39	–
Clamping force **F1**	N	299580	1.000	2.500	4.000
		299581	900	1.300	–
Clamping force **F2**	N	299580	1.000	2.500	4.000
		299581	900	1.300	–
Hauteur totale **H1**	mm	299580	73	123	149
		299581	66,3	90,5	–
Total length **L1**	mm	299580	68,5	108	175
		299581	64	104	–
Clamping screw			M6 × 25	M8 × 35	M12 × 50

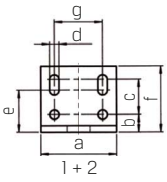
Angled mount for push-pull type toggle clamp

Design:
- for direct mounting of the push-pull type toggle clamp to the fixture
- high stability thanks to great material thickness
- steel, galvanised and passivated





0, 3 + 5



1 + 2


299600

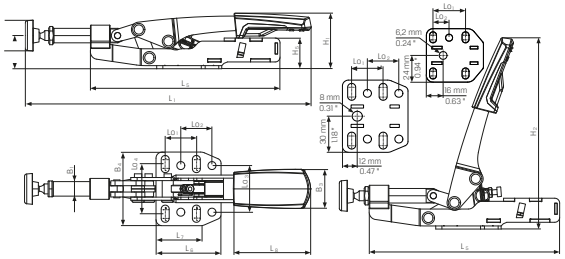

299601

N° article	299600 AMF angular base for 299550 and 299580	299601 PRETEC for 299581	a mm	f mm	i mm	b mm	c mm	d mm	e mm	g mm	h mm	k mm	l mm	m mm
0	○	–	30	30	23	9.0	16	4.5	–	18	13	10.2	3	15.5 - 20.5
1	○	–	60	40	40	11.0	11 - 18	6.7	22	40	24	12.2	4	40
2	○	○	60	40	40	11.0	11 - 18	6.7	22	40	24	16.2	5	40
3	○	○	65	44	50	14.5	19	6.7	–	41	33	20.2	6	41
5	●	–	70	60	60	17.0	32	9	–	45	37	24	8	45

Variable push-pull type toggle clamp

Design:
- actuation of the lever is converted into axial movement of the push rod
- automatic, continuous adjustment of the travel at constant clamping force
- adjustable clamping force up to 2500 N, depending on the setting of the adjusting screw in the joint
- stable, quenched and tempered metal sheets
- hole pattern of the base plate suited for mm and inch
- high-quality 2-component plastic handle

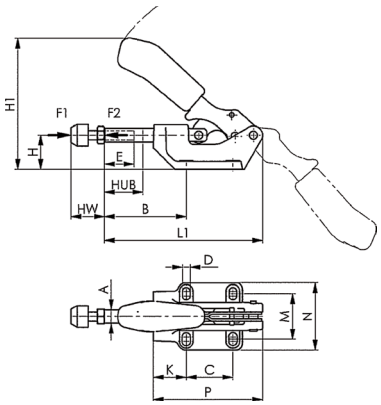




N° article	299650 STC-IHH	Clamping range mm	Clamping force, max. N	autom. adjustment mm	Weight kg
35	○	25	2500	13	0,42

Push-pull type toggle clamp

Design and use:
- push-pull type toggle clamp
- heavy-duty version with long rod guide
- body of varnished malleable iron
- lever parts and push-rod made of Q & T steel
- handle galvanised and with red, oil-resistant plastic handle
- rivets made of stainless steel
- pre-lubricated bearings
- with tempered and galvanised clamping screw and protective cap



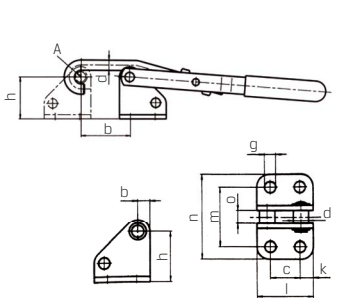


Größe		3	5	7
299700 heavy		●	●	○
Stroke	mm	32	40	50
Clamping force **F1**	N	4.000	10.000	25.000
Clamping force **F2**	N	4.000	10.000	25.000
Hauteur totale **H1**	mm	116	137,5	179
Total length **L1**	mm	139	174	218
Clamping screw		M8×35	M12×50	M12×50

Hook type toggle clamp

Design:
- galvanised and passivated
- case-hardened and greased bearing bushes
- rivets made of stainless steel
- hook and clamping sleeve tempered
- handle made of red, oil-resistant plastic
- for attaching lids and covers to containers

These clamps are also available in stainless steel




299760


299750

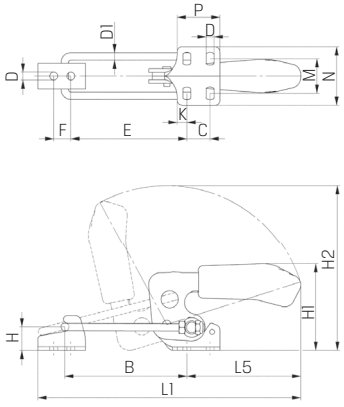
N° article	299750 without counter support	Tensile force kN	Adjustment range mm	Hauteur mm	b_1 mm	b_2 mm	c mm	d mm	e_1 mm	e_2 mm	g mm	h mm	k mm	l mm	m mm	n mm	R	s mm
1	●	2	8	34,5	16 - 23	35 - 42	19	5.3	16.5 - 23.5	35 - 42.5	4.5	22.7	6	31	26.0 - 30.0	40	4.5	45
3	●	3	12	36	32.5 - 44	65.5 - 77	19	7.1	39.5 - 50.5	72.5 - 84	5.5	22.7	13	40	31.5 - 35.5	45	5.5	98
5	○	5	14	69	26.5 - 40	57 - 71	29	10.75	27.5 - 42	58 - 72	11.2	49.1	13	55	55.5 - 63.0	85	8	146

N° article	299760 Fixed catch	Hauteur mm	b mm	c mm	d mm	g mm	h mm	k mm	l mm	m mm	n mm	o mm
1	○	29	6	19	8	4.5	22.7	6	31	26.0 - 30.0	40	6.9
3	○	29	6	19	10	5.5	22.7	13	40	31.3 - 35.8	45	10.9
5	○	61	12	29	15	11.2	49.1	13	55	56.5 - 64.0	86	13.8

Hook type toggle clamp

Design:
- galvanised and passivated
- rivets of stainless steel, running in case-hardened bearing bushes
- hook tempered
- bearings greased
- ergonomic handle made of red, oil-resistant plastic-

Delivery:
Complete with fixed catch





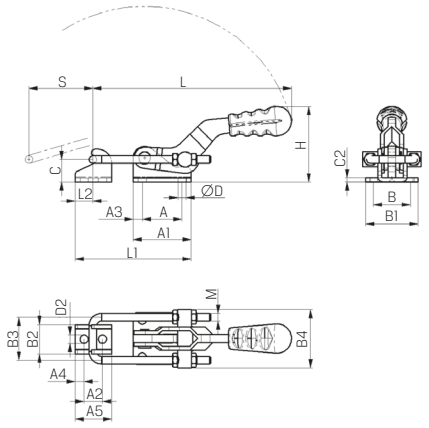
N° article	299770 horizontal	B min. mm	B max. mm	C mm	D mm	D_1 mm	E max. mm	E min. mm	f mm	H mm	$High_1$ mm	Tensile force kN	K mm	L_1 max. mm	L_1 min. mm	L_5 mm	M mm	N mm	P mm
2	●	42	76	13	5,2	4	72	38	11	12	47	1,6	6.4	159	125	69	19.5 - 23.5	38	26
3	●	53.5	101	19	6,5	6	96	48.5	14	19	70	3,2	8	216	169	93	24.5 - 32	48	35
4	●	66	130	32	8,5	8	123	59	19	26	94	7	9.5	273	209	111	35 - 46	64.3	53.5

Hook type toggle clamp

PRETEC

Design:
- with base mounting
- frame and clamping nuts complete mounted
- rivets made of stainless steel
- galvanised and passivated
- ergonomic, media resistant plastic handle

Delivery:
Incl. frame and fixed catch





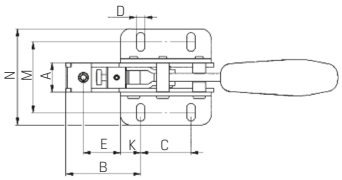
N° article	299772 horizontal	A mm	A_1 mm	A_2 mm	A_3 mm	A_4 mm	A_5 mm	B mm	B_1 mm	B_2 mm	B_3 mm	B_4 mm	C mm	C_2 mm	D mm	D_2 mm	Weight kg	H mm	Adhesive power kN
2	●	16	26	10	5	6	20	19	28.0	13	19	28.0	12	2	4,2	4.2	0,07	32	1,6
3	●	19	39.5	11.5	6.5	5.5	25.3	32	44.5	20	25,5	42.0	14	3	6,7	6.7	0,25	56.5	3,2
4	●	41.3	60.5	19	9.6	9.5	38	38	54.0	30	44,5	60.5	23.8	4	8,5	8.5	0,75	85	7

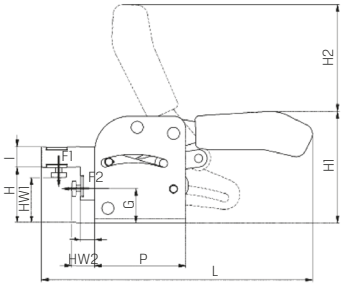
Combination clamp

amf

Design:
- galvanised and passivated
- rivets of stainless steel, running in case-hardened bearing bushes
- bearings greased
- ergonomic, oil-resistant handle

Use:
Positioning and clamping in one step







N° article	299771 horizontal and vertical	F_1 kN	F_2 kN	Weight kg	A mm	B mm	C mm	D mm	E mm	f mm	G mm	H mm	H1 mm	$High_2$ mm	HW1 min. mm	HW1 max. mm	HW2 min. mm	HW2 max. mm	I mm
2	○	2	2	0.7	19.5	56	50	6,5	32	9	28	46	94	87	30	40	14	24	16
3	○	3	3	1.62	29	74	50	8,5	37	14	34	55.5	110	106	40	50	20	30	20

Machine table clamp BS

BESSEY

Design and use:
- for rapid and secure clamping
- fastened to the machine table with a T-nut and a hex socket head screw
- rail and clamp of galvanised tempered steel
- clamping lever plastic coated
- pivotable, continuously height-adjustable
- applicable on all machine tables, drilling and milling machines, for mass production etc.

Note:
Fitting T-nuts DIN 508 see 297500
Accessories for welding tables see 587816

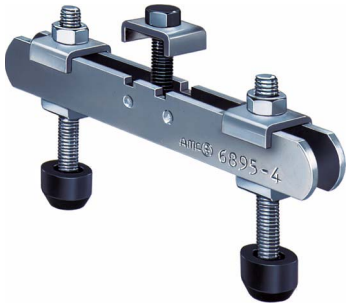


N° article	299800 BS	Clamping height mm	Projection mm	Rail	Achievable clamping force at 50 mm clamping height approx. N	Hole for fastening screw mm
BS-2S	●	200	200	19.5×9.5	3500	10.5
BS-3S	●	200	120	22×10.5	5500	13
BS-4S	○	200	120	28×11	7500	16.5
BS-5S	○	240	140	30×15	10000	16.5
BS-6S	○	500	140	30×15	10000	16.5

Cross arm for vertical and horizontal toggle clamps

Design and use:
- with sliding clamping screw
- galvanised and passivated
- 2 tempered clamping screws
- 2 protective caps and mounting screws
- for simultaneous clamping of 2 small workpieces or one larger workpiece at 2 points

Size	suitable for catalog no.				
	299100	299200	299250	299300	299450
0	0	–	–	0	–
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	–	–	–	5	–
6	5+6	–	–	–	–

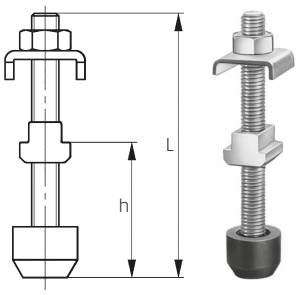


N° article	299910 Supporting arm for quick-action clamps	Size	Clamping screw spacing	Clamping screw size	Total length mm
0	○	0	18 - 60	M4×25	70
1	○	1	22 - 72	M5×30	85
2	○	2	28 - 85	M6×35	100
3	○	3	34 - 100	M8×45	120
4	○	4	40 - 125	M8×65	150
5	○	5	40 - 125	M8×65	150
6	○	6	54 - 200	M12×80	240

Clamping screws

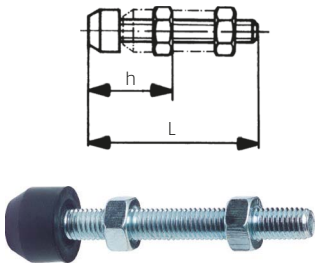
Design:
- tempered, strength class 8.8
- galvanised and passivated
- with removable protection cap
- size 0 - 3 with washer/nut element
- size 4 - 7 with nut for T-slot

Note:
Also available in stainless steel



N° article	299920 for open supporting arms	Screw size	Washer Size	Nut for T-slots DIN 508	L mm	h min. mm	h max. mm
0	○	M4× 25	0	–	32	13	20
1	○	M5× 30	1	–	38	17	24
2	●	M6× 35	2	–	45	19	28
3	○	M8× 45	3	–	58	22	34
4	○	M8× 65	4	M8×10	78	21	50
5	○	M8× 65	5	M8×10	78	21	45
6	○	M12× 80	6	M12×14	97	28	58
7	○	M12×110	6	M12×14	127	28	88

Design:
- tempered, strength class 8.8
- galvanised and passivated
- with 2 nuts
- sizes 1, 3, 4, 5 and 6 with removable protection cap



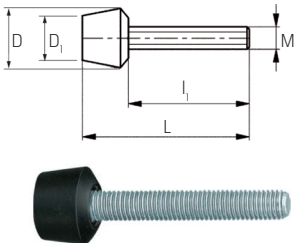
N° article	299960 for solid and fixed supporting arms	Screw size	L mm	h min. mm	h max. mm
1	○	M5× 30	38	14	25
3	○	M8× 45	58	22	32
4	●	M8× 65	78	22	52
5	○	M12× 80	98	30	60
6	○	M12×110	128	30	88

Note:
Made of oil-resistant rubber to protect sensitive workpieces



N° article	299915 Protective cap for clamping screw	for screw size	Diameter mm	Hauteur mm
0	●	M4	11	8,5
1	●	M5	12,5	10
2	●	M6	15	12
3+4	●	M8	19	15

Design:
- tempered, strength class 8.8
- galvanised and passivated
- made of oil-resistant neoprene



N° article	299970 with vulcanised-on pressure pad	M metric	L mm	D_1 mm	l_1 mm
M4×32	●	M4	32	8	24
M5×38	●	M5	38	10	28
M6×45	●	M6	45	12	33
M8×48	●	M8	48	16	32
M8×63	●	M8	63	16	47
M8×78	●	M8	78	16	62
M12×70	●	M12	70	24	46
M12×100	●	M12	100	24	76
M12×130	○	M12	130	24	106

NEW



MAHR
Precision digital depth gauge
IP67
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MAHR
Precision digital wireless depth gauge
IP67
Page 30/581



MITUTOYO
Precision digital outside micrometer
Page 31/591



MITUTOYO
Precision digital dial indicator
IP42
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MITUTOYO
Precision digital dial indicator
IP42, for 2-point internal measurements
Page 32/623



MITUTOYO
Precision digital dial indicator
IP42
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MITUTOYO
Precision digital dial indicator
IP30
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MAHR
Compact length measuring device
Millimar C
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MAHR
Inductive dial comparator
Page 32/627



MITUTOYO
Digital height measuring and marking device
Page 32/635



MITUTOYO
Digital height measuring device
Linear Height LH-600F
Page 32/636



MAHR
Digital height measuring device
Digimar 817 CLT
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PREMUS
Hard stone cleaning agent
Page 34/645



MAHR
Surface measuring device
MarSurf M 410
Page 38/671



BAUER+BÖCKER
LED magnifier lamp
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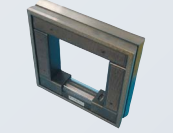

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Pictograms

Text and Icon Pictograms for Quicker Selection

DIN 862	Standard of the tool	SHOCK PROOF	Shock-protected measuring unit
	Double prism guide		Wireless transmission
	Angular depth gauge	ABS	Absolute function
	Round depth gauge		Marking of workpieces
	Friction wheel		Ball guide of the measuring pin
	Sealed dial		Jewel bearing
IP40	Protection against dust		Reference Lock function
IP51	Protection against dust and vertically falling dripping water	MAX MIN	Dynamic measurement function MIN, MAX, MIN-MIN
IP52	Protection against diagonally falling dripping water		Switch output at tolerance monitoring
IP54	Protection against dust and splash water	 TOL	Tolerance function
IP63	Dustproof and protection against spray water	 Digimatic	DIGIMATIC interface
IP65	Dustproof and protection against jet water	 RS 232 C	RS232 interface
IP67	Dust-tight and waterproof for temporary immersion	calibrated 	Calibration of the tool
USB	USB ready, the new flexible MarConnect interface. For simple data transmission to the PC and for the fast universal setup of multiple measuring stations. Compatible with all measuring devices with USB ready output. Comprehensive data collection with the MarCom Professional software. Optional measured value transmission via PC keyboard or straight at the meter.		

Pictograms

Text and Icon Pictograms for Quicker Selection

Lens geometry



Aspherical lens
Allows even for high magnification
a large lens diameter and thus a wide field of view.



Diffractive aspherical lens
Has an additional diffractive structure
for correcting colour errors



Aplanatic lenses
They are characterised by their spherical aberration
free image with sharp outlines.



Achromatic lenses
A combination of two lenses with
different refractive power for correction
of chromatic aberration



Meniscus/aspheric lenses
A combination of meniscus lens and aspherical lens.
This allows larger distances than comparable magnifications of other lenses with edge-sharp image



Biconvex lens
Single lens with two convex (outward
curved), spherical lens surfaces.



Plano-convex lens
A special shape of the converging lens with only one
convex lens surface while the second surface is planar.



In the **meniscus lens**both surface radii (r1 und r2) have
the same sign.
In converging menisci r_1 is greater than r_2
in divergent menisci r_1 is smaller than r_2.
Eyeglasses are usually menisci.

Lens material

PXM®

PXM® light lenses
The very light and break-resistant texture
enables the manufacture of products that are characterized by the highest image quality, ergonomic design and optimised operating conditions.

Silikat

Silicate
A melting product of quartz (binder),
potash and soda (flux) as well as oxides
(hardener). The glass melt, which has been dosed into pellets, is polished to lenses after cooling.

CR 39

Poly-allyl-diglycol carbonate (PADC)
is a polymer which is used, inter alia, for producing spectacle lenses and is also known under the designation CR-39.

Tri-
Acetat

Tri-acetate
A synthetic fibre from the sphere of
"natural polymers".

PC

Polycarbonate

Lens coating

cera-tec®
coating

cera-tec® hard coating
The extremely solid coating was developed together with the Fraunhofer Institute for Silicate Research (ICS)) especially for our PXM® lenses. It protects the lenses all-round and gives the user safety and both visual and wearing comfort.

Duplex

DUPLEX coating
The antistatic coating of the lens
permanently prevents fogged-up lenses.

Super-
Duplex

Super DUPLEX coating
DUPLEX with additional hard coating

Other



Filter caps
for changing the colour temperature
enclosed.



Light bulb



LED
which is much more economical in consumption than conventional light bulbs with comparable brightness and has an almost infinite life.



Fluorescent lamp



SMD-LED
(SMD: Surface Mounted Device, LED: Light Emitting Diode) special, miniaturised LED with higher light output than conventional LED.

Step Up

Step Up
Electronic control system that builds the consumption voltage required by the LED and keeps it constant even when the battery voltage drops. The illuminance of the LED therefore does not drop over the battery life cycle.

IP-Code / Protection Classes

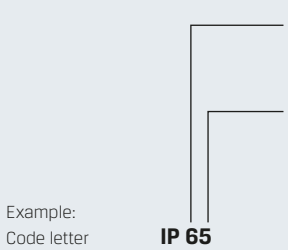
Definition of Protection Classes to IEC 60529

The standard IEC 60529 "Degrees of protection provided by enclosures (IP code)" provides a system for classifying the protection types through the housings of electrical equipment. This standard defines terms for enclosure types:

- Protection of persons against access to hazardous parts within the housing
- Protection of the equipment within the housing against penetration of solid foreign objects
- Protection of the equipment within the housing against harmful effects caused by the penetration of water

Degree of protection against solid foreign bodies		
first digit	**Abstract**	**Definition**
0	Unprotected	The object probe, sphere of 50 mm diameter, shall not fully penetrate.
1	Protected against solid foreign bodies 50 mm and larger.	The object probe, sphere of 12.5 mm diameter, shall not fully penetrate.
2	Protected against solid foreign bodies 12.5 mm diameter and larger.	The object probe, 2.5 mm diameter, shall not penetrate at all.
3	Protected against solid foreign bodies 2.5 mm diameter and larger.	The object probe, 2.5 mm diameter, shall not penetrate at all.
4	Protected against solid foreign bodies 1.0 mm diameter and larger.	The object probe, 1.0 mm diameter, shall not penetrate at all.
5	Dust-protected	Penetration of dust is not fully prevented, but dust must not penetrate in such an amount as to impair the satisfactory operation of the device or the safety.
6	Dust-protected	No penetration of dust.

Degree of protection against water		
second digit	**Abstract**	**Definition**
0	Unprotected	Vertically falling drops may not have any harmful effects.
1	Protected against dripping water.	Vertically falling drops may not have any harmful effects when the housing is tilted by an angle of up to 15° on either side of the vertical.
2	Protection against dripping water, when the housing is inclined up to 15°	Water, being sprayed at an angle of up to 60 ° on both sides of the vertical, may not have any damaging effects.
3	Protected against spray water.	Water spraying onto the housing from any direction must not cause any harmful effects.
4	Protected against splash water.	Jet water sprayed from any direction against the housing may not have any damaging effects.
4K	Protected against splashing water with increased pressure.	Water splashing from any direction with increased pressure against the housing, may not have any damaging effects. (Applies to DIN 40 050 part 9 only for road vehicles)
5	Protected against jet water.	Water splashing from any direction as jet against the housing, may not have any damaging effects.
6	Protected against strong jets of water.	Water splashing from any direction as strong jet against the housing, may not have any damaging effects.
6K	Protected against strong jet water with increased pressure.	Water sprayed from any direction as jet with increased pressure against the housing, may not have any damaging effects. (Applies to DIN 40 40050 part 9 only for road vehicles)
7	Protected against the effect on temporary immersion..	Water must not enter to an amount, which causes harmful in case the the housing is under pressure and temporary conditions tem-porarily immersed in water.
8	Protected against the Effects of continuous immersion.	Water must not enter in a quantity that causes harmful effects in case the housing is permanently immersed.
9K	Protected against Water at high pressure/ steam jet cleaning	Water splashing from any direction with increased pressure against the housing. may not have any harmful effects. (Applies to DIN 40050 part 9 only for road vehicles)



Security and confidence, the bedrock for lasting and prolific cooperation!

The measuring instruments used in the production process have to provide undeniable correct measured values for technical as well as legal reasons. To ensure this, the devices have to be regularly calibrated and traced to national standards.

In section 7.1.5.2 of the quality standards from the norm family DIN, EN 9001: 2015 16949: 2016, is defined:

7.1.5.2 Metrological traceability N1)

If metrological traceability is a requirement, or is considered by the organisation to be an essential contribution to establishing confidence in the validity of measurement results, the measuring instrument shall be:

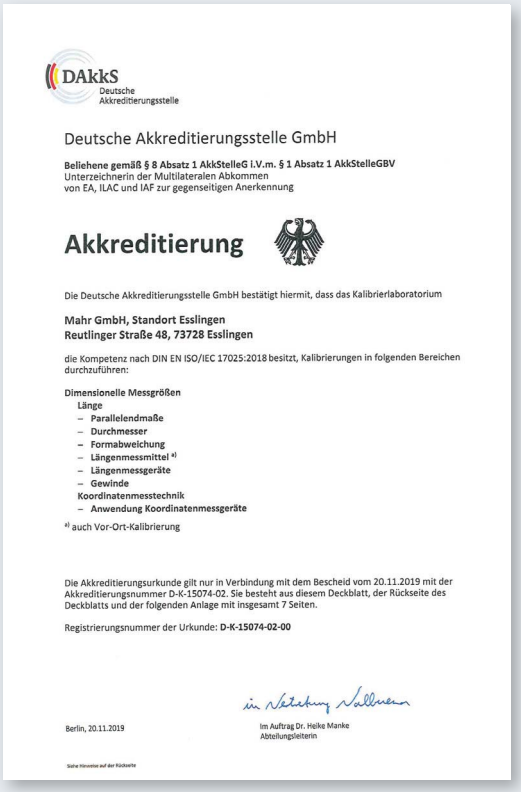
(a) calibrated, verified or both against standards traceable to international or national standards at specified intervals or prior to use; where no such standards exist, the basis for calibration or verification shall be retained as documented information;

The Mahr measuring equipment management assures this for the measuring parameter length, among others, by operating the calibration laboratories DKD-K-05401 and DKD-K06401, which are accredited by the Physikalisch-Technische Bundesanstalt PTB Braunschweig (Federal Institute of Physics and Technology PTB in Brunswick).

The calibration for an order takes about 2 days, for external brands approx. 5 days; a later calibration approx. 8 days.

Delivery ex works plus packing costs. To calibrate a new ordered tool initially, please attach "-KAL" to the size.

Example: Digital outside micrometer measuring range 0-25 mm
inclusive calibration
= cat. no. **310294 0-25-KAL**



DAkkS
Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Beliehene gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung

Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Kalibrierlaboratorium

Mahr GmbH, Standort Esslingen
Reutlinger Straße 48, 73728 Esslingen

die Kompetenz nach DIN EN ISO/IEC 17025:2018 besitzt, Kalibrierungen in folgenden Bereichen durchzuführen:

Dimensionelle Messgrößen
Länge
- **Parallelendmaße**
- **Durchmesser**
- **Formabweichung**
- **Längenmessmittel** a)
- **Längenmessgeräte**
- **Gewinde**

Koordinatenmesstechnik
- **Anwendung Koordinatenmessgeräte**

a) auch Vor-Ort-Kalibrierung

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 20.11.2019 mit der Akkreditierungsnummer D-K-15074-02. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 7 Seiten.

Registrierungsnummer der Urkunde: **D-K-15074-02-00**

Berlin, 20.11.2019

Im Auftrag Dr. Heike Manke
Abteilungsleiterin

calibration



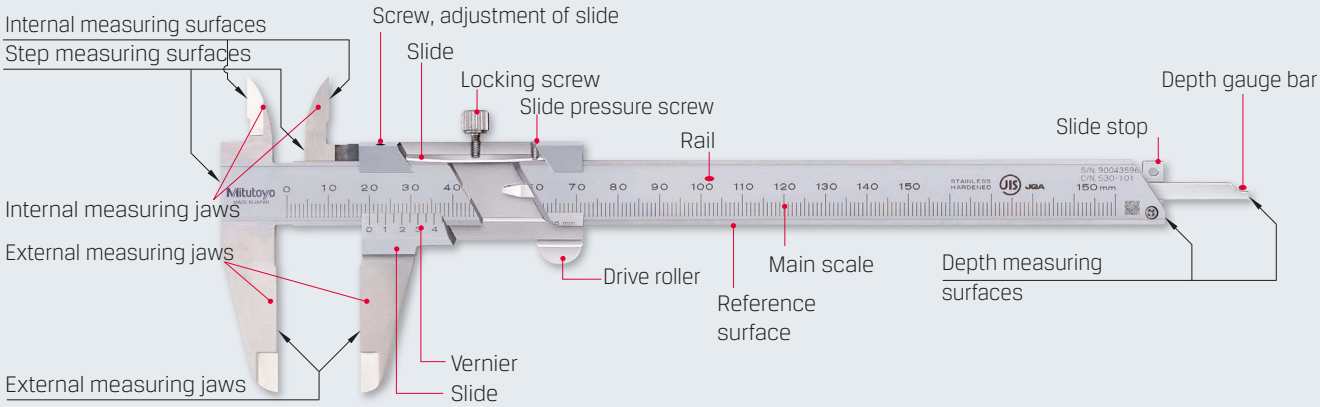
Precision Digital Calliper

Product Information

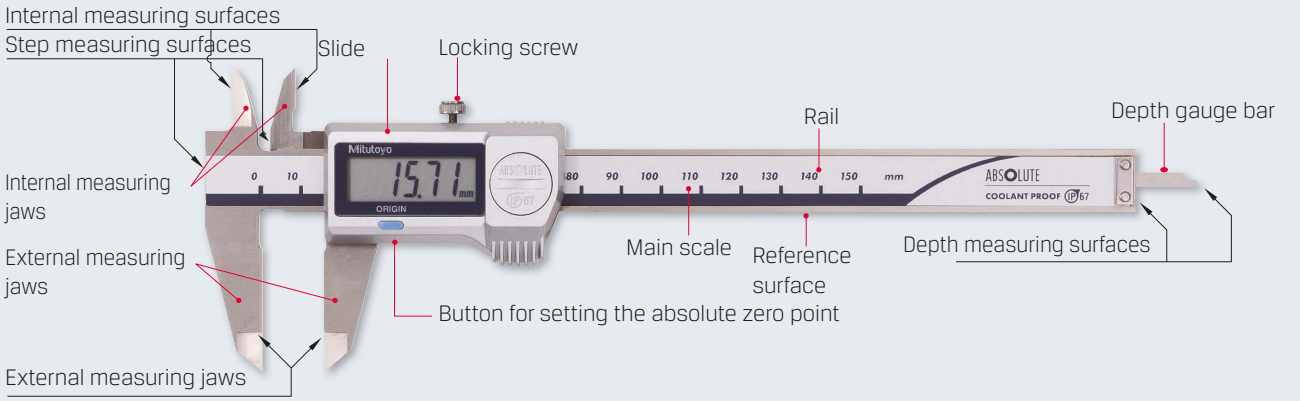
Mitutoyo

Terminology

Analogue calliper

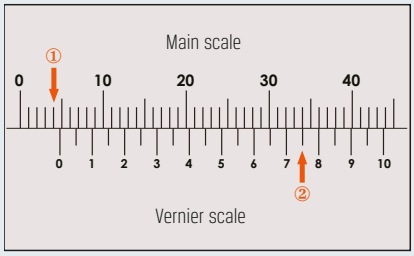


Absolute DIGIMATIC calliper



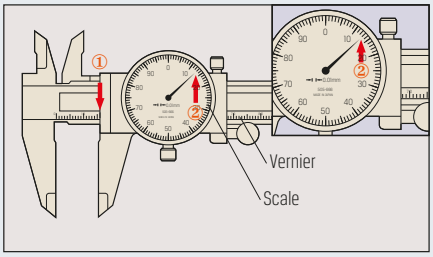
To read the scale

Vernier caliper



Graduation	0.05 mm
① Reading the main scale	4.00 mm
② Reading the vernier scale	0.75 mm
Reading caliper	4.75 mm

Caliper with dial gauge

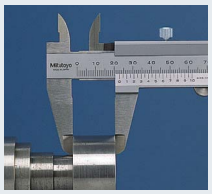


Graduation	0.01 mm
① Reading the main scale	16.00 mm
② Reading the vernier scale	0.13 mm
Reading dial face caliper	16.13 mm

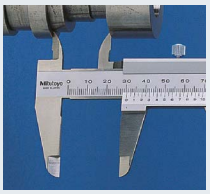
Note: Top left, 0.75 mm ② is read at the position where a scale division line of the main scale coincides with a vernier division line.

Application examples

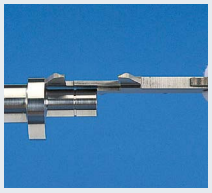
1. External measurement



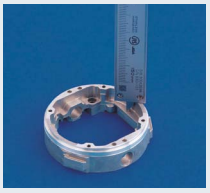
2. Internal measurement



3. Step (distance) measurement

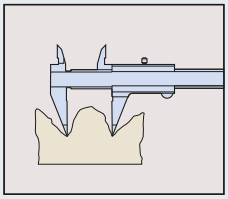


4. Depth measurement



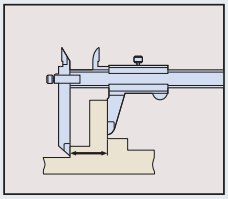
Vernier calipers for special applications

Type point jaw



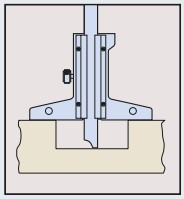
For measuring uneven surfaces.

Type offset measuring jaws



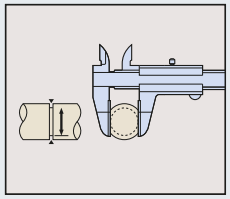
For measuring stepped workpieces.

Type depth measuring



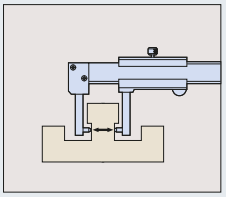
For depth measuring.

Type shaft groove caliper



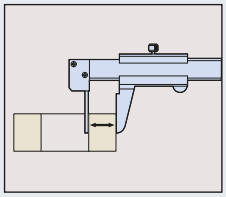
For measuring diameters of narrow grooves.

Type inward neck caliper



For measuring outside diametres like e. g. the tickness of a recess.

Type tube thickness caliper



For measuring wall thickness of tubes.

Pocket vernier calliper

Design:
- matt chrome-plated, fully hardened
- suitable for 4-fold measurement

DIN 862 | Rost frei | Delivered in case

Use:
Small, handy pocket vernier calliper for general testing purposes



N° article	300050 with locking screw	Measuring range mm	Reading mm
70	●	0 - 70	0,05
100	●	0 - 100	0,05

Depth measuring stop

Design:
- for pocket vernier callipers up to 200 mm
- hardened, very fine ground and lapped

Rost frei

Use:
For all callipers with rail width 16 mm



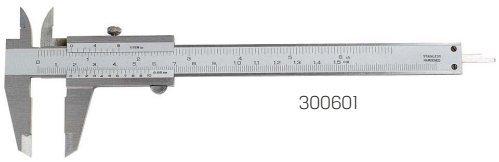
N° article	300900	Measuring bridge mm	Mounting width mm
75	●	80×8	16
100	●	100×8	16

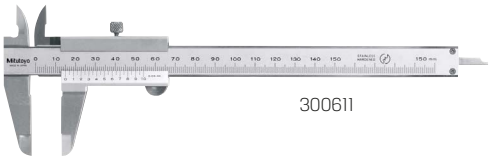
Precision pocket vernier calliper

Design:
- with locking screw
- with depth gauge, flat
- rail and slide made of hardened stainless steel
- scale and vernier matt chrome-plated
- heightened guideways

Use:
For external, internal, depth and height measurements and for marking

DIN 862 | Rost frei | calibrated | Delivered in case


300601


300611


300704

N° article	300601	300611 Mitutoyo 530	300621 Mitutoyo 530 with carbide measuring faces	300704 Mahr 16 FN	Measuring range mm	300611 Reading mm	300601 300704 Reading inch	Jaw length mm
150	●	●	○	●	0 - 150	0,05	0.05 - 1/128"	40
150-KAL	–	–	–	○	0 - 150	–	0.05 - 1/128"	40
200	●	●	○	○	0 - 200	0,05	0.05 - 1/128"	50
300	●	●	○	●	0 - 300	0,05	0.05 - 1/128"	60

Precision pocket vernier calliper

Design:
- with instant adjustment
- rail and slide made of hardened stainless steel
- scale and vernier matt chrome-plated
- heightened guideways

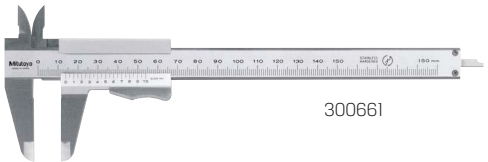
Use:
For external, internal, depth and height measurements and for marking

DIN 862 | Rost frei | Delivered in case


300190


300651


300854


300661

N° article	300190 for left-handers	300651	300661 Mitutoyo 531	300854 Mahr 16 DN	Measuring range mm	300661 Reading mm	300190 300651 300854 Reading inch	Jaw length mm
150	●	●	●	●	0 - 150	0,05	0.05 - 1/128"	40
200	–	–	○	–	0 - 200	0,05	–	50
300	–	–	○	–	0 - 300	0,05	–	64

Pocket vernier calliper DUO-FIX

HELIOS·PREISSER

Design:
- reading parts satin chrome plated
- main graduation lowered

Use:
For external, internal, depth and height measurements and for marking

DIN 862 | Rost frei | Delivered in case



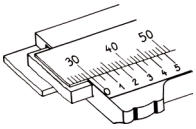
N° article	300130 DUO-FIX with locking screw and torque adjustment	Measuring range mm	Reading mm	Jaw length mm
150	●	0 - 150	0,05	40

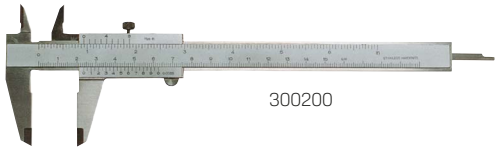
Pocket vernier calliper parallax-free

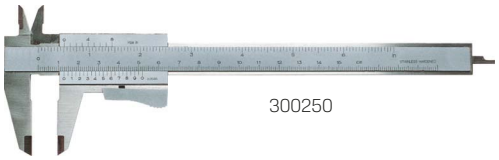
PRETEC

Design:
- matt chrome-plated, fully hardened
- suitable for 4-fold measurement

DIN 862 | Rost frei | Delivered in case







N° article	300200 with locking screw	300250 with instant lock	Measuring range mm	Reading mm	Reading inch	Jaw length mm
150	●	●	0 - 150	0,05	1/128*	40

Precision dial calliper

Mitutoyo | Mahr | PRETEC

DIN 862 | Factory standard | Rost frei | SHOCK PROOF | Delivered in case

Versions 301200 and 301400:
- measuring faces finely ground and lapped
- matt chrome-plated, fully hardened
- quick adjustment with one hand
- cross-over jaws for 4-fold measurement



Versions 301251 and 301451:
- guide rail titanium coated
- wearproof and smooth-running
- high precision
- easy reading
- scale matt chrome-plated
- all parts made of stainless steel
- delivery incl. manufacturer certificate



Versions 301554 and 301604:
- slide and rails hardened
- matt chrome-plated lined scale, large high-contrast dial Ø 34 mm
- zero adjustment by turnable dial face and locking screw
- covered gear rack
- impact-protected measuring mechanism, measuring edges for inside measurements
- depth measuring rod, locking screw, step measuring feature

Use:
Handy dial calliper for testing and control purposes



N° article	301200 PRETEC	301251 Mitutoyo 505	301554 Mahr 16 U	Reading mm	301200 Error limit mm	301251 Error limit mm	301554 Error limit mm	Jaw length mm
150	●	●	●	0,02	0,03	0,03	0,03	40
200	●	○	–	0,02	0,03	0,03	–	50
300	●	–	–	0,02	0,04	–	–	60

N° article	301400 PRETEC	301451 Mitutoyo 505	301604 Mahr 16 U	Reading mm	301400 Error limit mm	301451 Error limit mm	301604 Error limit mm	Jaw length mm
150	●	●	●	0,01	0,03	0,02	0,03	40
200	●	○	–	0,01	0,03	0,03	–	50
300	○	–	–	0,01	0,04	–	–	60

Digital vernier calliper

PRETEC

Design:
- hardened
- 4-fold measurement, 11 mm LCD display, locking screw
- on/off switch, ABS
- zero setting at any position
- mm/inch selection
- with absolute function

DIN 862 | Rost frei | ABS | Delivered in case



N° article	301701	Measuring range mm	Reading mm	Jaw length mm
150	●	0 - 150	0,01	40
200	●	0 - 200	0,01	50
300	●	0 - 300	0,01	64

Design:
- hardened
- 4-fold measurement, 12 mm LCD display
- data output RS 232 C (RBI)
- locking screw
- with carbide measuring face
- mm/inch selection
- fine adjustment

DIN 862 | Rost frei | RS 232 C | Delivered in case



N° article	301703	Measuring range mm	Reading mm	Jaw length mm
150	●	0 - 150	0,01	40

Precision digital calliper

Mitutoyo

Versions 301705 and 301707:
- electronic calliper with integrated absolute scale
- utmost measuring precision even at high operation speed
- without driver roll
- resolution 0.01 mm
- repeatability ± 0.02 mm

DIN 862 | ABS | ∅1.9 | Digimatic | USB | U-WAVE® | Delivered in case

Functions:
- ORIGIN
- Zero/ABS
- ON/OFF
- low voltage alert

Delivery:
Incl. one battery and factory certificate

Note:
Fitting connection cable see under 398001 on page 39/690



301705



301707

N° article	301705 500 without data output	301707 500 with data output	Depth gauge	Measuring range mm	Reading mm	Error limit mm	Jaw length mm
150	●	●	flat	0 - 150	0,01	0,02	40
150R	●	●	∅ 1.9 mm	0 - 150	0,01	0,02	40
200	●	●	flat	0 - 200	0,01	0,02	50

Precision digital calliper

Mahr

Design:
- slide and rail hardened
- lapped guide rails
- measuring blades for internal measurements
- step measuring feature and locking screw
- high-contrast 8.5 mm high LCD display (301713)
- high-contrast 11 mm high LCD display (301712)
- battery life approx. 3 years
- operation speed 2.5 m/s (100"/s)

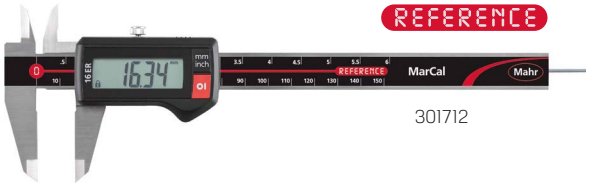
DIN 862 · Rost frei · ⌀1.5 · Digimatic · RS 232 C · USB · calibrated · Delivered in case

Functions:
- ON/OFF, RESET (Zero-setting of the display)
- mm/inch, Reference-Lock/Unlock, Auto-ON/OFF

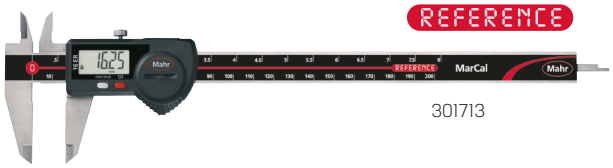
Data output:
- MarConnect data output
  optional with USB, OPTO RS232C or Digimatic

Delivery:
With battery and operating manual

Note:
Fitting connection cables see under 398010 on page 39/689



301712



301713

N° article	301712 16 ER without data output	301713 16 ER with data output	Depth gauge	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
150	●	●	flat	0 - 150	0,01	0.0005	0,03	40
150-KAL	○	–	flat	0 - 150	0,01	0.0005	0,03	40
150R	●	●	∅ 1.5 mm	0 - 150	0,01	0.0005	0,03	40
150R-KAL	○	–	∅ 1.5 mm	0 - 150	0,01	0.0005	0,03	40
200	●	●	flat	0 - 200	0,01	0.0005	0,03	50
300	●	●	–	0 - 300	0,01	0.0005	0,04	64

Precision digital calliper IP67

PREMUS

Design:
- made of stainless steel
- battery life up to 2 years
- operation speed 2.5 m/s
- high-contrast 7.5 mm high LCD display
- hardened rail
- jaws for internal measurements
- step measuring feature and locking screw
- measuring range 150/200 mm with 4-fold measurement
- measuring range 300 mm with 3-fold measurement
- protection class IP67, resistant to dust, coolants and lubricants

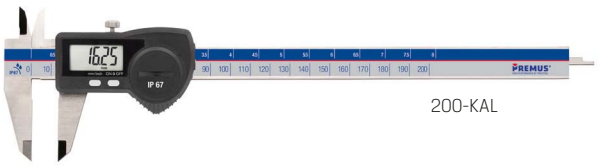
DIN 862 · Rost frei · IP67 · ABS system · ⌀1.5 · calibrated · Delivered in case

Functions:
- ON/OFF
- RESET (zero setting of the display)- ON/OFF, RESET (zero-setting of the display)
- selection mm/inch
- Auto ON/OFF
- ABS function (zeroed after being switched on)

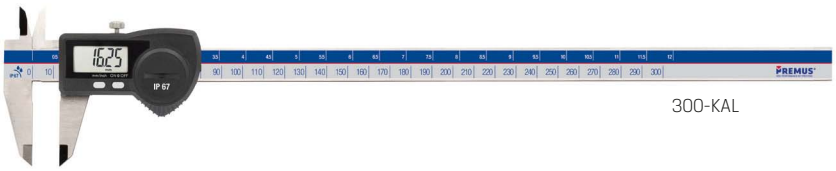
Delivery:
With battery, instruction manual and test certificate, in case



150-KAL



200-KAL



300-KAL

N° article	301711 without data output	Depth gauge	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
150-KAL	●	flat	0 - 150	0,01	0.0005	0,03	40
150R-KAL	●	∅ 1.5 mm	0 - 150	0,01	0.0005	0,03	40
200-KAL	●	flat	0 - 200	0,01	0.0005	0,03	50
300-KAL	●	–	0 - 300	0,01	0.0005	0,03	65

Precision digital calliper IP67

Mahr

Design:
- measuring faces for outside measurements made of ceramics (only 301714)
- lapped guide rails
- measuring blades for internal measurements
- step measuring feature and locking screw
- high-contrast 8.5 mm high LCD display (301714 and 301842)
- high-contrast 11 mm high LCD display (301841)
- battery life approx. 3 years
- operation speed 2.5 m/s (100"/s)
- protection class IP67, resistant to dust, coolants and lubricants

DIN 862 · Rost frei · IP67 · Ø1.5 · Delivered in case

Functions:
- ON/OFF, RESET (zero-setting of the display)
- selection mm/inch
- Reference Lock/Unlock
- data in connection with data cable
- Auto ON/OFF
- MarConnect data output
  optional with USB, OPTO RS232C or DIGIMATIC

Digimatic · RS 232 C · USB

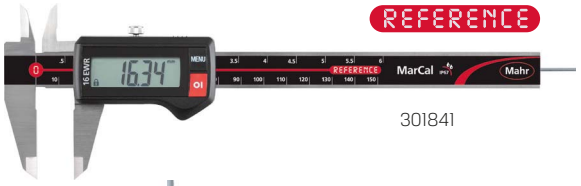
Delivery:
With battery and operating manual

Note:
Version 301841 300 without depth gauge
Fitting connection cables see under 398010 on page 39/689



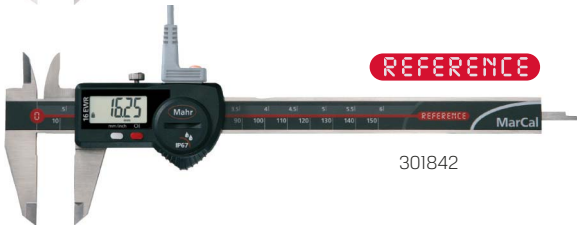
301714

calibrated



301841

Digimatic · RS 232 C · USB



301842

N° article	301714 16 EWR with data output and ceramic measuring faces	301841 16 EWR without data output	301842 16 EWR with data output	Depth gauge	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
150	–	●	●	flat	0 - 150	0,01	0.0005	0,03	40
150-KAL	–	○	–	flat	0 - 150	0,01	0.0005	0,03	40
150R	○	●	○	∅ 1.5 mm	0 - 150	0,01	0.0005	0,03	40
150R-KAL	–	○	–	∅ 1.5 mm	0 - 150	0,01	0.0005	0,03	40
200	–	●	●	flat	0 - 200	0,01	0.0005	0,03	50
300	–	●	●	–	0 - 300	0,01	0.0005	0,04	64

Precision digital wireless calliper IP67

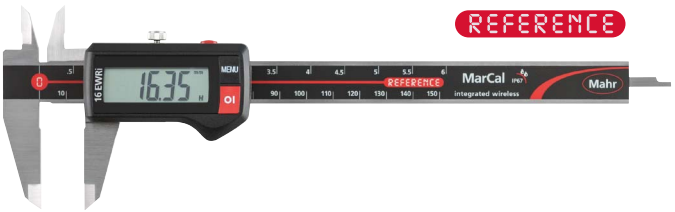
Design:
- slide and beam stainless and hardened
- lapped guide rails
- measuring blades for internal measurements
- step measuring feature and locking screw
- high-contrast 11 mm high LCD display
- battery life approx. 3 years
- operation speed 2.5 m/s (100"/s)
- integrated wireless interface
- immediately ready to measure due to the reference system
- dirt wiper integrated in slide
- protection class IP67, resistant to dust, coolants and lubricants

DIN 862 · Rost frei · IP67 · Ø1.5 · Delivered in case

Functions:
- ON/OFF
- Reset (zero-setting of display)
- mm/inch selection
- Reference-Lock/Unlock
- Auto ON/OFF
- HOLD (Measured value storage)
- DATA (Data transmission)
- PRESET (Presetting of fixed values)

Delivery:
Incl. battery and operating manual in case

Note:
Fitting radio receiver incl software MarCom see under 398026 on page 39/692.



N° article	301843 16 EWRi	Depth gauge	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
150	●	flat	0 - 150	0,01	0.0005	0,03	40
150R	○	∅ 1.5 mm	0 - 150	0,01	0.0005	0,03	40
200	●	flat	0 - 200	0,01	0.0005	0,03	50
300	●	–	0 - 300	0,01	0.0005	0,04	64

Universal digital calliper IP67 in set

Mahr

DIN 862 · IP67 · Digimatic · RS 232 C · USB · Delivered in case

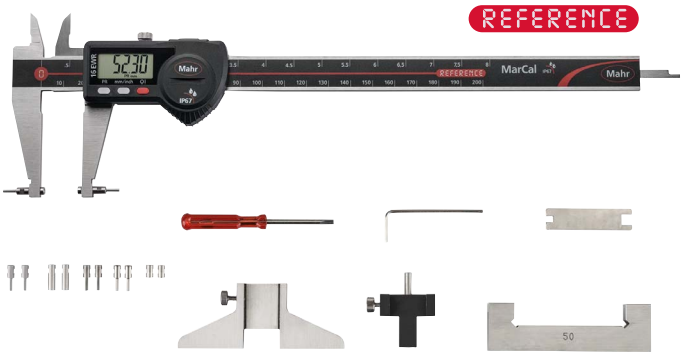
Design:
- slide and rail hardened, non-corrosive
- lapped guide rails
- measuring blades for internal measurements
- step measuring feature and locking screw
- high-contrast 8.5 mm high LCD display
- battery life approx. 3 years
- operation speed 2.5 m/s (100"/s)
- immediately ready to measure due to the reference system
- protection class IP67, resistant to dust, coolants and lubricants
- dirt wiper integrated in slide
- MarConnect data output
  optional with USB, OPTO RS232C or DIGIMATIC

Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- Reference Lock/Unlock
- data in connection with data cable
- Auto ON/OFF
- PRESET (presetting of fixed values)

Use:
Applicable as standard calliper (fourfold measuring feature, with standard accessories to measure recesses, grooves etc. plus special equipment to measure threads, bores, gears etc.

Delivery:
With battery, operating manual and standard accessories (depth gauge, setting gauge for internal measurements, measuring force device, anvils for exterior measurements, anvils for interior measurements, screws M2 × 8)

Note:
Fitting connection cables see under 398010 on page 39/689



N° article	301652 16 EWV, in set	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
200	●	0 - 200	0,01	0.0005	0,03	48

Precision digital calliper IP67

Mitutoyo

Design:
- ABSOLUTE system for reliable measurements (patented)
- without driver roll
- reading 0.01 mm

Functions:
- ORIGIN
- Zero/ABS
- Auto Power OFF
- low voltage alert

Delivery:
Incl. one battery and factory certificate

Note:
Fitting connection cables see under 398004 on page 39/690

DIN 862 · IP67 · ABS · Ø 1.9 · Digimatic · USB · U-WAVE® · TÜV tested · Delivered in case

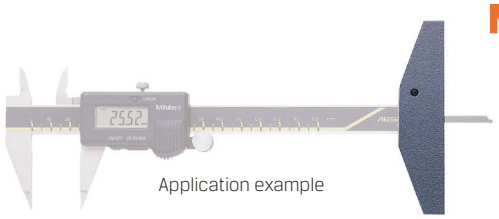


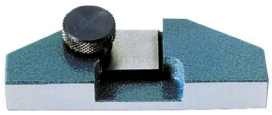
N° article	301800 500 without data output	301805 500 with data output	Depth gauge	Measuring range mm	Error limit mm	Jaw length mm
150	●	●	flat	0 - 150	0,02	40
150R	●	○	Ø 1.9 mm	0 - 150	0,02	40
200	●	●	flat	0 - 200	0,02	50

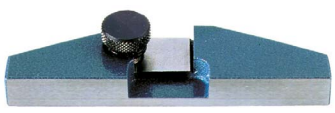
Depth measuring bridge for callipers

Mitutoyo

Design:
For upgrading all DIGIMATIC vernier callipers, dial callipers and analogue callipers with depth gauge and measuring range 150 mm or 200 mm


Application example


75 × 12

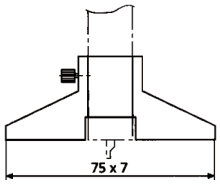

100 × 12

N° article	301902	Width mm	Height mm	Weight kg
75×12	●	75	12	0,13
100×12	●	100	12	0,16

Depth measuring bridge for callipers

Mahr

Note:
For Mahr callipers



N° article	301900	Width mm	Hauteur mm
75×7	●	75	7

Button cell

ANSMANN

Design:
- button cells for e.g. callipers, calculators, car keys etc.



0100 0105 0110

Art.-Nr.	611802	Design
0100	●	Lithium button cell, size CR2025, voltage 3 V
0105	●	Lithium button cell, size CR2032, voltage 3 V
0110	●	Silver oxide battery, size SR44 / SR1154 / 3572, voltage 1,55 V

Precision digital workshop calliper Carbon fibre, IP66

Mitutoyo

IP66 | ABS | Digimatic | USB | U-WAVE® | Delivered in case

Design:
- due to the composite construction the weight is reduced by down to 50 %
- ABSOLUTE system for reliable measurements (patented)
- easy reading due to large display characters
- OFFSET for direct reading at inner measurements
- reading 0.01 mm
- for internal measurements from 20 mm
- battery life approx. 5000 hours
- with data output

Functions:
- ORIGIN
- Zero/ABS
- OFFSET
- PRESET
- Auto Power OFF
- Data/Hold
- low voltage alert

Note:
Fitting connection cables see under 398004 on page 39/690



N° article	302050 552	Measuring range mm	Error limit mm	Jaw length mm	Weight kg
450	○	0 - 450	0,04	100	0,715
600	○	0 - 600	0,04	100	0,79
1000	○ +	0 - 1000	0,05	150	1,76
1500	● +	0 - 1500	0,09	150	2,16
2000	○ +	0 - 2000	0,12	150	2,56

Digital workshop calliper

PRETEC

Design:
- hardened
- LCD display 12 mm
- locking screw
- ON/OFF-switch
- mm/inch selection and zero button
- with ABS and PRESET button
- with RS232C interface

Rostfrei | ABS | RS 232 C | Delivered in case



N° article	304400 without tips with fine adjustment	Measuring range mm	Reading mm	Reading inch	Jaw length mm
300	●	0 - 300	0,01	0.0005	100
500	●	0 - 500	0,01	0.0005	150
600	○	0 - 600	0,01	0.0005	150
1000	○ +	0 - 1000	0,01	0.0005	150

Workshop calliper

PRETEC

Design:
- hardened
- reading parts satin chrome plated
- slide made of one piece, MONOBLOCK
- locking screw
- with fine adjustment
- pitch 1/20 mm

DIN 862 | Rostfrei | Delivered in case



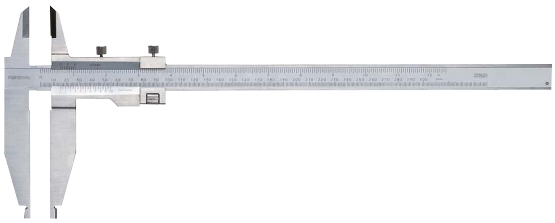
N° article	303100 without tips	Measuring range mm	Reading mm	Jaw length mm
300	●	0 - 300	0,05	90
500	●	0 - 500	0,05	150
800	● +	0 - 800	0,05	150
1000	● +	0 - 1000	0,05	150

Workshop calliper

PRETEC

DIN 862 | Rost frei | Delivered in case

Design:
- hardened
- reading parts satin chrome plated
- slide made of one piece, MONOBLOCK
- locking screw
- with fine adjustment
- pitch 1/20 mm



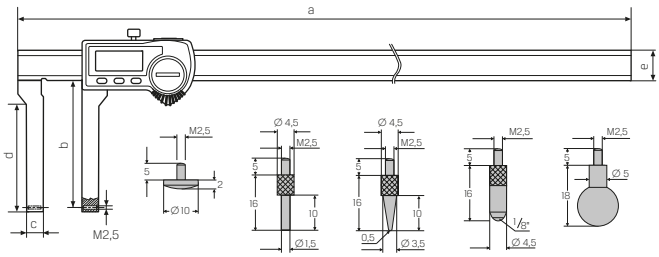
N° article	303300 with tips	Measuring range mm	Reading mm	Jaw length mm
300	●	0 - 300	0,05	90
500	●	0 - 500	0,05	150
800	○ +	0 - 800	0,05	150
1000	○ +	0 - 1000	0,05	150

Precision digital workshop calliper IP65

Mahr

Rost frei | IP65 | Digimatic | RS 232 C | USB | Delivered in case

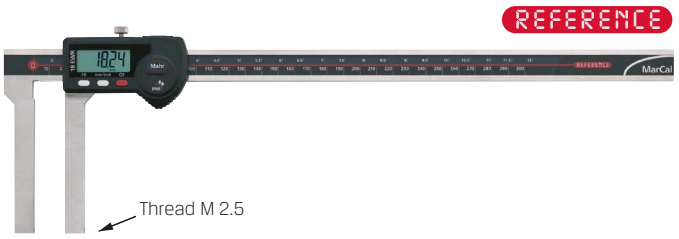
Design:
- immediately ready to measure due to the reference system
- excellent resistance against dust, coolants and lubricants, protection class IP65
- dirt wiper integrated in slide
- battery life up to 3 years
- high-contrast LCD display
- slide and rail hardened, non-corrosive
- measuring faces for external measurements
- blades with thread M2.5 to receive measuring inserts for external or internal measurements
- with locking screw
- MarConnect data output optional with USB, OPTO RS232C or Digimatic



Functions:
- ON/OFF
- RESET (zero setting of the display)- ON/OFF, RESET (zero-setting of the display)
- mm/inch selection
- Reference-Lock/Unlock
- PRESET (Presetting of fixed values)
- DATA (in combination with data cable)
- Auto ON/OFF

Delivery:
Includes 5 pairs of touch probe inserts, battery and operating instructions.

Note:
Fitting connection cables see under 398010 on page 39/689



N° article	301716 18 EWR-V	Measuring range mm	Reading mm	Reading inch	Error limit mm
300	○	0 - 300	0,01	0.0005	0,06
500	○	0 - 500	0,01	0.0005	0,08

Digital workshop calliper

PRETEC

Rost frei | ABS | RS 232 C | Delivered in case

Design:
- hardened
- LCD display 12 mm
- locking screw
- ON/OFF-switch
- mm/inch selection and zero button
- with ABS and PRESET button
- with RS232C interface



N° article	304405 with tips with fine adjustment	Measuring range mm	Reading mm	Reading inch	Jaw length mm
300	●	0 - 300	0,01	0.0005	90
500	●	0 - 500	0,01	0.0005	150
600	●	0 - 600	0,01	0.0005	150
1000	● +	0 - 1000	0,01	0.0005	150

Precision digital workshop calliper Mahr

IP65

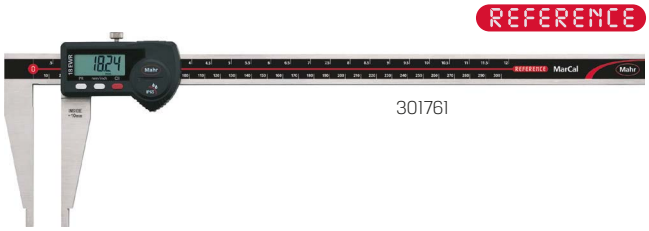
Rostfrei · IP65 · Digimatic · RS 232 C · USB · Delivered in case

Design:
- slide and rail hardened
- with rounded measuring faces for interior measurement and lock screw
- high contrast 10 mm (at 300 mm) or 12.5 mm high LCD display
- dirt wiper integrated in slide
- battery life approx. 3 years
- operation speed 2.5 m/s (100"/s)
- protection class IP65, resistant to dust, coolants and lubricants
- MarConnect data output optional with USB, OPTO RS232C or Digimatic

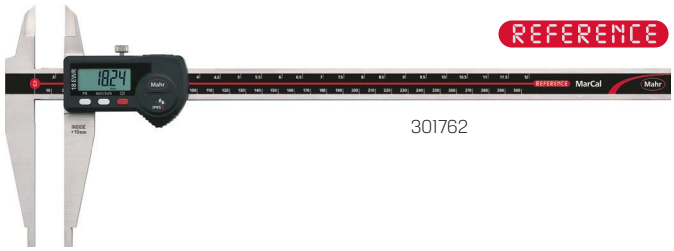
Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- Reference Lock/Unlock, Auto-ON/OFF
- DATA (only in combination with data cable)
- PRESET (presetting of fixed values)

Delivery:
With battery and operating manual

Note:
Fitting connection cables see under 398010 on page 39/689



301761



301762

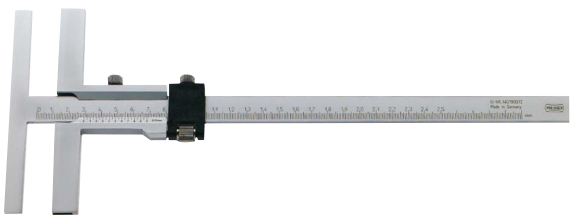
N° article	301761 18 EWR , without tips	301762 18 EWR, with tips	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
300	●	●	0 - 300	0,01	0.0005	0,03	90
500	●	●	0 - 500	0,01	0.0005	0,04	150
800	NEW ○	NEW ○	0 - 800	0,01	0.0005	0,05	150
1000	○ +	○ +	0 - 1000	0,01	0.0005	0,06	150

Marking calliper

HELIOS·PREISSER

Design:
- **with fine adjustment**
- with long T-shaped marking bar and fine adjustment
- special steel, scales satin chrome plated, marking edges hardened
- fine adjustment, locking screw

Use:
The marking surface allows precise marking. Marking values can be entered quickly and precisely



N° article	304820	Measuring range mm	Length of marking surface mm
160	●	0 - 160	135
250	●	0 - 250	160
300	●	0 - 300	160

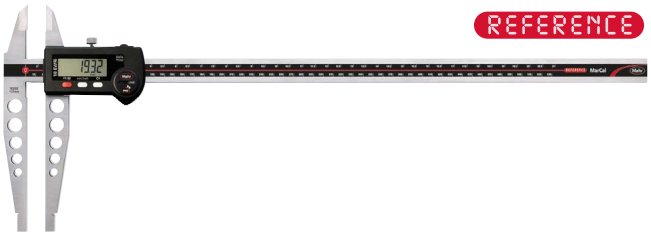
Precision digital wireless workshop calliper IP65 Mahr

Rostfrei · IP65 · Delivered in case

Design:
- immediately ready to measure due to the reference system
- high contrast 10 mm (at 300 mm) or 12.5 mm high LCD display
- dirt wiper integrated in slide
- battery life approx. 3 years
- operation speed 2.5 m/s (100"/s)
- protection class IP65, resistant to dust, coolants and lubricants
- integrated wireless interface

Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- Reference Lock/Unlock, Auto-ON/OFF
- PRESET (presetting of fixed values)
- Auto ON/OFF

Delivery:
With battery and manual in a wooden case



N° article	301763 18 EWRi	Measuring range mm	Reading mm	Reading inch	Error limit mm	Jaw length mm
300	○	0 - 300	0,01	0.0005	0,03	90
500	○	0 - 500	0,01	0.0005	0,04	150
800	NEW ○	0 - 800	0,01	0.0005	0,05	150
1000	○ +	0 - 1000	0,01	0.0005	0,06	150

Precision digital workshop calliper Mitutoyo

Design:
- with rounded measuring faces for inner and outer measurements
- blade type measuring faces
- with data output
- resolution 0.01 mm

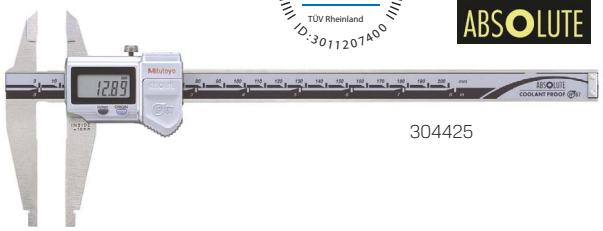
ABS · Digimatic · USB · U-WAVE® · TÜV tested · Delivered in case

Functions 304420:
- ORIGIN
- Zero/ABS
- ON/OFF
- low voltage alert

Functions 304425:
- ORIGIN
- Auto Power OFF
- low voltage alert

www.tuv.com TÜV TÜV Rheinland ID:3011207400

ABSOLUTE



304425

N° article	304420 551	Measuring range mm:	Error limit mm	Jaw length mm	Weight kg	fitting connection cable
500	●	0 - 500	0,06	150	1,06	398001
750	○	0 - 750	0,06	150	1,41	398001
1000	○ +	0 - 1000	0,07	150	3,43	398001

TÜV tested

N° article	304425 551	Measuring range mm:	Error limit mm	Jaw length mm	Weight kg	fitting connection cable
200	○	0 - 200	0,03	60	0,196	398004
301	●	0 - 300	0,04	90	0,4	398004

Vernier Callipers
for measuring cutting tools

Design and use:
- hardened
- scale satin chrome-plated, with locking screw
- pitch 1/20 mm

304860: 60° jaws for measuring 3-edged cutting or milling tools
304880: 108° jaws for measuring 5-edged cutting or milling tools


304860


304880

N° article	304860	304880	Measuring range mm	Reading mm
1 - 40	–	●	1 - 40	0,05
4 - 40	●	–	4 - 40	0,05
20 - 75	○	–	0 - 20	0,05

Inside groove calliper

Design and use:
- for measuring inside grooves larger than 10 mm
- matt chrome-plated, hardened
- pitch 1/20 mm

Delivered in case

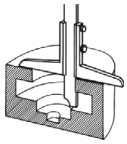


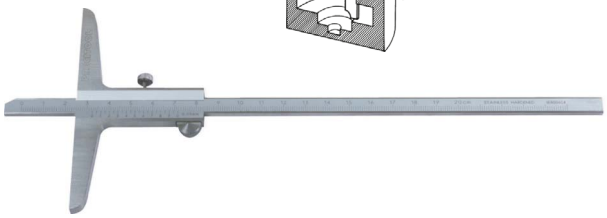
N° article	304900	Measuring range mm	Reading mm	Jaw length mm
10 - 160	●	10 - 160	0,05	25
20 - 160	●	20 - 160	0,05	40
26 - 200	●	26 - 200	0,05	60
30 - 250	●	30 - 250	0,05	80

Depth gauges

Design:
- hardened
- reading parts satin chrome plated
- locking screw
  straight measuring rail
- pitch 1/20 mm

DIN 862 | Delivered in case





N° article	308000	Measuring range mm	Reading mm	Cross-section measuring rail mm	Length measuring bridge mm
150	●	0 - 150	0,05	8 × 3	100
200	●	0 - 200	0,05	8 × 3	100
300	●	0 - 300	0,05	12 × 4	150
500	●	0 - 500	0,05	18 × 4	150
800	○ +	0 - 800	0,05	18 × 6	250
1000	○ +	0 - 1000	0,05	18 × 8	250

Precision depth gauge
with double function

Design:
- hardened
- scale made of one piece
- reading parts satin chrome plated
- locking screw
- pitch 1/20 mm

DIN 862 | Delivered in case



N° article	308452	Measuring range mm	Reading mm	Cross-section measuring rail mm	Jaw size mm	Length measuring bridge mm
150	●	0 - 150	0,05	8 × 3	20 × 5	100
200	●	0 - 200	0,05	12 × 4	20 × 5	100
300	●	0 - 300	0,05	12 × 4	28 × 10	150
400	○	0 - 400	0,05	12 × 4	28 × 10	150
500	○	0 - 500	0,05	20 × 5	36 × 10	150

Digital depth calliper

Design:
- hardened
- metal housing
- LCD display 6 mm
- locking screw
- ON/OFF-switch
- zero setting at any position
- mm/inch selection

DIN 862 | Delivered in pocket



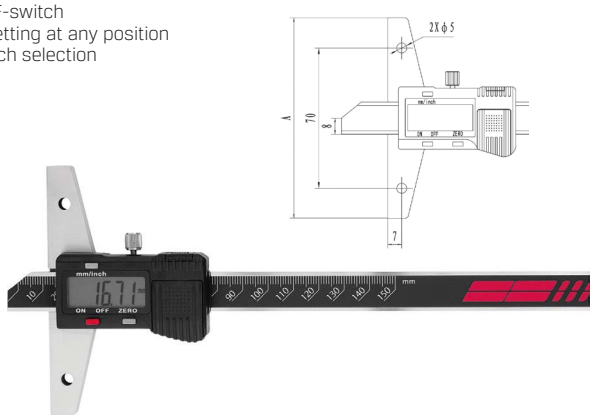
N° article	309002 with round sensor	Measuring range mm	Reading mm	Reading inch	Length measuring bridge mm
80	●	0 - 80	0,01	0.0005	50

Digital depth calliper

PRETEC

Design:
- hardened
- metal housing
- LCD display 6 mm
- locking screw
- ON/OFF-switch
- zero setting at any position
- mm/inch selection

DIN 862 | Rostfrei | Delivered in case



N° article	309000 with straight measuring rail	Measuring range mm	Reading mm	Reading inch	Length measuring bridge mm
150	●	0 - 150	0,01	0.0005	100
200	●	0 - 200	0,01	0.0005	100
300	●	0 - 300	0,01	0.0005	150

Design:
- hardened
- metal housing
- LCD display 6 mm
- locking screw
- ON/OFF-switch
- zero setting at any position
- mm/inch selection

DIN 862 | Rostfrei | Rostfrei | IP54



N° article	309004 with exchangeable sensor tip	Measuring range mm	Reading mm	Reading inch	Length measuring bridge mm
150	●	0 - 150	0,01	0.0005	100
200	●	0 - 200	0,01	0.0005	100
300	●	0 - 300	0,01	0.0005	150

Design:
- hardened
- metal housing
- LCD display 6 mm
- locking screw
- ON/OFF-switch
- zero setting at any position
- mm/inch selection

DIN 862 | Rostfrei | IP54 | IP54



N° article	309006 with hook	Measuring range mm	Reading mm	Reading inch	Length measuring bridge mm
300	○	0 - 300	0,01	0.0005	150
500	○	0 - 500	0,01	0.0005	150

Design:
- hardened
- metal housing
- LCD display 6 mm
- locking screw
- ON/OFF-switch
- zero setting at any position
- mm/inch selection

DIN 862 | Rostfrei | IP54 | IP54



N° article	309008 with double hook	Measuring range mm	Reading mm	Reading inch	Length measuring bridge mm
200	●	0 - 200	0,01	0.0005	100
300	●	0 - 300	0,01	0.0005	150

Digital depth gauge set made of light metal

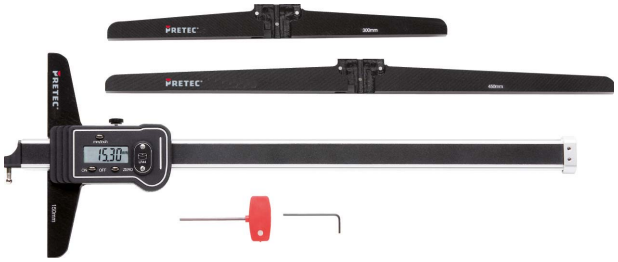
PRETEC

Rostfrei

Design:
- the depth gauges consist of very light material
- surface oxide coated
- optimal guiding and sliding properties
- inside double prism guiding
- no damage to the guides by impact marks
- measuring bridges made of aluminium, hard anodised (62 HRC)
- measuring bridges can be changed easily
- different measuring tips (M2.5) can be inserted into 90° offset holes

Delivery:
In box, including 3 measuring bridges (150/300/450 mm), battery, measuring tip with insert and Allen key

Note:
Supplied calibrated.



N° article	309010	Measuring range mm	Reading mm	Reading inch	Error limit mm
300	●	0 - 300	0,01	0.0005	0,04
500	○	0 - 500	0,01	0.0005	0,05
800	○	0 - 800	0,01	0.0005	0,06

Digital depth calliper
made of light metal

PRETEC

Design:
- the depth gauges consist of very light material
- surface oxide coated
- optimal guiding and sliding properties due to the interior double prism guide
- measuring bridges made of aluminium, hard-coated (62 HRC)
- different measuring tips (M2.5) can be inserted into the measuring rods
- measuring rods:
  Ø 4 mm for measuring depths of 200 - 300 mm
  Ø 6 mm for measuring depths of 500 - 950 mm
- additional measuring bridge fixes itself in the desired position
- the measuring bridge is fixed with 2 screws

Delivery:
Standard measuring tip with steel ball, disc insert Ø 10 mm or Ø 20 mm, measuring bridge 150 mm, special measuring bridge 350 mm, 2 screws for fastening, Allen key, battery LR44



N° article	309012 with round measuring rod	Disc measuring insert Ø mm	Measuring range mm	Reading mm	Error limit mm	Measuring rod Ø mm
200	●	10	0 - 200	0,01	0,03	4
300	●	10	0 - 300	0,01	0,04	4
500	○	20	0 - 500	0,01	0,05	6
800	○	20	0 - 800	0,01	0,06	6
950	○	20	0 - 950	0,01	0,06	6

Precision digital depth gauge IP67

PREMUS

Design:
- stainless steel, hardened
- locking screw on top
- straight measuring rod with measuring pin
- inductive measuring system
- high-contrast 7.5 mm high LCD display
- protection class IP67, resistant to dust, coolants and lubricants
- measuring pin 1.5 mm

DIN 862 · Rostfrei · IP67 · ABS · Digimatic · USB · RS 232 C · calibrated · Delivered in case

Functions:
- ON/OFF
- RESET (zero setting of the display)- ON/OFF, RESET (zero-setting of the display)
- mm/inch selection
- Auto ON/OFF
- PRESET function (presetting of fixed values)
- data output optional USB, DIGIMATIC, RS232C

Delivery:
With battery, instruction manual and test certificate, in case

Note:
Fitting connection cable see under 398010 on page 39/689



N° article	309111	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
150-KAL	●	0 - 150	234	0,01	0.0005	0,03	100

Precision digital depth gauge IP67

Mahr

Design:
- battery life up to 3 years
- operation speed 2.5 m/s (100"/s)
- high-contrast 8.5 mm high LCD display
- measuring bridge and rail hardened
- with locking screw
- with measuring inserts (100 mm)

Rostfrei · IP67 · Digimatic · RS 232 C · USB · Delivered in case

Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- PRESET (Presetting of fixed values)
- Reference Lock/Unlock, Auto-ON/OFF
- MarConnect data output
  optional with USB, OPTO RS232C or DIGIMATIC

Delivery:
With battery, measuring inserts (30 ENt/1 mm, 902 and 903) and operating manual

Note:
Fitting connection cable see under 398010 on page 39/689



N° article	309106 30 EWR-N	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
100	●	0 - 100	268	0,01	0.0005	0,03	85

Design:
- battery life up to 3 years
- operation speed 2.5 m/s (100"/s)
- high-contrast 8.5 mm high LCD display
- measuring bridge and rail hardened
- with locking screw
- with double hook

Rostfrei · IP67 · Digimatic · RS 232 C · USB · Delivered in case

Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- PRESET (Presetting of fixed values)
- Reference Lock/Unlock, Auto-ON/OFF
- MarConnect data output
  optional with USB, OPTO RS232C or DIGIMATIC

Delivery:
With battery and operating manual

Note:
Fitting connection cable see under 398010 on page 39/689



N° article	309108 30 EWR-D	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
200	●	0 - 200	289	0,01	0.0005	0,03	100
300	●	0 - 300	391	0,01	0.0005	0,04	150

Precision digital depth gauge IP67

Mahr

Design:
- battery life up to 3 years
- operation speed 2.5 m/s (100"/s)
- high-contrast 8.5 mm high LCD display
- lapped guide rails
- measuring surfaces, slide and rail hardened, locking screw
- increased guideways to protect the scale
- dirt wiper integrated in slide
- rail cross-section optimised from 16 × 3 mm to 12 × 3.5 mm
- 2 measuring surfaces: The measuring pin may be removed; for this purpose, the front of the depth measuring rod is shaped as a measuring surface and the scale is set back, secured with foil to prevent damage
- plastic cover in front of the display

Rostfrei | IP67 | Digimatic | RS 232 C | USB | Delivered in case

Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- PRESET (Presetting of fixed values)
- Reference Lock/Unlock, Auto-ON/OFF
- MarConnect data output optional with USB, OPTO RS232C or DIGIMATIC

Delivery:
With battery and operating manual

Note:
Fitting connection cable see under 398010 on page 39/689



N° article	309213 30 EWR	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
150	●	0 - 150	230	0,01	0.0005	0,03	100
200	●	0 - 200	280	0,01	0.0005	0,03	100
300	●	0 - 300	382	0,01	0.0005	0,04	150
500	●	0 - 500	586	0,01	0.0005	0,05	150

Precision digital depth gauge

Mitutoyo

Design:
- electronic calliper with integrated absolute scale
- easy reading due to large display characters
- excellent glide properties of the slide
- absolute system for reliable measurement

ABS | Digimatic | USB | U-WAVE® | Delivered in case

Functions:
- ORIGIN
- Zero/ABS
- ON/OFF
- low voltage alert

Note:
Fitting connection cable see under 398001 on page 39/690



N° article	309216 571	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
150	●	0 - 150	237	0,01	0.0005	0,02	100
200	●	0 - 200	287	0,01	0.0005	0,02	100
300	●	0 - 300	403	0,01	0.0005	0,03	100
450	○	0 - 450	635	0,01	0.0005	0,05	250
600	○	0 - 600	785	0,01	0.0005	0,05	250
750	○	0 - 750	935	0,01	0.0005	0,06	250
1000	○ +	0 - 1000	1200	0,01	0.0005	0,07	250

Precision digital wireless depth gauge IP67

Mahr

Design:
- battery life up to 3 years
- high-contrast 11 mm high numerical display
- lapped guide rails
- measuring surfaces, slide and rail hardened, locking screw
- increased guideways to protect the scale
- dirt wiper integrated in slide
- rail cross-section optimised from 16 × 3 mm to 12 × 3.5 mm
- 2 measuring surfaces: The measuring pin may be removed; for this purpose, the front of the depth measuring rod is shaped as a measuring surface and the scale is set back, secured with foil to prevent damage
- plastic cover in front of the display

Rostfrei | IP67 | Delivered in case

Functions:
- ON/OFF, RESET (zero-setting of the display), selection mm/inch
- PRESET (presetting of fixed values)
- Reference Lock/Unlock, Auto-ON/OFF
- HOLD (measured value storage), counting direction reversal
- DATA (data transfer), integrated wireless

Delivery:
With battery and operating manual



N° article	309214 30 EWRi	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
150	○	0 - 150	230	0,01	0.0005	0,03	100
200	○	0 - 200	280	0,01	0.0005	0,03	100
300	○	0 - 300	382	0,01	0.0005	0,04	150
500	○	0 - 500	586	0,01	0.0005	0,05	150

Precision digital depth gauge IP67

Mitutoyo

Design:
- extreme high resistance for application in particularly harsh environments
- ABSOLUTE system for reliable measurements (patented)

IP67 | ABS | Digimatic | USB | U-WAVE® | TÜV tested | Delivered in case

Functions:
- ORIGIN
- Auto Power OFF
- low voltage alert

Note:
Fitting connection cable see under 398004 on page 39/690

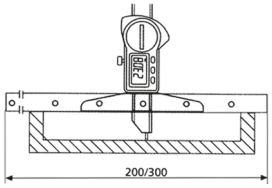


N° article	309221 571	Measuring range mm	Total length mm	Reading mm	Reading inch	Error limit mm	Length measuring bridge mm
150	●	0 - 150	237	0,01	0.0005	0,03	100
200	●	0 - 200	287	0,01	0.0005	0,03	100
300	○	0 - 300	404	0,01	0.0005	0,03	100

Accessories

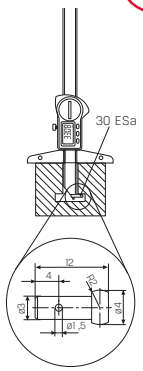
Mahr

Extended measuring bridge 200/300



N° article	309250 30 EXm	Width mm
200	○	200
300	●	300

Anvil for distance measurement, to be mounted at measuring pin



N° article	309215
30ESA	●

Measuring tool kit

PRETEC

Design:
Set consisting of
- pocket vernier calliper 150 mm with instant adjustment
- outside micrometer 0-25 mm, matt chrome-plated
- knife-edge square 100 × 70 mm, DIN 875/1
- ruler 150 mm
- straightedge 100 mm, DIN 874/0
- dividers 150 mm

Delivered in case



N° article	309825 analogue	Number of parts
6	●	6

Design:
Set consisting of
- pocket vernier calliper 150 mm
- outside micrometer 0 - 25 mm, matt chrome-plated
- knife-edge square 100 × 70 mm, DIN 875/1
- ruler 150 mm
- straightedge 100 mm, DIN 874/0
- dividers 150 mm

Delivered in case



N° article	309826 digital / analogue	Number of parts
6	○	6

Design:
Set consisting of:
- pocket vernier calliper 150 mm with instant adjustment
- outside micrometer 0-25 mm, matt chrome-plated
- knife-edge square 100 × 70 mm, DIN 875/1
- ruler 300 × 30 × 1 mm
- straightedge 100 mm, DIN 874/0
- dividers 200 mm
- depth measuring bridge 75 mm
- scriber 250 mm with one straight and one bent point
- HM scriber 150 mm

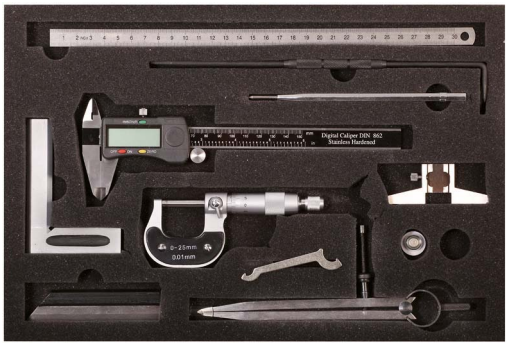
Delivered in case



N° article	309830 analogue	Number of parts
9	●	9

Design:
Set consisting of:
- digital pocket vernier calliper 150 mm
- outside micrometer 0.25 mm, matt chrome-plated
- knife-edge square 100 × 70 mm, DIN 875/1
- ruler 300 × 30 × 1 mm
- straightedge 100 mm, DIN 874/0
- dividers 200 mm
- scriber 250 mm with one straight and one bent point
- HM scriber 150 mm

Delivered in case



N° article	309831 digital / analogue	Number of parts
9	○	9

ON-CALL SERVICE

FOR TOOLS



THE FASTEST DELIVERY TIMES are the be-all and end-all for you. We know that! The answer to that: Our hotline. If we receive your order by 9 pm, it will be delivered the next working day*. And by the way: Our central warehouse is located right in the very heart of Germany. Therefore your tool will always find the shortest route to you. That´s our notion of tool logistics in the 21st century.

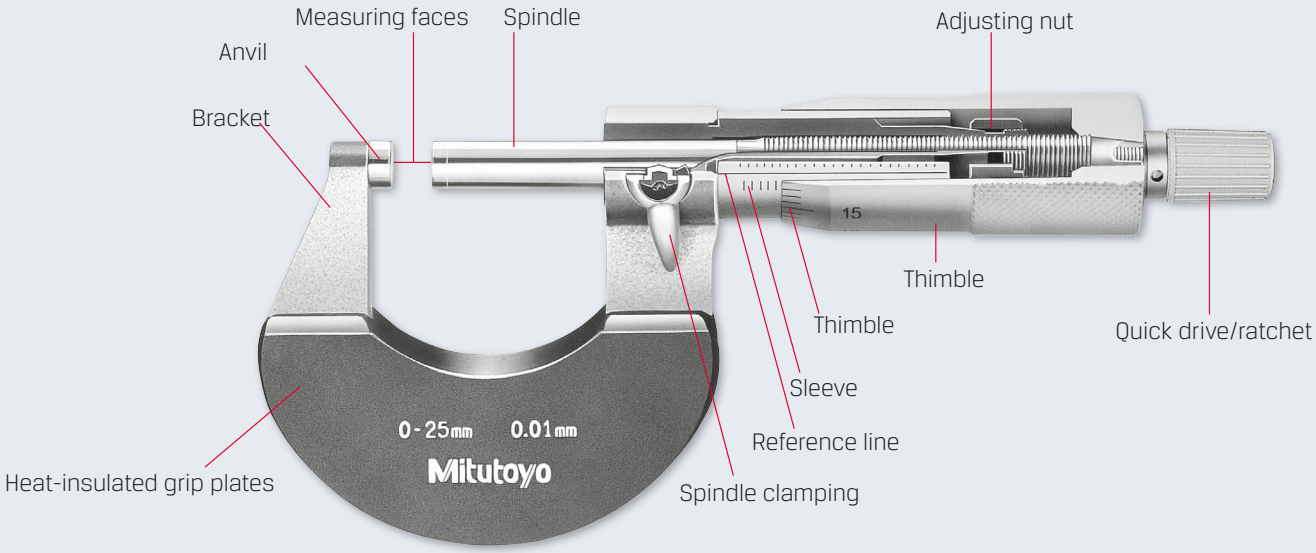
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* Only dispatch of items in stock (suitable for parcel service). We guarantee processing of the order MO – FR 5 p.m. – 9 p.m. and SA 8 a.m. – 11.30 a.m. on the day the order is received. We cannot guarantee the punctual delivery of the goods by the parcel service commissioned with the delivery.

Terminology

Standard analogue outside micrometer



DIGIMATIC outside micrometer



Outside micrometer

PRETEC

Design:
- reading parts satin chrome plated
- carbide-tipped measuring faces
- insulating handle
- measuring spindle Ø 6.5 mm, spindle pitch 0.5 mm
- from 25 mm with setting gauge
- resolution 0.01 mm

DIN 863-1 | Delivered in case



N° article	310100	Measuring range mm	Reading mm	Spindle pitch mm
0 - 25	●	0 - 25	0,01	0,5
25 - 50	●	25 - 50	0,01	0,5
50 - 75	●	50 - 75	0,01	0,5
75 - 100	●	75 - 100	0,01	0,5
100 - 125	●	100 - 125	0,01	0,5
125 - 150	●	125 - 150	0,01	0,5
150 - 175	●	150 - 175	0,01	0,5
175 - 200	●	175 - 200	0,01	0,5
200 - 225	●	200 - 225	0,01	0,5
225 - 250	●	225 - 250	0,01	0,5
250 - 275	○	250 - 275	0,01	0,5
275 - 300	○	275 - 300	0,01	0,5

Design:
- comprising outside micrometers 310100
- complete with reference dimensions and key



N° article	310120 set	Measuring range mm	Spindle pitch mm	Reading mm	Contents
0 - 100	●	0 - 100	0,5	0,01	1 micrometer each cat. no. 310100 Measuring ranges mm: 0 - 25 | 25 - 50 | 50 - 75 | 75 - 100
0 - 150	●	0 - 150	0,5	0,01	1 micrometer each cat. no. 310100 Measuring ranges mm: 0 - 25 | 25 - 50 | 50 - 75 | 75 - 100 | 100 - 125 | 125 - 150
100 - 200	●	100 - 200	0,5	0,01	1 micrometer each cat. no. 310100 Measuring ranges mm: 100 - 125 | 125 - 150 | 150 - 175 | 175 - 200

Precision outside micrometer

Mahr

Design:
- steel frame with handguard, varnished
- measuring face Ø 6.5 mm, carbide tipped, ground and lapped
- measuring spindle with clamping device
- thimble and barrel scale matt chrome-plated
- reading drum Ø 17.5 mm with fiftieth step graduation
- resolution 0.01 mm
- with setting key (from size 25-50 with setting gauge)

Delivery:
In case.

DIN 863-1 | Delivered in case



N° article	310204 40A	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,01	0,004	0,5
25 - 50	●	25 - 50	0,01	0,004	0,5
50 - 75	●	50 - 75	0,01	0,005	0,5
75 - 100	○	75 - 100	0,01	0,005	0,5
100 - 125	○	100 - 125	0,01	0,006	0,5
125 - 150	○	125 - 150	0,01	0,006	0,5
150 - 175	○	150 - 175	0,01	0,007	0,5
175 - 200	○	175 - 200	0,01	0,007	0,5

Design:
- comprising outside micrometers 310204
- setting gauges 25 mm and 75 mm



N° article	310210 Set 40 SA	Reading mm	Spindle pitch mm	Contents
0 - 100	●	0,001	0,5	0 - 25 | 25 - 50 | 50 - 75 | 75 - 100

Precision outside micrometer

Mitutoyo

Design:
- combined with ratchet stop on end of the handle to limit applied pressure on sensitive surfaces
- for one-hand operation and operation in the holder
- increased safety for one-hand operation
- thimble and barrel scale matt chrome-plated, Ø 19 mm
- planarity 0.6 µm
- parallelism 2 µm
- measuring face carbide tipped, ultra fine lapped
- frame varnished
- measuring spindle pitch 0.5 mm with clamping feature, Ø 6.35 mm
- measuring force 5-10 N

Delivery:
Incl. hand guard, setting key, setting gauge (from 25 mm) and factory certificate

Delivered in case



0-25



25-50

N° article	310230 Series 102 0.01 mm	310232 Series 102 0.001 mm	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	●	●	0 - 25	0,01	0,004	0,5
25 - 50	●	○	25 - 50	0,01	0,004	0,5

Precision outside micrometer

Mitutoyo

Design:
- light-weight workshop version
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated
- planarity 0.6 µm for versions up to 300 mm, beyond that 1 µm
- measuring faces carbide-tipped, ground and ultra-fine lapped
- frame varnished
- measuring spindle, pitch 0.5 mm with clamping feature
- measuring force 5-10 N

DIN 863-1 | Delivered in case

Delivery:
Incl. setting gauge (from 25 mm), with factory certificate (up to 50 mm) and setting key



N° article	310235 Series 103	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,01	0,004	0,5
25 - 50	●	25 - 50	0,01	0,004	0,5
50 - 75	●	50 - 75	0,01	0,004	0,5
75 - 100	●	75 - 100	0,01	0,006	0,5
100 - 125	●	100 - 125	0,01	0,006	0,5
125 - 150	●	125 - 150	0,01	0,006	0,5

N° article	310235 Series 103	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
150 - 175	●	150 - 175	0,01	0,008	0,5
175 - 200	●	175 - 200	0,01	0,008	0,5
200 - 225	○	200 - 225	0,01	0,008	0,5
225 - 250	○	225 - 250	0,01	0,01	0,5
250 - 275	○	250 - 275	0,01	0,01	0,5
275 - 300	○	275 - 300	0,01	0,01	0,5

Outside micrometer

PRETEC

Design:
- reading parts satin chrome plated
- measuring spindle Ø 8 mm
- thimble with scale division 0.01 mm for correct reading
- carbide-tipped measuring faces
- hand insulation and sensitive ratchet
- from 25 mm including setting gauge
- resolution 0.01 mm

DIN 863-1 | Delivered in case



N° article	310259 with big thimble	Measuring range mm	Reading mm
0 - 25	●	0 - 25	0,01
25 - 50	●	25 - 50	0,01
50 - 75	○	50 - 75	0,01
75 - 100	○	75 - 100	0,01

Digital outside micrometer

Mitutoyo

Design:
- practice-oriented base model
- handy and simple design
- measuring faces carbide tipped and precision lapped
- display with 7.5 mm high digits
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated
- Auto Power OFF after 20 minutes non-use
- measuring force 5-10 N

Delivered in case

Functions:
- ORIGIN
- Auto Power OFF
- low voltage alert

Delivery:
Incl. setting key, battery and factory certificate



N° article	310277 Series 293	Measuring range mm	Reading mm	Error limit mm
0 - 25	●	0 - 25	0,001	0,004

Precision outside micrometer set

Mitutoyo

Design:
- set consisting of 310230 and 310235
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated
- measuring faces carbide-tipped, ground and ultra-fine lapped
- frame varnished
- measuring spindle, pitch 0.5 mm with clamping feature
- measuring force 5 - 10 N

DIN 863-1 | Delivered in case

Delivery:
Incl. setting key, setting gauge (from 25 mm) and factory certificate (up to 50 mm).



N° article	310237 Series 103 set	Reading mm	Spindle pitch mm	Contents
0 - 150	●	0,01	0,5	Outside micrometer (310230) 0 - 25 mm, Outside micrometer (310235) 25 - 50 | 50 - 75 | 75 - 100 | 100 - 125 | 250 - 125 | 275 - 150 mm 5 setting standards for outside micrometers
150 - 300	○	0,01	0,5	Outside micrometer (310235) 150 - 175 | 175 - 200 | 200 - 225 | 225 - 250 | 250 - 275 | 275 - 300 mm 6 setting standards for outside micrometers
0 - 300	○	0,01	0,5	Outside micrometer (310230) 0 - 25 mm, Outside micrometer (310235) 25 - 50 to 275 - 300 mm

Precision outside micrometer

Mitutoyo

DIN 863-1 | Delivered in case

Design:
- with exchangeable anvil for variable measuring range
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated, ‹ 300 mm Ø 18 mm, › 300 mm Ø 21 mm
- planarity 0.6 µm for versions up to 300 mm, › 300 mm 1 µm
- measuring faces hardened and ground
- frame light construction, varnished
- measuring spindle up to 300 mm Ø 6.35 mm, over 300 mm Ø 8 mm, pitch 0.5 mm, with clamping device
- measuring force 5-10 N, over 300 mm 10-14 N

Delivery:
Incl. setting gauges, measuring inserts and setting key



N° article	310275 Series 104	Measuring range mm	Reading mm	Number of setting gauges	Number of exchangeable anvils	Spindle pitch mm
0 - 100	○	0 - 100	0,01	3	4	0,5
100 - 200	○	100 - 200	0,01	4	4	0,5
200 - 300	●	200 - 300	0,01	4	4	0,5
300 - 400	●	300 - 400	0,01	4	4	0,5
400 - 500	○	400 - 500	0,01	4	4	0,5

N° article	310275 Series 104	Measuring range mm	Reading mm	Number of setting gauges	Number of exchangeable anvils	Spindle pitch mm
500 - 600	○	500 - 600	0,01	4	4	0,5
600 - 700	○	600 - 700	0,01	4	4	0,5
700 - 800	○	700 - 800	0,01	4	4	0,5
800 - 900	○	800 - 900	0,01	4	4	0,5
900 - 1000	○	900 - 1000	0,01	4	4	0,5

Precision digital outside micrometer IP40

Mahr

IP40 | ABS | Delivered in case

Design:
- Reference system
- high-contrast 10 mm high LCD display
- lacquered steel frame, heat insulated
- measuring spindle and anvil carbide reinforced
- measuring spindle non-corrosive, totally hardened and ground
- with quick mode

REFERENCE

Functions:
- HOLD (Measured value storage)
- LOCK function (Keyboard lock)
- RESET (Zero setting of the display)
- mm/inch selection

Delivery:
With battery and operating manual



N° article	310293 40 ER	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,001	0.00005	0,002	0,635

Precision digital outside micrometer IP65

Mahr

IP65 | ABS | Delivered in case

Design:
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

REFERENCE

Functions:
- RESET (zero setting of display for relative measurements)
- ABS (switching from relative to absolute measurement)
- mm/inch
- Reference-Lock/Unlock
- PRESET (Presetting of fixed values)

Delivery:
With battery, instruction manual and setting standard from measuring range 25-50 mm



N° article	310300 40 EWR	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,001	0.00005	0,002	0,635
25 - 50	●	25 - 50	0,001	0.00005	0,002	0,635
50 - 75	●	50 - 75	0,001	0.00005	0,003	0,635
75 - 100	○	75 - 100	0,001	0.00005	0,003	0,635

Precision digital outside micrometer IP65

Mahr

Design:
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- with quick mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- spindle diameter 6.5 mm
- measuring force 5-10 N
- with data output

IP65 · ABS · TOL · Digimatic · USB · Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function (Keyboard lock)
- TOL (Tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (in combination with data cable)

Delivery:
With battery, instruction manual and setting standard from measuring range 25 - 50 mm

Note:
Fitting connection cable see under 398010 on page 39/689

REFERENCE



N° article	310297 40 EWR	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,001	0.00005	0,002	0,5
25 - 50	○	25 - 50	0,001	0.00005	0,002	0,5
50 - 75	○	50 - 75	0,001	0.00005	0,003	0,5
75 - 100	○	75 - 100	0,001	0.00005	0,003	0,5

REFERENCE



N° article	310297 set	Measuring range mm	Reading mm	Reading inch	Spindle pitch mm
SET	○	0 - 100	0,001	0.00005	0,5

Design:
- with location holes for measuring inserts with shank ∅ 3.5mm
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- fast mode
- ratchet is integrated in the thimble
- hard lacquered steel frame, heat insulated
- MarConnect, USB and Digimatic
- spindle diameter 6.5 mm
- spindle pitch 5 mm
- measuring force 5-10 N
- Quick Drive

IP65 · ABS · TOL · Digimatic · USB · Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25 - 50 mm plus case

Note:
Fitting connection cables see under 398010 on page 39/689

REFERENCE



N° article	310301 40 EWR-V	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	5
25 - 50	○	25 - 50	0,001	0.00005	0,004	5
50 - 75	○	50 - 75	0,001	0.00005	0,005	5
75 - 100	○	75 - 100	0,001	0.00005	0,005	5

REFERENCE



N° article	310301 40 EWR-V set, 6-piece	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
SET	○	0 - 25	0,001	0.0005	0,004	5

Precision digital wireless outside micrometer IP65

Mahr

Design:
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast drive
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function (Keyboard lock)
- TOL (Tolerance and warning limit input)
- DATA (Data transmission)
- HOLD (Measured value storage)

Delivery:
With battery, instruction manual and setting standard from measuring range 25 - 50 mm

IP65 | ABS | TOL | Delivered in case

Note:
Fitting radio receiver incl software MarCom see under 398026 on page 39/692

REFERENCE





N° article	310302 40 EWRi	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,002	0,5
25 - 50	○	25 - 50	0,001	0.00005	0,002	0,5
50 - 75	○	50 - 75	0,001	0.00005	0,003	0,5
75 - 100	○	75 - 100	0,001	0.00005	0,003	0,5

N° article	310303 set	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 100	○	0 - 100	0,001	0.00005	0,003	0,5

Precision digital wireless outside micrometer Quick Drive IP65

Mahr

Design:
- **quick adjustment, 5 mm per revolution**
- non-rotating measuring spindle to avoid scratch marks, especially on finely machined and sensitive surfaces
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- measuring force 5-10 N

IP65 | ABS | TOL | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function (Keyboard lock)
- TOL (Tolerance and warning limit input)
- DATA (Data transmission)
- HOLD (Measured value storage)

Delivery:
With battery, instruction manual and setting standard from measuring range 25-50 mm



REFERENCE

N° article	310304 40 EWRi	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,001	0.00005	0,002	5
25 - 50	●	25 - 50	0,001	0.00005	0,002	5
50 - 75	○	50 - 75	0,001	0.00005	0,003	5
75 - 100	○	75 - 100	0,001	0.00005	0,003	5

Precision digital outside micrometer Quick Drive IP65

Mahr

Design:
- quick adjustment, 5 mm per revolution
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- lacquered steel frame, heat insulated
- spindle diameter 6.5 mm
- measuring force 5-10 N
- with data output

IP65 | ABS | TOL | Digimatic | USB | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function (Keyboard lock)
- TOL (Tolerance and warning limit input)
- DATA (Data transmission)
- HOLD (Measured value storage)

Delivery:
With battery, instruction manual and setting standard from measuring range 25 - 50 mm

Note:
Fitting connection cable see under 398010 on page 39/689

REFERENCE



N° article	310316 40 EWR	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,001	0.00005	0,002	5
25 - 50	○	25 - 50	0,001	0.00005	0,002	5
50 - 75	○	50 - 75	0,001	0.00005	0,003	5
75 - 100	○	75 - 100	0,001	0.00005	0,003	5

Precision digital wireless outside micrometer IP65, Quick Drive

Mahr

Design:
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- with location holes for measuring inserts with shank Ø 3.5mm
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 5 mm
- measuring force 5-10 N
- Quick Drive

IP65 | ABS | TOL | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25 - 50 mm plus case

REFERENCE



N° article	310306 40 EWRi-V	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	5
25 - 50	○	25 - 50	0,001	0.00005	0,004	5
50 - 75	○	50 - 75	0,001	0.00005	0,006	5
75 - 100	○	75 - 100	0,001	0.00005	0,006	5

REFERENCE



Item no.	310306 40 EWRi-V set, 6-piece	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
SET	○	0 - 25	0,001	0,0005	0,004	5

Precision digital outside micrometer IP65

Mitutoyo

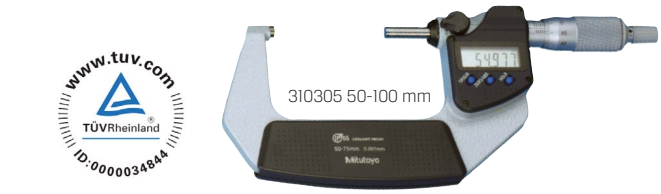
Design:
- digital outside micrometer with protection class IP65
- with ratchet
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated
- planarity 0.3 µm
- measuring faces carbide-tipped, ground and ultra-fine lapped
- frame varnished
- measuring spindle with clamping

IP65 | Digimatic | USB | U-WAVE® | Delivered in case | TÜV tested

Functions:
- ORIGIN (up to 100 mm)
- Zero/ABS
- Auto Power OFF
- Hold
- low voltage alert
- 2× PRESET (› 100 mm)
- key lock (› 100 mm)

Delivery:
Incl. setting standard (from 25 mm) and battery

Note:
Fitting connection cable for 310307 and 310309 see under 398005 on page 39/690.





N° article	310305 Series 293 without data output	310307 Series 293 with data output	Measuring range mm	Reading mm	Error limit mm
0 - 25	●	●	0 - 25	0,001	0,002
25 - 50	●	●	25 - 50	0,001	0,002
50 - 75	●	○	50 - 75	0,001	0,002
75 - 100	●	○	75 - 100	0,001	0,004
100 - 125	–	●	100 - 125	0,001	0,002
125 - 150	–	●	125 - 150	0,001	0,002
150 - 175	–	○	150 - 175	0,001	0,006
175 - 200	–	○	175 - 200	0,001	0,006
200 - 225	–	○	200 - 225	0,001	0,006
225 - 250	–	○	225 - 250	0,001	0,008
250 - 275	–	○	250 - 275	0,001	0,008
275 - 300	–	○	275 - 300	0,001	0,008



N° article	310309 with data output	Measuring range mm	Reading mm	Error limit mm	Contents
0 - 50	○	0 - 50	0,001	0,002	External micrometer (310307) 0 - 25 | 25 - 50 mm 1 gauge block 25 mm made of ceramics
0 - 75	○	0 - 75	0,001	0,002	External micrometer (310307) 0 - 25 | 25 - 50 | 50 - 75 mm Gauge blocks 25 | 50 mm
0 - 100	○	0 - 100	0,001	–	External micrometer (310307) 0 - 25 | 25 - 50 | 50 - 75 | 75 - 100 mm Gauge blocks 25 | 50 | 75 mm

Precision digital outside micrometer IP65, QuantuMike

Mitutoyo

DIN 863 | IP65 | ABS | Digimatic | USB | U-WAVE® | Delivered in case | TÜV tested

Design:
- with 2 mm spindle pitch
- dual function of the ratchet at thimble and speeder allows easy operation on a rack or as one-hand device
- resolution 0.001 mm
- measuring face carbide-tipped, ground and fine lapped
- frame varnished
- measuring force 7 - 12 N

Functions:
- ORIGIN (up to 100 mm)
- Zero/ABS
- Auto Power OFF
- Hold
- low voltage alert
- key lock function

Delivery:
Incl. setting standard (from 25 mm) and battery

Note:
Fitting connection cable for 310337 see under 398005 on page 39/690



N° article	310335 Series 293 without data output	310337 Series 293 with data output	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	●	●	0 - 25	0,001	0,002	2
25 - 50	○	○	25 - 50	0,001	0,002	2
50 - 75	●	○	50 - 75	0,001	0,002	2
75 - 100	○	○	75 - 100	0,001	0,004	2

Precision digital outside micrometer

Mitutoyo

ABS | Digimatic | USB | U-WAVE® | Delivered in case

Design:
- **high accuracy**
- digit increment switchable 0.1 µm / 0.5 µm
- limit for measurement error (MPE 0.6 µm), DIN EN ISO 3611
- constant measuring force of 7 - 9 N
- with absolute rotary encoder
- small measuring surface
- weight 400 g
- with data output

Functions:
- ON/OFF
- Auto Power OFF
- Hold
- low voltage alert
- PRESET

Delivery:
With battery, hand guard and test certificate

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	310339 Series 293	Measuring range mm	Reading mm	Reading mm	Error limit mm
0 - 25	○	0 - 25	0,001/0,005	0.0001/0.0005	0,0005

Precision micrometer with dial comparator IP54

Mitutoyo

IP54 | TOL | Delivered in case

Design:
- for serial inspections
- large scale for easy reading
- dial ± 5 µm adjustable
- with zero setting and tolerance fingers for go/no-go measurements
- release lever in comfortable position
- scale division 0.001 mm
- thimble and barrel scale matt chrome-plated
- planarity 0.3 µm
- parallelism 0.6 µm/0.000024" for models up to 50 mm
- measuring faces carbide tipped, ultra-fine lapped
- measuring force 5-10 N

Delivery:
Incl. box, setting standard (from 25 mm) and setting key



N° article	310383 Series 510	Measuring range mm	Reading mm
0 - 25	●	0 - 25	0,001
25 - 50	○	25 - 50	0,001

Precision micrometer with dial comparator

Mahr

DIN 863-1 | Delivered in case

Design:
- steel frame with insulation
- spindle Ø 7.5 mm made of stainless steel, fully hardened and ground, lockable
- operation and reading parts matt chrome-plated
- constant measuring force
- dial comparator integrated in frame
- adjustable tolerance fingers
- measuring faces carbide tipped
- lift-off distance 1 mm
- quick check of cylindrical parts, thickness and length measurements
- especially suited for serial components



N° article	310384 40F	Measuring range mm	Reading mm
0 - 25	●	0 - 25	0,001
25 - 50	○	25 - 50	0,001

Precision digital outside micrometer IP65

Mitutoyo

Design:
- for measuring all curved surfaces and wall thicknesses
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated
- planarity 0.6 µm/0.000024"
- measuring faces carbide-tipped, ground and ultra-fine lapped
- frame varnished
- measuring spindle with Ø 6.35 mm
- spindle pitch 0.5 mm, with locking device
- measuring force 5 - 10 N
- automatic power switch-off after 20 min. non-use
- low voltage alert
- with data output

IP65 · Digimatic · Delivered in case · TÜV tested

Delivery:
Incl. box, setting standard (from 25 mm), setting key and 1 battery

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	310425 Series 395 with spherical measuring surface	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0,004	0,5
25 - 50	○	25 - 50	0,001	0,004	0,5

Precision digital outside micrometer IP65

Mahr

Design:
- measuring surfaces: Anvil spherical, spindle flat
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- MarConnect, USB and Digimatic
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

IP65 · ABS · TOL · Digimatic · USB · Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25 - 50 mm plus case

Note:
Fitting connection cables see under 398010 on page 39/690

REFERENCE



N° article	310427 40 EWR-R with spherical measuring surface	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	0,5
25 - 50	○	25 - 50	0,001	0.00005	0,004	0,5

Design:
- suited to measure grooves, spline shafts, recesses etc.
- resolution 0.001 mm
- barrel scale matt chrome-plated, Ø 18 mm
- measuring faces carbide-tipped, ground and ultra-fine lapped
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.5 mm and clamping mechanism
- measuring force 5-10 N
- with data output

DIN 863-1 · IP65 · ABS · Digimatic · USB · U-WAVE® · Delivered in case · TÜV tested

Functions:
- ORIGIN
- Zero/ABS
- Auto Power OFF
- Hold
- low voltage alert

Delivery:
Incl. setting standard (from 25 mm), setting key and battery

Note:
Fitting connection cables see under 398005 on page 39/690

ABSOLUTE



N° article	310445 Series 331 with offset measuring surfaces	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0,004	0,5
25 - 50	○	25 - 50	0,001	0,004	0,5
50 - 75	○	50 - 75	0,001	0,004	0,5
75 - 100	○	75 - 100	0,001	0,004	0,5

Precision digital wireless outside micrometer IP65

Mahr

Design:
- measuring surfaces: Anvil spherical, spindle flat
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

IP65 · ABS · TOL · Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25-50 mm plus case

REFERENCE



N° article	310428 40 EWRi-R with spherical measuring surface	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	0,5
25 - 50	○	25 - 50	0,001	0.00005	0,004	0,5

Precision digital outside micrometer
IP65

Mahr

Design:
- with reduced measuring surface ∅ 3 mm
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- MarConnect, USB and Digimatic
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

IP65 | ABS | TOL | Digimatic | USB | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25 - 50 mm plus case

Note:
Fitting connection cables see under 398010 on page 39/689

REFERENCE



N° article	310447 40 EWR-B with offset measuring surfaces	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	0,5
25 - 50	○	25 - 50	0,001	0.00005	0,004	0,5

Precision digital wireless outside micrometer IP65

Mahr

Design:
- with reduced measuring surface ∅ 3 mm
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

IP65 | ABS | TOL | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25-50 mm plus case

REFERENCE



N° article	310448 40 EWRi-B with offset measuring surfaces	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	5
25 - 50	○	25 - 50	0,001	0.00005	0,004	5

Precision digital outside micrometer

Mitutoyo

Design:
- suited for measuring small external grooves
- with non-rotating spindle
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated, ∅ 18 mm
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.5 mm
- measuring force 5 - 10 N
- with data output

DIN 863-1 | ABS | Digimatic | USB | U-WAVE® | Delivered in case

Functions:
- ORIGIN
- Zero/ABS
- Auto Power OFF
- Hold
- low voltage alert

Delivery:
Incl. setting gauge (from 25 mm), handguard, setting key and battery

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	310466 Series 422 with flat measuring surfaces	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,001	0,006	0,5
25 - 50	○	25 - 50	0,001	0,006	0,5
50 - 75	○	50 - 75	0,001	0,006	0,5
75 - 100	○	75 - 100	0,001	0,008	0,5

Precision digital outside micrometer
IP65 Quick Drive

Mahr

Design:
- with blade-shaped measuring edges
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- MarConnect, USB and Digimatic
- spindle diameter 6.5 mm
- spindle pitch 5 mm
- measuring force 5-10 N
- Quick Drive

IP65 | ABS | TOL | Digimatic | USB | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Note:
Fitting connection cables see under 398010 on page 39/689

Delivery:
With instruction manual, battery, setting standard from measuring range 25-50 mm plus case

REFERENCE



N° article	310467 40 EWR-S with flat measuring surfaces	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0.00005	0,004	5
25 - 50	○	25 - 50	0,001	0.00005	0,004	5
50 - 75	○	75 - 50	0,001	0.00005	0,005	5
75 - 100	○	75 - 100	0,001	0.00005	0,005	5

Precision digital wireless outside micrometer IP65 Quick Drive

Mahr

Design:
- with blade-shaped measuring edges
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 5 mm
- measuring force 5-10 N
- Quick Drive

IP65 | ABS | TOL | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With instruction manual, battery, setting standard from measuring range 25-50 mm plus case

REFERENCE



N° article	310468 40 EWRi-S with flat measuring surfaces	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 25	777,00	0 - 25	0,001	0,00005	0,004	5
25 - 50	966,00	25 - 50	0,001	0,00005	0,004	5
50 - 75	990,00	75 - 50	0,001	0,00005	0,005	5
75 - 100	1.035,00	75 - 100	0,001	0,00005	0,005	5

Precision digital outside micrometer IP65

Mitutoyo

Design:
- for measuring tooth pitches or groove distances
- resolution 0.001 mm
- frame varnished
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- measuring force 3 - 8 N
- measuring spindle with Ø 6.35 m, pitch 0.5 mm with clamping feature
- with data output

IP65 | ABS | Digimatic | USB | U-WAVE® | Delivered in case | TÜV tested

Functions:
- ORIGIN
- Zero/ABS
- Auto Power OFF
- Hold
- low voltage alert

Delivery:
Incl. setting gauge (from 25 mm), handguard, setting key and battery

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	310526 Series 323 with disc probe tips and rotating spindle	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0,008	0,5
25 - 50	○	25 - 50	0,001	0,008	0,5
50 - 75	○	50 - 75	0,001	0,012	0,5
75 - 100	○	75 - 100	0,001	0,012	0,5

Precision digital outside micrometer IP65

Mahr

Design:
- measuring surfaces: Anvil with narrow bar, pointed spindle
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- MarConnect, USB and Digimatic
- spindle diameter 6.5 mm
- spindle pitch 0.5 mm
- measuring force 5-10 N

IP65 | ABS | TOL | Digimatic | USB | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Note:
Fitting connection cables see under 398010 on page 39/689

Delivery:
With operating instructions, battery and case

REFERENCE



N° article	310477 40 EWR-K with narrow bar	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 20	○	0 - 20	0,001	0.00005	0,004	0,5

Precision digital wireless outside micrometer IP65

Mahr

Design:
- measuring surfaces: Anvil with narrow bar, pointed spindle
- high-contrast LCD display, digit height 10 mm
- measuring spindle non-corrosive, totally hardened and ground
- measuring spindle and anvil carbide reinforced
- fast mode
- ratchet is integrated in the thimble
- lacquered steel frame, heat insulated
- integrated wireless
- spindle diameter 6.5 mm
- spindle pitch 5 mm
- measuring force 5-10 N

IP65 | ABS | TOL | Delivered in case

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to ORIGIN)
- mm/inch
- ORIGIN (measurement presetting)
- LOCK function
- TOL (tolerance and warning limit input)
- HOLD (Measured value storage)
- DATA (Data transmission)

Delivery:
With operating instructions, battery and case

REFERENCE



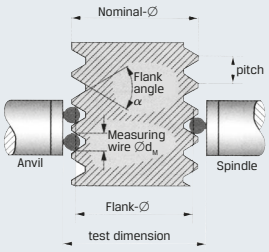
N° article	310478 40 EWRi-K with narrow bar	Measuring range mm:	Reading mm	Reading inch	Error limit mm	Spindle pitch mm
0 - 20	○	0 - 20	0,001	0.00005	0,004	5

Thread measuring wires for precision outside micrometers

Design:
The holder for the spindle is equipped with a measuring wire, the holder for the anvil is equipped with two measuring wires. This gauge block serves for the required broadening of the micrometer´s measuring face
(Subtract 3 mm from the result). Threaded inserts are supplied in pairs.

Use:
For measuring external threads. The flank diameter is determined by the three-wire method.

Delivery:
In case. Prices on request.



Please observe the spindle diameter.



= 6.35 mm
= 6.50 mm
= 7.50 mm
= 8.00 mm

Size = measuring wire Ø D mm	Metric tread DIN 13 (coarse and fine threads) thread pitch P mm			Whitworth thread DIN 11, 239, 240, 259 (BSW, BSF, BSP) number of threads per 1"			U.S.St thread (UNC, UNF) Thread number to 1"			Trapezoidal thread DIN 103, 378, 379 Pitch h mm		
0.17	0.25		0.30		–			–			–	
0.195		–			–			80			–	
0.22		0.35			–			72			–	
0.25		0.40			–			64			–	
0.29	0.45		0.50		–			56			–	
0.335		0.60			–		48				–	
0.39		–			40		44		40		–	
0.455	0.70	0.75	0.80		32			36			–	
0.53		0.90			28		32		28		–	
0.62		1.00		26		24		24			–	
0.725		1.25		22		20		20			–	
0.895		1.50		19		16		18			–	
1.10		1.75		14				13			2	
1.35		2.00		12		11	12		11		–	
1.65		2.50		10		9	10		9		3	
2.05	3.00		3.50	8		7	8		7		4	
2.55	4.00		4.50		6			6			5	
3.20	5.00		5.50	5		4½	5		4½		6	
4.00		6.00		4		3½		4			7	



Precision outside micrometer

Mitutoyo

DIN 863-1 | Delivered in case

Design:
- for measuring the flange diameter of threads
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.5 mm and clamping mechanism
- measuring force 5-10 N

Delivery:
Incl. setting standard 60° (from 25 mm) and setting key



N° article	310585 Series 126 for thread inspection	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	●	0 - 25	0,01	0,008	0,5
25 - 50	●	25 - 50	0,01	0,008	0,5
50 - 75	○	50 - 75	0,01	0,01	0,5
75 - 100	○	75 - 100	0,01	0,01	0,5

Interchangeable anvil
for outside micrometers

Mitutoyo



N° article	310589 metric, for thread inspection	Pitch mm
0,4 - 0,5	●	0,4 - 0,5
0,6 - 0,9	●	0.6 - 0.9
1,0 - 1,75	●	1.0 - 1.75
2,0 - 3,0	●	2.0 - 3.0
3,5 - 5,0	●	3.5 - 5.0
5,5 - 7,0	○	5.5 - 7.0

Precision outside micrometer

Mitutoyo

DIN 863-1 | Delivered in case

Design:
- for measuring triple-edge tools, e.g. taps or milling cutters
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- measuring faces with prism angle 60°
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.75 mm, with clamping mechanism
- measuring force 5-10 N

Delivery:
Incl. setting standard and setting key



N° article	310590 Series 114 with V anvil	Measuring range mm	Reading mm	Error limit mm	Design	Spindle pitch mm
1 - 15	○	1 - 15	0,01	0,008	with grooves	0,75
10 - 25	○	10 - 25	0,01	0,008	with grooves	0,75
25 - 40	○	25 - 40	0,01	0,012	–	0,75
40 - 55	○	40 - 55	0,01	0,012	–	0,75

Precision digital outside micrometer IP65

Mitutoyo

DIN 863-1 | IP65 | ABS | Digimatic | USB | U-WAVE® | Delivered in case | TÜV tested

Design:
- for measuring the flange diameter of threads
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.5 mm and clamping mechanism
- measuring force 5-10 N
- with data output

Functions:
- Zero/ABS
- Auto Power OFF
- Hold
- 2× PRESET
- low voltage alert
- key lock function

Delivery:
Incl. setting gauge 60° (from 25 mm), hand guard, setting key and battery

Note:
Fitting connection cables see under 398005 on page 39/960



N° article	310587 Series 326 for thread inspection	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
0 - 25	○	0 - 25	0,001	0,008	0,5
25 - 50	○	25 - 50	0,001	0,008	0,5
50 - 75	○	50 - 75	0,001	0,01	0,5
75 - 100	○	75 - 100	0,001	0,01	0,5

Precision digital outside micrometer

Mitutoyo

DIN 863-1 | ABS | Digimatic | USB | U-WAVE® | Delivered in case

Design:
- for measuring triple-edge tools, e.g. milling cutters or reamers
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- measuring faces with prism angle 60°
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.75 mm, with clamping mechanism
- measuring force 5-10 N
- with data output

Functions:
- Zero/ABS
- Auto Power OFF
- Hold
- 2× PRESET
- low voltage alert
- key lock function

Delivery:
Incl. setting standard and battery

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	310591 Series 314 with V anvil	Measuring range mm	Reading mm	Error limit mm	Design	Spindle pitch mm
1 - 15	○	1 - 15	0,001	0,008	with grooves	0,75
10 - 25	○	10 - 25	0,001	0,008	with grooves	0,75
25 - 40	○	25 - 40	0,001	0,01	–	0,75

Precision outside micrometer

Mitutoyo

DIN 863-1

Delivered in case

Design:
- for measuring 5-edged tools, like taps or milling cutters
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- measuring faces with prism angle 60°
- frame varnished
- measuring spindle with Ø 6.35 mm, pitch 0.75 mm, with clamping mechanism
- measuring force 5 - 10 N

Delivery:
Incl. setting standard and setting key



N° article	310593 Series 114 with V anvil	Measuring range mm	Reading mm	Error limit mm	Design	Spindle pitch mm
5 - 25	○	5 - 25	0,01	0,012	–	0,75
25 - 45	○	25 - 45	0,01	0,008	with grooves	0,75
45 - 65	○	45 - 65	0,01	0,01	–	0,75

Control and setting reference standard

Mahr

Design:
- for precision external micrometers
- round steel bars with heat insulated handles
- measuring faces = Ø 6.5 mm
- for testing the basic setting of an outside micrometer
- insulating hand sleeves
- manufacturing tolerance js2
- larger sizes on request



N° article	310720	Setting length mm
25	○	25
50	○	50
75	○	75
100	○	100
125	○	125
150	○	150
175	○	175

Length measuring bench Precimar

Mahr

Design:
- fast adaptation to new workpieces
- rugged construction makes it suitable for use close to production
- freely selectable measuring equipment (e.g. digital dial indicator, measuring probes etc.)
- measuring contacts in SC
- integrated coupling protects the measuring equipment
- suitable for left- and right-handed operators
- large support table, Ø 60 mm, with variable height adjustment

Delivery:
Without dial gauge



N° article	310595 Precimar SM 60	Measuring range mm	Measuring force N min.	Mounting shank diameter mm
0 - 25	○	0 - 25	1	8

Stand for outside micrometer

PRETEC

Design:
- solid, steady cast base
- pivotable jaws with rubber lining to protect the micrometer
- hammertone varnished
- both clamping jaw and hinge are fixed in place with one screw



N° article	310655
0100	●

External quick calliper IP65

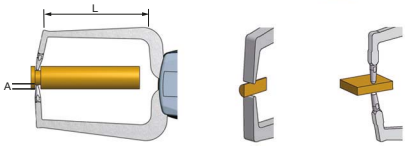
Kroeplin Längenmesstechnik

IP65

Design and use:
- for external measurements
- for measuring boreholes, grooves, distances etc.
- due to diverse stylus shapes universally applicable (stylus shape S = cutting edge, K = carbide ball)

Delivery:
With test certificate and operating manual





Probe shape S Probe shape K

N° article	310735 analogue	Measuring range mm	Reading mm	L mm	A mm	Error limit mm	Sensor design
D110	○	0 - 10	0,005	35	19,1	0,015	K/0.6, S/R0.1
D220	○	0 - 20	0,01	85	24,7	0,03	K/0.6, S/R0.1

External quick calliper IP67

Kroeplin Längenmesstechnik

IP67

Design and use:
- for external measurements
- for measuring boreholes, grooves, distances etc.
- universally applicable due to different probe shapes

Delivery:
With test certificate and operating manual



N° article	310736 digital	Measuring range mm	Reading mm	Leg length mm	A mm	Error limit mm
K110	○	0 - 10	0,005	35	19,1	0,015
K220	●	0 - 20	0,01	85	24,7	0,03

Snap gauge with dial comparator

Mahr

Delivered in case

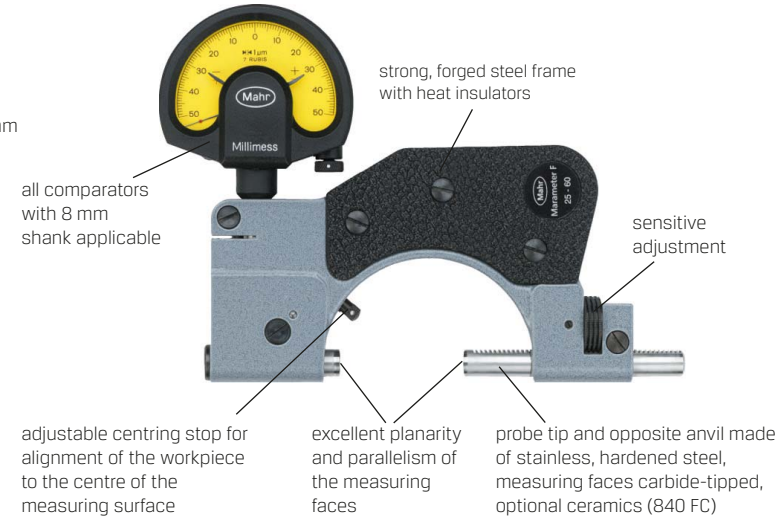
Design:
- forged steel frame with heat insulating grips
- probe in long guide way
- opposite anvil sensitive adjustable
- measuring spindle and anvil spindle made of stainless steel hardened and carbide tipped
- adjustable centre stop for alignment to the centre of the measuring surface
- built-in force measuring spring

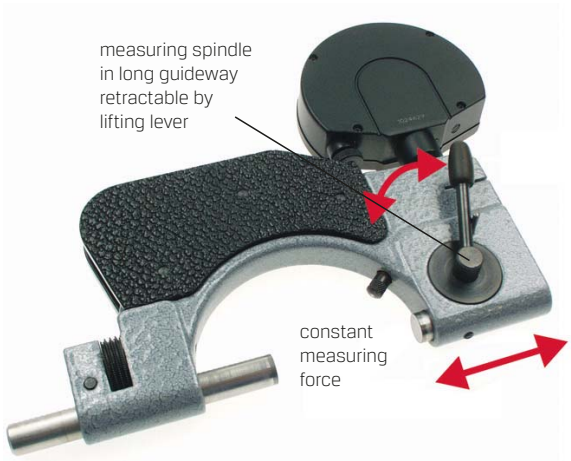
Measuring surfaces
Planarity ≤ 0.2 µm / parallelism ≤ 1 µm for measuring range 0 - 25 mm
Planarity ≤ 0.2 µm / parallelism ≤ 2 µm for measuring range 25 - 100 mm

Use:
- for cylindrical parts such as bolts, shafts etc.
- for thickness and length measurement
- universally

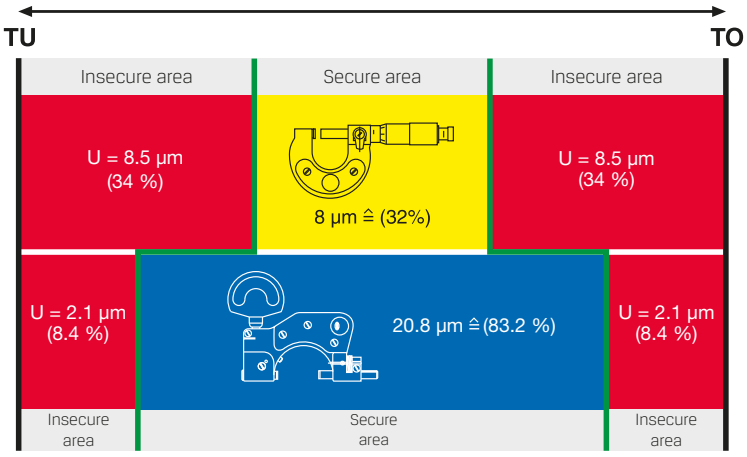
Display units:
- mechanic dial comparator 320694 type 1002, 1003, 1004
- inductive dial comparator 320640 type 2000, 2001

Delivery:
Without dial comparator

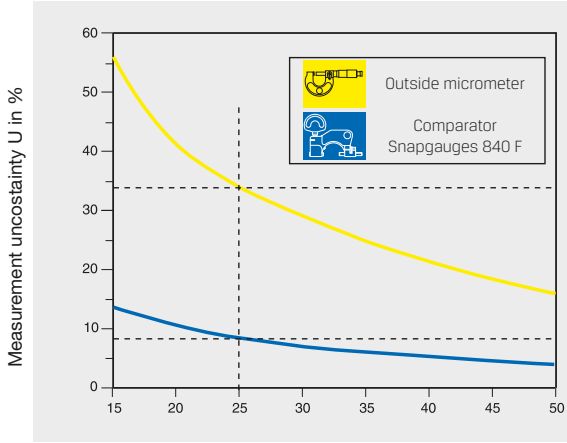




Workpiece tolerance = 25 µm



Measurement uncertainty U dependant on workpiece tolerances



N° article	310730 840 F	Measuring range mm	Measuring faces ∅ mm	Probe travel mm	Measuring force N min.
0 - 25	○	0 - 25	8	2	7,5
25 - 60	○	25 - 60	9	2	7,5
50 - 100	○	50 - 100	10	2,5	7,5

Thickness gauge

Design and use:
- with plane faces Ø 6.35 or 10 mm, resp., varnished frame
- spindle and all main parts made of stainless hardened tool steel
- for measuring the thickness of a very wide range of materials such as leather, cardboard, paper, felt, rubber, glass, sheet metal, foils, plywood and synthetic materials
- the shape of the measuring inserts should be adapted to the material to be measured
- as standard we deliver thickness gauges with plane faces



K15



J45



J50

N° article	310738	Reading mm	Pointer revolution mm	Measuring span mm	Throat size mm	Face diameter mm
K15	○	0,1	10	10	15	6,35
K15/2	○	0,1	10	20	15	6,35
K50/2	○	0,1	10	20	50	10
J45	○	0,01	1	10	45	6,35
J50	○	0,01	1	10	50	10

Digital quick thickness gauge
IP42

Design:
- measuring films, paper etc.
- selectable digit step value
- alarm for low voltage, setting error, sensor error or display overflow
- easy reading due to large display
- with data output
- power supply via battery (CR2032)- power supply via battery (CR2032)

IP42 · ABS · TOL · Digimatic · USB · U-WAVE®

Functions:
- Zero/ABS
- PRESET
- reversal of counting direction
- GO/±NG evaluation
- ON/OFF and automatic switch-off
- Data/Hold
- analogue measuring range selectable
- selectable analogue bar resolution
- calculation function (with formula)

Note:
Fitting connection cable see under 398000 on page 39/690

NEW



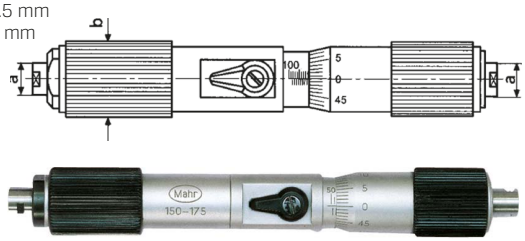
N° article	310742 Series 547	Measuring range mm	Reading mm	Error limit mm	Measuring range N
0 - 12	○	0 - 12	0.01/0.001/0.0005	0,0003	≤3.5

Precision inside micrometer

Design:
- kink-resistant, lightweight tubular construction
- spindle hardened and ground
- measuring faces spherically lapped
- one face adjustable
- operation and reading parts matt chrome-plated
- from measuring range 100 - 125 mm insulating handles and locking mechanism
- spindle pitch 0.5 mm
- resolution 0.01 mm

DIN 863-4

Delivery:
In tube



N° article	310744 44 F	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
30 - 40	○	30 - 40	0,01	0,004	0,5
40 - 50	○	40 - 50	0,01	0,004	0,5
50 - 70	○	50 - 70	0,01	0,005	0,5
70 - 100	○	70 - 100	0,01	0,005	0,5
100 - 125	○	100 - 125	0,01	0,006	0,5
125 - 150	○	125 - 150	0,01	0,006	0,5
150 - 175	○	150 - 175	0,01	0,007	0,5
175 - 200	○	175 - 200	0,01	0,007	0,5

Two-point inside micrometer

Design:
- with HM measuring faces up to 100 mm
- mat chrome-plated
- pitch 0.5 mm
- resolution 0.01 mm
- measuring range 5-30 mm and 25-50 mm with setting ring
- range 5-30 with probe tips

DIN 863-4 · Delivered in case

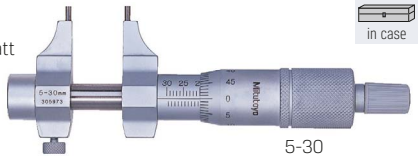


N° article	310970	Measuring range mm	Reading mm	Spindle pitch mm
5 - 30	●	5 - 30	0,01	0,5
25 - 50	●	25 - 50	0,01	0,5
50 - 75	●	50 - 75	0,01	0,5
75 - 100	●	75 - 100	0,01	0,5
100 - 125	●	100 - 125	0,01	0,5
125 - 150	●	125 - 150	0,01	0,5
150 - 175	○	150 - 175	0,01	0,5
175 - 200	○	175 - 200	0,01	0,5

Precision two-point inside micrometer

Design:
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated, Ø 18 mm
- measuring spindle with pitch 0.5 mm and clamping mechanism
- measuring force 5-10 N

Delivered in case



5-30

Delivery:
Incl. setting key



25-50

N° article	310972 Series 145	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
5 - 30	●	5 - 30	0,01	0,01	0,5
25 - 50	●	25 - 50	0,01	0,012	0,5
50 - 75	○	50 - 75	0,01	0,014	0,5
75 - 100	○	75 - 100	0,01	0,016	0,5

Precision digital two-point inside micrometer

Mitutoyo

Digimatic | USB | U-WAVE® | Delivered in case

Design:
- resolution 0.001 mm
- thimble and barrel scale matt chrome-plated, ∅ 18 mm
- measuring faces carbide-tipped, ground and ultra-fine lapped
- measuring spindle with pitch 0.5 mm and clamping mechanism
- measuring force 5-10 N
- with measuring jaws
- with data output

Delivery:
Incl. operating manual and battery

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	310974 Series 345	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
5 - 30	○	5 - 30	0,001	0,01	0,5
25 - 50	○	25 - 50	0,001	0,012	0,5

Precision depth micrometer

Mitutoyo

Delivered in case

Design:
- resolution 0.01 mm
- thimble and barrel scale matt chrome-plated, ∅ 18 mm
- measuring range 25 mm
- spindle pitch 0.5 mm, with clamping device
- measuring surface hardened, fine ground and lapped
- basis (W × D = 101.6 × 16 mm) consisting of hardened tool steel
- measuring force 5-10 N

Delivery:
Incl. setting key



N° article	311006 Series 129	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm	Number of inserts	Measuring surface of the support bridge mm
0 - 100	●	0 - 100	0,01	0,008	0,5	4	101 × 16
0 - 150	○	0 - 150	0,01	0,008	0,5	6	101 × 16
0 - 300	○	0 - 300	0,01	0,012	0,5	12	101 × 16

Precision depth micrometer

Mahr

DIN 863 | Delivered in case

Design:
- measuring spindle totally hardened and ground
- cross beam chrome plated and hardened
- contact face lapped
- insert hardened
- when using interchangeable extensions, recalibrating is not necessary
- operation and reading parts matt chrome-plated
- measuring range 25 mm
- resolution 0.01 mm
- spindle pitch 0.5 mm
- extensions 25 mm and 50 mm
- large measuring range due to interchangeable inserts



N° article	311004 45 T	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm	Number of inserts	Measuring surface of the support bridge mm
0 - 100	●	0 - 100	0,01	0,005	0,5	4	100×16

Precision digital depth micrometer

Mitutoyo

ABS | Digimatic | USB | U-WAVE® | Delivered in case

Design:
- resolution 0.001 mm
- measuring range 25 mm
- insert 4 mm
- thimble and barrel scale matt chrome-plated, ∅18 mm
- spindle pitch 0.5 mm, with clamping device
- measuring surface hardened, fine ground and lapped
- basis (W × D = 101.6 × 16 mm) consisting of hardened tool steel
- measuring force 5-10 N
- with data output

Functions:
- Zero/ABS
- 2× PRESET
- Auto Power OFF
- Data/Hold
- locking function
- low voltage alert

Delivery:
Incl. setting key

Note:
Fitting connection cables see under 398005 on page 39/960



N° article	311008 Series 329	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm	Number of inserts	Measuring surface of the support bridge mm
0 - 150	○	0 - 150	0,001	0,008	0,5	6	101 × 16
0 - 300	○	0 - 300	0,001	0,012	0,5	12	101 × 16

Three-point inside micrometer

PRETEC

Design:
- HM measuring face from 12 mm
- mat chrome-plated
- friction ratchet
- incl. setting ring, extension and key
- reading ∅ 6-12 = 0.001 mm
- reading ∅ 12-100 = 0.005 mm

DIN 863-4

Delivered in case



N° article	311200	Measuring range mm	Reading mm
6 - 8	○	6 - 8	0,001
8 - 10	○	8 - 10	0,001
10 - 12	○	10 - 12	0,001
12 - 16	●	12 - 16	0,005
16 - 20	●	16 - 20	0,005
20 - 25	●	20 - 25	0,005
25 - 30	●	25 - 30	0,005
30 - 40	●	30 - 40	0,005
40 - 50	●	40 - 50	0,005
50 - 63	●	50 - 63	0,005
62 - 75	○	62 - 75	0,005
75 - 88	●	75 - 88	0,005
87 - 100	○	87 - 100	0,005

Design:
- set compiled of micrometers from 311200
- incl. the required setting rings

DIN 863

Delivered in Case



N° article	311201 set	Measuring range mm	Reading mm	Contents
6 - 12	●	6 - 12	0,001	6 - 8 | 8 - 10 | 10 - 12
12 - 20	●	12 - 20	0,005	12 - 16 | 16 - 20
20 - 50	●	20 - 50	0,005	20 - 25 | 25 - 30 | 30 - 40 | 40 - 50
50 - 100	●	50 - 100	0,005	50 - 63 | 63 - 75 | 75 - 88 | 87 - 100

Precision three-point inside micrometer

Mahr

Design:
- reading and operation parts satin chrome plated
- measuring spindle totally hardened and ground
- rapid drive with integrated ratchet
- self-centring measuring head with 3 laterally positioned anvils, each offset at intervals of 120° (from 12.5 mm carbide tipped)
- from 40 mm head made of aluminium (weight reduction)
- from 12.5 mm for measurements to the bottom of the hole
- reading ∅ 6-20 = 0.001 mm
- reading ∅ 20-100 = 0.005 mm

DIN 863-4

Delivered in case



N° article	311214 44A	Measuring range mm	Reading mm	Error limit mm
6 - 8	○	6 - 8	0,001	0,004
8 - 10	○	8 - 10	0,001	0,004
10 - 12	○	10 - 12	0,001	0,004
12 - 16	○	12 - 16	0,001	0,004
16 - 20	○	16 - 20	0,001	0,004
20 - 25	○	20 - 25	0,005	0,004
25 - 30	○	25 - 30	0,005	0,004
30 - 40	○	30 - 40	0,005	0,004
40 - 50	○	40 - 50	0,005	0,004
50 - 60	○	50 - 60	0,005	0,005
60 - 70	○	60 - 70	0,005	0,005
70 - 85	○	70 - 85	0,005	0,005
85 - 100	○	85 - 100	0,005	0,005

Design:
- set of three-point inside micrometers 311214
- complete with setting rings

Delivery:
In case.

DIN 863

Delivered in case



N° article	311224 set 44 AS	Measuring range mm	Reading mm	Error limit mm	Number of micrometers	Ring gauges diameter mm
6 - 12	○	6 - 12	0,001	0,004	3	8, 10
12 - 20	○	12 - 20	0,001	0,004	2	16
20 - 50	●	20 - 50	0,005	0,004	4	25, 40
50 - 100	●	50 - 100	0,005	0,005	4	60, 85

Precision three-point inside micrometer

Mitutoyo

DIN 863-4 | TiN | Delivered in case

Design:
- measuring faces titanium coated or made of carbide
- resolution ⟨ 12 mm = 0.001 mm and ⟩ 12 mm = 0.005 mm
- thimble and barrel scale matt chrome-plated
- measuring spindle with pitch 0.5 mm
- measuring method up to 6 mm = 2-point-measurement

Delivery:
Incl. setting key and factory certificate



311300
2-2,5



311303
30-40



311303
100-125

N° article	311300 Series 368 Measuring surface Carbide	311303 Series 368 Measuring surfaces hardened steel TiN coated	Measuring range mm	Reading mm	Error limit mm	Spindle pitch mm
2-2,5	○	–	2-2,5	0,001	0,002	0,5
2,5-3	○	–	2,5- 3	0,001	0,002	0,5
3-4	○	–	3- 4	0,001	0,002	0,5
4-5	○	–	4- 5	0,001	0,002	0,5
5-6	○	–	5- 6	0,001	0,002	0,5
6-8	–	○	6- 8	0,001	0,002	0,5
8-10	–	○	8- 10	0,001	0,002	0,5
10-12	–	○	10- 12	0,001	0,002	0,5
12-16	–	●	12- 16	0,005	0,002	0,5
16-20	–	●	16- 20	0,005	0,002	0,5
20-25	–	●	20- 25	0,005	0,003	0,5
25-30	–	●	25- 30	0,005	0,003	0,5
30-40	–	●	30- 40	0,005	0,003	0,5
40-50	–	●	40- 50	0,005	0,003	0,5
50-63	–	●	50- 63	0,005	0,003	0,5
62-75	–	○	62- 75	0,005	0,003	0,5
75-88	–	○	75- 88	0,005	0,003	0,5
87-100	–	○	87-100	0,005	0,003	0,5
100-125	–	●	100-125	0,001	0,005	0,5
125-150	–	●	125-150	0,005	0,005	0,5
150-175	–	●	150-175	0,005	0,005	0,5
175-200	–	●	175-200	0,005	0,005	0,5



DIN 863-4 | TiN | Delivered in case

N° article	311305 set Measuring surfaces hardened steel TiN coated	Measuring range mm	Contents
6-12	●	6- 12	Internal precision micrometer (311303) 6-8|8-10|10-12 mm Setting rings ∅ 8|10 mm
12-20	●	12- 20	Internal precision micrometer (311303) 12-16|16-20 mm Setting ring ∅ 16 mm
20-50	●	20- 50	Internal precision micrometer (311303) 20-25|25-30|30-40|40-50 mm Setting rings ∅ 25|40 mm
50-100	●	50-100	Internal precision micrometer (311303) 50-63|62-75|75-88|87-100 mm Setting rings ∅ 62|87 mm
100-200	○	100-200	Internal precision micrometer (311303) 100-125|125-150|150-175|175-200 mm Setting rings ∅ 125|175 mm

Precision digital three-point inside micrometer

Mahr

DIN 863-4 | IP52 | ABS | Digimatic | RS 232 C | USB | Delivered in case

Design:
- threaded connection for exchange of the heads
- self-centring head with three lateral protruding measuring probes, offset by 120°
- measuring probes from 12 mm carbide reinforced
- from 12 mm for measurements to the bottom of the hole
- measuring head from 40 mm for weight saving reasons made of aluminium
- display with 8.5 mm digit height
- with data output

Use:
For measuring through or blind holes or centring wheels.

Functions:
- RESET (Zero setting of the display)
- ABS (display can be set to zero without losing the reference to PRESET)
- mm/inch selection
- PRESET (Presetting of fixed values)
- DATA (only in combination with data cable)
- LOCK function (Keyboard lock)

Scope of delivery:
Basic unit 44 EWg, measuring head 44 Ak, operating instructions and battery

Note:
Fitting connection cables see under 398005 on page 39/690



N° article	311225 44 EWR	Measuring range mm:	Reading mm	Error limit mm	Reading inch	Spindle pitch mm
6-8	○	6- 8	0,001	0,004	0.00005	0,5
8-10	○	8- 10	0,001	0,004	0.00005	0,5
10-12	○	10- 12	0,001	0,004	0.00005	0,5
12-16	○	12- 16	0,001	0,004	0.00005	0,5
16-20	○	16- 20	0,001	0,004	0.00005	0,5
20-25	○	20- 25	0,001	0,004	0.00005	0,5
25-30	○	25- 30	0,001	0,004	0.00005	0,5
30-40	○	30- 40	0,001	0,004	0.00005	0,5
40-50	○	40- 50	0,001	0,004	0.00005	0,5
50-60	○	50- 60	0,001	0,005	0.00005	0,5
60-70	○	60- 70	0,001	0,005	0.00005	0,5
70-85	○	70- 85	0,001	0,005	0.00005	0,5
85-100	○	85-100	0,001	0,005	0.00005	0,5

Design:
- set of three-point inside micrometers 311225
- complete with setting rings

DIN 863-4 | IP52 | ABS | Digimatic | RS 232 C | USB | Delivered in case



N° article	311226 set	Measuring range mm	Reading mm	Reading inch	Error limit mm	Spindle pitch mm	Number of micrometers	Ring gauges diameter mm
6-12	○	6- 12	0,001	0.00005	0,004	0,5	3	8, 10
12-20	○	12- 20	0,001	0.00005	0,004	0,5	2	16
20-50	○	20- 50	0,001	0.00005	0,004	0,5	4	25, 40
50-100	○	50-100	0,001	0.00005	0,005	0,5	4	60, 85

Precision digital three-point inside micrometer IP65, Holtest

DIN 863-4 | TiN | IP65 | ABS | Digimatic | USB | U-WAVE® | Delivered in case

Design:
- measuring face made of titanium coated hard metal
- resolution 0.001 mm
- 3-point measuring method
- with data output

Functions:
- Zero/ABS
- 2-point PRESET
- Auto Power OFF
- Hold
- low voltage alert
- key lock function

Delivery:
Incl. setting key, battery SR44 and factory certificate

Note:
Fitting connection cables see under 398005 on page 39/690

Nº article	311313 Series 468	Measuring range mm	Reading mm	Error limit mm
6-8	○	6- 8	0,001	0,004
8-10	○	8- 10	0,001	0,004
10-12	○	10- 12	0,001	0,004
12-16	○	12- 16	0,001	0,004
16-20	○	16- 20	0,001	0,004
20-25	○	20- 25	0,001	0,006
25-30	○	25- 30	0,001	0,006
30-40	○	30- 40	0,001	0,006
40-50	○	40- 50	0,001	0,006
50-63	○	50- 63	0,001	0,006
62-75	○	62- 75	0,001	0,006
75-88	○	75- 88	0,001	0,006
87-100	○	87-100	0,001	0,006
100-125	○	100-125	0,001	0,01
125-150	○	125-150	0,001	0,01
150-175	○	150-175	0,001	0,01
175-200	○	175-200	0,001	0,01



6-8 8-10

Nº article	311315 Series 468 with interchangeable measuring heads	Measuring range mm	Contents
6-12	○	6- 12	Inside precision gauge 6-8|8-10|10-12 mm Setting rings ∅ 8|10 mm Extension 100 mm
12-20	○	12- 20	Inside precision gauge 12-16|16-20 mm Setting ring ∅ 16 mm Extension 150 mm
20-50	○	20- 50	Inside precision gauge 20-25|25-30|30-40|40-50 mm Setting rings ∅ 25|40 mm Extension 150 mm
50-100	○	50-100	Inside precision gauge 50-63|62-75|75-88|87-100 mm Setting rings ∅ 62|87 mm Extension 150 mm
100-200	○	100-200	Inside precision gauge 100-125|125-150|150-175|175-200 mm Setting rings ∅ 125|175 mm Extension 150 mm



Nº article	311317 Series 468 fixed	Measuring range mm	Contents
6-12	○	6- 12	Three-point internal precision micrometer (311313) 6-8|8-10|10-12 mm Setting rings ∅ 8|10 mm
12-25	○	12- 25	Three-point internal precision micrometer (311313) 12-16|16-20|20-25 mm Setting rings ∅ 16|20 mm
25-50	○	25- 50	Three-point internal precision micrometer (311313) 25-30|30-40|40-50 mm Setting rings ∅ 30|40 mm
50-75	○	50- 75	Three-point internal precision micrometer (311313) 50-63|62-75 mm Setting ring ∅ 62 mm
75-100	○	75-100	Three-point internal precision micrometer (311313) 75-88|87-100 mm Setting ring ∅ 87 mm



Precision digital three-point inside micrometer Borematic

Mitutoyo

TiN | Digimatic | USB | U-WAVE® | Delivered in case

Design:
- digit height 11 mm
- display 41.6 × 20.3 mm
- three-button operation
- measuring faces titanium coated
- resolution 0.001 mm
- with data output

Functions:
- MODE
- SET
- ON/OFF

Note:
Fitting connection cables see under 398000 on page 39/690



N° article	311323 Series 568	Measuring range mm	Reading mm	Error limit mm
6 - 8	○	6 - 8	0,001	0,01
8 - 10	○	8 - 10	0,001	0,01
10 - 12	○	10 - 12	0,001	0,01
12 - 16	○	12 - 16	0,001	0,01
16 - 20	○	16 - 20	0,001	0,01
20 - 25	○	20 - 25	0,001	0,012
25 - 30	○	25 - 30	0,001	0,012
30 - 40	○	30 - 40	0,001	0,012
40 - 50	○	40 - 50	0,001	0,012
50 - 63	○	50 - 63	0,001	0,012
62 - 75	○	62 - 75	0,001	0,012
75 - 88	○	75 - 88	0,001	0,012
87 - 100	○	87 - 100	0,001	0,012



N° article	311325 Series 568 with exchangeable measuring heads	Measuring range mm	Contents
6 - 12	○	6 - 12	Three-point internal precision micrometer 6 - 8 | 8 - 10 | 10 - 12 mm Setting rings ∅ 8 | 10 mm
12 - 25	○	12 - 25	Three-point internal precision micrometer 12 - 16 | 16 - 20 | 20 - 25 mm Setting rings ∅ 16 | 20 mm
25 - 50	○	25 - 50	Three-point internal precision micrometer 25 - 30 | 30 - 40 | 40 - 50 mm Setting rings ∅ 30 | 40 mm
50 - 100	○	50 - 100	Three-point internal precision micrometer 50 - 63 | 62 - 75 | 75 - 88 | 87 - 100 mm Setting rings ∅ 62 | 87 mm



N° article	311327 Series 568 fixed	Measuring range mm	Contents
6 - 12	○	6 - 12	Three-point internal precision micrometer 6 - 8 | 8 - 10 | 10 - 12 mm Setting rings ∅ 8 | 10 mm
12 - 25	○	12 - 25	Three-point internal precision micrometer 12 - 16 | 16 - 20 | 20 - 25 mm Setting rings ∅ 16 | 20 mm
25 - 50	○	25 - 50	Three-point internal precision micrometer 25 - 30 | 30 - 40 | 40 - 50 mm Setting rings ∅ 30 | 40 mm
50 - 75	○	50 - 75	Three-point internal precision micrometer 50 - 63 | 62 - 75 mm Setting ring ∅ 62 mm
75 - 100	○	75 - 100	Three-point internal precision micrometer 75 - 88 | 87 - 100 mm Setting ring ∅ 87 mm

Precision digital three-point measuring pistol

Mahr

Delivered in case

Design:
- consisting of measuring pistol and measuring head
- rapid covering of the entire measuring range
- for fast operations
- threaded connection for exchange of the heads
- self-centring head with three lateral protruding measuring probes, offset by 120°
- measuring probes from 12.5 mm carbide reinforced
- from 40 mm head made of aluminium to reduce weight
- for through-holes, blind holes and centring shoulders

Delivery:
Without dial gauge and setting ring



N° article	312110 844 A self-centring	Measuring range mm	Error limit mm
6 - 8	○	6 - 8	0,003
8 - 10	○	8 - 10	0,003
10 - 12	○	10 - 12	0,003
12 - 16	○	12 - 16	0,003
16 - 20	○	16 - 20	0,003
20 - 25	○	20 - 25	0,003
25 - 30	○	25 - 30	0,003
30 - 40	○	30 - 40	0,003
40 - 50	○	40 - 50	0,003
50 - 60	○	50 - 60	0,004
60 - 70	○	60 - 70	0,004
70 - 85	○	70 - 85	0,004
85 - 100	○	85 - 100	0,004

Design:
- set with self-centring pistol 312110 (incl. measuring heads)
- with two setting rings

Delivery:
With traceable calibration certificate, without dial



N° article	312116 set self-centring	Measuring range mm	Error limit mm	Number of measuring heads	∅ setting ring 1 mm	∅ setting ring 2 mm
6 - 12	○	6 - 12	0,003	3	8	10
12 - 20	○	12 - 20	0,003	2	16	–
20 - 50	○	20 - 50	0,003	4	25	40
50 - 100	○	50 - 100	0,004	4	60	85

Comparative measurement of bores in highest precision

Bore gauges of the 844 D family are 2-point comparison gauges, combined with a precisely ground guide cylinder. guide cylinder, which centres itself precisely in bores. This means that there is no need to determine a reversal point by oscillating. The measured value is displayed reliably, precisely and immediately.

Adjustment to a respective nominal dimension is carried out in adjusting rings.

Typical applications of bore plug gauges

- quickcheck of bore diameters

⇨ fast ⇨ unambiguous ⇨ serial measurements

- determining roundness and cylinder deviations (Conicity)

Special advantages

Self-centring: No oscillation required to determine the reversal point
Measured value is displayed safely, precisely and immediately without operator influence
Particularly suitable with the use of digital display units for direct processing of the measured values

Each bore gauge is custom made

- individually
- matching the bore diameter
- matching the bore tolerance

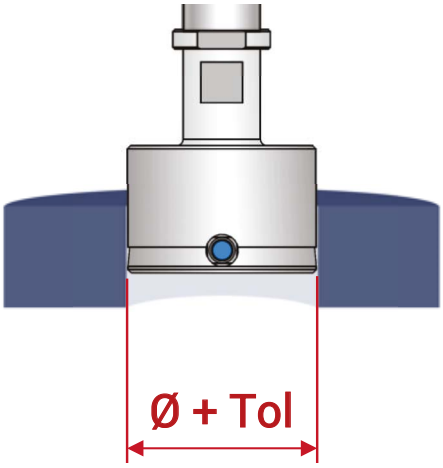
Whenever ordering a bore gauge, please indicate

- order number
- bore diameter
- bore tolerance (as ISO or numerical value)

Ordering examples

1 x 4484016 844 D bore gauge
Nominal bore size Ø 34.5 mm
Bore tolerance H8

1 x 4484048 844 DR bore gauge
Nominal bore size Ø 74.55 mm
Bore tolerance +0.05 / -0.03



Modular system

By combining with the extensive range of accessories (indicators, holders, extensions, stops for defined measuring depths and contra-angles), the bore gauge becomes a precision measuring instrument adapted to the measuring task.

Examples of application compositions



Standard composition

- indicator 1003
- holder 844 Dg
- bore gauge



Composition for defined measuring depth

- indicator 1003
- holder 844 Dg
- extension 844 Dv
- measuring depth stop 844 Dt-3
- bore gauge

Composition for lateral measurement at defined measuring depth

- indicator 2000 W
- holder 844 Dg
- angle attachment 844 Dw
- bore gauge
- setting ring 844 Dt-R

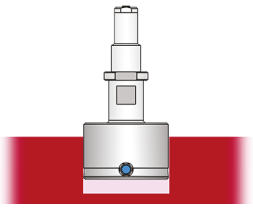


Basic versions

Equipment: Guide cylinder hard-chrome plated, measuring surfaces made of hard metal

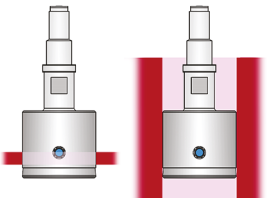
844 D

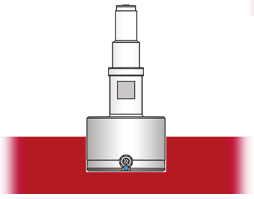
Standard version for general applications
For quick inspection of precisebores



844 DR

Design for through holes and thin-walled holes (Sheet metal)
With extended guide cylinder





844 DS

Version for blind holes
For measurement close to the bottom of the hole

Versions

Version C: 844 D-C / 844 DR-C / 844 DS-C
Measuring surfaces hard chrome-plated: For sensitive surfaces of non-ferrous metals and aluminium alloys



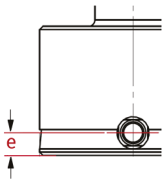
Version R: 844 D-R / 844 DR-R / 844 DS-R
Measuring surfaces ruby tipped For very sensitive surfaces of non-ferrous metals and aluminium alloys



Version D: 844 D-D / 844 DR-D
Measuring surfaces ruby tipped For very sensitive surfaces of soft non-ferrous metals and aluminium alloys



Version FD: 844 D-FD / 844 DR-FD
Deviating front dimension "e": Shortening of the guide cylinder in order to be able to measure closer, or at a defined position, to the bottom of the borehole.



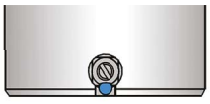
Version M: 844 D-M / 844 DR-M / 844 DS-M
Extended measuring range: For measuring large tolerance fields



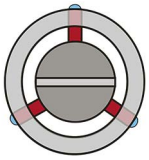
Version HR: 844 D-HR / 844 DR-HR / 844 DS-HR
High Resolution for very narrow bore tolerance fields < 10 µm.
More precise manufacturing tolerance of the guide cylinder for tighter clearance in the bore, thereby reducing axial and radial measurement influences



Version F: 844 DS-F
Only with front bevel (Without pilot groove): For measuring very short blind holes



Version 3 844 D-3 / 844 DR-3
3-point scanning (3 x 120°): For fast measurement of interrupted diameters and detection of shape defects in a polygon



Precision universal measuring instrument

Mahr

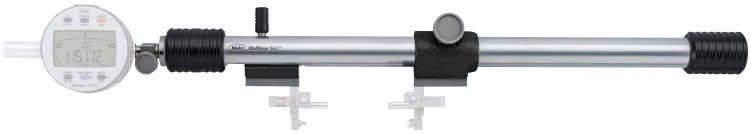
Delivered in case

Design:
- tilting safety of the movable measuring arm carrier
- measuring force direction can be changed for external and internal measurement
- constant measuring force due to built-in measuring force spring
- movable measuring arm support is mounted in a ball guide with low play and low friction
- strong, polished and hard chrome plated column
- the fixed measuring arm support is moved along the column for coarse adjustment

Use:
- exterior and interior dimensions
- external and internal threads
- centring wheels, narrow lugs, recesses and grooves
- external and internal cones, external and internal splines

Delivery:
Operating instructions, mounting and support blocks, wooden case, without measuring arms/pieces and measuring inserts

Note:
Further probe tips on request!



Nº article	312600 844 T	Field of application inside mm	Field of application outside mm	Total length mm	Probe travel mm
30 - 115	○	30 - 115	0 - 85	280	12
110 - 265	○	110 - 265	80 - 235	430	12
260 - 615	○	260 - 615	230 - 585	740	12
610 - 1015	○	610 - 1015	580 - 985	1140	12

Precision universal calliper IP 65

Mahr

IP65 | Digimatic | USB | RS 232 C

Design:
- individually adaptable due to interchangeable measuring arms, probe inserts and stop elements
- application range can be extended by rotating the measuring arm supports
- slide and beam stainless and hardened
- USB, Digimatic, Opto RS232C and Wireless

Functions:
- ON/OFF
- AUTO-ON/OFF
- RESET (Zero setting of the display)
- mm/inch
- PRESET (Presetting of fixed values)
- LOCK function (Keyboard lock)
- DATA

Scope of delivery:
Battery, operating instructions, mounting and support blocks, wooden case, without measuring arms/pieces and measuring inserts

Note:
Fitting connection cablessee under 398010 on page 39/654



Nº article	312607 25 EWR	Measuring range mm	Reading mm	Reading inch	Error limit mm
0 - 300	○	0 - 300	0,01	0.0005	0,03
0 - 600	○	0 - 600	0,01	0.0005	0,03
0 - 1000	○	0 - 1000	0,01	0.0005	0,4
0 - 1250	○	0 - 1250	0,01	0.0005	0,4

Precision universal wireless calliper IP 65

Mahr

Design:
- individually adaptable due to interchangeable measuring arms, probe inserts and stop elements
- application range can be extended by rotating the measuring arm supports
- slide and beam stainless and hardened
- integrated wireless

Functions:
- ON/OFF
- AUTO-ON/OFF
- RESET (Zero setting of the display)
- mm/inch
- PRESET (Presetting of fixed values)
- LOCK function (Keyboard lock)
- DATA

Scope of delivery:
Battery, operating instructions, mounting and support blocks, wooden case, without measuring arms/pieces and measuring inserts

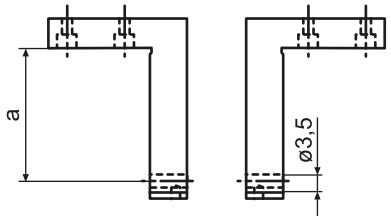


N° article	312608 25 EWRi	Measuring range mm	Reading mm	Reading inch	Error limit mm
0 - 300	○	0 - 300	0,01	0.0005	0,03
0 - 600	○	0 - 600	0,01	0.0005	0,03
0 - 1000	○	0 - 1000	0,01	0.0005	0,4
0 - 1250	○	0 - 1250	0,01	0.0005	0,4

Measuring arm

Mahr

Design:
- for external and internal diameters
- on the holder these arms are reversible to extend the measuring range
- mounting bore 3.5 mm for exchangeable probes
- in each case 2 pieces are necessary



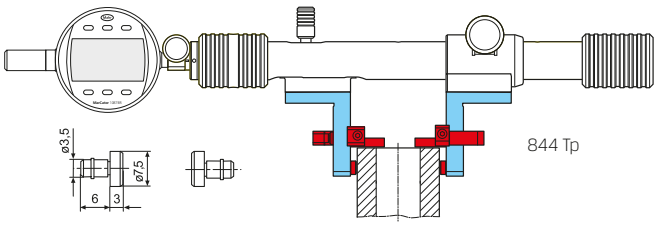
N° article	312601	Reach a mm
25	○	25
35	○	35
70	○	70
100	○	100

Measuring insert for measuring arms

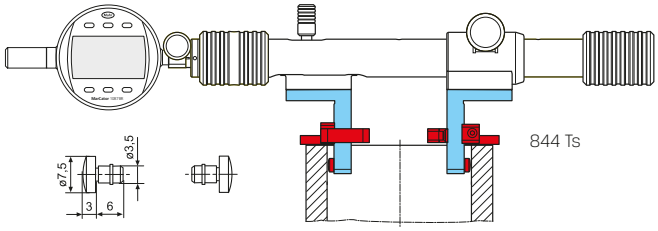
Mahr

Design:
- for external and internal measurements
- made of hardened steel, with cylindrical mounting shank and retainer ring that allows free rotation in the bore of the measuring arms 844 Te
- in each case 2 pieces are necessary

Type 844 Tp: Flat, for outside diameters, distances and widths
Type 844 Ts: Spheric, for inside diameters



844 Tp



844 Ts

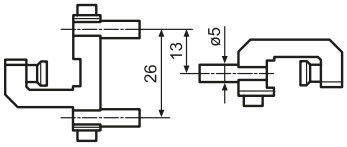
N° article	312604
844TP	○
844TS	○

Stop

Mahr

Design:
- for setting the measuring depth limit
- can be attached to and moved along arms 844 Te and 844 Tx
- reversible for external and internal measurements
- in each case 2 pieces are necessary

N° article	312603
844TW	●

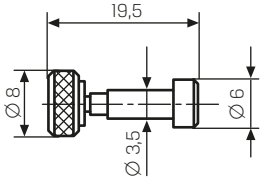


Adapter for measuring arms

Mahr

Design:
- adapter Ø 3.5 - M2.5 for measuring arms see under 312601

N° article	312605
844TAD	○



Precision bore gauge micrometer SU

Schwenk

Design and use:
This bore gauge micrometer is a universal and robust 2-point comparator. It is suited for measuring tasks in production, receiving inspection and testing as well as for final checks. The centring happens automatically in the bore, the base being formed by the centring plate. The wider the centring basis the more reliable the device will be centred in the bore. Utmost accuracy, repeatability max. 0.0005 mm. Transmission error 0.0025 mm. During the measuring operation the reversal point has to be defined. This is done by oscillating of the device around the rigid measuring bolt. In doing so, the minimum value point automatically is passed through, where the axis of the measuring device is exactly vertical to the bore axis. On a mechanical display unit this will clearly be seen by the pointer´s change of direction. Using digital display units a minimum value memory will be helpful. The measuring pins are as standard carbide ball tipped, wear parts are either made of carbide or wearproof, hardened steel

Adjustment via setting rings, micrometer screws or by use of adjustment tool ESU together with gauge blocks

Delivery:
In wooden case, with test certificate plus corresponding measuring pins and discs, without dial gauge



N° article	312610 Steel	Measuring range mm	Measuring depth mm	Number of pins	Number of measuring discs
18 - 35	○	18 - 35	110	9	2
35 - 60	○	35 - 60	138	7	2
50 - 100	○	50 - 100	177	11	3
100 - 160	○	100 - 160	234	7	4
160 - 290	○	160 - 290	234	7	4

N° article	312611 Carbide	Measuring range mm:	Measuring depth mm	Number of pins	Number of measuring discs
6 - 8	○	6 - 8	100	7	–
8 - 12	○	8 - 12	100	9	–
12 - 20	○	12 - 20	110	9	1
18 - 35	○	18 - 35	110	9	2
35 - 60	○	35 - 60	138	7	2
50 - 100	○	50 - 100	177	11	3
100 - 160	○	100 - 160	234	7	4
160 - 290	○	160 - 290	234	7	4

Precision setting device ESU

Schwenk

Design:
Frame with holder for adjustable jaws, a pair of adjustable jaws, measuring legs made of solid carbide in gauge block quality, clamping element, stand. The unit can be employed horizontally or vertically, depending on the desired mode of use. Combined with a set of gauge blocks it offers a cost-effective possibility to calibrate inside callipers. Setting reliability (without consideration of the gauge block quality) ≤ 2 µm, application area 4.5 - 800 mm

Use:
For calibration two measuring legs are wrought in contact to a gauge block or a combination thereof, these are fixed inside the tube of the device, so that the blades stay firmly attached to the gauge blocks. In this way the probing force of the gadget to calibrate has no influence

Delivery:
In wooden case, without gauge blocks and dial gauge

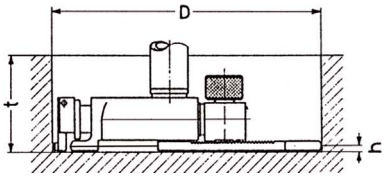


N° article	312612 for inside fine measuring instruments	min. field of application mm	max. field of application mm
4,5 - 160	○	4,5	160
18 - 290	○	18	290
160 - 510	○	160	510

Precision bore gauge micrometer SS

Design and use:
This device allows measurements of blind bores close to the bottom of the bore and of short spigots. Min. distance to the bore bottom is h = 1.5 mm. Also available for min. distance h = 1 mm. During the measuring operation the device touches the bottom of the hole, hence no oscillating for reverse search is needed. Presetting by exchange or shifting of the toothed and scaled vernier callipers. Presetting by using setting rings (384160)

Delivery:
Holder, vernier calliper and probe carbide tipped in wooden case, without dial gauge



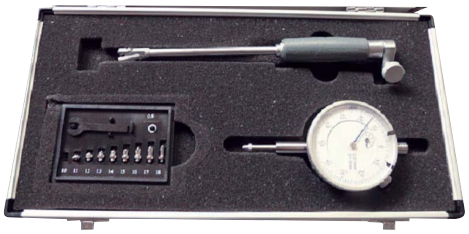


N° article	312613 for blind holes	Measuring range mm	Vernier Callipers mm	Face dimension mm	Measuring depth mm	Measuring path mm
50 - 110	○	50 - 110	50 - 80, 80 - 110	1,5	60	2
110 - 300	○	80 - 110	110 - 150, 150 - 200, 250 - 300, 200 - 250	2	90	2

Inside calliper

Design:
- holder matt chrome-plated
- with dial gauge, reading 0.01 mm

Delivered in case



N° article	312620 Steel	Measuring range mm	Measuring depth mm	Number of pins	Extension mm
6 - 10	●	6 - 10	50	9	–
10 - 18	●	10 - 18	100	9	–
18 - 35	○	18 - 35	125	6	–
35 - 50	○	35 - 50	150	6	–
50 - 100	○	50 - 100	150	11	–
50 - 160	●	50 - 160	150	13	5,00
100 - 250	○	100 - 250	220	4	80,00
160 - 250	●	160 - 250	400	10	50,00
250 - 450	○	250 - 450	320	5	100,00

Precision bore gauge micrometer SV

Design:
This version comprehends two devices of different size to cover a large application range from 6 to 800 mm. Utmost accuracy. Repeatability 0.0005 mm, transmission error 0.0025 mm. The device encompasses a top section and two measuring heads. The touch probes are as standard equipped with a carbide ball

Delivery:
Wooden case, with the corresponding touch probes, measuring heads, without dial gauge



N° article	312614 Steel	312615 Carbide	Measuring range mm	Measuring depth mm	Number of pins	Number of measuring discs
6 - 18	–	○	18 - 160	145	20	15
18 - 160	○	○	18 - 160	100	17	2

Inside calliper

Design:
- holder matt chrome-plated
- dial gauge with reading 0.01 mm
- set compiled from 322200

Delivered in case



N° article	312625 set	Measuring range mm	Contents
18 - 160	●	18 - 160	18 - 35 mm | 35 - 50 mm | 50 - 160 mm

Internal quick calliper IP65

Krœplin Längenmesstechnik

IP65

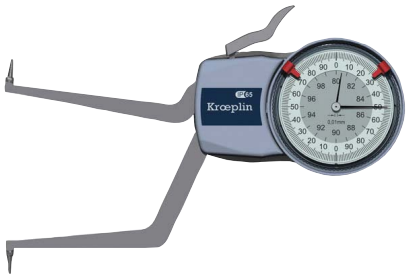
Design:
- device for measuring grooves and bores, with tolerance fingers
- dirt-protected and drip-proof
- measuring contacts in solid carbide
- absolute measuring device with clear and easy to read scale
- secure reproducibility of the display

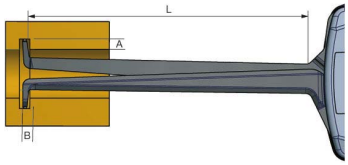
Use:
- for measuring boreholes, grooves, distances etc.
- due to diverse stylus shapes universally applicable (stylus shape S = cutting edge, K = carbide ball)

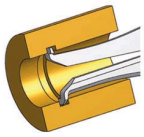
Delivery:
With test certificate and operating manual



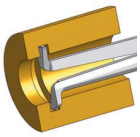








S



K

N° article	313000 analogue	min. field of application mm	max. field of application mm	max. Measuring range mm	Reading mm	L mm	A mm	B mm	Error limit mm	Sensor design
H102	○	2,5	12,5	10	0,005	12	0,7	0,5	0,015	S/R0.1
H105	○	5	15	10	0,005	35	2,3	0,8	0,015	K/0.6
H210	●	10	30	20	0,01	85	5,2	1,2	0,03	K/1.0
H220	●	20	40	20	0,01	85	7	1,2	0,03	K/1.0
H230	●	30	50	20	0,01	85	7	1,2	0,03	K/1.0
H240	○	40	60	20	0,01	85	8,3	1,2	0,03	K/1.0
H250	○	50	70	20	0,01	85	8,3	1,2	0,03	K/1.0
H260	○	60	80	20	0,01	85	8,3	1,2	0,03	K/1.0
H270	○	70	90	20	0,01	85	8,3	1,2	0,03	K/1.0
H280	○	80	100	20	0,01	85	8,3	1,2	0,03	K/1.0

Internal quick calliper IP67

Krœplin Längenmesstechnik

IP67 Digimatic USB

Design:
- device for measuring grooves and bores, with tolerance fingers
- dirt-protected and drip-proof
- measuring contacts in solid carbide
- absolute measuring device with clear and easy to read scale
- secure reproducibility of the display
- with data output

Use:
- for measuring boreholes, grooves, distances etc.
- due to diverse stylus shapes universally applicable (stylus shape S = cutting edge, K = carbide ball)

Delivery:
With test certificate and operating manual





N° article	313001 digital	min. field of application mm	max. field of application mm	max. Measuring range mm	Reading mm	L mm	A mm	B mm	Error limit mm	Sensor design
L102	○	2,5	12,5	10	0,005	12	0,7	0,5	0,015	S/R0.1
L105	●	5	15	10	0,005	35	2,3	0,8	0,015	K/0.6
L210	●	10	30	20	0,01	85	5,2	1,2	0,03	K/1.0
L220	●	20	40	20	0,01	85	7	1,2	0,03	K/1.0
L230	●	30	50	20	0,01	85	7	1,2	0,03	K/1.0
L240	○	40	60	20	0,01	85	8,3	1,2	0,03	K/1.0
L250	○	50	70	20	0,01	85	8,3	1,2	0,03	K/1.0
L260	○	60	80	20	0,01	85	8,3	1,2	0,03	K/1.0
L270	○	70	90	20	0,01	85	8,3	1,2	0,03	K/1.0
L280	○	80	100	20	0,01	85	8,3	1,2	0,03	K/1.0

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Comparative measurement of bores with high precision

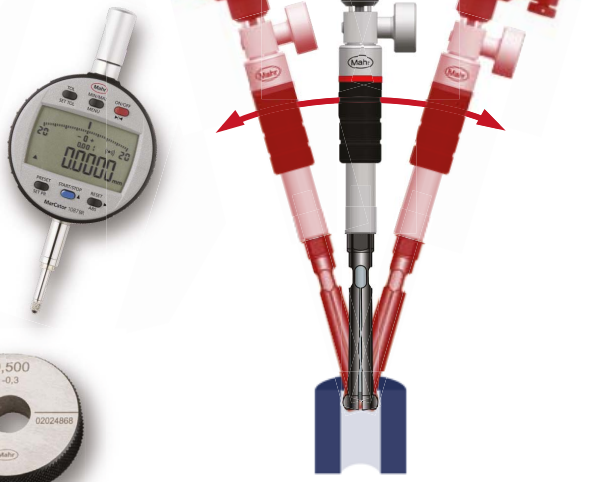
The internal probes of the 844 K family are 2-point comparative measuring devices, with which a reversal point is a reversal point is determined. This reversal point corresponds to the minimum and thus the exact bore diameter.

Measuring process

The measured value is indicated by analogue dial indicators or electronic dial gauges.

Practical tip

With an electronic dial indicator such as the types 1087 BR or 1087 BRi you have the great advantage that the reversal point is automatically MIN-function and that the display can show an absolute PRESET setting - an absolute measured value can be displayed. In addition, the measurement data can be conveniently and securely transferred to a PC or CAQ system via data cable or integrated wireless technology. or a CAQ system.



Adjusting the comparative measuring device

The setting to a respective nominal dimension is carried out in setting rings.

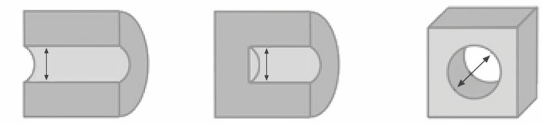


Measuring process

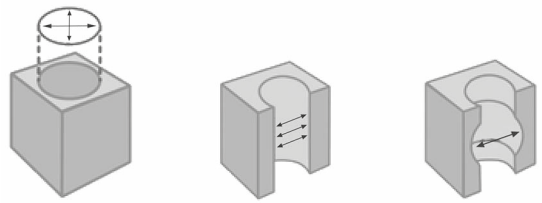
By oscillating in a borehole the reversal point (minimum value) is determined.

Typical applications of self-centring inside diameter gauges

- quick check of bore diameters



- detection of roundness and cylindricity deviations by turning and moving to other bore depths





Special advantages

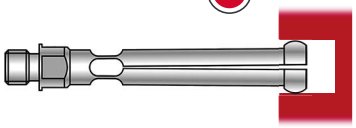
Adjustment to a respective nominal dimension is carried out in adjusting rings.

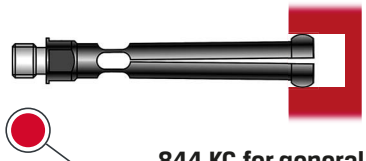
- self-centring in the bore
- quick determination of the reversal point by oscillation
- measured value is displayed immediately
- particularly suitable with the use of digital display units, especially for direct processing of the measured values

Versions of the inside measuring probes (Spread probes)

844 K standard for general kinds of bores

- spreading probe made of hardened steel
- measuring surfaces hard chrome plated



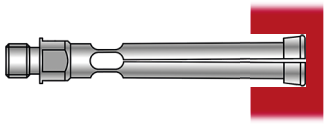


844 KC for general kinds of bores with DLC coating

- spreader probe made of hardened steel
- measuring surfaces and inner edges DLC-coated (Diamond-like hard layer)
- with increased wear protection und very low friction coefficient, thus
- ideally suited for measurements in sensitive or abrasive surfaces
- for general kinds of bores

844 KS spread probe for bore measurements up to near the bottom of the hole

- spreading probe made of hardened steel
- measuring surfaces hard chrome plated



Special advantages of the DLC coating

- **DLC coating** (Diamond Like Carbon)
- extremely high coating for **very high wear resistance**
- **extremely low friction coefficient, thus preventing** e.g.
  - streaking on finely machined non-ferrous metal surfaces
  - increased wear in abrasive materials
- full-surface DLC coating on measuring surfaces incl. inner contact point of the drive needle, for **very high long-term accuracy (Linearity)**
- **visual wear indication:** Visible bright spot after reached wear of the coating
- **excellent corrosion protection**

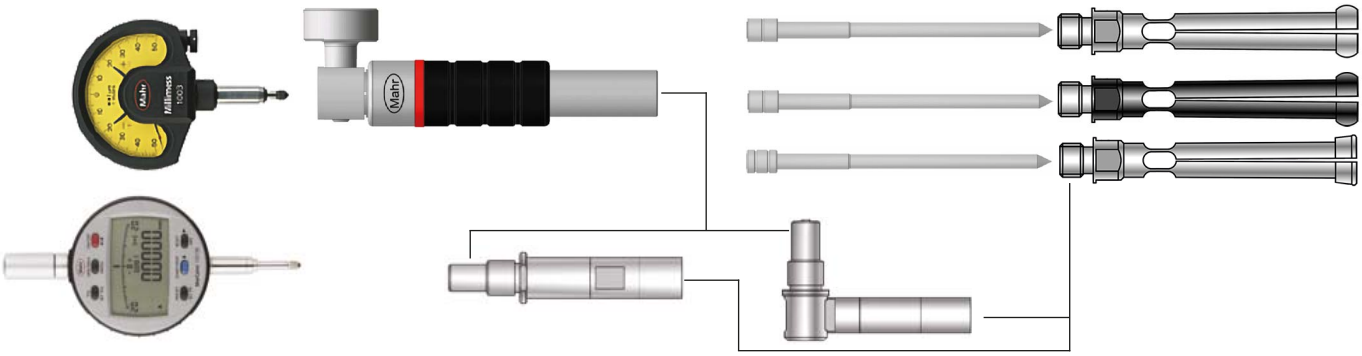
Best equipment for long-term accuracy

To transmit the measuring movement of the probe head to the display unit drive needles are inserted into the probe. For **maximum service life** and thus **high linearity over a long period of time**, the **Mahr drive needles are generally made of solid carbide.**



Modular system

By combining them with the extensive range of accessories (indicators, internal probes with drive needles, holders, extensions and contra-angles), the internal probes become a precision measuring instrument adapted to the measuring task.



Inside calliper 844K

Mahr

Design 312616:
- measuring head made of hardened steel, hard-chrome plated
- constant measuring force due to built-in measuring force spring
- for comparative measurement of diameters and testing for shape deviations such as roundness and conicity
- determination of the reversal point by oscillating in the borehole

Design 312617:
- measuring head made of hardened steel, with DLC coating
- extremely high wear resistance due to DLC, for long service life even on hard and abrasive surfaces
- wear indicator, worn areas appear as light spots in the dark DLC coating
- constant measuring force due to built-in measuring force spring
- determination of the reversal point by oscillating in the borehole

Delivery:
Wooden box, measuring head, driving needle and measuring device holder 844 Kg.



N° article	312616 Type K. standard	312617 Type KC, standard, DLC coating	Measuring range mm	Number of probes	Linearity deviation fe	Repeatability fw
0,95 - 1,55	○	○	0,95 - 1,55	5	2 % min. 0.0001	0,0001
1,50 - 3,95	○	○	1,5 - 3,95	9	1 % min. 0.0001	0,0001
3,70 - 9,80	○	○	3,7 - 9,8	21	1 % min. 0.0001	0,0001
1,50 - 9,80	○	○	1,5 - 9,8	12	1 % min. 0.0001	0,0001
9,40 - 20,60	○	○	9,4 - 20,6	11	1 % min. 0.0001	0,0001

Design 312618:
- measuring head made of hardened steel, hard-chrome plated
- for measurements close to the edge of the bore
- for comparative measurement of diameters and testing for shape deviations such as roundness and conicity
- constant measuring force due to built-in measuring force spring
- determination of the reversal point by oscillating in the borehole

Delivery:
Wooden box, measuring head, driving needle and measuring device holder 844 Kg.



N° article	312618 Type KS, for blind holes	Measuring range mm	Number of probes	Linearity deviation fe	Repeatability fw
3,70 - 9,80	○	3,7 - 9,8	12	1 % min. 0.0001	0,0001
9,40 - 20,60	○	9,4 - 20,6	11	1 % min. 0.0001	0,0001

Precision small dial gauge

DIN 878 | SHOCK PROOF

Design:
- 1/100 scale division
- metal housing and smooth-running precision measuring mechanism
- clamping shank made of stainless steel, hardened and finest ground
- turnable scale for zero-setting at any pointer position, adjustable tolerance fingers
- rod made of stainless steel, ground and micro-finished
- exchangeable measuring insert or to be replaced by special probes

ST =shock resistant version


M6


M4

N° article	320000	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
M6	●	3	0,01	0,5	32	8
M4	●	3	0,01	0,5	40	8
M4ST	●	3	0,01	0,5	40	8
M4/5	●	5	0,01	0,5	40	8
M4/5ST	●	5	0,01	0,5	40	8
M4/10	●	10	0,01	1	40	8

Precision small dial gauge IP54

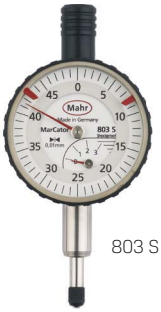
DIN 878 | IP54 | SHOCK PROOF

Design:
803 A:
- chrome-plated housing
- precision gears and pinions
- adjustable tolerance fingers
- detachable protection cap at the end of the spindle

803 S:
- shockproof version

803 SW:
- shockproof, water and oil protected
- detachable protection cap at end of spindle
- dial ring and clear screen sealed with O-rings
- rubber bellow at the measuring pin


803 A


803 S


803 SW

N° article	320005	Measuring span mm	Reading mm	Pointer revolution mm	Dial Ø mm	Clamping shank Ø h6 mm
803A	●	3	0,01	0,5	50	8
803S	●	3	0,01	0,5	50	8
803SW	●	3	0,01	0,5	50	8

Precision dial gauge

DIN 878 | SHOCK PROOF | calibrated

Design:
- 1/100 reading, like 320000, but with housing diameter 58 mm

ST: - shockproof version with fine adjustment of pointer

ST0: -shockproof version without fine adjustment of pointer

M2M: - particularly low-priced standard version

TS:
- with high-quality shock protection
- metal outer ring and lifting sleeve
- measuring insert with ruby ball

N° article	320100	320101	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
M2M	–	●	10	0,01	1	58	8
M2	●	–	10	0,01	1	58	8
M2-KAL	○	–	10	0,01	1	58	8
M2ST0	●	–	10	0,01	1	58	8
M2ST0-KAL	○	–	10	0,01	1	58	8
M2ST	●	–	10	0,01	1	58	8
M2ST-KAL	○	–	10	0,01	1	58	8
M2TS	●	–	10	0,01	1	58	8
M2TS-KAL	○	–	10	0,01	1	58	8


M2ST0

Precision dial gauge IP54

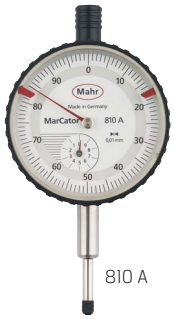
DIN 878 | IP54 | SHOCK PROOF | calibrated

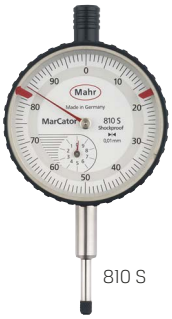
Design:
- chrome-plated housing, precision gears and pinions
- adjustable, coloured tolerance fingers
- detachable protection cap at the end of the spindle

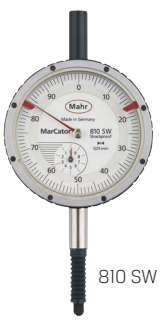
810 A: - standard design

810 S: - shockproof version Ø

810 SW:
- shockproof, water and oil protected
- with rubber bellow at measuring pin to avoid ingress of liquids and dirt
- detachable protection cap at end of spindle


810 A


810 S


810 SW

N° article	320105	Measuring span mm	Reading mm	Pointer revolution mm	Dial Ø mm	Clamping shank Ø h6 mm
810A	●	10	0,01	1	50	8
810A-KAL	○	10	0,01	1	50	8
810S	●	10	0,01	1	50	8
810S-KAL	●	10	0,01	1	50	8
810SW	●	10	0,01	1	50	8
810SW-KAL	○	10	0,01	1	50	8

Precision dial gauge

Mitutoyo

Design:
- with continuous scale
- end cap flat
- repeatability 3 µm
- scale 0 - 100 or 100 - 0

DIN 878



N° article	320107 2046AB	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
2046AB	●	10	0,01	1	57	8

Precision dial gauge IP67

Käfer

Design:
- with rubber bellows seal at the entry point of the measuring pin into the shaft
- the upper end of the measuring pin is sealed by a protection cap with O-ring
- metal outer ring
- an additional O-ring is located between the rotatable outer ring and the metal housing
- back sealed by a rubber ring

DIN 878 | IP67 | SHOCK PROOF


M4STWD


M2STWD

N° article	320150 shock-protected	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
M4STWD	○	3	0,01	0,5	44	8
M2STWD	●	10	0,01	1	61	8

Precision dial gauge

Käfer

Factory standard | SHOCK PROOF

Design:
- robust housing, with smooth-running precision gear measuring system in sapphire bearing
- clamping shank made of stainless steel, hardened and fine ground
- pivotable scale for zero setting, adjustable tolerance fingers
- rod made of stainless steel, ground and micro-finished
- exchangeable insert

S = shock resistant version



N° article	320220 with high resolution	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
KM1000	●	1	0,001	0,2	40	8
KM1000S	○	1	0,001	0,2	40	8
FM1000	●	1	0,001	0,2	58	8
FM1000S	○	1	0,001	0,2	58	8
FM1000/5	●	5	0,001	0,2	58	8

Precision dial gauge

Mahr

DIN 878 | SHOCK PROOF

Design:
- precision gears and pinions
- axes in stone bearing
- dial ring and clear screen
- sealed with O-rings
- detachable protection cap at end of spindle
- chrome-plated housing
- with integrated back



N° article	320225 shock-protected	Measuring span mm	Reading mm	Dial Ø mm	Accuracy f_e µm	Clamping shank Ø h6 mm
810SM	○	1	0,001	50	3	8

Precision dial gauge

Mitutoyo

Design:
- with display on both sides
- jewel bearing
- scale from 0 - 100 - 0
- end cap flat

2109AB-10:
shock-protected



DIN 878 | DIN 878

N° article	320227	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm	Repeatability mm
2109AB-10	●	1	0,001	0,2	57	8	0,001
2119AB-10	●	5	0,001	0,2	57	8	0,002

High precision dial gauge

Käfer

Design:
- with 1/1000 mm reading
- like 320220, albeit as oil- and waterproof version



Factory standard | SHOCK PROOF

N° article	320250	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
FM1000SW	○	1	0,001	0,2	61,5	8

High precision dial gauge

Käfer

Design:
- the pin travel is magnified and transferred by a lever to the pointer
- measuring range division of 1 mm
- due to the lever transmission, the reading range of inversion is very low at max. 1.5 µm
- suited for very precise comparison measurements
- deviation spans fe and fges are almost halved
- measuring mechanism with the lever system offers a good impact protection

Delivery:
With metal outer rings and lifting sleeves



Factory standard

N° article	320320 with comparator precision movement	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
FM1101	●	1	0,001	0,1	58	8

Precision dial gauge

Käfer

Design:
- with extreme robust metal housing and smooth-running mechanic
- clamping shank made of stainless steel, hardened and fine ground
- pivotable scale for zero setting at any position
- adjustable tolerance fingers
- probe rod made of stainless steel, ground and micro-finished
- exchangeable measuring insert or to be replaced by special probes

STO = impact-protected, without fine-adjustment of pointer



320350

Factory standard | DIN 878 | SHOCK PROOF



320400

N° article	320350 with large measuring range	320400 with large housing	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
GM80	–	○	10	0,01	1	80	8
GM80SW	–	○	10	0,01	1	80	8
GM100	–	○	10	0,01	1	100	8
M2/20	●	–	20	0,01	1	58	8
M2/30	●	–	30	0,01	1	58	8
M2/30STO	●	–	30	0,01	1	58	8
M2/50	●	–	50	0,01	1	58	8
M2/50STO	○	–	50	0,01	1	58	8
M2/80	○	–	80	0,01	1	58	8
M2/100	○	–	100	0,01	1	80	10

Error-free dial gauge

DIN 878 | SHOCK PROOF

Design:
- measuring pin and clamping shank made of stainless steel
- mounting takes place on the clamping shank
- shock proofed version with free lift and limited indicating range
- the large free lift supports the insertion of the test items

SI = security


SI-45


SI-90

N° article	320450 with measuring range limited to one revolution	Measuring span mm	Reading mm	Free lift mm	Housing Ø mm	Clamping shank Ø h6 mm
SI-45	●	0,4	0,01	4,5	40	8
SI-90	●	0,8	0,01	9	58	8

Error-free dial gauge IP52

Design:
- dial gauges with full pointer revolution prevent reading errors
- damped end point
- protection against dripping water
- weight approx. 70 g

DIN 878 | IP52


2971AB

N° article	320455	Measuring span mm	Reading mm	Housing Ø mm	Clamping shank Ø h6 mm	Repeatability mm
2971AB	○	0,5	0,01	57	8	0,003
2972AB	○	1	0,01	57	8	0,003
2973AB	○	1,6	0,02	57	8	0,003

Precision dial gauge

DIN 878 A


M2R


M2TM

N° article	320570 rearward measuring pin	320590 Magnetic back	Measuring span mm	Reading mm	Pointer revolution mm	Housing Ø mm	Clamping shank Ø h6 mm
KM4R	○	–	3	0,01	0,5	40	8
M2R	○	–	3	0,01	1	58	8
KM4TM	–	○	3	0,01	0,5	40	8
M2TM	–	●	10	0,01	1	58	8

Digital dial gauge

Factory standard | RS 232 C

Design:
- aluminium housing with robust plastic covering, housing Ø 57 mm
- measuring pin and clamping shank stainless, hardened and ground
- LCD display, digit height 11 mm
- with data output (RS232C interface)

Functions:
- mm/inch selection
- AUS (OFF), EIN (ON)
- NULL (ZERO) setting in any position



N° article	320595	Measuring span mm	Reading mm	Housing Ø mm	Clamping shank Ø h6 mm
10,5	●	10,5	0,01	58	8

Precision digital dial indicator IP42

Mahr

Design:
- inductive measuring system
- data output optional USB, OPTO RS232C, DIGIMATIC
- data in connection with data cable
- operation speed 1.5 m/s
- detachable protection cap at the end of the spindle
- mm/inch selection

IP42 | TOL | ABS | Digimatic | RS 232 C | USB

Functions:
- ON/OFF, RESET (Zero-setting of the display)
- PRESET (Presetting of fixed values)
- ABS (display can be set to zero without losing the reference
- 0 (mode of tolerance indication)

Delivery:
With battery

Note:
Fitting connection cables see under 398010 on page 39/689





REFERENCE



320615



320620

N° article	320615 MarCator 1086 R 0.01 mm	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	a mm	b mm	c mm
12,5	○	12,5	0,02	0,01	0.0005	0.65 - 0.90	126,3	23	13,5
25	●	25	0,02	0,01	0.0005	0.65 - 1.15	153,4	26,8	26,5
50	○	50	0,02	0,01	0.0005	1.25 - 2.70	267,3	40	52
100	○	100	0,02	0,01	0.0005	1.60 - 3.50	420,3	91	103

N° article	320620 MarCator 1086 R 0.001 mm	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	a mm	b mm	c mm
12,5	●	12,5	0,004	0.0005 | 0.001 | 0.002 | 0.005 | 0.01	0,00002|0,00005|0,0001|0,0002|0,0005	0.65 - 0.90	126,3	23	13,5
25	●	25	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0.65 - 1.15	153,4	26,8	26,5
50	●	50	0,007	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	1.25 - 2.70	267,3	40	52
100	●	100	0,008	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	1.60 - 3.50	420,3	91	103

Precision digital dial indicator IP52

Mahr

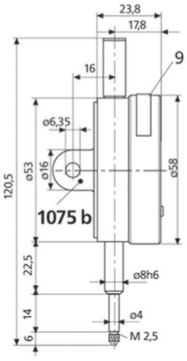
Design:
- immediately ready to measure due to the reference system
- high-contrast 12 mm high LCD display
- operating temperature 10 - 40 °C
- operation speed 1.5 m/s
- data output optional USB, Opto RS232C, DIGIMATIC

IP52 | Digimatic | RS 232 C | USB

Functions:
- ON/OFF, 0 (zero-setting of display)
- mm/inch selection, reversal of counting direction
- PRESET (Presetting of fixed values)
- DATA (in combination with data cable)
- LOCK function to lock all keys
- AUTOON/OFF

Delivery:
With battery and operating manual

Note:
Fitting connection cables see under 398010 on page 39/689.



REFERENCE



N° article	320604 MarCator 1075 R	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	Clamping shank Ø h6 mm
0,001	●	12,5	0,005	0,001	0.00005	0.5 - 1	8
0,005	●	12,5	0,015	0,005	0.0001	0.5 - 1	8
0,01	●	12,5	0,02	0,01	0.0005	0.5 - 1	8

Precision digital dial indicator IP42

Mitutoyo

Design:
- one-time setting of the starting position (remains the absolute zero point until the battery is changed)
- measuring precision even at high speed
- easy reading due to large display characters
- 6-digit LCD display
- digit height 9 mm
- with reversal of counting direction
- contact point made of carbide ball
- low voltage or counting error alert
- end cap flat
- die cast housing
- with factory calibration certificate

IP42 | ABS | Digimatic | USB | U-WAVE®

Note:
Fitting connection cables see under 398000 on page 39/690.

NEW



ABSOLUTE

N° article	320618 Series 543 0.01 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank Ø h6 mm
12,7	●	12,7	0,004	0,01	≤ 1.5	8

Precision digital wireless dial gauge IP42

Mahr

Design:
- immediately ready to measure due to the reference system
- integrated wireless transmitter
- high-contrast 11 mm high LCD display
- control panel and display rotatable by 280°
- clamping shank and measuring pin made of stainless, hardened steel
- data output optional USB, Opto RS232 C, DIGIMATIC or integrated wireless

Functions:
- ON/OFF
- RESET (zero setting of the display)- ON/OFF, RESET (zero-setting of the display)
- mm/inch selection, reversal of counting direction
- PRESET (Presetting of fixed values)
- TOL (tolerance input)
- ABS
- DATA (in combination with data cable)
- LOCK function to lock all keys
- factor (Adjustable)
- 0 (mode of tolerance indication)

Delivery:
With battery and operating manual



N° article	320623 MarCator 1086 Ri	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	Clamping shank ∅ h6 mm
12,5	○	12,5	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0,65-0,90	8
25	○	25	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0,65-1,15	8
50	○	50	0,007	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	1,25-2,70	8
100	○	100	0,008	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	1,80-3,50	8

Precision digital dial indicator
IP42, for 2-point internal measurements

Mahr

Design:
- for 2-point internal measurements, e.g. for bore gauge micrometers 322610 et seq.
- the point of reversal is detected during the oscillation
- reversal of counting direction
- individual buttons can be locked
- inductive measuring system
- data output MarConnect

Functions:
- ON/OFF, RESET (Zero-setting of the display)
- PRESET (Presetting of fixed values)
- TOL (tolerance display)
- START/STOP of the reversal point searching
- MAX/MIN memory of the reversal point searching
- ABS (display can be set to zero without losing the reference to the preset value)
- 0 (analogue display set to zero)

Note:
Fitting connection cables see under 398010 on page 39/689.



N° article	320625 MarCator 1087 BR 0.001 mm	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	Clamping shank ∅ h6 mm
12,5	○	12,5	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0.65 - 0.90	8

Precision digital wireless dial gauge
IP42, for 2-point internal measurements

Mahr

Design:
- integrated wireless transmitter
- high-contrast LCD display
- control panel and display rotatable by 280°
- detachable protection cap at the end of the spindle
- clamping shank and measuring pin made of stainless, hardened steel
- immediately ready to measure due to the reference system

Functions:
- Null (setting the analogue display to zero)
- ABS (display can be set to zero without losing the reference to PRESET)
- Auto ON/OFF
- data in connection with data cable
- factor adjustable
- Lock (individual key lock)
- Max./Min. memory to find the reversal point
- ON/OFF
- PRESET (presetting of fixed values)
- Range (switching of measuring range and scale division)
- Reset (zero-setting of display)
- TIR (MAX-MIN) for concentricity and planarity check
- tolerance indication
- reversal of counting direction
- mm/inch selection

Delivery:
Incl. operating manual and battery

Note:
Fitting radio receiver incl software 3.1 see under 398026



N° article	320628 MarCator 1087 Ri 0.001 mm	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	Clamping shank ∅ h6 mm
12,5/0,001	○	12,5	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0.65 - 0.85	8

Precision digital dial indicator

Mitutoyo

IP42, for 2-point internal measurements

Design:
- for 2-point internal measurements
- 7-digit LCD display
- reading position can be rotated up to 330°
- power supply 1 battery CR2032

Functions:
- ON/OFF
- PRESET
- tolerance setting
- Data/Hold
- Fast Mode
- Reset
- key lock function
- data output

NEW



IP42 | TOL | ABS | Digimatic | USB

ABSOLUTE

Note:
Fitting connection cables see under 398000 on page 39/690.

N° article	320627 Series 543 0.001 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank ∅ h6 mm
12,7	●	12,7	0,003	0,001	≤ 1.5	8

Precision digital dial indicator IP42

Mitutoyo

Design:
- one-time setting of the starting position (remains the absolute zero point until the battery is changed)
- measuring precision even at high speed
- easy reading due to large display characters
- slim design
- 6-digit LCD display
- with reversal of counting direction
- contact point made of carbide ball
- low voltage or counting error alert
- measuring force ≤ 1.8 N

Note:
Fitting connection cables see under 398000 on page 39/690.



IP42 | ABS | Digimatic | USB | U-WAVE®

ABSOLUTE

N° article	320631 Series 575 0.01 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank ∅ h6 mm
25,4	●	25,4	0,004	0,01	≤ 1.8	8

Precision digital dial indicator IP54

Mahr

Design/Functions:
- like 320615 or 320620, resp.
- splashproof to IP54

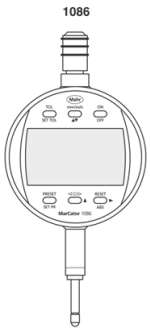
Delivery:
With battery

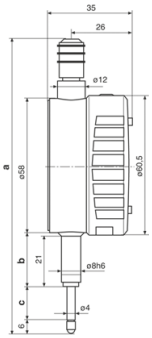
Note:
Fitting connection cables see under 398010 on page 39/689.

IP54 | TOL | ABS | Digimatic | RS 232 C | USB

N° article	320630 MarCator 1086 WR	Measuring span mm	Error limit mm	Reading mm	Reading inch	Measuring range N	a mm	b mm	c mm
12,5/0,001	○	12,5	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0.65 - 1.40	144,3	21	28,5
25/0,001	○	25	0,004	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	1 - 2.25	193,2	24,8	50





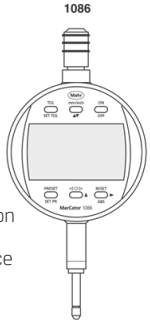


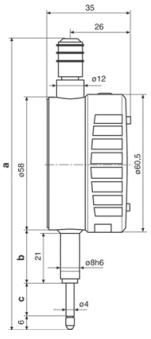
Precision digital dial indicator IP42

Mahr

Design:
- combined digit and scale display
- inductive measuring system
- tolerance and dynamic measuring functions
- tolerance indication: The integrated bar graph visualises the tolerance deviation
- the out of tolerance state is indicated by arrows appearing on the display
- data output MarConnect
- data in connection with data cable
- operation speed 1.5 m/s
- high-contrast LCD display, digit height 8.5 mm
- mm/inch selection

Dynamic measuring functions:
- MAX-MIN function for concentricity and planarity testing
- MAX/MIN memory to find the reversal point
- ON/OFF, RESET (Zero-setting of the display)
- PRESET (to enter fixed values), reversal of counting direction
- TOL (tolerance input)
- ABS (display can be set to zero without losing the reference to PRESET)







IP42 | TOL | ABS | MAX MIN | Digimatic | RS 232 C | USB

Note:
Fitting connection cables see under 398010 on page 39/689.

N° article	320635 MarCator 1087 R	Measuring span mm	Reading mm	Reading inch	Measuring range N	a mm	b mm	c mm
12,5	●	12,5	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0.65 - 0.90	126,3	23	13,5
25	○	25	0.0005, 0.001, 0.002, 0.005, 0.01	0.00002, 0.00005, 0.0001, 0.0002, 0.0005	0.65 - 1.15	153,4	26,8	26,5

Precision digital dial indicator IP42

Mitutoyo

Design:
- multifunctional standard dial indicator that is reliable and easy to operate
- bidirectional communication possible, e.g. for parametrisation via PC (Digimatic S1 interface)
- with ABSOLUTE system
- one-time setting of the starting position (remains the absolute zero point until the battery is changed)
- easy reading of the values due to a large digital/analogue display
- model available with digital digit step of 0.5 µm
- simple calculations and peak value detection are possible
- equipped with a warning function for the calibration plan
- GO/±NG assessment is performed by setting the upper and lower tolerances
- display 330° rotatable
- function lock protects the dial indicator from unauthorised use

IP42 | TOL | ABS | Digimatic | USB | U-WAVE®

NEW



N° article	320645 Series 543 0.0005 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank Ø h6 mm	Repeatability mm
12,7	●	12,7	0,003	0,0005	≤ 1,5	8	0,002
25,4	○	25,4	0,003	0,0005	≤ 1,8	8	0,002
50,8	○	50,8	0,005	0,0005	≤ 2,3	8	0,002

N° article	320644 Series 543 0.01 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank Ø h6 mm	Repeatability mm
12,7	○	12,7	0,02	0,01	≤ 1,5	8	0,010
25,4	○	25,4	0,02	0,01	≤ 1,8	8	0,010
50,8	○	50,8	0,04	0,01	≤ 2,3	8	0,010

Precision digital dial indicator

Mitutoyo

Design:
- electronic multifunctional dial gauge
- bidirectional communication possible, e.g. for parametrisation via PC (Digimatic S1 interface)
- with ABSOLUTE system - one-time setting of the starting position, which remains the absolute zero point until the battery is changed
- easy reading of the values due to a large digital/analogue display
- simple calculations and peak value detection are possible
- equipped with a warning function for the calibration plan
- red/green LCD backlight for visual GO/±NG tolerance evaluation
- MAX/MIN/RANGE (runout value) function with a frequency of 500 scans/s

IP30 | TOL | MAX MIN | Digimatic

NEW



N° article	320647 Series 543 0.0005 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank Ø h6 mm	Repeatability mm
25,4	○	25,4	0,0025	0,0005	≤1,8	8	0,002
50,8	●	50,8	0,004	0,0005	≤2,3	8	0,002

Compact length measuring device IP42

Mahr

Design:
- high-resolution and high-contrast colour display
- display can be tilted continuously for optimum viewing angle
- mains or battery operation possible, therefore also suitable for mobile use
- wall mount possible

Functions:
- ON/OFF
- mm/inch selection, reversal of counting direction
- switching to different measuring ranges
- MAX/MIN memory
- TIR for concentricity and planarity check
- TOL (tolerance input)
- PRESET (Presetting of fixed values)
- switching of the numerical increment
- DATA (in combination with data cable)
- menu lock

Delivery:
Power supply unit and operating instructions

IP42 | TOL | MAX MIN | Digimatic | RS 232 C | USB



N° article	320650 Millimar C 1200 M
C1200M	○

Compact length measuring device Millimar C

Mahr

Design:
- flexible use for a wide range of measuring tasks
- for inductive and incremental probes or for pneumatic measuring equipment
- high-resolution and high-contrast colour display
- display can be tilted continuously for optimum viewing angle
- 3 measured value displays to choose from: Number, pointer or bar
- 1 - 3 features can be displayed simultaneously
- very simple operation
- different measuring tasks can be stored on the memory card
- compact housing
- wall mount possible

Functions:
- mm/inch
- PRESET (Presetting of fixed values)
- 1-point or 2-point master measurement
- HOLD (Measured value storage)
- switching of the numerical increment
- factor (Adjustable)
- reversal of counting direction
- programmable control input
- measuring sequence with time control
- DATA (Data transmission)

Delivery:
Power supply unit, micro SD memory card, operating instructions.

Note:
- N 1700 measuring modules (320653) are additionally required accessories
- additional software "MarWin 13" available

IP42 | TOL | MAX MIN | Digimatic | USB

NEW

N° article		C1202
320652 C 1202 Millimar, without N 1700		○
Display		TFT colour display 110 mm (4.3"), 480×272 pixels
Display range Numerical display	µm	± 999 999,9
Display range scale display	µm	± 5000, ± 2000, ± 1000, ± 300, ± 100, ± 30, ± 10, ± 3
Digit increment	µm	0,01 | 0,1 | 1
Scale division	µm	500, 200, 100, 20, 10, 2, 1, 0,2
Measuring combinations		+A, -A, +B, -B, A+B, +A-B, -A+B, -A-B
Features		3
Dynamic functions		Max, Min, Max-Min, (Max+Min) /2, mean value
Statistical functions		Length, angle
Configuration		Keyboard
Data transmission rate	Hz	30
Frame rate	fps	40
Error limit digit display		0.3 % (min. 0.2 µm) 0.3 % (min. 0.04 µm)* * (with N 1702 M-HR)
Error limit scale display		0.25 % of the full scale value / 0.3 % of the displayed value
Width	mm	130
Hauteur	mm	175
Depth	mm	145



Module for inductive probes

Mahr

Design:
- flexibly combinable RS 485 bus modules
- powerful connection modules for analysing measuring sensors (N1702M: inductive/pneumatic | N1702M-HR: inductive)
- connection of the N 1700 modules via USB interface to the smart and universally applicable Millimar Cockpit evaluation and configuration software onwards
- max. theoretical bus data rate of 4189 values/s (depending on the number of connected channels)
- synchronised data retrieval from several connected probes
- connection of all probe types of a compatibility via one and the same module

Note:
Resolution of the measuring signal (numerical step value)
N1702M: 0.1 µm
N1702M: 0.01 µm

NEW



N° article	320653
N1702M	○
N1702M-HR	○

Module for incremental probes

Mahr

Design:
- flexibly combinable RS485 bus modules
- powerful connection modules for analysing measuring sensors (incremental 1 Vss) such as length sensors or rotary encoders
- reference point evaluation
- synchronised data retrieval from several connected probes
- as a measuring module on the Millimar C 1202 from firmware from firmware 1.1.0.0 employable
- connection of the N 1700 modules via USB interface to the smart and universally applicable Millimar Cockpit evaluation and configuration software from version 14 onwards
- connection of all probe types of a compatibility via one and the same module
- max. theoretical bus data rate of 4189 values/s (depending on the number of connected channels)

Note:
Resolution of the measuring signal (numerical step value) 0.01 / 0.1 µm

NEW



N° article	320654
N1702VPP	○

Inductive lever probe IP50

Mahr

IP50

Design:
- flexible probe adaptation to probing surface
- high operational robustness, since measuring system is remote from guide and clamping shaft
- excellent clamping properties
- distance of lower stop -0.37 mm
- distance of upper stop 1.6 mm
- cable length 1.5 m



N° article	320655 Millimar 1318	Plage de mesure mm	Measuring range N	Repeatability µm	Measured value reversal range µm
1318	○	-0,3 - 1	0,25 +/- 0,05	0,03	0,5

Inductive probe IP64

Mahr

IP64

Design:
- variants without and with pneumatic lifting or pressurisation
- measuring pin mounted in ball guide
- high linearity over the entire measuring range
- excellent electromagnetic shielding (EMC)
- distance of lower stop -2.2 mm - 0 mm
- distance of upper stop -2.2 mm - 4.4 mm
- cable length 2.5 m

Scope of delivery
Operating instructions, cap for side cable outlet and key for pre-stroke adjustment.



N° article	320655 Millimar P 2004 M	Plage de mesure mm	Measuring range N	Repeatability mm	Measured value reversal range µm	Operating temperature min. °C	Operating temperature max. °C	Operating temperature, min. °C	Operating temperature max. °C
P2004M	○	-2 - 2	0,75 +/- 0,15	0,03	0,5	10	55	-10	80

Inductive dial comparator

Mahr

Design:
- tempered glass front with touch control panels
- high-contrast LCD display
- unambiguous tolerance symbols and coloured LED signals (red, green, yellow) for measured value classification
- clamping shank and measuring pin made of stainless, hardened steel
- precision ball guiding of the measuring pin for small reversal range
- data interfaces USB, Digimatic
- type of battery lithium polymer rechargeable battery 3.7 V
- software MarCom Professional (Free of charge)

Factory standard · IP64 · TOL · ABS · Digimatic · USB · Delivered in case

Functions:
- ON/OFF
- mm/inch
- RESET (Zero setting of the display)
- PRESET (Presetting of fixed values)
- switching of the numerical increment
- factor (Adjustable)
- reversal of counting direction
- HOLD (Measured value storage)
- DATA (Data transmission)
- bidirectional data interface (External query and input option for characteristic values as well as setting of individual function locks via MarCom software)

NEW



Use:
For static measuring tasks

Delivery:
Operating instructions, USB data and charging cable type DK-U1, plug-in power supply (with 4 interchangeable adapters) for USB, rubber bellow

N° article	320690	Measuring range ±	Reading mm	Reading inch	Free lift mm	Clamping shank ∅ h6 mm
2000W	○	1	0,0001, 0,0002, 0,0005, 0,001, 0,002, 0,005, 0,01	0,000005, 0,00001, 0,00002, 0,00005, 0,0001, 0,0002, 0,0005	2,5	8

Design:
- tempered glass front with touch control panels
- high-contrast LCD display
- unambiguous tolerance symbols and coloured LED signals (red, green, yellow) for measured value classification
- clamping shank and measuring pin made of stainless, hardened steel
- precision ball guiding of the measuring pin for small reversal range
- data interfaces USB, Digimatic
- type of battery lithium polymer rechargeable battery 3.7 V
- software MarCom Professional (Free of charge)

Factory standard · IP64 · TOL · ABS · Digimatic · USB · Wireless · Delivered in case

Functions:
- ON/OFF
- mm/inch
- RESET (Zero setting of the display)
- PRESET (Presetting of fixed values)
- switching of the numerical increment
- factor (Adjustable)
- reversal of counting direction
- HOLD (Measured value storage)
- DATA (Data transmission)
- bidirectional data interface (External query and input option for characteristic values as well as setting of individual function locks via MarCom software)
- with WLAN

NEW



Use:
For static measuring tasks

Delivery:
Operating instructions, USB data and charging cable type DK-U1, plug-in power supply (with 4 interchangeable adapters) for USB, rubber bellow

N° article	320691	Measuring range ±	Reading mm	Reading inch	Free lift mm	Clamping shank ∅ h6 mm
2000WI	○	1	0,0001, 0,0002, 0,0005, 0,001, 0,002, 0,005, 0,01	0,000005, 0,00001, 0,00002, 0,00005, 0,0001, 0,0002, 0,0005	2,5	8

Design:
- tempered glass front with touch control panels
- high-contrast LCD display: for visual recognition of the measuring movement during dynamic measuring tasks
- clear tolerance limits and coloured LED signals (red, green, yellow) for measured value classification
- clamping shank and measuring pin made of stainless, hardened steel
- precision ball guiding of the measuring pin for small reversal range
- data interfaces USB, Digimatic
- type of battery lithium polymer rechargeable battery 3.7 V
- software MarCom Professional (Free of charge)

Factory standard · IP64 · TOL · MAX MIN · ABS · Digimatic · USB · Delivered in case

Functions:
- ON/OFF
- mm/inch
- RESET (Zero setting of the display)
- PRESET (Presetting of fixed values)
- switching of the numerical increment
- RANGE (Switching of measuring range and scale division)
- 0 (set analogue scale display to zero)
- factor (Adjustable)
- reversal of counting direction
- HOLD (Measured value storage)
- DATA (Data transmission)
- bidirectional data interface (External query and input option for characteristic values as well as setting of individual function locks via MarCom software)

NEW



Use: For static and dynamic measuring tasks.

Delivery:
Operating instructions, USB data and charging cable type DK-U1, plug-in power supply (with 4 interchangeable adapters) for USB, rubber bellow

N° article	320692	Measuring range ±	Reading mm	Reading inch	Free lift mm	Clamping shank ∅ h6 mm
2001W	○	1	0,0001, 0,0002, 0,0005, 0,001, 0,002, 0,005, 0,01	0,000005, 0,00001, 0,00002, 0,00005, 0,0001, 0,0002, 0,0005	2,5	8

Design:
- tempered glass front with touch control panels
- high-contrast LCD display: for visual recognition of the measuring movement during dynamic measuring tasks
- clear tolerance limits and coloured LED signals (red, green, yellow) for measured value classification
- clamping shank and measuring pin made of stainless, hardened steel
- precision ball guiding of the measuring pin for small reversal range
- data interfaces USB, Digimatic
- type of battery lithium polymer rechargeable battery 3.7 V
- software MarCom Professional (Free of charge)

Factory standard · IP64 · TOL · MAX MIN · ABS · Digimatic · USB · Wireless · Delivered in case

Functions:
- ON/OFF
- mm/inch
- RESET (Zero setting of the display)
- PRESET (Presetting of fixed values)
- RANGE (Switching of measuring range and scale division)
- switching of the numerical increment
- 0 (set analogue scale display to zero)
- factor (Adjustable)
- reversal of counting direction
- HOLD (Measured value storage)
- DATA (Data transmission)
- bidirectional data interface (External query and input option for characteristic values as well as setting of individual function locks via MarCom software)
- with WLAN

NEW



Use: For static and dynamic measuring tasks.

Delivery:
Operating instructions, USB data and charging cable type DK-U1, plug-in power supply (with 4 interchangeable adapters) for USB, rubber bellow

N° article	320693	Measuring range ±	Reading mm	Reading inch	Free lift mm	Clamping shank ∅ h6 mm
2001WI	○	1	0,0001, 0,0002, 0,0005, 0,001, 0,002, 0,005, 0,01	0,000005, 0,00001, 0,00002, 0,00005, 0,0001, 0,0002, 0,0005	2,5	8

Precision digital dial indicator

Mitutoyo

Design:
- multifunctional version
- tolerance function shown in colour
- external control option and data transfer to the outside
- optional with remote control (to be ordered separately)
- contact point made of carbide ball
- alert in case of counting error, overrun or tolerance limit error
- power supply via mains adapter
- lift lever over 30 mm with cable release (optional, to be ordered separately)

TOL | MAX MIN | Digimatic | RS 232 C | USB | U-WAVE®

Functions:
- Zero
- PRESET
- Data/Hold
- reversal of counting direction
- resolution selectable
- analogue measuring range selectable
- Max-Min-Runout value
- GO/± evaluation
- DIGIMATIC data input/output
- DIGIMATIC data output RS232C
- data input RS232C ASCII data
- ON/OFF
- locking function

ABSOLUTE



Delivery:
Incl. lift lever and AC adapter

Note:
Fitting connection cables see under 398003 on page 39/690.

N° article	320641 0.001 mm	Measuring span mm	Error limit mm	Reading mm	Measuring range N	Clamping shank ∅ h6 mm
30,4	○	30,4	0,0015	0,0005/0,001	≤2,0	8
60,9	●	60,9	0,0025	0,0005/0,001	≤2,5	8

Accessories for precision dial comparators

Mahr

Use:
For lifting the measuring spindle.

Art.-Nr.	320698
DRAHTABHEBER	●
ABHEBETASTE	○

Depth measuring bridge

PRETEC

Design:
- for measurements of dimensional distances, blind holes, millings and all types of grooves
- for mounting dial gauges
- support surface hardened, ground and finely lapped
- measuring bridge burnished
- with shank diameter 8 h6
- flatness tolerance to DIN 874 sheet 1, GG 00



N° article	320699	Flatness tolerance µm	Dimension mm	Weight kg
0080	●	1,5	80 × 16	0,2
0100	●	1,7	100 × 16	0,3
0150	●	2	150 × 20	0,5

Precision dial comparator

Mahr

Design:
- large high-contrast dial
- adjustable tolerance fingers
- lockable fine adjustment
- shock-protected measuring unit
- clamping shank and measuring pin made of stainless, hardened steel
- precision ball guiding of the measuring pin for small reversal range
- Insensitive to forces acting laterally on the gauging pin
- maximal sensitivity and accuracy are ensured by the spindle axes running in jewel bearings and precision geared wheels and pinions
- box-shaped protective housing
- constant measuring force
- lifting of the measuring pin by screw-in wire lifter or lifting button

Factory standard | SHOCK PROOF | calibrated | Delivered in case

Delivery:
In case.



1003



1010

N° article	320694	Measuring range ±	Reading mm	Free lift mm	Measuring range N	Clamping shank ∅ h6 mm
1002	●	± 25 µm	0,0005	2,8	1	8
1002-KAL	○	± 25 µm	0,0005	2,8	1	8
1003	●	± 50 µm	0,001	2,8	1	8
1003-KAL	○	± 50 µm	0,001	2,8	1	8
1003×L	●	± 130 µm	0,002	2,5	1	8
1004	○	± 0,13 mm	0,005	2,5	1	8
1010	●	± 0,25 mm	0,01	2,5	1	8

Precision depth gauge

Käfer

Design:
- lined scale pivotable
- inserts exchangeable
- bridge satin chrome plated and hardened
- contact face fine lapped
- collet ensures safe clamping of the gauge

Factory standard

Delivery:
Fully assembled

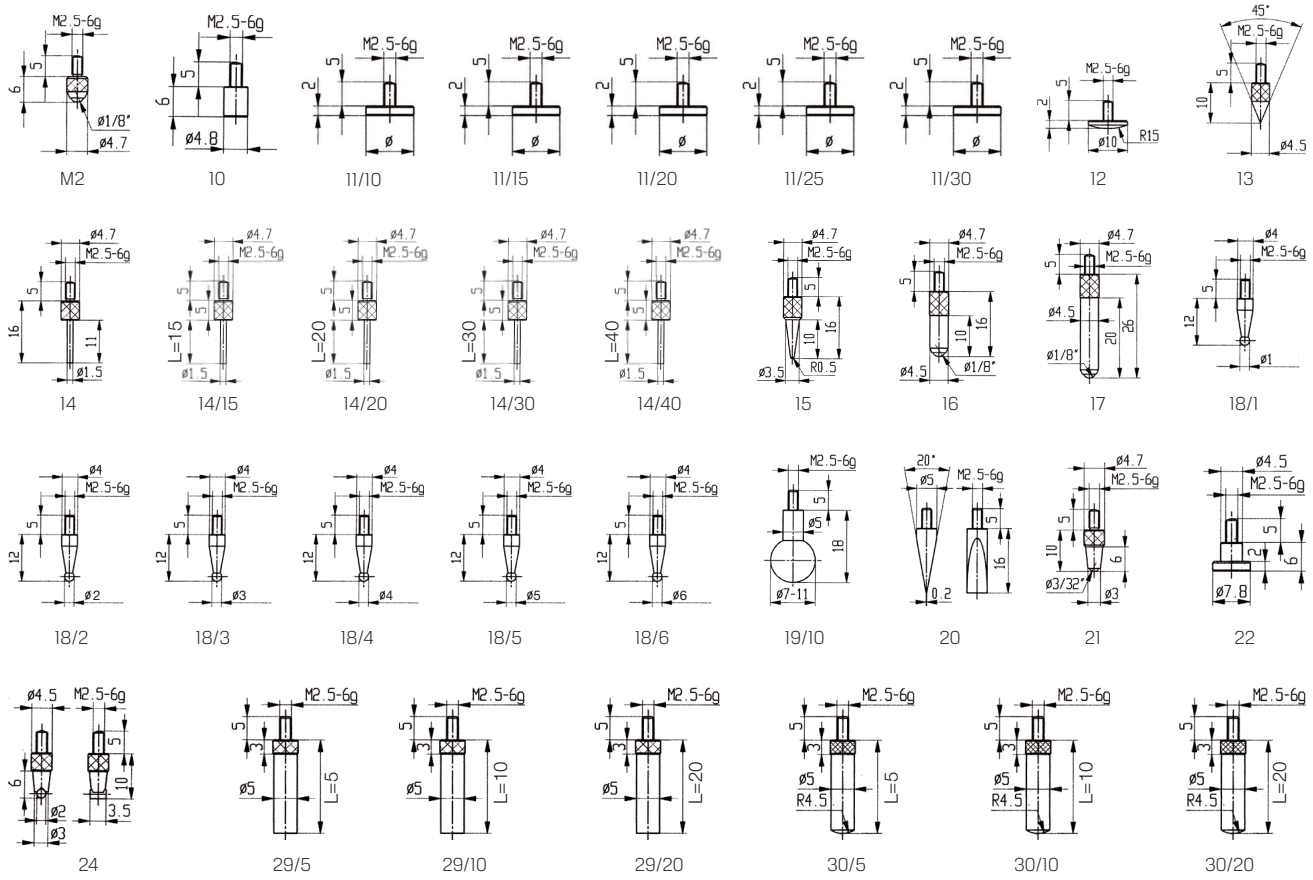

TM2


TM2/30

N° article	320550 0.01 mm	Measuring span mm	Reading mm	Pointer revolution mm	Outer ring ∅ mm	Support surface mm
TM/2	●	10	0,01	1	58,00	80 × 16 mm
TM2/30	●	30	0,01	1	58,00	80 × 16 mm

Measuring insert and special probe for dial gauges and dial comparators

Design:
- measuring inserts with connecting thread M 2.5 made of steel
- carbide and ruby tipped
- for measuring tools with connecting thread M 2.5 to create special measuring equipments



N° article	320705 Steel	320710 Carbide-tipped	320720 Ruby tipped
M2	●	●	●
10	●	●	–
11/10	●	○	–
11/15	●	–	–
11/20	●	–	–
11/25	○	–	–
11/30	●	–	–
12	●	○	–
13	●	○	–
14	●	●	–
14/15	●	–	–

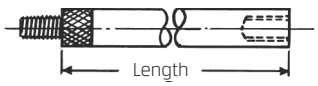
N° article	320705 Steel	320710 Carbide-tipped	320720 Ruby tipped
14/20	●	–	–
14/30	●	–	–
14/40	●	–	–
15	●	–	–
16	●	–	●
17	●	–	○
18/1	●	○	–
18/2	●	●	–
18/3	●	○	–
18/4	●	○	–
18/5	●	–	–

N° article	320705 Steel	320710 Carbide-tipped	320720 Ruby tipped
18/6	○	–	–
19/10	●	–	–
20	●	○	–
21	●	○	–
22	●	–	–
24	●	○	–
29/5	○	–	–
29/10	●	–	–
29/20	●	–	–
30/10	○	–	–

Feeler extension

Design:
- with connecting thread M 2.5 (6g), in different lengths
- suitable for all gauge slides and special feelers 320705/320710/320720

N° article	320760	Length mm
10	●	10
20	●	20
30	●	30
40	●	40
50	●	50
60	●	60
70	●	70
80	●	80
90	●	90

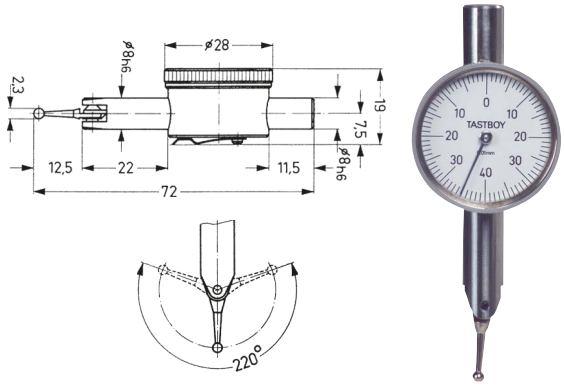


Dial test indicator

DIN 2270 | Delivered in case

Design:
- universal device for the workshop
- the feeler is switchable for 110° lever movement to the right or left side
- mounting at upper or lower clamping shank x 8 mm h6
- bezel pivotable
- square holder **321090** as optional accessory

Delivery:
In case, without holder



N° article	321080	Measuring span in each direction mm	Reading mm
28	●	0,8	0,01

N° article	321090 Square holder
1.0958	○

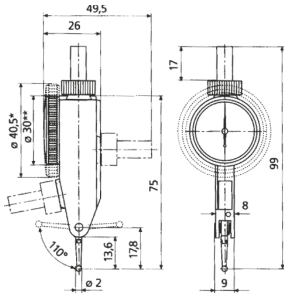
Dial test indicator

Mahr

DIN 2270 | SHOCK PROOF | calibrated | Delivered in case

Design:
- satin chrome plated housing, dial face sealed with O-ring
- contact point with carbide ball, double lever supported in ball bearings
- overload protection provided by slip clutch
- mechanism shockproof, anti magnetic
- axes in stone bearings with 8 gems
- automatic adjustment to probe direction

800 SGE: With large measuring range
800 SGM: With high resolution for high-precision measurements, with water-protected display
800 SGM-R: With high resolution for high-precision measurements, with water-protected display and ruby probe
800 SL: With long measuring insert
800 S: Standard version
800 S-R: Standard version, with ruby probe
800 SG: With large dial
800 SG-R: With large dial and ruby probe
800 SGB: With long measuring insert





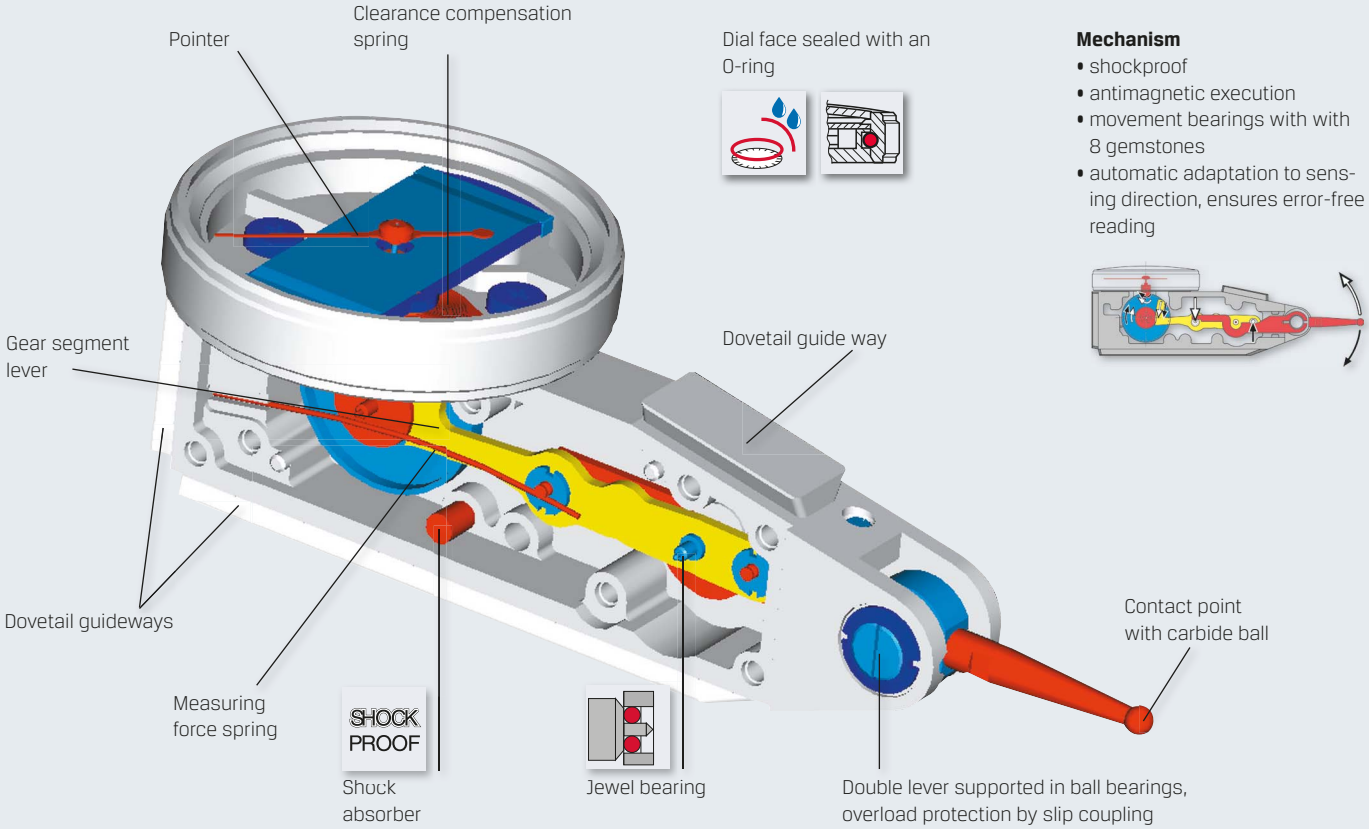
800 S



800 SGM

N° article	321704	321705	Measuring range ±	Reading mm	Dial ∅ mm	free measuring insert length mm	Measuring range N
800SGE	–	●	0,07	0,001	38	8,3	0.20
800SGE-KAL	–	○	0,07	0,001	38	8,3	0.20
800SGM	–	●	0,1	0,002	38	14,5	0.15
800SGM-KAL	–	○	0,1	0,002	38	14,5	0.15
800SL	●	–	0,25	0,01	27,5	41,2	0.07
800SL-KAL	○	–	0,25	0,01	27,5	41,2	0.07
800S	●	–	0,4	0,01	27,5	14,5	0.15
800S-KAL	○	–	0,4	0,01	27,5	14,5	0.15
800SG	●	–	0,4	0,01	38	14,5	0.15
800SG-KAL	○	–	0,4	0,01	38	14,5	0.15
800SGB	●	–	0,5	0,01	38	32,3	0.07
800SGB-KAL	○	–	0,5	0,01	38	32,3	0.07

Design features



Mechanism

- shockproof
- antimagnetic execution
- movement bearings with with 8 gemstones
- automatic adaptation to sensing direction, ensures error-free reading

MarTest applications

The test indicator serves as an instrument for comparative measurements. It can be employed in any kind of measuring stand. Due to the swivelling feature of the stylus and the reversal of its sensing direction, the Mahr test indicator is suitable for various measuring and inspection tasks.

Areas of application are e.g.:

- testing of concentricity and run-out of shanks and bores
- testing of parallelism and alignment of surfaces in engineering and tool making

Concentricity test of shafts



Concentricity test of sleeves



Centring of bores

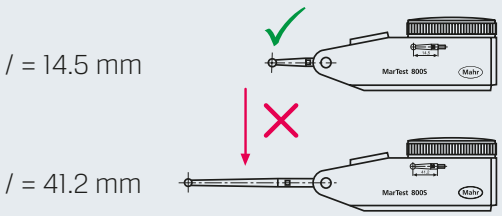


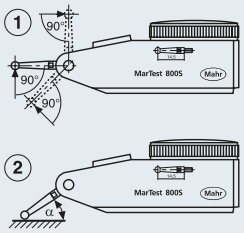
Aligning of surfaces



Testing parallelism







For accurate measurements, the axis of the contact point has to be perpendicular to the measuring device (fig. 1).
If this is not possible, it is necessary to multiply the reading from the dial with a correction coefficient, which depends on anglea (fig. 2). For angles less than 15° the correction factor is negligible.

Angle α	15°	30°	45°	60°
Corr. coeff.	0.96	0.87	0.70	0.50

Dial test indicator

Mitutoyo

Design:
- rotatable scale for easy zero-setting
- precision gear wheels in jewel bearings for trouble-free and precise measurement
- non-magnetic
- contact point with thread M1.7 × 0.35
- carbide tip with ∅ 2 mm
- scale from 0 - 40 - 0
- accuracy 8 µm

Delivery:
Incl. clamping shank ∅ 8 mm and union nut

DIN 2270 | Delivered in case



N° article	321720 Series 513	Measuring range mm	Reading mm	Dial ∅ mm	Measuring range N
0,8×40	●	0,8	0,01	40	0.01 - 0.3

Dial test indicator

Mitutoyo

Design:
- rotatable scale for easy zero-setting
- precision gear wheels in jewel bearings for trouble-free and precise measurement
- non-magnetic
- contact point with thread M1.7 x 0.35 mm
- carbide tip with ∅ 2 mm
- scale from 0 - 40 - 0
- accuracy 8 µm

Delivery:
Incl. clamping shank with ∅ 8 mm and union nut

DIN 2270 | Delivered in case



N° article	321722 Series 513 vertical	Measuring range mm	Reading mm	Dial ∅ mm	Measuring range N
0,8×40	●	0,8	0,01	40	0.01 - 0.3

Dial test indicator

Mitutoyo

Design:
- small construction
- rotatable scale for easy zero-setting
- precision gear wheels in jewel bearings for trouble-free and precise measurement
- contact point with thread M1.7 x 0.35 mm
- accuracy 10 µm
- scale from 0 - 25 - 0
- carbide tip with ∅ 2 mm

Delivery:
Incl. clamping shank with ∅ 8 mm and spanner

DIN 2270 | Delivered in case



N° article	321724 Series 513 with long probe tip	Measuring range mm	Reading mm	Dial ∅ mm	Measuring range N
0,5×33	●	0,5	0,01	33	≤ 0.3

Dial test indicator

Mitutoyo

Design:
- rotatable scale for easy zero-setting
- precision gear wheels in jewel bearings for trouble-free and precise measurement
- revolution counter centred
- non-magnetic
- contact point with thread M1.7 x 0.35 mm
- carbide tip with ∅ 2 mm
- scale from 0 - 100 or 0 - 40 - 0

Delivery:
Incl. clamping shank with ∅ 8 mm and union nut

DIN 2270 | Delivered in case



N° article	321726 Series 513 horizontal	Measuring range mm	Reading mm	Dial ∅ mm	Measuring range N
0,4×40	●	0,4	0,002	40	0.01 - 0.3
1,6×40	●	1,6	0,01	40	0.01 - 0.3

Dial test indicator

Mahr

Design:
- like 321704, but with special design for specific applications
- with water protected display

800 H: Stylus can be moved horizontally to the dial face
800 SR: With large measuring range
800 SRM: with high accuracy

DIN 2270 | SHOCK PROOF | calibrated

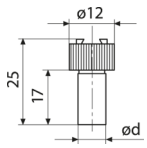


800 H



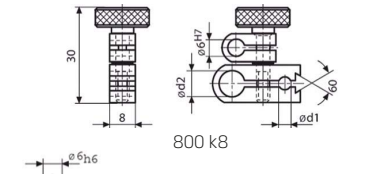
800 SR

N° article	321804	Measuring range ±	Reading mm	Dial ∅ mm	free measuring insert length mm	Measuring range N
800H	●	0,4	0,01	27,5	13,6	0.25
800SR	●	0,8	0,01	38	13,6	0.15
800SRM	●	0,2	0,002	38	13,6	0.15





N° article	321810 Mounting shank for dovetail	Shank diameter mm
800A8	●	8
800A6	○	6
800A4	●	4

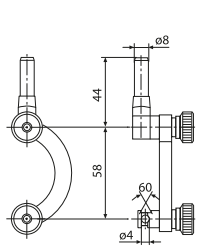


800 h



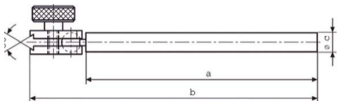
800 h with 800 k8

N° article	321814 Universal clamp
800K8	●



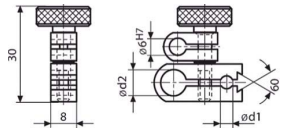


N° article	321816 Universal centring support frame
800B	●

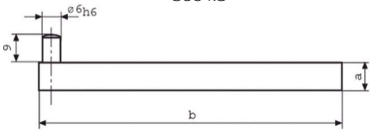




N° article	321818 Universal holder with dovetail clamp
800HS8	●



800 k8



800 h



800 h with 800 k8

N° article	321812 Holder for universal clamp
800H	●

Measuring insert
for Mahr dial test indicators

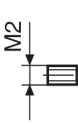
Design and use:
- with connecting thread M2

- length of stylus 14.5 mm:
  Dial test indicators size 800 S, 800 SG, 800 H, 800 SR, 800 SRM

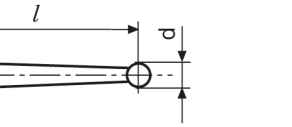
- length of stylus 9.1 mm:
  Dial test indicators size 800 SG

- length of stylus 41.2 mm:
  Dial test indicators size 800 SL

- length of stylus 32.3 mm:
  Dial test indicators size 800 SGB



321825



321830

N° article	321825 with carbide ball	Sphere Ø mm	free measuring insert length mm
14,5/1	●	1	14,5
14,5/2	●	2	14,5
14,5/3	●	3	14,5
9,1/1	○	1	9,1
9,1/2	○	2	9,1
9,1/3	○	3	9,1
41,2/1	●	1	41,2
41,2/2	●	2	41,2
41,2/3	●	3	41,2
32,3/1	○	1	32,3
32,3/2	●	2	32,3
32,3/3	○	3	32,3

N° article	321830 with ruby ball	Sphere Ø mm	free measuring insert length mm
14,5/2	●	2	14,5
9,1/2	○	2	9,1
41,2/2	○	2	41,2
32,3/2	○	2	32,3

Precision centring device

HAIMER

Design:
- non-rotating dial for centring bores and arbors
- clamping shank 16 mm, to be clamped into the spindle of the milling machine
- replaceable probe tip
- centring accuracy 0.003 mm

Use:
- for quick and precise centring of bores and shafts
- for testing and adjusting the axial run-out of a surface to the spindle
- concentricity errors of spindle or fixing are compensated
- adjustment not required

Delivery:
With straight stylus ∅ 5 mm Probe tips for Centro centring device.Probe tips for Centro centring device



N° article	321870 Centro	Measuring range inner ∅ (Bore) mm	Measuring range outer ∅ (shaft) mm	Centring accuracy mm	Clamping shank mm	Casing ∅ / Dial gauge ∅ mm	Length (without shank) mm	max. speed min^{-1}
16	●	3 - 125	0 - 125	0,003	DIN 1835 B	80/60	92	150
HSKA50	○	3 - 125	0 - 125	0,003	ISO 12164 - 1	80/60	92	150

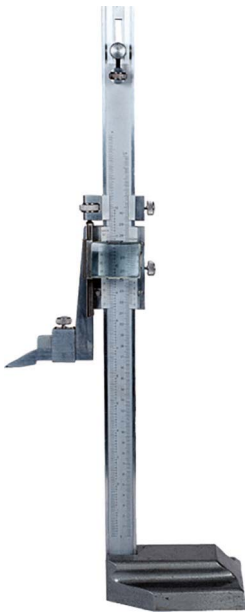
N° article	321875 Probe inserts	Sensor design
301	●	Straight stylus, with ball ∅ 5 mm (standard probe tip)
302	●	Bent probe tip, with ball ∅ 5 mm
303	●	Straight probe tip, with ball ∅ 2 mm for small bores

Height measuring and marking device

PRETEC

Design:
- reading accuracy at vernier 0.02 mm
- made of stainless steel, satin chrome plated
- with fine adjustment
- magnifier
- carbide-tipped scriber

Delivered in case



N° article	325100	Measuring range mm
300	●	300
600	● +	600
1000	○ +	1000

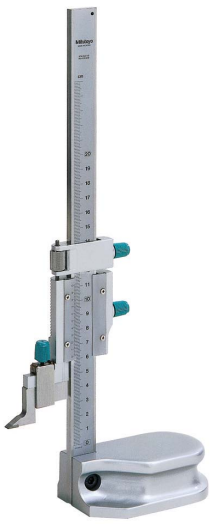
Height measuring and marking device

Mitutoyo

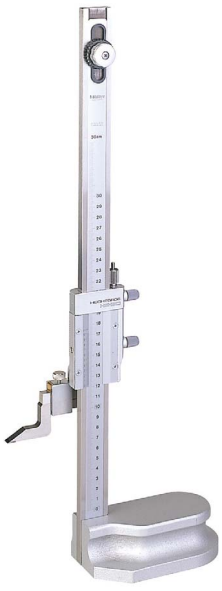
Design:
- precise and quick reading due to matt chrome-plated scale and vernier
- scale hardened and ground
- scriber cranked and carbide tipped
- with fine adjustment
- resolution 0.02 mm

Delivery:
200 mm: Including scriber holder and scriber (L × H = 47 × 25 mm)

300 mm Including scriber holder, clamp for measuring inserts and scriber (L × H = 80 × 32 mm)



0-200 mm



0-300 mm

N° article	325110	Measuring range mm	Fine adjustment mm
200	○	200	–
300	○	300	4

Digital height measuring and marking device

PRETEC

Design:
- column made of stainless, hardened steel
- scriber carbide-tipped
- stand fine ground and lapped
- floor space with dirt grooves
- LCD digital display, digit height 6 mm
- power supply lithium battery type 357 HD
- ON/OFF
- mm/inch selection, zero-setting at any position with RESET
- presetting of values for both directions

Delivered in case



N° article	325400	Measuring range mm	Repeatability µm	Reading mm
300	●	300	30	0,01
600	●	600	50	0,01
1000	● +	1000	70	0,01

Digital height measuring and marking device

Mahr

Design:
- hardened, lapped base, smooth and even movement, stable base
- slide and beam stainless and hardened
- hand crank for positioning and measuring
- fine adjustment, locking screw
- interchangeable scriber point, carbide tipped
- 12 mm high LCD display
- resolution 0.01 mm

ABS · Digimatic · RS 232 C · USB · Delivered in case

Use:
- for scribing and marking of workpieces
- for measuring of heights and distances

Functions:
- RESET (zero-setting)
- ABS (switching relative/absolute measurement)
- selection mm/inch
- Reference Lock/Unlock
- PRESET (Presetting of fixed values)
- battery life up to 3 years
- operation speed 1.5 m/s (60"/s)
- MarConnect data output optional USB, OPTO RS232C or DIGIMATIC (in connection with data cable 301910 on page 39/689)

Delivery:
With scriber point, battery and operating manual



N° article	325411 Digimar 814 SR	Measuring range mm	Reading mm	Reading inch	Error limit mm
350	●	350	0,01	0.0005	0,04
600	○	600	0,01	0.0005	0,05

Digital height measuring and marking device

Mitutoyo

Design:
- reading 0.01 mm
- digital display
- with handwheel

ABS · Digimatic · USB · U-WAVE®

Functions:
- ORIGIN
- Zero/ABS
- ON/OFF
- Data/Hold
- low voltage alert

NEW

Delivery:
Includes battery, carbide-tipped scriber and holder.

Note:
Suitable connection cables can be found under 398000 on page 39/690.

ABSOLUTE



N° article	325422 Series 570	Measuring range mm	Length measurement deviation mm
300	●	300	±0.03
600	○	600	±0.05

Digital height measuring and marking device

Mitutoyo

Design:
- standard type in column shape with data output
- zero-setting at the touch of a button in any position
- via PRESET button 2 values can be entered and recalled
- resolution 0.01 mm
- LED display
- operation speed 500 mm/s

ABS · Digimatic · USB · U-WAVE®

Functions:
- Zero/ABS
- PRESET
- switching ±
- ON/OFF
- signal probe tip diameter compensation
- Data/Hold
- low voltage alert

Delivery:
Incl. HM scriber (L × H = 80 × 32 mm), clamping for measuring inserts and dust cover

Note:
Fitting connection cable see under 398000 on page 39/690



N° article	325425 Series 192	Measuring range mm	Reading mm	Length measurement deviation mm
300	○	300	0,01	±0.02
600	○	600	0,01	± 0.05
1000	○ +	1000	0,01	± 0.07

Digital height measuring device

Mitutoyo

Digimatic | RS 232 C | USB

Design:
- high-end 2D height measuring device
- perfect combination of intuitive operation, multifunctionality and exceptional accuracy
- pneumatic drive mechanism
- automatic sequence of learned part programmes
- excellent visualisation of GO/±NG tolerance comparisons
- swivelling and tilting 8.4" SVGA touchscreen (LED, with backlight)
- mains-independent operation through rechargeable battery
- easy handling and low deadweight
- Digimatic S1 bidirectional (for wireless data transmission, Digimatic data transmission)
- RS-232C (for receipt printer)
- USB-A (for memory stick) / USB-B (for PC)
- 21 various display languages selectable
- equilibration through counterweights
- max. 50 memo programmes
- max. 100,000 data can be saved
- readout switchable

972HG with handle

Note:
Fitting connection cable see under 398000 on page 39/689.

NEW



N° article		972	972HG
325437		○ +	○ +
max. field of application	mm	600	600
Reading	mm	0,0001/0,001/0,01/0,1	0,0001/0,001/0,01/0,1
Error limit height measuring device	µm	1,1 + 0,6L/600, L in mm	1,1 + 0,6L/600, L in mm
Repetition precision	µm	0,4 (level) / 0,9 (bore)	0,4 (level) / 0,9 (bore)
Perpendicularity calibration	µm	5	5
Max. battery operating time	h	4	4
Overall height	mm	996	996
Depth	mm	492	492
Foot width	mm	238 × 288	238 × 288
Weight	kg	26,1	26,6

Digital height measuring device Digimar 817 CLT

RS 232 C | USB | Wireless

Design:
- large and clear touch display with backlighting
- excellent measuring accuracy and reliability due to optical incremental measuring system
- air bearings system for easy, jerk-free shifting
- easy measuring procedures due to motorised measuring slide
- integrated rechargeable battery with long operating time for mains-independent measurement
- temperature compensation via integrated temperature sensor
- additional measuring device can be connected with MarConnect USB interface
- dynamic touch probe for high repeatability

Delivery:
- height measuring device including operating and display element
- carrier 817 h1
- measuring insert K6/51
- adjustment block 817 eb
- USB cable
- operating instruction
- mains charging adapter
- protective cover
- calibration certificate

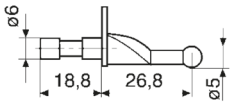
Functions:
- probing at the bottom or top
- web width or groove spacing incl. web or groove centre
- bore or shaft diameter incl. centre of bore or shaft
- reversal point bores (top or bottom)
- reversal point shaft (top or bottom)
- calculate distances or symmetry
- dynamic measuring functions
- perpendicularity measurement
- straightness measurement
- measuring in 2D mode
- measuring programmes
- measurement data processing- knife

Note:
Suitable connection cables can be found in our catalogue Tools 2022 under 398012 on page 39/649.
MarCom Professional free download under www.mahr.com/marcom (only for Mahr data cables and radio systems with USB and RS-232 interface)

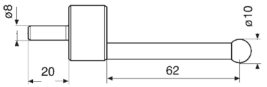
NEW



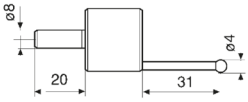
N° article		350	600	1000
325556		○ +	○ +	○ +
Measuring range	mm	0 - 350	0 - 600	0 - 1000
min. field of application	mm	170	170	170
max. field of application	mm	520	770	1170
Resolution	mm	0,01, 0,005, 0,001, 0,0005, 0,0001	0,01, 0,005, 0,001, 0,0005, 0,0001	0,01, 0,005, 0,001, 0,0005, 0,0001
Error limit height measuring device	µm	1,8+L/600 (L in mm)	1,8+L/600 (L in mm)	1,8+L/600 (L in mm)
Repetition precision Drilling	µm	1	1	1
Repetition precision Plain	µm	0,5	0,5	0,5
Perpendicularity calibration	µm	5	6	10
Max. operating time	h	14	14	14
Measuring force	N	1,0 ± 0,2 N	1,0 ± 0,2 N	1,0 ± 0,2 N
Relative humidity non-condensing	%	65	65	65
Working temperature	°C	20	20	20
Operating temperature	°C	10 - 40	10 - 40	10 - 40
Overall height	mm	741	985	1,392
Weight	kg	22	26	29
Output		USB, Wireless	USB, Wireless	USB, Wireless



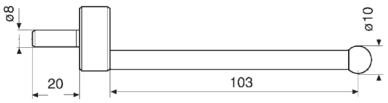
K/5/51 K6/51



K 10/60

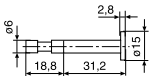


K 4/30

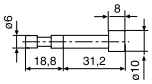


K 10/60 ... K 10/100

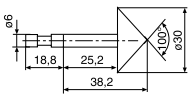
N° article	325560 Ball anvil	Sphere ∅ mm	Reach A in mm	Mount ∅ mm
K5/51	○	5	26,8	6
K6/51	○	6	24,2	6
K4/30	○	4	30	8
K6/40	○	6	40	8
K10/60	○	10	60	8
K10/100	○	10	100	8



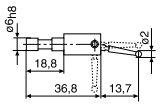
S 15/31,2



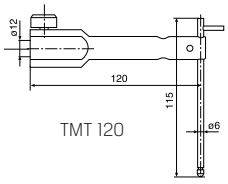
Z 10/31,2



MKe 30



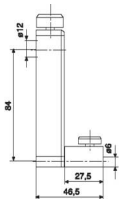
KM 2
universally applicable



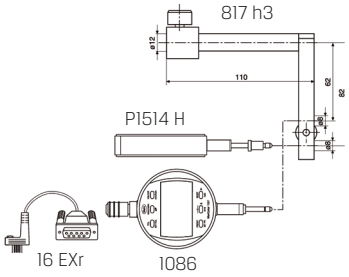
TMT 120

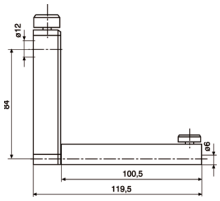
N° article	325562	Designation	Mount ∅ mm
S15/31,2	○	Disc measuring insert	6
Z10/31,2	○	Cylindrical probe	6
MKE30	○	Taper probe	6
TMT120	○	Depth probe incl. carrier	6
KM2	○	Probe for MarTest with probe M2	6

817 h1

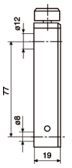


817 h3





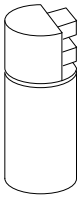
817 h2



817 h4

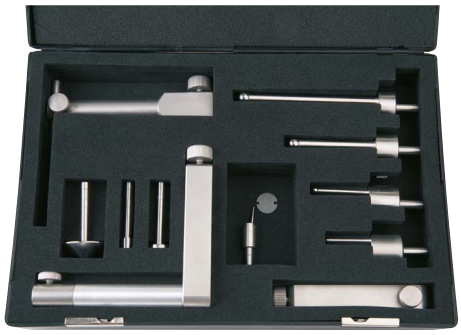
N° article	325564	Reach A in mm	Designation	Mount ∅ mm
817H1	○	27,5	Carrier for probes	6
817H2	○	100	Carrier for probes	6
817H3	○	–	Carrier for dial gauges	8
817H4	○	–	Carrier for probes	8

817 eb



N° article	325566	Designation
817EB	○	Setting block

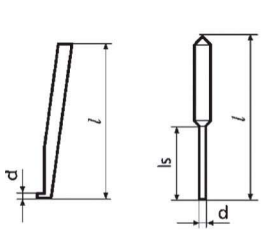
N° article	325570	Contents
817TS1	○	Accessory case Carrier for probes 817 h2 Disc probes S15/31,2 Cylindrical probe Z10/31,2 Taper probe MKe 30 Probe for recess measurement incl. carrier TMT 120 Probe KM2 for MarTest M2 Carrier for probes 817 h4 Spherical probes K4/30, K6/40, K10/60, K10/100



N° article	325572	Contents
817TS2	○	Accessory case Carrier for probes 817 h2 Disc probe S15/31.2 Cylindrical probe Z10/31,2 Taper probe MKe 30 Probe for recess measurement incl. carrier TMT 120 Probe for MarTest probes M2, KM2

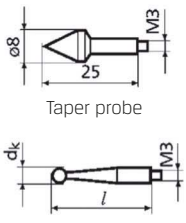


Note:
Please necessarily also order 325564 817H4!

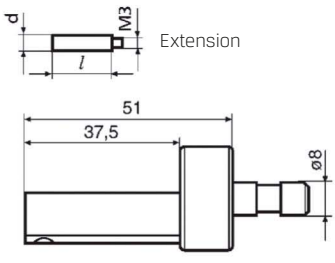


Measuring crook

Stylus



Taper probe
Spherical probe



Extension
Probe carrier



N° article	325574	Contents
CXT3	○	Packaging box Probe carrier Measuring crook Stylus/stylus tip Taper probe Spherical probe Spherical probe Spherical probe Extension M3-M3 Extension M3-M2.5

Magnetic measuring stand

PRETEC

Design:
- with switchable magnetic base
- mm 8H7 mounting hole
- with fine adjustment

Delivery:
Without dial indicator.



330050



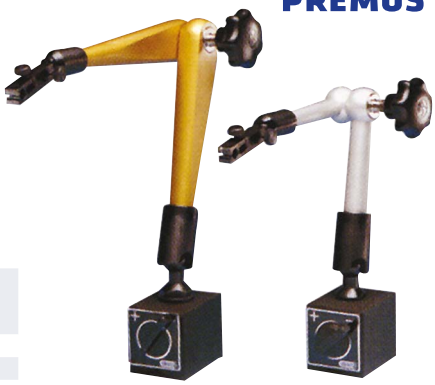
330100

N° article	330050	330100	Total height mm	Columns-Ø mm	Column height mm	Unloading mm	Diameter of Cross Arm Ø mm	Dial gauge recording Ø mm	Magnetic base length mm	Magnetic base width mm	Magnetic base height mm	Adhesive force N
231	●	–	231	12	175	150	10	8	63	50	55	600
260	–	●	260	16	230	230	16	8	70	46	65	600
460	–	●	460	20	420	420	16	8	75	60	80	800

Magnetic articulated tripod

PREMUS

Design:
- for measurements in any position
- 4-part articulated linkage is centrally clamped by a clamping button
- Adjustment is carried out via fine adjustment
- Magnetic base can be switched with prismatic sole
- mounting hole 8H7
- with hydraulic clamping



N° article	330510	Total height mm	Unloading mm	Magnetic base length mm	Magnetic base width mm	Magnetic base height mm	Adhesive force N
260	●	310	260	60	50	55	800
400	●	480	400	75	50	55	1000

Design:
- with strong magnetic base with prismatic sole
- central hydraulic tension
- one-handed operation
- patented hydraulic central clamping, maintenance-free, from smooth to absolute rigidly adjustable
- Measuring beak suitable for all common dial gauges
- Tripod movable in all directions, even for hard-to-reach places
- M8 connection thread



N° article	330540	Unloading mm	Magnetic base length mm	Magnetic base width mm	Magnetic base height mm	Adhesive force N
260	●	260	60	50	55	800

Design:
- with strong round magnet
- magnetic base cannot be switched
- rotatable fine adjustment on the base for all-round measurement
- 100% mobility
- for measurements of any type and in any position
- even for hard-to-reach places that cannot be reached with other tripods
- central hydraulic tension (force clamping of the joint linkage)
- particularly suitable for feeler lever measuring devices



N° article	330530	Unloading mm	Magnetic base Ø mm	Magnetic base height mm	Adhesive force N
150	●	150	30	35	147

Magnetic measuring stand

PRETEC

Design:
- flexible in any position
- adjustable link arm with fine adjustment
- with switchable magnetic base
- base designed as a prism, therefore usable on all levels and cylindrical steel surfaces
- Dial gauge holder Ø 8 mm

Delivery:
Without dial indicator.



N° article	330610	Total height mm	Unloading mm	Magnetic base length mm	Magnetic base width mm	Magnetic base height mm	Adhesive force N
350	●	350	200	70	46	65	600

Magnetic articulated tripod

PREMUS

Design:
- great mobility with high clamping force using a clamping handle
- magnetic base with high adhesive force
- magnetic base can be switched on and off using a rotary switch
- combined holder for dial indicators, precision indicators or measuring probes with shaft Ø 8 mm H7
- for lever gauges in dovetail holder
- with central clamping and fine adjustment

Delivery:
Without dial gauge.



N° article	330700	Total height mm	Unloading mm	Magnetic base length mm	Magnetic base width mm	Magnetic base height mm	Adhesive force N
310	●	310	200	65	50	55	500
430	●	430	285	70	46	65	600

Dial indicator holder

Käfer

Design:
- permanent magnetic base with strong adhesive force
- upper part made of metal
- light, handy design

P18:
- very flat design
- rotatable and pivotable

P19:
- with prismatic slat magnetic base
- very high magnetic force
- adheres to the sole and both sides
- dial indicator holder can be swiveled through 360°
- prismatic sole allows use as a shaft alignment device

P22:
- with round magnetic base, rigid

Delivery:
Without dial gauge.



P18



P19



P22

N° article	330820	Height mm	Magnetic base Ø mm	Magnetic base length mm	Magnetic base width mm	Adhesive force N
P18	●	46	–	73	38	180
P19	●	59	–	72	37	260
P22	●	66	40	–	–	130

Universal measuring stand

PREMUS

Design:
- like 330700, with adhesive base
- for use on hard stone slabs and other anti-magnetic surfaces

Delivery:
Without dial indicator.



N° article	330750 with vacuum adhesive base	Total height mm	Unloading mm	Vacuum adhesive foot Ø mm	Adhesive force N
390	○	390	285	100	230

Universal measuring stand

Mahr



Design:
- strong base for high stability and stability
- top of foot with hand rail
- easy, vibration-free movement
- front ground as a stop for guiding along edges and rulers
- statically perfectly determined support thanks to three support surfaces
- fine adjustment on the extension arm
- column and extension arm made of stainless steel
- display device by ± 90° swivel
- Mounting hole Ø 8 mm H7

Delivery:
Without dial indicator.

N° article	331100 MarStand 815 GN	Total height mm	Columns-Ø mm	Unloading mm	Diameter of Cross Arm Ø mm	Magnetic base length mm	Magnetic base width mm
500	○	500	25	200	18	190	180

Measuring table

BENZING



Version:
- Round table surface (type 0051 only)
- Table surface with dust grooves (type 0060 only)
- Table surface with longitudinal grooves (type 0098 only)
- Column hardened and finely ground
- Vertical column hard chrome plated (type 0098 only)
- Measuring table top adjustable with 3-point support (type 0098 only)
- Mounting hole for dial gauge Ø 8 mm H7
- with movable measuring arm (type 0060 and 0098 only)

Delivery:
Without dial gauge.

N° article	331200	Measuring range mm	Unloading mm	Total height mm	Measuring table surface mm	Columns-Ø mm	Diameter of Cross Arm Ø mm	Length of cross arm mm	Weight kg
0051	○ +	100	49	200	Ø 50	22	–	–	2,3
0060	○ +	100	100	200	60 × 68	22	–	120	3,5
0098	○ +	150	135	284	98 × 98	28	20	–	7,1



Design:
- adjustable measuring table top with 3-point support
- hard chrome-plated vertical column
- measuring table with thread on the column, adjusting ring and horizontal measuring arm
- table surface Finely ground
- Mounting hole for dial gauge Ø 8 mm H7

Delivery:
Without dial gauge.

N° article	331201	Measuring range mm	Unloading mm	Total height mm	Measuring table surface mm	Columns-Ø mm	Diameter of Cross Arm Ø mm	Weight kg
0098	○ +	160	180	320	98 × 180	35	22	13
0170	○ +	160	180	320	170 × 215	35	22	23



Version:
- Column hardened and finely ground
- Table surface made of lapped ceramic
- Flatness ≤ 2 µm
- Mounting hole for dial gauge Ø 8 mm H7

Delivery:
Without dial gauge.

N° article	331202	Measuring range mm	Unloading mm	Total height mm	Measuring table surface mm	Columns-Ø mm	Weight kg
0050	○ +	100	49	200	Ø 50	22	2,3
0065	○ +	100	100	200	65 × 75	22	3,2

Precision precision measuring table

Design:
- stable design
- table top made of hardened steel
- flatness tolerance DIN 876/00
- strong, ground column made of stainless steel
- movable support arm for the display device
- mounting hole Ø 8 mm H7

Delivery:
Without dial indicator.



N° article	331700 MarStand 820 N, without fine adjustment	measuring range mm	Unloading mm	Total height mm	Columns-Ø mm	Measuring table Ø mm
50	●	0-110	52,5	175	25	50

Design:
- stable design
- table top made of black hard granite
- flatness tolerance DIN 876/00
- strong, ground column made of stainless steel
- movable support arm for the display device
- mounting hole mm 8H7
- with fine adjustment through rigid parallel spring system
- fine adjustment range +plusmn; 0.2mm



N° article	331755 MarStand 820 FG, with fine adjustment	measuring range mm	Unloading mm	Total height mm	Measuring table surface mm	Columns-Ø mm	Fine adjustment range mm
100×160	○	0-130	67,5	228,5	100 × 160	25	0,4

Design:
- stable design
- table top made of black hard granite
- flatness tolerance DIN 876/00
- strong, ground column made of stainless steel
- movable support arm for the display device
- mounting hole mm 8H7



N° article	331750 MarStand 820 NG, without fine adjustment	measuring range mm	Unloading mm	Total height mm	Measuring table surface mm	Columns-Ø mm
100×160	○	0-130	67,5	228,5	100 × 160	25

Design:
- stable design
- table top made of lapped black hard granite
- flatness tolerance DIN 876/0
- strong, ground column and adjustable extension arm made of stainless steel Steel
- movable extension arm with fall brake for the display device
- mounting hole mm 8H7

Delivery:
Without dial gauge.



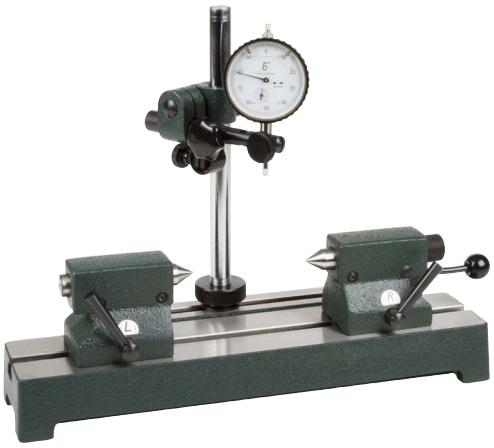
N° article	331890 MarStand 821 FG, with fine adjustment	Measuring range mm	Projection min. mm	Throat, max. mm	Total height mm	Measuring table surface mm	Columns-Ø mm	Fine adjustment range mm
200×300	○ +	300	90	200	375	200 × 300	35	0,2
300×400	○ +	500	95	280	675	300 × 400	50	0,2

Concentricity testing device

Design:
- Flatness of the base plate according to DIN 876/1
- Support area in the prism 5-20 mm (only type 0075)
- Dial gauge holder 8 H7
- Stroke movable tip 8 mm

Equipment:
- 1 base plate
- 1 pair of tailstocks
- 1 measuring stand

Delivery:
Without dial gauge.



N° article	332100 with accuracy level 1	Center height mm	max. center width mm	Base plate length mm	Base plate width mm	Groove width mm	Distance between guide/clamping groove mm	Total height mm	Weight kg
0050	○ +	50	200	350	110	10 H7	58	260	8
0075	○ +	75	350	500	110	10 H7	58	260	12
0100	○ +	100	450	700	180	12 H7	100	320	35

Prism and rolling stand Par paire

Design:
- Prism plates replaceable, hardened and ground
- Prism angle 90°

Use:
Prisms Roll-off stands are placed on the base plate instead of tailstocks.



N° article	332200 Rolling stand	332201 Rolling stand	Support area mm	Center height mm	Width of the slot nuts mm	Weight kg
0050	○	○	5-25	65	10 h6	1
0100	○	○	8-50	100	12 h6	4

Rolling stand Par paire



N° article	332202 height adjustable	Support area mm	Center height mm	Width of the slot nuts mm	Minimum distance L mm	Roll width b mm	Weight kg
0050	○	2-32	66	10 h6	16	8	1,8
0100	○	2-65	99	12 h6	19	8	5,7

Measuring and inspection plate
made of hard

MYTRI PRECISION GRANITE

DIN 876

Design:
- manufactured of black hard stone with a very fine and uniform texture
- surface lapped, sides ground, underside properly sawn
- resistance to bending extremely good, moisture absorption very low
- rustproof and acid-resistant

Quality I: diamond lapped (10µ + L/100)
Quality O: fine diamond lapped (4µ + L/250)
Quality OO: ultra fine diamond lapped (2µ + L/500)

Delivery:
With steel ball inserts, test record and transport packaging

Note:
On request also with T-grooves made of steel
(to DIN 650, nominal dimension 14 mm, precision 0.01/10000 mm),
with threaded bushings made of stainless steel or brass
in other (intermediate) sizes and accuracies (e.g. quality 000) available



N° article	340500 Quality 1	340550 Quality 0	340600 Quality 00	Length mm	Width mm	Thickness mm	Weight kg
250×250	○ +	○ +	○ +	250	250	50	9
400×250	○ +	○ +	○ +	400	250	60	18
400×400	○ +	○ +	○ +	400	400	60	29
630×400	○ +	○ +	○ +	630	400	80	60
630×630	○ +	○ +	○ +	630	630	80	95
800×500	○ +	○ +	○ +	800	500	100	120
1000×630	○ +	○ +	○ +	1000	630	100	190
1000×1000	○ +	○ +	○ +	1000	1000	100	300
1200×800	○ +	○ +	○ +	1200	800	150	432
1500×1000	○ +	○ +	○ +	1500	1000	150	675
2000×1000	○ +	○ +	○ +	2000	1000	200	1200

Safety pedestal

MYTRI PRECISION GRANITE

Design:
- made of solidly welded angular steel, with 3-point bearing and tipping protection
- the plate is secured against slipping and collision through sectional angles
- working height adjustable (incl. plate) between approx. 900 - 1000 mm adjustable
- standard colour silver grey RAL 7001, powder-coated

Note:
Other colours on request



N° article	340670 for hard rock measuring plates	for measuring plate dimension mm	N° article	340670 for hard rock measuring plates	for measuring plate dimension mm
630×400	○ +	630×400	1000×1000	○ +	1000×1000
630×630	○ +	630×630	1200×800	○ +	1200×800
800×500	○ +	800×500	1500×1000	○ +	1500×1000
1000×630	○ +	1000×630	2000×1000	○ +	2000×1000

Accessories
for hard rock measuring plates

MYTRI PRECISION GRANITE

Design:
- cleaning agent for hard rock
- by additional use of the caring oil smooth sliding of the workpiece is ensured and the abrasion is considerably reduced



N° article	340880	340890	Contents
5L	●	–	Canister (5 l)
SET	–	●	2×500 ml spray cans

Hard stone cleaning agent

PREMUS®

Design:
- cleans gently
- forms a protective film
- prevents friction and abrasion
- reduces wear
- increases the service life

Finish:
- maintains and protects
- ensures easy gliding of the workpieces
- reduces wear
- contributes to a longer service life of the surface

NEW



Cleaner 1000 ml



Cleaner 5000 ml



Finish 1000 ml



Finish 5000 ml

N° article	340882 Cleaner	340884 Finish	Contents
1000	●	●	1000 ml spray bottle
5000	●	●	5000 ml canister

Master square 90° Triangular shape

MYTRI PRECISION GRANITE

Design:
- manufactured of black hard stone with a very fine and uniform texture
- two small leg surfaces lapped rectangular to each other (DIN 876/00)
- remaining surfaces polished
- perpendicularity to DIN 875
- for weight reduction and better handling with through holes

DIN 875 | DIN 876

Use:
For checking the 90° angle at verticals in the control room

Delivery:
With test certificate



N° article	340900 Quality 0	340920 Quality 00	Length mm	Width mm	Height mm	Accuracy mm	Weight kg
200×150	○ +	–	200	50	150	0,004	2,5
300×200	○ +	○ +	300	50	200	0,005	5
400×250	–	○ +	400	60	250	0,003	10
500×300	○ +	○ +	500	80	300	0,06	20
630×400	–	○ +	630	80	400	0,003	35
800×500	–	○ +	800	100	500	0,004	90
1000×630	–	○ +	1000	100	630	0,004	120

Pair of precision parallel supports

MYTRI PRECISION GRANITE

Design:
- made of black hard rock
- two slim measuring surfaces parallel machined to DIN 876/00 or DIN 876/0 as a pair

DIN 876/0 | DIN 876/00

Use:
In the control room

Delivery:
With test certificate



N° article	340950 Quality 0	340980 Quality 00	340950 Accuracy mm	340980 Accuracy mm	Length mm	Width mm	Height mm	Weight kg
150×20×30	○	○	0,004	0,002	150	20	30	0,5
200×25×40	○	○	0,005	0,003	200	25	40	1,2
300×40×70	○	○	0,005	0,003	300	40	70	5

Measuring bar

MYTRI PRECISION GRANITE

Design:
- made of black hard rock
- made of MYTRI fine black granite
- both surfaces are accurately and parallel ground
- from length 800 mm provided with 2 handles

Delivery:
With test certificate



N° article	340930 Quality 00	Length mm	Width mm	Height mm	Accuracy mm	Weight kg
630	○ +	630	50	100	0,003	63
800	○ +	800	50	120	0,003	120
1000	○ +	1000	60	150	0,004	10
1200	○ +	1200	60	180	0,004	15
1500	○ +	1500	70	200	0,005	27
2000	○ +	2000	80	250	0,006	39

Double V-block pair with clamping bracket

Design:
- hardened, finely ground and calibrated in pairs
- accuracy 0.004 mm
- made of steel, top precision quality, with two grooves 90°
- 341300 (type D) with foldable clamp and 6 support faces

Use:
- for machining and inspecting cylindrical workpieces
- for 341300 the prism can also be placed sideways with the workpiece clamped in place

Delivery:
In pairs



341250



341300

N° article	341250 Type N	341300 Type D	Length mm	Width mm	Height mm	Shaft ∅ min. mm	Shaft ∅ max. mm
50×40×40	●	–	50	40	40	5	30
60×58×40	–	○	60	58	40	5	30
75×55×55	●	–	75	55	55	5	50
100×75×75	●	–	100	75	75	7	70

V-block pair

Design:
- machined in pairs
- cut-in angle 90°
- accuracy 0.008 mm (341130)
- accuracy 0.016 mm (341131)
- accuracy 0.064 mm (341133)

DIN 876/0 | DIN 876/I | DIN 876/III | Delivered in case

Delivery:
In pairs

N° article	341130 Special steel, quality 0	341131 Special cast, quality 1	341133 Special cast, quality 3	Length mm	Width mm	Height mm	Shaft ∅ min. mm	Shaft ∅ max. mm
75×35×30	●	–	–	75	35	30	5	40
75×40×30	–	○	●	75	40	30	5	40
100×40×30	–	○	●	100	40	30	5	55
100×47×40	●	–	–	100	47	40	5	55
150×55×45	○	○	–	150	55	45	5	60
150×50×40	–	–	●	150	50	40	5	60
200×65×55	○	–	–	200	65	55	5	75
200×70×50	–	●	○	200	70	50	5	75





Dividers

Design:
- forged of steel with 3-piece milled joint surface, ground and burnished
- octagonally ground legs, points hardened and ground



N° article	342550 with setting wing	Length mm
150	●	150
200	●	200
250	●	250
300	●	300
500	●	500

Spring divider

Design:
- extra strong square legs with steady spring tension and through spindle
- with quick-action nut and exchangeable points made of steel or carbide
- inside calliper with strong, outwards bent tips
- outside calliper with strong, inwards arched and domed tips



342700

N° article	342700 Dividers	Length mm
150	●	150
200	●	200
250	●	250
300	●	300

N° article	342720 Replacement tips by the piece, steel	Length mm	Length max. mm
150 - 300	●	150	300

N° article	342740 Replacement tips by the piece, carbide	Length mm	Length max. mm
150 - 300	○	150	300



342750

N° article	342750 Inside calliper	Length mm
150	○	150
200	●	200
250	○	250
300	●	300



342780

N° article	342780 Outside calliper	Length mm
150	○	150
200	○	200
250	○	250
300	○	300

Carbide scriber

Design:
- straight form with hexagonal steel handle and clip
- point made of carbide, soldered-in



N° article	343150	Length mm
150	●	150

Scriber

Design:

125: With straight point, biro form incl. 20 interchangeable scribers, chromium-vanadium steel, hardened

160: With straight point, plastic handle, carbide tipped

200: With 1 straight and 1 bent point, screwed-in and burnished, chromium-vanadium steel, hardened

250: With 1 straight and 1 bent point ∅ 4 mm, chromiumvanadium steel, hardened



160



200



250

N° article	343000	Length mm
160	●	160
200	●	200
250	●	250

Carbide scriber

Design:
- shank made of aluminium with clip, pen-type
- carbide tip for regrinding, readjustment and replacement

Use:
For marking steel, sheet metal, cast, tiles, glass, plastics etc.

bis 60 HRC



N° article	343170	343200 Spare point (also for RICO markers)	Length mm
150	●	●	150

Marker

VOGEL GERMANY Measuring Solutions

Design:
- scriber holder
- tip made of carbide

Use:
For marking steel, sheet metal, cast, tiles, glass, plastics etc.

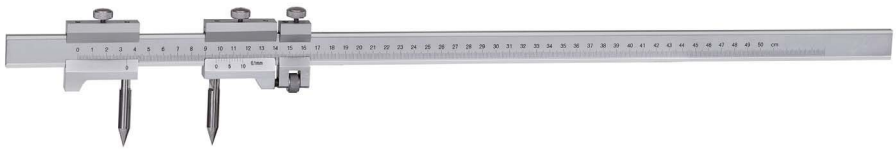
NEW



N° article	343302 exchangeable carbide tip	Length mm	343304 Replacement tip for marker	Length mm
150	●	150	●	30

Beam trammel

Design:
- made of gauge steel with sturdily dimensioned flat beam
- slide with 1/10 vernier
- exact and easy to calibrate fine adjustment via friction wheel
- position slide incl. reference marking
- replaceable silver steel tips hardened and precisely ground pair of replacement tips for bar compasses



N° article	343650	Cross-section length mm	Cross-section width mm
500	○ +	30	6
1000	○ +	30	6
2000	○ +	40	8

N° article	343660 Pair of spare points
1	○

Marking gauge

Design:
- mm/inch graduation, vernier 1/10 - 1/128
- with exchangeable hardened scriber

Use:
Ideal for parallel marking of convex, concave and other shapes

Delivery:
Incl. 1 spare scriber



N° article	343810 with track roller	Measuring range mm
200	●	200

N° article	343812 Spare scriber
1	●

Marking gauge

PRETEC

Design 343800:
- stainless steel, chrome finished
- marking-out edges hardened, laser-cut mm graduation, vernier 1/10 mm
- reference markers at slide

Design 343801:
- aluminium, anodised, black
- laser-cut mm graduation



343800



343801

N° article	343800	343801 PRETEC	Measuring range mm	Cross-section length mm	Cross-section width mm
200	●	●	200	40	3
250	●	●	250	40	3
300	●	●	300	40	3

Knife-edge square DIN 875/00

PREMUS

Design:
- mat chrome-plated
- with 2 knife-edges, totally hardened

DIN 875/00

N° article	350151	Leg length mm
50×40	●	50× 40
75×50	●	75× 50
100×70	●	100× 70
150×100	●	150×100
200×130	●	200×130
300×200	●	300×200



Universal bevel protractor set

PREMUS

Design:
- all pieces hardened, measuring faces and edges lapped

Delivered in case

Use:
For tool makers, precision engineers, mould-makers, inspectors, training workshops and vocational schools

Delivery:
Handpiece with large ruler



N° article	350400	Handle length mm	Straightedge length mm
40	●	40	60

Die maker´s square DIN 875/00

PREMUS

DIN 875/00

Design:
- with a ground and lapped knife-edge at the inside of the small inner blade
- fully hardened and annealed, high edges ground and lapped
- flat edges finely ground

Use:
For the making of tools, jigs and fixtures



N° article	350300	Leg length mm	Leg cross section mm
25×20	●	25×20	6×3,5
40×28	●	40×28	6×3,5

Flat squares DIN 875/I

PREMUS

DIN 875/I

Design:
- high edges ground and calibrated
- flat edges exactly dressed
- angle accuracy DIN 875/I

Use:
For production control and mechanical engineering



N° article	350800 Gauge steel	350850 stainless	Leg length mm	Leg cross section mm
75×50	●	●	75× 50	15× 5
100×70	●	●	100× 70	20× 5
150×100	●	●	150×100	25× 5
200×130	●	●	200×130	30× 6
250×165	●	○	250×165	35× 7
300×200	●	●	300×200	40× 8
400×265	○	–	400×265	45×10
500×330	○	○	500×330	50×10

Measuring tool kit

PREMUS

DIN 875 DIN 874

Delivered in case

Design:
5-piece set comprising
- 1 knife-edge square, stainless 75×50 mm
- 1 piece each die maker´s square 90°, stainless 25×20 and 40×28 mm
- 1 straightedge made of normal steel, 100 mm
- 1 gauge block scribing point 60×9×9 mm

Use:
For tool makers, precision engineers, mould-makers, inspectors, training workshops and vocational schools



N° article	350450 Quality 00	Number of parts
5	●	5

Flat squares DIN 875/II

PRETEC

Design:
- made of special gauge steel
- high edges ground and calibrated, flat edges exactly dressed
- angle accuracy DIN 875/II

Use:
For mechanic engineering and general-purpose jobs

DIN 875/II



N° article	350880	Leg length mm	Leg cross section mm
75×50	●	75× 50	15× 5
100×70	●	100× 70	20× 5
150×100	●	150×100	25× 6
200×130	●	200×130	30× 6
250×165	●	250×165	35× 7
300×175	●	300×175	35× 7
400×200	●	400×200	35× 7
500×250	○	500×250	40× 8
600×300	○ +	600×300	40× 8
750×375	○ +	750×375	45×10
1000×500	● +	1000×500	50×10

Try square DIN 875/II

PRETEC

Design and use:
Like 350880, but with stop

DIN 875/II



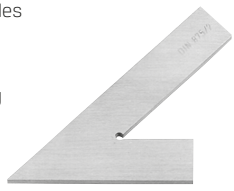
N° article	351080	Leg length mm	Leg cross section mm
75×50	●	75× 50	15× 5
100×70	●	100× 70	20× 5
150×100	●	150×100	25× 6
200×130	●	200×130	30× 6
250×165	●	250×165	35× 7
300×175	●	300×175	35× 7
400×200	●	400×200	35× 7
500×250	●	500×250	40× 8
600×300	● +	600×300	40× 8
750×375	● +	750×375	45×10
1000×500	● +	1000×500	50×10

Acute angle square DIN 875/II

Design:
- made of special gauge steel
- with fine machined edges and sides
- with or without stop

Use:
For testing, marking and measuring of 45° angles

DIN 875/II



352500



352550

N° article	352500 45° without stop	352550 45° with stop	Leg length mm	Leg cross section mm
120×80	●	●	120× 80	20×5
150×100	○	●	150×100	20×5

Try square DIN 875/I

PREMUS

Design and use:
Like 350800 and 350850, but with stop

DIN 875/I



N° article	351000 Gauge steel	351050 stainless	Leg length mm	Leg cross section mm
75×50	●	●	75× 50	15× 5
100×70	●	●	100× 70	20× 5
150×100	●	●	150×100	25× 5
200×130	●	●	200×130	30× 6
250×165	●	●	250×165	35× 7
300×200	●	●	300×200	40× 8
400×265	●	○	400×265	45×10
500×330	●	○	500×330	50×10

Engineer´s squares

Design:
- made of steel, galvanised (rust-protected)
- both high and flat edges levelled and smoothed

Use:
For simple metalwork (levelling, marking)



351500



351550

N° article	351500 Flat squares	351550 Try square	Leg length mm	Leg cross section mm
150×100	●	●	150×100	20×5
200×130	●	●	200×130	20×5
250×160	●	●	250×160	25×5
300×180	●	●	300×180	25×5
500×280	●	●	500×280	30×5
750×375	● +	● +	750×375	30×5
1000×500	● +	● +	1000×500	30×5

Mitre square DIN 875/II

Design:
- made of special gauge steel
- with ground high edges and finely finished flat edges
- with or without stop

Use:
For checking and marking the cornering 45°/90° (mitre) or the angles (hexagon) 60°/120°

DIN 875/II



352000



352050



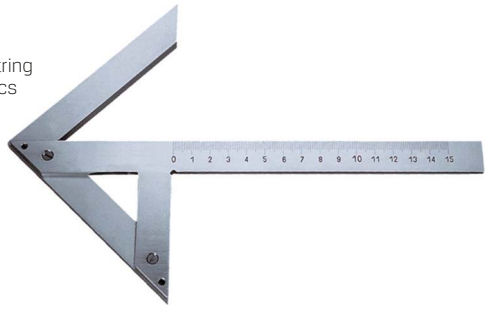
352150

N° article	352000 135° without stop	352050 135° with stop	352150 60°/120° without stop	Leg length mm	Leg cross section mm
50×50	○	–	○	50× 50	15×5
75×75	○	–	○	75× 75	18×5
100×100	●	–	●	100×100	20×5
120×80	–	●	–	120× 80	20×5
150×100	–	●	–	150×100	20×5
200×130	–	●	–	200×130	20×5

Centre square

Design:
- made of gauge steel with mm graduation on the rail
- edges ground

Use:
For marking and centring shafts and round discs

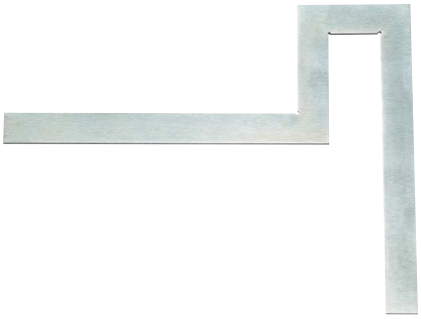


N° article	352600	Leg length mm	for max. ∅ mm
100×70	●	100× 70	90
150×130	●	150×130	190
200×150	●	200×150	220
250×160	●	250×160	230
300×180	●	300×180	280

Flange square

Design:
- made of steel galvanised
- edges and sides machined

Use:
For aligning flanges



N° article	352700	Leg length mm	Leg cross section mm
300×300	●	300×300	30×5
400×400	●	400×400	30×5

Protractor

PRETEC

Design 354150:
- made of stainless gauge steel, satin chrome plated (glare-free)
- with locking screw
- graduation 0 - 180°, reading 1°



354150

Design 354151:
- surface hardened aluminium (HRC 62), black anodised
- with locking screw
- graduation 0 - 180°, reading 1°

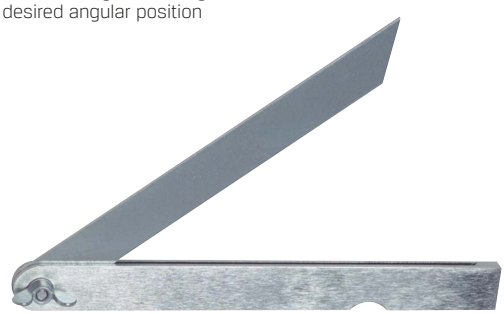


354151

N° article	354150	354151	Protractor mm	Leg length mm	Leg cross section mm
80×120	●	●	80	120	11×2
120×150	●	●	120	150	13×2
150×200	●	●	150	200	16×3
200×300	●	●	200	300	20×3
300×500	●	●	300	500	30×4
300×600	○	–	300	600	30×4

Bevel square Sliding T-bevel square

Design:
- made of galvanised steel, 2 legs with wing nut
- adjustable to any desired angular position



N° article	352800	Leg length mm	Leg cross section mm
200	●	200	20×8
250	●	250	25×8
300	●	300	25×8
500	○	500	25×8

Protractor

Design:
- with semicircular, open arc, blade adjustable in length
- locking screw made of tool steel
- adjustable measuring rail
- measurements on workpieces with tiny lugs and extensions



N° article	354180	Protractor mm	Leg length mm	Leg cross section mm
100×150	●	100	150	20×4
150×300	●	150	300	20×4
200×400	●	200	400	20×4
250×500	●	250	500	20×4

Digital universal protractor

PRETEC

Delivered in case

Design:
- with fine adjustment
- quick clamping
- 3 measuring rails 150, 200 and 300 mm
- reading 1"/0,01, Tol ± 5"
- measuring range 0 - 90°, 0 - 180°, 0 - 360°

Delivery:
Incl. test certificate



N° article	354610	Leg length mm
150 - 300	●	150 - 300

Universal protractor

PRETEC

Rost frei – Edelstahl – Inox Stainless Steel

Delivered in case

Design:
- with fine adjustment
- made of stainless steel with hardened measuring edges
- glare-free and parallax-free reading through counter thrusting vernier
- with large magnifying lens and additional angle
- partition of base plate in 4 × 90°
- reading accuracy 1/12° = 5 arc minutes
- with 3 exchangeable measuring bars of 150, 200 and 300 mm length
- measuring bars slidable in the entire length and with additional fine adjustment

Use:
- for measuring angles at workpieces, fixtures, machines etc.
- usable as ruler and mitre square



N° article	354350	Leg length mm
150/200/300	●	150200300

Straightedge DIN 874/00

PREMUS

Design:
- standard steel
- quality 00
- bevel edge hardened, ground and fine lapped
- with insulation
- glare-free burnished

DIN 874/00



N° article	360020	Length mm	Leg cross section mm
75	●	75	20 × 5
100	●	100	20 × 5
125	●	125	20 × 5
150	●	150	25 × 6
200	●	200	25 × 6
300	●	300	35 × 8
500	●	500	40 × 10

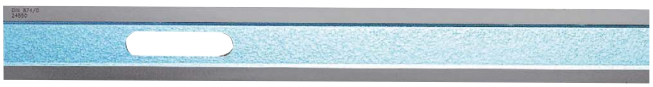
Steel ruler DIN 874/I

PREMUS

Design:
- quality 1
- edges and sides precisely machined, unhardened
- from size 2,000 mm with H-section profile and with 2 hand slots

DIN 874/I

Use:
For control purposes Supplied with test report.



N° article	360180	Length mm	Leg cross section mm
500	● +	500	40 × 8
750	○ +	750	50 × 10
1000	● +	1000	50 × 10
1500	○ +	1500	60 × 12
2000	○ +	2000	70 × 14

Workshop ruler DIN 866/B

PRETEC

Design:
- ground on all sides and additionally polished on the graduation part
- the lengths of the scale lines are structured in mm. 5 mm and 10

DIN 866 B

EDELSTAHL Rost frei INOX STAINLESS STEEL



N° article	361150	Length mm	Leg cross section mm
500	● +	500	25 × 5
1000	● +	1000	30 × 6
1500	○ +	1500	30 × 6
2000	○ +	2000	40 × 8
3000	○ +	3000	40 × 8

Light metal rule

PRETEC

Design:
- aluminium anodised
- glare-free reading due to black mm scale
- not calibratable



N° article	361400	Length mm	Leg cross section mm
300	●	300	50 × 5
600	●	600	50 × 5
1000	● +	1000	50 × 5

Steel ruler DIN 874/II

PRETEC

Design:
- quality II
- edges and sides precisely machined
- unhardened

DIN 874/II

Use:
For marking and alignment purposes Supplied with test report.



N° article	360150	Length mm	Leg cross section mm
500	● +	500	30 × 6
750	○ +	750	40 × 8
1000	● +	1000	40 × 8
1500	○ +	1500	50 × 10
2000	○ +	2000	60 × 12

Steel ruler DIN 874/0

PREMUS

Design:
- quality 0
- edges and sides precisely machined
- unhardened

DIN 874/0

Use:
For the most accurate inspections. Supplied with test report.



N° article	360230	Length mm	Leg cross section mm
500	○ +	500	50 × 10
1000	○ +	1000	60 × 12

Workshop ruler DIN 866/A

PRETEC

DIN 866 A

EDELSTAHL Rost frei INOX STAINLESS STEEL



N° article	361200 Standard steel	361250 stainless	Length mm	Leg cross section mm
500	● +	○ +	500	30 × 6
1000	● +	● +	1000	40 × 8
1500	○ +	○ +	1500	40 × 8
2000	○ +	○ +	2000	50 × 10
3000	○ +	○ +	3000	50 × 10

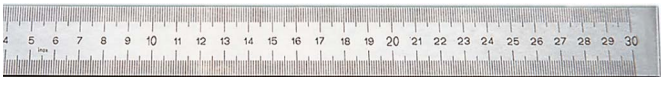
Steel rule DIN 866/B

PRETEC

Design:
- graduation mm/mm
- stainless

DIN 866 B

EDELSTAHL Rost frei INOX STAINLESS STEEL



N° article	361500	Length mm	Leg cross section mm
300	●	300	30 × 1
500	●	500	30 × 1
1000	●	1000	30 × 1
1500	● +	1500	30 × 1
2000	● +	2000	30 × 1
3000	● +	3000	30 × 1

Steel rule DIN 866/B

BMI

Design:
- the scale is abrasion-resistant
- insensitive to chemicals, greases and oils
- the matt surface guarantees prime readability
- curved edges
- EG accuracy class II

DIN 866 B | approved to EG-II | Rostfrei



361600 1/1 mm graduation top and bottom



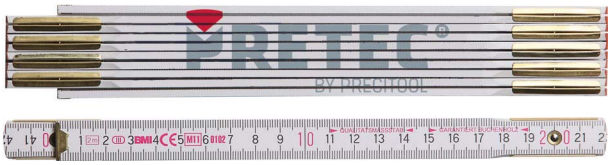
361650 1/2 mm graduation top and 1/1 mm graduation bottom

N° article	361600 Graduation mm/mm	361650 Graduation mm / 1/2 mm	Length mm	Leg cross section mm
150	●	●	150	13×0,5
200	●	●	200	13×0,5
250	●	●	250	13×0,5
300	●	●	300	13×0,5
500	●	●	500	18×0,5
1000	●	●	1000	18×0,5

Folding ruler

PRETEC

Design:
- beech
- duplex division, black graduation
- red decimal graduation
- brass-plated steel springs
- through-riveted joints

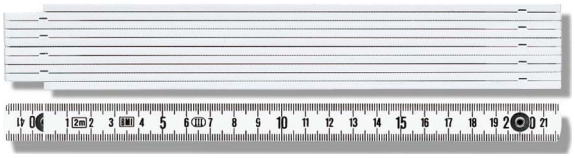


N° article	363000 Beech	Length m	Width mm	Number of sections
2P	●	2	16	10

Folding ruler

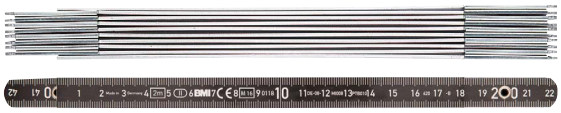
BMI

Design:
- white plastic folding rule with black graduation (EG II)
- riveted metal joint springs



N° article	363100 Plastic	Length m	Width mm	Number of sections
1	●	1	13	10
2	●	2	16	10

Design:
- spring-hard special aluminium alloy
- section thickness 1.4 mm
- section height 14 mm
- black with silver-coloured mm graduation
- digits and graduations deep etched in the anodized coat
- the graduation is anti-abrasive and withstands chemicals, grease and oil
- exactly latching, galvanised steel springs
- EG accuracy class II



N° article	363200 Aluminium black	Length m	Width mm	Number of sections
1	●	1	14	10
2	●	2	14	10

Pocket spring tape measure

STANLEY

Design:
- lightweight, ergonomically shaped tape measure for a comfortable grip and convenient use
- improved durability of the first 8 cm of the tape thanks to a BladeArmor® coating to ensure better abrasion and breaking resistance
- double-sided pressure of the measuring tape enables simple overhead measurement
- magnetic multi end hook for great versatility when used on all surfaces
- finger brake for controlled and safe retraction of the tape
- rubber-coated housing with integrated belt clip

approved to EG-II



N° article	363610 Compact Pro	Belt length m	Strap width mm
8	●	8	25
10	●	10	25
5	●	5	25

Design:
- shockproof housing, enamelled tape for longer service life
- flexible tape end fitting for exact internal and external measurements
- with locking device

approved to EG-II



N° article	363625 Tylon	Belt length m	Strap width mm
3	●	3	12,7
5	●	5	19
8	●	8	25

Pocket spring tape measure

BMI

Design:
- housing made of impact-resistant ABS
- accuracy of the tape according to EC II
- graduation mm/mm
- steel, white varnished with black graduation

approved to EG-II



N° article	363681 Vario	Belt length m	Strap width mm	Housing dimension W × D × H mm
2	●	2	13	58 × 57 × 26
3	●	3	13	58 × 57 × 26
5	●	5	16	75 × 70 × 26
8	●	8	19	76 × 75 × 32

Design:
- made of impact-resistant ABS
- stainless tape design
- tape, return spring and end hook are completely rustproof
- graduation mm/mm
- stainless steel with black graduation
- accuracy of the tape according to EC II

approved to EG-II

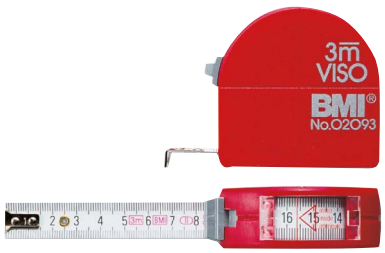
Edelstahl Rostfrei



N° article	363686 Vario	Belt length m	Strap width mm	Housing dimension W × D × H mm
2	●	2	13	58 × 57 × 26
3	●	3	13	58 × 57 × 26
5	●	5	16	75 × 70 × 26

Design:
- housing made of polyamide
- free-running tape made of spring steel strip, white stove-enamelled
- black/red mm graduation with EU qualification approval, calibratable
- horizontal window for internal measurements and foldout callipers
- the spring tape measures provide the following functions: Linear measure, internal measurement and radius

approved to EG-II



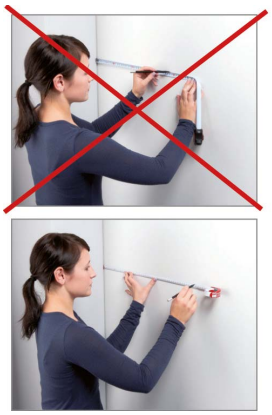
N° article	363700 Viso	Belt length m	Strap width mm	Housing dimension W × D × H mm
3×3	●	3	16	65 × 65 × 25

Pocket spring tape measure

PRETEC

Design:
- stainless steel measure
- with stopper
- white varnished
- unbreakable and durable
- the convex tape makes it a perfect ruler
- rolls out by itself

Edelstahl Rostfrei





N° article	363650	Belt length m	Strap width mm
2	●	2	13

Pocket spring tape measure

STANLEY

Design:
- with chrome-plated plastic housing, removable belt clip
- automatic tape return with locking device
- yellow varnished steel tape with mm graduation and MYLAR protective coating

approved to EG-II



N° article	363800 POWERLOCK	Belt length m	Strap width mm
5	●	5	19
8	●	8	25
10	●	10	25

Design:
- brown plastic housing
- direct reading of internal dimensions through wide display window
- yellow steel tape with two-colour print
- no automatic tape return "push and pull"
- the housing is protected by an U-shaped aluminium rail
- movable end hook for inside and outside measurement

approved to EG-II

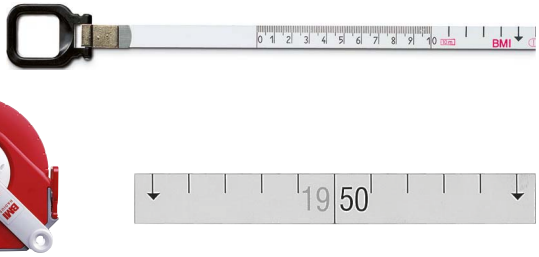


N° article	363760 PANORAMIC	Belt length m	Strap width mm
3	●	3	12,7

Tape measure

Design:
- start of scale A approx. 10 cm from fitting end
- fibreglass tape with cm graduation
- in capsule

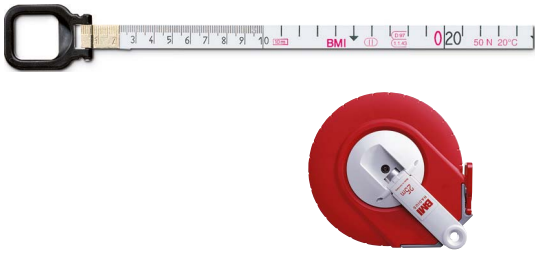
approved to EG-II



N° article	364000	Belt length m	Strap width mm
10	○	10	13
20	●	20	13
25	○	25	13
30	○	30	13

Design:
- measurement commencement of scale B from front fitting edge with 0
- steel measuring tape, white lacquered, with mm graduation
- in capsule

approved to EG-II



N° article	364050	Belt length m	Strap width mm
10	●	10	13
15	●	15	13
20	●	20	13
25	○	25	13
30	○	30	13
50	●	50	13

Circumference tape Circometer

DIN 866 B

Design:
- made of spring steel strip
- 16 mm wide flexible tape with lasered scale graduation
- reading at vernier, option: Resolution 0.05 mm
- scale spacing 1 mm, vernier reading 0.1 mm
- accuracy of graduation to DIN 866/B

Use:
- for measuring circumference and diameter at round pieces (arbors, tubes, balls etc.)
- size 15 - 115 vernier reading 0.05 mm
- for measuring external diameters



N° article	365100	Measuring range circumference min. mm	Measuring range circumference max. mm	Measuring range Ø min. mm	Measuring range Ø max. mm
15 - 115	○	15	115	–	–
60 - 950	●	60	950	20	300
940 - 2200	●	940	2200	300	700
2190 - 3460	○	2190	3460	700	1100

Tape measure

Design:
- measurement commencement of scale B from front fitting edge with 0
- steel measuring tape, polyamide coated, with mm graduation
- on a frame

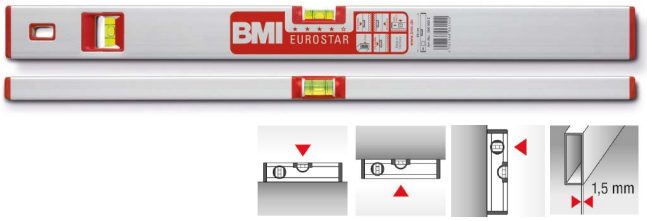
approved to EG-II

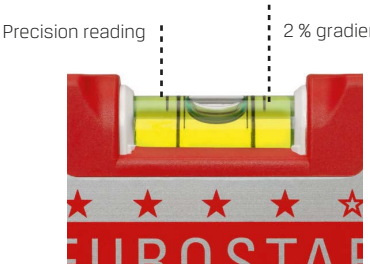


N° article	364180	Belt length m	Strap width mm
20	○	20	13
30	○	30	13

Aluminium spirit level

Design:
- smooth aluminium profile, anodised
- at the same inclination the spirit bubbles have a five times longer way than in standard levels
- inaccuracies become visible immediately
- round levels for non-glare display
- mounting accuracy of levels 0.3 mm/m in normal position
- 4-chamber profile
- additional protection through shock-absorbing rubber end caps
- wall thickness 1.6 mm





The original.
With laser scaled spirit levels (patented) and non-glare reading!

N° article	370100 EUROSTAR	Length mm	Width mm	Height mm
300	●	300	22	50
400	●	400	22	50
600	●	600	22	50
800	●	800	22	50
1000	● +	1000	22	50



- **2 % gradient marking in the horizontal spirit level**
- **Markings for precision reading in the spirit level**
- **Laser-marked spirit levels, thus lifelong high measuring accuracy of 0.5 mm/m**
- **Optimal reading due to tube level**
- **Durable due to thick walls and shock-absorbing rubber end cap**
- **No more double bubbles**

Design:
- smooth aluminium profile, anodised
- round horizontal spirit level with magnifying effect
- edgeless horizontal vial creates distortion-free view of the vial bubble, even with reversal measurement
- durable due to strong walls and shock-absorbing rubber end caps
- lifetime high measuring accuracy (0.5 mm/m) due to ultrasonically welded vials
- reversal measurement possible (0.75 mm/m)
- wall thickness up to 1200 mm = 1.6 mm, from 1500 mm = 2.2 mm



370151

N° article	370151 ALUSTAR	370152 ALUSTAR with magnet	Length mm	Width mm	Height mm
200	●	–	200	24	55
300	●	●	300	24	55
400	●	●	400	24	55
500	●	●	500	24	55
600	●	●	600	24	55
800	●	●	800	24	55
1000	● +	● +	1000	24	55
1200	○ +	○ +	1200	24	55
1500	○ +	○ +	1500	24	55
1800	○ +	○ +	1800	24	55
2000	○ +	○ +	2000	24	55

Design:
- smooth aluminium profile, anodised
- round horizontal spirit level with magnifying effect
- edgeless horizontal vial creates distortion-free view of the vial bubble, even with reversal measurement
- lifetime high measuring accuracy (0.5 mm/m) due to ultrasonically welded vials
- reversal measurement possible (0.5 mm/m)
- solid wall and shock-absorbing rubber end caps maintain high measurement accuracy
- milled measuring surface (up to 200 cm)
- lengths 1500, 1800 and 2000 mm with additional second vertical vial
- wall thickness up to 1200 mm = 1.8 mm



370221

N° article	370221 SUPERSTAR	Length mm	Width mm	Height mm
300	●	300	24	55
400	●	400	24	55
500	●	500	24	55
600	●	600	24	55
800	●	800	24	55
1000	● +	1000	24	55
1200	○ +	1200	24	55
1500	○ +	1500	24	55
1800	○ +	1800	24	55
2000	○ +	2000	24	55

Aluminium spirit level

Design:
- smooth aluminium profile, anodised
- at the same inclination the spirit bubbles have a five times longer way than in standard levels
- inaccuracies become visible immediately
- round levels for non-glare display
- mounting accuracy of levels 0.3 mm/m in normal position
- 4-chamber profile
- additional protection through shock-absorbing rubber end caps
- wall thickness 2 mm



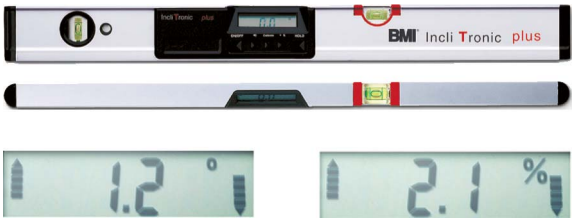
N° article	370300 HIGHPRECISION	Length mm	Width mm	Height mm
600	○	600	26	50
800	○	800	26	75
1000	○ +	1000	26	75
1200	○ +	1200	26	75
1800	○ +	1800	26	75
2000	○ +	2000	26	75

Aluminium spirit level with inclinometer

Design and use:
- solid powder-coated 4-chamber profile with 2 milled faces
- electronically measured angle, digital display
- the computer can be calibrated on site within seconds
- display can be toggled between degrees and percentage
- measured value display in 0.1° or in 0.1% steps
- arrows in the display indicate the direction of movement for the inclinometer to reach the 0° or 90° position
- HOLD button to save the current measured value
- connectible acoustic signal for 0° or 90° position
- due to horizontal and vertical vial applicable as spirit level

Note:
Measuring accuracy at 0° and 90° = ± 0.1°
Measuring accuracy from 1° to 89° = ± 0.3°

Delivery:
With batteries, in screw cap plastic mailing tube



N° article	370620 Incli Tronic plus	Length mm	Width mm	Height mm
600	●	600	26	60
800	○	800	26	60
1200	○ +	1200	26	60

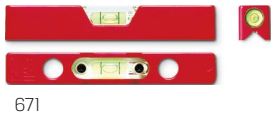
Plastic spirit level

Design:
Handy spirit level made of impact-proof plastic, furnished with acrylic glass vials

670: With horizontal and vertical spirit level
671: Post level with prismatic base
673: With horizontal, vertical and 45° spirit level



670

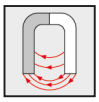

671

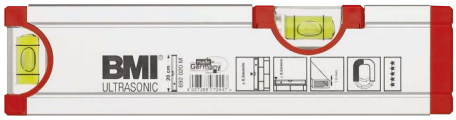

673

N° article	370700	Length mm	Width mm	Height mm
670	●	100	13	35
671	●	150	23	25
673	●	200	17	42

Aluminium spirit level

Design:
- smooth aluminium profile, anodised
- with head vial and rotatable angle vial
- robust horizontal perspex vial, with magnifying effect, easy to read
- measuring accuracy 0.5 mm/m in normal position or at reversal measurements
- with magnet
- wall thickness 1.8 mm


Magnet



N° article	370400 ULTRASONIC	Length mm	Width mm	Height mm
200	●	200	22	50

Protractor with LCD display

Design and use:
- solid powder-coated light-metal profile
- range 355°, display in 0.1° increments
- profile-integrated bubbles allow to determine the horizontal and the vertical line
- can be used as spirit level

Delivery:
With batteries, in screw cap plastic mailing tube



N° article	370650 Quadranfix	Length mm
600	○	600

Precision spirit level DIN 877

DIN 877 — Delivered in case

Design:
- made of grey cast iron, with prismatic base, measuring faces fine ground
- for aligning horizontal faces and shafts
- with ground and split horizontal vial and complete thermal protection
- tension-free mounting of the vial



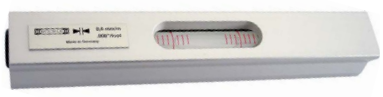
N° article	370960 Accuracy 0.10 mm	370970 Accuracy 0.04 mm	370980 Accuracy 0.02 mm	Length mm	Width mm	Height mm
160	●	●	●	160	42	42
200	●	○	●	200	42	42
250	○	○	●	250	42	42
300	○	○	○	300	42	42
500	○	○	○	500	42	42

Light-metal spirit level

Delivered in case

Design:
- made of aluminium
- with prismatic base (120°)
- scale graduation of vial approx. 0.6 mm/m

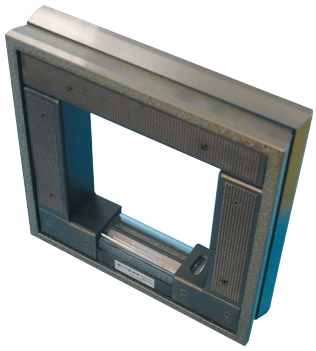
N° article	371060	Length mm	Width mm	Height mm
150	●	150	22	22
200	●	200	22	22
250	○	250	22	22
300	○	300	22	22



Frame level DIN 877

Design:
- made of grey cast iron, 3 sides prismatic, one vertical side plane
- for aligning horizontal and vertical faces and shafts
- with complete thermal protection, measuring faces fine ground
- tension-free mounting of the vial

DIN 877 | Delivered in case



N° article	371560 Accuracy 0.10 mm	371570 Accuracy 0.02 mm	Length mm	Width mm	Height mm
100×100	○	–	100	34	100
150×150	●	○	150	42	150
200×200	○	●	200	42	200
300×300	○	○	300	44	300

Crankpin spirit level DIN 877

Design:
- made of grey cast iron
- with ground and split horizontal and vertical vial
- measuring faces fine ground
- with horizontal and transverse prism
- suited for aligning crankshafts and pins on engines and machines

DIN 877 | Delivered in case



N° article	372010	Accuracy mm/m	Length mm	Width mm	Height mm
60	○	0.2	60	42	42
90	●	0.1	90	42	42

Bench type spirit level

Design:
- made of grey cast iron
- measuring faces ground
- with one ground and split horizontal vial and flat base
- suited for simple calibrations

Delivered in case



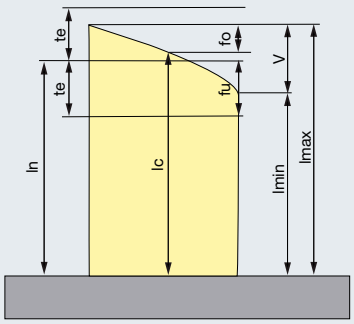
N° article	372305	Accuracy mm/m	Length mm	Width mm	Height mm
100	●	0.3	100	24	22
150	●	0.3	150	24	22

Tolerance classes and their application areas

The parallel gauge blocks according to DIN EN ISO 3650 are produced in different tolerance classes

Calibration class K	Reference standard gauge blocks, are used predominantly for gauge block tests with gauge block testers in calibration laboratory, in conjunction with a DKD calibration certificate.
Tolerance class 0	Factory and reference standard in the calibration laboratory or in the air-conditioned measuring room for setting or calibrating gauges and measuring instruments
Tolerance class 1	Commonly used reference standard for the testing of gauges and for the adjustment of measuring instruments. Use in the measuring room and at the test station in production
Tolerance class 2	Gauge blocks of this class are used as a reference standard at inspection stations in production areas, for adjusting and calibration of measuring instruments and for adjustment and inspection of tools, devices and machines.





Deviation limits of the length of the nominal dimension and tolerances for the deviation span (extract from DIN EN ISO 3650, table 4)

Nominal size range		Tolerance class 0		Tolerance class 1		Tolerance class 2	
		Deviation limits of the length of the nominal size at any point ± th µm	Tolerance for the deviation margin tv µm	Deviation limits of the length of the nominal size at any point ± th µm	Tolerance for deviation margin tv µm	Deviation limits of the length of the nominal size at any point ± th µm	Tolerance for the deviation margin tv µm
Above	to						
-	**10**	0.12	0.10	0.20	0.16	0.45	0.30
10	**25**	0.14	0.10	0.30	0.16	0.60	0.30
25	**50**	0.20	0.10	0.40	0.18	0.80	0.30
50	**75**	0.25	0.12	0.50	0.18	1.00	0.35
75	**100**	0.30	0.12	0.60	0.20	1.20	0.35
100	**150**	0.40	0.14	0.80	0.20	1.60	0.40
150	**200**	0.50	0.16	1.00	0.25	2.00	0.40
200	**250**	0.60	0.16	1.20	0.25	2.40	0.45
250	**300**	0.70	0.18	1.40	0.25	2.80	0.50
300	**400**	0.90	0.20	1.80	0.30	3.60	0.50
400	**500**	1.10	0.25	2.20	0.35	4.40	0.60
500	**600**	1.30	0.25	2.60	0.40	5.00	0.70
600	**700**	1.50	0.30	3.00	0.45	6.00	0.70
700	**800**	1.70	0.30	3.40	0.50	6.50	0.80
800	**900**	1.90	0.35	3.80	0.50	7.50	0.90
900	**1,000**	2.00	0.40	4.20	0.60	8.00	1.00

Comparison table on material properties

Property	**Ceramics**	**Carbide**	**Steel**
Linear expansion coefficient	9,5 × 10-E-6 / K	4,23 × 10-E-6 / K	11,5 × 10-E-6 / K
Thermal conductivity	very low	low	high
Wear resistance	excellent	good	less well
Wringing characteristics	acceptable	excellent	excellent
Geometric fidelity	excellent	excellent	acceptable at proper handling
Corrosion resistance	excellent	good	less well
Mechanic solidity	good	good	very good

Parallel gauge block set

DIN ISO 3650 | Delivered in case

Design:
- made of top-quality special steel, age-hardened, annealed
- with good wringing performance, hand-lapped
- edges slightly chamfered

380100 degree of accuracy 0
- for checking gauges actually used at work
- adjustment of measuring devices and measuring machines with high precision

380150 degree of accuracy 1
- for checking control gauges
- for calibrating measuring devices
- control work in the measuring room

380200 degree of accuracy 2
- working and setting gauge for control in workshop and production

Delivery:
Incl. test certificate of manufacturer

Calibration costs see monitoring of test equipment from page 39/694



N° article	380100 Degree of accuracy 0	380150 Degree of accuracy 1	380200 Degree of accuracy 2	Contents
32	○	●	●	1 × 1.005 9 × 1.01 - 1.09 (0.01) 9 × 1.1 - 1.9 (0.1) 9 × 1 - 9 (1.0) 3 × 10 - 30 (10.0) 1 × 50
47	●	●	●	1 × 1.005 20 × 1.01 - 1.20 (0.01) 7 × 1.30 - 1.90 (0.1) 9 × 1.00 - 9.00 (1.0) 10 × 10 - 100 (10.0)
87	○	●	●	9 × 1.001 - 1.009 (0.001) 49 × 1.01 - 1.49 (0.01) 19 × 0.5 - 9.5 (0.5) 10 × 10 - 100 (10.0)
103	○	●	●	1 × 1.005 49 × 1.01 - 1.49 (0.01) 49 × 0.5 - 24.5 (0.5) 4 × 25 - 100 (25.0)

Parallel gauge block

DIN ISO 3650 | Delivered in case

Design:
- made of top-quality special steel, age-hardened, annealed
- with good wringing performance, hand-lapped
- edges slightly chamfered
- each gauge block is delivered with engraved ID no. and quality class
- degree of accuracy 1

Delivery:
In plastic package, from 125 mm in wooden box

Calibration costs see monitoring of test equipment from page 39/694



N° article	380600 separate	Nominal dimension mm	Graduation mm
0,5	●	0,5	-
1,001 - 1,009	○	1 - 1,001	0,01
1,00 - 1,47	●	1 - 1,47	0,001 - 0,01
1,48 - 1,90	○	1,48 - 1,9	0,01
2,00 - 9,50	○	2 - 9,5	0,5
10,0 - 20,0	○	10 - 20	0,5
20,5	●	20,5	0,5
21,0 - 24,5	○	21 - 24,5	0,5
25,0	●	25	-
30	●	30	-

N° article	380600 separate	Nominal dimension mm	Graduation mm
40	●	40	-
50	●	50	-
60	●	60	-
70	●	70	-
80	●	80	-
90	○	90	-
100	●	100	-
125	○	125	-
150	○	150	-
200	●	200	-

N° article	380600 separate	Nominal dimension mm	Graduation mm
250	○	250	-
300	○	300	-
400	○	400	-
500	○	500	-
600	○	600	-
700	○	700	-
800	○ +	800	-
900	○ +	900	-
1000	○ +	1000	-

Accessories for parallel gauge block

Livraison :
- linen cloth
- chamois leather
- can of anti-corrosion oil
- hone
- fine brush
- grease brush
- operating manual

Delivered in case



N° article	381450 Gauge block care kit
1901	○

Design:
- with quick adjustment and clamping mechanism for rapid and secure chucking of gauge blocks
- smooth supporting faces all around
- excellent rigidity of shape due to longitudinal ribs

N° article	381700 Gauge block holder	Clamping range mm
0 - 100	●	0 - 100
100 - 200	○	100 - 200
200 - 400	●	200 - 400
300 - 500	○	300 - 500



Use:
- only for external measurements
- suitable for forming snap gauges or adjustable limit snap gauges



N° article	381720 Plane jaws	Total length mm	Width mm	Height mm
100	○	100	9	20

Use:
- for internal and external measurements (not suitable for bores)
- height corresponds to tolerance class 2



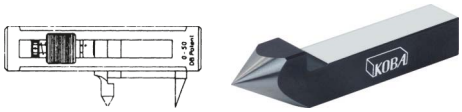
N° article	381730 Plane-parallel legs	Total length mm	Width mm	Height mm
100	○	100	9	20

Use:
For inner and outer measurements



N° article	381750 Measuring jaws with cylindrical shoulder	Lug ∅ mm	Measuring depth mm	Length mm	Shank width mm	[C4] Shank height mm
4	○	4	8	43	9	7
10	○	10	15	50	9	9
16	○	16	20	55	9	10
20	○	20	40	75	9	10
30	○	30	65	100	9	15
40	○	40	95	130	9	20

Use:
For forming a marking divider



N° article	381800 Centre point	Total length mm	Shank width mm	[C4] Shank height mm
55	○	55	9	8

Use:
For forming a precise height marking gauge



N° article	381820 Scriber	Total length mm	Shank width mm	Shank height mm
55	○	55	9	8

Use:
For checking graduations and exact distances between lines and points

Delivery:
In pairs



N° article	381840 Control points	Total length mm	Shank width mm	Shank height mm
55	○	55	9	8

Design:
- made of special cast, base minutely machined and lapped
- supporting face aligned

Use:
For holding gauge block holders or combinations of them



N° article	381850 Holder base	Length mm	Width mm	Height mm
HF	○	106	70	28 (20)



N° article	381855 Measuring jaw	Plage de mesure mm	Design:
0001	○	all	upper measuring jaw
0003	○	18 - 35	lower measuring jaw
0005	○	35 - 100	lower measuring jaw
0007	○	100 - 280	lower measuring jaw
0009	○	280 - 510	lower measuring jaw

Optical flat for parallel gauge block

PRETEC

Design:
- for flatness and slip testing on high-precision, flat surfaces
- optical flat Ø 45 mm
- thickness 15 mm
- planarity 0.1 µm

Delivered in case

N° article	381870 Optical flat
0045	○



0045

Design:
- for surface evenness and wring tests of outside micrometers
- optical flat Ø 30 mm
- flatness / parallelism: 0.5/0.3 µ

Delivery:
In wooden case.

N° article	381870 set
0050	○



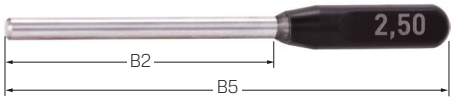
0050

Precision pin gauge

Design:
- made of alloyed tool steel
- hardened and tempered, ground and lapped
- hardness 58 - 62 HRC
- with handle

DIN 2269

Use:
See application examples (drawings on page 38/674)



N° article	383000 Accuracy 0.001 mm	Ø (um 0,01 steigend) mm	Total length mm	Total length mm
0,10 - 0,19	○	0,10 - 0,19	53	33
0,20 - 0,29	○	0,20 - 0,29	53	33
0,30 - 0,49	○	0,30 - 0,49	53	33
0,50 - 0,99	○	0,50 - 0,99	53	33

N° article	383000 Accuracy 0.001 mm	Ø (um 0,01 steigend) mm	Total length mm	Total length mm
0,10 - 0,19	○	0,10 - 0,19	53	33
0,20 - 0,29	○	0,20 - 0,29	53	33
0,30 - 0,49	○	0,30 - 0,49	53	33
0,50 - 0,99	○	0,50 - 0,99	53	33

Gauge block test kit for outside micrometers

PRETEC

Design:
- ISO 3650 for callipers MB 0-200 mm
- made of superior special steel
- age-hardened, hardened and hand-lapped
- tolerance class I
- 3 pieces per set

Delivered in case

N° article	381877	Contents
0001	○	1× 30.0 mm | 1× 41.3 mm | 1× 131.4 mm



0001

Design:
- DIN 2250-C for testing the internal measurement of callipers according to VDI/VDE/DGQ 2618
- 2 pieces per set

N° article	381877 for outside micrometers	Contents
0002	○	1× 4.0 mm | 1× 25.0 mm



0002

Precision pin gauge set

Design:
- made of high-quality gauge steel, hardened and age-hardened to 58- 62 HRC
- ultra-fine ground to top contour-accuracy
- cylindrical pin gauges (test probes in set)
- the pins are checked at a reference temperature of 20 °C
- from 3.0 mm Ø labelled at the front face
- facet ground on only one side to reduce damaging
- immutable measuring bobs

Use:
For various measuring and testing tasks

DIN 2269

Delivered in case

N° article	383550 Accuracy 0.001 mm	383551 Accuracy 0.002 mm	Length mm	Quantity
0,5 - 1/0,01	○	○	40	51
1 - 2/0,01	○	○	70	101
2,01 - 3/0,01	○	○	70	100
3,01 - 4/0,01	○	○	70	100
4,01 - 5/0,01	○	○	70	100
5,01 - 6/0,01	○	○	70	100
6,01 - 7/0,01	○	○	70	100
7,01 - 8/0,01	○	○	70	100
8,01 - 9/0,01	○	○	70	100
9,01 - 10/0,01	○	○	70	100



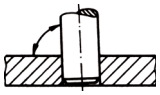
Precision pin gauge

Design:
- made of alloyed tool steel
- hardened and tempered, ground and lapped
- hardness 58 - 62 HRC
- from ∅ 1.50 mm labelled

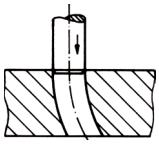
Use:
See application examples (drawings)



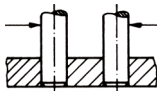
DIN 2269



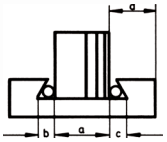
1 Angularity of bores and bore tolerances



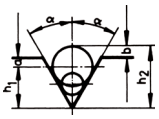
2 Straightness of bores



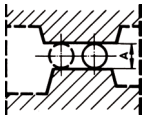
3 Hole distances



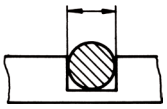
4 V-guides



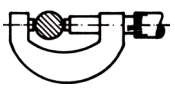
5 Profile depths of angles



6 Guide surfaces



7 Determination of groove dimensions



8 Micrometer partition

N° article	383100 Accuracy 0.001 mm	383102 Accuracy 0.002 mm	∅ (increasing by 0.01) mm	Length mm
0,10 - 0,19	○	○	0,1 - 0,19	40
0,20 - 0,29	○	○	0,2 - 0,29	40
0,30 - 0,49	○	○	0,3 - 0,49	40
0,50 - 0,99	○	○	0,5 - 0,99	40
1,00 - 2,99	○	○	1 - 2,99	70
3,00 - 5,99	○	○	3 - 5,99	70
6,00 - 9,99	○	○	6 - 9,99	70
10,00 - 11,99	○	○	10 - 11,99	70
12,00 - 13,99	○	○	12 - 13,99	70
14,00 - 15,99	○	○	14 - 15,99	70
16,00 - 18,99	○	○	16 - 18,99	70
19,00 - 20,00	○	○	19 - 20	70

N° article	383104 Accuracy 0.001 mm Rust and acid resistant	∅ (increasing by 0.01) mm	Length mm
0,30 - 0,49	○	0,1 - 0,49	40
0,50 - 0,99	○	0,5 - 0,99	40
1,00 - 2,99	○	1 - 2,99	70
3,00 - 5,99	○	3 - 5,99	70
6,00 - 9,99	○	6 - 9,99	70
10,00 - 11,99	○	10 - 11,99	70
12,00 - 12,99	○	12 - 12,99	70

Pin gauge accessories

Design:
Holder made of fine zinc casting alloy, enamelled, with clamp screw

Use:
- for mounting gauge pins
- for producing individual go/no-go gauges





N° article	383300 Holder	Clamping range mm	Holder length mm
1	●	1 - 1.99	59
2	●	2 - 4.5	67
3	●	4.51 - 6.99	75
4	●	7 - 9.5	83
5	●	9.51 - 12	91

Limit plug gauge set

Design:
Made of gauge steel hardened, tempered and fine ground

DIN 2245 | H7 | Delivered in case



N° article	384001	Nominal dimension min., mm	Nominal dimension max., mm	Contents
3 - 12	●	3	12	1 × each ∅ 3 | 4 | 5 | 6 | 8 | 10 | 12 mm

Limit plug gauge

Design:
- go and no-go sides made of hardened gauge steel
- ground and lapped
- limit plug gauges with different tolerances and intermediate dimensions available on request

DIN 2245 | H7

Use:
For inspecting bores with regard to dimensional accuracy.

Calibration costs see monitoring of test equipment from page 39/694
Please add "-KAL" to the size indication
Example: 384000 35-KAL

Note:
From size 51 upwards two-part



N° article	384000	Nominal dimension mm	N° article	384000	Nominal dimension mm	N° article	384000	Nominal dimension mm
1	●	1	20	●	20	42	●	42
1,5	●	1,5	21	●	21	44	●	44
2	●	2	22	●	22	45	●	45
3	●	3	23	●	23	46	○	46
4	●	4	24	●	24	47	○	47
5	●	5	25	●	25	48	●	48
6	●	6	26	●	26	50	●	50
7	●	7	27	●	27	52	○	52
8	●	8	28	●	28	55	●	55
9	●	9	29	●	29	58	○	58
10	●	10	30	●	30	60	●	60
11	●	11	32	●	32	62	○	62
12	●	12	33	○	33	65	●	65
13	●	13	34	●	34	68	○	68
14	●	14	35	●	35	70	○	70
15	●	15	36	●	36	75	○	75
16	●	16	37	○	37	80	○	80
17	●	17	38	●	38	85	○	85
18	●	18	39	○	39	90	●	90
19	●	19	40	●	40	100	○	100

Ring gauge (Control ring)

Design:
Made of gauge steel, hardened, ground and lapped

Use:
For calibrating measuring instruments like three-point internal micrometers 311200, dial bore gauges etc.

Calibration costs see monitoring of test equipment from page 39/694
Please add "-KAL" to the size indication
Example: 384160 28-KAL

DIN 2250 | Form C

Note:
- further nominal diameters available on request
- ring gauges to DIN 2250 form B for pneumatic length measuring devices



N° article	384160 separate	Nominal dimension mm	N° article	384160 separate	Nominal dimension mm	N° article	384160 separate	Nominal dimension mm	N° article	384160 separate	Nominal dimension mm	N° article	384160 separate	Nominal dimension mm	N° article	384160 separate	Nominal dimension mm
3	○	3	21	○	21	39	○	39	62	○	62	90	○	90	150	○	150
4	○	4	22	○	22	40	●	40	64	○	64	92	○	92	155	○	155
5	○	5	23	○	23	41	○	41	65	○	65	94	○	94	160	○	160
6	●	6	24	○	24	42	○	42	66	○	66	95	○	95	162,5	○	162,5
7	○	7	25	●	25	43	○	43	68	○	68	96	○	96	165	○	165
8	●	8	26	○	26	44	○	44	70	●	70	98	○	98	170	○	170
9	○	9	27	○	27	45	○	45	72	○	72	100	●	100	175	○	175
10	●	10	28	●	28	46	○	46	74	○	74	105	○	105	180	○	180
11	○	11	29	○	29	47	○	47	75	●	75	110	○	110	185	○	185
12	●	12	30	●	30	48	○	48	76	○	76	112,5	○	112,5	187,5	○	187,5
13	○	13	31	○	31	49	○	49	78	○	78	115	○	115	190	○	190
14	○	14	32	○	32	50	●	50	80	●	80	120	○	120	195	○	195
15	●	15	33	○	33	52	○	52	82	○	82	125	●	125	200	○	200
16	●	16	34	○	34	54	○	54	84	○	84	130	○	130			
17	○	17	35	●	35	55	○	55	85	●	85	135	○	135			
18	●	18	36	○	36	56	○	56	86	○	86	137,5	○	137,5			
19	○	19	37	○	37	58	○	58	87	○	87	140	○	140			
20	●	20	38	○	38	60	●	60	88	○	88	145	○	145			

Thread plug gauge

Design:
- made of gauge steel, hardened, annealed and fine ground
- one-piece arbor with go/no-go side
- the go-side is furnished with a complete thread profile
- the no-go side is equipped with a shortened thread profile with only a few thread leads

Tolerance field:
≤ M1.4 = 5H
≥ M1.6 = 6H

M Metric thread | Metric 60° | DIN 13 | 5H | 6H

Calibration costs see monitoring of test equipment from page 39/694 in our main catalogue

Note:
≤ M3 with centring tip



N° article	387000	Thread size metric	N° article	387000	Thread size metric	N° article	387000	Thread size metric	N° article	387000	Thread size metric
M1	○	M1	M3	●	M3	M12	●	M12	M27	●	M27
M1,2	●	M1.2	M3,5	●	M3.5	M14	●	M14	M30	●	M30
M1,4	●	M1.4	M4	●	M4	M16	●	M16	M33	○	M33
M1,6	●	M1.6	M5	●	M5	M18	○	M18	M36	●	M36
M2	●	M2	M6	●	M6	M20	●	M20	M39	○	M39
M2,2	○	M2.2	M8	●	M8	M22	○	M22			
M2,5	●	M2.5	M10	●	M10	M24	●	M24			

Thread ring gauge

Design:
Made of gauge steel hardened, tempered and fine ground

Tolerance field:
〈 M1.4 = 6h
〉 M1.4 = 6g

Calibration costs see monitoring of test equipment from page 39/694 in our main catalogue

M Metric thread | Metric 60° | DIN 13


387100


387120

N° article	387100 go	387120 No-go	Thread size metric	N° article	387100 go	387120 No-go	Thread size metric	N° article	387100 go	387120 No-go	Thread size metric	N° article	387100 go	387120 No-go	Thread size metric
M1	○	○	M1	M3	●	●	M3	M12	●	●	M12	M27	○	○	M27
M1,2	○	○	M1.2	M3,5	○	○	M3.5	M14	●	○	M14	M30	●	●	M30
M1,4	○	○	M1.4	M4	●	●	M4	M16	●	●	M16	M33	○	○	M33
M1,6	○	○	M1.6	M5	●	●	M5	M18	●	○	M18	M36	●	○	M36
M2	●	○	M2	M6	●	●	M6	M20	●	●	M20	M39	○	○	M39
M2,2	○	○	M2.2	M8	●	●	M8	M22	○	○	M22				
M2,5	●	○	M2.5	M10	●	●	M10	M24	●	○	M24				

Thread plug gauge

Design:
- made of gauge steel, hardened, annealed and fine ground
- one-piece arbor with go/no-go side
- the go-side is furnished with a complete thread profile
- the no-go side is equipped with a shortened thread profile with only a few thread leads

MF Metric fine thread | Metric 60° | DIN 13 | 5H | 6H

Tolerance field:
P ⟨ 0.25 = 5H
P ⟩ 0.25 = 6H

Calibration costs see monitoring of test equipment from page 39/694
Please add KAL (for "Calibration") to the size indication. Example: 387200 M10 × 0.35-KAL



N° article	387200	Thread size metric-fine
M1×0,2	○	M1×0,2
M1,2×0,2	○	M1,2×0,2
M1,4×0,2	○	M1,4×0,2
M1,6×0,2	○	M1,6×0,2
M1,8×0,2	○	M1,8×0,2
M2×0,2	○	M2×0,2
M2×0,25	○	M2×0,25
M2,5×0,2	○	M2,5×0,2
M2,5×0,25	○	M2,5×0,25
M2,5×0,35	○	M2,5×0,35
M3×0,25	○	M3×0,25
M3×0,35	○	M3×0,35
M3,5×0,25	○	M3,5×0,25
M3,5×0,35	○	M3,5×0,35
M3,5×0,5	○	M3,5×0,5
M4×0,25	○	M4×0,25
M4×0,35	○	M4×0,35
M4×0,5	○	M4×0,5
M4,5×0,35	○	M4,5×0,35
M4,5×0,5	○	M4,5×0,5
M5×0,25	○	M5×0,25
M5×0,5	●	M5×0,5
M5×0,75	○	M5×0,75
M6×0,25	○	M6×0,25
M6×0,35	○	M6×0,35
M6×0,5	●	M6×0,5
M6×0,75	●	M6×0,75
M7×0,35	○	M7×0,35
M7×0,5	○	M7×0,5
M7×0,75	○	M7×0,75
M8×0,35	○	M8×0,35
M8×0,5	○	M8×0,5
M8×0,75	○	M8×0,75
M8×1	●	M8×1
M9×0,35	○	M9×0,35
M9×0,5	○	M9×0,5
M9×0,75	○	M9×0,75
M9×1	○	M9×1
M10×0,35	○	M10×0,35
M10×0,5	○	M10×0,5
M10×0,75	○	M10×0,75
M10×1	●	M10×1
M10×1,25	●	M10×1,25
M11×0,5	○	M11×0,5
M11×0,75	○	M11×0,75

N° article	387200	Thread size metric-fine
M11×1	○	M11×1
M12×0,5	○	M12×0,5
M12×0,75	○	M12×0,75
M12×1	●	M12×1
M12×1,25	●	M12×1,25
M12×1,5	●	M12×1,5
M13×0,5	○	M13×0,5
M13×0,75	○	M13×0,75
M13×1	○	M13×1
M13×1,5	○	M13×1,5
M14×0,5	○	M14×0,5
M14×0,75	○	M14×0,75
M14×1	●	M14×1
M14×1,25	○	M14×1,25
M14×1,5	●	M14×1,5
M15×0,75	○	M15×0,75
M15×1	○	M15×1
M15×1,5	○	M15×1,5
M16×0,5	○	M16×0,5
M16×0,75	○	M16×0,75
M16×1	●	M16×1
M16×1,5	●	M16×1,5
M17×0,5	○	M17×0,5
M17×0,75	○	M17×0,75
M17×1	○	M17×1
M17×1,5	○	M17×1,5
M18×0,5	○	M18×0,5
M18×0,75	○	M18×0,75
M18×1	●	M18×1
M18×1,5	●	M18×1,5
M18×2	○	M18×2
M19×0,5	○	M19×0,5
M19×0,75	○	M19×0,75
M19×1	○	M19×1
M20×0,5	○	M20×0,5
M20×0,75	○	M20×0,75
M20×1	●	M20×1
M20×1,5	●	M20×1,5
M20×2	○	M20×2
M21×0,75	○	M21×0,75
M21×1	○	M21×1
M22×0,75	○	M22×0,75
M22×1	●	M22×1
M22×1,5	●	M22×1,5
M22×2	○	M22×2

N° article	387200	Thread size metric-fine
M23×0,75	○	M23×0,75
M23×1	○	M23×1
M24×0,75	○	M24×0,75
M24×1	●	M24×1
M24×1,5	●	M24×1,5
M24×2	●	M24×2
M25×0,75	○	M25×0,75
M25×1	○	M25×1
M25×1,5	○	M25×1,5
M26×0,75	○	M26×0,75
M26×1	○	M26×1
M26×1,5	●	M26×1,5
M27×0,75	○	M27×0,75
M27×1	○	M27×1
M27×1,5	○	M27×1,5
M27×2	○	M27×2
M28×0,75	○	M28×0,75
M28×1	●	M28×1
M28×1,5	○	M28×1,5
M30×0,75	○	M30×0,75
M30×1	●	M30×1
M30×1,5	●	M30×1,5
M30×2	●	M30×2
M32×1	○	M32×1
M32×1,5	●	M32×1,5
M33×1	○	M33×1
M33×1,5	○	M33×1,5
M33×2	○	M33×2
M34×1	○	M34×1
M34×1,5	○	M34×1,5
M35×1	○	M35×1
M35×1,5	●	M35×1,5
M36×1	○	M36×1
M36×1,5	●	M36×1,5
M36×2	●	M36×2
M36×3	○	M36×3
M38×1	○	M38×1
M38×1,5	●	M38×1,5
M39×1,5	○	M39×1,5
M39×2	○	M39×2
M39×3	○	M39×3
M40×1	○	M40×1
M40×1,5	●	M40×1,5

Thread ring gauge

Design:
Made of gauge steel, hardened, tempered and fine ground

MF Metric fine thread | Metric 60° | DIN 13

Tolerance field:
P < 0.25 = 6h
P > 0.25 = 6g

Calibration costs see monitoring of test equipment from page 39/694
Please add KAL (for "Calibration") to the size indication. Example: 387300 M10 × 0.35-KAL


387300


387320

N° article	387300 go	387320 No-go	Thread size metric-fine
M1×0,2	○	○	M1×0.2
M1,2×0,2	○	○	M1.2×0.2
M1,4×0,2	○	○	M1.4×0.2
M1,6×0,2	○	○	M1.6×0.2
M1,8×0,2	○	○	M1.8×0.2
M2×0,2	○	○	M2×0.2
M2×0,25	○	○	M2×0.25
M2,2×0,25	○	○	M2.2×0.25
M2,5×0,2	○	○	M2.5×0.2
M2,5×0,25	○	○	M2.5×0.25
M2,5×0,35	○	○	M2.5×0.35
M3×0,25	○	○	M3×0.25
M3×0,35	○	○	M3×0.35
M3,5×0,25	○	○	M3.5×0.25
M3,5×0,35	○	○	M3.5×0.35
M3,5×0,5	–	○	M3.5×0.5
M4×0,25	○	○	M4×0.25
M4×0,35	○	○	M4×0.35
M4×0,5	○	○	M4×0.5
M4,5×0,35	○	○	M4.5×0.35
M4,5×0,5	○	○	M4.5×0.5
M5×0,25	○	○	M5×0.25
M5×0,35	○	○	M5X0.35
M5×0,5	●	○	M5×0.5
M5×0,75	○	○	M5×0.75
M6×0,25	○	○	M6×0.25
M6×0,35	○	○	M6×0.35
M6×0,5	○	○	M6×0.5
M6×0,75	●	○	M6×0.75
M7×0,35	○	○	M7×0.35
M7×0,5	○	○	M7×0.5
M7×0,75	○	○	M7×0.75
M8×0,35	○	○	M8 × 0.35
M8×0,5	○	○	M8 × 0.5
M8×0,75	○	○	M8 × 0.75
M8×1	●	○	M8× 1
M9×0,35	○	○	M9×0.35
M9×0,5	○	○	M9×0.5
M9×0,75	–	○	M9×0.75
M9×1	○	○	M9×1
M10×0,35	○	○	M10×0.35
M10×0,5	○	○	M10×0.5
M10×0,75	○	○	M10×0.75
M10×1	●	●	M10×1
M10×1,25	○	○	M10×1.25
M11×0,5	○	○	M11×0.5
M11×0,75	○	○	M11×0.75
M11×1	○	○	M11×1
M12×0,5	○	○	M12×0.5
M12×0,75	○	○	M12×0.75
M12×1	●	●	M12×1
M12×1,25	●	○	M12×1.25

N° article	387300 go	387320 No-go	Thread size metric-fine
M12×1,5	●	○	M12×1.5
M13×0,5	○	○	M13×0.5
M13×0,75	○	○	M13×0.75
M13×1	○	○	M13×1
M13×1,5	○	○	M13×1.5
M14×0,5	○	○	M14×0.5
M14×0,75	○	○	M14×0.75
M14×1	●	○	M14×1
M14×1,25	○	○	M14×1.25
M14×1,5	●	●	M14×1.5
M15×0,75	○	○	M15×0.75
M15×1	○	○	M15×1
M15×1,5	○	○	M15×1.5
M16×0,5	○	○	M16×0.5
M16×0,75	○	○	M16×0.75
M16×1	●	○	M16×1
M16×1,5	●	●	M16×1.5
M17×0,5	○	○	M17×0.5
M17×0,75	○	○	M17×0.75
M17×1	○	○	M17×1
M17×1,5	○	○	M17×1.5
M18×0,5	○	○	M18×0.5
M18×0,75	○	○	M18×0.75
M18×1	●	○	M18×1
M18×1,5	●	●	M18×1.5
M18×2	○	○	M18×2
M19×0,5	○	○	M19×0.5
M19×0,75	○	○	M19×0.75
M19×1	○	○	M19×1
M20×0,5	○	○	M20×0.5
M20×0,75	○	○	M20×0.75
M20×1	●	○	M20×1
M20×1,5	●	●	M20×1.5
M20×2	○	○	M20×2
M21×0,75	○	○	M21×0.75
M21×1	○	○	M21×1
M22×0,75	○	○	M22×0.75
M22×1	●	○	M22×1
M22×1,5	●	●	M22×1.5
M22×2	○	○	M22×2
M23×0,75	○	○	M23×0.75
M23×1	○	○	M23×1
M24×0,75	○	○	M24×0.75
M24×1	○	○	M24×1
M24×1,5	●	●	M24×1.5
M24×2	●	○	M24×2
M25×0,75	○	○	M25×0.75
M25×1	○	○	M25×1
M25×1,5	○	○	M25×1.5
M26×0,75	○	○	M26×0.75
M26×1	○	○	M26×1
M26×1,5	●	○	M26×1.5

N° article	387300 go	387320 No-go	Thread size metric-fine
M27×0,75	○	○	M27×0.75
M27×1	○	○	M27×1
M27×1,5	○	○	M27×1.5
M27×2	○	○	M27×2
M28×0,75	○	○	M28×0.75
M28×1	●	○	M28×1
M28×1,5	●	○	M28×1.5
M30×0,75	○	○	M30×0.75
M30×1	○	○	M30×1
M30×1,5	●	○	M30×1.5
M30×2	●	○	M30×2
M32×1	○	○	M32×1
M32×1,5	●	○	M32×1.5
M33×1	○	○	M33×1
M33×1,5	○	○	M33×1.5
M33×2	○	○	M33×2
M34×1	○	○	M34×1
M34×1,5	○	○	M34×1.5
M35×1	○	○	M35×1
M35×1,5	○	○	M35×1.5
M36×1	○	○	M36×1
M36×1,5	○	○	M36×1.5
M36×2	●	○	M36×2
M36×3	○	○	M36×3
M38×1	○	○	M38×1
M38×1,5	○	○	M38×1.5
M39×1,5	○	○	M39×1.5
M40×1	○	○	M40×1
M40×1,5	●	○	M40×1.5
M42×1	○	○	M42× 1
M42×1,5	○	○	M42 × 1.5
M45×1	○	○	M45×1
M45×1,5	○	○	M45×1.5
M48×1	○	○	M48×1
M48×1,5	○	○	M48×1.5
M50×1	○	○	M50×1
M50×1,5	○	○	M50×1.5
M52×1	○	○	M52×1
M52×1,5	○	○	M52×1.5
M55×1	○	○	M55×1
M55×1,5	○	○	M55×1.5
M56×1	○	○	M56×1
M56×1,5	○	○	M56×1.5
M58×1	○	○	M58×1
M58×1,5	○	○	M58×1.5
M60×1	○	○	M60×1
M60×1,5	○	○	M60×1.5
M62×1	○	○	M62×1
M62×1,5	○	○	M62×1.5
M64×1	○	○	M64×1
M64×1,5	○	○	M64×1.5

Thread plug gauge

Design:
- made of gauge steel, hardened, annealed and fine ground
- one-piece, for non self-sealing threaded connections (limit thread plug gauge)
- tolerance class medium

G Cylindrical pipe thread | DIN 228 | G. Whitworth pipe thread 55°

Calibration costs see monitoring of test equipment from page 39/694
Please add KAL (for "Calibration") to the size indication. Example:
387500 G1/8-KAL



N° article	387500	Thread size G
G1/8	●	G1/8
G1/4	●	G1/4
G3/8	●	G3/8
G1/2	●	G1/2
G5/8	○	G5/8
G3/4	●	G3/4
G7/8	○	G7/8
G1	●	G1

Thread ring gauge

Design:
- for non-self-sealing threaded connections
- made of gauge steel, hardened, annealed and fine ground

G Cylindrical pipe thread | DIN 228 | G. Whitworth pipe thread 55°

Tolerance class A

Calibration costs see monitoring of test equipment from page 39/694
Please add KAL (for "Calibration") to the size indication. Example:
387600 G1/8-KAL



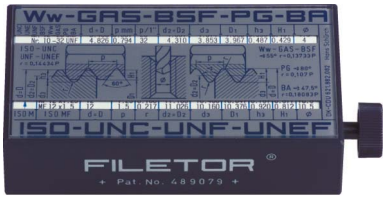
N° article	387600 go	387620 No-go	Thread size G
G1/8	●	●	G1/8
G1/4	●	●	G1/4
G3/8	●	●	G3/8
G1/2	●	●	G1/2
G5/8	○	○	G5/8
G3/4	●	○	G3/4
G7/8	○	○	G7/8

N° article	387600 go	387620 No-go	Thread size G
G1	●	○	G1
G1.1/8	○	○	G1.1/8
G1.1/4	●	○	G1.1/4
G1.1/2	●	○	G1.1/2
G1.3/4	○	○	G1.3/4
G2	●	○	G2

Thread indicator

Design:
Dust- and dirt-proof plastic housing

Use:
- indicates the determination of threads, the range and the associated relevant data
- for core hole diameters



N° article	388200
FILETOR	●

Thread plug gauge

Design:
- for non self-sealing threaded connections, like 387500
- only one-sided with either go or no-go end
- tolerance class medium

G Cylindrical pipe thread | DIN 228 | G. Whitworth pipe thread 55°

Calibration costs see monitoring of test equipment from page 39/694
Please add KAL (for "Calibration") to the size indication. Example:
387560 G1.1/4-KAL

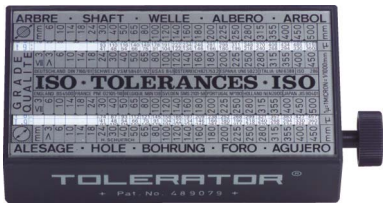


N° article	387560 go	387580 No-go	Thread size G
G1.1/4	●	●	G1.1/4
G1.1/2	●	●	G1.1/2
G1.3/4	○	○	G1.3/4
G2	●	○	G2

ISO tolerance indicator

Design:
Dust-proof plastic housing

Use:
- direct reading of all tolerance values to ISO recommendation R 286 -1962
- the indicator comprises a complete list of all ISO tolerances in use at home and abroad up to nominal size 500 mm = more than 6400 pairs of tolerance values



N° article	388100
TOLERATOR	●

Hardness tester

KERN

Design:
- compact build
- for 1-handed operation
- LCD display with switchable strong brightness and backlighting, allowing reading from all directions
- tests in all test directions (360 °) by automatic compensation function
- internal impact rebound sensor
- measured values optional in Rockwell (Type B and C), Vickers (HV), Brinell (HB), Shore (HSD) and Leeb (HL)
- internal data memory for up to 500 measurement data with date and time
- easy to install on all PCs
- measurement uncertainty ± 4 HLD
- dimensions L × W × H = 145 × 35 × 25 mm
- battery powered
- external mains adapter
- weight approx. 0.07 kg

USB | Delivered in Case



N° article	388630 HN-D
0001	○

Hardness tester

KERN

USB | TOL | Delivered in Case

Design:
- measures all metallic samples (› 3 kg, thickness › 8 mm)
- offers the highest degree of mobility and flexibility in use compared to stationary table devices and hardness testers with an internal sensor
- robust metal housing
- external impact sensor
- measured values in Rockwell (Type A, B and C), Vickers (HV), Shore (HS), Leeb (HL) and Brinell (HB)
- automatic unit conversion (the measuring result is converted into all the mentioned hardness units)
- tests in all test directions (360 °) by automatic compensation function
- limit value function (input of the upper and lower limit value; optical and acoustic signals support the measuring process)
- internal data memory for up to 600 measuring groups, up to 32 individual values per group, from which the average value of the group is formed)
- mini statistics function shows measured value, average value, measuring direction, date and time
- matrix display backlit multi-function display of all relevant functions at a glance
- precision ± 1 % at 800 HLD
- smallest bending radius of the test object (concave/convex) 50 mm (with stabilising ring 10 mm)
- thinnest measurable layer 8 mm
- dimensions W × D × H 132 × 82 × 31 mm
- admissible ambient temperature range: -10°C / +40°C
- battery operation 2 × 1.5 V AA (not included in the scope of delivery), operating time up to 100 h, AUTO-OFF function for battery protection, battery level indicator
- weight approx. 0.45 kg



N° article	388631 HK-D
0001	○

Design:
- impact sensor
- external impact sensor (type D)
- offers the highest degree of mobility and flexibility in use compared to stationary table devices and hardness testers with an internal sensor
- tests in all test directions (360 °) by automatic compensation function
- data output to PC
- wireless, infrared-connected printer, for on-site printing of measurement protocols (battery operated)
- hardness reference block and guide ring for curved test objects (radius › 10 mm)
- internal data memory for up to 9 measuring groups, up to 9 individual values per group, from which the average value of the group is formed)
- mini statistics function shows measured value, average value, difference from max. and min. value, date and time
- measured values in Rockwell (Type A, B and C), Vickers (HV), Brinell (HB), Shore (HS), Leeb (HL) and tensile strength (MPa)
- automatic unit conversion (the result is converted into all the hardness units)
- precision 1 % at 800 HLD (± 6 HDL)
- measuring range tensile strength: 375-2.639 MPa (Steel)
- smallest test weight on massive basis sensor D & DC 3 kg / sensor G 15 kg
- thinnest measurable layer sensor D & DC 8 mm / sensor G 10 mm
- smallest bending radius of the test object: (concave/convex) 50 mm (with stabilising ring 10 mm)
- dimensions L × W × H: 150 × 80 × 30 mm
- external mains adapter
- battery operation possible, batteries (3 × 1.5 V AAA) included, AUTO-OFF function for battery recharging, battery level indicator
- weight approx. 0.2 kg

USB | Delivered in case



N° article	388632 HMM
0001	○

Design:
- for measuring the penetration depth (Shore)
- for internal comparison measurements, standard calibrations e. g. to DIN 53505
- **Type 0001** (Shore A) for rubber, elastomers, neoprene, silicone, vinyl, soft plastics, felt, leather and similar material
- **Type 0003** (Shore D) for plastics, synthetic resin, Formica, epoxides, plexiglass etc.
- Max mode collects the peak value
- Point mode shows the stable measured value
- mountable on test stands
- precision 3% of Max
- measuring range max 100 HA
- readability d 1.0 HA
- dimensions L × W × H: 115 × 60 × 25 mm
- weight approx. 0.16 kg

Delivered in Case



N° article	388633 HB-A
0001	●

Design:
- for hardness determination of plastics through penetration measurement
- (Shore A) for rubber, elastomers, neoprene, silicone, vinyl, soft plastics, felt, leather and similar material
- (Shore D) for plastics, synthetic resin, Formica, epoxides, plexiglass etc.
- internal memory for up to 500 measurements
- for internal comparison measurements, standard calibrations e. g. to DIN 53505
- can be attached to test stands to improve measuring uncertainty
- large display with backlight
- selectable AUTO-OFF function or continuous operation, charge indicator
- measuring range max 100 HA
- readability d 1.0 HA

RS 232 C | Delivered in Case



Shore A



N° article	388634 HD-A
0001	○

Surface measuring device MarSurf M 310

Mahr

Bluetooth® | USB | TOL | IP40 | Delivered in Case

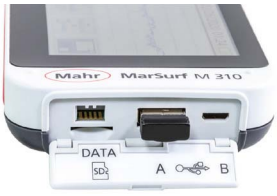
Design:
- feeler Inductive skid sensor
- probe tip 2 µm
- handy roughness measuring device for mobile use
- transmission of measurement protocols and data via Bluetooth or cable
- print directly from the mobile printer (in set with printer)
- illuminated 4.3" TFT touch display
- generation of completed PDF protocols in the measuring device, without additional software
- mains-independent operation allows over 1200 measurements without having to charge the device
- offers a wide range of performance with 31 parameters
- with automatic cut-off selection

Use:
- on shafts, housing parts, large machines, automotive construction, large workpieces, milling and turning parts or on ground and honed workpieces
- high-precision measurements using the profile method enable waviness and primary parameters to be tested on small and large workpieces
- users with little prior knowledge of quality control will find this skid touch system the perfect companion

Technical data:
- measuring range up to 350 µm (0.014 in)
- standards ISO and JIS
- according to EN ISO 12085: 1 mm | 2 mm | 4 mm | 8 mm | 12 mm | 16 mm
- number of sampling lengths selectable from 1 to 16
- automatic selection of the filter and the scanning distance according to standards
- phase correct Gaussian filter according to DIN EN ISO 16610-21
- cutoff 0.25 mm | 0.80 mm | 2.50 mm (0.010 in | 0.032 in | 0.100 in)
- shortened cutoff selectable - parameters according to: DIN / ISO: A1, !2, Ar, CF, CL, CR, Mr1, Mr2, R, R3z, RPc, RS, Ra, Rk, Rmax, Rp, Rpk, Rpm, Rq, Rt, Rvk, Rx, Rz, Vo
  JIS: Rmr tp, Rz, Ry
- ASME: RpA, Rpm, Rpm tp
- material ratio curve and measuring record
- indication of date and/or time of the measurement
- integrated memory for the results of up to 500,000 measurements and at least 3900 profiles
- dynamic calibration function
- lock and/or password protection for device setting
- optional data backup on a microSD card up to 32 GB in size



Delivery M 310:
- MarSurf M 310 base unit
- feed unit (removable)
- feeler PHT 6-350, standard
- roughness standard (integrated in the housing, removable) including Mahr calibration certificate
- stylus protection / prism holder
- charger / plug-in power supply with 3 adapters
- height adjustment (integrated)
- carrying bag with shoulder strap
- USB cable
- hand prism (pair)
- extension cable to the feeder (length 1.2 m)
- operating instructions

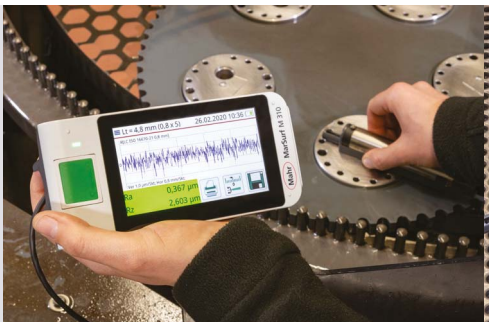


Delivery M 310 with printer:
- MarSurf M 310 base unit
- feed unit (removable)
- feeler PHT 6-350, standard
- built-in rechargeable battery
- roughness standard (integrated in the housing, removable) including Mahr calibration certificate
- Bluetooth printer with USB Bluetooth stick and 1 roll of paper
- stylus protection / prism holder
- charger / plug-in power supply with 3 adapters
- height adjustment (integrated)
- carrying bag with shoulder strap
- USB cable
- hand prism (pair)
- extension cable to the feeder (length 1.2 m)
- operating instructions



N° article	388712 M310
M310	○
M310D	○







Surface measuring device MarSurf M 410

Mahr

Bluetooth® | USB | TOL | IP40 | microSD | RS 232 C | Delivered in Case

Design:
- feeler inductive with exchangeable probe arms (magnetic), measuring force 0.75 mN (standard)
- probe tip 2 µm
- handy roughness measuring device for mobile use
- MarSurf M 410 operating unit and MarSurf MD 26 feed unit can be separated from each other for flexible use
- thanks to **contactless tracer** measurements of roughness and corrugation - no extra measuring station required, determination of R, W and P parameters
- with more than 50 parameters, offers a wide range of functions like a laboratory device
- with automatic cut-off selection
- mains-independent operation allows over 500 measurements without having to charge the device
- transmission of measurement protocols and data via Bluetooth or cable
- print directly from the mobile printer (in set with printer)
- touch display, rotatable

NEW

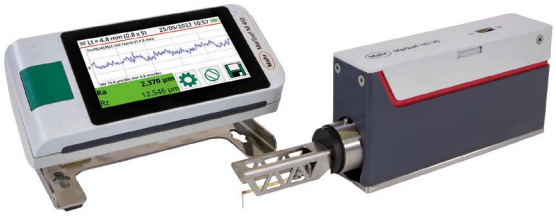
Use:
High-precision measurements using the profile method enable roughness, waviness and primary parameters to be tested on small and large workpieces.
Users with little prior knowledge of quality control will find this inductive free probe system the perfect companion.



Technical data:
- **measuring range** up to 500 µm
- number n of individual measuring sections (according to ISO/JIS) selectable from 1 to 16
- automatic selection of the filter and the scanning distance according to standards
- profile determination for primary, waviness and roughness profile
- standards DIN/ISO/JIS/ASME/MOTIF selectable
- parameters
  DIN/ISO: Ra, Rq, Rz, Rmax, Rp, Rv, Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RPc, Rmr (3x), HSC, RSm, Rsk, Rdc, Rdq, Pa, Pt, PMr (3x), Pdc, Wa, Wt, WSm, Wsk
  JIS: Ra, Rz, RzJIS, Sm, S
- ASME: RpA, Rpm
  MOTIF: R, Ar, Rx, W, Wx, Wte, CR, CL, CF, NR, NCRx, NW
- filter (according to DIN/JIS):
  Gaussian filter according to DIN EN ISO 16610-21
  robust Gaussian filter according to DIN EN ISO 16610-31
  Special filter according to DIN EN ISO 13565-1
  Filter according to DIN EN ISO 3274 (on-off-switchable)
- Cutoff lc (according to ISO/JIS):
  0.25 mm (0,010 in), 0.8 mm (0,03 in), 2.5 mm (0,1 in); free adjustment between 0.08 mm (0.003 in) and 2.5 mm and (0.1 in); automatic
- shortened cut-off (according to ISO/JIS): selectable
- dynamic calibration function
- indication of date and/or time of the measurement
- lock and/or password protection for device setting
- travelling distance Z: 7.5 mm motorised
- integrated memory for the results of up to 500,000 measurements and at least 3900 profiles
- optional data backup on a microSD card up to 32 GB in size



Delivery M410:
- MarSurf M 410 evaluation unit
- MarSurf MD 26 feed unit including BFW 250 touch probe
- 1 probe arm, 2 µm (BFW A 10-45-2/90°)
- 1 touch arm guard
- 1 USB-A to micro-USB connection cable
- 1 MarSurf M 410 docking station
- wide-range power supply unit with 3 mains adapters
- Allen key
- operating instruction
- MarSurf M 410 case



Delivery M410D (with printer):
- MarSurf M 410 evaluation unit
- MarSurf MD 26 feed unit including BFW 250 touch probe
- 1 probe arm, 2 µm (BFW A 10-45-2/90°)
- 1 touch arm guard
- 1 USB-A to micro-USB connection cable
- 1 MarSurf M 410 docking station
- 1 printer set
- wide-range power supply unit with 3 mains adapters
- Allen key
- operating instruction
- MarSurf M 410 case



N° article	388714 M410
M410	○
M410D	○

Surface measuring device MarSurf

Mahr

Design:
- handy roughness measuring device for mobile use
- easy and intuitive menu navigation
- large, illuminated 4.3" TFT touch display
- display rotatable
- Start button simultaneously Home button for direct access to the start screen
- data backup as TXT, X3P, CSV and PDF file
- mains-free operation - over 1200 measurements without charging
- flexible thanks to removable feed unit
- for all measuring positions - horizontal, vertical, overhead
- with integrated, removable roughness standard
- quick access to functions by favourites in the display
- standards DIN-ISO/JIS/ASME/MOTIF selectable
- setting unbalanced profile section levels for peak counting
- tolerance monitoring
- lock and/or password protection for device setting
- date and time for recording

USB IP40 microSD RS 232 C

Use:
- roughness measurements on site directly at the workpiece
- measuring in the production process
- universal on the processing machine
- in the incoming goods inspection



Delivery:
MarSurf PS10 basic unit, feed unit, standard feeler (according to norm), rechargeable battery (built-in), roughness standard (including Mahr calibration certificate), feeler protection, charger, 3 mains adapters, operating instructions, carrying case with shoulder strap, USB cable, extension cable feed unit, height adjustment (integrated)

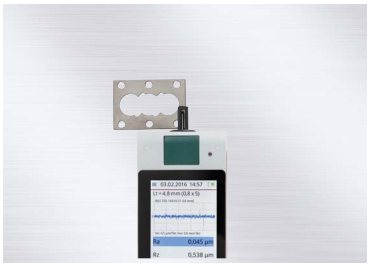


Delivery:
MarSurf PS10 basic unit, feed unit, standard feeler (according to norm), rechargeable battery (built-in), roughness standard (including Mahr calibration certificate), feeler protection, charger, 3 mains adapters, operating instructions, carrying case with shoulder strap, USB cable, extension cable feed unit, height adjustment (integrated)



Functions:

- **measuring unit**	metric/inch
- **measuring principle**	profile method
- **feeler**	inductive skid sensor, 2 µm feeler tips, measuring force approx. 0.7 mN
- **parameters**	=> DIN/ISO: Ra, Rq, Rz, Rmax, Rp, Rpk, Rv, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, Rv, RPc, Rmr, RSm, Rsk, CR, CF, CL, R, AR, Rx => JIS: Ra, Rq, Ry (corr. Rz), RzJIS, tp (corr. Rmr), RSm, RS => ASME: Rp, Rpm, RPc, Rsk, tp (corr. Rmr) => MOTIF: R, AR, Rx, CR, CF, CL
- **languages**	17, of which 3 are Asian
- **measuring range**	350 µm
- **profile resolution**	8 nm
- **filter***	=> Gaussian filter according to ISO 16610-21 => special filter according to DIN EN ISO 13565-1 => Is-filter according to DIN EN ISO 3274 (on-off-switchable)
- **Cutoff lc***	0.25 mm / 0.8 mm / 2.5 mm / automatic
- **traversing length Lt***	1.5 mm / 4.8 mm / 15 mm / automatic / N × Lc, freely selectable
- **traversing length (acc. to MOTIF)**	1 mm | 2 mm | 4 mm | 8 mm | 12 mm | 16 mm
- **shortened Cutoff***	selectable
- **total measuring distance ln***	1.25 mm / 4.0 mm / 12.5 mm
- **number of the individual measuring sections***	selectable from 1 to 16
- **calibration function**	dynamic
- **memory capacity**	3,900 profiles, 500,000 results, 1,500 PDF files, expandable with microSD card up to 32 GB
- **dimensions**	H × W × D = 160 × 77 × 50 mm
- **weight**	500 g
- **battery**	Li-ion battery, 3.7 Volt, nominal capacity 11.6 Wh
- **interfaces**	USB device, MarConnect (RS232C, USB), micro SD slot for SD™ / SDHC cards up to 32 GB
- **wide range power supply**	100 Volt to 264 Volt



*According to ISO/JIS



N° article	388750 PS10
PS10	●

Accessories

Mahr

Use:
E.g. for measuring points located deep inside cylinders



N° article	388760 Feeler	Probe length mm
80	○	80

Design:
PHT 6-350:
Standard probe, **already included in set PS 10,**
For measurements in boreholes from Ø 6 mm

PHT 3-350:
For measurements in boreholes from Ø 3 mm

PHT 11-100:
For measurements at recessed measuring points,
e.g. in grooves from 2.5 mm width to 7.5 mm depth

PHTR 100:
For measurements on concave and convex surfaces

PHTF 0.5-100:
For measurements on tooth flanks

PT 150:
Dual-skid probe for roughness measurements on metal sheets and roller surfaces according to DIN EN 10049 (SEP)



PT 150



PHTR 100



PHT 11-100



PHTF 0,5-100



PHT 3-350

N° article	388762 Feeler	Feeler
PHT6 - 350	●	Probes for holes from Ø 6 mm
PHT3 - 350	○	Probes for holes from Ø 3 mm
PHT11 - 100	○	Probes for recessed measuring points
PHTR100	○	Probes for measurements on concave and convex surfaces
PHTF0,5 - 100	○	Probes for measurements on tooth flanks
PT150	○	Dual-skid probe for measurements on sheet metal and roller surfaces according to DIN EN 10049 (SEP)



N° article	388766 adjustable bracket
814SH	○

Surface roughness tester Surftest

Mitutoyo

Design:
- measuring range 360 µm
- touch probe measuring force 0.75 mN
- probe tip angle 60°
- probe tip radius 2 µm
- standard feed for measurements in X direction

Digimatic | USB | U-WAVE®

Note:
Software free of charge from www.mitutoyo.de



N° article	388775	Design
SJ210	●	Standard version



Design:
- portable
- with touch-sensitive LCD monitor (touch screen) and integrated printer
- 5.7" colour LCD
- easy and intuitive menu navigation
- follows industrial standards like DIN EN ISO, VDA, ANSI or JIS
- 10 different measuring conditions can be stored
- statistic function and coloured tolerance evaluation
- two different evaluation criteria with one measuring operation
- each function can be protected separately by a password
- 16 languages available
- touch probe measuring force 0.75 mN
- probe tip angle 60°
- probe tip radius 2 µm

Note:
Software free of charge from www.mitutoyo.de



N° article	388776	Design
SJ310	○	Standard version



Design:
- high-precision measurements
- high-resolution probe tip with wide measuring range
- feed unit with high straightness
- reference plane system for measuring of primary, roughness and waviness profile
- 35 different roughness parameters
- data preparation with an analysis programme possible
- measuring force touch probe 0.75 mN
- probe tip angle 60°
- probe tip radius 2 µm



N° article	388777	Measuring range (X-axis) mm	Straightness µm	Straightness mm	Design
SJ411	○	25	0,3	25	Dimension touch probe mm: 128 × 36 × 47

Geometry normal

Mahr

calibrated

Design:
- surface normal with turned profile
- chrome-plated
- profile depth approx. 10 µm
- for checking the roughness measuring station
- incl. test certificate

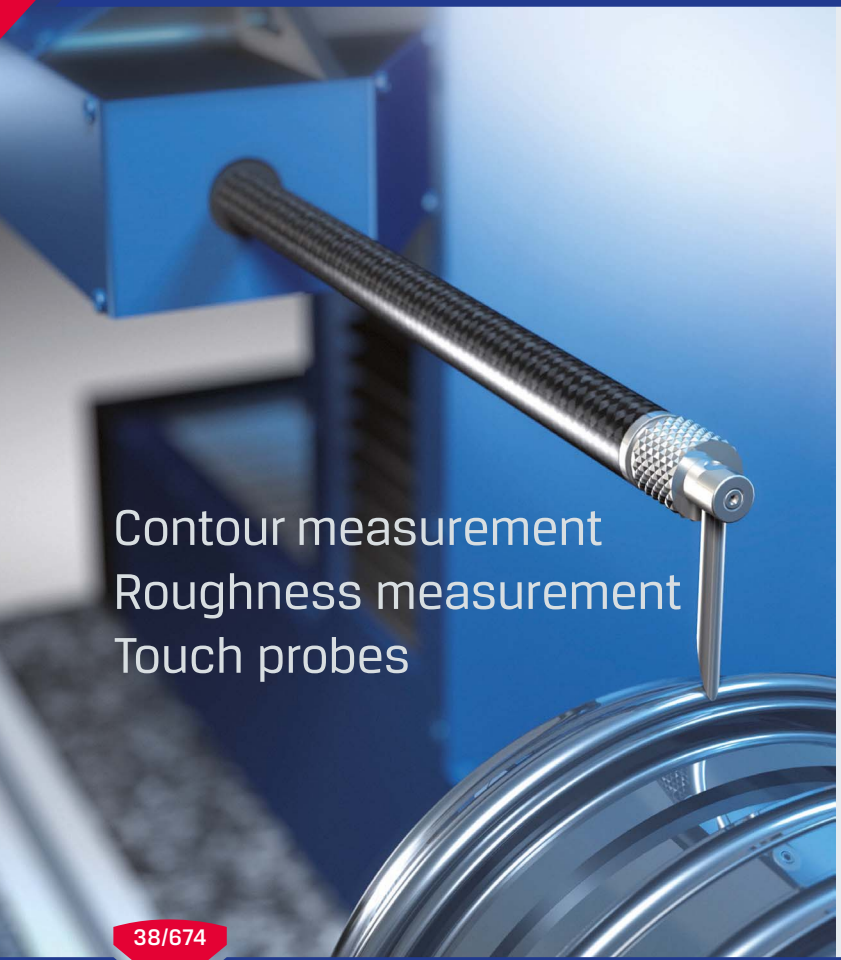


N° article	388802	Design
0010	○	MarSurfPRN 10

PREMUS VC10

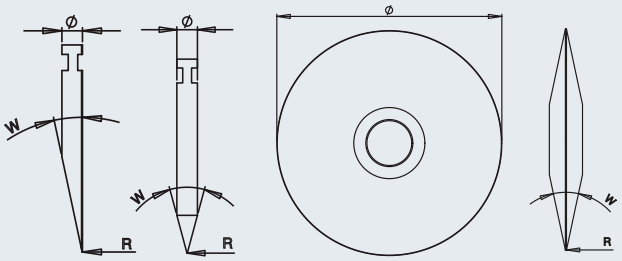
Product Information

PREMUS®
HIGH PERFORMANCE BY PRECITOOL



Precise, cost-cutting and flexible

A chain is only as strong as its weakest link - a control system only as good as probe arm and probe tip. Therefore, we pay the same attention to these details as to our machines. All touch probes are manufactured with the same care as the PRECICOM measuring systems. And they are equally elaborate: Our practical and cost-cutting system consisting of a variety of probe tips, disc feelers and miniature probe arms, which can be exchanged in seconds using the practical quick-change fastener, proves this every day in measurement labs worldwide.



The measure of all things:
Our all-rounder for highly accurate measuring

You are looking for an all-round system that masters the whole variety of contour measuring tasks with impressive precision?

Then the PREMUS VC10 should fit your conceptperfectly. It performs contour measurements alone or in combination with simultaneous roughness measurement* as well as roundness measurements* or composite measurements*. Thus, even the most sophisticated measuring tasks on complex shaped objects become a very simple operation.

The PREMUS VC10 is not only convincing because of its simple operation, but even more by its outstanding precision.
At the tip of the probe, it reaches a true, not merely calculated, resolution of less than 3 mm - and this over the entire measuring range.

* optional



PREMUS VC10 in standard execution

Technical data:

Resolution in X / Z axis	0.002 µm
Measuring path vertical (Z axis)	225 mm
Measuring path horizontal (Y axis)	225 mm
Measuring system	optical, incremental in all axes (X, Z, T)
Accuracy	+/- (0.5 + L/100) µm
Accuracy to DIN ISO standard	5 % class 1
Resolution at the probe tip	< 3 nm
Maximum measuring force	150mN
Measuring speed	0.1 - 2 mm/sec (automatically optimised)
Cut-off lengths [mm]	0.08/0.25/0.80/2.50/8.00/ and freely adjustable
Number cut-offs	freely selectable
Filter	Gaussian, 2RC, ls filter, DIN EN ISO 13565-1
Resolution	Scale 1:1 to 5,000:1
Radius of probe tip	0.002 - 1 mm
Measurable gradients	78° upwards, 87° downwards
Roughness parameters, DIN EN ISO 4287	Rp, Rv, Rz, Rc, Ra, Rq, RSm, Rdq, Rdc, Rt, Rku, Rsk, Rmr, Rmr (c)
Waviness parameters, DIN EN ISO 4287	Wp, Wv, Wz, Wc, Wa, Wq, WSm, Wdq, Wdc, Wt, Wku, Wsk, Wmr, Wmr (c)
Waviness parameters, DIN EN ISO 12085	AW, W, Wx, Wt
Profile parameters, DIN EN ISO 4287	Pp, Pv, Pz, Pc, Pa, Pq, PSm, Pdq, Pdc, Pt, Pku, Psk, Pmr, Pmr (c)
Material parameters to DIN EN ISO 13565-2	Mr1, Mr2, A1, A2, Rpk, Rvk, Rk
Roughness parameters, DIN EN ISO 12085	AR, R, Rx
Profile parameters JIS B-0601B	Pp, Pv, Pz, Pc, Pa, Pq, PSm, Pdq, Pdc, Pt, Pku, Psk, Pmr, Pmr (c)
Waviness parameters JIS B-0601	Wp, Wv, Wz, Wc, Wa, Wq, WSm, Wdq, Wdc, Wt, Wku, Wsk, Wmr, Wmr (c)
Roughness parameters JIS B-0601	Rp, Rv, Rz, Rc, Ra, Rq, RSm, Rdq, Rdc, Rt, Rku, Rsk, Rmr, Rmr (c)
Calibration standard	is delivered with a certificate along with the machine
Dimensions (B × T × H)	950 × 380 × 725 mm
Weight	150 kg

*** Scope of delivery:**

1 PREMUS Vc10measuringmeasuring range 225 × 225 mm
1 industrial PC with Windows operating system
1 rubber connector
1 mouse
1 keyboard
1 cable set for the desk
1 monitor
1 cable set for measuring systems
1 power strip
1 monitor cable
1 printer
1 USB cable
1 USB hub
1 documentation incl. driver
1 calibration standard
1 probe tip 33 mm
1 probe tip 20.5 mm
2 probe tip holders

N° article	388900 PREMUS VC 10	Measuring range (X-axis) mm	Measuring range (Z-axis) mm	Width mm	Depth mm	Height mm	Weight kg
0225	○ +	225	225	950	80	725	150
0325	○ +	325	325	1150	380	725	180
0425	○ +	425	425	1150	380	725	200

Y-table

PREMUS

Design:
- for manual or automatic finding of the highest/lowest point
- robust, universal and precise
- due to linear guidance and ground ball screw drives movable totally free of play and precise
- the automatic version additionally has a stepping motor and an optical, incremental, contact-free measurement system
- spindle pitch 3 mm
- table load 500 kg

Use:
For extending automated CNC programmes by an Y axis for user-independent, reproducible topdown measurements on the µm scale





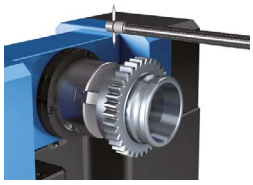
N° article	388910 manual	Length mm	Width mm	Height mm	Design	Weight kg
0025	○ +	185	250	85	with 25 mm travel	11

N° article	388912 automatic	Length mm	Width mm	Height mm	Design:	Weight kg
0025	○ +	185	250	85	with 25 mm travel	11
0100	○ +	375	250	85	with 100 mm travel	17

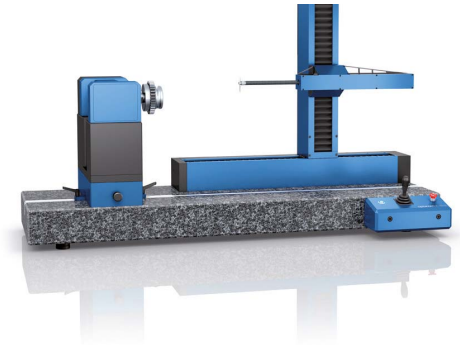
Extension module

PREMUS

Design:
- combines the advantages of a round (rotary) table and a swivelling object holder
- simplest roundness measurements
- concentricity 2.5 µm
- as standard on a special motorised Y-table with measuring system and 25 mm travel
- as standard with manual three-jaw chuck
- fully integrated into the Precicom software
- absolutely torsion-resistant
- inside-outside clamping
- swing ∅ over granite base 190 mm
- roughness fully measurable on the ∅ at circumference
- CNC programmable
- movement controllable via machine console provided with buttons and joystick
- three integrated optical, incremental and contactless measuring systems







N° article	388917 Rotary swivelling table	Length mm	Width mm	Height mm	Y-travel mm	Spindle pitch mm	Swing angle	Weight kg
0025	○ +	365	145	255	25	3	120	30

Extension module topdown

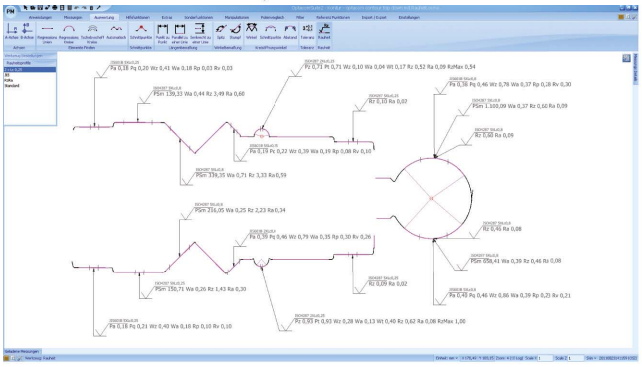
PREMUS

Design:
For composite top-down measurements

Scope of delivery:
- software PREMUS topdown
- double-sided calibration standard with certificate (for carrying out machine calibration)
- 1x double probe tip holder
- 2× 20.5 mm probe tip







N° article	388915 PREMUS topdown	Design:
0001	○ +	Module when ordering machine
0005	○ +	Retrofit kit

Probes and accessories

PREMUS

Design:
- made of carbide

N° article	388920 Probe tip 3.5 mm	∅ mm	Radius µm	Angle °
0035	○	0,5	25	19

N° article	388920 Probe tip 6 mm	∅ mm	Radius µm	Angle °
0060	○	1	25	19

N° article	388920 Probe tip 13 mm	∅ mm	Radius µm	Angle °
0130	○	1	25	19

N° article	388920 Probe tip 20.5 mm	∅ mm	Radius µm	Angle °
0205	○	3,5	25	12

N° article	388920 Probe tip 33 mm	∅ mm	Radius µm	Angle °
0330	○	3,5	25	12

Probes and accessories

PREMUS

Design:
- made of carbide

N° article	388920 Probe tip 59.5 mm	∅ mm	Radius µm	Angle °
0595	○	3,5	25	12



N° article	388924 Double probe tip 9 mm	∅ mm	Radius µm	Angle °
0090	○	1	25	19



N° article	388926 Roughness probe tip 3 mm, tapered with diamond	∅ mm	Radius µm	Angle °
0030	○	1	5	24



N° article	388922 Probe tip 20.5 mm, tapered	∅ mm	Radius µm	Angle °
0205	○	3,5	25	24



N° article	388922 Probe tip 33 mm, tapered	∅ mm	Radius µm	Angle °
0330	○	3,5	25	24



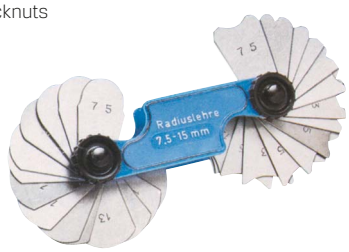
N° article	388926 Roughness probe tip 33 mm, tapered with diamond	∅ mm	Radius µm	Angle °
0330	○	3,5	5	90



Radius gauge

Design:
- consisting of concave and convex shaped templates
- complete in holder, foldable, with locknuts

Use:
For testing internal and external radii



N° article	389000 Steel	Radius mm	0.25 mm incremental	0.5 mm incremental	1.0 mm incremental	Qty of blades
1 - 7	●	1 - 7	up to 3 mm	from 3.5 mm	–	17
7,5 - 15	●	7.5 - 15	–	7.5 - 15 mm	–	16
15,5 - 25	●	15.5 - 25	–	up to 20 mm	21 - 25 mm	15

Thread gauge

Design:
Foldable, in low-built holder, with locknut

Use:
For testing the pitches of male and female threads



N° article	389100 Steel	Includes TPI	Qty of blades	Thread type
G	●	8 - 28	6	Gas pipe

Radius gauge

PRETEC

Design:
- consisting of concave and convex shaped templates
- complete in holder, foldable, with locknuts

Use:
For testing internal and external radii

NEW



N° article	389001 INOX	Radius mm	Qty of blades
1 - 7	●	1 - 7	17
7,5 - 15	●	7.5 - 15	16
15,5 - 25	●	15.5 - 25	15

Feeler gauge Valve setting gauges

Design:
- with single labelling
- complete foldable set in holder, with locknut
- the blades are conically shaped



N° article	389200 Steel, blade length 100 mm	389220 stainless steel, blade length 100 mm	389250 Steel, blade length 200 mm, on ring	Qty of blades	Blade thicknesses 0.05 mm increasing	Blade thicknesses 0.1 mm increasing
8	–	●	–	8	0.05 - 0.25 mm	0.3 - 0.5 mm
13	–	●	●	13	0.05 - 0.25 mm	0.3 - 1 mm
20	●	●	●	20	0.05 - 1 mm	–

Feeler gauge strip

Design:
- with high accuracy
- 5 m long, 12.7 mm wide
- up to tape thickness 0.60 mm in plastic box, from tape thickness ›0.60 mm loosely bound
- can be pulled out and cut to desired length

Use:
- for alignment and calibration
- as lining foil in the engineering industries, in production and installation
- for controlling dovetail guides, parallel fits etc.
- other tape thicknesses available on request

N° article	389305 Steel	tape thickness mm	N° article	389305 Steel	tape thickness mm	N° article	389305 Steel	tape thickness mm
0,01	●	0,01	0,09	●	0,09	0,35	●	0,35
0,02	●	0,02	0,10	●	0,10	0,40	●	0,40
0,03	●	0,03	0,12	●	0,12	0,50	●	0,50
0,04	●	0,04	0,15	●	0,15	0,60	●	0,60
0,05	●	0,05	0,18	●	0,18	0,70	●	0,70
0,06	●	0,06	0,20	●	0,20	0,80	●	0,80
0,07	●	0,07	0,25	●	0,25	0,90	●	0,90
0,08	●	0,08	0,30	●	0,30	1,00	●	1,00

NEW



Feeler gauge accessories

Design:
Plastic holder with clamping spring.

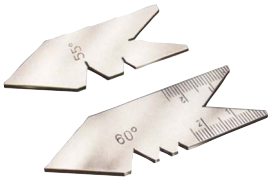


N° article	389350	Length mm
135	●	135

Thread cutting gauge

Design:
- precision version
- measuring edges ground, surface fine ground

Use:
- for threads Whitworth 55°
- metric threads 60°

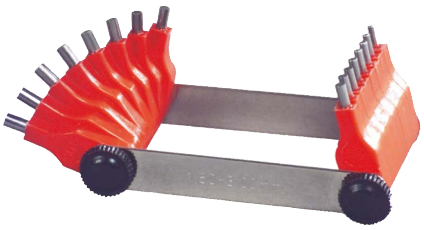


N° article	389500	Thread
55	●	G 55°
60	●	M60°

Nozzle gauge

Design:
With cylindrical steel pins, foldable in flat holder, with locknut

Use:
- for measuring and inspecting of all types of nozzles
- also suitable as tolerance gauge for small bore holes



N° article	389850	Number of pins	Measuring range mm
16	○	16	1.50 - 3.0 (0.1 mm increasing)
20	○	20	0.45 - 1.5 (0.05 mm increasing)

Measuring wedge

Design:
- special steel, polished, matt chromium-plated
- scale lasered, knurled handle
- ABS plastic, scale CNC-divided
- resolution 0.1 mm

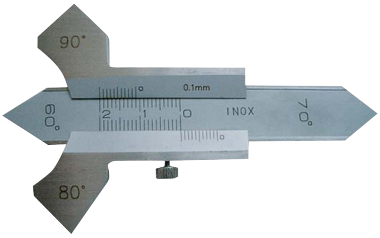
Use:
- for measuring gap dimensions



N° article	389810	Measuring range mm	Length mm	Height mm	Width mm	Weight g
0,5 - 7	●	0.5 - 7	124	8	8	39
2,0 - 7	○	2 - 7	109	8	8	38
0,5 - 11	●	0.5 - 11	153	12	8	62
0,5 - 11K	○	0.5 - 11	155	12	8	17

Welding seam gauge

Design:
- made of gauge steel, bright, engraved scales and digits, with locknut
- for inspection of flat welded seams and welds in corners
- for testing V-welded angles the gauge bears angles of 60°, 70°, 80° and 90°



N° article	389950 Steel	Measuring range mm
20	●	20

PREMUS®
HIGH PERFORMANCE BY PRECITOOL

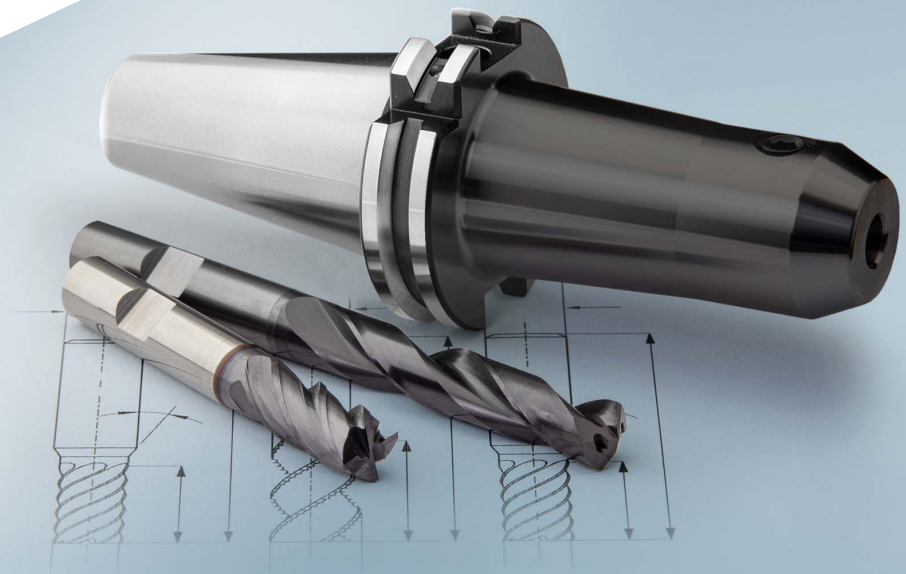
HIGH PERFORMANCE



- high-performance
- outstanding price/performance ratio
- innovative
- best-in-class

PRETEC®
BY PRECITOOL

DAILY BREAD



- good performance
- reasonable price
- sophisticated & proven

Watchmaker´s magnifier

ESCHENBACH

Design:
- housing made of plastic
- diameter 25 mm
- magnification 5-fold and 7-fold, lens plano-convex
- magnification 10-fold, lens bi-convex

PXM® | Duplex



N° article	391000	Magnification
5×	●	5-fold
7×	●	7-fold
10×	●	10-fold

Linen tester

ESCHENBACH

Design:
- housing made of brass
- satin chromium plated

Silikat



N° article	391250	Magnification	Cut-out length mm	Cut-out width mm
5×	●	5-fold	30	30
8×	●	8-fold	20	20
10×	●	10-fold	15	15

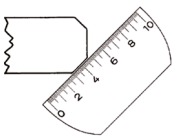
Measuring magnifier

Design:
- all-metal version with 0.1 mm direct reading
- adjustable aplanatic glass magnifier with eightfold magnification
- exchangeable stainless steel scale
- engraved blackened graduation
- distortion-free reading
- focus adjustable by shifting
- can be taken out of the housing and used as a hand magnifier
- scale 10 mm long

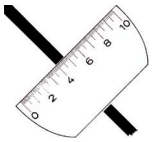
Use:
For measuring tasks e.g. in toolmaking and engineering, in electronics, in laboratory, at test and control stations

Delivery:
In plastic screw container

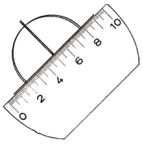




e.g. bevel width
1.75 mm



e.g. line width
0.85 mm



e.g. fit
0.01 mm

N° article	391100	Magnification	Plage de mesure mm	Reading mm
8×	●	8-fold	10	0,1
ETUI	●	–	–	–

Folding magnifier

ESCHENBACH

Design:
- housing made of brass
- metal lens frame, precision glass optics
- aplanatic lens 23 mm Ø

Silikat



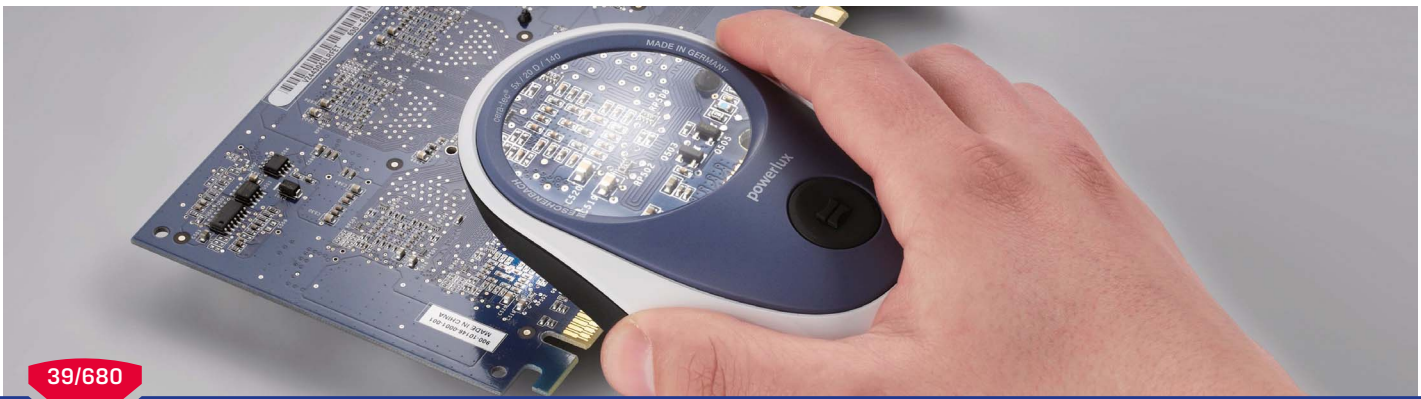
N° article	391280	Magnification
6×	●	6-fold
8×	●	8-fold
10×	●	10-fold
12×	●	12-fold

Design:
- housing made of plastic
- dust-tight housing, precision optics
- two plane-convex glass lenses x 23 mm

Silikat



N° article	391300	Magnification
10×	●	10-fold



Scale magnifier

ESCHENBACH

Silikat | Delivered in case

Design and use:
- for precise measurements with distortion-free high-quality optics
- tempered glass optics for distortion-free and sharp images
- adjustment via focussing ring, lens 23 mm ∅
- exchangeable precision scales
- housing made of glass-fibre reinforced polyamide

391510:
- LED illuminating equipment for precision scale magnifier 391520
- battery handle for 2 baby type batteries (R14)
- delivery with bulb, but without batteries
- illumination through 2 high-contrast white LEDs, 123 mA

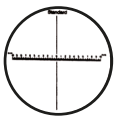
391520:
- magnification 10-fold Delivery with standard scale (Type 1152/01)
- measuring range 20 mm with 1/10 mm graduation
- complete in plastic box with storage space for further scales



391510
(Fig. with scale magnifier)



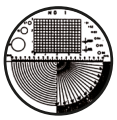
391520



1152/01



1152/03



1152/02

N° article	391510 LED battery handle (without magnifier)	391520 Scale magnifier	391560 Scales
11514	○	–	–
1154/10	–	●	–
1152/01	–	–	●
1152/02	–	–	●
1152/03	–	–	●

Micro magnifier LED

ESCHENBACH

Design and use:
- focusing via rotating ring
- for surface inspections of all kinds of materials, e.g. metals, enamel etc.

Silikat

Delivery:
Incl. optic glass lenses and 2 batteries AA



N° article	392100 with LED illumination	Magnification
30×	●	30-fold

Magnifier lamp

ESCHENBACH

Design:
- robust and compact construction
- even and very precise bright and non-glare illumination through 2 SMD-LED
- magnification 20 dpt (5-fold); light colour chalk white, approx. 8,000K
- automatic switch off after 30 minutes

PXM® | cera-tec® coating | Delivered in case

Delivery:
Incl. 3 Mignon batteries



N° article	392503 powerlux	Magnification	Lenses ∅ mm
5×	●	5-fold	58
7×	●	7-fold	58

Reading magnifier

ESCHENBACH

Design:
Black plastic handle

PXM® | Duplex



N° article	392400 with light metal frame	Magnification	Lenses ∅ mm
2,5×	●	2.5-fold	80

Magnifier lamp

ESCHENBACH

Design:
- up to 1500 lux intensity
- 4-fold magnification with lens diffractive aspheric, without Ceratec®coating

PXM® | cera-tec® coating | Step Up | Delivered in case

Delivery:
Incl. second light filter and batteries



6X-10X

N° article	392502 mobilux® with SMD-LED	Magnification	Lenses ∅ mm
4×	●	4-fold	75×50
6×	●	6-fold	58
7×	●	7-fold	35
10×	●	10-fold	35

Magnifier lamp

ESCHENBACH

Design:
- enlargement and light in credit card size
- no bulb exchange
- very tiny LED lights with high luminous intensity
- threefold magnification
- light slimline SMD-LED
- available in housing colours black and silver

PXM®

Delivery:
Incl. 2 button cells, 1.5 V, type 2025



N° article	392505 Easy Pocket	Magnification	Colour
152110	●	3-fold	black
152111	○	3-fold	silver

Magnifying eyeglasses

ESCHENBACH

Design:
- extremely lightweight magnifying eyeglasses with independently adjustable lenses (system Galileo)
- clip-on temple ends
- dioptre adjustment on both sides from ± 3 dpt.
- large focussing range of approx. ∅ 16 cm and large working distance of 40 cm

PXM®

Delivered in case

Use:
For model-making, soldering, adhesive bonding, grinding, needlework and other precision work

Delivery:
With retaining bracket



N° article	392660 MaxDetail	Magnification	Working distance mm	Weight g
2×	●	2-fold	400	49

LED magnifier lamp Slim

Bauer Böcker

Design and use:
- LED work light for use in the laboratory, at work or at home
- magnifying glass that can be adjusted as desired thanks to the flexible shaft
- glare-free and flicker-free
- flexible shaft length 450 mm
- 460 lumens
- 7.5 watts of power
- 300 mm focal length
- ∅ light head: outside 160 mm
- glass lens 100 mm
- comes with a table clamp

NEW



N° article	392507 with clamp and magnetic base	Magnification	flexible shaft length mm	Weight g
0010	●	6-fold	450	2000

Magnifier lamp

ESCHENBACH

Design:
- selection between ring or segment illumination for surface control
- minimum lighting focus for shadow-free illumination of 3.5 cm
- illuminance approx. 6000 lux (in 150 mm working distance)
- gooseneck with protective cover for better hygiene
- with desk clamp
- mains adapter for EU, GB, US, AUS included
- cable length 3 m

PXM®

cera-tec® coating



N° article	392511 VarioLED™ Flex	Magnification	Length of stand mm	Dioptres (dpt)
2781	●	2.5-fold	350	6
27815	●	2.5-fold	600	6

N° article	392511 Table stand for vario LED flex
27819	○

Headband magnifier

ESCHENBACH

PXM®

Delivered in case

Design:
- visor closed on all sides
- various options for individual height adjustment
- forehead rest perforated to allow ventilation
- lens sections may be easily replaced

Use:
- for binocular spatial vision
- suitable for wearer of glasses

Delivery:
Complete with one lens part



N° article	392650	Magnification	Working distance mm
2,5X	●	2.5-fold	180
3,0X	●	3-fold	160

Digital stereo zoom microscope MarVision

Mahr

Design:
- magnification continuously adjustable via zoom lens (7- to 45-fold)
- focusing via ergonomic hand wheel (for left- and right-handers on both sides)
- prismatic head 45°, by 360° pivotable with dioptre compensation
- integrated incident and transmitted light, continuously adjustable
- a CCD camera can be attached (only type SM 151)

Use:
- for luminous, sharp, three-dimensional images
- for the inspection of workpieces during production or in quality management

Delivery:
Microscope incl. dust cover, glass plate and white/black plate

N° article	392905	Magnification
SM150	○ +	7 - 45-fold
SM151	○ +	7 - 45-fold

N° article	392905 LED ring light
150LR	○



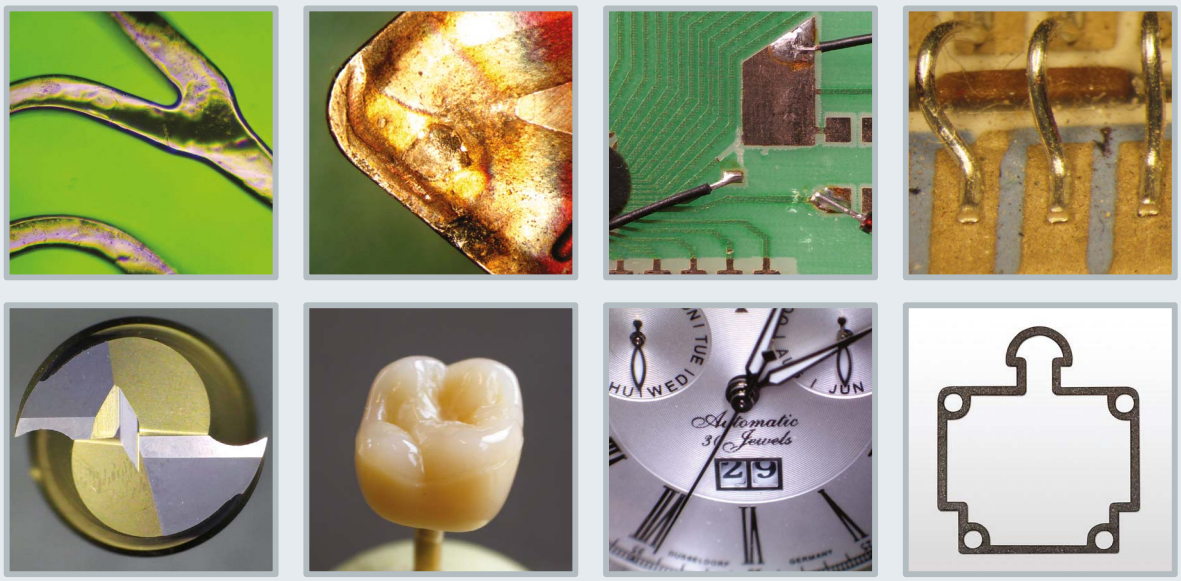
SM 150



SM 151

Non-contact measuring microscopes | Optical/Video - Digital - CNC

Vision Engineering is one of the world's leading companies in the development and manufacture of contactless measurement systems. The range includes easy-to-use, cost-effective 2-axis measuring microscopes up to fully automatic fully automatic 3-axis measuring systems with video edge detection (VED), extensive report functions and PC and PC evaluation.



Measuring Microscopes | Measuring Systems | CNC-KMM's

Swift PRO - Duo/Cam/Elite

Workshop Measuring Microscope/Optical Video/ Measuring Microscope

- measuring range 150 × 100 mm / 200 × 100 mm
- optional magnification 10×, 20×, 50×, 100× (20× Standard)
- optical 2-axis and 3-axis measurement
- optical and/or video measurement
- workshop geometry calculator
- or measuring PC



Hawk - manual or VED

Manual measuring microscope / also with PC evaluation or PC-based optical/video measuring station

- measuring range up to 400 × 300 mm
- optional magnification 20× - 1000× (20× Standard)
- optical 3-axis measurement
- extensive report functions
- high repeatability
- re-measuring CAD contours
- for demanding measuring tasks

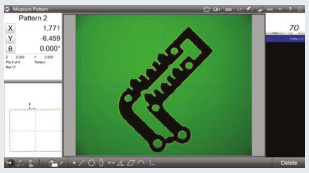


Measuring Microscopes | Measuring Systems | CNC-KMM's

TVM - Digital Measuring Projector

Geometric measurement almost in real time

- fast and precise 2D measurements in the field of view (FOV)
- place test sample and measure at the touch of a button
- no alignment of the samples
- particularly user-friendly
- option: Measuring table with motorised control
- also available as CNC





LVC200/400 - CNC video measuring system

Large format 3-axis CNC video measurement

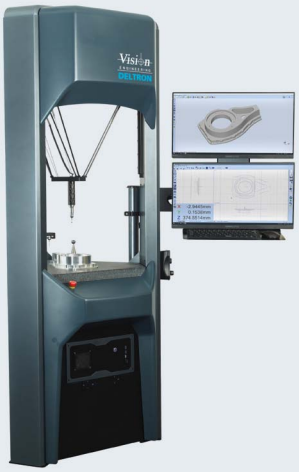
- measuring range up to 400 × 300 × 200 mm
- motorised zoom lens with 6 steps
- 3D touch probe option (tactile)
- high-resolution video image with a 5MP USB3.0 camera
- intuitive M3 PC measurement software
- measure against CAD



DELTRON 370 / 520 - CNC coordinate measuring system

3-axis CNC tactile CMM for manufacturing

- encapsulated guides & bearings of the highest quality, for robust yet smooth operation in production
- built-in temperature sensors guarantee high accuracy even with strong temperature fluctuations
- intuitive and powerful software
- measure against CAD
- measuring range Ø 370/H270 or Ø 520/H300



Eyepieceless stereo inspection system

Design:
- high value at low cost
- 3D imaging of the components to control
- increase in production and throughput
- long working distances for easy sample manipulation and rework
- magnification through quick-change lenses
- colourfast LED illumination with long service life (10.000 hours)
- illumination 20 LEDs (9,400 lux)
- transmitted light (only for table-top stands) with 13 LEDs (1,200 - 4,000 lux)
- excellent handling for ergonomic working
- reduction of eye fatigue through patented eyepieceless technology

Delivery:
0001: Head MCH-001 with LED incident light (without lens), swivel stand MCS-005, dust cover MS-003 and mains adapter MPS-005

0003: Head MCH-001 with LED incident light (without lens), table stand MES-006 with LED transmitted light, dust cover MS-003 and mains adapter MPS-005



0001



0003

N° article	392927 Mantis Compact	Height min. mm	Height max. mm	Width mm	Depth, min. mm	Depth, max. mm	Weight kg	Design
0001	○	396	605	213	335	545	5,4	with universal stand
0003	○	526	641	305	487	–	6,6	with table stand



1060 1040

N° article	392927 Lens for Mantis Compact	Magnification	Working distance mm	Image detail mm
1040	○	4-fold	96	27.5
1060	○	6-fold	93	19.2

Design MANTIS Elite:
- excellent optical performance
- magnification from x2 to x20 optional
- maximal freedom of head movement and reduction of eye fatigue through patented eyepieceless technology
- superb ergonomics and hand-eye coordination for inspection and manipulation tasks
- increase in production and throughput
- very bright and colourfast LED illumination with long service life (10,000 hours)
- illumination with 24 LEDs (11,000 LUX)
- transmitted light (only for table-top stands) with 13 LEDs (1,200 - 4,000 lux)
- great working distance and large picture detail for manipulation and rework

Design MANTIS Elite-Cam with 2D measuring software:
Like MANTIS Elite, but with factory-integrated USB2.0 HD camera in the projection head and 2D measuring software for additional viewing on screen, archiving, insertion of texts and arrows as well as simple measuring tasks (length measurement, diameter, area content determination, 3-point angle measurement).
- permanently masked live image on the monitor, at the same time unobstructed optical view through the microscope
- ideal for training and educational purposes
- storage of picture data in BMP, JPEG and PNG

Delivery:
0001: Head MEH-001 with 2 lens station exchange turret (without lenses) and LED incident light, swivel stand MES-005, dust cover MS-003 and mains adapter MPS-005

0003: Head MEH-001 with 2 lens station exchange turret (without lenses) and LED incident light, table stand MES-006 with LED transmitted light, dust cover MS-003 and mains adapter MPS-005

0005 and 0007: Like type 0001 or type 0003, but with integrated camera, USB cable (1 m length), standard image recording and storage software plus installation CD.



0003



0001

N° article	392928 Mantis Elite / Elite-Cam	Height min. mm	Height max. mm	Depth, min. mm	Depth, max. mm	Weight kg	Design
0001	○	415	624	352	622	6,3	with universal stand
0003	○	526	641	487	–	6,6	with table stand
0005	○	415	624	352	622	6,3	with universal stand, built-in HD camera and PC software
0007	○	526	641	487	–	6,6	with table stand, built-in HD camera and PC software



N° article	392928 Lens for Mantis Elite	Magnification	Working distance mm	Image detail mm
1040	○	4-fold	96	34
1060	○	6-fold	68	23
1080	○	8-fold	59	17
1100	○	10-fold	54	13.5
1150	○	15-fold	40	8.8
1200	○	20-fold	29	6.5



N° article	392928 Sliding table	Design
MS002	○	for versions with table stand, 100 × 100 mm, usable with adjustable transmitted light illumination, even manoeuvrability



0007

Profile projector

Mitutoyo

Design:
- robust floor-mounted version
- large, rotatable monitor
- monitor Ø 508 mm / 20"
- halogen transmitted light and incident light 24 V / 150 W
- as standard lens 10-fold
- max. workpiece weight 5 kg



N° article	392951	Magnification	Measuring table surface mm	Travel mm	Weight kg
PV5110	○ +	10-fold	380 × 250	200 × 100	210

Digital length measuring system
Linear Scale

Mitutoyo

Design:
- effective measuring range from 100 to 3000 mm available
- max. operation speed 50 m/min
- operation temperature from 0 °C to +45 °C
- dust- and water-protected (IP67)
- automatic zero point setting after power on

IP67



N° article	393000	Plage de mesure mm	Measuring range inch	Measuring head travel, max. mm	Total length mm	Cable length mm
0100	○	100	4"	120	278	3,4
0150	○	150	6"	170	328	3,4
0200	○	200	8"	220	378	3,4
0250	○	250	10"	270	428	3,4
0300	○	300	12"	330	488	3,4
0350	○	350	14"	380	538	3,4
0400	○	400	16"	430	588	3,4
0450	○	450	18"	480	638	3,4
0500	○	500	20"	540	698	3,4
0600	○	600	24"	640	798	3,4
0700	○	700	28"	740	898	3,4
0750	○	750	30"	780	938	3,4
0800	○	800	32"	840	998	3,4
0900	○	900	36"	940	1098	3,4
1000	○	1000	40"	1040	1198	4,9

Digital display unit Linear Scale

Mitutoyo

Design:
- display unit for digital length measuring system
- numerical increment 0.001 mm or 0.005 mm
- display with 7 digits plus algebraic signs (-)
- operation temperature from 0 °C to 45 °C
- dimensions H × W × D = 260 × 167 × 80 mm

Functions:
- PRESET
- ABS/INC mode
- zero-approach operation
- bolt circle machining
- bore treatment
- scale reference point
- tool specification
- selectable resolution
- diameter display
- reversal of counting direction
- macro function keys
- programming features
- addition of the results from 2 axes (only at type 0003)
- addition / subtraction
- linear error compensation
- masking of the last figure
- saving of the last reading
- copying of coordinate data
- data transfer from DIGIMATIC measuring devices
- ZERO/ABS (only with 393000)
- mm/inch selection
- zero-approach function



0003

N° article	393005	Number of axes	Weight kg
0002	○	2	1,1
0003	○	3	1,2

Adding stopwatch

hanhart 1882

Design:
- **time measurement with interrupt option**
- in ABS housing
- very lightweight and secure in handling
- Start/Stop with crown
- zeroing by means of lateral button
- pin pallet, 1 jewel
- 1/5 sec. and 1/100 min. for 30 min.
- housing diameter 55 mm



N° article	394000	Accurate running 1/5 + 1/100	Accurate running 1/5 + 1/100	Running time accuracy 1/10	Accurate running 1/10	Weight g
0001	○	10 - 12 hrs.	0.04 %	5 - 6 hrs.	0.06 %	80

Design:
- **time measurement with interrupt option**
- winding mechanism with shock-proof pin pallet movement on the back
- Start = green button
- Stop = red button
- Zero setting = white or black button
- robust ABS housing with neck strap
- standard with Flyback (Tempo)
- pin pallet, 1 jewel, 1/10 sec. 15 min.
- housing diameter 55 mm



N° article	394001	Accurate running 1/5 + 1/100	Accurate running 1/5 + 1/100	Running time accuracy 1/10	Accurate running 1/10	Weight g
0001	○	10 - 12 hrs.	0.06 %	5 - 6 hrs.	0.08 %	85

Stopwatch

hanhart 1882

Design:
- measuring range 1/100 sec.
- 7-digit LCD display
- digit height 7 mm
- display range 9 hrs / 59 min / 59.99 sec.
- battery mignon AA 1.5 V
- battery life about 2 to 5 years
- housing made of plastic, black



Functions:
- Start/Stop: Flyback timing without interruption
- Reset: Zero setting
- Addition: Timing with possibility of interruption
- Split: Intermediate recording with continuous time measurement
- dual measurement for two briefly consecutive measurements

N° article	394002 Stopstar	Length mm	Width mm	Depth mm	Weight g
0001	●	82	61	28	70

Design:
- measuring range 1/100 sec.
- 7-digit LCD display
- digit height 6.5 mm
- display range 9 hrs / 59 min / 59.99 sec.
- battery button cell SR54
- battery life approx. 2 years
- housing made of plastic

Functions:
- Start/Stop: Flyback timing without interruption
- Reset: Zero setting
- Addition: Timing with possibility of interruption
- Split: Intermediate recording with continuous time measurement
- dual measurement for two briefly consecutive measurements



N° article	394002 Stratos	Length mm	Width mm	Depth mm	Weight g
0005	●	66	70	21	62

Design:
- 2-button operation
- with battery change indicator
- **waterproof**
- selectable 1/100 min or 1/100 sec.
- 2.5-digit LCD display
- upper line 6-digit with battery status display, lower line 7-digit
- function window for lap or standard time
- memory display 2-digit
- digit height 7 mm or 5 mm
- display area upper line 9999.99 min.
- display area lower line 99,999.99 min.
- battery Micron cell AAA 1.5V
- battery life about 5 to 7 years

Functions at 1/100 min .:
- Start/Stop: Flyback timing without interruption
- Reset (zero setting)
- Split: Intermediate recording with continuous time measurement
- Lap: Laps or lap times; after each stop new measurement starts automatically with 0
- Addition: Timing with possibility of interruption
- Split and Lap can be read simultaneously
- time and date
- 65 memories for Split and Lap

Functions when switching to 1/100 sec .:
- Start/Stop, Reset, Addition, Split, Lap, time and date as above
- but additionally with short-lap (shortest running time)
- Split time may be preset from clock time
- Countdown
- Countdown and stopwatch can be used at the same time
- 65 memories with evaluation and fast search

Delivery:
With protective pouch and strap



N° article	394002 Spectron	Length mm	Width mm	Depth mm	Weight g
0010	○	82	61	28	85

Table stopwatch

hanhart 1882

Design and use:
- for all sectors such as school, sports, laboratory and industry
- easy-to-read, quartz-controlled, analogue desktop/wall clock
- ergonomic design, optimal stability
- pointer noctilucent
- with battery change indicator
- two time measuring buttons
- measuring range 0 - 60 sec. and 1/100 min.
- external scale 0 - 60 sec. and 0 - 60 min.
- inner scale 0 - 100/100 min.
- temperature range from -10 °C to +70 °C
- battery Mignon cell AA 1.5 V, running time approx. 1 - 2 years

Functions:
- Start/Stop: Flyback timing without interruption
- Reset: Zero setting
- Addition: Timing with possibility of interruption
- Flyback (pace, "floating zero position")
- combining stop, reset and start into one step



N° article	394005 Mesotron	Length mm	Width mm	Depth mm	Depth 2 mm	Weight g
0001	○	175	130	40	95	375

Table stopwatch

hanhart 1882

Design and use:
- with two interval up-down timers
- for industry, school, laboratory, sports or private sector
- sturdy white plastic housing
- adjustable alarm sound
- two time measuring buttons
- with battery change indicator
- measuring range 1/100 sec. or 1/100 min.
- 2-digit LCD display and function window
- upper line 3-digit, lower line 5-digit
- function window 2-line with 6 positions
- digit height 22 mm or 8 mm
- display area selectable:
  a) 999 min./99/100 min. or
  b) 9 hrs. / 59 min. / 59 sec. / 1/10 sec.
- temperature range from -10 °C to +55 °C
- battery Mignon cell AA R6, running time approx. 1 - 2 years

Functions:
- Start/Stop
- Reset (zero setting)
- Addition
- Flyback
- Count down - with adjustable beep
- 2 timers - fully programmable, alternatively with separate or common Start/Stop operation
- Repeat, manual or automatic
- Time



N° article	394006 Prisma 200	Length mm	Width mm	Depth mm	Depth 2 mm	Weight g
0001	○	175	130	40	95	390

Data connection cable

Mahr

Note:
For all Mahr callipers and dial callipers with data output MarConnect

Type 0002 (DIGIMATIC):
Blade terminal, 10-pole (16 EXd)

Type 0006 (16 E○u / 2000USB):
USB, incl. MarCom standard software

Type 0010 (OPTO RS232C):
SUB-D socket 9-pole (16 EXr)

Type 0012 (DK-U1):
USB, Micromar 40 EWR (≥ 2018)

Type 0014 (DK-D1):
Digimatic, Micromar 40 EWR (≥ 2018)

Type 0016 (DK- M1):
Connection to Digimar 817 CLT

Digimatic | RS 232 C | USB


Digimatic


RS 232 C


16EXu


DK-M1

N° article	398010	Cable length mm	Design
0002	●	2	DIGIMATIC
0006	●	2	16EXu
0010	●	2	RS232C
0012	○	2	DK-U1
0014	○	2	DK-D1
0016	NEW ●	0,4	DK-M1

Printer kit M310 / M410 / 817 CLT

Mahr

Use:
Printer set including Bluetooth USB adapter.

NEW



Digimatic | RS 232 C | Bluetooth®

N° article	398013	Design:
0001	○	DP-B1

Data connection cable

Mitutoyo

Note:
For all Mitutoyo callipers, micrometers, measuring devices or dial gauges with data output

Digimatic | USB | U-WAVE®

DIGIMATIC: For connecting a multitude of devices with DIGIMATIC interface
USB: System for direct connection as keyboard format without software driver (HID) or as virtual COM port (VCP)
U-Wave: Wireless data transmission system, transmission range 20 m
RS232C: Plug, 9-pole D-Sub

N° article	398000	Cable length mm	Design:
0002	●	2	DIGIMATIC, straight
0004	○	2	DIGIMATIC, back side
0006	●	2	USB, straight
0008	●	–	U-Wave, straight



0002

Digimatic | USB | U-WAVE®



398001



398002



398003



398004



398006

N° article	398001 with data button	398002 6-pole, round	398003 10-pole, single	398004 with data button, IP protected	398005 with data button, IP protected	398006 IP protected	Cable length mm	Design:
0002	●	●	●	●	●	–	2	DIGIMATIC
0006	●	○	○	○	○	○	2	USB
0008	○	○	○	○	○	○	–	U-Wave
0010	–	–	–	–	–	○	2	RS232C

USB-ITPAK

Mitutoyo

USB | RS 232 C

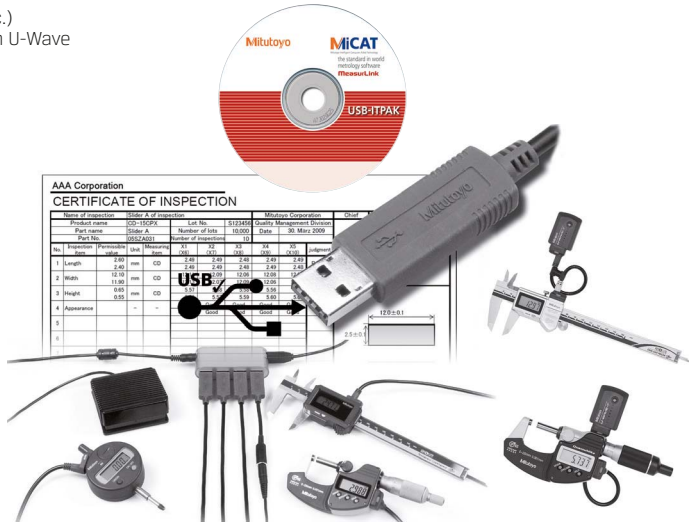
Design:
- USB-ITPAK is a configuration and data collection software
- data collection of measuring devices with DIGIMATIC output in a Microsoft® Excel® worksheet
- USB Input Tool Direct connection cable, U-Wave and USB foot switch adapter can be used for data transfer into a Microsoft® Excel® worksheet

Functions:
- settings for the storage in Microsoft® Excel® (Workbook, worksheet, cell area, etc.)
- data collection USB Input Tool Direct cable or cordless data transmission system U-Wave
- selection of the data collection (sequential, simultaneous individually)
- triggering of data collection (mouse, foot switch, keyboard)
- text input for foot switch function
- time control

Delivery:
License key, software CD

Supported operating systems:
- Windows® 2000 Professional (› SP4)
- Windows® XP Professional (› SP2)
- Windows® XP Home Edition (› SP2)
- Windows Vista® (32bit/64bit)
- Windows® 7, 8 and 8.1 (32bit/64bit)

Supported Microsoft® Excel® versions:
Excel® 2000/2002/2003/2007/2010



N° article	398019	Design:
ITPAK	○	Software USB-ITPAK with license key

Mini processor

Mitutoyo

Digimatic RS 232 C

Design:
- compact construction
- for all devices with DIGIMATIC data output
- for printing the recorded figures or for statistic calculations
- incl. thermal printer, quick and quiet
- with RS232C interface cable recorded data can be send to a PC
- easy print function, in clear and legible large characters
- clock function - time-dependant entering of the measuring data
- up to 9,999 data can be registered
- power supply via mains adapter 6 V or via battery LR6 or Ni-MH
- dimensions L × W × H = 201 × 94 × 43.9/75.2 mm



Nº article	398020
0002	○

Interface box

Mitutoyo

Digimatic RS 232 C

Design:
- interface for connection of measuring devices with DIGIMATIC interface to PCs with RS232C or USB interface
- the device works without extra power supply

398021 0001 and 0002: Handshake lines RTS and DTR are needed for power supply
398021 0008: Power supply 230 - 240 V, 50 Hz
398022: The devices log on to the computer as virtual RS232C interface



0001



0002



0008

Nº article	398021	Data input	Data output	Cable connection at the interface	Transmission rate	Data bits	Stop bits	Parity
0001	○	1× DIGIMATIC	RS232C serial signal	serial cable D-SUB 9	9600 baud	8	1	none
0002	○	2× DIGIMATIC	RS232C	serial cable D-SUB 25	9600 baud	8	1	none
0008	○	8× DIGIMATIC	RS232C	serial cable D-SUB 9	9600 baud	8	1	none

Digimatic RS 232 C USB



0001



0003

Nº article	398022	Data input	Data output	Cable connection at the interface	Transmission rate	Data bits	Stop bits	Parity
0001	○	1× DIGIMATIC	USB	USB cable mini, 5-pole, standard	9600 baud	8	1	none
0003	○	3× DIGIMATIC	USB, RS232C	serial cable D-SUB 9, USB cable type B	1200/9600 baud (adjustable via jumper)	8	1	none

USB-DIGIMATIC-Interface

Mitutoyo

Design:
- USB Input Tool
- for connecting a DIGIMATIC measuring device to a PC-USB interface for direct reading of the data without additional software
- with foot switch connection
- measured values are converted into keyboard codes, allowing interaction with any programmes working with keyboard input (HID)
- with the software USB-ITPAK easy editing of Microsoft® Excel® spreadsheets
- fixed COM assignment (VCP) using driver (USB-ITPAK required)
- USB cable cascadable via USB hub)
- power supply 5 V via USB, cable length 1 m

Digimatic USB

NEW



Nº article	398024 Digimatic Input Tool USB	Data input	Data output	Output decimal separator	Width mm	Depth mm	Height mm
0001	○	DIGIMATIC, Digimatic 2, Digimatic S1	USB virtual COM port (VCP) with USB IT PAK, USB keyboard signal (HID)	Emulates local settings	38	64	21

Data transfer system

Mitutoyo

Design:
- wireless data transmission system from measuring device direct to PC via DIGIMATIC data protocol
- U-Wave-T (transmitter) sends measured data to U-Wave-R (receiver)

U-WAVE® IP67

0005: Dust and water protected (IP67)



0007 0003|0005 0001

Nº article	398025 U-Wave	Design:
0001	○	Receiver U-Wave-R and software
0003	○	Transmitter U-Wave-T, standard version, confirmation data receipt through LED and acoustic signal
0005	○	Transmitter U-Wave-T, IP67, confirmation data receipt through LED

iStick radio receiver

Mahr

Design:
- incl. MarCom software
- up to 8 measuring devices can be connected per a single iStick receiver
- for digital measuring instruments with integrated radio system "Integrated Wireless":
- callipers 301843
- external micrometers (3010302)
- dial gauges 320628



Nº article	398026
I-STICK	●

Security and confidence, the bedrock for lasting and prolific cooperation!

The measuring instruments used in the production process have to provide undeniable correct measured values for technical as well as legal reasons. To ensure this, the devices have to be regularly calibrated and traced to national standards.

In section 7.1.5.2 of the quality standards from the norm family DIN, EN 9001: 2015 16949: 2016, is defined:

7.1.5.2 Metrological traceability N1)

If metrological traceability is a requirement, or is considered by the organisation to be an essential contribution to establishing confidence in the validity of measurement results, the measuring instrument shall be:

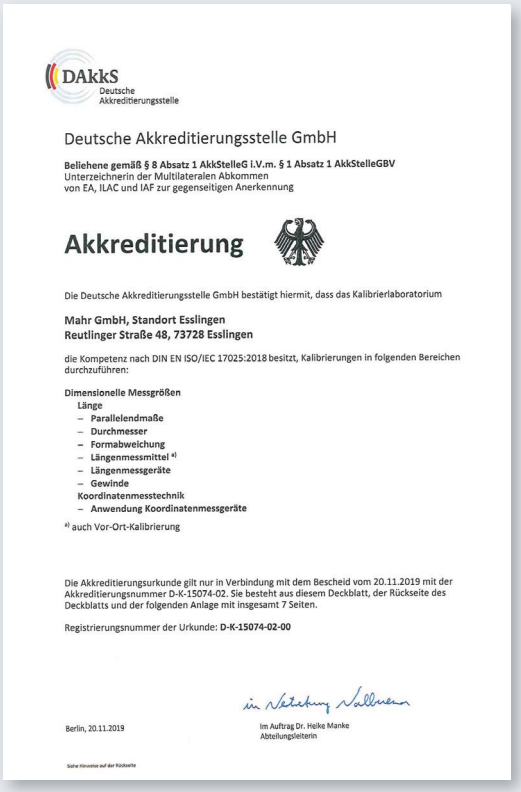
a) calibrated, verified or both against standards traceable to international or national standards at specified intervals or prior to use; where no such standards exist, the basis for calibration or verification shall be retained as documented information;

The Mahr measuring equipment management assures this for the measuring parameter length, among others, by operating the calibration laboratories DKD-K-05401 and DKD-K06401, which are accredited by the Physikalisch-Technische Bundesanstalt PTB Braunschweig (Federal Institute of Physics and Technology PTB in Brunswick).

The calibration for an order takes about 2 days, for external brands approx. 5 days; a later calibration approx. 8 days.

Delivery ex works plus packing costs. To calibrate a new ordered tool initially, please attach "-KAL" to the size.

Example: Digital outside micrometer measuring range 0-25 mm
inclusive calibration
= cat. no. **310294 0-25-KAL**



DAkkS
Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Beliehene gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung

Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Kalibrierlaboratorium

Mahr GmbH, Standort Esslingen
Reutlinger Straße 48, 73728 Esslingen

die Kompetenz nach DIN EN ISO/IEC 17025:2018 besitzt, Kalibrierungen in folgenden Bereichen durchzuführen:

Dimensionelle Messgrößen
Länge
- **Parallelendmaße**
- **Durchmesser**
- **Formabweichung**
- **Längenmessmittel** a)
- **Längenmessgeräte**
- **Gewinde**

Koordinatenmesstechnik
- **Anwendung Koordinatenmessgeräte**

a) auch Vor-Ort-Kalibrierung

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 20.11.2019 mit der Akkreditierungsnummer D-K-15074-02. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 7 Seiten.

Registrierungsnummer der Urkunde: **D-K-15074-02-00**

Berlin, 20.11.2019

Im Auftrag Dr. Heike Manke
Abteilungsleiterin

Siehe Hinweise auf der Rückseite

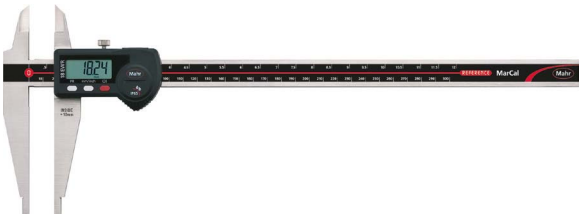
calibration



Indicating length measuring devices

Workshop caliper
with digital or analogue display

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 9.1



Measuring range end value mm	Calibration price per piece
to 200	○ +
〉 200 - 500	○ +
〉 500 - 1000	○ +
〉 1000 - 2000	○ +

Height measuring and marking equipment
with digital or analogue display

Calibration:
- for devices of all brands
- to VDI / VDE / DGQ 2618



Measuring range end value mm	Calibration price per piece
to 300	○ +
〉 300 - 600	○ +
〉 500 - 600	○ +

Depth micrometer
with digital or analogue display

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 9.2



Measuring range end value mm	Calibration price per piece
to 200	○ +
〉 200 - 500	○ +
〉 500 - 1000	○ +

Special purpose calipers
with scale and digital or analogue display

Calibration:
- for devices of all brands
- following* DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 9.1
  (*Currently there is no published directive for the calibration of special purpose callipers)



Measuring range end value mm	Calibration price per piece
to 200	○ +
〉 200 - 500	○ +
〉 500 - 1000	○ +

Outside micrometer
with digital or analogue display and flat or spheric measuring faces

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 10.1



Measuring range end value mm	Calibration price per piece
to 100	○ +
〉 100 - 200	○ +
〉 200 - 300	○ +
〉 300 - 500	○ +
〉 500 - 750	○ +
〉 750 - 1000	○ +

Thread micrometer
with digital or analogue display

Calibration:
- for devices of all brands
- following* DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 10.1
  (*Currently there is no published directive for the calibration of thread micrometers)



Measuring range end value mm	Calibration price per piece
to 100	○ +
〉 100 - 200	○ +
〉 200 - 300	○ +
〉 300 - 500	○ +

Indicating length measuring devices

Micrometer with integrated dial comparator

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 10.3



Measuring range end value mm	Calibration price per piece
to 100	○ +
to 200	○ +

Micrometers with 3-line contact

Instruments without exchangeable measuring jaws

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 10.8



Measuring range end value mm	Calibration price per piece
to 50	○ +
〉 50 - 100	○ +
〉 100 - 150	○ +
〉 150 - 200	○ +

Inside micrometers with 2-point or 2-line contact

Calibration:
- for devices of all brands
- to VDI / VDE / DGQ 2618



Measuring range end value mm	Calibration price per piece
to 200	○ +
〉 200 - 500	○ +
〉 500 - 1000	○ +

Micrometer heads

Calibration:
- for devices of all brands
- following* VDI / VDE / DGQ 2618

*Currently there is no published directive for the calibration of micrometer heads



Measuring span mm	Calibration price per piece
25	○ +
50	○ +

Depth micrometers

Calibration:
- for devices of all brands
- to VDI / VDE / DGQ 2618



Measuring span mm	Calibration price per piece
25	○ +
incl. extension up to 100	○ +
Extension up to 200	○ +

Indicators

with digital or analogue display and resolution ≥ 1µm

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 11.1 or to DIN 878



Measuring range end value mm	Calibration price per piece
Up to 0 - 10	○ +
〉 10 - 50	○ +
〉 50 - 100	○ +

Lever gauges

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 11.3 or according to DIN 2270



Measuring range end value mm	Calibration price per piece
mit Skalierung 0.01, 0.001 or 0.002	○ +

Comparator with numeric display

Calibration:
- for devices of all brands
- according to Mahr standard*

(*Currently there is no published directive for the calibration of comparators with numeric display)



Type	Calibration price per piece
Mahr Extramess 2000/2001	○ +

Indicating length measuring devices

Comparator with scale display mechanic

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 page 11.2 or to DIN 879



Type	Calibration price per piece
alle Typen	○ +

Protractors / Indicators

Calibration:
- for devices of all brands
- to VDI / VDE / DGQ 2618



Measuring range		Calibration price per piece
Gradmesser	180°	○ +
Winkelmesser analog/digital	360°	○ +

Self-centring internal gauges
with 2-point contact on the workpiece

Calibration:
- for devices of all brands
- to VDI / VDE / DGQ 2618



Measuring range mm		Calibration price per piece
Up to	0 - 100	○ +
〉	100 - 250	○ +
〉	250 - 400	○ +
〉	400 - 800	○ +

Quick caliper thickness gauges
(internal/external measurement)

Calibration:
- for devices of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 12.1 or 13.1, resp.
- for thickness gauges, the flatness and parallelism deviations and the deviation f_e are determined



Type	Calibration price per piece
Dickenmessgeräte	○ +
Schnelltaster für Innen-/Außenmessung	○ +

Gauge blocks steel, ceramics, carbide

Calibration:
- to VDI / VDE / DGQ 2618 Sheet 3.1



Measuring range mm		Calibration price per piece
to	100	○ +
〉	100 - 200	○ +
〉	200 - 300	○ +
〉	300 - 500	○ +
〉	500 - 750	○ +
〉	750 - 1000	○ +

Gauges and reference standards

Go/no-go snap gauges

Calibration:
- for gauges of all brands
- to VDI / VDE / DGQ 2618 Sheet 4.7



Measuring range mm		Calibration price per piece one-sided
≥	2 - 10	○ +
〉	10 - 50	○ +
〉	50 - 100	○ +
〉	100 - 150	○ +

Measuring range mm		Calibration price per piece double-ended
≥	2 - 10	○ +
〉	10 - 50	○ +
〉	50 - 100	○ +
〉	100 - 150	○ +

Setting rings, ring gauges

Calibration:
- for gauges of all brands
- to VDI / VDE / DGQ 2618 Sheet 4.1
- circumference 2: Like circumference 1, additional measurement rotated by 90 °



Diameter mm		Calibration price per piece
〉	0.5 - 100	○ +
〉	100 - 200	○ +
〉	200 - 300	○ +

39
Optical | Device Monitoring

Gauges and reference standards

Double-sided plug gauges, limit plug gauges, feeler gauges

Calibration:
- for gauges of all brands
- to VDI / VDE / DGQ 2618 Sheet 4.1
- circumference 2: like circumference 1, additional measurement rotated by 90 °

Diameter mm	Calibration price per piece
〉 100	○ +
〉 100 - 200	○ +
〉 200 - 300	○ +



Single-sided plug gauges, limit plug gauges, feeler gauges

Calibration:
- for gauges of all brands
- to VDI / VDE / DGQ 2618 Sheet 4.1
- circumference 2: like circumference 1, additional measurement rotated by 90 °

Diameter mm	Calibration price per piece
〉 100	○ +
〉 100 - 200	○ +
〉 200 - 250	○ +



Gauge pins, thread plug gauges

Calibration:
- for gauges of all brands
- to VDI / VDE / DGQ 2618 Sheet 4.1
- circumference 1

Diameter mm		Calibration price per piece
Einzelstifte up to	20,00	○ +
in Haltern up to (3 pins)	3,2	○ +



Thread ring gauges, thread setting rings cylindrical

Calibration:
- for gauges of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 4.8 option 1

Diameter mm	Calibration price per piece
〉 1 - 5	○ +
〉 5 - 100	○ +
〉 100 - 200	○ +



Single-sided thread plug gauges, thread setting gauges cylindrical

Calibration:
- for gauges of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 4.8 option 1

Diameter mm	Calibration price per piece
〉 1 - 5	○ +
〉 5 - 100	○ +
〉 100 - 200	○ +



Double-sided thread plug gauges, thread setting gauges cylindrical

Calibration:
- for gauges of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618 Sheet 4.8 option 1

Diameter mm	Calibration price per piece
〉 1 - 5	○ +
〉 5 - 100	○ +
〉 100 - 200	○ +



Flat squares, try squares and knife-edge squares

Calibration:
- for gauges of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618

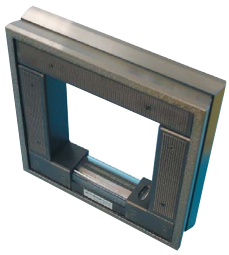
longer legs mm	Calibration price per piece
〉 0 - 200	○ +
〉 200 - 500	○ +
〉 500 - 1000	○ +



Machine and frame spirit levels
Inclinometers

Calibration:
- for gauges of all brands
- following DIN 877

Type	Calibration price per piece
Maschinenrichtwaage	○ +
Rahmenrichtwaage	○ +



Straightedges, marking gauges and line scales

Calibration:
- for gauges of all brands
- to DKD-R 4-3 or VDI / VDE / DGQ 2618

Length mm	Calibration price per piece
〉 0 - 200	○ +
〉 200 - 500	○ +
〉 500 - 1000	○ +



Straightedges DIN 874

Calibration:
- for gauges of all brands
- to VDI / VDE / DGQ 2618 Sheet 18

Length mm	Calibration price per piece
〉 0 - 300	○ +
〉 300 - 500	○ +
〉 500 - 1000	○ +
〉 1000 - 1500	○ +
〉 1500 - 2000	○ +



Accessories for length test devices

Setting gauges for outside micrometers

Extensions for inside micrometers with 2-point contact and extensions for depth gauges

Calibration:
- for gauges of all brands
- to Mahr standard

Length mm	Calibration price per piece
0 - 200	○ +
200 - 500	○ +
500 - 1000	○ +



Setting gauges for thread micrometers

Calibration:
- for gauges of all brands
- to Mahr standard

Length mm	Calibration price per piece
0 - 200	○ +
200 - 500	○ +
500 - 1000	○ +



Precision Digital Calliper IP 67

Including Calibration



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NEW



PFERD
Sanding file
Page 42/711



PFERD
Fibre grinding disc COMBICLICK®
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PFERD
Flap disc POLIVLIES with X-LOCK
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PFERD
Flap disc POLIFAN with X-LOCK
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PFERD
Flap disc POLIFAN with X-LOCK
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PFERD
Flap disc POLIFAN -CURVE with X-LOCK
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PFERD
Cutting disc X-LOCK
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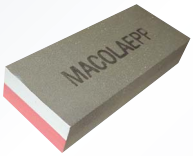
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PFERD
Roughing wheel X-LOCK
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Cutting disc
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MACOLAEPP
2-component whetstone
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OSBORN
Wheel brush Xtreme wire
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Cup brush Interchangeable braid
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Bevel brush Xtreme wire
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Surface brush
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OSBORN
Wheel brush ATB
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ARNTZ
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ARNTZ
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BAHCO
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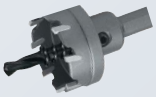
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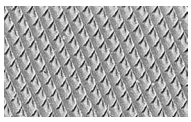
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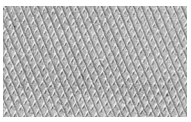
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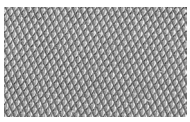
Engineer´s file

Design:
- with forged tang; flawless steel microstructure for uniform hardness
- evenly executed cut, exact shape

Cut 1 (coarse): roughing, coarse machining
Cut 2 (medium): universal roughing and finishing
Cut 3 (fine): finishing, fine machining


Hieb 1


Hieb 2


Hieb 3

Use:
Quality file for the highest demands, with long service life and high stock removal rate

DIN 7261 Form A

N° article	400100 flat blunt-ended, parallel tapered, cut 1	400200 flat blunt-ended, parallel tapered, cut 2	400300 flat blunt-ended, parallel tapered, cut 3	Cut length mm	Width mm	Thickness mm
100	●	●	●	100	12	2,5
150	●	●	●	150	16	4
200	●	●	●	200	20	5
250	●	●	●	250	25	6
300	●	●	●	300	30	6,5
350	●	●	–	350	35	7,5



DIN 7261 Form C

N° article	401100 square, pointed, cut 1	401200 square, pointed, cut 2	401300 square, pointed, cut 3	Cut length mm	Width mm	Thickness mm
100	●	●	●	100	4	4
150	●	●	●	150	6	6
200	●	●	●	200	8	8
250	●	●	●	250	10	10
300	●	●	–	300	12	12



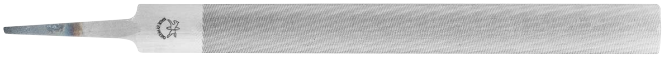
DIN 7261 Form C

N° article	402100 triangular, pointed, cut 1	402200 triangular, pointed, cut 2	402300 triangular, pointed, cut 3	Cut length mm	Width mm
100	●	●	●	100	8
150	●	●	●	150	11
200	●	●	●	200	15
250	●	●	●	250	18
300	●	●	–	300	20



DIN 7261 Form E

N° article	403100 semicircular, parallel tapered, cut 1	403200 semicircular, parallel tapered, cut 2	403300 semicircular, parallel tapered, cut 3	Cut length mm	Width mm	Thickness mm
150	●	●	●	150	16	4,5
200	●	●	●	200	20	6
250	●	●	●	250	25	7
300	●	●	●	300	30	8,5
350	●	–	–	350	35	10



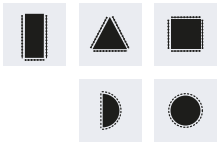
DIN 7261 Form F

N° article	404100 round, pointed, cut 1	404200 round, pointed, cut 2	404300 round, pointed, cut 3	Cut length mm	Width mm
100	●	●	●	100	4
150	●	●	●	150	6
200	●	●	●	200	8
250	●	●	●	250	10
300	●	●	●	300	12



Engineer´s file set

Design:
- 5-piece set, consisting of one file (with plastic handle) each flat blunt-ended, three-square, square, half round, round





406200

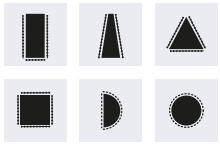


406306

N° article	406100 PFERD, cut 1	406200 PFERD, cut 2	406300 PFERD, cut 3	406306 PRETEC, cut 2	Cut length mm	Amount files
200	●	●	●	●	200	5
250	●	●	●	●	250	5
300	●	●	–	–	300	5

Key file set

Design:
- 6-piece set, comprising one key file (with wooden handle) each flat blunt-ended, flat pointed, square, three-square, half-round and round
- cutting length approx. 100 mm, cut 2





407410



407421



407451

N° article	407410 in plastic bag, cut 2	407421 in tin box, cut 2	407451 in plastic bag, cut 2	Cut length mm	Amount files
6	●	●	●	100	6

Multi-purpose file PFERD-PLUS

Design:
- flat blunt-ended shape, special cut PFERD-PLUS
- teeth in spade form and wide chip breakers
- reduced clogging of the filing grooves, even when processing soft material
- with plastic handle



Use:
- universal file for roughing and finishing
- for the machining of steel, NF metal, plastic and wood

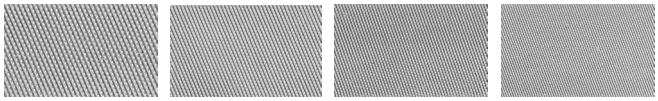


N° article	405050 parallel tapered with universal cut	Cut length mm	Width mm	Thickness mm
200	●	200	20	5
250	●	250	25	6
300	●	300	30	6,5



Precision file

Design and use:
- precision files conform to highest demands on dimensional accuracy, cutting performance and tool life
- smaller than engineers´ files, easier to handle and more precise in their geometry
- their main use is in fixture construction and tool making as well as in the construction and installation of high-precision devices and machines


Cut 00 | Cut 0 | Cut 1 | Cut 2

Cut 00: for very coarse precision machining
Cut 0: for course precision machining
Cut 1: for medium precision machining
Cut 2: for medium-fine precision machining

SC =Swiss cut



N° article	410100 Pottance file (flat blunt-ended, cut on three sides)	Cut length mm	Swiss cut	Width mm	Thickness mm
100/0	●	100	0 (coarse)	13	3
100/1	●	100	1 (medium)	13	3
100/2	●	100	2 (medium)	13	3
150/00	●	150	00 (very coarse)	18	4
150/0	●	150	0 (coarse)	18	4
150/1	●	150	1 (medium)	18	4
150/2	●	150	2 (medium)	18	4
200/00	●	200	00 (very coarse)	22	5
200/0	●	200	0 (coarse)	22	5
200/1	●	200	1 (medium)	22	5
200/2	●	200	2 (medium)	22	5



N° article	411100 Pillar file, regular (flat blunt-ended, two sides cut)	Cut length mm	Swiss cut	Width mm	Thickness mm
150/00	●	150	00 (very coarse)	13	4
150/0	●	150	0 (coarse)	13	4
150/2	●	150	2 (medium)	13	4
200/00	●	200	00 (very coarse)	15	5
200/0	●	200	0 (coarse)	15	5
200/2	●	200	2 (medium)	15	5
250/00	●	250	00 (very coarse)	18	6
250/0	●	250	0 (coarse)	18	6
250/2	●	250	2 (medium)	18	6



N° article	412100 Pillar file, slim (flat blunt-ended, two sides cut)	Cut length mm	Swiss cut	Width mm	Thickness mm
150/00	●	150	00 (very coarse)	8	3,5
150/0	●	150	0 (coarse)	8	3,5
150/2	●	150	2 (medium)	8	3,5
200/00	●	200	00 (very coarse)	10	4,5
200/0	●	200	0 (coarse)	10	4,5
200/2	●	200	2 (medium)	10	4,5
250/0	●	250	0 (coarse)	12	5
250/2	●	250	2 (medium)	12	5



N° article	413100 Pillar file, very slim (flat blunt-ended, two sides cut)	Cut length mm	Swiss cut	Width mm	Thickness mm
150/00	●	150	00 (very coarse)	6	3
150/0	●	150	0 (coarse)	6	3
150/2	●	150	2 (medium)	6	3
200/00	●	200	00 (very coarse)	8	3,5
200/0	●	200	0 (coarse)	8	3,5
200/2	●	200	2 (medium)	8	3,5



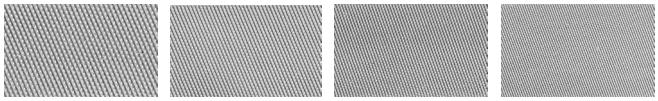
N° article	414100 Tang file, square	Cut length mm	Swiss cut	Width mm	Thickness mm
150/0	●	150	0 (coarse)	6	6
150/2	●	150	2 (medium)	6	6



N° article	415100 Tang file, three-square	Cut length mm	Swiss cut	Width mm
100/1	●	100	1 (medium)	6
100/2	●	100	2 (medium)	6
150/0	●	150	0 (coarse)	10
150/1	●	150	1 (medium)	10
150/2	●	150	2 (medium)	10
200/0	●	200	0 (coarse)	14
200/1	●	200	1 (medium)	14
200/2	●	200	2 (medium)	14

Precision file

Design and use:
- precision files conform to highest demands on dimensional accuracy, cutting performance and tool life
- smaller than engineers´ files, easier to handle and more precise in their geometry
- their main use is in fixture construction and tool making as well as in the construction and installation of high-precision devices and machines

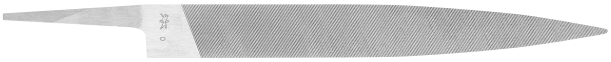


Cut 00 | Cut 0 | Cut 1 | Cut 2

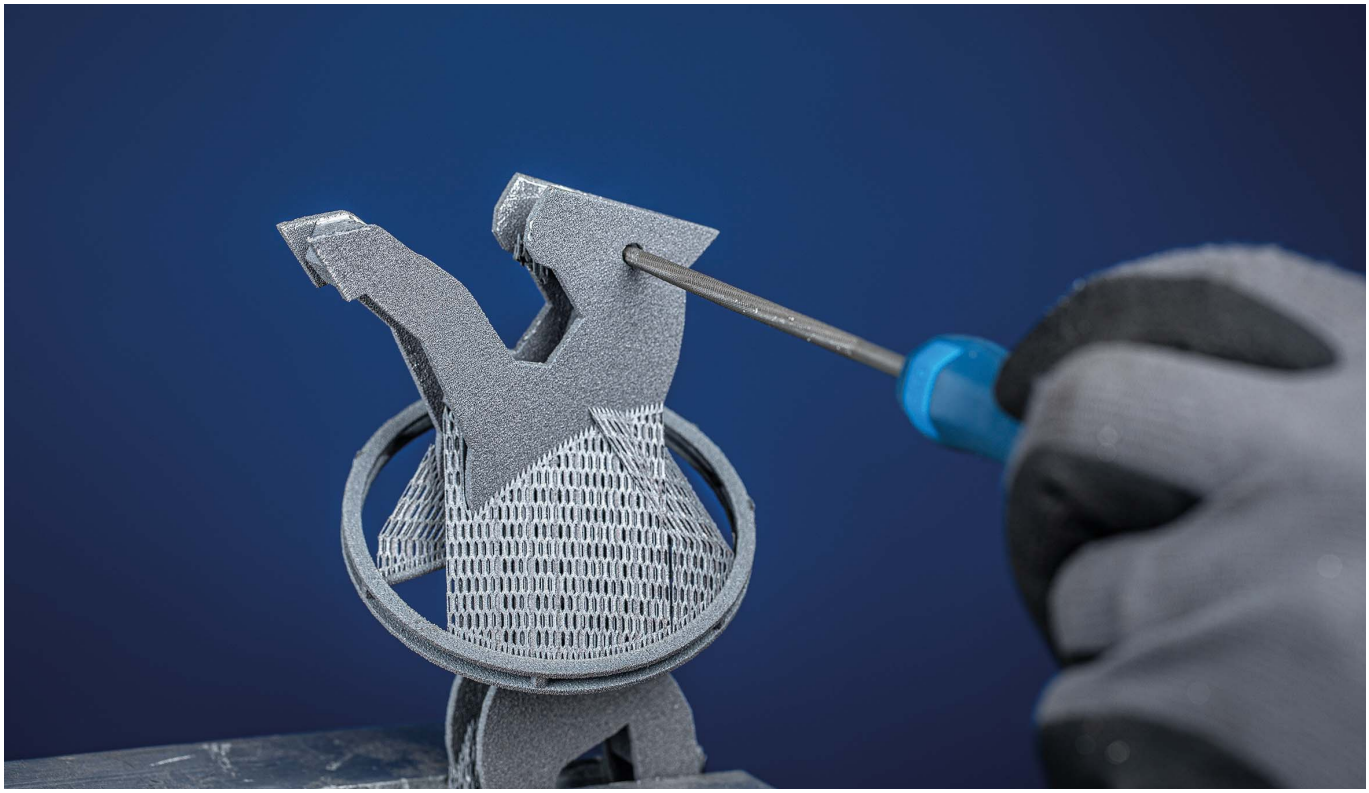


N° article	416100 Tang file, half-round	Cut length mm	Swiss cut	Width mm	Thickness mm
100/0	●	100	0 (coarse)	12	3,5
100/1	●	100	1 (medium)	12	3,5
100/2	●	100	2 (medium)	12	3,5
150/00	●	150	00 (very coarse)	16	4,5
150/0	●	150	0 (coarse)	16	4,5
150/1	●	150	1 (medium)	16	4,5
150/2	●	150	2 (medium)	16	4,5
200/00	●	200	00 (very coarse)	21	6
200/0	●	200	0 (coarse)	21	6
200/1	●	200	1 (medium)	21	6
200/2	●	200	2 (medium)	21	6
250/00	○	250	00 (very coarse)	25	7
250/0	●	250	0 (coarse)	25	7
250/1	●	250	1 (medium)	25	7

N° article	417100 Tang file, round	Cut length mm	Swiss cut	∅ mm
100/2	●	100	2 (medium)	4
150/0	●	150	0 (coarse)	6
150/1	●	150	1 (medium)	6
150/2	●	150	2 (medium)	6
200/1	●	200	1 (medium)	8
200/2	●	200	2 (medium)	8



N° article	418100 Tang file, knife	Cut length mm	Swiss cut	Width mm	Thickness mm
150/0	●	150	0 (coarse)	18	4
150/2	●	150	2 (medium)	18	4
200/0	●	200	0 (coarse)	22	5
200/2	●	200	2 (medium)	22	5



Precision file CORINOX®, INOX

Design and use:
- high-performance file with outstanding wear resistance and durability (stainless surface with **hardness 1200 HV**)
- no clogging of the file due to special tooth form, chips can be removed by tapping out
- for machining stainless steels, high-temperature steels, hard non-ferrous metals, fibre-reinforced thermosets such as GRP, CFRP as well as on other materials that are difficult to file

M



N° article	419012 Pottance file, flat blunt-ended, parallel tapered, SC 00	Cut length mm	Swiss cut	Width mm	Thickness mm
150	●	150	00 (very coarse)	18	4
200	●	200	00 (very coarse)	22	5

M



N° article	419022 Pottance file, flat blunt-ended, parallel tapered, SC 0	Cut length mm	Swiss cut	Width mm	Thickness mm
150	●	150	0 (coarse)	18	4
200	●	200	0 (coarse)	22	5

M

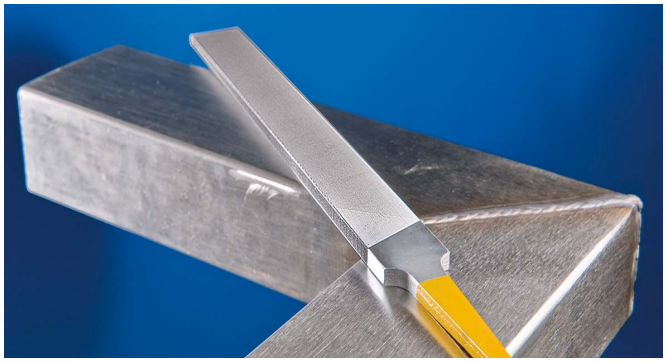


N° article	419112 Pillar file, normal, parallel ending, SC 00	Cut length mm	Swiss cut	Width mm	Thickness mm
150	●	150	00 (very coarse)	13	4
200	●	200	00 (very coarse)	15	5

M



N° article	419122 Pillar file, normal, parallel ending, SC 0	Cut length mm	Swiss cut	Width mm	Thickness mm
150	●	150	00 (very coarse)	13	4
200	●	200	00 (very coarse)	15	5



M



N° article	419212 Tang file, half-round, tapered, SC 0	Cut length mm	Swiss cut	Width mm	Thickness mm
150	●	150	0 (coarse)	16	4,5
200	●	200	0 (coarse)	21	6

M



N° article	419222 Tang file, half-round, tapered, SH 2	Cut length mm	Swiss cut	Width mm	Thickness mm
200	●	200	0 (coarse)	21	6

M



N° article	419322 File, triangular, pointed, SC 0	Cut length mm	Swiss cut	Width mm
200	●	200	0 (coarse)	14

M



N° article	419422 File, square, pointed, SC 0	Cut length mm	Swiss cut	Width mm	Thickness mm
150	●	150	0 (coarse)	6	6

M

N° article	419522 File, round, pointed, SC 0	Cut length mm	Swiss cut	∅ mm
200	●	200	0 (coarse)	8

Lathe file

Design:
- square, form H
- cut on 2 sides, 2 edges uncut
- opposed direction of the cut on the front and back side for better chip removal and safe working

DIN 7261

Use:
For deburring turning parts on lathes



N° article	420300 Cut 1	Cut length mm	Width mm	Thickness mm	fitting handle
250	●	250	25	6	FH 4/1
300	●	300	30	6,5	FH 5/1

Milled file with chip breaker

Design:
- flat blunt-ended
- toothed on three sides
- flat sides helical cut with chip breaker
- high edge straight toothed

DIN 7264

Use:
- machining of surfaces
- deburring
- machining of rectangular geometries
- for soft and long chipping material



N° article	422100 flat blunt-ended, Z1 (coarse)	422200 flat blunt-ended, Z2 (medium)	Cut length mm	Width mm	Thickness mm	fitting handle
300	●	●	300	30	5,8	FH 5/1

Design:
- half-round, hollow and tapered
- half round side with helical toothing, with chip breaker

Use:
- machining of radii
- deburring
- filing of half-round profiles
- for soft and long chipping material



N° article	422500 Half round, hollow, Z1 (coarse)	Cut length mm	Width mm	Thickness mm	fitting handle
300	●	300	27	9	FH 5/1

Thread file

Design:
- 8 different pitches
- for sharp threads metric or inch

Use:
For reworking damaged female and male threads



N° article	424100	Thread type	Lead
METRISCH	●	M	0.8 | 1 | 1.25 | 1.5 | 1.75 | 2 | 2.5 | 3 mm
WHITWORTH	●	W	24 | 20 | 18 | 16 | 14 | 12 | 11 | 10 (TPI)

Soft metal file

Design:
- special cut on three sides, one edge uncut

DIN 7261 Form A

Use:
- machining of surfaces
- deburring
- machining of rectangular geometries

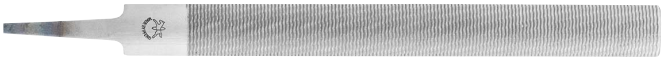


N° article	421000 flat blunt-ended, cut 0	Cut length mm	Width mm	Thickness mm	fitting handle
250	●	250	25	6	FH 4/1
300	●	300	30	6,5	FH 5/1

Design:
- special spiral cut on the half-round side, perfectly suitable for the treatment of soft metals

DIN 7261 Form E

Use:
- machining of surfaces
- deburring
- filing semicircular profiles



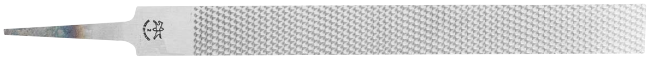
N° article	421100 half round, cut 0	Cut length mm	Width mm	Thickness mm	fitting handle
250	●	250	25	7	FH 4/1
300	●	300	30	8,5	FH 5/1

Wood rasp

Design:
- with special cut for wood (rasp cut)
- high removal rate
- good chip removal

DIN 7263

Use:
- deburring
- machining of surfaces
- edge processing (chamfering, rounding)



423000



423050

N° article	423000 flat blunt-ended, cut 2	423050 half round, cut 2	Cut length mm	Width mm	Thickness mm	fitting handle
200	–	●	200	20	6,5	FH 4/1
250	●	●	250	25	7,5	FH 4/1



423100

N° article	423100 round, cut 2	Cut length mm	Diameter mm	fitting handle
200	●	200	9,5	FH 4
250	●	250	11,5	FH 4

Chain saw file

Design:
- round file with exact spiral cut for extreme sharpness and particularly long service life
- sharpens the tooth edge rapidly and score-free

Use:
For gentle manual sharpening of commercial saw chains

Recommendations for use:
Two to three file strokes are sufficient for standard sharpening. Thus the chain is spared and the service life is increased.

N° article	425500	Cut length mm	Diameter mm	for chain pitch	fitting handle
200×4,8	●	200	4,8	.325"	FH 3
200×5,5	●	200	5,5	3/8" | .404"	FH 3

Contact file

Design:
- slim, rectangular flat file (very thin), form A
- with flat handle piece
- on both sides with cut 2

DIN 7283 Form A

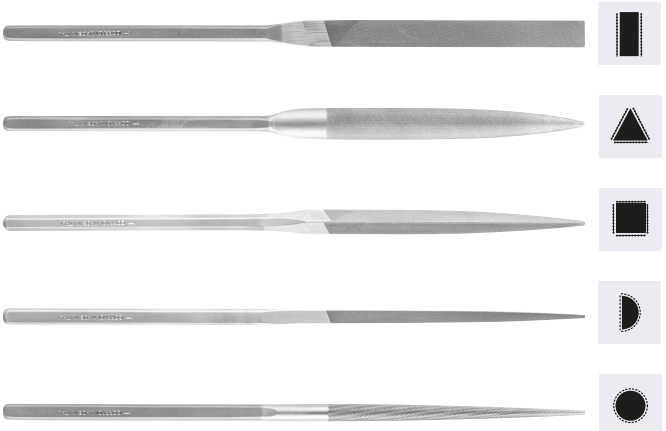
Use:
- for machining of terminal contacts, narrow grooves, perforations and openings
- for deburring, for surface machining



N° article	425600 Cut 2	Total length mm	Width mm	Thickness mm
100	●	100	8	1,2

Habilis file CORRADI

Design and use:
- robust file, similar to a precision needle file
- cylindrically forged tang (usable without handle)
- for tool construction and die making
- applicable at inaccessible places



N° article	426202 SC 00 (very coarse)	426252 SC 1 (medium)	Total length mm	Cut length mm	Width mm	Thickness mm
FLACHSTUMPF	●	●	215	105	10	2,5
DREIKANT	●	●	215	105	10	–
VIERKANT	●	●	215	105	5	5
HALBRUND	●	●	215	105	12	3,5
RUND	●	●	215	105	6	6,5

Handy files set CORRADI

Design:
5-piece set, comprising one file each flat blunt-ended, half round, three-square, square and round (426202 or 426252, resp.)



N° article	426502 SC 00	426552 SC 1	Swiss cut
SH00	●	–	00 (very coarse)
SH1	–	●	1 (medium)

Precision needle file CORRADI

Design:
- with round shank
- hardness approx. 64 - 66 HRC
- usable with or without handle



N° article	426810 SC 0 (coarse)	426820 SC 1 (medium)	426830 SH 2 (medium fine)	Cut length mm	Width mm	Thickness mm
FLACHSTUMPF	●	●	●	140	5,1	1,3
DREIKANT	●	●	●	140	3,5	–
VIERKANT	●	●	●	140	2,4	2,4
HALBRUND	●	●	●	140	5	1,7
RUND	●	●	●	140	3	3
BARETT	–	●	●	140	5	2,1

N° article	426910 SC 0 (coarse)	426920 SC 1 (medium)	426930 SH 2 (medium fine)	Cut length mm	Width mm	Thickness mm
FLACHSTUMPF	●	●	●	160	5,5	1,4
FLACHSPITZ	–	●	●	160	5,5	1,4
DREIKANT	●	●	●	160	3,7	–
VIERKANT	●	●	●	160	2,5	2,5
HALBRUND	●	●	●	160	5,7	1,8
RUND	●	●	●	160	3,25	3,25
MESSER	●	●	●	160	5,8	1,7
VOGELZUNGE	●	●	●	160	5,2	2,3
BARETT	●	●	●	160	5,3	2,1

N° article	426940 SC 0 (coarse)	426941 SC 1 (medium)	426942 SH 2 (medium fine)	Cut length mm	Width mm	Thickness mm
FLACHSTUMPF	●	●	●	180	6	1,5
DREIKANT	●	–	●	180	4,1	–
VIERKANT	●	–	●	180	2,7	2,7
HALBRUND	●	–	●	180	6	2
RUND	●	●	●	180	3,5	3,5

N° article	426950 SC 0 (coarse)	426951 SC 1 (medium)	426952 SH 2 (medium fine)	Cut length mm	Width mm	Thickness mm
FLACHSTUMPF	●	●	●	200	6,4	1,6
DREIKANT	●	–	●	200	4,4	–
VIERKANT	●	–	●	200	3	3
HALBRUND	●	–	●	200	6,4	1,8
RUND	●	●	●	200	3,75	3,75

Needle file set CORRADI

Design:
12-piece set, consisting of one needle file each of each form
- flat pointed
- flat blunt-ended
- bird's tongue
- three-square
- square
- round
- knife
- half round
- beret
- flat pointed with round edges
- flat blunt-ended with round edges
- bird's tongue round oval



N° article	427000	Cut length mm	Swiss cut
140/1	●	140	1 (medium)
160/1	●	160	1 (medium)
180/0	●	180	0 (coarse)
200/0	●	200	0 (coarse)

File handle

Design:
- made of hardwood, with embedded indissoluble clamp
- safety file handle; the deeply embedded clamp made of tubular steel prevents splitting of the handle when the file is driven into it

DIN 395



N° article	429500	Total length mm	for file length mm
70	●	70	100
80	●	80	100
90	●	90	125
100	●	100	150
110	●	110	200
120	●	120	250
130	●	130	300
140	●	140	350
160	●	160	400

File handle

Design:
- ergonomic two-component file handle
- large, rounded contact surfaces
- octagon at the collar prevents annoying rolling away of the tools
- protects the hand from sharp edges and corners
- does not contain plasticisers

FH 2	100-150 mm Key files and very fine tangs
FH 3	100-150 mm standard tangs
FH 4/1	200-250 mm for profiles flat blunt, flat pointed, half round
FH 4	200-250 mm for profiles three-square, square round and special shapes
FH 5/1	300-350 mm for profiles flat blunt, flat pointed, half round
FH 5	300-350 mm for profiles three-square, square round and special shapes



N° article	429550	for file length mm
FH2	●	100 - 150
FH3	●	100 - 150
FH4	●	200 - 250
FH4/1	●	200 - 250
FH5/1	●	300 - 350
FH5	●	200 - 250

Design:
- made of sturdy plastic
- good power transmission and excellent guidance
- air chambers help to absorb the moisture originating from the hands
- octagon collar prohibits rolling away of the placed-down files
- patented tang receptacles with displacement chambers
- does not contain plasticisers



N° article	429560	for file length mm
PH8	●	100 - 150 (with very narrow hinges)
PH9	●	100 - 150
PH11	●	200 - 250
PH13	●	300 - 350

Use:
Type SH 220 quick-release handle:
- simply by twisting the two halves of the handle the file tang is safely clamped into it
- **for needle files, diamond files and small machinist´s or precision files**

Type NFH 211-3K needle file holder:
- for safe guiding and quick **clamping of needle files**



SH 220



NFH 211-3K

N° article	429600	for file length mm	for tang Ø mm
SH220	●	140 | 160 | 180 | 200	3 | 3.25 | 3.50 | 3.75
NFH211-3K	●	–	3 - 4.5

Sanding file SiC

PFERD

SiC | PU 10 pieces

Design:
- abrasive silicon carbide SiC/C
- suitable for machining when only SiC is permitted
- for machining hard-to-reach places and narrow slots
- optimal contour adaptation due to high flexibility
- **can be used in engine and turbine construction as well as in tool and mould making**
- for deburring, roughening, surface machining, edge machining and stepwise fine grinding
- for machining steel, cast steel, stainless steel (INOX), non-ferrous metal, aluminium, titanium, wood, thermoplastics and plastics

SF: Grinding file without radius
SF-R: Grinding file with radius

Delivery:
Delivery only in specified PUs!

Note:
Price per piece

NEW



429700



429702



429704

N° article	429700 SF-R	Length mm	Width mm	Height mm	Grit
80	●	147	15	5	80
100	●	147	15	5	100
120	●	147	15	5	120
180	●	147	15	5	180
240	●	147	15	5	240
320	●	147	15	5	320
1000	●	147	15	5	1000

N° article	429702 SF-R	Length mm	Width mm	Height mm	Grit
80	●	180	19	5	80
100	●	180	19	5	100
120	●	180	19	5	120
180	●	180	19	5	180
240	●	180	19	5	240
320	●	180	19	5	320
1000	●	180	19	5	1000

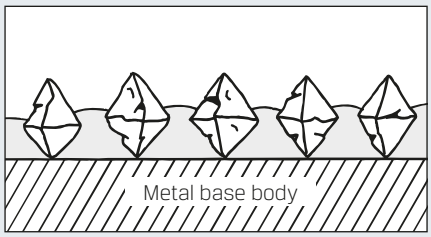
N° article	429704 SF	Length mm	Width mm	Height mm	Grit
80	●	180	28	5	80
100	●	180	28	5	100
120	●	180	28	5	120
180	●	180	28	5	180
240	●	180	28	5	240
320	●	180	28	5	320
1000	●	180	28	5	1000



Diamond Files

Product Information

Galvanically bonded diamond tools



Tool structure
The main feature of galvanically bonded tools is the single-layer coating with diamond or CBN grain. The fixation of the abrasive grains on a metal base body by an electrochemically deposited nickel layer is referred to as the coating. The nickel layer corresponds approximately to half of the grain diameter used.

Advantages:
- Shortened processing time due to the coating type
- Reduction of unproductive processing times, since dressing and profiling is no longer required
- Reduction of the tool costs due to the single-layer coating and the possibility of anew trimming
- Individual tool profiles
- Constant tool geometry due to the single-layer coating

Areas of application:
Galvanically bonded tools are troubleshooters for the machining of, e.g. particularly hard or abrasive materials. The choice of the grain size allows to vary the characteristics of galvanically coated tools in application-oriented ways.

Galvanically bonded diamond and CBN tools are used in both wet and dry grinding

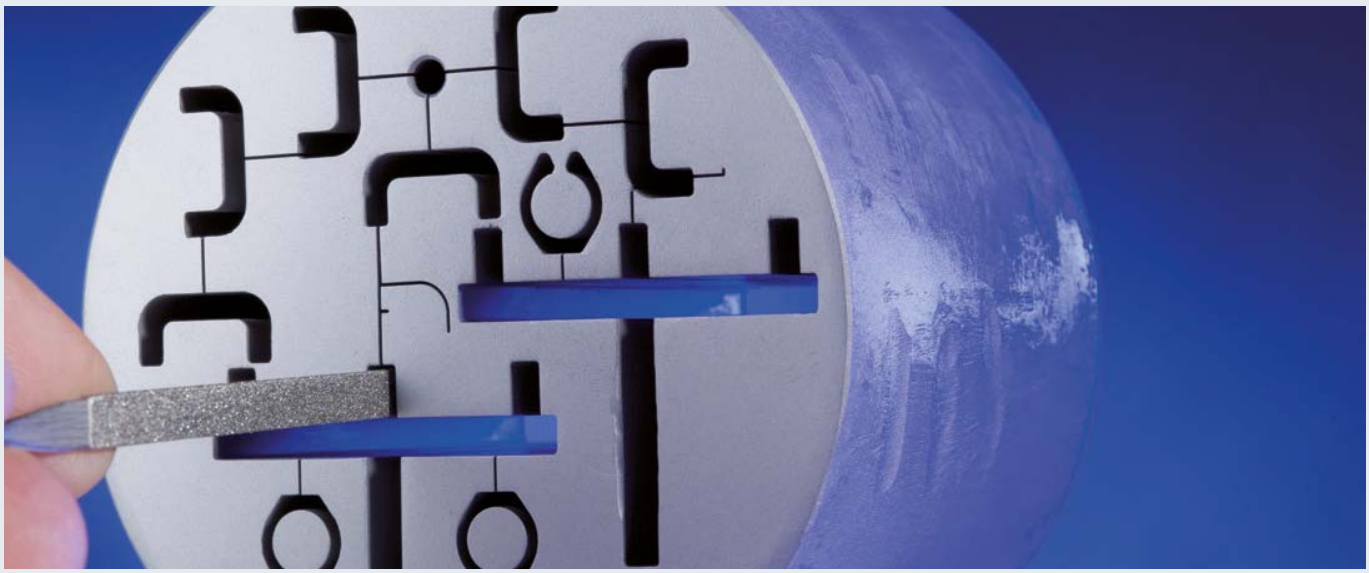


Diamond Files
Diamond files are successfully used wherever conventional files fail due to the hardness of the material to be machined.

Note:
Diamond files are also used for machining hardened steel.
The working temperatures are so insignificant that no thermal/chemical wear occurs. Thus the higher hardness of the diamond grain can be utilised for a longer service life.

Recommendations for use:
- Apply only slight pressure to the file, especially in workpiece edge areas
- Clogged diamond files can be cleaned in kerosene or anti-static plastic cleaner using a file brush. Alternatively, ultrasonic cleaning is possible. Often it will suffice to knock the file against a hard object.
- Operate preferably free of grease!.

Grain size	Grain size standards [µm] ISO 6106 (FEPA standard)	Recommendations for use:
extremely fine	D 15	very fine prefinishing
very fine	D 25 / D 46	fine finishing
fine	D 91	finishing
medium	D 126	universal use
coarse	D 151 / D 181	for roughing
very coarse	D 251	for roughing



Diamond needle file

PFERD

Diamond

Design:
- for dimensionally correct finishing of cuts, dies and press/ extrusion tools made of hardened steel or hard metal
- also suited for glass, ceramics and other hard materials

Note:
Quick-clamping handle see 429600

Grit sizes:
D 91 (fine) for finishing, smoothing and final filing
D 126 (medium) for standard tasks and general use
D 181 (coarse) for roughing



N° article	431000 Grit D 91	431050 Grit D 126	431100 Grit D 181	File shape	Width mm	Thickness mm	Total length mm	Trimmed surface length mm	Shank diameter mm
FLACH-STUMPF	●	●	●	hand	5,5	1,6	140	70	3
DREIKANT	●	●	●	three square	3,5	–	140	70	3
VIERKANT	●	●	●	square	2,6	2,6	140	70	3
HALBRUND	●	●	●	half round	5,5	1,6	140	70	3
RUND	●	●	●	round	3,2	3,2	140	70	3
MESSER	–	●	–	knife	5	1,8	140	70	3
SCHWERT	●	–	–	feather edge	5	2,4	140	70	3
VOGEL-ZUNGE	●	●	–	crossing oval	5	2,2	140	70	3

Design:
- 5-piece set
- consisting of one diamond needle file each flat blunt-ended, three-square, square, half-round and round
- break-proof plastic box



N° article	431200 Grit D 126	431250 Grit D 91	File shape	Total length mm	Trimmed surface length mm	Shank diameter mm	Amount files
5	●	●	hand, three square, square, half round, round	140	70	3	5

Diamond habilis file

PFERD

Diamant

Design:
- for standard tasks

Use:
Due to their forged shaft diamond handy files can be used without file handle



N° article	432020 Grit D 126	File shape	Width mm	Thickness mm	Total length mm	Trimmed surface length mm
FLACHSTUMPF	●	hand	10,3	2,8	215	100
DREIKANT	●	three square	10	–	215	100
VIERKANT	●	square	5,5	5,5	215	100
HALBRUND	●	half round	12,5	3,8	215	100
RUND	●	rund	6,7	6,7	215	100

Design:
- 5-piece set
- consisting of:
  one diamond habilis file (432020) each flat blunt-ended, three-square, square, half round and round
- break-proof plastic box



N° article	432060 Grit D 126	File shape	Total length mm	Trimmed surface length mm	Amount files
5	●	hand, three square, square, half round, round	215	100	5

HSS Rotary Burrs

Product Information

Cut 1
without chip breaker



Cut 2
with chip breaker



Cut 3
with chip breaker



Cut ALU



HSS rotary cutters are, due to their special tooth geometry and high production quality, particularly suitable for deburring, chamfering, fettling of castings and for the machining of aluminium. They can also be used economically with low-performance machines at lower speeds.

Advantages
- High aggressiveness
- Can be used at low speeds
- Large chip removal per time unit
- The viscosity of the high-performance high-speed steel (HSS) results in a great stability of the tooth cutting edge

Toothing 1
Machining of steel, cast steel and stainless steel (INOX).

Toothing 2
Machining of steel, cast steel and cast iron.
Also suitable for fine machining, for example, deburring of steel, cast steel and cast iron, non-ferrous metals and plastics.

Toothing 3
Machining of steel, cast steel and cast iron.
Also suitable for fine machining, for example, deburring of steel, cast steel and cast iron.

Cut ALU
Ideally suited for cutting soft non-ferrous metals, brass, copper, aluminium alloys, plastics, fibre-reinforced plastics and rubber.

Recommended speed range [min^{-1}]

❶ Material groups			❷ Application task	❸ Toothing	❹ Cutting speed
Steel, Cast steel	Non-hardened, non-tempered steels up to 1,200 N/mm² (< 38 HRC)	Structural steels, carbon steels, tool steels, unalloyed steels, case-hardening steels, cast steel	Coarse machining = high stock removal	2	60 - 80 m/min
				3	
			Fine machining = low stock removal	3	80 - 100 m/min
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse machining = high stock removal	1	60 - 80 m/min
			Fine machining = low stock removal	1	80 - 100 m/min
				2	60 - 80 m/min
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys, brass, copper, zinc	Coarse machining = high stock removal	ALU	200 - 300 m/min
				1	
			Fine machining = low stock removal	2	200 - 250 m/min
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with spheroidal graphite/nodular cast iron EN-GJS (GGG), white malleable cast iron EN-GJMW (GTW), black malleable cast iron EN-GJMB (GTS)	Coarse machining = high stock removal	2	60 - 80 m/min
				3	
			Fine machining = low stock removal	3	80 - 100 m/min
Plastics, other materials	Fibre-reinforced thermoplastic and thermoset plastics, hard rubber, wood		Coarse machining = high stock removal	ALU	200 - 300 m/min
				1	
			Fine machining = low stock removal	1	250 - 300 m/min
				2	200 - 250 m/min

To determine the recommended speed range [min^{-1}] please proceed as follows:
❶ Select the material group to be machined
❷ Assign processing case
❸ Select the toothing
❹ Determine cutting speed range
❺ Select the desired diameter of the rotary cutter
❻ Cutting speed range and diameter of rotary cutter indicate the recommended speed range.

	❻ Cutting speeds [m/min]					
❺ Ø [mm]	60	80	100	200	250	300
	Speeds (min-1)					
1.6	12,000	16,000	19,900	39,800	49,800	59,700
2.3	8,400	11,100	13,900	27,700	34,600	41,600
3.2	6,000	8,000	10,000	19,900	24,900	29,900
4.0	4,800	6,400	8,000	16,000	19,900	23,900
5.0	3,900	5,100	6,400	12,800	16,000	19,100
6.0	3,200	4,300	5,400	10,700	13,300	16,000
7.0	2,800	3,700	4,600	9,100	11,400	13,700
8.0	2,400	3,200	4,000	8,000	10,000	12,000
10.0	2,000	2,600	3,200	6,400	8,000	9,600
12.0	1,600	2,200	2,700	5,400	6,700	8,000
14.0	1,400	1,900	2,300	4,600	5,700	6,900
16.0	1,200	1,600	2,000	4,000	5,000	6,000

HSS burr

N° article	440100 Cylinder A-ST, with spur toothing	Head ∅ mm	Head length mm	Total length mm
A0413ST	●	4	13	60
A0616ST	●	6	16	60
A0820ST	●	8	20	60
A1013ST	●	10	13	53
A1020ST	●	10	20	60
A1225ST	●	12	25	65
A1625ST	●	16	25	65

HSS | Toothing 3 | Shank 6mm



HSS

N° article	440200 Spherical F	Head ∅ mm	Head length mm	Total length mm
F0403	●	4	3	55
F0605	●	6	5	55
F0807	●	8	7	55
F1009	●	10	9	49
F1210	●	12	10	51
F1614	●	16	14	54

Form F



N° article	440250 Cylindrical with round end C	Head ∅ mm	Head length mm	Total length mm
C0616	●	6	16	60
C0820	●	8	20	60
C1020	●	10	20	60
C1225	●	12	25	65

Form C



N° article	440300 Pointed cone G	Head ∅ mm	Head length mm	Total length mm
G0618	●	6	18	60
G1020	●	10	20	60
G1225	●	12	25	65

Form G



N° article	440320 Pointed arch K	Head ∅ mm	Head length mm	Total length mm
K0618	●	6	18	60
K1020	●	10	20	60
K1225	●	12	25	65
K1230	●	12	30	70
K1630	●	16	30	70

Form K



N° article	440400 Cone with rounded end L	Head ∅ mm	Head length mm	Total length mm
L1020	●	10	20	60
L1225	●	12	25	65
L1230	●	12	30	70

Form L



N° article	440420 Oval shape	Head ∅ mm	Head length mm	Total length mm
O0610	●	6	10	55
O1016	●	10	16	56
O1220	●	12	20	60

Form O



HSS burr Special shapes

Design:
440450: with spur gearing

HSS | Toothing 3 | Shank 6mm





N° article	440450	440550	Head ∅ mm	Head length mm	Total length mm	Shape
W1220	●	–	12	13	53	W-ST 20°
55	–	●	6	20	60	55
64	–	●	12	30	70	64

HSS burr set

Design:
The set comprises the most common shapes and sizes

Delivery:
In unbreakable plastic box

HSS | Toothing 3 | Shank 6mm



N° article	440590	Number of parts	Contents 1 piece each form/size
81/10	●	10	A0616ST | A1013ST | A1225ST | C0616 | C1225 F1210 | K0618 | K1230 | K1630 | L1630
82/10	○	10	A1013ST | A1625ST | F1614 | G1020 | K1630 L1020 | L1630 | O1625 | W1220 | 45
83/18	●	18	A0616ST | A1225ST | C0616 | C1225 | F0403 | F0807 F1210 | F1614 | G0618 | G1225 | K0618 | K1225 K1230 | O0610 | O1220 | 55 | 63 | 64

HSS burr Cut ALU

Design and use:
- with special toothing
- for the machining of aluminium alloys, brass, copper, zinc, CRP and GFRP

HSS | Shank 6mm | Form A | Form C | Form K | Form L | Form O | N



N° article	440600	Head ∅ mm	Head length mm	Total length mm	Shape
A1625ST	●	16	25	65	A
C1625	●	16	25	65	C
K1630	●	16	30	70	K
L1630	●	16	30	70	L
O1625	●	16	25	65	O

HSS engraving pen

Design and use:
- with special toothing
- for fine machining in small and difficult to access areas

HSS | Shank 6mm



N° article	440800	Head ∅ mm	Head length mm	Shank length mm	Total length mm
301	●	3	2,7	40	60
306	●	3	4,5	40	60
311	●	6	5,6	40	60

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Carbide Rotary Cutters

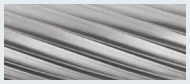
Product Information

With **PFERD tungsten carbide burrs,** materials of almost any strength are machined.
They are manufactured in compliance with the highest quality standards.

Advantages:
- highest cutting performance
- improved working comfort with reduced fatigue due to innovative serrations for high
- reduced wear of the tool-drive through shock-free operation without chatter marks thanks to exact concentricity

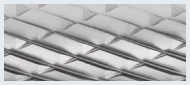
PFERD serrations for universal applications:

Cut 3 (MY to DIN 8033)



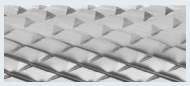
Machining of cast iron, steel < 60 HRC, stainless steel (INOX), nickel-base and titanium alloys. high material removal, good surfaces.

Cut 3 PLUS (MX to DIN 8033)



Machining of cast iron, stainless steel (INOX), nickel-base and titanium alloys.
Similar to cut 3, though stagger-toothed.

Cut 4 (MX to DIN 8033)



Machining of stainless steel (INOX), steel < 60 HRC and highly heat-resistant materials such as nickel-based and cobalt-based alloys,, high material removal with short chips, good surfaces.

Cut 5 (F to DIN 8033)



Fine machining of cast iron, steel < 60 HRC, stainless steel (INOX) and highly heat-resistant materials such as nickel-base and cobalt-base alloys, good surfaces.

PFERD serrations for high-performance applications:

Cut ALU



High cutting performance on aluminium and aluminium alloys, light metals, non-ferrous metals and plastics, smooth cutting behaviour.

Toothing STEEL



Extremely high cutting performance on steel and cast steel, quiet milling behaviour, reduced vibrations and less noise.

Toothing INOX



Extremely high chipping performance on all austenitic, rustproof and acid-resistant steels and stainless steels (INOX Titanium alloys), significantly reduced vibrations and less noise.

❶ Material groups			❷ Application task	❹ Toothing	❺ Cuttingspeed
Steel, cast steel	Non-hardened, non-tempered steels up to 1200 N/mm² (< 38 HRC)	Structural steels, carbon steels, tool steels, unalloyed steels, case-hardening steels, cast steel	Coarse cutting	3 PLUS	450 – 600 m/min
				STEEL	450 – 750 m/min
			Finish machining	3	450 – 600 m/min
	Hardened, tempered steels above 1,200 N/mm² (> 38 HRC)	Tool steels, tempered steels, alloyed steels, cast steel	Coarse cutting	3, 3 PLUS, 4	250 – 350 m/min
				STEEL	450 – 750 m/min
			Finish machining	5	350 – 450 m/min
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse cutting	3, 3 PLUS	250 – 350 m/min
				4	250 – 450 m/min
				INOX	450 – 600 m/min
			Finish machining	5	350 – 450 m/min
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys, brass, copper, zinc	Coarse cutting	ALU	600 – 1,100 m/min
			Finish machining		900 – 1,100 m/min
	Hard non-ferrous metals	Hard aluminium alloys (high Si percentage)	Coarse cutting	3, 4	250 – 350 m/min
				ALU	600 – 1,100 m/min
			Finish machining	3	350 – 450 m/min
				ALU	900 – 1,100 m/min
		Titanium and titanium alloys	Coarse cutting	3, 4	250 – 350 m/min
				ALU	450 – 600 m/min
			Finish machining	3	350 – 450 m/min
				ALU	600 – 900 m/min
		bronze	Coarse cutting	3, 4	250 – 350 m/min
				ALU	600 – 1,100 m/min
			Finish machining	3	350 – 450 m/min
				ALU	600 – 900 m/min
	Highly heat-resistant materials	Nickel base and cobalt base alloys (aircraft engine and turbine construction)	Coarse cutting	3 PLUS, 4	250 – 450 m/min
			Finish machining	5	350 – 600 m/min
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with spheroidal graphite/nodular cast iron EN-GJS (GGG), white malleable cast iron EN-GJMW (GTW), black malleable cast iron EN-GJMB (GTS)	Coarse cutting	3 PLUS	450 – 600 m/min
			Finish machining	3	450 – 600 m/min
Plastics, other materials	Fibre reinforced plastics (GRP/CRP), thermoplastics		Coarse cutting	ALU	600 – 1,100 m/min
			Finish machining		

To achieve **the recommended speed range [min⁻¹]** please proceed as follows:

❶ Select the material group to be machined
❷ Assign processing case
❸ Select the toothing
❹ Determine cutting speed range
❺ Select the desired diameter of the rotary cutter
❻ Cutting speed range and diameter of rotary cutter indicate the recommended speed range

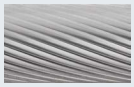
❺ Rotary cutter Ø [mm]	❻ Cutting speeds [m/min]						
	250	350	450	600	750	900	1,100
	Speeds (min⁻¹)						
2	40,000	56,000	72,000	95,000	119,000	143,000	175,000
3	27,000	37,000	48,000	64,000	80,000	95,000	117,000
4	20,000	28,000	36,000	48,000	60,000	72,000	88,000
6	13,000	19,000	24,000	32,000	40,000	48,000	59,000
8	10,000	14,000	18,000	24,000	30,000	36,000	44,000
10	8,000	11,000	14,000	19,000	24,000	29,000	35,000
12	7,000	9,000	12,000	16,000	20,000	24,000	30,000
16	5,000	7,000	9,000	12,000	15,000	18,000	22,000
20	4,000	6,000	7,000	10,000	12,000	14,000	17,000

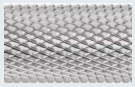
HM burr

Design:
Carbide burrs for universal applications are suitable for fine and coarse machining, with high cutting performance. Optimal matching of carbide, geometry and innovative toothing.
Reduced wear and longer service life with higher removal rate at the same time.
Impact-free work possible thanks to precise concentricity.


Toothing 3 (Z3)


Toothing 3 PLUS


Toothing 5 (Z5)


Toothing MICRO

Use:
For manual and industrial robot use for deburring, edge breaking, chamfering as well as for weld seam and surface processing. Optimal speeds are prerequisites for economical use and good results.

UNI | Carbide | Shank 6mm

Form ZYA

N° article	443000 Cylinder, Z3 PLUS	Head diameter mm	Head length mm	Total length mm
4×16	●	4	16	51
6×16	●	6	16	51
8×20	●	8	20	64
10×20	●	10	20	64
12×25	●	12	25	70
16×25	●	16	25	70



N° article	443002 PFERD cylinder, Z3	443004 PFERD cylinder, Z3 PLUS	443008 PFERD cylinder, Z5	443009 PFERD Cylinder, MICRO	Head Ø mm	Head length mm	Total length mm
4×13	–	○	●	–	4	13	55
6×16	●	●	●	NEW ●	6	16	55
8×20	○	●	●	NEW ○	8	20	60
10×20	●	●	●	NEW ○	10	20	60
12×25	○	●	○	NEW ○	12	25	65
16×25	○	○	–	–	16	25	65

Form ZYA-S

N° article	443050 Cylinder-S Z3 PLUS	Head diameter mm	Head length mm	Total length mm
4×16	●	4	16	51
6×16	●	6	16	51
8×20	●	8	20	64
10×20	●	10	20	64
12×25	●	12	25	70
16×25	●	16	25	70



N° article	443052 PFERD cylinder-S, Z3	443054 PFERD cylinder-S, Z3 PLUS	443058 PFERD cylinder-S, Z5	443059 PFERD Cylinder-S, MICRO	Head Ø mm	Head length mm	Total length mm
4×13	–	○	○	–	4	13	55
6×16	○	●	○	NEW ●	6	16	55
8×20	○	●	○	NEW ○	8	20	60
10×20	○	●	○	NEW ○	10	20	60
12×25	○	○	○	NEW ○	12	25	65
16×25	○	○	○	–	16	25	65

Form WRC

N° article	443100 cylindrical with round end, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
4×16	●	4	16	51
6×16	●	6	16	51
8×20	●	8	20	64
10×20	●	10	20	64
12×25	●	12	25	70
16×25	●	16	25	70



N° article	443102 PFERD cylindrical with round end, Z3	443104 PFERD cylindrical with round end, Z3 PLUS	443108 PFERD cylindrical with round end, Z5	443109 PFERD Cylindrical with round end, MICRO	Head Ø mm	Head length mm	Total length mm
12×25	–	○	–	–	12	25	65
4×13	○	●	○	NEW ●	4	13	55
6×16	○	●	○	NEW ○	6	16	55
8×20	○	●	○	NEW ○	8	20	60
10×20	○	●	○	NEW ○	10	20	60
16×25	○	○	–	–	16	25	65

Form KUD

N° article	443200 spherical Z3 PLUS	Head Ø mm	Head length mm	Total length mm
3×3	●	3	3	51
6×6	●	6	6	51
8×8	●	8	8	52
10×10	●	10	10	52
12×11	●	12	11	56
16×14	●	16	14	59



N° article	443202 PFERD spherical, Z3	443204 PFERD spherical, Z3 PLUS	443208 PFERD spherical, Z5	443209 PFERD spherical, MICRO	Head Ø mm	Head length mm	Total length mm
4×3	–	●	○	–	4	3	45
6×5	●	●	●	NEW ○	6	5	45
8×7	○	●	○	NEW ○	8	7	47
10×9	●	●	○	NEW ●	10	9	49
12×10	○	●	○	NEW ○	12	10	51
16×14	–	○	○	–	16	14	54
20×18	○	○	–	–	20	18	58

Form TRE



N° article	443300 Oval shape, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
6×10	●	6	10	51
8×16	●	8	16	60
10×16	●	10	16	60
12×22	●	12	22	67
16×25	●	16	25	70

N° article	443302 PFERD oval shape, Z3	443308 PFERD oval shape, Z5	Head Ø mm	Head length mm	Total length mm
6×10	–	○	6	10	50
12×20	○	○	12	20	60

Form RBF

N° article	443400 Round arch, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
6×16	●	6	16	51
8×20	●	8	20	64
10×20	●	10	20	64
12×25	●	12	25	70
16×25	●	16	25	70



N° article	443402 PFERD round arch, Z3	443408 PFERD round arch, Z5	443409 PFERD round arch, MICRO	Head Ø mm	Head length mm	Total length mm
10×20	●	○	NEW ○	10	20	60
12×25	–	–	NEW ○	12	25	65
6×18	○	●	NEW ●	6	18	55
8×20	–	–	NEW ○	8	20	60

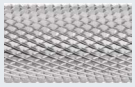
HM burr

Design:
Carbide burrs for universal applications are suitable for fine and coarse machining, with high cutting performance. Optimal matching of carbide, geometry and innovative toothing.
Reduced wear and longer service life with higher removal rate at the same time.
Impact-free work possible thanks to precise concentricity.


Toothing 3 (Z3)


Toothing 3 PLUS


Toothing 5 (Z5)


Toothing MICRO

Use:
For manual and industrial robot use for deburring, edge breaking, chamfering as well as for weld seam and surface processing. Optimal speeds are prerequisites for economical use and good results.

UNI | Carbide | Shank 6mm

N° article	443500 Pointed tree, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
6×16	●	6	16	51
8×20	●	8	20	64
10×20	●	10	20	64
12×25	●	12	25	70
16×25	●	16	25	70

Form SPG



N° article	443502 PFERD blunted conical shape, Z3	443504 PFERD cylinder, Z3 PLUS	443508 PFERD pointed arch, Z5	443509 PFERD Pointed arch, MICRO	Head Ø mm	Head length mm	Total length mm
10×20	○	●	○	NEW ○	10	20	60
12×25	●	●	○	NEW ○	12	25	65
6×18	●	○	○	NEW ●	6	18	55
8×20	–	–	–	NEW ○	8	20	60

N° article	443600 Flame Z3 PLUS	Head Ø mm	Head length mm	Total length mm
8×20	●	8	20	64
12×32	●	12	32	76
16×36	●	16	36	81

Form B



N° article	443602 PFERD flame, Z3	443604 PFERD flame, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
8×20	○	●	8	20	60
12×30	○	○	12	30	70

N° article	443700 Cone with rounded end, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
6×16	●	6	16	51
8×24	●	8	24	67
10×27	●	10	27	71
12×30	●	12	30	73
16×33	●	16	33	78

Form KEL



N° article	443702 PFERD cone with rounded end, Z3	443708 PFERD cone with rounded end, Z5	Head Ø mm	Head length mm	Total length mm
10×20	○	–	10	20	60
12×30	○	○	12	30	70

N° article	443800 Conical pointed, Z3 PLUS	Head Ø mm	Head length mm	Total length mm
6×20	●	6	20	51
10×19	●	10	19	64
12×25	●	12	25	70
16×29	●	16	29	70

Form SKM



N° article	443802 PFERD pointed cone, Z3	443808 PFERD pointed cone, Z5	443809 PFERD Pointed taper, MICRO	Head Ø mm	Head length mm	Total length mm
10×20	●	○	NEW ○	10	20	55
12×25	○	●	NEW ○	12	25	60
6×18	●	●	NEW ●	6	18	60
8×20	–	–	NEW ○	8	20	65

N° article	443902 PFERD blunted conical shape, Z3	Head Ø mm	Head length mm	Total length mm
10×13	●	10	13	53
12×13	○	12	13	53
16×13	●	16	13	53

Form WKN



HM burr set

PRETEC

Carbide | Shank 3mm

N° article	444819 Shank Ø 3 mm Staggered teeth	Contents	Number of parts	Total length mm
10	●	**1 cylindrical without front toothing** 3×13 mm **1 cylindrical with rounded head** 3×13 mm **1 pointed arch** 3×8 mm **1 round arch** 3×13 mm **1 drop shape** 3×6 mm **1 flame shape** 3×6 mm **1 round cone, spherical** 3×13 mm **1 spherical** Ø 3 mm **1 interior angle** 10°, 3 mm **1 pointed cone** 3×13 mm	10	38



HM burr set

PFERD

Carbide | Shank 6mm | Shank 3mm

N° article	444820 Shank ∅ 3 mm Z5	443905 Shank ∅ 6 mm Z3 Plus	Contents	Number of parts	Total length mm
5	–	●	**1 cylindrical without front toothing** 6 × 16 mm **1 pointed arch** 6 × 18 mm **1 round arch** 6 × 18 mm **1 spherical** 6 × 5 mm **1 cylindrical with round end** 6 × 16 mm	5	55
15	●	–	**4 cylindrical with front toothing** 2× 10 | 3× 13 | 6× 7 | 6× 13 mm **1 pointed arch** 3 × 7 mm **2 round arch** 3 × 7 | 6 × 13 mm **2 drop shape** 3 × 7 | 6 × 10 mm **1 flame shape** 3 × 7 mm **1 spherical** 4 × 3 mm **2 cylindrical with round end** 2 × 10 | 3 × 13 mm **1 angular burr** 3 × 7 mm **1 pointed cone** 6 × 13 mm	15	34 - 43 - 43



HM burr set MICRO

PFERD

UNI | Carbide | Shank 3mm | Shank 6mm

Design:
- contains carbide burrs with MICRO teeth that are specially optimised for fine machining
- ideally suited for machining tasks in hand and machine use
- impact-free work possible thanks to precise concentricity
- no change in geometry due to wear and tear compared to mounted points
- machining of almost all materials up to 68 HRC
- particularly good for fine machining, for very fine fettling work, corrections in tool and mould making
- low vibration and low noise
- a break-proof plastic box protects the tools from dirt and damage

NEW



Set 1306 | Set 1312 | Set 1303 | Set 1502

N° article	443909 Shank ∅ 6 mm, MICRO	444803 Shank ∅ 3 mm, MICRO	Contents	Number of parts	Total length mm
SET1306	●	–	**1 cylindrical with front toothing** 6 × 16 mm **1 round arch** 6 × 16 mm **1 cylindrical with radius end** 6 × 18 mm	3	55
SET1312	●	–	**1 cylindrical with front toothing** 12 × 25 mm **1 round arch** 12 × 25 mm **1 cylindrical with round end** 12 × 25 mm	3	65
SET1303	–	●	**1 cylindrical without front toothing** 3 × 13 mm **1 round arch** 3 × 13 mm **1 Cylindrical with round end** 3 × 13 mm	3	43
SET1502	–	●	**3 cylindrical without front toothing** 2 × 10 | 3 × 13 | 6 × 13 mm **2 round arch** 3 × 7 | 6 × 13 mm **3 cylindrical with radius end** 2 × 10 | 3 × 13 | 6 × 13 mm **2 spherical** 3 × 2 | 6 × 5 mm	10	33 - 43 - 43

HM burr Cut ALU

PRETEC

Design:
Special toothing for soft and smearing materials

Carbide | Shank 6mm | N

Use:
For machining of aluminium, copper, bronze, tin, zinc, plastics, NF metals etc.



ZYA 1225 WRC 1225 RBF 1225 KEL 1230 KUD 1210

N° article	444759	Head Ø mm	Head length mm	Total length mm	Shape
ZYA1020	●	10	20	64	Cylinder
ZYA1225	●	12	25	70	Cylinder
WRC0616	●	6	16	51	Cylindrical with round end
WRC1225	●	12	25	70	Cylindrical with round end
RBF0618	○	6	18	51	Round arch
RBF1225	●	12	25	70	Round arch
KEL1230	●	12	30	73	Round cone
KUD1210	●	12	10	56	Spherical

HM burr Cut ALU

PFERD

Design:
- specially developed for the machining of aluminium
- reduction of material adhesion
- long service life
- large removal rate
- applicable up to 1,100 m/min cutting speed
- smooth running characteristics

Carbide | Shank 6mm | N



ZYAS KUD WRC KEL RBF

N° article	444762	Head Ø mm	Head length mm	Total length mm	Shape
ZYAS0616	○	6	16	55	Cylindrical with spur toothing
ZYAS1225	○	12	25	65	Cylindrical with spur toothing
KUD1210	○	12	10	50	Spherical
WRC0616	●	6	16	55	Cylindrical with round end
WRC1225	●	12	25	65	Cylindrical with round end
KEL1230	○	12	30	70	Round cone
RBF0618	○	6	18	55	Round arch
RBF1225	●	12	25	65	Round arch

HM burr Toothing STEEL

PFERD

Design:
- especially developed for the treatment of steel and cast steel
- **simultaneously noticeable aggressiveness and good manageability**
- due to the high cutting performance, high time savings and high economic efficiency
- applicable up to 750 m/min cutting speed
- smooth running and reduced noise

Carbide | Shank 6mm | P



ZYA1225 KUD1210 WRC1225 B1230 SPG1225 KEL1230 RBF1225

N° article	444765	Head Head Ø	Head length mm	Total length mm	Shape
ZYA0616	○	6	16	55	Cylinder
ZYA1225	●	12	25	65	Cylinder
KUD0605	●	6	5	45	Spherical
KUD1210	●	12	10	51	Spherical
WRC0616	○	6	16	55	Cylindrical with round end
WRC1225	○	12	25	65	Cylindrical with round end
B1230	○	12	30	70	Flame, pointed
SPG0618	●	6	18	55	Pointed arch
SPG1225	○	12	25	70	Pointed arch
KEL1230	●	12	30	70	Round cone
RBF0618	○	6	18	55	Round arch
RBF1225	●	12	25	65	Round arch

HM burr Toothing INOX

PFERD

Design and use:
- innovative rotary burrs for the machining of stainless steel
- **extremely high chipping performance on all austenitic, rustproof and acid-resistant steels**
- long tool life due to innovative tooth geometry
- delivers high-quality surfaces through optimal chip formation
- prevents heat-related discolourations on the material due to low heat development
- comfortable, ergonomic working through smooth operation, reduced vibrations and less noise
- applicable up to 600 m/min cutting speed

Carbide | Shank 6mm | M



ZYA1225 KUD1210 WRC1225 B1230 SPG1225 KEL1230 RBF1225 TRE1220

N° article	444770	Head Ø mm	Head length mm	Total length mm	Shape
ZYA0616	○	6	16	55	Cylinder
ZYA1225	●	12	25	55	Cylinder
KUD0605	●	6	5	45	Spherical
KUD1210	●	12	10	51	Cylinder
WRC0616	○	6	16	55	Cylindrical with round end
WRC1225	●	12	25	65	Cylindrical with round end
B1230	○	12	30	70	Flame, pointed
SPG0618	○	6	18	55	Pointed arch
SPG1225	●	12	25	65	Pointed arch
KEL1230	○	12	30	70	Round cone
RBF0618	○	6	10	55	Round arch
RBF1225	○	12	18	65	Round arch
TRE1220	○	12	20	60	Flame

HM miniature burr Cut ALU

N° article	444825	Head Ø mm	Head length mm	Total length mm	Shape
ZYAS0313	●	3	13	43	Cylindrical with spur toothing
ZYAS0613	○	6	13	43	Cylindrical with spur toothing
KUD0302	○	3	2	32	Spherical
KUD0605	●	6	5	35	Spherical
WRC0313	○	3	13	43	Cylindrical with round end
WRC0613	●	6	13	43	Cylindrical with round end
RBF0313	●	3	13	43	Round arch
RBF0613	●	6	13	43	Round arch

Carbide | Shank 3mm | N

Design:
- specially developed for the chipping of aluminium
- high cutting performance on all aluminium materials
- reduction of material adhesion
- long service life
- large removal rate
- applicable up to 1,100 m/min cutting speed
- smooth running characteristics

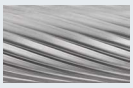


ZYAS KUD WRC RBF

PFERD

HM miniature burr

Design and use:
- shank Ø 3 mm
- HM head soldered
- for further details see product information


Toothing 3 (Z3)


Toothing 4 (Z4)

UNI

Carbide

Shank 3mm

N° article	444800 Cylinder, Z4	444810 Cylinder, Z3	Head Ø mm	Head length mm	Total length mm
ZYA0210	●	○	2,4	13	38
ZYA0313	●	●	3	13	38
ZYA0607	●	○	6	7	38
ZYA0613	●	●	6	13	51
ZYA-S0210	●	○	2,5	11	38
ZYA-S0313	●	●	3	14	38
ZYA-S0613	●	●	6	13	51


ZYA0210 ZYA0313 ZYA0607 ZYA0613 ZYA-S0210 ZYA-S0313 ZYA-S0613


KUD0302 KUD0403 KUD0605

N° article	444800 Spherical, Z4	444810 Spherical, Z3	Head Ø mm	Head length mm	Total length mm
KUD0302	●	●	2,4	2,4	38
KUD0403	●	●	3,2	3,2	38
KUD0605	●	●	6,4	6,4	44


WRC0210 WRC0313 WRC0613

N° article	444800 Cylindrical with round end, Z4	444810 Cylindrical with round end, Z3	Head Ø mm	Head length mm	Total length mm
WRC0210	●	●	2,4	13	38
WRC0313	●	●	3	13	38
WRC0613	●	●	6	13	51


B0307 B0613

N° article	444800 Flame, Z4	444810 Flame, Z3	Head Ø mm	Head length mm	Total length mm
B0307	●	●	3	6	38
B0613	●	●	6	13	43


SKM0307 SKM0313 SKM0613

N° article	444800 Pointed cone, Z4	444810 Pointed cone, Z3	Head Ø mm	Head length mm	Total length mm
SKM0307	●	●	3	10	38
SKM0313	●	●	3	13	38
SKM0613	●	●	6	13	51


RBF0313 RBF0613

N° article	444800 Round arch, Z4	444810 Round arch, Z3	Head Ø mm	Head length mm	Total length mm
RBF0313	●	●	3	13	38
RBF0613	●	●	6	13	51


SPG0307 SPG0313 SPG0613

N° article	444800 Pointed arch, Z4	444810 Pointed arch, Z3	Head Ø mm	Head length mm	Total length mm
SPG0307	●	●	3	8	38
SPG0313	●	●	3	13	38
SPG0613	●	●	6	13	51


WKN0307 WKN0607

N° article	444800 Angle, Z4	444810 Angle, Z3	Head Ø mm	Head length mm	Total length mm
WKN0307	●	●	3	3	38
WKN0607	●	○	6	6	44
WKN0608	●	●	6	8	44

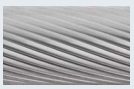

TRE0307 TRE0610

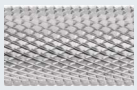
N° article	444800 Drop, Z4	444810 Drop, Z3	Head Ø mm	Head length mm	Total length mm
TRE0307	●	●	3	6	38
TRE0610	●	●	6	10	48

HM miniature burr

Design and use:
- shank ∅ 3 mm
- carbide head brazed on (if the head ∅ is larger than the shank, otherwise completely made of carbide)


Toothing 4 (Z4)


Toothing 5 (Z5)


Toothing MICRO

UNI | Carbide | Shank 3mm

N° article	444806 Cylinder, Z4	444808 Cylinder, Z5	444809 Cylinder, MICRO	Head ∅ mm	Head length mm	Total length mm
ZYA0210	○	●	NEW ○	2	10	40
ZYA0313	●	●	NEW ●	3	13	43
ZYA0413	–	–	NEW ○	4	13	43
ZYA0613	–	○	NEW ○	6	13	43
ZYA0607	–	○	–	6	7	37
ZYA-S0313	●	–	–	3	13	43
ZYA-S0607	–	○	–	6	7	37
ZYA-S0613	●	–	–	6	13	43


ZYA0210 ZYA0313 ZYA0607 ZYA0613 ZYA-S0313 ZYA-S0607 ZYA-S0613


KUD0302 KUD0403 KUD0605

N° article	444806 Spherical, Z4	444808 Spherical, Z5	444809 Spherical, MICRO	Head ∅ mm	Head length mm	Total length mm
KUD0215	–	–	NEW ○	2	1,5	33
KUD0302	●	●	NEW ○	3	2	33
KUD0403	●	●	NEW ○	4	3	34
KUD0605	●	●	NEW ●	6	5	35


WRC0210 WRC0313 WRC0613

N° article	444806 Cylindrical with round end, Z4	444808 Cylindrical with round end, Z5	444809 Cylindrical with round end, MICRO	Head ∅ mm	Head length mm	Total length mm
WRC0210	●	●	NEW ●	2	10	40
WRC0313	●	●	NEW ●	3	13	43
WRC0613	●	●	NEW ○	6	13	43


B0307 B0613

N° article	444808 Flame, Z5	Head ∅ mm	Head length mm	Total length mm
B0307	●	3	7	37
B0613	●	6	13	43


SPG0307 SPG0313 SPG0613

N° article	444806 Pointed arch, Z4	444808 Pointed arch, Z5	444809 Pointed arch, MICRO	Head ∅ mm	Head length mm	Total length mm
SPG0307	●	●	NEW ○	3	7	37
SPG0313	●	●	NEW ●	3	13	43
SPG0613	●	●	NEW ○	6	13	43


RBF0307 RBF0613

N° article	444806 Round arch, Z4	444808 Round arch, Z5	444809 Round arch, MICRO	Head ∅ mm	Head length mm	Total length mm
RBF0307	–	●	NEW ○	3	7	37
RBF0313	–	–	NEW ●	3	13	43
RBF0613	●	●	NEW ○	6	13	43


SKM0307 SKM0311 SKM0613

N° article	444808 Pointed cone, Z5	444809 Pointed taper, MICRO	Head ∅ mm	Head length mm	Total length mm
SKM0307	●	NEW ●	3	7	37
SKM0311	●	NEW ○	3	11	41
SKM0613	●	NEW ○	6	13	43


WKN0307 WKN0607

N° article	444808 Angle, Z5	Head ∅ mm	Head length mm	Total length mm
WKN0307	●	3	7	37
WKN0607	○	6	7	37


TRE0307 TRE0610

N° article	444808 Drop, Z5	Head ∅ mm	Head length mm	Total length mm
TRE0307	○	3	7	37
TRE0610	○	6	10	40

Mounted Points

Product Information



Mounted tools **STEEL EDGE (Hardness O)** are made of a ceramic bond and pink special fused alumina. These tools are characterised by a very long tool life and good stock removal rate due to the combination of wear-resistant grain and a hard bond. The Type STEEL EDGE is particularly suited for use on edges and for deburring work on steel components. The machining tasks also include the grinding of bevels for weld seam preparation and the grinding of contours.preparation and the grinding of contours.

Advantages:
- Long tool life and low tool wear due to the hard, dimensionally stable bond
- Economical to use due to the high edge stability even on low-speed tool drives

Application examples:
- Removal of burrs on cast steel parts
- Grinding of chamfers for welding seam preparation
- Grinding contours

Recommendations for use:
- Mounted points of hardness O achieve their best performance at a cutting speed of 25 to 40 m/s
- Flexible shafts, electric grinders and air-powered straight grinders are suitable as tool drives



Mounted points **CAST EDGE (Hardness R)** are made of a ceramic bond and grey silicon carbide. The combination of very hard abrasive grain and high bond content means that extremely long tool life is achieved when grinding. The Type CAST EDGE is particularly suitable for use on edges and for grinding out metal contamination on grey and nodular cast iron at high cutting speeds. The removal of sharp burrs and grinding of sand inclusions and mineralisation on castings are among their main tasks.

Advantages:
- Highly dimensionally stable due to the high bond content
- Economical to use due to the high edge stability even on low-speed tool drives

Application examples:
- Removal of sharp burrs on grey and nodular cast iron components
- Grinding of sand and metal contamination on cast parts

Recommendations for use:
- Mounted points of hardness R achieve their best performance at a cutting speed of 30 to 50 m/s
- Flexible shafts, electric grinders and air-powered straight grinders are suitable as tool drives

Mounted points **INOX EDGE (Hardness N)** are made of a high-quality synthetic resin bond and normal corundum.. This relatively hard bond contains grinding additives, which in combination with tough regular aluminiumoxide and the hard bond allow high stock removal rates and excellent tool life. The Type INOX EDGE is particularly suited for edge grinding on stainless steel (INOX). Machining tasks include grinding fillet welds on stainless steel components, removing burrs on moulded parts made of high-temperature alloys, removing burrs on stainless steel castings and grinding chamfers in preparation for welding stainless steel profiles.

Advantages:
- Due to cool grinding, very suitable for use on temperature-sensitive materials
- High level of grinding comfort through low-vibration grinding
- Economical to use due to the high edge stability even on low-speed tool drives

Application examples:
- Grinding of fillet welds on high-grade steel components
- Removal of burrs on moulded high-temperature-resistant alloys
- Removal of burrs on cast stainless steel parts
- Grinding of chamfers in preparation for welding of stainless steel profiles

Recommendations for use:
- Mounted points of hardness N achieve their best performance at a cutting speed of 35 to 50 m/s
- Flexible shafts, electric grinders and air-powered straight grinders are suitable as tool drives

Material group			Bond ▶	Ceramic bond		Resinoid bond
			Mounted point version ▶	STEEL EDGE	CAST EDGE	INOX EDGE
			Abrasives ▶	AR	CU	AN
			Recommended cutting speed ▶	25–40 m/s	30–50 m/s	35–50 m/s
			Processing task ▼			
Steel, cast steel	Non-hardened, non-tempered steels up to 1,200 N/mm² (< 38 HRC)	Structural steels, carbon steels, tool steels, unalloyed steels, case-hardening steels	**Surface grinding** with high stock removal rate	○		
			Edge grinding with high form stability	●		○
	Hardened, heat-treated steels over 1,000 N/mm² (> 38 HRC)	Tool steels, tempered steels, alloyed steels	**Edge grinding** with high form stability	○		
	Cast steel	Non-alloyed cast steel, low-alloyed cast steel	**Surface grinding** with high stock removal rate	○		
			Edge grinding with high form stability	●		○
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels	**Surface grinding** with high stock removal rate			○
			Edge grinding with high form stability	○		●
Cast iron	Grey cast iron white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	**Surface grinding** with high stock removal rate	○	○	○
			Edge grinding and grinding of burning-in with high form stability	○	●	○

● = very well suited ○ = well suited

Small mounted point Special fused alumina

PFERD

Design:
- special fused alumina pink (PFA), coarse grit
- STEEL EDGE (Hardness 0) (Details see product information page 45/724)

EKR | Shank 3mm | P | PU 10 pieces

N° article	450610 Cylinder	Head Ø mm	Head length mm	Shank length mm
ZY0205	●	2	5	30
ZY0306	●	3	6	30
ZY0408	●	4	8	30
ZY0510	●	5	10	30
ZY0613	●	6	13	30
ZY0810	●	8	10	30
ZY0816	●	8	16	30
ZY1002	●	10	2	30
ZY1013	●	10	13	30
ZY1303	●	13	3	30
ZY1604	●	16	4	30

Form ZY



N° article	450630 Cylindrical with round end	Head Ø mm	Head length mm	Shank length mm
WR0306	●	3	6	30
WR0510	●	5	10	30

Form WR



N° article	450640 Pointed arch	Head Ø mm	Head length mm	Shank length mm
SP0306	●	3	6	30
SP0510	●	5	10	30

Form SP



N° article	450650 ball	Head Ø mm	Head length mm	Shank length mm
KU03	●	3	3	30
KU05	●	5	5	30
KU08	●	8	8	30
KU13	●	13	13	30

Form KU



N° article	450660 taper	Head Ø mm	Head length mm	Shank length mm
KE1010	●	10	10	30

Form KE



Mounted point Special fused alumina

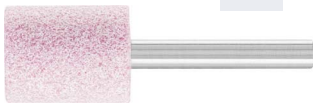
PFERD

Design:
- special fused alumina pink (PFA), coarse grit
- STEEL EDGE (Hardness 0) (Details see product information page 45/724)

EKR | Shank 6mm | P | PU 10 pieces

N° article	450100 Cylinder	Head Ø mm	Head length mm	Shank length mm
ZY0408	●	4	8	40
ZY0510	●	5	10	40
ZY0613	●	6	13	40
ZY0816	●	8	16	40
ZY1020	●	10	20	40
ZY1025	●	10	25	40
ZY1032	●	10	32	40
ZY1325	●	13	25	40
ZY1632	●	16	32	40
ZY2006	●	20	6	40
ZY2025	●	20	25	40
ZY2506	●	25	6	40
ZY2513	●	25	13	40
ZY2532	●	25	32	40
ZY4020	●	40	20	40

Form ZY



N° article	450300 Cylindrical with round end	Head Ø mm	Head length mm	Shank length mm
WR0510	●	5	10	40
WR0816	●	8	16	40
WR1320	●	13	20	40

Form WR



N° article	450400 Pointed arch	Head Ø mm	Head length mm	Shank length mm
SP0510	●	5	10	40
SP0816	●	8	16	40
SP1320	●	13	20	40
SP2032	●	20	32	40

Form SP



N° article	450500 ball	Head Ø mm	Head length mm	Shank length mm
KU05	●	5	5	40
KU08	●	8	8	40
KU13	●	13	13	40
KU16	●	16	16	40
KU20	●	20	20	40
KU25	●	25	25	40

Form KU



N° article	450600 taper	Head Ø mm	Head length mm	Shank length mm
KE1313	●	13	13	40
KE1616	●	16	16	40
KE1645	●	16	45	40
KE2020	●	20	20	40
KE2525	●	25	25	40
KE2545	●	25	45	40

Form KE



Set of mounted points Special fused alumina

PFERD

EKR | Shank 3mm | Shank 6mm

Delivered in Box

Design:
- STEEL EDGE, hardness 0, wear-resistant grit, hard bond
- ceramic bonding
- special fused alumina pink

Use:
- very long tool life
- universally applicable, dimensionally stable and with high edge strength
- recommended cutting speed 25 - 40 m/s
- for edge application and deburring operations at steel components
- can be used on flexible shafts and angle grinders



10 15

N° article	450690	Contents	Shank ∅ mm	Grit
10	●	**10-piece** mounted points each of the type ZY1013 | ZY1320 | ZY2006 | ZY2013 | ZY2025 | KU16 | WR2025 | WK2025 | SP1320 | KE2020	6	coarse
15	●	**15-piece** mounted points each of the type 2× ZY0510 | 2× ZY0810 | ZY0802 | ZY0613 | ZY0408 | ZY1013 | ZY1604 | WR0510 | KU05 | SP0306 | KE1010 | ZY1604 | ZY1303	3	fine

Mounted point silicon carbide

PFERD

SiC | Form ZY | Shank 6mm

K | PU 10 pieces

Design:
- CAST EDGE (hardness R)
- ceramic bonding
- silicon carbide abrasive grit
- high cohesiveness and homogeneous structure

Use:
- for the machining of grey cast iron, nodular cast iron, thermoset, inorganic materials
- on high-speed grinding machines
- recommended peripheral speed 30 - 50 m/s

N° article	450700 Cylinder Grit 30 (coarse)	Head ∅ mm	Head length mm	Shank length mm
ZY1632	●	16	32	40
ZY2025	●	20	25	40
ZY2040	●	20	40	40



Mounted point Normal corundum

PFERD

NK | Form ZY | Shank 6mm

M | PU 10 pieces

Design:
- INOX EDGE (hardness N)
- normal corundum
- resinoid bond
- length 40 mm
- grit size 46 (medium)

Use:
- for machining stainless and acid-proof steels
- for high peripheral speed 35 - 50 m/s
- for edge application

N° article	451000 Cylinder Grit 46 (coarse)	Head ∅ mm	Head length mm	Shank length mm
ZY1032	●	10	32	40
ZY1325	●	13	25	40
ZY1632	●	16	32	40
ZY2025	●	20	25	40
ZY4020	●	40	20	40

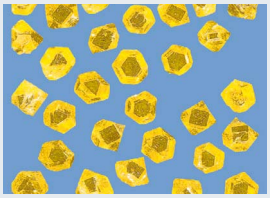




Diamond/CBN Tools

Product Information

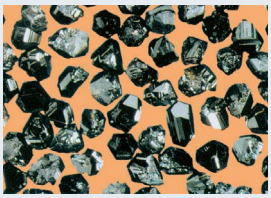
Advantages of grinding tools with diamond and CBN
Excellent service life and profile retention, short processing times. Reduction of unproductive time losses, because the tool has to be dressed or changed less frequently Prevention of thermal damages to the workpiece due to lower grinding temperatures. Uniform quality level over a large number of workpieces.



Abrasive diamond
Diamond and CBN abrasives do not compete but complement each other For steel processing, diamond is inapt, because a chemical reaction between iron (Fe) in the steel and carbon (C) of the diamond causes very rapid wear of the diamond tool. The machining of steel with diamond is therefore generally uneconomical.

Diamond tools are suitable for the processing of:
HM (sintered), HM (green compact), glass, ceramics (also engineering ceramics), porcelain, wear protection layers, ferrite, silicon, graphite, synthetic carbon, thermosets, glass fibre reinforced plastics, natural and synthetic materials, fireproof fabrics.





Abrasive CBN
CBN is nearly as hard as diamond, but does not react with iron (Fe) in the steel

CBN tools are suitable for the processing of:
High-speed steels, tool steels, case-hardening steels, ball bearing steels, chromium steels, hardened steel materials with a hardness above 54 HRC.

Conversion table from
❶ cutting speed (m/s)
❷ in rotational speed (min^{-1})
❸ per tool Ø

example: Diamond mounted point
Diameter: 20 mm
Cutting speed: 25 m/s
Spedd rounded 23,900 min^{-1}

Safety instructions:



Please observe safety recommendations!

❸ Tool Ø (mm)	❶ Cutting speeds (m/s)											
	8	12	15	18	20	25	30	40	50	80	100	125
	❷ Rotational speeds (min^{-1})											
1	153,000											
2	76,400	115,000	143,000	172,000	191,000							
3	50,900	76,400	95,500	115,000	127,000	159,000	191,000					
4	38,200	57,300	71,600	85,900	95,500	119,000	143,000					
5	30,600	45,800	57,300	68,800	76,400	95,500	115,000	153,000				
6	25,500	38,200	47,700	57,300	63,700	79,600	95,500	127,000	159,000			
7	21,800	32,700	40,900	49,100	54,600	68,200	81,900	109,000	136,000			
8	19,100	28,600	35,800	43,000	47,700	59,700	71,600	95,500	119,000	191,000		
9	17,000	25,500	31,800	38,200	42,400	53,100	63,700	84,900	106,000	170,000		
10	15,300	22,900	28,600	34,400	38,200	47,700	57,300	76,400	95,500	153,000	191,000	
12	12,700	19,100	23,900	28,600	31,800	39,800	47,700	63,700	79,600	127,000	159,000	199,000
14	10,900	16,400	20,500	24,600	27,300	34,100	40,900	54,600	68,200	109,000	136,000	171,000
15	10,200	15,300	19,100	22,900	25,500	31,800	38,200	50,900	63,700	102,000	127,000	159,000
16	9,500	14,300	17,900	21,500	23,900	29,800	35,800	47,700	59,700	95,500	119,000	149,000
18	8,500	12,700	15,900	19,100	21,200	26,500	31,800	42,400	53,100	84,900	106,000	133,000
20	7,600	11,500	14,300	17,200	19,100	23,900	28,600	38,200	47,700	76,400	95,500	119,000
22	6,900	10,400	13,000	15,600	17,400	21,700	26,000	34,700	43,400	69,400	86,800	109,000
25	6,100	9,200	11,500	13,800	15,300	19,100	22,900	30,600	38,200	61,100	76,400	95,500
30	5,100	7,600	9,500	11,500	12,700	15,900	19,100	25,500	31,800	50,900	63,700	79,600
40	3,800	5,700	7,200	8,600	9,500	11,900	14,300	19,100	23,900	38,200	47,700	59,700
50	3,100	4,600	5,700	6,900	7,600	9,500	11,500	15,300	19,100	30,600	38,200	47,700
75	2,000	3,100	3,800	4,600	5,100	6,400	7,600	10,200	12,700	20,400	25,500	31,800
100	1,530	2,300	2,900	3,400	3,800	4,800	5,700	7,600	9,500	15,300	19,100	23,900
125	1,220	1,830	2,300	2,800	3,100	3,800	4,600	6,100	7,600	12,200	15,300	19,100
150	1,020	1,530	1,910	2,300	2,500	3,200	3,800	5,100	6,400	10,200	12,700	15,900
175	870	1,310	1,640	1,960	2,200	2,700	3,300	4,400	5,500	8,700	10,900	13,600
200	760	1,150	1,430	1,720	1,910	2,400	2,900	3,800	4,800	7,600	9,500	11,900
230	660	1,000	1,250	1,490	1,660	2,100	2,500	3,300	4,200	6,600	8,300	10,400
250	610	920	1,150	1,380	1,530	1,910	2,300	3,100	3,800	6,100	7,600	9,500
300	510	760	950	1,150	1,270	1,590	1,910	2,500	3,200	5,100	6,470	8,000
350	440	650	820	980	1,090	1,360	1,640	2,200	2,700	4,400	5,500	6,800
400	380	570	720	860	950	1,190	1,430	1,910	2,400	3,800	4,800	6,000
450	340	510	640	760	850	1,060	1,270	1,700	2,100	3,400	4,200	5,300
500	310	460	570	690	760	950	1,150	1,530	1,910	3,100	3,800	4,800
600	250	380	480	570	640	800	95 0	1270	1,590	2,500	3,200	4,000

CBN mounted point

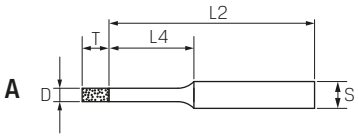
PFERD

CBN | Shank 3mm | Shank 6mm | P | M | K

Design:
- precision ground mounted points with very hard CBN coating (single layer) in galvanic bonding
- high grinding efficiency and excellent tool life
- from a Ø of 8 mm, the mounted points have a recess at the front face

Use:
- for machining high-speed steel, tool steel, high-temperature materials
- cutting speeds: Dry grinding 15 - 25 m/s, wet grinding 20 - 45 m/s

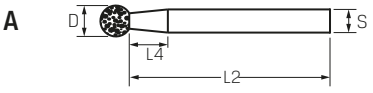
A = reduced shank
N = regular shank



Form ZY



N° article	453030 Cylinder Grit B 126 (medium)	Head Ø mm	T mm	L_4 mm	L_2 mm	Shank Ø mm
1,0×4	●	1	4	9	36	3
1,4×4	●	1,4	4	9	36	3
2,0×4	●	2	4	10	36	3
3,0×4	●	3	4	19	36	3
4,0×5	●	4	5	–	45	3
5,0×5	●	5	5	–	45	6
6,0×6	●	6	6	19	54	6
8,0×8	●	8	8	–	52	3
10,0×8	●	10	8	–	52	6
12,0×8	●	12	8	–	52	3



Form KU



N° article	453040 ball Grit B 126 (medium)	Head Ø mm	L_4 mm	L_2 mm	Shank Ø mm
1,0	●	1	10	44	6
2,0	●	2	8	43	3
3,0	●	3	6	42	3
4,0	●	4	5	41	3
5,0	●	5	2	40	3
6,0	●	6	–	39	6
8,0	●	8	10	52	3

Diamond mounted point

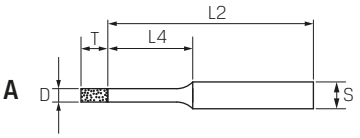
PFERD

Diamond | Shank 3mm | Shank 6mm | Plastics

Design:
- precision ground mounted points with extremely hard diamond application (single layer) in galvanic bonding
- high grinding efficiency and excellent tool life
- from a Ø of 8 mm, the mounted points have a recess at the front face

Use:
- for machining glass fibre or carbon reinforced thermosets, carbide, ferrite steel, silicon, graphite etc.
- cutting speeds: Dry grinding 8 - 18 m/s, wet grinding 15 - 25 m/s

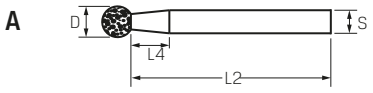
A = reduced shank
N = regular shank



Form ZY



N° article	454030 Cylinder Grit D 126 (medium)	Head Ø mm	T mm	L_4 mm	L_2 mm	Shank Ø mm
1,0×4	●	1	4	9	36	3
1,4×4	●	1,4	4	9	36	3
1,6×4	●	1,6	4	10	36	6
2,0×4	●	2	4	10	36	3
2,4×4	●	2,4	4	14	36	3
3,0×4	●	3	4	19	36	3
4,0×5	●	4	5	–	45	3
5,0×5	●	5	5	–	45	3
6,0×6	●	6	6	19	54	6
8,0×8	●	8	8	–	52	3
10,0×8	●	10	8	–	52	6
12,0×8	●	12	8	–	52	3



Form KU



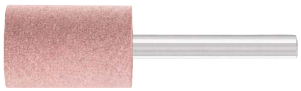
N° article	454060 ball Grit D 126 (medium)	Head Ø mm	L_4 mm	L_2 mm	Shank Ø mm
1,0	●	1	10	44	6
2,0	●	2	8	43	3
3,0	●	3	6	42	3
4,0	●	4	5	41	3
5,0	●	5	2	40	3
6,0	●	6	–	39	6
8,0	●	8	10	52	6
10,0	●	10	5	50	3

Polishing mounted point Poliflex®

Design:
- bonding: Elastomer bond GR
- max. peripheral speed 15 m/s (recommended 10 - 12 m/s)

EKR | Shank 6mm | N | PU 10 pieces

Use:
- for grinding and polishing
- usable for extremely smearing metals
- for surface finishing and for applying optical effects to containers, apparatuses made of stainless and acid-resistant steel, non-ferrous and light metals, plastics, for polishing press moulds and injection moulds



N° article	454830 Cylinder Special fused alumina AR Grit 120	Head Ø mm	Head length mm
ZY1015	●	10	15
ZY1220	●	12	20
ZY1525	●	15	25
ZY2030	●	20	30
ZY2525	●	25	25
ZY3030	●	30	30

Marbling tool and non-woven abrasive disc

Design and use:
- abrasive fleece in corundum version, oil- and waterproof
- for marbling profiled workpieces and for surface effects on surfaces
- optimum speed 600 - 1400 min^{-1}
- marbling tool to receive the non-woven abrasive fabric (Velcro fastening)
- can be used on almost all materials

Form AN | Shank 6mm | PU 10 pieces





454840



454842-454846

N° article	454840 Marbling tool	454842 Non-woven abrasive discs, grit 100	454844 Non-woven abrasive discs, grit 180	454846 Non-woven abrasive discs, grit 280	Ø mm
40	●	●	●	●	40
50	●	●	●	●	50
60	●	●	●	●	60

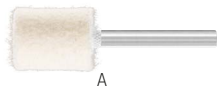
Felt polishing point

Design:
Made of firm felt with metal shank

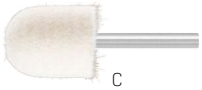
Use:
- for surface refinement of pre-ground parts
- optimum peripheral speed 5-10 m/s
- for pre-polishing and high-gloss polishing with diamond polishing compound

Note:
Price per piece

Form A | Form C | Form K | Form L | Form D | Shank 6mm | PU 10 pieces



A



C



K



L



D

N° article	454850	Head Ø mm	Head length mm	Shape
1014A	●	10	14	A
2025A	●	20	25	A
2530A	●	25	30	A

N° article	454850	Head Ø mm	Head length mm	Shape
2530C	●	25	30	C
1018K	●	10	18	K
1520K	●	15	20	K

N° article	454850	Head Ø mm	Head length mm	Shape
2025L	●	20	25	L
3035L	●	30	35	L
1014D	●	10	14	D

Grinding compound

Design and use:
- oil-soluble, ready-to-use grinding compound with sharp-edged SiC grit
- for felt polishing points
- also fit for grinding-in valves
- granulation 800 esp. for tungsten carbide matrices
- for polishing and gradual fine grinding

SIC | Safety data sheet



N° article	454900 Can 250 g	Grit	Grit range
90	●	K90	medium coarse
150	●	K 150	fine
280	●	K 280	very fine
360	●	K 360	extra fine
800	●	K 800	extremely fine

Grinding compound MACOLAEPP

Use:
- concentrated paste for manual and machine lapping
- high surface quality
- low-cost alternative to diamond paste due to extreme grit hardness

SIC | Safety data sheet



N° article	454950 Tube 100 g	Grit size (micron) µ
120	●	180
180	●	130
220	●	100
360	●	50
500	●	25
750	●	10
1000	●	5
1500	●	3
2000	●	1

Polishing compound EMIL OTTO

Use:
For use on grinding, polishing, rag wheels and brushes

Safety data sheet

Delivery:
In cardboard tube, variable pack weights, about 300 to 350 g



N° article	454958	Ideal for
1703	●	Polishing of steel and stainless steel
1704	●	High gloss polishing of all metals

Polishing cloth ring/Polishing fleece ring

Design:
- folded cloth buffs of corrugated textile fabric are firmly wrapped around the metal core
- for polishing and satinising

Sisal cloth buff (454860):
- sisal cotton cloth, type 81 (dense structure)
- impregnated to strengthen the polishing effect, to extend tool life and for better adhesion of the polishing compound

Notiflex non-woven buff NF913 (454862):
- polishing cloth Notiflex, type NF 914 (hard, density 110)

Notiflex non-woven buff NF913 (454864):
- ultra fine polishing cloth Notiflex, type NF 925 (soft, density 110)

Use:
- on drills, flexible shafts, angle polishers and polishing machines (number and width optional)
- to be used with compound from pre-polishing to mirror finishing of metals (INOX, steel, NE metals)
- peripheral speed approx. 25 - 30 m/sec.

454860: mainly for pre-polishing or matting (NE metals)
454862: for polishing and levelling as well as finishing without high-gloss creation
454864: for high-gloss polishing of all metals as well as plastics

Note:
Price per PU



454860 454862 454864

Art.-Nr.	454860 Type 81 (PU = 1 pieces)	Width mm	454862 NF 914 (PU = 2 pieces)	Width mm	454864 NF 925 (PU = 2 pieces)	Width mm	Bore mm	∅ mm
100	●	20	●	14	●	14	10	100
150	●	20	●	14	●	14	10	150
200	●	20	●	14	●	14	10	200



N° article	454866 Polishing assortment	Bore mm	Contents	∅ mm
10	●	**10-piece** 2 sisal cloth buffs 2 Notiflex fleece buffs, hard 2 Notiflex fleece buffs, soft 3 polishing compounds white, brown, blue 1 shank Ø 6 mm	10	100

Satin finishing tool LIPPRITE®EKK buff

Design and use:
- abrasive fleece rings (density 100) firmly wrapped around a metal core

454890:
- coarse, aggressive abrasive fleece (approx. grit 100)
- for deoxidising, removing of rust films and surface contaminations as well as for roughing (lacquers, paints, plastic) and satinising of decorative metals (surface roughness approx. 3.5 - 4 µm)

454892:
- medium grinding fleece (approx. grit 180)
- for regrinding ground/brushed surfaces (surface roughness approx. 3 µm)

454894:
- ultra-fine grinding fleece (approx. grit 280)
- for repairing scratches or for fine matting (surface roughness approx. 1.5 µm)



454890 454892 454894

N° article	454890 coarse (approx. grit 100) Type A4	454892 medium (approx. grit 180) Type A6	454894 fine (approx. grit 280) Type S7	Bore mm	∅ mm
100	●	●	●	10	100



N° article	454896 Satinising assortment	∅ mm	Contents	Bore mm
4	●	100	10	10

Accessories for polishing tools



N° article	454868 Clamping mandrel for 10 mm bore	∅ mm
6	●	6



N° article	454878 Clamping mandrel for polishing buff	Clamping width, min. mm	Clamping width, max. mm	Ideal for
15-30	●	15	30	Angular polisher
15-50	●	15	30	Angular polisher



N° article	454880 Polishing compound	Ideal for	Colour
WEISS	●	for high-gloss polishing of steel, premium steel and NF metals	white
BRAUN	●	Pre-polishing and finishing of NF metals	brown
BLAU	●	for high-gloss polishing of steel, premium steel and NF metals	blue

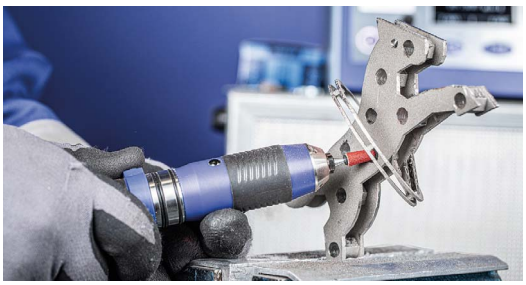
Safety data sheet

Grinding cap holder / Grinding cap

Design:
- slotted abrasive cap holders with steel shank (reusable)
- seamless formed abrasive cap, coated with abrasive particles
- quick replacement
- grit sizes 60 (coarse) / 80 (medium) and 280 (fine)

Shank 3mm | Shank 6mm

Use:
- mainly in tool-making and mould-making
- finishing at contours and difficult to access places
- recommended peripheral speed 10 - 20 m/s



Note:
Price per piece



Corundum A | P | Plastics | PU 50 pieces

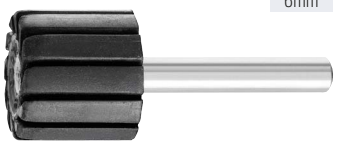


N° article	455000 Abrasive cap holder	455100 Abrasive caps	455100 Grit	455150 Abrasive caps	455150 Grit	Head ∅ mm	Head length mm	Shank ∅ mm	max. speed min⁻¹	Shape
0510A	●	●	80	●	280	5	10	3	40000	A
0511C	●	●	80	●	280	5	11	3	40000	C
0515L	●	●	80	●	280	5	15	6	40000	L
1317C	●	●	60	●	280	13	17	6	16000	C
1626G	●	●	60	●	280	16	26	6	12000	G
1626A	●	●	60	●	280	16	26	6	12000	A
1632L	●	●	60	●	280	16	32	6	12000	L
2140L	●	●	60	●	280	21	40	6	9500	L

Abrasive sleeve holder

Design:
- re-usable abrasive sleeve holder with steel shank
- GK = slotted holder, expands through centrifugal force and in this way holds the belt

Shank 6mm



N° article	455300 Type GK	∅ mm	Height mm	min. speed min⁻¹	max. speed min⁻¹
10×20	●	10	20	30000	44000
15×30	●	15	30	26000	36000
22×20	●	22	20	18000	26000
30×30	●	30	30	13000	19100
45×30	●	45	30	8500	12700

Abrasive sleeve

Design:
Made of tearproof cloth with synthetic resin-bonded abrasive grit for long lifetime and good grit adhesion

Corundum A | P | K | N | Plastics

Use:
- levelling of pre-ground weld seams, smoothing of spot welds, regrinding of forging dies etc.
- the use of grinding oil prevents clogging of the belt and raises tool life
- for universal use on steel, NF metals and plastics



Note:
Price per piece

N° article	455400 Corundum A, coarse | medium	455400 Grit	455410 Corundum A, fine	455410 Grit	∅ mm	Height mm
10×20	●	80	●	150	10	20
15×30	●	80	●	150	15	30
22×20	●	60	●	150	22	20
30×30	●	60	●	150	30	30
45×30	●	60	●	150	45	30

Abrasive sleeve

Design:
- abrasive zirconia alumina Z-Versalia
- grinding additives provide a cool cut and prevent clogging

Zircon corundum | M | S

Use:
For machining stainless steel (INOX)



Note:
Price per piece

N° article	455420 Zircon corundum, coarse K50	455480 Zircon corundum, fine K150	∅ mm	Height mm
15×30	●	●	15	30
22×20	●	●	22	20
30×30	●	●	30	30
45×30	●	●	45	30



Flap wheel

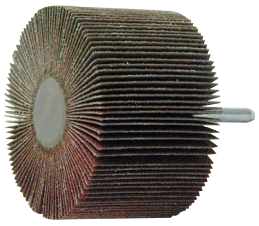
PRETEC

Design and use:
- lamellae made of flexible abrasive cloth allow optimum adaptation to the contours of the workpiece to be machined
- ideal for fine grinding work in apparatus and container construction as well as tool and mould making
- structuring, deburring, cleaning of metal, wood and plastic parts
- machining of castings, moulds and tools
- coarse grit at high speed acts finer, fine grit at low speed coarser
- **please mind the permitted speed**
- use on hand-held machines

Corundum A | Shank 6mm | P | PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	455602 Grit 60	455604 Grit 80	455606 Grit 120	455608 Grit 240	∅ mm	Height mm	max. speed min⁻¹
30×10	●	●	●	●	30	10	12000
30×15	●	●	●	●	30	15	12000
40×15	●	●	●	●	40	15	9600
40×20	●	●	●	●	40	20	9600
50×20	●	●	●	●	50	20	7000
50×30	●	●	●	●	50	30	7000
60×20	●	●	●	●	60	20	6300
60×30	●	●	●	●	60	30	6300
60×40	●	●	●	●	60	40	6300
60×50	●	●	●	●	60	50	6300
80×50	●	●	●	●	80	50	4800

Non-woven abrasive

PFERD PRETEC

Use:
- non-woven carrier fabric interspersed with normal corundum
- for removing dirt and oxide layers from metals and matting and satin finishing of metals
- creates a semi-gloss surface finish

Corundum A | Shank 6mm | UNI | PU 10 pieces

456000 PNL:
- the abrasive cloth is organised radial in lamellar shape
- the lamellae are densely arranged, granting a long tool life
- for surface machining

456100 PNR:
- POLINOX grinding cloth is organised axially on top of each other in round blanks
- for the machining of profiles or pipes

Delivery:
In packaging units only!

Note:
Price per piece



456000 PNL



456100 PNR

N° article	456000 PRETEC Typ PNL	456100 PFERD Typ PNR	∅ mm	Height mm	Grit	max. speed min⁻¹
60×50/100	●	●	60	50	100	10000
60×50/180	●	●	60	50	180	10000
60×50/280	●	●	60	50	280	10000
80×50/100	●	●	80	50	100	7500
80×50/180	●	●	80	50	180	7500
80×50/280	●	●	80	50	280	7500

Flap wheel INOX

Design:
Zirconium corundum Z-Cool

Use:
- for machining of **stainless steel and high-temperature alloys**
- high abrasive capacity
- no clogging

Zircon corundum | Shank 6mm | M | PU 10 pieces

Note:
Price per piece



N° article	455711 Grit 60	455716 Grit 80	∅ mm	Height mm	max. speed min⁻¹
30×20	●	●	30	20	9600
40×20	●	●	40	20	9600
50×20	●	●	50	20	7000
60×30	●	●	60	30	6300
80×50	●	●	80	50	4800

Non-woven abrasive with intermediate layer

Design and use:
- the cloth material is arranged radial, i.e. in lamella-shape, with one piece of grinding fabric between each lamella
- improved stock removal
- the result is coarser in appearance

Corundum A | Shank 6mm | UNI | PU 10 pieces

Note:
Price per piece



N° article	456201 Type PNZ	∅ mm	Height mm	Grit	max. speed min⁻¹
60×50	●	60	50	100	7000
80×50	●	80	50	100	5250

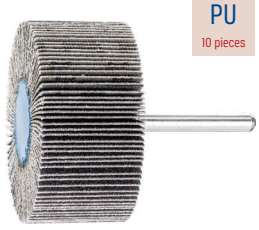
Flap wheel SiC

PFERD

Design and use:
- silicon carbide (SiC)
- **for the machining of hard and tough materials** like titanium alloys and aluminium, copper, bronze, high-alloyed steel and fibre-reinforced plastics
- generates a particularly fine sanding pattern

SiC | Shank 6mm | N | PU 10 pieces

Note:
Price per piece



N° article	455720 Grit 60	455725 Grit 80	455730 Grit 120	455735 Grit 150	∅ mm	Height mm	max. speed min⁻¹
30×10	●	●	●	●	30	10	12000
60×30	●	●	●	●	60	30	6300

Sanding star POLINOX

PFERD

Design:
- for cleaning, deburring and finish grinding of interior surfaces and contours
- usable especially for hard to reach places such as holes and recesses

UNI

Application examples:
- deburring of holes on components made of NF and non-ferrous heavy metals
- fine grinding on internal surfaces of pipes made of stainless steel (INOX)
- cleaning of threads



N° article	456220 ∅ 25 mm 2 layers	456222 ∅ 38 mm 3 layers	Grit
80	●	●	80
100	●	●	100
280	●	●	280

Grinding wheel with thread

Corundum A | UNI | Socket M 14

Design:
- **abrasive: Corundum A**
- made of non-woven nylon fibres, with even distribution of abrasive grit
- the elastic non-woven fabric adapts to any surface and enables consistent work results throughout its entire service life
- non-woven flap drums are moisture resistant and do not become clogged

456213:
- non-woven flap drums combined with abrasive cloth enable higher material removal and a coarser grinding pattern with greater peak-to-valley height

Use:
- universal use of medium-sized surfaces on variable-speed angle grinders and fillet weld grinders
- to achieve shadow-free, seamless surfaces on metals, wood or plastics
- for pre- and post-processing of stainless steel and aluminium surfaces





N° article	456211 Abrasive cloth	456213 Abrasive fleece / Cloth	∅ mm	Height mm	Grit	max. speed min^{-1}
110×50/100	○	○	110	50	100	5300
110×50/180	○	○	110	50	180	5300
110×50/280	○	–	110	50	280	5300

Lamellar flap wheel

Corundum A | UNI

Design:
- dense, radially around the core arranged abrasive cloth lamellae, good adaptation to the workpiece
- recesses on both sides facilitate exact operations in corner areas through recessed clamping flanges

Use:
- for light sanding and satinising of steel, premium steel, NE metals, aluminium, wood and plastic plus extra large-scale workpieces
- for coarse, medium and final touch
- flap wheels to be used with mounting plate (456526)

Note:
- coarse grit acts subtler at high speed
- fine grit behaves coarser at low speed
- please mind the permitted speed



N° article	456506 Ø 165×30 mm	∅ mm	Height mm	Grit	max. speed min^{-1}
60	●	165	30	60	5800
80	●	165	30	80	5800
120	●	165	30	120	5800

N° article	456516 Ø 165×50 mm	∅ mm	Height mm	Grit	max. speed min^{-1}
60	●	165	50	60	5800
80	●	165	50	80	5800
120	●	165	50	120	5800

N° article	456526 Clamping flange	∅ mm	Bore mm	Bore × up to mm	PU pieces
54	●	79	12	40	2

Tool Holder for POLINOX grinding stars

PFERD

Shank 6mm

Design:
- tool holder for POLINOX grinding stars
- due to the different lengths of the tool holders, bores or perforations in different depths can be reached

N° article	456225 for sanding star POLINOX®	Clamping length l1 mm	Length mm	Thread	Shank ∅ mm
75	●	30	75	–	6
125	●	30	125	8 - 32 UNC	6



Grinding drum

PFERD

UNI

Design:
- mounting bore: 19 mm with 2 keyways
- fitting for all surface grinders and surface polishing (glazing) machines

Use:
456541 LSW-W :
- for removing rust, paint and oxide layers as well as for structuring and satin-finishing different surfaces

456551 PNL-W:
- for directed brush matting on large surfaces (container construction, construction of large-scale catering establishments)

456561 PNZ-W:
- due to layers of abrasive cloth between the cloth lamellae better material removal and coarser character on large surfaces

N° article	456541 Type LSW-W	456551 Type PNL-W	456561 Type PNZ-W	Grit	∅ mm	Drum width mm	min. speed min^{-1}	max. speed min^{-1}
40	●	–	–	40	100	100	2000	3700
60	●	–	●	60	100	100	2000	3700
80	●	–	●	80	100	100	2000	3700
120	●	–	●	120	100	100	2000	3700
100	–	●	–	100	100	100	2000	3700
180	–	●	–	180	100	100	2000	3700
280	–	●	–	280	100	100	2000	3700



456541



456551



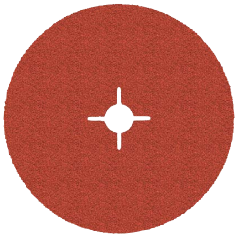
456561

Fibre disc Ceramics

Design and use:
- with precision formed ceramic grit
- high removal rate and reasonable tool life
- for removal and weld seam processing

Application areas:
Type 782C Structural steels, forged steels, NF metals
Type 787C Stainless steels

UNI

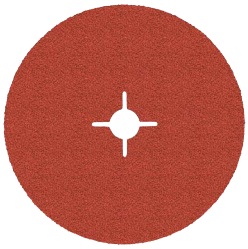


N° article	460903 Typ 782C, ∅ 115 mm	max. rpm⁻¹	460905 Typ 782C, ∅ 125 mm	max. rpm⁻¹	Korn
36	●	13.200	●	12.200	36
60	●	13.200	●	12.200	60
80	●	13.200	●	12.200	80

Delivery:
In packaging units only!

Note:
Price per piece

M



Ceramic | PU 100 pieces

N° article	460907 Typ 787C, ∅ 115 mm	max. rpm⁻¹	460909 Typ 787C, ∅ 125 mm	max. rpm⁻¹	Korn
36	●	13.200	●	12.200	36
60	●	13.200	●	12.200	60
80	●	13.200	●	12.200	80
120	●	13.200	●	12.200	120

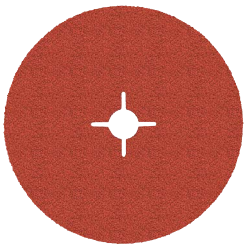
Fibre disc Cubitron™ II

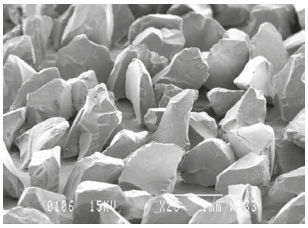
Design and use:
- suited for steel, construction steel and cast iron
- for weld seam preparation
- made of extremely tearproof and adaptable vulcanised fibre
- fastest grinding processes, maximum material removal rate, long service life, self-sharpening effect, cool grinding, stress cracks and discolourations are avoided
- **up to 30% faster grinding processes on difficult to machine materials**
- **up to 3× longer tool life**
- construction features vulcanised fibre, full synthetic resin, Cubitron™ II mineral ceramics grit, semi-open dispersion

Ceramic | P | K | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece





Conventional grinding mineral



Precision molded 3M™ Cubitron™ grinding mineral

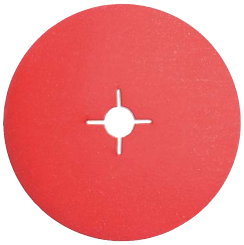
N° article	460914 Type 782C, ∅ 115 mm	460914 max. rpm⁻¹	460916 Type 782C, ∅ 125 mm	460916 max. rpm⁻¹	460917 Type 782C, ∅ 180 mm	460917 max. rpm⁻¹	Grit
36	●	13.200	●	12.200	●	8.500	36
60	●	13.200	●	12.200	●	8.500	60
80	●	13.200	●	12.200	●	8.500	80

Design and use:
- like type 982C, but **with additionally applied grinding aid**
- cooler grinding
- no clogging on smearing materials
- suited for stainless steel, titanium, nickel alloys and aluminium

Ceramic | M | N | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	460918 Type 987C, ∅ 115 mm	460918 max. rpm⁻¹	460920 Type 987C, ∅ 125 mm	460920 max. Rpm-1	460921 Type 987C, ∅ 180 mm	460921 max. rpm-1	Grit
36	●	13.200	●	12.200	●	8.500	36
60	●	13.200	●	12.200	●	8.500	60
80	●	13.200	●	12.200	●	8.500	80

High performance backing pad

Design:
- especially for Cubitron™ II pads
- ribbed for cooling





N° article	460940 ribbed	460941 flat and flexible	∅ mm	Thread	max. rpm⁻¹
115	●	●	115	M14	13.200
125	●	●	125	M14	12.200
180	●	●	180	M14	8.500

Backing pad

Design and use:
- rubber, extra hard, with cooling fins
- fan-shaped ribs stiffen the backing pad and provide air circulation that reduces the heat generated during the sanding process



N° article	460952 TURBO PAD 3	∅ mm	Thread	max. rpm⁻¹
115	●	115	M14	13.300
125	●	125	M14	12.200

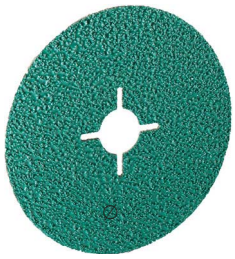
Fibre disc

ACTIROX AF799
Design and use:
- developed for unalloyed steel and aluminium
- also suitable for stainless steel and non-ferrous metals
- thanks to geometrically shaped, self-sharpening abrasive grains very aggressive, fast grinding for maximum stock removal
- cool grinding without tarnishing and very long service life
- for deburring, chamfering, cleaning, weld seam pre- and post-processing

Ceramic | P | N | PU 50 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	460950 ACTIROX AF799	∅ mm	Grit	max. rpm^{-1}
115/36	●	115	36	13.300
115/60	NEW ○	115	60	13.300
115/80	NEW ○	115	80	13.300
125/36	●	125	36	12.200
125/60	NEW ●	125	60	12.200
125/80	NEW ●	125	80	12.200

ACTIROX AF890:
Design and use:
- developed for superalloys and stainless steel
- also suitable for aluminium, unalloyed steel and non-ferrous metals
- thanks to geometrically shaped, self-sharpening abrasive grains very aggressive, fast grinding for maximum stock removal
- cool grinding without tarnishing and very long service life
- for deburring, chamfering, cleaning, weld seam pre- and post-processing

Ceramic | M | N | PU 50 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	460951 ACTIROX AF890	∅ mm	Grit	max. rpm^{-1}
115/36	●	115	36	13.300
115/60	NEW ○	115	60	13.300
115/80	NEW ○	115	80	13.300
125/36	●	125	36	12.200
125/60	NEW ●	125	60	12.200
125/80	NEW ●	125	80	12.200

Fibre disc

KLINGSPOR Schleiftechnologie

Design:
- highly elastic full resin bond corundum grit on tear-resistant pad of vulcanised fibre
- with bore and cross recess

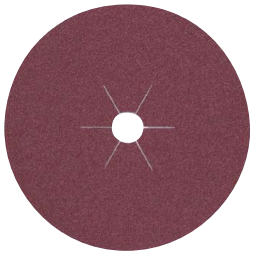
Use:
- for the reworking of weld seams, welding points, at metal construction, locksmith work, container and repair shop
- universal disc for metal working

Corundum A | P | K | N | PU 25 pieces

N° article	461000 ∅ 115 mm	461000 max. rpm^{-1}	461050 ∅ 125 mm	461050 max. rpm^{-1}	461100 ∅ 180 mm	461100 max. rpm^{-1}	Grit
24	●	13.300	●	12.200	●	8.500	24
36	●	13.300	●	12.200	●	8.500	36
40	●	13.300	●	12.200	●	8.500	40
60	●	13.300	●	12.200	●	8.500	60
80	●	13.300	●	12.200	●	8.500	80
100	●	13.300	●	12.200	●	8.500	100
120	●	13.300	●	12.200	●	8.500	120

Delivery:
In packaging units only!

Note:
Price per piece



Fibre disc

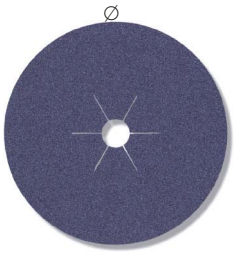
KLINGSPOR Schleiftechnologie

Design and use:
- zirconium corundum
- for mechanical metalworking, for derusting, descaling, deburring, especially of stainless steel

Zircon corundum | M | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461120 Stainless steel, ∅ 115 mm	461120 max. rpm^{-1}	461140 Stainless steel, ∅ 125 mm	461140max. Rpm-1	Grit
36	●	13.300	●	12.200	36
40	●	13.300	●	12.200	40
60	●	13.300	●	12.200	60
80	●	13.300	●	12.200	80
100	○	13.300	●	12.200	100

Velcro grinding disc without perforation

KLINGSPOR Schleiftechnologie

Design:
- strong E-weight paper with semi-open corundum dispersion and full synthetic resinoid bonding
- the back is covered with velour loops
- Velcro-backed

Corundum A | UNI | PU 50 pieces

Use:
- for all current grinding operations occurring at the processing of wood and metal
- for reworking of filler materials

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461180 ∅ 115 mm	461184 ∅ 125 mm	461186 ∅ 150 mm	Grit
40	●	●	●	40
60	●	●	●	60
80	●	●	●	80
120	●	●	●	120
180	●	●	●	180
240	●	●	●	240
400	●	●	●	400

Velcro grinding disc with perforation

3M

Design and use:
- C paper
- full synthetic resin
- open coating
- dust rejecting
- especially suited for lacquer sanding works
- for applications covering the entire industrial sector

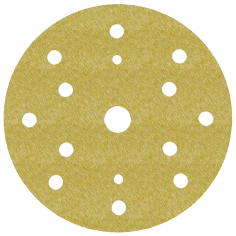
Corundum A

UNI

PU
100 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461198 Type 255 P, ∅ 150 mm	Grit
80	●	80
120	●	120
150	●	150
180	●	180
220	●	220
240	●	240
320	●	320
400	●	400

Velcro pad Standard

3M

Design and use:
- to receive Velcro adhesive discs with ∅ 150 mm
- Direct Flow™ technology for direct removal of grinding dust
- multi hole perforation



N° article	461199 Type Hookit, ∅ 150 mm	Thread
0010	●	M8
0015	●	5/16"

Velcro grinding disc with perforation

KLINGSPOR Schleiftechnologie

Design:
- strong E-weight paper with semi-open corundum dispersion and full synthetic resinoid bonding
- the back is covered with velour loops
- Velcro-backed

Corundum A

UNI

PU
50 pieces

Use:
- for all current grinding operations occurring at the processing of wood and metal
- for reworking of filler materials
- with a corresponding backing pad on all major angle grinders and other hand grinders

Delivery:
In packaging units only!

Note:
Price per piece



461190 461192 461196

N° article	461190 ∅ 125 mm 8 holes (Bosch, Fein, Festo, Metabo)	461190Pitch circle ∅ mm	461192 ∅ 150 mm 6 holes (Bosch, Metabo)	461192Pitch circle ∅ mm	461196 ∅ 150 mm 8 holes plus centre hole (Festo)	461196Pitch circle ∅ mm	Grit
40	●	65	●	80	●	120	40
60	●	65	●	80	●	120	60
80	●	65	●	80	●	120	80
100	●	65	●	80	●	120	100
120	●	65	●	80	●	120	120
180	●	65	●	80	●	120	180
240	●	65	●	80	●	120	240
400	●	65	●	80	●	120	400

Backing pad

KLINGSPOR Schleiftechnologie

Design:
- special plastic, extra elastic and wearproof
- with clamping nut

Socket M 14



N° article	461200 Standard	461225 ribbed	∅ mm	Thread	max. rpm^{-1}
115-14	●	●	115	M14	13.300
125	●	●	125	M14	12.200
180	●	●	180	M14	8.500

Velcro backing pad

KLINGSPOR Schleiftechnologie

Design:
- special plastic, extra elastic and wearproof
- with clamping nut
- backside additionally trimmed with a self-fastening backing pad with hooks to hold the Velcro grinding disc positively in place

Socket M 14



N° article	461240 Velcro-backed	∅ mm	Thread	max. rpm^{-1}
115	●	115	M14	13.300
125	●	125	M14	12.200
150	●	150	M14	10.200

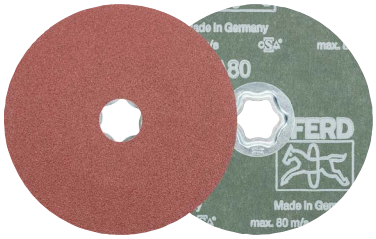
Fibre grinding disc COMBICLICK®

Design and use:
- corundum A
- for **universal grinding tasks** from coarse to final touch
- for industry and crafts

Corundum A | P | K | N | Plastics | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



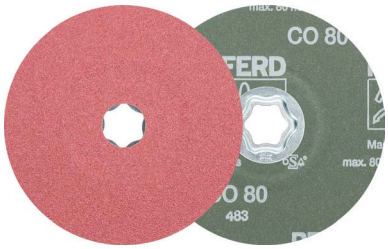
N° article	461230 Corundum A	∅ mm	Grit	max. rpm^{-1}
115/36	●	115	36	13.300
115/60	●	115	60	13.300
115/80	●	115	80	13.300
125/36	○	125	36	12.200
125/60	○	125	60	12.200
125/80	○	125	80	12.200

Design and use:
- for **aggressive grinding with highest abrasion** and very good tool life
- for machining of hard materials and layers
- primarily applicable on high-performance angle grinders

Ceramic | P | K | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



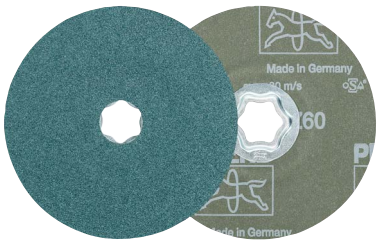
N° article	461234 Ceramic grit CO	∅ mm	Grit	max. rpm^{-1}
115/36	○	115	36	13.300
115/60	●	115	60	13.300
115/80	●	115	80	13.300
125/36	●	125	36	12.200
125/60	●	125	60	12.200
125/80	○	125	80	12.200

Design and use:
- for **coarse grinding tasks with high chipping demand**and good lifetime
- best results on high-performance angle grinders and at increased contact pressure

Zircon corundum | P | M | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



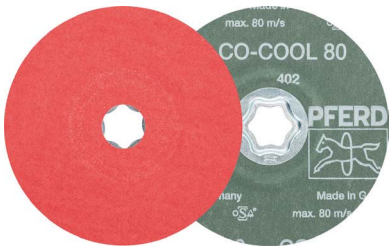
N° article	461232 Zirconium corundum Z	∅ mm	Grit	max. rpm^{-1}
115/60	○	115	60	13.300
115/80	●	115	80	13.300
125/60	○	125	60	12.200
125/80	○	125	80	12.200

Design and use:
Ceramic grit CO-COOL
- for aggressive grinding on hard, poorly heat conducting materials
- constant performance due to self-sharpening ceramic grit
- no clogging, cool cut

Ceramic | N | M | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461245 Ceramic grit CO-COOL	∅ mm	Grit	max. rpm^{-1}
115/36	●	115	36	13.300
115/60	●	115	60	13.300
115/80	●	115	80	13.300
125/36	●	125	36	12.200
125/60	●	125	60	12.200
125/80	●	125	80	12.200

Design:
- **VICTO**GRAIN-COOL abrasive grit
- for highly aggressive grinding with maximum stock removal and extremely long tool life
- for machining of hard materials and layers
- primarily applicable on high-performance angle grinders

Use:
- for deburring, edge processing, surface processing, levelling and weld seam processing
- suitable for steel, cast steel, hard non-ferrous metal and nickel-based alloys (e.g. Inconel and Hastelloy)

Delivery:
In packaging units only!

Note:
Price per piece

Ceramic | P | N | PU 25 pieces

NEW



N° article	461249 VICTOGRAIN-COOL	∅ mm	Grit	max. rpm^{-1}
115/36	○	115	36	13.300
115/60	●	115	60	13.300
115/80	●	115	80	13.300
125/36	○	125	36	12.200
125/60	●	125	60	12.200
125/80	●	125	80	12.200

Backing pad COMBICLICK®

PFERD

Design:
- backing pad for all COMBICLICK®abrasive fibre discs on customary angle grinders
- geometry of the cooling slots guarantee high air flow for **considerable reduction of the thermal load** of abrasive and workpiece
- patented COMBICLICK®clamping system **minimises the tool change times**
- CC-GT (medium), colour black
- CC-H-GT (hard), colour blue

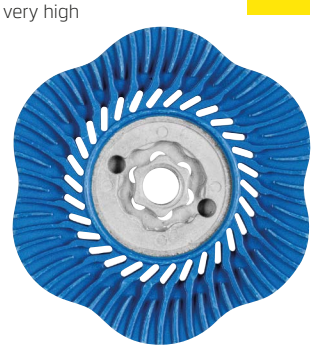


N° article	461238 CC-GT	forlock nuts ∅ mm	Thread	max. rpm^{-1}
115/125	●	115/125	M14	13.300

Use:
For the processing of stainless steel (INOX), preferably use the CC-H-GT version, because it has a very high edge strength in order to achieve higher contact forces

M

Note:
Maximum permissible peripheral speed is 80 m/s.



N° article	461246 CC-H-GT (type INOX)	for lock nuts ∅ mm	Thread	max. rpm^{-1}
115/125	●	115/125	M14	13.300

Flap disc

PRETEC

Design:
- high-quality zircon corundum for excellent grinding performance
- robust glass fabric plate for strong contact pressure
- suitable for steel and INOX

Zircon corundum | P | M | PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



straight

straight version
especially suitable for surface grinding

N° article	461272 straight	∅ mm	Bore ∅ mm	Grit
115/40	●	115	22,23	40
115/60	●	115	22,23	60
115/80	●	115	22,23	80
125/40	●	125	22,23	40
125/60	●	125	22,23	60
125/80	●	125	22,23	80

M

inclined version, 14°
especially suitable for point by point processing

N° article	461274 cranked	∅ mm	Bore ∅ mm	Grit
115/40	●	115	22,23	40
115/60	●	115	22,23	60
115/80	●	115	22,23	80
125/40	●	125	22,23	40
125/60	●	125	22,23	60
125/80	●	125	22,23	80

M

inclined version, 8°
especially suitable for edge grinding

N° article	461276 cranked	∅ mm	Bore ∅ mm	Grit
115/40	●	115	22,23	40
115/60	●	115	22,23	60
115/80	●	115	22,23	80
125/40	●	125	22,23	40
125/60	●	125	22,23	60
125/80	●	125	22,23	80

Flap discs

Design and Use:
- maximum abrasion due to self-sharpening ceramic grit
- cool grinding, less tarnish discolouration
- wider lamellae for optimum machining of the workpiece
- trimmable backing pad, hence fully usable disc

Ceramic | P | M | PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piecerinding

cranked

inclined version, 8°
especially suitable for edge grinding

N° article	461280 cranked	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
125/40	●	125	22,23	40	12.300
125/60	●	125	22,23	60	12.300



Flap Discs

Product Information







POLIFAN flap discs offer the user advantages over roughing discs, where high cutting performance is required as well as high surface quality.

The wide range of high-quality grinding lamellae and the tried and tested special designs from PFERD meet the requirements of demanding grinding tasks and the materials to be machined.

Version: A SG STEELOX
Universally applicable professional tool with high cutting performance and outstanding service life.

Version: Z SG POWER STEELOX
Top tool for the most demanding grinding tasks with the most economical use. With aggressive cutting performance and outstanding service life.

Version: A- COOL SG INOX and ALU
Professional tool for grinding tasks with high surface quality and low thermal loading For extra cool grinding on poor thermoconductive materials

POLIFAN CURVE is an innovation of PFERD for fillet processing.. Thanks to the special arrangement of the grinding lamellae, the unique radial design (PFR) offers convincing advantages in the complex and demanding machining of fillet welds:

- high removal rate due to unequalled speed, aggressive grinding and thus significant savings in labour costs
- precise and optimal grinding-out of the fillet weld geometry
- dimensional stability for high-quality results
- excellent service life for the treatment of fillet welds
- optimal utilisation of the abrasive in the radius

Recommendations for use:

- **Version M** for fillet weld radii 〉5 mm or a-dimension 〈 6 mm with 90° joint, width at radius: 11 mm
- **Design L** for fillet radii 〉8 mm or a-dimension 〉6 mm with 90° joint, width at radius: 14 mm

Design Z SGP CURVE STEELOX
High performance flap disc for maximum material removal on steel and stainless steel (INOX).

Design CO SGP-CURVE STEELOX
High-performance tool for demanding grinding tasks, especially for obtaining fine surfaces. The ceramic grain guarantees extremely cool grinding on materials which are poorly thermally conductive and therefore optimal grinding results without thermal workpiece damage.

The patented design of **POLIFAN®-STRONG** opens a completely new dimension of grinding. Outstanding benefits are a unique performance advantage:

- fast grinding by constant abrasive aggressiveness to the last abrasive grain
- maximum efficiency thanks to more power per unit of time and less disc consumption.
- greatest possible removal rate
- extremely long service life
- maximum efficiency thanks to fewer tool changes and set-up times.
- optimal utilisation of the powerful drive

Recommendations for use:

- **Grain size 36** is optimally suited for high removal, e.g. for welding seam processing.
- **Grain size 50** is optimally suited for edge processings like chamfering or for achieving fine surfaces.

Design Z SGP STRONG STEEL
High-performance tool with particularly high cutting performance for demanding grinding tasks.

Design CO-FREEZE SGP STRONG INOX
Due to the ceramic grain CO with grinding-active, cooling special coating (FREEZE), no tarnishing occurs - even under thermally unfavourable conditions - so that no reworking is necessary.

The fast way to the best tool

Starting from the processing task ❶ and material ❷ the overview shows the different versions of tools from the PFERD program and helps you to find the optimum tool.

❶ Processing task / ❷ Material	Steel Design:	Stainless steel (INOX) Design:	Aluminium, non-ferrous metals Design:	Plastics, other materials Design:
Surface grinding	A SG STEELOX Z SG POWER STEELOX	A SG STEELOX A-COOL SG INOX and ALU CO-FREEZE SGP STRONG INOX	A-COOL SG INOX and ALU	A SG STEELOX A-COOL SG INOX and ALU
Weld dressing	A SG STEELOX Z SG POWER STEELOX Z SGP STRONG STEEL	CO-FREEZE SGP STRONG INOX	A-COOL SG INOX and ALU	–
Chamfering	Z SG POWER STEELOX Z SGP STRONG STEEL	Z SG POWER STEELOX	–	A SG STEELOX
Deburring	Z SGP STRONG STEEL	Z SG POWER STEELOX	–	A SG STEELOX
Fillet welding	CO SGP CURVE STEELOX	Z SGP CURVE STEELOX CO SGP CURVE STEELOX	–	–

Flap disc POLIFAN

PFERD

Design:
A SG STEELOX
- abrasive corundum A
- high chipping performance
- very long tool life

Corundum A | P | M

straight | cranked | PU 10 pieces

Use:
- for steel, stainless steel (INOX)
- for universal grinding tasks, e.g. surface grinding and weld seam treatment

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461300 straight	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
115/80	●	115	22,23	80	13.300
115/120	●	115	22,23	120	13.300
125/40	●	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
125/80	●	125	22,23	80	12.200
125/120	●	125	22,23	120	12.200
180/40	●	180	22,23	40	8.500
180/60	●	180	22,23	60	8.500
180/80	●	180	22,23	80	8.500

N° article	461315 cranked	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
115/80	●	115	22,23	80	13.300
115/120	●	115	22,23	120	13.300
125/40	●	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
125/80	●	125	22,23	80	12.200
125/120	●	125	22,23	120	12.200
180/40	●	180	22,23	40	8.500
180/60	●	180	22,23	60	8.500
180/80	●	180	22,23	80	8.500

Design:
Z SG POWER STEELOX
- abrasive zirconium corundum Z
- aggressive chipping performance and very good tool life

Zircon corundum | P | M

straight | cranked | PU 10 pieces

Use:
- for steel and stainless steel
- for weld dressing, chamfering and surface grinding

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461350 straight	∅ mm	Bore ∅ mm	Grit	max. Rpm-1
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
125/40	●	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
180/40	●	180	22,23	40	8.500
180/60	●	180	22,23	60	8.500

N° article	461355 cranked	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
115/80	●	115	22,23	80	13.300
115/120	●	115	22,23	120	13.300
125/40	●	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
125/80	●	125	22,23	80	12.200
125/120	●	125	22,23	120	12.200
180/40	●	180	22,23	40	8.500
180/60	○	180	22,23	60	8.500

Flap disc POLIFAN

PFERD

Design:
A-COOL SG INOX and ALU
- abrasive corundum A with coating
- for extra cool grinding on poor thermoconductive materials

Use
- for stainless steel, aluminium and NF metals
- for grinding tasks with high surface quality and low thermal loading
- preferred for machining of sheet material and thin walled profiles

Delivery:
In packaging units only!

Note:
Price per piece



Corundum A | M | N

cranked | straight | PU 10 pieces

N° article	461330 straight	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
115/80	○	115	22,23	80	13.300
125/40	●	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
125/80	○	125	22,23	80	12.200

N° article	461335 cranked	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/40	●	115	22,23	40	13.300
115/60	●	115	22,23	60	13.300
115/80	○	115	22,23	80	13.300
125/40	○	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
125/80	○	125	22,23	80	12.200

Flap disc POLIFAN-STRONG

PFERD

Design:
Z SGP STRONG STEEL
- abrasive zirconium corundum Z
- grit size 36 for coarse steel treatment
- grit size 50 for edge processing
- abrasive, lamellae and carrier plate are tuned for use on powerful drives

Use:
- for steel materials
- for weld seam treatment
- for chamfering and deburring

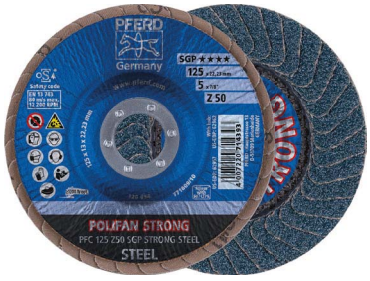
N° article	461390 Type PFC, conical	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/36	●	115	22,23	36	13.300
115/50	●	115	22,23	50	13.300
125/36	●	125	22,23	36	12.200
125/50	●	125	22,23	50	12.200

Advantages:
- **rapid grinding due to steady aggressiveness** down to the last abrasive grit
- **greatest possible removal rate**
- extremely long service life
- optimal utilisation of the powerful drive

Zircon corundum | P | PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



Flap disc POLIFAN CURVE

Zircon corundum | P | M | PU 10 pieces

Design:
SZ SGP CURVE STEELOX
- abrasive zirconium corundum Z
- due to radial construction and special arrangement of the lamellae notable advantage for fillet weld treatment

Use:
- for steel and stainless steel
- fillet weld processing (5 or 8 mm), chamfering, deburring

Advantages:
- rapid, aggressive grinding due to high removal rate
- precise and optimal grinding-out of the fillet weld geometry
- dimensional stability for high-quality results
- excellent service life for the treatment of fillet welds
- optimal utilisation of the abrasive in the radius

Delivery:
In packaging units only!

Note:
Price per piece



Nº article	461395 Type PFR, radial	∅ mm	Bore ∅ mm	Grit	Seam width mm	max. rpm^{-1}
125/40/5	●	125	22,23	40	5	12.200
125/40/8	●	125	22,23	40	8	12.200

Flap disc POLIFAN-CO CURVE

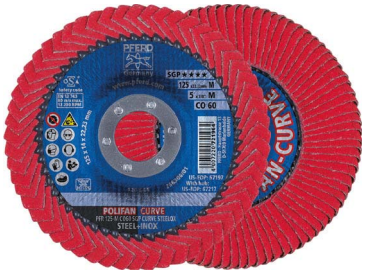
Ceramic | M | PU 10 pieces

Design:
CO SGP CURVE STEELOX
- abrasive ceramic grain CO with abrasive coating
- particularly for obtaining fine surfaces
- the ceramics grit guarantees extremely cool grinding on materials with poor thermal conductivity
- optimal grinding results are obtained without thermal damage to the workpiece
- radial construction

Use:
- for stainless steel (INOX) and steel
- fillet weld processing (5 mm or 8 mm), chamfering, deburring

Delivery:
In packaging units only!

Note:
Price per piece



Nº article	461397 Type PFR, radial	∅ mm	Bore ∅ mm	Grit	Seam width mm	max. rpm^{-1}
115/60/5	●	115	22,23	60	5	13.300
115/60/8	●	115	22,23	60	8	13.300
125/60/5	●	125	22,23	60	5	12.200
125/60/8	●	125	22,23	60	8	12.200

Flap disc Cubitron™ II (Ceramic)

Cubitron™ II | P | M | PU 10 pieces

Design and use:
- high stock removal potential, uniform finish
- cool grinding due to ceramic precision grit
- increased packing density of the sanding lamellae and sturdier base, which means longer service life and more active abrasive material
- suitable for removal, deburring, finishing or edge grinding

Delivery:
In packaging units only!

Note:
Price per piece



Nº article	461402 Type 969F, conical	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
115/60	●	115	22,23	60	13.200
115/80	●	115	22,23	80	13.200
125/40	●	125	22,23	40	12.000
125/60	●	125	22,23	60	12.000
125/80	●	125	22,23	80	12.000



PFERD-Tools with X-LOCK

Product Information



Tipp

Matching machines with X-LOCK mounting you will find in our catalogue "Elektro-/Druckluftwerkzeuge" (Electric/compressed air tools and accessories) 2022/23.

X-LOCK from Bosch is the world's first quick-change system for angle grinders. Position the tool in the X-LOCK holder, click on - done. Changing accessories on angle grinders has never been easier. X-LOCK creates a new standard that makes work easier for professionals and increases productivity. Bosch Power Tools relies on strong partners like PFERD. Consequently, PFERD has developed the principle for connecting X-LOCK stamped parts with the bonded abrasive, flap discs and brushes, as well as creating the conditions for these to be manufactured industrially.

X-LOCK
Technology by BOSCH

With the Bosch X-LOCK system for angle grinders you can change tools quickly and conveniently. Instead of a round hole, the X-LOCK system has an x-shaped contour that allows the tool to be positively fixed on the angle grinder.
This guarantees the safe clamping of different tools in the shortest possible time. The unique system meets the highest quality and safety standards and withstands rough and tough operating conditions.

Advantages:

- Quick and convenient tool change.
- Secure fixing by audible engagement of the tool.
- Tools with X-LOCK can also be used on conventional angle grinders with thread M14 and 5/8"-11 (except cup brushes). (with the exception of cup brushes).

Recommendations for use:

- Place the tool on the X-LOCK clamping system of your angle grinder and fix it in place by pressing it down slightly. The tool audibly engages.

Mode of operation:



Place the tool positively on the X-LOCK mount.



Press the tool down slightly until it audibly engages.



Release the tool by operating the lever.

Flap disc POLIVLIES with X-LOCK

SIC Corundum | P | M | N | S | cranked | X-LOCK | PU 5 pieces

Design:
- abrasive corundum A
- high abrasive performance, as new, sharp abrasive is constantly released
- consistently high surface quality over the entire tool life
- optimal contour adaptation due to high flexibility
- for universal use from coarse to fine sanding
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11

Use:
- for steel, stainless steel (INOX), aluminium, non-ferrous metals, fibre-reinforced thermosets (GRP, CFRP), zinc, cast steel and nickel-based alloys (e.g. Inconel and Hastelloy)
- for universal grinding tasks, e.g. weld seam processing, surface processing, roughening, structuring (matting, line matting and satin finishing)

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	461297 Type PVL-X-LOCK	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
125/100G	○	125	22,23	100	12.200
125/180M	○	125	22,23	180	12.200
125/240F	○	125	22,23	240	12.200

Flap disc POLIFAN with X-LOCK

Design:
Z PSF STEELOX
- abrasive zirconium corundum Z
- aggressive chipping performance and very good tool life
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11
- also suitable for low-power angle grinders

Zircon corundum | P | M | cranked | X-LOCK | PU 10 pieces

Use:
- for steel and stainless steel
- for weld dressing, chamfering and surface grinding

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	461310 cranked	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
125/40	●	125	22,23	40	12.200
125/60	●	125	22,23	60	12.200
125/80	●	125	22,23	80	12.200

Design:
Z SG POWER STEELOX
- abrasive zirconium corundum Z
- aggressive cutting performance and outstanding service life
- highest aggressiveness over the entire service life
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11

Zircon corundum | P | M | cranked | X-LOCK | PU 10 pieces

Use:
- for steel and stainless steel
- for weld dressing, chamfering and surface grinding

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	461351 cranked	∅ mm	Bore ∅ mm	Grit	max. rpm^{-1}
125/40	○	125	22,23	40	12.200
125/60	○	125	22,23	60	12.200
125/80	○	125	22,23	80	12.200

Flap disc POLIFAN -CURVE with X-LOCK

Design:
Z SGP CURVE STEELOX
- abrasive zirconium corundum Z
- due to radial construction and special arrangement of the lamellae significant advantages in fillet weld processing
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11

Zircon corundum | P | M | X-LOCK | PU 10 pieces

Use:
- for steel and stainless steel
- fillet weld processing (5 or 8 mm), chamfering, deburring

Advantages:
- rapid, aggressive grinding due to high removal rate
- precise and optimal grinding-out of the fillet weld geometry
- dimensional stability for high-quality results
- excellent service life for the treatment of fillet welds
- optimal utilisation of the abrasive in the radius

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	461396 Type PFR, radial	∅ mm	Bore ∅ mm	Grit	Seam width mm	max. rpm^{-1}
125/40/5	○	125	22,23	40	5	12.200
125/40/8	○	125	22,23	40	8	12.200

Cutting disc X-LOCK

PFERD

Corundum A | P | M
straight | X-LOCK | PU 25 pieces

Design:
PSF STEEL
- fast work progress due to high cutting performance
- high economic efficiency due to good service life
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11
- also suitable for low-power angle grinders

Use:
- for cutting sheets, profiles and solid material made of steel
- for steel

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	463101 Steel/cast iron	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
125×1,0	●	125	1	22,23	12.200
125×1,6	●	125	1,6	22,23	12.200

Cutting disc SG STEELOX

PFERD

P | M | straight
X-LOCK | PU 25 pieces

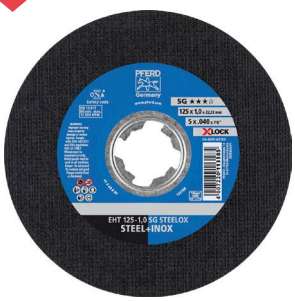
Design:
SG STEELOX
- fast work progress due to high cutting performance
- highest economic efficiency due to maximum service life
- without addition of bulking agents containing iron, sulphur or chlorine
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11

Use:
- for cutting sheets, profiles and solid material made of premium steel (INOX)
- thin and low-burr separating cuts

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	463156 INOX	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
125×1,0	●	125	1	22,23	12.200
125×1,6	●	125	1,6	22,23	12.200

Roughing wheel X-LOCK

PFERD

Corundum A | P | K
cranked | X-LOCK | PU 10 pieces

Design:
- abrasive corundum A - medium hardness
- suitable for angle grinders with X-LOCK tool holder and with thread M14 and 5/8"-11
- also suitable for low-power angle grinders

Use:
- for machining of steel and cast
- high grinding efficiency and reasonable tool life
- for surface grinding, weld seam processing, deburring, edge processing, fillet weld processing, gouging, chamfering

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	462151 Steel/cast iron	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
125×7	○	125	7	22,23	12.200

Grinding tool system COMBIDISC

PFERD

Shank 6mm

Design:
- abrasive disc holder system CD
- bolted connection with metal female thread
- peripheral speed according to version 20 - 50 ms/sec.

Advantages:
- simple handling => fast change of abrasive discs
- no sticking, no slipping, no loosening caused by heat
- vibration-free concentricity
- abrasive disc always remains centrically

Use:
- for efficient grinding of small surfaces and contours (e.g. in toolmaking and mould-making, mechanical engineering etc.)
- for drive units such as pneumatic straight and angle grinders or flexible shaft machines







N° article	461900 COMBIDISC® abrasive disc holder	∅ mm	Hardness	max. rpm^{-1}
W50	●	50	soft	19.000
W75	○	75	soft	12.500
M50	●	50	medium	19.000
M75	●	75	medium	12.500
H50	●	50	hard	19.000
H75	●	75	hard	12.500

Abrasive sheet COMBIDISC

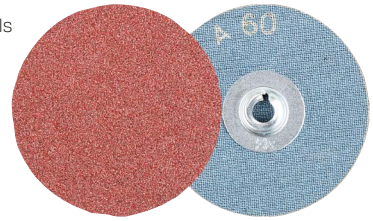
Corundum A | UNI | PU

Design and use:
461910:
- corundum A
- for **universal application** on metals (coarse to finish grinding)

461920:
- corundum A-Forte
- universally applicable on all metals
- high removal rate
- long service life

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461910 Corundum A	461920 Corundum A-Forte	∅ mm	Grit	min./max. Speed min^{-1}	PU pieces
50/36	●	●	50	36	8,000 - 13,000	100
50/60	●	●	50	60	8,000 - 13,000	100
50/80	●	●	50	80	8,000 - 13,000	100
50/120	●	●	50	120	8,000 - 13,000	100
50/180	●	–	50	180	8,000 - 13,000	100
50/320	●	–	50	320	8,000 - 13,000	100
75/36	○	○	75	36	5,000 - 9,000	50
75/60	●	○	75	60	5,000 - 9,000	50
75/80	●	○	75	80	5,000 - 9,000	50
75/120	○	○	75	120	5,000 - 9,000	50
75/180	●	–	75	180	5,000 - 9,000	50
75/320	●	–	75	320	5,000 - 9,000	50

Non-woven disc COMBIDISC

Corundum A | UNI | PU

Design and use:
- corundum A, hard finish, open structure, for achieving matt and satin finishes
- universally employable for surface treatment on metals
- for the removal of prefinishing marks
- for the removal of oxidation
- for easy deburring tasks
- available POLIVLIES grit sizes
100 G = coarse (yellow-brown)
180 M = medium (reddish brown)
240 F = fine (blue)

Note:
The flexibility of the non-woven disc during surface grinding is determined by the hardness of the holder.

Delivery:
In packaging units only!

Note:
Price per piece



N° article	461935 hard	∅ mm	Grit	min./max. Speed min^{-1}	PU pieces
50/GROB	●	50	coarse	5,500 - 7,500	50
50/MITTEL	●	50	medium	5,500 - 7,500	50
50/FEIN	●	50	very fine	5,500 - 7,500	50
75/GROB	○	75	coarse	3,800 - 5,000	25
75/MITTEL	●	75	medium	3,800 - 5,000	25
75/FEIN	○	75	very fine	3,800 - 5,000	25

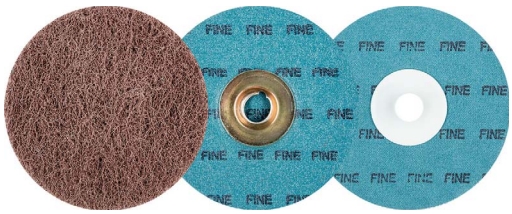
Non-woven disc COMBIDISC®

Corundum A | UNI | PU

Design and use:
- corundum A, soft finish, very open structure, achieve matt and satin finishes
- for final touch at surfaces and contours
- for cleaning operations at metals
- the addition of oil or water during grinding results in even finer surfaces, cooler grinding and longer tool life
- for the removal of prefinishing marks
- for the removal of oxidation
- for easy deburring tasks
- available POLINOX grit sizes
100 = medium
180 = fine
280 = very fine

Delivery:
In packaging units only!

Note:
Price per piece



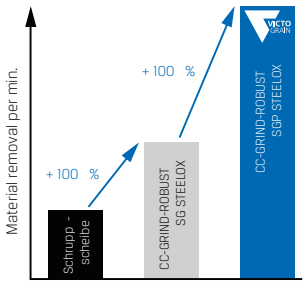
N° article	461955 soft	∅ mm	Grit	min./max. Speed min^{-1}	PU pieces
50/MITTEL	●	50	medium	5500 - 7500	50
50/FEIN	●	50	fine	5500 - 7500	50
50/SEHR FEIN	●	50	very fine	5500 - 7500	50
75/MITTEL	○	75	medium	3800 - 5000	25
75/FEIN	○	75	fine	3800 - 5000	25
75/SEHR FEIN	○	75	very fine	3800 - 5000	25

Grinding disc CC-GRIND-ROBUST

CC-GRIND-ROBUST 125 SG STEELOX
Design and use:
- for steel and stainless steel
- **significantly less noise, vibration and dust compared to roughing wheels**
- aggressive abrasive grains ensure a **cool grinding** without tarnishing and with very long service life
- for deburring, chamfering, weld seam pre- and post-processing, for edge processing and surface grinding
- resetting/trimming the tool is possible without any problems

Delivery:
Delivery only in specified PUs!

Note:
Price per piece





N° article	461247 CC-GRIND-ROBUST 125 SG STEELOX	∅ mm	Bore ∅ mm	max. rpm^{-1}
125SG	●	125	22,23	12.200

CC-GRIND-ROBUST 125 SGP STEELOX
Design and use:
- suitable for steel and stainless steel
- **significantly less noise, vibration and dust compared to grinding discs**
- aggressive **precision-formed, triangular high-performance abrasive grains** ensure cool grinding without tarnishing and an extremely long service life
- for deburring, chamfering, weld seam pre- and post-processing, edge processing and surface grinding
- Resetting/trimming of the tool is possible without any problems

Ceramic | P | M | PU 10 pieces

Delivery:
Only in the specified PUs.

Note:
Price per piece.





N° article	461248 CC-GRIND-ROBUST 125 SGP STEELOX	∅ mm	Bore ∅ mm	max. rpm^{-1}
125SGP	●	125	22,23	12.200

Roughing wheel

KLINGSPOR Schleiftechnologie

Design:
A 46 N Supra
- soft standard disc, cranked

N | cranked | PU 10 pieces

Use:
For the machining of aluminium as well as for all other NF metals

Delivery:
In packaging units only!

Note:
Price per piece



N° article	462170 Aluminium	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×6	●	115	6	22,23	13.300
125×6	●	125	6	22,23	12.200
180×8	○	180	8	22,23	8.500

Design:
A 24 N Supra
- soft high-performance disc, cranked

M | cranked | PU 10 pieces

Use:
- for rust and acid resistant steel like e.g. INOX
- with vast chipping capacity and very good tool life
- free of iron and sulphur

Delivery:
In packaging units only!

Note:
Price per piece



N° article	462190 INOX	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×6	●	115	6	22,23	13.300
125×6	●	125	6	22,23	12.200
180×8	●	180	8	22,23	8.500

Roughing wheel Cubitron II (ceramic)

3M

Design and use:
- for stock removal, removal of weld seams, chamfering and plastering
- 3-fold removal rate compared to conventional roughing discs
- immediate intervention into the solid material
- **reduction of effort required around up to 70 %**

Cubitron™ II | P | M | cranked | PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	462164 Steel/INOX	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×7	○	115	7	22,23	13.300
125×7	○	125	7	22,23	12.250
178×7	○	178	7	22,23	8.500
230×7	○	230	7	22,23	6.650

Roughing wheel

PFERD

Design:
PSF STEEL
- medium hardness

P | K | cranked | PU 10 pieces

Use:
- for machining of steel and cast
- high grinding efficiency and reasonable tool life

Delivery:
In packaging units only!

Note:
Price per piece



N° article	462150 Steel/cast iron	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×7	●	115	7,2	22,23	13.300
125×7	●	125	7,2	22,23	12.200
180×8	●	180	8,3	22,23	8.500
230×8	●	230	8,3	22,23	6.600

Roughing wheel

PFERD

Design:
- **SG STEEL**
- hard version

P | cranked | PU 10 pieces

Use:
- for weld seam machining, deburring and edge processing
- at steel machining with high grinding capacity and long service life

Delivery:
In packaging units only!

Note:
Price per piece



N° article	462155 Steel	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×7	●	115	7,2	22,23	13.300
125×7	●	125	7,2	22,23	12.200
180×8	●	180	8,3	22,23	8.500
230×8	●	230	8,3	22,23	6.600

Roughing wheel

KLINGSPOR Schleiftechnologie

Design:
A24 extra
- medium hardness
- cranked

UNI | cranked | PU 10 pieces

Use:
Universally applicable for all fields of metal processing

Delivery:
In packaging units only!

Note:
Price per piece



N° article	462110 Universal	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×6	●	115	6	22,23	13.300
125×6	●	125	6	22,23	12.200
180×8	●	180	8	22,23	8.500
230×8	●	230	8	22,23	6.600

Cutting disc

PRETEC®

P | M | straight | PU 50 pieces

Design and use:

- high-performance cutting disc for steel and stainless steel, with excellent cutting feeling
- efficient cutting with a long service life - for fast, productive cutting
- ideal to machine thin-walled profiles and tubes
- high cutting performance and low burr formation ensure clean cut surfaces
- does not contain any fillers that are rich in iron (FE), chlorine (Cl) or sulphur (S)

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	463335 Steel/INOX	∅ mm	Thickness mm	Bore ∅ mm	Disc shape	max. rpm^{-1}
115×1,0	●	115	1	22,23	straight	13.300
125×1,0	●	125	1	22,23	straight	12.200

Cutting disc

KLINGSPOR Schleiftechnologie

Design:
A 24 Extra
- medium hard cutting disc with long service life and easy cut

UNI | cranked | straight | PU 25 pieces

Use:
For all areas of metal machining

Delivery:
In packaging units only!

Note:
Price per piece



N° article	463000 Universal	∅ mm	Thickness mm	Bore ∅ mm	Disc shape	max. rpm^{-1}
115	●	115	2,5	22,23	cranked	13.300
125	●	125	2,5	22,23	cranked	12.200
180	●	180	3	22,23	straight	8.500
230	●	230	3	22,23	straight	6.600

Design and use:
A 60 TZ Special (1.0 mm)
A 46 TZ Special (1.6 / 1.9 mm)
- thin high performance disc
- to machine thin-walled profiles and tubes
- limited burr formation
- for stainless steel, NF metals and steel

P | M | N | straight | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	463300	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×1,0	●	115	1	22,23	13.300
115×1,6	●	115	1,6	22,23	13.300
125×1,0	●	125	1	22,23	12.200
125×1,6	●	125	1,6	22,23	12.200
180×1,6	●	180	1,6	22,23	8.500
230×1,9	●	230	1,9	22,23	6.600

Design and use:
- high-performance cutting disc with self-sharpening abrasive grit
- guarantees high cutting performance along with a long service life
- low heat generation

P | M | N | straight | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	463301 EDGE	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×1,2	●	115	1,2	22,23	13.300
125×1,2	●	125	1,2	22,23	12.200

Cutting disc

PFERD

Design and use:
SG STEELOX
- fast work progress due to high cutting performance
- highest economic efficiency due to maximum service life
- without addition of bulking agents containing iron, sulphur or chlorine
- for cutting sheets, profiles and solid material made of premium steel (INOX)

P | M | straight | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	463155 INOX	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×1,0	●	115	1	22,23	13.300
115×1,6	●	115	1,6	22,23	13.300
125×1,0	●	125	1	22,23	12.200
125×1,6	●	125	1,6	22,23	12.200

Design and use:
SGP STEELOX
- highest cutting performance and excellent tool life
- for cool, fast, comfortable, burr-free and universal cutting
- specially optimised for use on thin sheets and profiles made of steel and stainless steel (INOX)

M | straight | PU 25 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	463152 INOX, extra slim	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×0,8	●	115	0,8	22,23	13.300
125×0,8	●	125	0,8	22,23	12.200

Cutting disc

PFERD

Design:
PSF STEEL
- fast work progress due to high cutting performance
- high economic efficiency due to good service life

P | K | cranked | straight | PU 25 pieces

Use:
- for cutting sheets, profiles and solid material made of steel
- for steel

Delivery:
In packaging units only!

Note:
Price per piece



N° article	463100 Steel / Cast iron	∅ mm	Thickness mm	Bore ∅ mm	Disc shape	max. rpm^{-1}
115	●	115	2,4	22,23	cranked	13.300
125	●	125	2,4	22,23	cranked	12.200
180	●	180	3	22,23	straight	8.500
230	●	230	3	22,23	straight	6.600

Cutting disc

KLINGSPOR Schleiftechnologie

Design:
A 46 N Supra
- soft, open and light cutting separating disc

N | cranked | straight | PU 25 pieces

Use:
- for all smearing NF metals like aluminium, copper, zinc, lead, tin and alloys thereof
- for cutting sprues, solid material, tubes, profiles and sheet material

Delivery:
In packaging units only!



N° article	463310 Aluminium	∅ mm	Thickness mm	Bore ∅ mm	Disc shape	max. rpm^{-1}
115	●	115	2,5	22,23	cranked	13.300
125	●	125	2,5	22,23	cranked	12.000
180	●	180	3	22,23	straight	8.600
230	●	230	3	22,23	straight	6.600

Cutting disc Cubitron™ II

3M

Design and use:
- with precision Cubitron II ceramic grit and special binder coating
- **very high cutting performance with long service life and minimal burr formation**
- fast, comfortable cutting of profiles, pipes, bars and sheets
- in steel, stainless steel and NF metals

Ceramic | P | M | N | straight | PU 25 pieces

Delivery:
In packaging units only!



N° article	463303 Universal	463303 Universal, slim	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×1,0	–	○	115	1	22,23	13.200
115×1,6	○	–	115	1,6	22,23	13.200
125×1,0	–	○	125	1	22,23	12.000
125×1,6	○	–	125	1,6	22,23	12.000

Cutting disc

KLINGSPOR Schleiftechnologie

M | straight | PU 25 pieces

Design:
A 960 TZ SPECIAL
- all-rounder among the thin high-performance cutting discs
- optimised bond system ensures longer service life
- limited burr formation
- low thermal stress
- free of iron, sulphur and chlorine

Delivery:
In packaging units only!



N° article	463308 INOX, slim	∅ mm	Thickness mm	Bore ∅ mm	max. rpm^{-1}
115×1,0	●	115	1	22,23	13.300
125×1,0	●	125	1	22,23	12.200

Cup wheel

KLINGSPOR Schleiftechnologie

Korund A | P

Design:
- medium hard cup wheel made of corundum

Use:
- grinding of surfaces and weld seams
- from pregrinding to final sanding max. operation speed 50 m/s



16

N° article	464450	∅ mm	Height mm	Bore ∅ mm	Grit	max. rpm^{-1}
16	●	110 / 90	55	22,23	16	8.600
30	●	110 / 90	55	22,23	30	8.600



Tool Grinding Wheels

Product Information

PRECITOOL®

The choice of an abrasive depends on the type of workpiece to be ground and its properties as well as the operating conditions.
For the different application areas we offer abrasive products made from the following artificial grinding media:



Normal corundum
For machining iron and low-grade steel.

Special fused alumina
For machining alloyed steels, tool steel and high-speed steel (HSS) and steels sensitive to heat.

Silicon carbide
For machining carbides, short-chipping materials like aluminium, copper, plastic, glass, china, ceramics etc..

Grit grade
The degree of fineness of a surface to be ground depends quintessentially on the size of the abrasive grain used. Superior demands to the surface will be met by the choice of finer granulation, coupled with the acceptance of a reduced cutting performance.



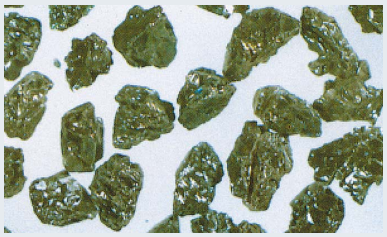
NK = Normal corundum
high tenacity



EKW = High grade corundum, white,
very hard and brittle



EKD = Special fused alumina, pink
very hard, higher grain tenacity
than EKW



SiCg = SiC, green
extremely hard and brittle



KA or Z = Zircon corundum
very high mechanical tenacity

Hardness of the grinding disc
The hardness of a grinding wheel is the strength or stability of the bond, which, via so-called bond bridges, determines the individual abrasive bodies. It is understood as resistance or force required to break one or more abrasive grains out of the bonding union of a grinding disc.

As a rough rule of thumb:
The grinding wheel hardness should be inversely proportional to the hardness of the material to be machined.
For hardened steels a softer hardness is chosen than for uncured ones.

According to DIN 69100, the hardness of grinding discs is denoted by the following letters:

very soft	E	F	G	
soft	H	I	J	K
medium	L	M	N	O
hard	P	Q	R	S
very hard	T	U	V	W
extremely hard	X	Y	Z	

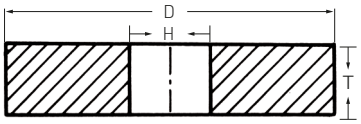
Tool grinding wheel for double grinders

Design and use:
See product information on previous page

EK | NK | SIC | Form A

Note:
Other dimensions, grit sizes and composites for special materials available on request

465100: Special fused alumina (EK pink) for tool grinding HSS
465150: Normal corundum (NC) for steel. coarse
465160: Normal corundum (NC) for steel, fine
465200: Silicon carbide (SIC) for hard metal



Form A ohne Aussparung

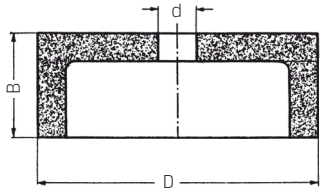
N° article	465100 PFA	465150 Normal corundum coarse	465160 NC, fine	465200 SiC	465100 Grit/hardness	465150 Grit/hardness	465160 Grit/hardness	465200 Grit/hardness	D mm	T mm	H mm
125×20×32	●	●	●	●	80M	36P	60N	80J	125	20	32
150×20×32	●	●	●	●	80M	36P	60N	80J	150	20	32
150×25×51	●	●	●	●	80M	36P	60N	80J	150	25	51
175×20×32	●	●	●	●	80M	24P	60N	80J	175	20	32
175×25×32	●	●	●	●	80M	24Q	60N	80J	175	25	32
175×25×51	●	●	●	●	80M	24Q	60N	80J	175	25	51
200×25×32	●	●	●	●	80M	24Q	60N	80J	200	25	32
200×25×51	●	●	●	●	80M	24Q	60N	80J	200	25	51
200×32×51	●	●	●	●	80M	24Q	60N	80J	200	32	51
300×40×76	●	●	●	○	60M	24Q	60N	80J	300	40	76

Tool grinding wheel

Design:
Size 100K = with special edge hardening (mainly for stylus grinders)

EK | DIN 69139 | Form D

Use:
- special fused alumina (EK) for tool grinding on stationary, mechanical tool grinding machines
- for grinding of cutting tools like milling cutters, drills, broaches et al.



N° article	465900	d mm	D mm	B mm	Grit	Hardness
100	●	20	100	50	60	1J
100K	●	20	100	50	60	7J

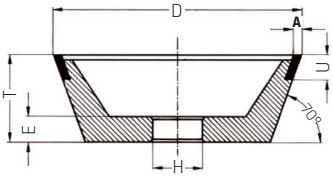
CBN tool grinding wheel

Design:
- synthetic resin or phenolic resin bonding (PFR) for high-performance dry grinding
- grit concentration C75 = caratage per cm / coating volume (ct/cm) 3.3

CBN

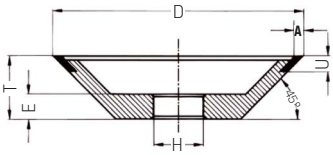
Use:
For grinding HSS tools
Dimensioned for dry grinding, enables cool grinding even without coolant Suited for wet grinding, too (minimal wear)

Form 11 V9



Grinding speeds
dry sanding approx.
18 - 30 m/s
wet sanding approx.
25 - 35 m/s

Form 12 V9



N° article	466032 CBN cup wheel	466042 CBN cup wheel	D mm	A mm	U mm	H mm	T mm	E mm	Concentration	Disc shape
11V9	○	–	100	2	10	20	35	10	C75	11 V9
12V9	–	○	100	2	10	20	20	10	C75	12 V9

Diamond tool grinding disc

Design:
- synthetic resin or phenolic resin bonding (PFR) for high-performance dry grinding
- grit concentration C75 = caratage per cm / coating volume (ct/cm) 3.3

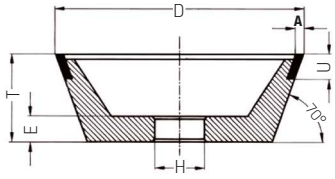
Diamant

Use:
For grinding carbide tools
- for dry sanding, allows cool cutting without coolant Suited for wet grinding, too (minimal wear)

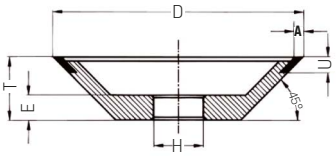
Cutting speeds:
dry sanding approx. 15 - 30 m/s
wet sanding approx. 20 - 30 m/s

Further dimensions and granulation grades are available on request

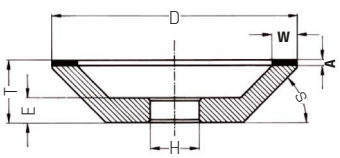
Form 11 V9



Form 12 V9



Form 12 A2



N° article	466007 Diamond cup wheel	466012 Diamond cup wheel	466022 Diamond cup wheel	D mm	A mm	U mm	H mm	T mm	E mm	Concentration	Disc shape
11V9	○	–	–	100	2	10	20	35	10	C100	11 V9
12V9	–	○	–	100	2	10	20	20	10	C100	12 V9
12A2 - 100	–	–	●	100	10	2	20	26	10	C100	12 A2
12A2	–	–	●	125	10	2	20	26	10	C100	12 A2

Grinding disc dresser

Design:
- exchangeable steel-section grinding wheel dresser
- on one axis with pressurised lubrication nipple, mounted inside the dressing head
- the spinning dresser is made of hardened, U-shaped Swedish steel profile teeth, which are very durable and can be used until complete wear out
- lateral plate to protect against sparks and abrasive particles



469100



469150

N° article	469100 Dresser complete	469150 Spare spinning top	Roll Ø mm	Width mm	Total length mm	grinding wheel Ø / max. width mm
0	●	●	36	12	285	125 - 250/35
1	●	●	55	24	435	250 - 500/60
2	●	●	55	50	435	250 - 500/100

Grinding disc dresser TETRABOR®

Design:
Dresser of pure boron carbide, the hardest material following diamonds and boron nitride

Use:
For economical dressing, profiling and sharpening of grinding wheels

Note:
Dressing with soft pressure using only the edge!
For discs up to Ø 300 mm



469300



469320

N° article	469300 Dresser	469320 Holder for dresser	Total length mm	Width mm	Thickness mm
75×12×6	●	●	75	12	6

Dressing rod

Design:
- filled with silicon carbide
- with plastic sleeve and wooden handle

SIC

Use:
For profiling and dressing of grinding discs



N° article	469200 silicon carbide	Total length mm	Width mm	Thickness mm
20	●	400	20	20

Sharpener

PFERD

Design and use:
- with soft polyurethane bonding
- abrasive silicon carbide
- for resharpening or uncovering of fresh layers on diamonds cutting wheels
- by cutting off thin slices from the sharpening file the external blunt diamonds are removed from the abrasive segment

SIC



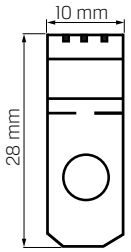
N° article	469380 silicon carbide	Length mm	Width mm	Thickness mm
200×50×25	●	200	50	25

CVD needle dresser

Design:
- optimal dressing tool for achieving consistent surface quality
- constant effective width throughout the entire wearing process
- with 3 needles

Advantages over conventional dressing plates:
Due to the uniformity of the CVD diamond needles, the reproducibility of the work sequence or the dressing result (surface structure of the grinding wheel and wear characteristics of the dressing tool) is almost constant

Note:
Further needle thicknesses and lengths as well as PKD versions on request





N° article	469390 Dressing plate CVD	Dimensions of CVD needles mm
AP101/633C	○	0,6 × 0,6 × 3
AP101/653C	○	0.6 × 0.6 × 5
AP101/833C	○	0.8 × 0.8 × 3
AP101/853C	○	0.8 × 0.8 × 5
AP101/1043C	○	1.0 × 1.0 × 4
AP101/1053C	○	1.0 × 1.0 × 5

Diamond multi-grit dresser

Design:
Dressing surface interspersed with several rows of diamond grit (2.75 carat)

Diamant

F1 = transverse to the shaft
F2 = parallel to the shaft



F1

Use:
For planing, profiling and dressing of straight grinding discs



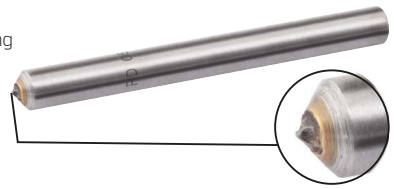
F2

N° article	469400	Shape	Trimmed surface length mm	Trimmed surface width mm	Total length mm
F1	●	F1	30	10	200
F2	●	F2	30	10	200

Diamond single-grit dresser

Design:
- for dressing of grinding discs K60 - 180

Diamant



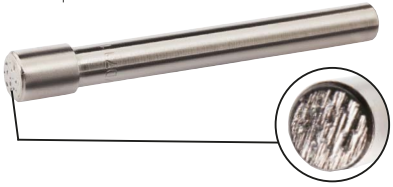
N° article	469490 cylindrical 8×80 mm	Diamond weight carat	Shank adapter
0,5	●	0,5	ZYL
0,75	●	0,75	ZYL

Diamond fine-grit dresser

Design:
- for the dressing of grinding discs K60 - 180 on cylindrical and flat grinders

Diamant

Note:
Coarser or finer graining available on request



N° article	469492 cylindrical 8×80 mm	Diamond weight carat
1,2	●	1,2

Diamond single-grit dresser with natural diamond tip

Design:
- 1st quality = diamonds with 3 - 5 sharp points
- 2nd quality = diamonds with 1 - 3 sharp points

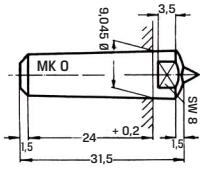
Diamant

Use:
- for dressing, profiling and sharpening of EK (fused alumina) and SC grinding discs
- diamond dresser should be clamped vibration-free and as short as possible

Note:
Further sizes available on request

*Shank ∅ and length at your choice
Without particulars we provide ∅ 10×50 mm

Substitution or applying of new stones is possible!
On request also diamonds up to 5 carats are available!





Carat weight	0,30	0,40	0,60	0,80	1,00
for disk ∅ mm	125 × 30 - 250 × 15	150 × 30 - 300 × 20	200 × 30 - 350 × 20	250 × 30 - 400 × 30	300 × 70 - 500 × 40

N° article	469500 1 quality	469550 2. quality	Diamond weight carat	Shank adapter
0,33MK1	●	–	0,33	MK1
0,50MK0	●	–	0,5	MK0
0,50MK1	●	●	0,5	MK1
0,60MK0	●	●	0,6	MK0

N° article	469500 1 quality	469550 2. quality	Diamond weight carat	Shank adapter
0,80MK0	●	●	0,8	MK0
0,80MK1	●	○	0,8	MK1
1,0MK0	●	○	1	MK0
1,0MK1	●	●	1	MK1

N° article	469500 1 quality	469550 2. quality	Diamond weight carat	Shank adapter
0,3ZYL.	●	●	0,3	ZYL
0,6ZYL.	●	●	0,6	ZYL
0,8ZYL.	●	●	0,8	ZYL

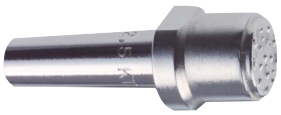
Diamond multi-grit dresser with tips of natural diamonds

Design:
- wearing a number of finely crystallised, sharp crude natural diamonds
- arranged either in one or in several layers
- shank size MK0, MK1

Diamant

Use:
- for dressing, profiling and sharpening of EK (fused alumina) and SC grinding discs
- diamond dresser should be clamped vibration-free and as short as possible
- suited for coarse and robust dressing

Note:
Further sizes available on request





MA 4 MA 7 MA 8

N° article	469580 MK 0	469600 MK 1	Diamond weight carat	Diamanteinsatz ∅ mm	Depth mm	Diamond dispersion	Application note
MA4	○	●	2,5	10	10	5 layers with 13 stones apiece	Universally applicable for all grinding discs from grit 46
MA7	●	●	2,5	12	10	5 layers with 25 stones apiece	Universally applicable for all grinding discs with medium and fine grit
MA8	●	●	5	12	12	durchgesetzt	for large and wide discs with fine grit

Diamond fine-grit dresser

Design:
- cylindrical 10×50 mm
- for the dressing of grinding discs K60 - 180 on cylindrical and flat grinders
- quality D711

Diamant

Note:
Further sizes available on request
Coarser or finer graining available on request



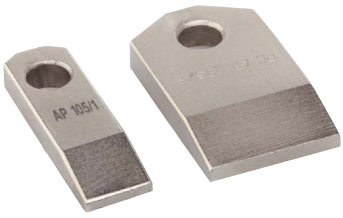
N° article	469605 MK0	469607 MK1	469609 cylindrical 10×50 mm	Diamond weight carat
2,5	○	●	●	2,5
3,5	○	●	●	3,5

Diamond dressing plate

Design:
- for dressing of grinding discs K60 -180 on cylindrical grinding machines
- for finer discs, finer diamond grit sizes are available

Diamant

Note:
Other dimensions, natural sharp points and CVD dressing plates available on request



N° article	469610 Grit D 900
AP105	●
AP205	●

Abrasive cloth Scotch-Brite™

PU 10 pieces

Design:
- flexible and versatile
- very compact and even finish
- for smoothing, matting and cleaning of various surfaces
- for roughing of surfaces, removal of wood fibres or light deburring

Use:
Type A (Aluminium oxide): Abrasive grit with high toughness. Fine, matt grinding pattern.
Type S (Silicon carbide): Hard, pointed abrasive grain. Striking grinding pattern with fine structure.

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470002 Hand sheet L224×B158 mm	Grit	Colour	PU pieces
A-MEDIUM	●	A-MEDIUM	brown	10
A-VERYFINE	●	A-VERYFINE	red	20
S-MEDIUM	●	S-MEDIUM	grey	10
S-ULTRAFINE	●	S-ULTRAFINE	grey	20
F-SUPERFINE	●	F-SUPERFINE	white	10

Abrasive cloth roll Scotch-Brite™

Design:
Wear Resistance (WR) Clean & Finish fibre fleece material, resin-bonded
- particularly tear-proof and resistant
- adapts to the geometry of the workpiece
- consistent, reproducible work result

Use:
Type A (Aluminium oxide): Abrasive grit with high toughness. Fine, matt grinding pattern.
Type S (Silicon carbide): Hard, pointed abrasive grain. Striking grinding pattern with fine structure.



N° article	470020 WR-RL, 10 m×100 mm	Grit	Colour	Comparable granulation
A-MEDIUM	●	A-MEDIUM	red	180-220
A-FINE	●	A-FINE	red	240-280
A-VERYFINE	●	A-VERYFINE	red	280-360
S-VERYFINE	●	S-VERYFINE	grey	400-600
S-SUPERFINE	●	S-SUPERFINE	grey	600-1,000

Abrasive cloth roll Scotch-Brite™

Design:
- **Clean & Finish (CF)** high-performance belt with dense grit distribution and complete abrasive penetration of the nylon fibre
- fast, aggressive grinding behaviour
- uniform grinding pattern
- roll with perforated hand pads to tear off



N° article	470030 CF-RL 35 pads on a roll L115×W150 mm	Grit	Colour	Comparable granulation
A-VERYFINE	●	A-VERYFINE	purple	280 - 360
S-ULTRAFINE	●	S-ULTRAFINE	grey	600 - 1.000

Abrasive cloth

Design and use:
- made of elastic synthetic fibres with abrasive grit in synthetic resin bonding
- usable under dry and wet conditions
- for super finishing of metal, wood and plastic plus for intermediate lacquer sanding or for cleaning polishing (derusting)
- for achieving a uniform surface pattern

PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470004 Hand sheet L229×W152 mm	Grit
100	●	100
180	●	180
280	●	280
400	●	400
600	●	600

Abrasive fleece hand pad/roll Scotch-Brite™

Design:
- **Durable Flex (DF)** high-performance belt with dense grit distribution and complete abrasive penetration of the nylon fibre
- fast, aggressive grinding behaviour
- uniform grinding pattern
- extremely resistant despite highest flexibility

PU 25 pieces

Use:
- manual cleaning of corrosion and contamination. Matting of metal and smoothing of wood surfaces
- roughening and preparing surfaces
- very flexible and therefore also usable in hard to reach places
- for wet and dry use

Type A (Aluminium oxide): Abrasive grit with high toughness. Fine, matt grinding pattern.
Type S (Silicon carbide): Hard, pointed abrasive grain. Striking grinding pattern with fine structure.

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470028 Hand sheet MX-HP, L228×B115 mm	Grit	Colour	Comparable granulation
A-VERYFINE	●	A-VERYFINE	red	280-360
S-ULTRAFINE	●	S-ULTRAFINE	grey	600-1,000

Design:
- roll with 60 perforated hand pads to tear off



N° article	470029 MX-HP, 60 pads on a roll L200×W100 mm	Grit	Comparable granulation
A-VERYFINE	●	A-VERYFINE	280 - 360
S-ULTRAFINE	●	S-ULTRAFINE	600 - 1.000

Abrasive cloth roll

Design:
- made of non-woven nylon fibres
- elastic

Use:
- dry, with water, with emulsion or oil
- cleaning, surface preparation
- fine deburring of sheet material, NF metals, wooden and plastic parts
- suited for the removal of paint, fillers, small score marks and minor scratches plus corrosion elimination



N° article	470062 L10 m×B115 mm	Grit
100	●	100
180	●	180
280	●	280
400	●	400
600	●	600

Hand block Scotch-Brite™

Design:
- for holding hand pads and fleece abrasives
- excellent adhesion and practical handling
- fitting for 470020, 470029, 470062



N° article	470070 PH-AC	Length mm	Width mm
120×80	●	120	80

Non-woven Velcro grinding disc Scotch-Brite™

PU 25 pieces

Design:
- robust nylon-fibre fleece with Velcro bonding on a fabric backing
- precision-moulded ceramic abrasive grain for faster stock removal
- wide grit row
- long service life
- for reducing surface roughness, removing tarnish, smoothing surfaces and finishing

Delivery:
In packaging units only!

Note:
Price per piece

NEW



N° article	470106 PN-DH Ø 115 mm	470107 PN-DH Ø 125 mm	Grit	Colour	degree of fineness
A-COARSE	●	●	A-COARSE	brown	coarse
A-MEDIUM	●	●	A-MEDIUM	red	medium
A-VERYFINE	●	●	A-VERYFINE	blue	fine

Non-woven Velcro grinding disc Scotch-Brite™

PU 20 pieces

Design and use:
- robust nylon-fibre fleece with Velcro bonding on a fabric backing
- wide grit row
- for reducing surface roughness, removing tarnish, smoothing surfaces and light cleaning and deburring work

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470103 SC-DH Ø 115 mm	470104 SC-DH Ø125 mm	Grit	Colour	degree of fineness
A-COARSE	●	●	A-COARSE	brown	coarse
A-MEDIUM	●	●	A-MEDIUM	red	medium
A-VERYFINE	●	●	A-VERYFINE	blue	fine

Velcro backing pad Scotch-Brite™

Socket M 14

Design:
- for holding SC-DH, SL-DH and GB-DH fleece wheels **with centring**
- sturdy construction, durable Velcro backing
- centring reduces vibrations by down to 50 %

Note:
Price per piece



N° article	470114 MN-AC	∅ mm	Thread
115	●	115	M14
125	●	125	M14

Velcro backing pad

KLINGSPOR Schleiftechnologie

Design:
- especially for non-woven discs

Socket M 14

Use:
For mounting Velcro grinding discs to angle grinders with max. 40 m/sec. peripheral speed

Note:
Price per piece



N° article	470190 NDS 555	Ø mm	Thread
115	●	115	M14
125	●	125	M14

Non-woven Velcro grinding disc

KLINGSPOR Schleiftechnologie

Design:
NDS 800
- Velcro grinding disc in excellent quality with increased edge stability for demanding tasks
- ideal for coarse cleaning work, deburring and the treatment of weldseams

Corundum A

PU 10 pieces

Use:
In combination with Velcro backing pad 470190 on angle grinders

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470115 NDS 800 Ø 115 mm	470150 NDS 800 Ø 125 mm	Grit	degree of fineness
50	●	●	60	coarse
100	●	●	120	medium
180	●	●	180	fine

Coarse cleaning disc Scotch-Brite™

3M

Design and use:
- **combines flexibility and aggressiveness** with a fine finish
- several discs can be grouped to form one wheel
- for derusting, paint stripping or cleaning of weld seams
- to remove heavy surface contaminations or coatings
- radially applied on straight grinders, flexible shafts or power drills

PU 2 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470202 BF-DC	Ø mm	Bore Ø mm	Grit	max. U/min^{-1}
152	●	152	12,7	A-MEDIUM	4.000

Design and use:
- **flexible and aggressive**
- open structure prevents clogging
- for stainless steel, NF metals and steel
- applied radially
- for derusting, paint stripping, cleaning of welding seams, removal of heavy surface contaminations and coatings
- for use on straight grinders, flexible shafts or power drills

PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



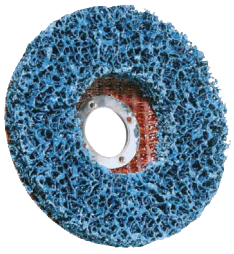
N° article	470201 CG-DC	Ø mm	Bore Ø mm	Grit	max. U/min^{-1}
100	●	100	13	S-EXTRACOARSE	6.000
150	●	150	13	S-EXTRACOARSE	4.000

Design and use:
- **high edge strength, aggressive**
- open structure prevents clogging
- for derusting, paint stripping or cleaning of weld seams
- for removing heavy surface contaminations or coatings
- is applied over the area
- **use on angle grinders, without accessories**

PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470210 XT-RD	Ø mm	Bore Ø mm	Grit	max. U/min^{-1}
115	●	115	22,23	S-EXTRACOARSE	11.000

Design and use:
- **flexible and aggressive**
- open structure prevents clogging
- for derusting, paint stripping or cleaning of weld seams
- for removing heavy surface contaminations or coatings
- is applied over the area
- **use on angle grinders, without accessories**

PU 10 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470212 CG-RD	Ø mm	Bore Ø mm	Grit	max. U/min^{-1}
115	●	115	22,23	S-EXTRACOARSE	11.000

Accessories for Scotch-Brite™ cleaning disc

Use:
- for mounting radial Bristle brushes in Ø 150 mm, 193 mm and 200 mm (e.g. 480020) as well as for Scotch-Brite™ rough cleaning wheels XT-DC, CG-DC and BF-DC discs
- **for wheels with internal Ø 12.7 mm**

Shank 6mm | Shank 8mm

N° article	480050 Clamping mandrel MN-AC	Shank Ø mm	Max. clamping range mm
6	●	6	19
8	●	8	25,4



Abrasive cloth

KLINGSPOR Schleiftechnologie

Corundum | PU 50 pieces

Design:
- universal product for metalworking
- corundum abrasive fabric
- bonded with glue and synthetic resin

470350 =KL 371 X, normal, blue twill
470450 = KL 385 JF, ultra flexible, brown twill

Delivery:
In packaging units only!

Note:
Price per piece



470350



470450

N° article	470350 Sheet standard 230×280 mm	470450 Sheet flexible 230×280 mm	Grit
40	●	●	40
60	●	●	60
80	●	●	80
100	●	●	100
120	●	●	120
150	●	●	150

N° article	470350 Sheet standard 230×280 mm	470450 Sheet flexible 230×280 mm	Grit
180	●	●	180
220	●	●	220
320	●	●	320
400	●	●	400
600	–	●	600

Velcro sheet strips

KLINGSPOR Schleiftechnologie

Corundum | PU 100 pieces

Design:
- for hand sanding block 470590
- synthetic resin-bonded
- tough abrasive paper with good sanding performance

Delivery:
In packaging units only!

Note:
Price per piece

N° article	470595 PS 22 K 125×70 mm	Grit
80	●	80
100	●	100
120	●	120
180	●	180



Sanding sponge Scotch-Brite™

Design and use:
- synthetic resin-bonded abrasive grit on polyurethane foam
- suited for grinding tasks on wood, plastic and paint
- degree of fineness: fine

Delivery:
In packaging units only!

Note:
Price per piece



Corundum | SIC | PU

N° article	470552	Grit	Length mm	Width mm	Thickness mm	Design	PU pieces
100×68×26	●	100	100	68	26	4-sided	100
125×98×13	○	100	125	98	13	2-sided	24

Abrasive paper

KLINGSPOR Schleiftechnologie

Design:
- **grit 150 - 400** = PS 11 C
- **grit 500 - 2000**= PS 11 A
- waterproof silicon carbide abrasive paper
- synthetic resin-bonded and impregnated
- for lacquers and filler

Delivery:
In packaging units only!

Note:
Price per piece



SIC | PU 50 pieces

N° article	470550 Sheet, waterproof, silicon carbide 230×280 mm	Grit
150	●	150
220	●	220
240	●	240
320	●	320
400	●	400
500	●	500

N° article	470550 Sheet, waterproof, silicon carbide 230×280 mm	Grit
600	●	600
800	●	800
1000	●	1000
1500	●	1500
2000	●	2000

Hand sanding block

KLINGSPOR Schleiftechnologie

Design:
- for hand sanding of surfaces
- pre-grinding and re-grinding without re-chucking; firm fixation of the abrasive paper by Velcro



N° article	470590 HK 100 Velcro-backed	Length mm	Width mm	Height mm
118×68×40	●	118	68	40

Soft pad sanding sponge Scotch-Brite™

Corundum | PU 20 pieces

Design:
- **ultra flexible and smooth soft pad** to machine narrowest spaces and profiled workpieces

Use:
For hand grinding of curved or domed surfaces and contours. Suited for wet grinding

Only in packaging units!

Note:
Price per piece



N° article	470554 one-sided coated	Grit	degree of fineness	Length mm	Width mm	Thickness mm
MITTEL	●	60	medium	140	115	5
FEIN	●	100	fine	140	115	5
SUPERFEIN	●	220	superfein	140	115	5
ULTRAFEIN	●	1500	ultrafein	140	115	5
MIKROFEIN	●	1500	mikrofein	140	115	5

Sanding sponge

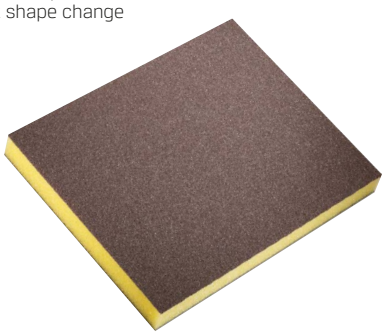
Corundum | PU 10 pieces

Design:
- made of soft PU foam, open-pored surface
- with elastic binding agent
- **2-sided coating**
- colour coding for easy assignment
- minimal clogging, reusable several times
- for wet and dry use
- no loop-through thanks to pressure-compensating foam
- adaptable to contours, curves or profiles for an even sanding pattern

Use:
- for roughening wood, metal or plastic before paint application
- for fine sanding of filler
- for machining profiled and round workpieces
- for roughening surfaces without shape change

Delivery:
In packaging units only!

Note:
Price per piece



N° article	470562 flex pad 98×120 mm	Grit	degree of fineness	Length mm	Width mm
MEDIUM	●	60	medium	120	98
FINE	●	100	fine	120	98
SUPERFINE	●	180	superfein	120	98
ULTRAFINE	●	220	ultrafein	120	98

Sanding paper economy roll 50 m

KLINGSPOR Schleiftechnologie

Design:
- corundum abrasive fabric in rolls
- synthetic resin-bonded

Corundum



N° article	470852 KL 385 JF 50 m×25 mm	470855 KL 385 JF 50 m×40 mm	470860 KL 385 JF 50 m×50 mm	470760 KL 385 JF 50 m×115 mm	Grit
40	–	●	●	○	40
60	●	●	●	●	60
80	●	●	●	●	80
100	●	●	●	●	100
120	●	●	●	●	120
150	–	●	●	●	150
180	–	●	●	●	180
240	–	●	●	●	240
320	–	●	●	●	320
400	–	●	●	●	400

Design:
- made of PU foam, open-pored surface
- with elastic binding agent
- **4-sided coating**
- colour coding for easy assignment
- minimal clogging
- for wet and dry use

Corundum | PU 10 pieces

Use:
- for roughening wood, metal or plastic before paint application
- for fine sanding of filler
- for intermediate sanding of lacquers on surfaces and curves
- for roughening rabbets and slight curves
- suitable for old paint, old lacquer, filler, melamine foil, NC paint, PUR paint, priming material, UP/UV lacquer, water-based paint, plastic, mineral material, hard/soft wood and gypsum



470564

Delivery:
In packaging units only!

Note:
Price per piece



470565

N° article	470564 Combination block, hard 69×98 mm	470565 Standard block, hard 69×98 mm	Grit	degree of fineness	Length mm	Width mm
COARSE	–	●	36	coarse	98	69
MEDIUM	●	●	60	medium	98	69
FINE	●	●	100	fine	98	69
SUPERFINE	–	●	180	superfein	98	69



N° article	470566 Standard block, soft 69×98 mm	Grit	degree of fineness	Length mm	Width mm
MEDIUM	●	60	medium	98	69
FINE	●	100	fine	98	69
SUPERFINE	●	180	superfein	98	69
ULTRAFINE	●	220	ultrafein	98	69

Dispenser

KLINGSPOR Schleiftechnologie

Design:
- metal box with 5 retainers
- with tear-off device

Use:
For placement of economy rolls up to 50 mm (470852-470860)

Delivery:
Without depicted content



N° article	470960 empty	Quantity of roll holders
5	●	5

Sanding paper economy roll in dispenser

Design:
- densely woven cotton fabric with even distribution of the synthetic resin-bonded normal corundum
- tissue brown, for extremely high strain
- extra flexible, oil-resistant
- with very good grit adhesion, high grinding performance and long service life
- **with integrated tear-off knife**

Corundum



N° article	470800 KK 114 F 50 m×25 mm	470850 KK 114 F 50 m×40 mm	470851 KK 114 F 50 m×50 mm	Grit
40	●	●	●	40
60	●	●	●	60
80	●	●	●	80
100	●	●	●	100
120	●	●	●	120
150	●	●	●	150
180	●	●	●	180
240	●	●	●	240
320	●	●	●	320
400	●	●	●	400

Sanding paper economy roll dispenser

Design:
- robust magazine (hammertone enamelled)
- complete with tear-off device and fixing material (for abrasive cloth economy rolls with 20 - 50 mm width and 50 m length)



1 5

N° article	470970 empty	Quantity of roll holders
1	●	1
5	●	5

Abrasive belt endless, normal corundum

Design:
- endless belt made of corundum abrasive fabric
- in full synthetic resin-bonded quality

Use:
- aggressive grinding and long service life
- versatile for deburring of castings, serial parts, tools, pipes and round components made of steel, NF and light metals
- suited for roughing and finishing depending on grit size
- for surface grinding and circular grinding machines

Delivery:
In packaging units only!

Note:
Price per piece



Corundum A | PU

N° article	472008 CS 310 XF 10×330 mm	Grit	PU pieces
40	●	40	25
60	●	60	25
80	●	80	25
120	●	120	25

N° article	472012 CS 310 XF 12×520 mm	Grit	PU pieces
40	●	40	25
60	●	60	25
80	●	80	25
120	●	120	25

N° article	472016 CS 310 XF 13×610 mm	Grit	PU pieces
40	●	40	25
60	●	60	25
80	●	80	25
120	●	120	25
240	●	240	25

N° article	472018 LS 309 X 28×533 mm	Grit	PU pieces
40	●	40	20
60	●	60	20
80	●	80	20
120	●	120	20

N° article	472025 CS 310 X 50×1000 mm	Grit	PU pieces
40	●	40	30
60	●	60	30
80	●	80	30
120	●	120	30

N° article	472030 CS 310 X 50×2000 mm	Grit	PU pieces
40	●	40	10
60	●	60	25
80	●	80	25
120	●	120	25

N° article	472033 LS 309 XH 75×533 mm	Grit	PU pieces
40	●	40	10
60	●	60	10
80	●	80	10
120	●	120	10

N° article	472034 CS 310 X 75×2000 mm	Grit	PU pieces
40	●	40	10
60	●	60	25
80	●	80	25
120	●	120	25

N° article	472044 LS 309 X 100×950 mm	472046 LS 309 X 100×1000 mm	472050 LS 310 X 150×2000 mm	Grit	PU pieces
40	●	●	●	40	10
60	●	●	●	60	10
80	●	●	●	80	10
120	●	●	●	120	10

Abrasive belt endless

KLINGSPOR Schleiftechnologie

Zircon corundum | PU

Design and use:
- synthetic resin-bonding made of zircon corundum
- for high-performance finish at the machining of high-temperature steel
- for soft steels with a smearing tendency, for example, St37 or castings, investment castings, aluminium alloys

CS 411 X: Backing cotton
CS 411 Y: Backing polyester, waterproof, extra tearproof

Delivery:
In packaging units only!

Note:
Price per piece



N° article	472310 CS 411 X 12×520 mm	Grit	PU pieces
40	●	40	30
60	●	60	30
80	●	80	30
120	●	120	30

N° article	472330 CS 411 X 13×610 mm	Grit	PU pieces
40	●	40	30
60	●	60	30
80	○	80	30
120	○	120	30

N° article	472340 CS 411 X 28×533 mm	Grit	PU pieces
40	●	40	30
60	●	60	30
80	●	80	30
120	●	120	30

N° article	472350 CS 411 X 50×1000 mm	Grit	PU pieces
40	●	40	30
60	●	60	30
80	●	80	30
120	●	120	30

N° article	472360 CS 411 X 50×2000 mm	Grit	PU pieces
40	●	40	10
60	●	60	25
80	●	80	25
120	●	120	25

N° article	472390 CS 411 Y 75×2000 mm	Grit	PU pieces
40	●	40	10
60	●	60	10
80	●	80	10
120	●	120	10

N° article	472395 CS 411 Y 150×2000 mm	Grit	PU pieces
40	●	40	10
60	●	60	10
80	●	80	10
120	●	120	10

Abrasive belt endless

VSM WE KNOW ABRASIVES

Ceramic | PU

Design:
- ceramic grit with resin bonding on polyester fabric
- self-sharpening => thereby
- more uniform surface quality
- higher processing speed
- longer tool life
- cooler grinding



N° article	472402 XK 850 X 13×610 mm	Grit	PU pieces
40	●	40	100
60	●	60	100
80	●	80	100

N° article	472400 XK 850 X 75×2000 mm	Grit	PU pieces
36	●	36	20
40	●	40	20
60	●	60	20
80	●	80	20

N° article	472403 XK 850 X 10×330 mm	Grit	PU pieces
60	●	60	100
80	●	80	100

N° article	472404 XK 850 X 12×520 mm	Grit	PU pieces
40	●	40	100
60	●	60	100
80	●	80	100

N° article	472405 XK 850 X 150×2000 mm	Grit	PU pieces
36	●	36	10
40	●	40	10
60	●	60	10
80	●	80	10

N° article	472406 XK 850 X 28×533 mm	Grit	PU pieces
40	●	40	20
60	●	60	20
80	●	80	20

N° article	472408 XK 850 X 50×2000 mm	Grit	PU pieces
40	●	40	10
60	●	60	10
80	●	80	10

Non-woven abrasive belt endless

KLINGSPOR Schleiftechnologie

PU 10 pieces

Use:
- for the machining of steel and stainless steel
- in particular for sheet metal, coils and circuit boards

Delivery:
In packaging units only!



N° article	472100 NBF 800 12×520 mm	472120 NBF 800 28×533 mm	Grit
100	–	●	100
180	●	●	180
240	●	●	240

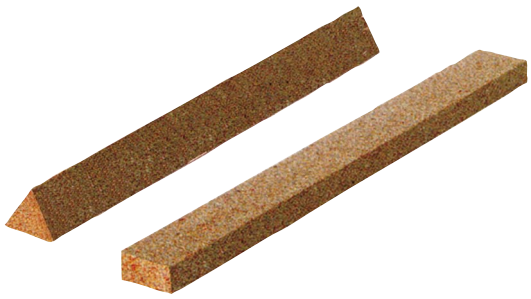
Sanding file Corundum

Korund

Design:
- for deburring, chamfering and sharpening of tools
- made of corundum ceramically bonded
- hardness 0/P in standard quality

Use:
- combined with oil, kerosene, water or dry
- for machining of steel

N° article	473000 square	473100 three-square	473200 flat	473400 half round	473500 round	473600 Knife	Length mm	Width mm	degree of fineness	Grit
100×6M	●	●	●	–	●	–	100	6	medium	180
100×6F	●	●	●	●	●	–	100	6	fine	320
100×8M	●	●	●	●	●	–	100	8	medium	180
100×8F	●	●	●	–	●	–	100	8	fine	320
100×10G	●	●	●	●	●	–	100	10	coarse	80 - 100
100×10M	●	●	●	●	●	–	100	10	medium	180
100×10F	●	●	●	●	●	–	100	10	fine	320
100×13G	●	○	–	–	–	–	100	13	coarse	80 - 100
100×13M	●	●	●	●	●	–	100	13	medium	180
100×13F	●	●	●	–	●	–	100	13	fine	320
100×25M	–	–	–	–	–	●	100	25	medium	180
100×25F	–	–	–	–	–	●	100	25	fine	320
150×16G	●	●	●	●	–	–	150	16	coarse	80 - 100
150×16M	●	●	●	●	–	–	150	16	medium	180
150×16F	●	●	●	●	–	–	150	16	fine	320

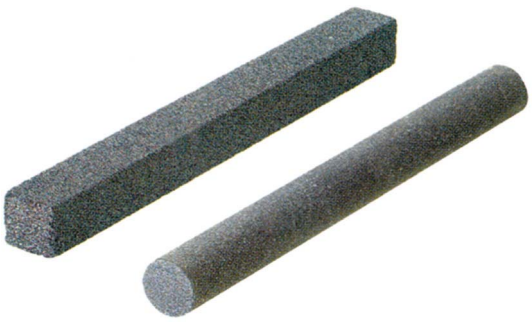


Sanding file SiC

SIC

Design and use:
- made of pure silicon carbide, ceramic bonded
- high hardness and self-sharpening effect
- for deburring, chamfering and sharpening of tools
- for machining carbide metal, NF metals, ceramics and cast

N° article	474000 square	474100 three-square	474200 flat	474400 half round	474500 round	474600 Knife	Length mm	Width mm	degree of fineness	Grit
100×6M	–	–	–	–	●	–	100	6	medium	180
100×6F	●	●	○	○	●	–	100	6	fine	320
100×8M	●	●	○	○	●	–	100	8	medium	180
100×10M	●	●	●	●	●	–	100	10	medium	180
100×10F	●	●	●	●	●	–	100	10	fine	320
100×13M	●	●	○	●	●	–	100	13	medium	180
100×13F	●	●	○	●	○	–	100	13	fine	320
100×25G	–	–	–	–	–	○	100	25	coarse	80 - 100
100×25M	–	–	–	–	–	●	100	25	medium	180
100×25F	–	–	–	–	–	●	100	25	fine	320
150×16G	●	●	●	○	○	–	150	16	coarse	80 - 100
150×16M	●	●	●	●	●	–	150	16	medium	180
150×16F	●	●	●	●	●	–	150	16	fine	320



Sanding file Hard Arkansas

Design and use:
- natural stone (genuine Arkansas) made of finest-grained quartz
- high edge strength
- corresponds to grit size 800
- for finest grinding

Note:
Due to natural size variations of the raw material blocks, exact dimensions cannot always be met



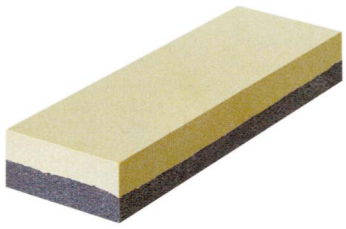
N° article	474700 square	474720 three-square	474740 flat	474750 half round	474760 round	474780 Knife	Length mm	Width mm	Grit
100×6	–	–	○	–	●	–	100	6	800
100×8	●	–	○	–	●	–	100	8	800
100×10	●	●	●	●	●	–	100	10	800
100×13	–	●	●	–	–	–	100	13	800
100×25	–	–	–	–	–	●	100	25	800

Bench stone (Hone)

Korund SIC

Design:
- combined oilstone with hardness degree 0/P
- coarse side for pregrinding
- fine side for finishing

Use:
- for sharpening, deburring and chamfering of tools
- corundum for the treatment of steel, silicon for the treatment of carbide and cast iron



N° article	474800 Corundum	474850 Silicon carbide	Length mm	Width mm	Thickness mm
100×25	●	●	100	25	13
115×40	●	●	115	40	16
125×50	●	●	125	50	20
150×50	●	●	150	50	25
200×50	●	●	200	50	25

2-component whetstone

MACOLAEPP

Design and use:
- honing stone is double-pressed
- application without additional oils
- for processing all metallic materials, hard and soft
- dry processing of the material without firm pressure
- high resistance to breakage



N° article	474860 square	Length mm	Width mm
125×50×25	○	125	50

Bench stone (Hone)

KYOCERA

Design:
- made of highly sintered, binder-free aluminium oxide
- high hardness and edge and profile resistance
- for excellent surfaces thanks to the finely and densely sintered texture
- pasted into a wooden box

Delivered in case

Use:
- for deburring, chamfering and sharpening of tools
- mainly for grinding hard materials



N° article	475800 medium	475850 fine	Length mm	Width mm	Thickness mm
100×25	●	●	100	25	10
120×50	●	●	120	50	10

Hand lapper
for carbide metal

MACOLAEPP

Design:
- with high cohesiveness at edges and surfaces
- no clogging, robust, insensitive to breakage

Use:
- for machining of HM turning tools
- for sharpening cutting edges
- for removal of built-up edges (thus increasing tool life)



N° article	474890 Plastic handle	Grit	Grit ∅ µm	Colour	Trimming L × W × H mm	Total length mm	Application
180-130	●	180	130	yellow	60×20×10	125	coarse grinding
220-100	●	220	100	blue	60×20×10	125	medium grinding
360-50	●	360	50	red	60×20×10	125	fine grinding
500-25	●	500	25	green	60×20×10	125	finest grinding

Sanding file Degussit

KYOCERA

Design:
- made of highly sintered aluminium oxide, free of bonding agents (fine, dense texture)
- with extreme rigidity and permanence of edges and profile

Use:
- for deburring, chamfering and sharpening of tools
- mainly for grinding hard materials

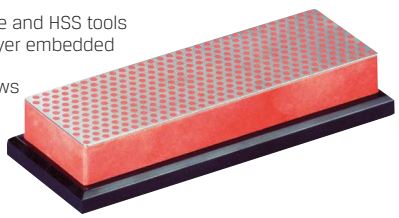


N° article	475000 square	475100 three-square	475200 flat	475400 half round	475500 round	475600 Knife	Length mm	Width mm	Grit	degree of fineness
100×6M	●	●	●	–	●	–	100	6	600	medium
100×6F	●	●	●	–	●	–	100	6	2000	fine
100×8M	●	●	●	–	–	–	100	8	600	medium
100×8F	●	●	●	–	●	–	100	8	2000	fine
100×10G	●	●	–	●	–	–	100	10	60	coarse
100×10M	●	●	–	●	●	–	100	10	600	medium
100×10F	●	●	–	–	●	–	100	10	2000	fine
100×15M	–	–	–	–	–	○	100	15	600	medium
120×13M	●	●	–	–	–	–	120	13	600	medium
120×13F	●	○	–	–	–	–	120	13	2000	fine

Diamond oilstone

BARKE

Design:
- for quick sharpening of carbide and HSS tools
- diamond coating in a nickel layer embedded on a base of steel and plastic
- totally even oilstone - no hollows or grooves whatsoever
- durable, even, extremely firm diamond surface



N° article	475900 150×50 mm	Grit	Length mm	Width mm	Application
9MIKRON	●	9 Mikron (Körnung extra fein)	150	50	for carving tools and chisels
25MIKRON	●	25 Mikron (Körnung fein)	150	50	for HSS and carbide tools
45MIKRON	●	45 Mikron (Körnung grob)	150	50	for woodworking tools

Diamond oilstone

3M

Design:
- flex diamond material is glued to a 10 mm thick aluminium plate



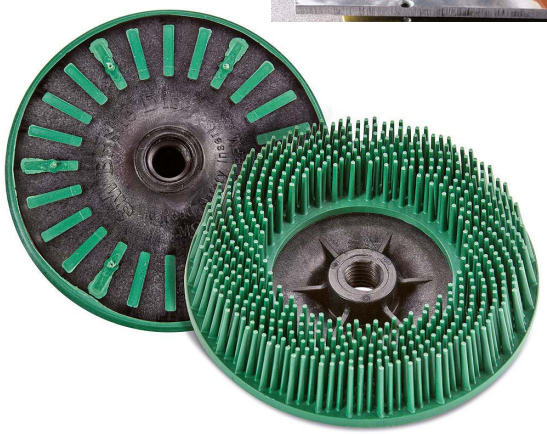
N° article	475920 in leather pouch	Grit	Length mm	Width mm
N020	●	N020	100	25
N040	●	N040	100	25

Special cleaning disc Cubitron™

Ceramic | Socket M 14

Design and use:
- for derusting, paint stripping, removal of adhesive residues and other contaminations
- especially for flat surfaces
- works without contact pressure
- **ceramic Cubitron™ abrasive grit (no clogging)**





N° article	480010 Bristle Disc, BD-ZB	Diameter mm	Thread	Grit	Colour	Max. permissible speed rpm^{-1}
50	●	115	M14	50	green	12.000
80	●	115	M14	80	yellow	12.000
120	●	115	M14	120	white	12.000

Design and use:
- radial brush of 8 individual segments (each approx. 1.7 mm wide), thus variable width
- observe direction of rotation
- bent bristles
- **ceramic Cubitron™ abrasive grit (no clogging)**
- for cleaning, paint stripping, deburring and cross-fading on almost all materials, especially for highly contoured surfaces
- for use on double or straight grinders with enclosed reducer rings Ø 22.2 | 19.0 | 15.6 | 12.7 mm or flexible shafts with clamping mandrel 480050

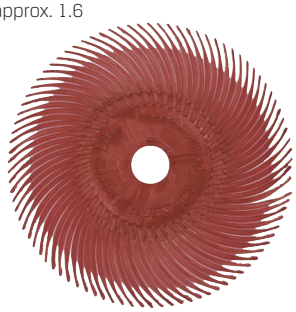
Ceramic



N° article	480020 Bristle brush BB-ZB type C	Diameter mm	Bore Ø mm	Grit	Colour	Max. permissible speed rpm^{-1}
80	●	152,4	25,4	80	yellow	6.000
120	●	152,4	25,4	120	white	6.000
220	●	152,4	25,4	220	red	6.000

Design and use:
- radial single segments
- bent bristles
- **ceramic Cubitron™ abrasive grit (no clogging)**
- brush width freely selectable (1 segment approx. 1.6 mm wide) through use with mandrel
- for cleaning, paint stripping, deburring and cross-fading on almost all materials, especially for highly contoured surfaces
- for use on straight grinders or flexible shafts with mandrel 480055 6
- observe direction of rotation

Ceramic



N° article	480025 Bristle Brush, RB-ZB, type C,	Diameter mm	Bore Ø mm	Grit	Colour	Max. permissible speed rpm^{-1}
80	●	76,2	9,5	80	yellow	20.000
120	●	76,2	9,5	120	white	20.000
220	●	76,2	9,5	220	red	20.000

Design and use:
- like 480025
- 6 segments potted with one 6 mm shank
- immediate use on straight grinders or flexible shafts without any further accessories

Ceramic | Shank 6mm



N° article	480030 Bristle brush BB-ZS	Diameter mm	Grit	Colour	Max. permissible speed rpm^{-1}
80	●	76,2	80	yellow	6.000
120	●	76,2	120	white	6.000
220	●	76,2	220	red	6.000

Accessories for Scotch-Brite™ cleaning disc

Use:
- for mounting radial Bristle brushes in Ø 150 mm, 193 mm and 200 mm (e.g. 480020) as well as for Scotch-Brite™ rough cleaning wheels XT-DC, CG-DC and BF-DC discs
- **for wheels with internal Ø 12.7 mm**

Shank 6mm | Shank 8mm

N° article	480050 Clamping mandrel MN-AC	Shank diameter mm	Max. clamping range mm
6	●	6	19
8	●	8	25,4



Use:
- to receive single bristle segments in Ø 50 mm and 76.2 mm (e.g. 480025) up to 12.7 mm width
- 2 clamping nuts (for different widths)

Shank 6mm

N° article	480055 Mandrel MN-AC/990M	Shank diameter mm	Max. clamping range mm
6	●	6	12,7



Technical brushes for deburring

Technical burrs and sharp edges are a problem and risk in production that should not be underestimated: employees or customers can injure themselves, workpieces do not fit precisely, the assembly of parts becomes impossible or is only possible with rework, surfaces can be destroyed by moving parts.

Conventional grinding and milling tools often leave behind a new burr, the so-called secondary burr, which also has to be reworked. By using brushes, however, a burr can be completely removed or rounded in a defined manner.

Deburring of cut edges



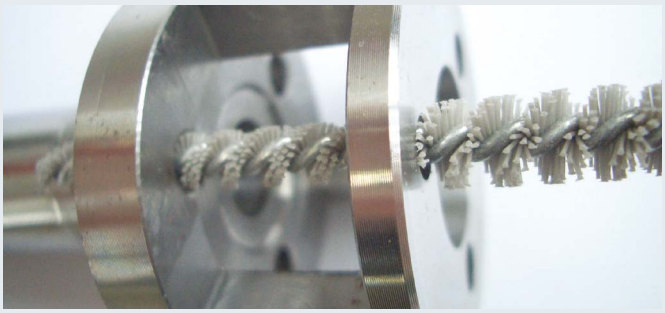
For burrs that arise during cutting, sawing or punching, we offer various brushes for every machine type (bench grinder, table deburrer or deburring machine), which replace laborious manual work with scrapers and files.

The cut edges of pipes in particular can be deburred very efficiently with brushes: only brushes are able to reach the inner and outer edges of the pipe ends in one operation and with one tool. Even with 10 saw edges per working day, the use of a round brush is worthwhile in every workshop!

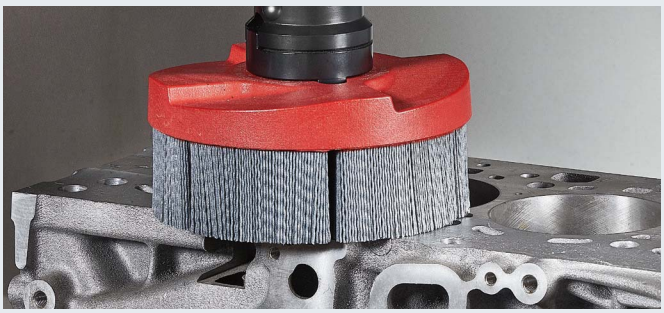
Deburring of holes and cross holes

Internal brushes are the ideal tools for deburring or cleaning holes and cross holes. Equipped with abrasive bristles, synthetic bristles or metal wires, they are used on valves, motor housings, pumps or nozzles.

If the inlet opening is smaller than the surface to be machined behind it, knotted end brushes are used, which open at higher speeds. They can also be used to machine workpieces with strong contours or to clean threads in pipe ends.



Deburring of machine parts



Both machining and non-machining production steps produce burrs that must be completely removed.

Cup or disc brushes are suitable for deburring large parts with different edge shapes (e.g. gearbox housings or cylinder heads). In machining centers or special machines, round or roller brushes can deburr gears or camshafts, for example. And end brushes can be used for difficult-to-reach and smaller surfaces.

Lessmann GmbH

Lessmann is one of the leading producers of technical brushes in Europe and offers a broad portfolio with over 10,000 standard items that are manufactured in Oettingen in Bavaria.

Lessmann is also a development and production specialist for special models in small and large series. With a dedicated engineering department and the in-house tool and fixture construction, there is plenty of scope and modern equipment for all imaginable special tasks.



QUALITY MADE IN GERMANY

Wheel brush

Design:
- aggressive multi-row round brushes (Exception: 150 × 16/0.3 = single-row)
- with corrugated trimming

Use:
- universal brush for medium-heavy brushing operations
- optimal for the treatment of large-scale surfaces

Note:
For variable use each brush is accompanied by a selection of bore reducers:
- brushes Ø 100-125 mm, 20 mm => 1/2", 5/8"
- brushes Ø 150-200 mm, 31.75 mm => 13, 15, 16, 19, 20 mm, 7/8" and 1"
- brushes Ø 250 mm, 50.80 mm => 20 mm*
- brushes Ø 300 mm, 50.80 mm => 25.40 mm*

*please specify deviating bores when ordering



480120



480220

N° article	480120 Steel wire crimped	480220 Stainless steel wire crimped	Ø mm	Bore Ø mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
100×20/0,2	●	–	100	20	20	0,2	23	8.000
100×20/0,3	●	●	100	20	20	0,3	23	8.000
100×28/0,3	●	–	100	20	28	0,3	23	8.000
125×22/0,3	●	●	125	20	22	0,3	30	6.000
150×30/0,2	●	●	150	31,75	30	0,2	32	6.000
150×30/0,3	●	●	150	31,75	30	0,3	29	6.000
178×23/0,3	●	●	178	31,75	23	0,3	29	6.000
178×32/0,3	●	●	178	31,75	32	0,3	38	6.000
200×30/0,3	●	●	200	31,75	30	0,3	38	4.500
200×38/0,3	●	–	200	31,75	38	0,3	38	4.500
250×28/0,3	○	○	250	50,8	28	0,3	47	3.600
300×32/0,3	○	–	300	50,8	32	0,3	50	3.000

Wheel brush Xtreme wire

Design:
- with corrugated Xtreme special wire
- compact wire configuration
- aggressive version
- particularly high wire density
- higher deburring performance with less wear

Use:
- suitable for deburring machines, table deburring machines and automated machines
- for processing profiles, flat parts and deburring the cut edges of pipes
- fast and effective deburring of inner and outer edges in a single operation
- variable immersion depth, adapts to the contours of complex components

NEW



N° article	480401 Steel wire crimped	Ø mm	Bore Ø mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
250×60/0,31	○	250	50,8	60	0,3	53	3.600

Wheel brush

Design:
- flexible bristles
- gentle treatment, adaptation to the workpiece
- no encrusting, bristles remain abrasive

Use:
- in stationary machines and machining centres
- for deburring, derusting and roughening of stainless steel, light metal or plastic

SiC





N° article	480322 Steel wire crimped	480324 Stainless steel wire crimped	Ø mm	min. standard bore mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
100×12/0,30	●	●	100	12	12	0,3	21	8.000
150×14/0,30	●	●	150	12	14	0,3	32	6.000
178×14/0,30	NEW ●	NEW ●	178	14	14	0,3	46	6.000
200×16/0,30	●	●	200	16	16	0,3	32	6.000

N° article	480326 Abrasive bristles (SiC K120/1.1)	Ø mm	min. standard bore mm	Width mm	Trimming height mm	Max. permissible speed rpm^{-1}
100×12/120	●	100	12	12	21	8.000
150×14/120	●	150	12	14	32	6.000
178×14/120	●	178	12	14	46	6.000
200×16/120	●	200	16	16	32	6.000

Deburring wheel brush

LESSMANN® THE GERMAN BRUSH COMPANY

SiC

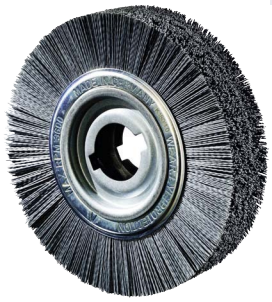
Design:
- special brushes for all common deburring machines
- high wire content, exactly uniform trimming distribution
- longer tool life due to the use of very high quality wire
- with axle cover, bore and double keyway 13 × 7 mm



480250



480252



480254

N° article	480250 Steel wire crimped	480252 Stainless steel wire crimped	480254 Abrasive bristles (SiC 180/1,0)	∅ mm	Bore ∅ mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
250×60/0,35	●	●	●	250	50,8	60	0,35	50	3.600

Wheel brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- trimming single-row
- braid-shaped with rose bud

Use:
- suited for angle grinders or in stationary use
- for pre-machining or reworking of weld seams (fillet weld and butt weld)
- removes scale, rust, paint, slag, rubber residues and deburrs edges

N° article	480570 Steel wire knotted	480572 Stainless steel wire knotted	∅ mm	Bore ∅ mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
115×14	●	●	115	22,2	14	0,5	24	12.500
115×14/M14	●	–	115	–	14	0,5	24	12.500
125×14	●	●	125	22,2	14	0,5	29	12.500
125×14/M14	●	–	125	–	14	0,5	29	12.500
150×14	●	–	150	22,2	14	0,5	32	12.500
178×14	●	●	178	22,2	14	0,5	38	12.500



480570



480572

Wheel brush Interchangeable braid

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- right-left knotted
- braid-shaped with rose bud
- **the aggressive version is** ideal for processing corners and edges
- ideal for heavy brushing works
- excellent tool life
- for processing of rather large steel surfaces
- suitable for angle grinders
- for machining of of weldseams, deburring, cleaning
- for removing paint, rust, slag, scale and concrete residues

Tip for users:
Turn the brushes repeatedly during use.
This way, the wire tips sharpen automatically!

Tip

Turn the brushes over and over again during use.

In this way, the wire tips sharpen automatically!

NEW

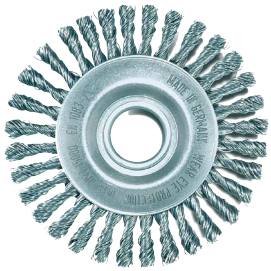


N° article	480580 Steel wire interchangeable plait	480581 Stainless steel wire interchangeable braid	∅ mm	Number of braids	Bore ∅ mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
115×14	●	●	115	20	22,2	14	0,5	23,5	12.500

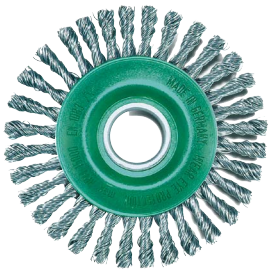
Pipeline brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- fully knotted (wire ends are cut completely) and pressed firmly into the steel body
- excellent tool life and pleasant running smoothness
- particularly for professional treatment of U- and V-welds, especially at pipe joints
- slim form



480576



480578

N° article	480576 Steel wire knotted	480578 Stainless steel wire knotted	∅ mm	Number of braids	Bore ∅ mm	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
115×6	●	●	115	22	22,2	6	0,5	22	15.000
125×6	●	–	125	40	22,2	6	0,5	26	15.000

Cup brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- smooth steel wire, knotted
- ideal for heavy brushing works
- for preparing metal surfaces before painting
- for removing slag, rust, scale or concrete residues

Socket M 14



481090



481092

N° article	481090 Steel wire knotted	481092 Stainless steel wire knotted	∅ mm	Number of braids	Trimming height mm	Wire thickness mm	Thread	Max. permissible speed rpm^{-1}
65/0,35	●	–	65	18	20	0,35	M14	12.500
65/0,50	●	●	65	18	20	0,5	M14	12.500
90/0,50	●	–	90	20	22	0,5	M14	11.500

Cup brush Interchangeable braid

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- right-left knotted
- braid-shaped with rose bud
- **the aggressive version is** ideal for processing corners and edges
- ideal for heavy brushing works
- excellent tool life
- smooth and unbalance-free running
- for processing of rather large steel surfaces
- suitable for angle grinders
- for machining of weldseams and for cleaning
- for removing paint, rust, slag, scale and concrete residues

Socket M 14

NEW



N° article	481094 Steel wire interchangeable braid	481095 Stainless steel wire interchangeable braid	∅ mm	Number of braids	Trimming height mm	Wire thickness mm	Thread	Max. permissible speed rpm^{-1}
65/0,50	●	●	65	18	20	0,5	M14	12.500

Cup brush crimped

osborn

Design and use:
- with hardened steel wire trimming
- for machining large surfaces
- for removing slag, paint, rust, scale etc.

Socket M 14

TÜV SÜD



481020



481030

N° article	481020 Steel wire crimped	481030 Stainless steel wire crimped	∅ mm	Trimming height mm	Wire thickness mm	Thread	Max. permissible speed rpm^{-1}
60/0,20	●	–	60	21	0,2	M14	12.500
60/0,30	●	●	60	21	0,3	M14	12.500
80/0,30	●	●	80	25	0,3	M14	8.500
100/0,30	●	●	100	30	0,3	M14	8.500

Cup brush with supporting ring,

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- smooth steel wire, knotted
- **with supporting ring,** which stabilises the brush and is simply removed as soon as the free wire trim is worn out, after which a further 20 mm of wire is available
- ideal for heavy brushing works
- for preparing metal surfaces before painting
- for removing slag, rust, scale or concrete residues

Socket M 14



480840



480842

N° article	480840 Steel wire knotted	480842 Stainless steel wire knotted	∅ mm	Number of braids	Trimming height mm	Wire thickness mm	Thread	Max. permissible speed rpm^{-1}
80/0,5	●	●	80	20	25	0,5	M14	9.000
100/0,5	●	–	100	23	23	0,5	M14	9.000
125/0,5	●	–	125	32	25	0,5	M14	7.000

Cup brush Xtreme wire

osborn

Design:
- with corrugated Xtreme special wire
- **up to 8× longer service life compared to conventional crimped cup brushes**
- low contact pressure required
- ensures an even, satin surface finish
- very low wire breakage
- combines the aggressive cleaning performance of knotted brushes with the flexibility of soft corrugated brushes
- **low-vibration and low-noise**

Use:
- suitable for angle grinders
- for removing rust, paint, scale, slag, silicate residues, to prevent blue discolouration and for deburring

Socket M 14

TÜV SÜD

NEW



N° article	481040 Steel wire crimped	∅ mm	Trimming height mm	Wire thickness mm	Thread	Max. permissible speed rpm^{-1}
60/0,30	○	60	20	0,3	M14	12.500
80/0,30	○	80	25	0,3	M14	12.500
100/0,30	○	100	22	0,3	M14	8.500

Bevel brush Xtreme wire

osborn

Design:
- with corrugated Xtreme wire
- **up to 8× longer service life compared to conventional crimped brushes**
- flexible Xtreme wire, adapts perfectly to the workpiece
- processing of large surfaces and hard-to-reach areas
- combines the best features of a cup brush with those of a round brush
- ensures an even, satin surface finish
- **low-vibration and low-noise**

Use:
- suitable for angle grinders
- for removing rust, paints, silicates, for weld seam processing and for deburring

Socket M 14

NEW



N° article	481245 Steel wire crimped	∅ mm	Width mm	Trimming height mm	Wire thickness mm	Thread	Max. permissible speed rpm^{-1}
100/0,30	○	100	10	20	0,3	M14	12.500

Bevel brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- made of high-strength steel wire, smooth
- for difficult to access places
- left twist knotted for longer tool life

Socket M 14



481220



481222

N° article	481220 Steel wire knotted	481222 Stainless steel wire knotted	∅ mm	Number of braids	Width mm	Width mm	Wire thickness mm	Trimming height mm	Thread
100×12	●	●	100	18	12	12	0,35	20	M14
115×12	●	●	115	20	12	12	0,5	24	M14
125×12	●	–	125	20	12	12	0,5	29	M14

Design:
- made of high-strength steel wire
- for difficult to access areas (conical form)
- for deburring and derusting with angle grinders

Socket M 14



481232



481234

N° article	481232 Steel wire crimped	481234 Stainless steel wire crimped	∅ mm	Width mm	Wire thickness mm	Trimming height mm	Thread
100×10	●	●	100	10	0,35	20	M14

Bevel brush Interchangeable braid

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- right-left knotted
- braid-shaped with rose bud
- **the aggressive version is** ideal for processing corners and edges
- ideal for heavy brushing works
- excellent tool life
- for processing of rather large steel surfaces
- suitable for angle grinders
- for treatment of weld seams
- for removing paint, rust, slag, scale and concrete residues

Socket M 14

NEW



481224



481225

N° article	481224 Steel wire interchangeable braid	481225 Stainless steel wire interchangeable braid	∅ mm	Number of braids	Width mm	Wire thickness mm	Trimming height mm	Thread	Max. permissible speed rpm^{-1}
115×12	●	●	115	20	12	0,5	24	M14	15.500

Wheel brush X-LOCK

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- trimming single-row
- braid-shaped with rose bud
- for pre-machining or reworking of weld seams (fillet weld and butt weld)
- removes scale, rust, paint, slag, rubber residues and deburrs edges
- suitable for use on angle grinders with X-LOCK tool holder

NEW



480573



480574

N° article	480573 Steel wire knotted	480574 Stainless steel wire knotted	∅ mm	Number of braids	Width mm	Bore ∅ mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
125×14	○	○	125	20	14	22.23	0,5	29	12.500

Pipeline brush X-LOCK

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- for machining of difficult to access places, like inside bores or recesses at housing parts
- very narrow braid
- with rose bud knotting to increase tool life
- with increasing speed the braids open more and more
- suitable for use on angle grinders with X-LOCK tool holder

NEW



480577



480579

N° article	480577 Steel wire knotted	480579 Stainless steel wire knotted	∅ mm	Number of braids	Width mm	Bore ∅ mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
125×6	○	○	125	40	6	22.23	0,5	27	12.500

Cup brush X-LOCK

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- with hardened steel wire trimming
- for machining large surfaces
- for removing slag, paint, rust, scale, for polishing etc.
- suitable for use on angle grinders with X-LOCK tool holder

NEW



481021



481031

N° article	481021 Steel wire, crimped	481031 Stainless steel wire crimped	∅ mm	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}
85/0,30	○	○	75	22	0,3	12.500

Design:
- smooth steel wire, knotted
- ideal for heavy brushing works
- for preparing metal surfaces before painting
- for removing slag, rust, scale or concrete residues
- suitable for use on angle grinders with X-LOCK tool holder

NEW



481093



481091

N° article	481091 Steel wire knotted	481093 Stainless steel wire knotted	∅ mm	Number of braids	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}
85/0,50	○	○	75	20	20	0,5	12.500

Bevel brush X-LOCK

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- made of high-strength steel wire
- for difficult to access areas (conical form)
- for deburring and derusting with angle grinders
- suitable for use on angle grinders with X-LOCK tool holder

NEW



481233



481235

N° article	481233 Steel wire crimped	481235 Steel wire crimped	∅ mm	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}
115×10	○	○	115	20	0,35	12.500

Design:
- made of high-strength steel wire, smooth
- for difficult to access areas (conical form)
- left twist knotted for longer tool life
- suitable for use on angle grinders with X-LOCK tool holder

NEW



481221



481223

N° article	481221 Steel wire knotted	481223 Stainless steel wire knotted	∅ mm	Bore ∅ mm	Number of braids	Width mm	Wire thickness mm	Trimming height mm	Max. permissible speed rpm^{-1}
115×12	○	○	115	22.23	20	12	0,5	24	12.500



Shank mounted wheel brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- dense trimming
- due to their small diameters these brushes can be used at difficult to access places
- for mounting to hand-held drills, flexible shafts and hand grinders

Schaft 6mm


481510


481512


481513

NEW

N° article	481510 Steel wire crimped	481512 Stainless steel wirecrimped	∅ mm	Trimming height mm	Width mm	Wire thickness mm	Max. permissible speed rpm^{-1}
30/0,20	●	●	30	6	6	0,2	20.000
40/0,20	●	●	40	9	9	0,2	18.000
50/0,20	●	●	50	12	15	0,2	15.000
50/0,30	●	●	50	12	15	0,3	15.000
60/0,20	●	●	60	17	13	0,2	15.000
60/0,30	●	●	60	17	13	0,3	15.000
70/0,20	●	●	70	19	13	0,2	15.000
70/0,30	●	●	70	19	13	0,3	15.000
80/0,20	●	–	80	20	13	0,2	15.000
80/0,30	●	●	80	20	13	0,3	15.000
100/0,30	NEW ●	NEW ●	100	25	14	0,3	12.000

N° article	481513 Brass wire crimped	∅ mm	Trimming height mm	Width mm	Wire thickness mm	Max. permissible speed rpm^{-1}
40/0,20	●	40	9	7	0,2	18.000
50/0,20	●	50	12	10	0,2	15.000
60/0,20	●	60	17	12	0,2	15.000
70/0,20	●	70	19	12	0,2	15.000

Shank mounted wheel brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- to remove underbody protection
- suitable for rust removal, deburring or roughening etc.
- for machining of difficult to access places

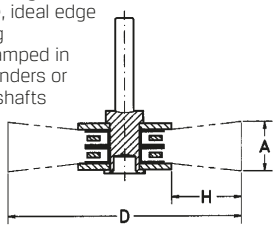
Schaft 6mm


481562


481564

N° article	481562 Steel wire knotted	481564 Stainless steel wire knotted	∅ mm	Trimming height mm	Width mm	Wire thickness mm	Max. permissible speed rpm^{-1}
75×0,50	●	●	75	15	12	0,5	25.000

Design:
- for deburring stainless steel and aluminium
- abrasive, ideal edge rounding
- to be clamped in hand grinders or flexible shafts



Schaft 6mm

SIC



N° article	481558 Abrasive bristles (SiC 120)	481559 Abrasive bristles (SiC 320)	481558 Wire thickness mm	481559 Wire thickness mm	∅ mm	Trimming height mm	Width mm	Max. permissible speed rpm^{-1}
30	●	●	0,6	0,6	30	6	6	18.000
50	●	●	1,1	0,6	50	12	10	15.000
70	●	●	1,1	0,6	70	20	12	15.000

Miniature brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- for deburring and polishing of small surfaces
- for cleaning of small workpieces
- brushes with stainless steel wire for machining of stainless steel surfaces and aluminium
- for metalworking industries and crafts
- suitable for precision tools, precision mechanics or pneumatics and hydraulics

Shank 3mm

PU 10 pieces






Round brushes


Surface brushes


End brushes

N° article	481610 Steel wire crimped 0.10 mm	481612 Stainless steel wire crimped 0.10 mm	481614 Brass wire crimped 0.10 mm	NEW 481615 Abrasive bristles (SiC 500) 0.46 mm	NEW 481617 Polyamide 0.15 mm	NEW 481619 Natural bristles black	∅ mm	Trimming height mm	Width mm	Max. permissible speed rpm^{-1}	Design
19R	●	●	●	–	–	–	19	5	2	12.000	Wheel brush
22R	●	●	●	●	●	●	22	6	2	10.000	Wheel brush
15F	●	●	●	–	●	●	15	5	2	15.000	Surface brush
18F	●	●	●	●	–	–	18	6	2	15.000	Surface brush
5P	●	●	●	●	●	●	5	8	–	15.000	End brush

End brush

Design and use:
- industrial quality crimped wire brush
- for use on high-speed machines
- the flexible trim material adapts optimally to the workpiece
- the brush spreads out so that different bore diameters can be machined
- for derusting, paint stripping, smoothing, edge rounding, deburring and internal machining

Schaft 6mm



30×45



10×100

N° article	481620 Steel wire crimped	481670 Stainless steel wire crimped	∅ mm	Trimming height mm	Base body length mm	Wire thickness mm	Max. permissible speed rpm^{-1}
10×45	●	●	11	20	45	0,3	20.000
17×45	●	●	16	25	45	0,3	18.000
25×45	●	●	22	25	45	0,3	18.000
30×45	●	●	29	25	45	0,3	15.000
10×100	●	●	11	20	100	0,3	10.000

Surface brush

Design and use:
- industrial quality crimped wire cup brush
- for use in drilling machines
- flexible trim material
- for paint stripping and derusting surfaces

Schaft 6mm



N° article	481820 Steel wire crimped	∅ mm	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}
50	●	50	17	0,3	4.500
75	●	75	20	0,3	4.500

Surface brush

Design and use:
- for working on small and medium surfaces

Delivery:
In packaging units only!

Note:
Price per piece

Shank 6mm

PU 10 pieces



N° article	481822 Steel wire crimped	∅ mm	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}
50	●	50	20	0,35	4.500
75	●	75	20	0,35	4.500

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- for working on small and medium surfaces
- for use on electrical and air driven grinding machines
- used for deburring, polishing or structuring of stainless steel, aluminium and plastic

Schaft 6mm



481823



481824



481825

N° article	481823 Steel wire crimped 0.3 mm	481824 Stainless steel wire crimped 0.3 mm	481825 Brass wire criped 0.2 mm	∅ mm	Trimming height mm	Max. permissible speed rpm^{-1}
50	●	●	●	50	20	10.500

End brush RUFTUF®

Design and use:
- industrial quality cup brush
- sleeve galvanised
- for removing burrs, slag, scale, paint, rust, excess rubber, residues of combustion and other contaminations
- at difficult to access places and inside areas
- for use on high-speed portable machines

Shank 6mm



N° article	481700 Steel wire knotted	481720 Stainless steel wire knotted	∅ mm	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}
20/0,15	●	●	20	29	0,15	22.000
20/0,26	●	●	20	29	0,26	22.000
30/0,26	●	–	30	29	0,26	20.000
30/0,35	●	●	30	29	0,35	20.000

End brush

LESSMANN® THE GERMAN BRUSH COMPANY

Shank 6mm

Design and use:
- for machining of difficult to access places, like inside bores or recesses at housing parts
- with rose bud knotting to increase tool life
- with increasing speed the braids open more and more



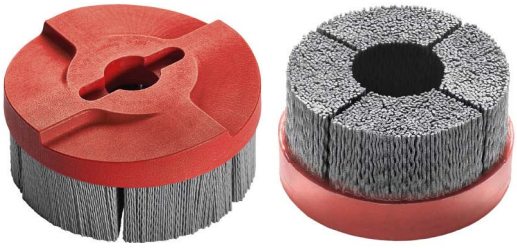
N° article	481730 Steel wire knotted	481732 Stainless steel wire knotted	∅ mm	Trimming height mm	Wire thickness mm	Max. permissible speed rpm^{-1}	Total length mm
6/0,25	●	●	6	25	0,25	4.500	65
6/0,35	●	●	6	25	0,35	4.500	65
19/0,15	–	●	19	28	0,15	20.000	72
19/0,25	●	●	19	28	0,25	20.000	72
19/0,35	●	–	19	28	0,35	20.000	72
22/0,35	●	●	22	28	0,35	20.000	72
29/0,15	–	○	29	28	0,15	20.000	72
29/0,25	●	●	29	28	0,25	20.000	72
29/0,35	●	–	29	28	0,35	20.000	72

Disc brushes

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- brushes with very high/dense trim
- firmly cast in plastic compound
- high dimensional stability
- very long tool life
- **suitable for steep taper mountings SK 40 (DIN 6358) e.g. 240620 (page 24/???)**
- for machining flat components such as stamped and pressed parts, sintered parts, hydraulic and pneumatic workpieces
- precise deburring and edge rounding after milling
- SiC abrasive bristles suitable for wet and dry processing as well as universal use
- for use on CNC lathes and milling machines, machining centres and for robot use

Note:
Further sizes available on request



N° article	481740 Abrasive bristles (SiC 80)	481742 Abrasive bristles (SiC 120)	481744 Abrasive bristles (SiC 180)	∅ mm	Trimming height mm	Bore ∅ mm	Max. permissible speed rpm^{-1}
50	○	○	○	50	35	22	3.600
75	○	○	○	75	35	22	4.500
105	○	○	○	105	35	22	3.500
125	○	○	○	125	40	27	3.000
150	○	○	○	150	40	32	2.500

Wheel brush ATB®

osborn

SIC | Ceramic

Design:
- dense and flat filling surface for long service life
- potted version
- high abrasive grain content
- high dimensional stability and concentricity for process-reliable use
- brush with silicon carbide or ceramic trim

Use:
- application on CNC machines, machining centres and robot systems
- with longitudinal groove for direct clamping on tool holders (e.g. HSK, SK, BT) as cutter head holders and combination milling arbor holders
- is suitable directly after machining for deburring and edge rounding on components with side and inner surfaces as well as for fine machining of component contours
- use with cooling lubricant and oil is recommended

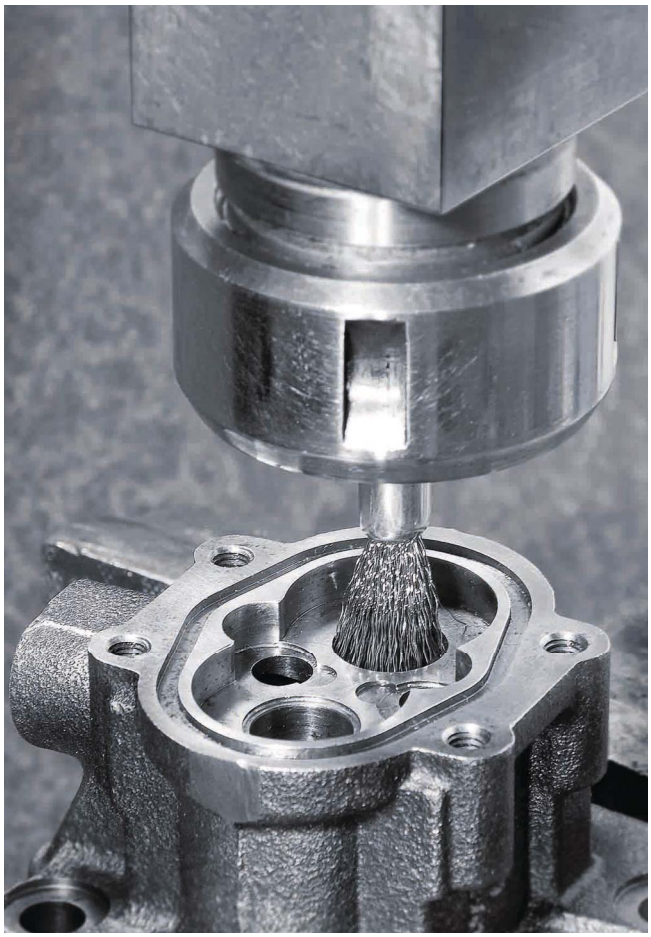
Note:
Further dimensions and trimming materials are available on request

NEW





N° article	482620 Abrasive bristles (SiC 120)	482622 Abrasive bristles (Ceramic 120)	∅ mm	Bore ∅ mm	Width mm	Wire thickness mm	Trimming height mm
125×15	●	●	125	22,2	15	1,1	25



Micro tube brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- inner brush with steel wire or high-strength stainless steel wire
- for manual or machine use
- suitable for descaling, deburring or cleaning of cross intersections, bore intersections, tapped holes or grooves



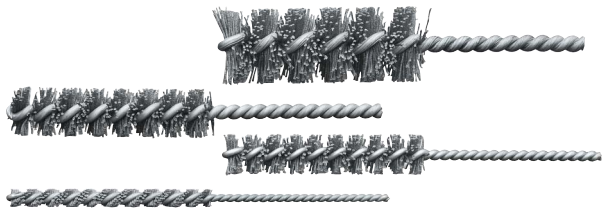
N° article	481763 Stainless steel wire crimped	481764 Steel wire crimped	∅ mm	Trimming length mm	Wire thickness mm	Total length mm	Max. permissible speed rpm^{-1}
6	–	●	6	25	0,12	90	3.500
8	–	●	8	25	0,12	90	3.500
10	●	●	10	25	0,12	90	3.500
13	●	●	13	25	0,12	90	3.500
16	●	●	16	25	0,12	90	3.000
19	●	●	19	25	0,2	90	3.000
25	●	●	25	25	0,2	90	3.000
29	–	●	29	25	0,2	90	3.000
32	–	●	32	25	0,2	90	3.000

Tube or cylinder brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- interior brush with galvanised spiral wire core and single trimming row
- silicon carbide abrasive bristles
- particularly suitable for deburring of holes, transversal bores or O-ring recesses in complex workpieces
- for polishing or cleaning of nozzles and small bores

SIC | Ceramic



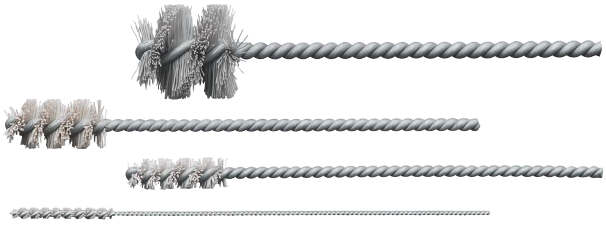
N° article	481766 Abrasive bristles (SiC 120)	481767 Abrasive bristles (SiC 320)	481768 Abrasive bristles (Ceramic 120)	Grit	∅ mm	Trimming length mm	Wire thickness mm	Shank ∅ mm	Total length mm	Max. permissible speed rpm^{-1}
6	●	●	–	120	6	65	0,6	3	125	1.500
8	●	●	–	120	8	65	0,6	3	125	1.500
10	●	●	NEW ●	120	10	65	0,6	3,7	125	2.000
13	●	●	NEW ●	120	13	65	0,6	3,7	125	2.000
16	●	●	NEW ●	120	16	65	0,6	5,2	125	2.000
19	●	●	–	120	19	65	0,6	5,2	125	2.000
20	–	–	NEW ●	–	20	65	0,6	5,7	125	2.000
25	●	●	NEW ●	120	25	65	0,6	5,7	125	2.000

Tube brush

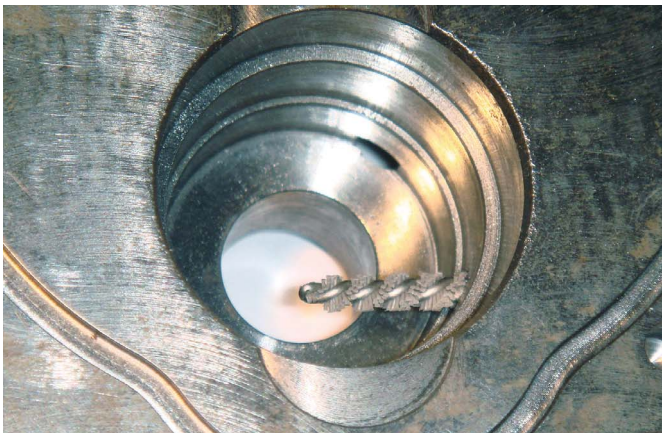
LESSMANN® THE GERMAN BRUSH COMPANY

Design and use:
- with galvanised spiral wire core and single trimming row
- trimming made of abrasive bristles with aluminium oxide (from 3.5 mm) or of silicon carbide (up to ∅ 3.2 mm)
- **fine SiC or AO bristles with grit 1000 or 600**
- for deburring bores, transversal bores or O-ring recesses
- for polishing or cleaning of nozzles and small bores
- flexible threads adapt the inner brushes to the contour of the workpiece

SIC | Aluminium oxide



N° article	481765 micro abrasive	Abrasive bristle trimming	Grit	∅ mm	Trimming length mm	Wire thickness mm	Shank ∅ mm	Total length mm	Max. permissible speed rpm^{-1}
1,2	●	SiC	1000	1,2	12	0,2	0,7	100	500
1,9	●	SiC	1000	1,9	18	0,2	0,7	100	500
2,2	●	SiC	1000	2,2	18	0,2	0,9	100	1.000
2,6	●	SiC	1000	2,6	25	0,2	1	100	1.000
3,2	●	SiC	1000	3,2	25	0,2	1,7	100	1.000
3,5	●	AO	1000	3,5	25	0,2	1,7	100	1.000
4,2	●	AO	600	4,2	25	0,3	2,2	125	1.000
4,8	●	AO	600	4,8	25	0,3	2,2	125	1.000
5,5	●	AO	600	5,5	25	0,3	2,2	125	1.000
6,6	●	AO	600	6,6	25	0,3	2,5	125	1.000
8,2	●	AO	600	8,2	25	0,3	3,2	125	2.000
9,8	●	AO	600	9,8	25	0,3	3,2	125	2.000
11,5	●	AO	600	11,5	25	0,3	3,7	125	2.000
13,0	●	AO	600	13	25	0,3	3,7	125	2.000
16,0	●	AO	600	16	25	0,3	3,7	125	2.000
17,5	●	AO	600	17,5	25	0,3	4,7	125	2.000
20,0	●	AO	600	20	25	0,3	4,7	125	2.000
25,0	●	AO	600	25	25	0,3	4,7	125	2.000



Tube brush with eyelet

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- galvanised spiral wire core handle with single trimming row made of corrugated steel wire, brass wire or nylon bristles

Use:
For manual cleaning and deburring of tubes, bores and the like



N° article	481770 Steel wire crimped	481772 Brass wire, crimped	481774 Polyamide	∅ mm	Trimming length mm	Wire thickness mm	Total length mm
3	●	●	●	3	100	0,08	300
4	●	●	●	4	100	0,1	300
6	●	●	●	6	100	0,1	300
8	●	●	●	8	100	0,1	300
10	●	●	●	10	100	0,15	300
12	NEW ●	NEW ●	NEW ●	12	100	0,15	300

N° article	481770 Steel wire crimped	481772 Brass wire, crimped	481774 Polyamide	∅ mm	Trimming length mm	Wire thickness mm	Total length mm
15	●	●	●	15	100	0,15	300
18	NEW ●	NEW ●	NEW ●	18	100	0,15	300
20	●	●	●	20	100	0,15	300
25	●	●	●	25	100	0,15	300
30	●	●	●	30	100	0,15	300

Flex hone brush

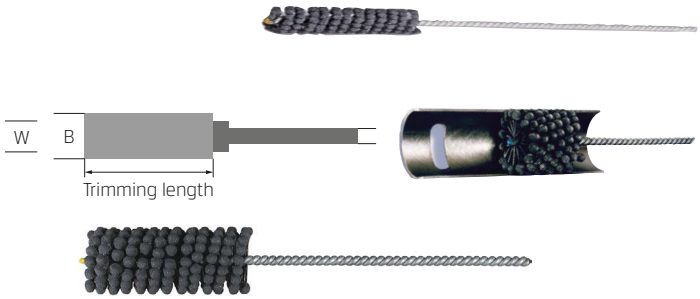
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SiC | Zircon

Design:
- rotating honing tool with abrasive globules on robust nylon brushes
- flexible working with tender grinding process
- variable nylon strings are ideal for honing of untrue or transversal bores

Use:
- for edge chamfering and for finishing of surfaces
- mountable to any machine system (among others to hand drills)
- good carrier for oil film adhesion due to cross grinding
- creates a plateau finish





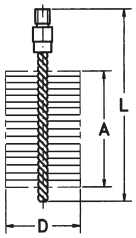
N° article	481911 SiC K120	481912 SiC K180	481913 Zirconium corundum K80	B ∅ mm	W ∅ mm	Shank ∅ mm	Trimming length mm	Total length mm
6,5	–	●	–	7	6,5	2,5	40	200
7,0	●	●	–	8	7	3,2	50	200
8,0	●	●	–	9	8	3,6	50	200
9,0	○	●	–	10	9	3,6	50	200
10,0	●	●	–	11	10	3,6	60	200
11,0	●	●	–	12	11	3,6	60	200
12,0	●	●	NEW ●	13	12	3,6	60	200
14,0	●	●	NEW ●	15,5	14	3,6	60	200
16,0	●	●	NEW ●	18	16	4,6	60	200
18,0	○	●	NEW ●	20	18	4,6	60	200
20,0	●	●	NEW ●	22	20	4,6	70	200

N° article	481911 SiC K120	481912 SiC K180	481913 Zirconium corundum K80	B ∅ mm	W ∅ mm	Shank ∅ mm	Trimming length mm	Total length mm
22,0	●	●	–	25	22	4,6	70	200
25,0	●	●	–	28	25	5,1	70	200
29,0	●	●	–	32	29	5,1	70	200
32,0	●	●	–	35	32	5,7	70	200
35,0	○	●	–	38	35	5,7	70	200
38,0	●	●	–	41	38	5,7	70	200
41,0	○	●	–	45	41	5,7	70	200
45,0	●	●	–	48	45	5,7	70	200
51,0	○	●	–	54	51	6,5	70	200
57,0	○	●	–	60	57	7,3	70	200
64,0	–	●	–	68	64	7,5	76	200

Tube brush

LESSMANN® THE GERMAN BRUSH COMPANY

Design:
- for deburring and cleaning pipes and bores
- for cleaning gratings and sleeves
- all brushes compatible with shaft, handle and extension





481782 481784 481786

N° article	481782 Steel wire, crimped	481784 Polyamide, smooth,	481786 Brass wire crimped	∅ mm	Trimming length mm	Total length mm	Thread	Max. permissible speed rpm^{-1}
8	NEW ●	NEW ●	NEW ●	8	80	115	M6	3.000
10	●	●	●	10	80	115	M6	3.000
12	●	●	●	12	80	115	M6	3.000
14	●	●	●	14	80	115	M6	3.000
16	●	●	●	16	80	115	M6	3.000
18	●	●	●	18	80	115	M6	3.000
20	●	●	●	20	80	115	M6	3.000

N° article	481789 Accessories	Design:
0010	●	**Threaded adapter**, inside M6, shaft ∅ 6 mm, total length 50 mm
0018	●	**Extensions**, M6, 200 mm
0020	●	**Handle**, M6, 130 mm



0010



0020

Wire hand brush

Design:
- hardwood body with curved handle and hole for hanging
- trimming length 145 mm
- total length approx. 295 mm



482000 482100 482200 482300

N° article	482000 Steel wire smooth 0.35 mm	482100 Stainless steel wire crimped 0.30 mm	482200 Brass wire crimped 0.30 mm	482300 Steel wire smooth V-shaped 0.35 mm	Number of rows	Trimming length mm	Wire thickness mm	Total length mm
2	●	●	●	–	2	145	0,35	295
3	●	●	●	●	3	145	0,35	295
4	●	●	●	–	4	145	0,35	295
5	●	●	●	–	5	145	0,35	295

Universal hand brush ROKI

Design and use:
- robust, slim wire brush
- very aggressive brush for general brushing tasks
- for cleaning of weld seams
- for removing brake abrasion from brake callipers
- with ergonomic two-component handle and eyelet



N° article	482425 Steel wire smooth 0.35 mm	482426 Stainless steel wire smooth 0.35 mm	482427 Brass wire crimped 0.25 mm	Number of rows	Trimming height mm	Trimming length mm	Total length mm
225	●	●	●	2	22	90	225

Fine brush

Design:
- beechwood handle, rounded edges
- for fine surface improvement, for cleaning and for the application of solutions and cleaning agents
- is characterised by a dense trimming



482810



482812

N° article	482810 Brass wire crimped 0.15 mm	482811 Stainless steel wire crimped 0.15 mm	482812 Polyamide smooth 0.30 mm	Number of rows	Trimming height mm	Trimming length mm	Total length mm
110×20	●	●	●	4	20	110	225

Wire hand brush

Design:
- robust, handy design
- plastic handle with hanging hole

Use:
Universal, especially for derusting and deburring



482400



482410

N° article	482400 Steel wire crimped 0.30 mm	482410 Stainless steel wire crimped 0.30 mm	482420 Brass wire crimped 0.30 mm	Trimming height mm	Total length mm
265	●	●	●	25	265

Wire hand brush

Design:
- robust handy execution with scraper
- with hang-up hole

Use:
Universal, especially for derusting



N° article	482422 Steel wire smooth 0.35 mm	Number of rows	Trimming height mm	Total length mm
290	●	4	25	290

File brush

Design:
- with wire trimming (Carding cloth)
- straight wooden body with rounded edges

Use:
For cleaning corrugated surfaces, especially of files

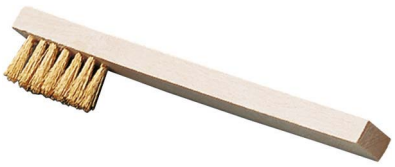


N° article	482700	Trimming height mm	Trimming width mm	Trimming length mm	Total length mm
100×25	●	8	25	100	210
115×40	●	8	40	115	260

Spark plug brush

Design:
- straight wooden body with rounded edges

Use:
For cleaning tasks, esp. for spark plugs



N° article	482800 Brass wire crimped 0.20 mm	Number of rows	Trimming height mm	Trimming length mm	Wire thickness mm	Total length mm
20	●	3	15	20	0,2	200

Spark plug brush

Design:
- beechwood handle with rounded edges

Use:
For cleaning tasks, esp. for spark plugs



482802 482804

N° article	482802 Stainless steel wire crimped 0.15 mm	482804 Polyamide smooth 0.30 mm	Number of rows	Trimming height mm	Trimming length mm	Total length mm
40	●	●	3	15	40	150

Machine saw blade

Design:
- made of top class HSS DMo5
- **standard toothing, 0° rake angle**
- constant high hardness and great toughness
- optimum cutting performance and long tool life
- **490515** especially for Kasto machines with offset clamping hole

HSS



Use:
- universal saw blade for most cutting tasks
- uncomplicated in use, robust and reliable and yet with maximum service life even in the uppermost strength range
- ideal for the treatment of a huge variety of different materials and dimensions

Design:
- bi-metal bandsaw blade with **0° rake angle**
- tooth tips made of HSS-M2
- blade back made of elastic spring steel
- high cutting performance, even at high feed rates; absolutely unbreakable
- **490560** especially for Kasto machines with offset clamping hole

HSS Bi-metal



Use:
For sawing of solid material, tubes and profiles up to 1400 N/mm².



N° article	490510 SB-5	Saw blade length mm	Teeth per inch	Height mm	Thickness mm	Clamping hole mm	Material
300/10	●	300	10	25	1,25	8,5	HSS
300/14	●	300	14	25	1,25	8,5	HSS
350/8	●	350	8	30	1,5	8,5	HSS
350/10	●	350	10	30	1,5	8,5	HSS
350/14	●	350	14	30	1,5	8,5	HSS
400/6	●	400	6	30	2	8,5	HSS
400/8	●	400	8	30	2	8,5	HSS
400/10	●	400	10	30	2	8,5	HSS
400/14	●	400	14	30	2	8,5	HSS
450/4	●	450	4	32	2	8,5	HSS
450/6	●	450	6	32	2	8,5	HSS
450/8	●	450	8	32	2	8,5	HSS
450/10	●	450	10	32	2	8,5	HSS
500/4	○	500	4	40	2	10,5	HSS
500/6	●	500	6	40	2	10,5	HSS
500/8	○	500	8	40	2	10,5	HSS
500/10	○	500	10	40	2	10,5	HSS
600/4	●	600	4	50	2,5	13	HSS
600/6	●	600	6	50	2,5	13	HSS
700/4	●	700	4	50	2,5	13	HSS
700/6	○	700	6	50	2,5	13	HSS



N° article	490550 Ko-Bi	Saw blade length mm	Teeth per inch	Height mm	Thickness mm	Clamping hole mm	Material
400/4	●	400	4	32	1,6	8	HSS bi-metal
400/6	●	400	6	32	1,6	8	HSS bi-metal
400/8	●	400	8	32	1,6	8	HSS bi-metal
400/10	●	400	10	32	1,6	8	HSS bi-metal
450/4	●	450	4	32	1,6	10	HSS bi-metal
450/6	●	450	6	32	1,6	10	HSS bi-metal
450/8	●	450	8	32	1,6	10	HSS bi-metal
450/10	●	450	10	32	1,6	10	HSS bi-metal
450/4EB	○	450	4	38	2	10	HSS bi-metal
450/6EB	●	450	6	38	2	10	HSS bi-metal
500/4	●	500	4	38	2	10	HSS bi-metal
500/6	●	500	6	38	2	10	HSS bi-metal
700/4	●	700	4	50	2,5	13	HSS bi-metal

N° article	490515 SB-5, for Kasto	Saw blade length mm	Teeth per inch	Height mm	Thickness mm	Clamping hole mm	Material
450/4	●	450	4	40	2	8,5	HSS
450/6	●	450	6	40	2	8,5	HSS
450/8	●	450	8	40	2	8,5	HSS
500/4	○	500	4	48	2,5	10,5	HSS
500/6	○	500	6	48	2,5	10,5	HSS
500/8	○	500	8	48	2,5	10,5	HSS
550/4	●	550	4	45	2	10,5	HSS
550/6	●	550	6	45	2	10,5	HSS
575/3	○	575	3	50	2,5	10,5	HSS
575/4	●	575	4	50	2,5	10,5	HSS
575/6	●	575	6	50	2,5	10,5	HSS
600/4	○	600	4	50	2,5	13	HSS
650/3	○	650	3	55	2,5	10,5	HSS
650/4	●	650	4	50	2,5	10,5	HSS
650/6	○	650	6	55	2,5	10,5	HSS
700/4	●	700	4	55	2,5	10,5	HSS
700/6	●	700	6	55	2,5	10,5	HSS

N° article	490560 Ko-Bi, Kasto	Saw blade length mm	Teeth per inch	Height mm	Thickness mm	Clamping hole mm	Material
450/4	●	450	4	38	2	8.5	HSS
450/6	●	450	6	38	2	8.5	HSS
450/8	●	450	8	38	2	8.5	HSS
450/10	○	450	10	38	2	8.5	HSS
500/4	●	500	4	50	2,5	10.5	HSS
550/4	●	550	4	50	2,5	10.5	HSS
550/6	○	550	6	50	2,5	10.5	HSS
575/4	●	575	4	50	2,5	10.5	HSS
575/6	●	575	6	50	2,5	10.5	HSS
600/4	●	600	4	50	2,5	10.5	HSS
600/6	●	600	6	50	2,5	10.5	HSS
650/6	●	650	6	50	2,5	10.5	HSS
700/4	○	700	4	50	2,5	10.5	HSS

Machine saw blade

Design:
- **variable tooth pitch, 7° positive rake angle**
- pilot teeth for straight cut, variable tooth pitch for vibration-free and clean cut
- the advertised cutting data require a proper employment of the blade

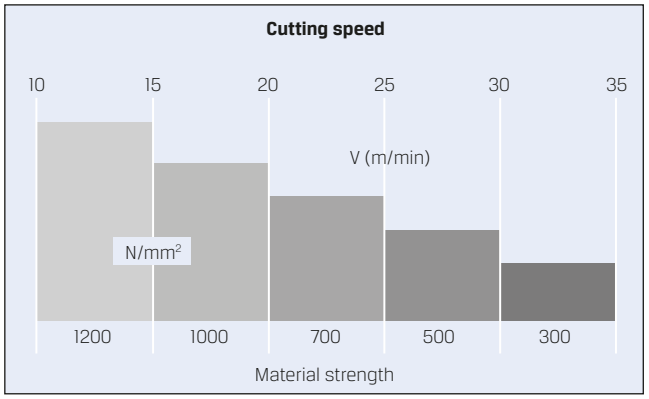
HSS



* Especially for Kasto machines with offset clamping bore

Use:
For stainless steel grades, long-chipping and stringy materials





N° article	491550 VP-7	*	Saw blade length mm	Teeth per inch	Height mm	Thickness mm	Clamping hole mm	Material
300-4/7	●	–	300	4/ 7	30	2	8.5	HSS
350-3/4	●	–	350	3/ 4	35	2	8.5	HSS
350-4/7	●	–	350	4/ 7	35	2	8.5	HSS
350-6/10	●	–	350	6/10	35	2	8.5	HSS
400-3/4	●	–	400	3/ 4	30	2	8.5	HSS
400-4/7	●	–	400	4/ 7	35	2	10.5	HSS
400-6/10	●	–	400	6/10	30	2	8.5	HSS
400-3/4S	○	*	400	3/ 4	35	2	10.5	HSS
400-4/7S	●	*	400	4/ 7	30	2	8.5	HSS
450-3/4	○	–	450	3/ 4	40	2	Kasto	HSS
450-4/7	●	–	450	4/ 7	35	2	10.5	HSS
450-3/4S	●	*	450	3/ 4	35	2	10.5	HSS
450-4/7S	●	*	450	4/ 7	40	2	Kasto	HSS
500-3/4	●	–	500	3/ 4	40	2	Kasto	HSS
500-4/7	○	–	500	4/ 7	40	2	Kasto	HSS
550-4/7S	○	*	550	4/ 7	50	2,5	13	HSS
575-2/3	○	–	575	2/ 3	50	2,5	Kasto	HSS
575-3/4	●	–	575	3/ 4	50	2,5	Kasto	HSS
600-3/4	●	–	600	3/ 4	50	2,5	Kasto	HSS
600-4/7	○	–	600	4/ 7	50	2,5	Kasto	HSS
650-3/4	○	–	650	3/ 4	55	2,5	Kasto	HSS
650-4/7	○	–	650	4/ 7	55	2,5	Kasto	HSS

Design:
- **claw tooth, 13° positive rake angle**
- excellent cutting results through cutting edge geometry; minor cutting edges stabilise the blade in the cutting duct
- esp. for the cutting of rust- and acid-resistant steels

HSS



M

N

Cutting data:
Tooth spacing:
3 teeth/inch for profiles from 50 - 200 mm
(Pipes from 10 mm wall)
2 teeth/inch for profiles from 150 mm

Cutting speed: 10 to 20 m/min.



N° article	491650 P-13	Saw blade length mm	Teeth per inch	Height mm	Thickness mm	Clamping hole mm	Material
350-3	○	350	3	35	2	8.5	HSS
400-3	●	400	3	35	2	10.5	HSS
450-3	○	450	3	40	2	Kasto	HSS
500-3	○	500	3	48	2,5	Kasto	HSS
600-2	○	600	2	50	2,5	Kasto	HSS
650-3	○	650	3	55	2,5	Kasto	HSS
700-3	○	700	3	55	2,5	Kasto	HSS

Bi-metall

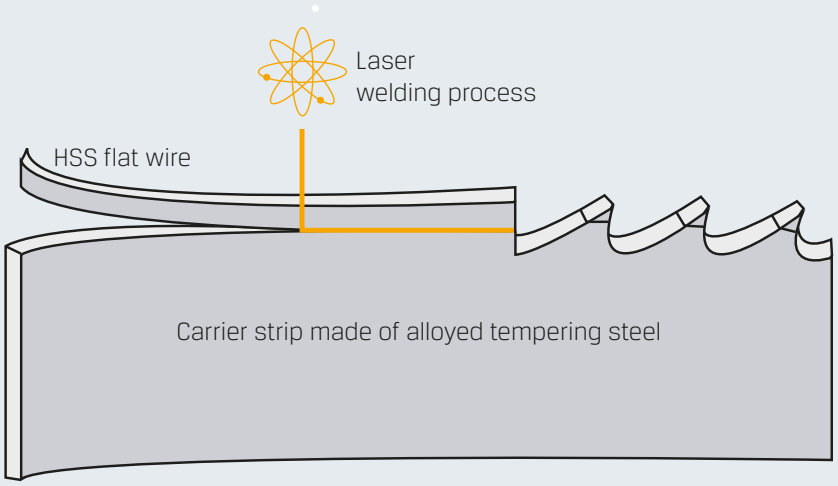
What makes it so successful?

M42

Material 1.3247
Hardness approx. 68 - 69 HRC

M51

Material 1.3207
Hardness approx. 69 HRC,
with high tungsten and cobalt content.



So flexible:

The carrier band of the bi-metal saw band is made of specially alloyed tempered steel. Highly flexible with a strength of approx. 50 HRC. Permanently spring-hard and excellent in the band run, it forms an optimal basis.

Optimally connected:

The carrier tape and the HSS flat wire are optimally and inseparably connected using electron or laser beam welding processes.

Hard and durable:

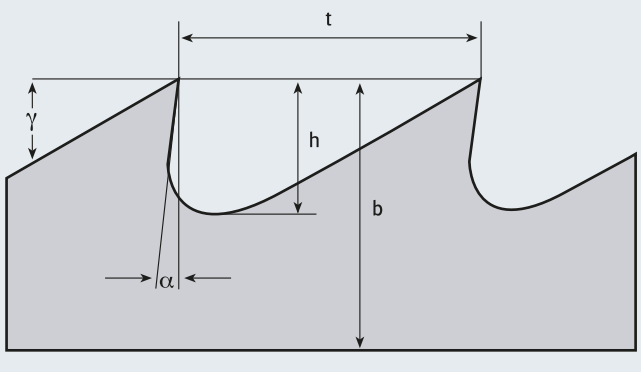
Tooth tips made of tempered HSS in the qualities M42 and powder metallurgical M51 ensure maximum wear resistance thanks to sophisticated heat treatment and a defined structure.

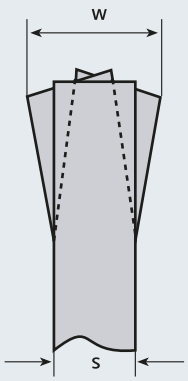
All the advantages:

The high-quality bi-metal saw blade combines the flexibility of the carrier with the enormous wear resistance of the high-performance high-speed steel. Each tooth tip of the finished saw blade is made of hardened HSS, resilient and extremely powerful.

Saw blade geometry

What is called what?



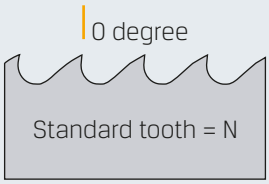


b = band width
s = band thickness
h = tooth depth
t = tooth pitch
α = rake angle
γ = clearance angle
w = set width

Teeth shapes

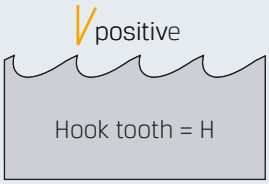
What does a right tooth do?

Only a correctly selectes tooth shape cuts the material optimally and with low vibration. There are four basic types:



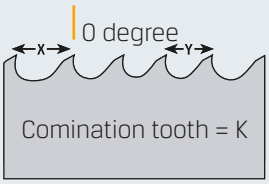
Specialist for:
- short-chipping materials
- thin wall-thicknesses

Data:
- rake angle of 0°
- constant tooth pitch from 4 to 18 TPI



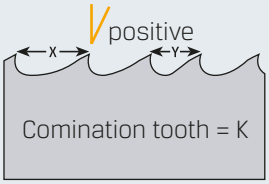
Specialist for:
- long-chipping, tough materials
- large cross-secitions

Data:
- positive rake angle
- constant tooth pitch from 3 to 6 TPI



Specialist for:
- low-vibration chipping
- profiles

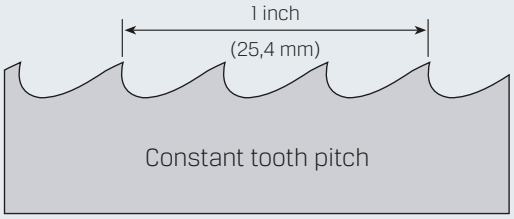
Data:
- rake angle of 0°
- variable tooth pitch from 5/8 to 10/14 TPI



Specialist for:
- low-vibration chipping
- solid material

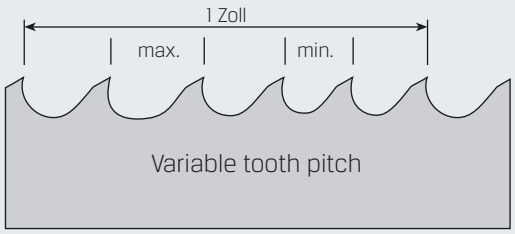
Data:
- positive rake angle
- variable tooth pitch from 0,75/1,25 to 12/16 TPI

Tooth pitch



The teeth are arranged with the same distance to each other. The number of teeth per inch (25.4 mm) designates the toothing of the saw belt

Constant or variable?



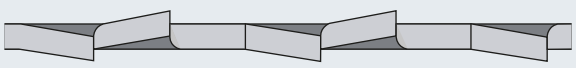
Within a tooth segment the distandes of the teeth differ. The combination toothing of the saw band is called after the largest or smallest tooth of the respective tooth segment

Types of tooth setting

What is the effect of groups and waves

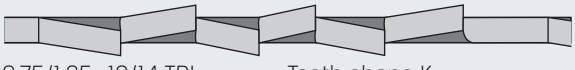
In addition to tooth shape and tooth pitch the exact setting of a band saw blade is decisive for its performance. This results in the correct free cut of the band saw blade. It prevents the band from jamming, which is particularly important with problematic steels. The setting type and width are precisiely matched to the cutting task.

Standard tooth set



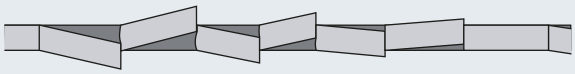
3 - 18 TPI — Teeth shapes N, H

Group tooth setting



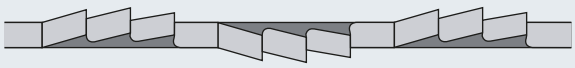
0,75/1,25 - 10/14 TPI — Teeth shape K

Variable group tooth setting



0,75/1,25 - 12/16 TPI — Teeth shapes K-P, K-VS, K-X

Wavy tooth setting



14 - 18 TPI — Teeth shapes N-W

Correct toothing - optimal sawing performance

Decisive for the optimal use of a bi-metal saw blade is the choice of the adequate toothing for the material diamter to be cut. The selection offers a standard tooth with constant tooth pitch or a combination with variable tooth pitch. For low-vibration cutting of problematic workpiece dimensions we recommend a combination tooth with variable tooth pitch of the tooth group. Resonant frequencies are reduced and the saw band is protected.

Toothing recommendations for solid material

Variable toothing	
Material cross-cut mm	Teeth per inch TPI
from 550	0,75/1,25
380 - 750	1/1,3
250 - 550	1,4/2
120 - 350	2/3
80 - 140	3/4
60 - 110	4/6
40 - 70	5/7 | 5/8
30 - 60	6/10
20 - 40	8/11 | 8/12
to 25	10/14

Toothing recommendations for profiles

Thin-walled profiles (0° - 7° rake angle)							
Wall thickness (S) in mm	Profile outer diameter (D) in mm 20	40	60	80	100	120	150
2	14	14	14	14	14	14	10/14
3	14	14	14	14	10/14	10/14	8/11 | 8/12
4	14	14	10/14	10/14	8/11 | 8/12	8/11 | 8/12	6/10
5	14	10/14	10/14	8/11 | 8/12	8/11 | 8/12	6/10	6/10
6	14	10/14	8/11 | 8/12	8/11 | 8/12	6/10	6/10	5/7 | 5/8
8	14	8/11 | 8/12	6/10	6/10	5/7 | 5/8	5/7 | 5/8	5/7 | 5/8
10	-	6/10	6/10	5/7 | 5/8	5/7 | 5/8	5/7 | 5/8	–

Especially when cutting profiles, the choice of toothing has a decisive influence on the sawing result. The most The use of band saw blades with variable toothing has proven to be the most favourable tooth form worldwide. The required tooth The required tooth pitch depends on the wall thickness and diameter of the profiles to be cut. The tables apply to single cuts. If two or more profiles are machined next to each other, the tables apply taking into account the 2-fold wall thickness.

Thick-walled profiles (positive rake angle)								
Wall thickness (S) in mm	Profile outer diameter (D) in mm 80	100	120	150	200	300	500	750
10	-	-	-	4/6	4/6	4/6	3/4	2/3
15	4/6	4/6	4/6	4/6	4/6	3/4	2/3	2/3
20	4/6	4/6	4/6	4/6	3/4	3/4	2/3	2/3
30	4/6	4/6	4/6	3/4	3/4	2/3	2/3	2/3
50	-	-	3/4	3/4	2/3	2/3	2/3	1,4/2
80	-	-	-	-	2/3	2/3	1,4/2	1,4/2
100	-	-	-	-	-	2/3	1,4/2	1,4/2

Bi-metal band saw blades are supplied as endless welded bands, customised for your sawing machine or in coils:

6 - 13 mm in lengths of approx. 30,5 + 76 m | 20 - 34 mm in lengths of approx. 100 m | 41 mm in lengths of approx. 80 m
54 - 67 mm in lengths of approx. 90 m | 80 mm in lengths of approx. 40 m

Metal saw band Bi-metal M42

PREMUS

HSS
Bi-metal

Design:
PREMUS - high-performance bi-metal band saw blade with low-wear M42 tooth cutting edges.
- the teeth 5/8 to 10/14 ZpZ with robust 0° rake angle are ideally suited for sawing thin-walled profiles and solid material
profiles and solid material workpieces up to 70 mm cross-section, especially short-chipping materials such as brass, bronze
and cast iron can be sawn excellently with a 0° rake angle.

Note:
If you have not found your blade dimensions, please contact us.
We will be happy to produce customised dimensions for you in a timely manner!



N° article	492300 2450×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0010	●	M42-bi-metal	Combination tooth	4/6K	0
0020	●	M42-bi-metal	Combination tooth	5/8K	0
0030	●	M42-bi-metal	Combination tooth	6/10K	0
0040	●	M42-bi-metal	Combination tooth	8/12K	0
0050	○	M42-bi-metal	Combination tooth	10/14K	0

N° article	492300 2710×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0060	○	M42-bi-metal	Combination tooth	6/10K	0

N° article	492300 2750×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0070	●	M42-bi-metal	Combination tooth	4/6K	0
0080	●	M42-bi-metal	Combination tooth	5/8K	0
0090	●	M42-bi-metal	Combination tooth	6/10K	0
0100	●	M42-bi-metal	Combination tooth	8/12K	0

N° article	492300 2910×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0110	●	M42-bi-metal	Combination tooth	3/4K	0
0120	●	M42-bi-metal	Combination tooth	4/6K	0
0130	●	M42-bi-metal	Combination tooth	5/8K	0
0140	●	M42-bi-metal	Combination tooth	6/10K	0

N° article	492300 2950×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0150	●	M42-bi-metal	Combination tooth	3/4K	0
0160	●	M42-bi-metal	Combination tooth	4/6K	0
0170	●	M42-bi-metal	Combination tooth	5/8K	0
0180	●	M42-bi-metal	Combination tooth	6/10K	0

N° article	492300 3150×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0190	●	M42-bi-metal	Combination tooth	4/6K	0
0200	●	M42-bi-metal	Combination tooth	5/8K	0
0210	●	M42-bi-metal	Combination tooth	6/10K	0

N° article	492300 3660×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0220	●	M42-bi-metal	Combination tooth	10/14K	0
0230	●	M42-bi-metal	Combination tooth	3/4K	0
0240	●	M42-bi-metal	Combination tooth	4/6K	0
0250	●	M42-bi-metal	Combination tooth	5/8K	0
0260	●	M42-bi-metal	Combination tooth	6/10K	0
0270	●	M42-bi-metal	Combination tooth	8/12K	0

N° article	492300 3830×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0280	●	M42-bi-metal	Combination tooth	3/4K	0
0290	●	M42-bi-metal	Combination tooth	4/6K	0
0300	●	M42-bi-metal	Combination tooth	5/8K	0
0310	○	M42-bi-metal	Combination tooth	6/10K	0

N° article	492300 4100×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0320	●	M42-bi-metal	Combination tooth	2/3K	0
0330	●	M42-bi-metal	Combination tooth	3/4K	0
0340	●	M42-bi-metal	Combination tooth	4/6K	0

N° article	492300 4400×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0350	●	M42-bi-metal	Combination tooth	2/3K	0
0360	●	M42-bi-metal	Combination tooth	3/4K	0
0370	●	M42-bi-metal	Combination tooth	4/6K	0

N° article	492300 4640×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0380	●	M42-bi-metal	Combination tooth	2/3K	0
0390	●	M42-bi-metal	Combination tooth	3/4K	0
0400	●	M42-bi-metal	Combination tooth	4/6K	0

N° article	492300 5090×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0410	●	M42-bi-metal	Combination tooth	2/3K	0
0420	●	M42-bi-metal	Combination tooth	3/4K	0
0430	●	M42-bi-metal	Combination tooth	4/6K	0

Metal saw band Bi-metal M42

PREMUS

HSS
Bi-metal

Design:
PREMUS - high-performance bi-metal band saw blade with low-wear M42 tooth cutting edges.
- the teeth 3/4 to 8/11 TPI with 5°- rake angle are ideally suited for sawing small and medium profiles and solid material

Use:
- steel beams, profiles and pipes
- workpiece mix
- ideal for mixed operation
- fewer saw band changes required
- universally applicable

NEW

Note:
If you have not found your blade dimensions, please contact us.
We will be happy to produce customised dimensions for you in a timely manner!





N° article	492310 2450×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0010	○	M42-bi-metal	Combination tooth	8/11	5 - 7
0110	○	M42-bi-metal	Combination tooth	4/ 6	5 - 7

N° article	492310 2710×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0020	○	M42-bi-metal	Combination tooth	3/4	5 - 7
0030	○	M42-bi-metal	Combination tooth	4/6	5 - 7

N° article	492310 2750×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0040	○	M42-bi-metal	Combination tooth	4/ 6	5 - 7
0060	○	M42-bi-metal	Combination tooth	8/11	5 - 7

N° article	492310 3660×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0050	○	M42-bi-metal	Combination tooth	3/ 4	5 - 7
0070	○	M42-bi-metal	Combination tooth	8/11	5 - 7
0090	○	M42-bi-metal	Combination tooth	4/ 6	5 - 7

N° article	492310 3830×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
0080	○	M42-bi-metal	Combination tooth	3/4	5 - 7
0100	○	M42-bi-metal	Combination tooth	4/6	5 - 7

Correct running-in: Guarantee for a long service life.

Correct running-in: Guarantee for a long service life.
Like all tools, metal band saw blades must be run in correctly.This guarantees maximum service life and saves tool and set-up costs.The particularly sharp tooth tips must not be fully loaded at the start of cutting be fully loaded. Premature overloading can lead to chipping of the tooth tips. By running in correctly, the cutting edges the cutting edges perfectly.

Bi-metal band saw blades

For the first 300 - 500 cm2 of cutting area, the band saw blade operates at half the feed rate at the recommended cutting speed. After an appropriate run-in time, the feed rate is gradually increased to the intended value.
If vibrations or oscillation noises occur at the start of cutting, the set cutting speed should be adjusted slightly. should be corrected slightly.

Carbide saw bands

For running-in during the first 30 minutes at least we recommend the following operating values:

Material diameter up to 600 mm	Cutting speed	= 30 m/min
	Feed rate	= 5 mm/min
Material diameter over 600 mm	Cutting speed	= 25 m/min
	Feed rate	= 3 mm/min

Only when the band saw blade is completely vibration-free, the cutting speed and feed rate and feed rate can be increased step by step up to the desired maximum value. value. The band saw blade works works perfectly as long as no audible vibrations are perceived.

Bei allen genannten Preisen handelt es sich um unverbindliche Preisempfehlungen.

Metal saw band Bi-metal M42

Design:
- the profile professional for small and medium-sized wall thickness
- rake angle 0°

Use:
- for profiles with thin or medium wall thicknesses
- for short-chipping material
- for sheet metal panels on vertical panel saws machines

Note:
We will be happy to produce customised dimensions for you in a timely manner!

NEW







HSS Bi-metal

N° article	492320 SPRINT	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0010	○	1138	13	0,65	Combination tooth	8/12	0
0020	○	1138	13	0,65	Combination tooth	10/14	0
0030	○	1325	13	0,65	Combination tooth	8/12	0
0040	○	1325	13	0,65	Combination tooth	10/14	0
0050	○	2375	20	0,9	Combination tooth	6/10	0
0060	○	2375	20	0,9	Combination tooth	8/12	0
0070	○	2375	20	0,9	Combination tooth	10/14	0
0080	○	2450	27	0,9	Combination tooth	5/ 8	0
0090	○	2450	27	0,9	Combination tooth	6/10	0
0100	○	2450	27	0,9	Combination tooth	8/12	0
0110	○	2710	27	0,9	Combination tooth	5/ 8	0
0120	○	2710	27	0,9	Combination tooth	8/12	0
0130	○	2750	27	0,9	Combination tooth	5/ 8	0
0140	○	2750	27	0,9	Combination tooth	6/10	0
0150	○	2750	27	0,9	Combination tooth	8/12	0
0160	○	2835	27	0,9	Combination tooth	5/ 8	0

N° article	492320 SPRINT	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0170	○	2835	27	0,9	Combination tooth	6/10	0
0180	○	2835	27	0,9	Combination tooth	8/12	0
0190	○	2910	27	0,9	Combination tooth	5/ 8	0
0200	○	2910	27	0,9	Combination tooth	6/10	0
0210	○	2910	27	0,9	Combination tooth	8/12	0
0220	○	2950	27	0,9	Combination tooth	5/ 8	0
0230	○	2950	27	0,9	Combination tooth	8/12	0
0240	○	3150	27	0,9	Combination tooth	5/ 8	0
0250	○	3150	27	0,9	Combination tooth	6/10	0
0260	○	3150	27	0,9	Combination tooth	8/12	0
0270	○	3660	27	0,9	Combination tooth	5/ 8	0
0280	○	3660	27	0,9	Combination tooth	6/10	0
0290	○	3660	27	0,9	Combination tooth	8/12	0
0300	○	3660	27	0,9	Combination tooth	10/14	0
0310	○	3830	27	0,9	Combination tooth	5/ 8	0
0320	○	3830	27	0,9	Combination tooth	6/10	0

N° article	492321 SPRINT by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0010	○	13	0,65	Combination tooth	6/10	0	76
0020	○	13	0,65	Combination tooth	8/12	0	76
0030	○	13	0,65	Combination tooth	10/14	0	76
0040	○	20	0,9	Combination tooth	5/ 8	0	100
0050	○	20	0,9	Combination tooth	6/10	0	100

N° article	492321 SPRINT by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0060	○	20	0,9	Combination tooth	8/12	0	100
0070	○	20	0,9	Combination tooth	10/14	0	100
0100	○	27	0,9	Combination tooth	5/ 8	10	100
0200	○	34	1,1	Combination tooth	5/ 8	10	100
0300	○	41	1,3	Combination tooth	5/ 8	10	80

Design:
- strong in materials of medium and large dimensions
- rake angle 10°

Use:
- for production bandsaw machines
- for universal application for steel and non-ferrous metals
- for tensile strengths up to approx. 1400 N/mm²
- for thick-walled profiles

Note:
We will be happy to produce customised dimensions for you in a timely manner!

NEW







HSS Bi-metal

N° article	492330 Sprint-Plus	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0010	○	2450	27	0,9	Combination tooth	4/6	10
0020	○	2750	27	0,9	Combination tooth	4/6	10
0030	○	2910	27	0,9	Combination tooth	3/4	10
0040	○	2910	27	0,9	Combination tooth	4/6	10
0050	○	2950	27	0,9	Combination tooth	3/4	10
0060	○	2950	27	0,9	Combination tooth	4/6	10
0070	○	3150	27	0,9	Combination tooth	4/6	10
0080	○	3660	27	0,9	Combination tooth	3/4	10
0090	○	3660	27	0,9	Combination tooth	4/6	10
0100	○	3800	34	1,1	Combination tooth	3/4	10
0110	○	3800	34	1,1	Combination tooth	4/6	10
0120	○	3830	27	0,9	Combination tooth	3/4	10
0130	○	3830	27	0,9	Combination tooth	4/6	10
0140	○	4100	34	1,1	Combination tooth	2/3	10
0150	○	4100	34	1,1	Combination tooth	3/4	10
0160	○	4100	34	1,1	Combination tooth	4/6	10

N° article	492330 Sprint-Plus	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0170	○	4150	34	1,1	Combination tooth	2/3	10
0180	○	4150	34	1,1	Combination tooth	3/4	10
0190	○	4150	34	1,1	Combination tooth	4/6	10
0200	○	4400	34	1,1	Combination tooth	2/3	10
0210	○	4400	34	1,1	Combination tooth	3/4	10
0220	○	4400	34	1,1	Combination tooth	4/6	10
0230	○	4640	34	1,1	Combination tooth	2/3	10
0240	○	4640	34	1,1	Combination tooth	3/4	10
0250	○	4640	34	1,1	Combination tooth	4/6	10
0260	○	5000	34	1,1	Combination tooth	2/3	10
0270	○	5000	34	1,1	Combination tooth	3/4	10
0280	○	5000	34	1,1	Combination tooth	4/6	10
0290	○	5090	34	1,1	Combination tooth	2/3	10
0300	○	5090	34	1,1	Combination tooth	3/4	10
0310	○	5090	34	1,1	Combination tooth	4/6	10

N° article	492331 Sprint-Plus by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0002	○	27	0,9	Combination tooth	2/3	10	100
0004	○	27	0,9	Combination tooth	3/4	10	100
0006	○	27	0,9	Combination tooth	4/6	10	100
0020	○	34	1,1	Combination tooth	2/3	10	100
0030	○	34	1,1	Combination tooth	3/4	10	100

N° article	492331 Sprint-Plus by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0040	○	34	1,1	Combination tooth	4/6	10	100
0060	○	41	1,3	Combination tooth	2/3	10	80
0070	○	41	1,3	Combination tooth	3/4	10	80
0080	○	41	1,3	Combination tooth	4/6	10	80

Metal saw band Bi-metal M51

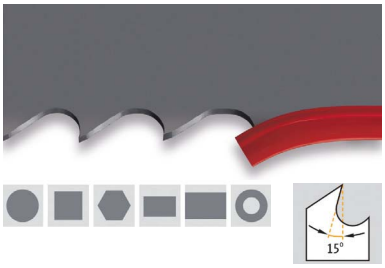
HSS Bi-metal

Design:
- extra wear-resistant cutting edges made from powder metallurgy high-speed steel
- aggressive and favourable cutting rake angle of 15°

Use:
- for hard and tough materials up to approx. 1700 N/mm² tensile strength
- for stainless and acid-resistant steels
- for copper and copper alloys
- for titanium and titanium alloys
- for thick-walled profiles

Note:
We will be happy to produce customised dimensions for you in a timely manner!

NEW



N° article	492340 BLIZZARD	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0010	○	2700	27	0,9	Combination tooth	4/6	15
0020	○	2700	27	0,9	Combination tooth	5/8	15
0030	○	2720	27	0,9	Combination tooth	2/3	15
0040	○	2720	27	0,9	Combination tooth	3/4	15
0050	○	2720	27	0,9	Combination tooth	4/6	15
0060	○	2720	27	0,9	Combination tooth	5/8	15
0070	○	2825	27	0,9	Combination tooth	3/4	15
0080	○	2825	27	0,9	Combination tooth	4/6	15
0090	○	2825	27	0,9	Combination tooth	5/8	15
0100	○	2910	27	0,9	Combination tooth	2/3	15
0110	○	2910	27	0,9	Combination tooth	3/4	15
0120	○	2910	27	0,9	Combination tooth	4/6	15
0130	○	2910	27	0,9	Combination tooth	5/8	15
0140	○	3000	27	0,9	Combination tooth	3/4	15
0150	○	3000	27	0,9	Combination tooth	4/6	15
0160	○	3000	27	0,9	Combination tooth	5/8	15
0170	○	3180	27	0,9	Combination tooth	2/3	15
0180	○	3180	27	0,9	Combination tooth	3/4	15
0190	○	3180	27	0,9	Combination tooth	4/6	15
0200	○	3180	27	0,9	Combination tooth	5/8	15
0210	○	3350	27	0,9	Combination tooth	2/3	15
0220	○	3350	27	0,9	Combination tooth	3/4	15
0230	○	3350	27	0,9	Combination tooth	4/6	15
0240	○	3350	27	0,9	Combination tooth	5/8	15
0250	○	3505	27	0,9	Combination tooth	2/3	15
0260	○	3505	27	0,9	Combination tooth	3/4	15
0270	○	3505	27	0,9	Combination tooth	4/6	15

N° article	492340 BLIZZARD	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0280	○	3505	27	0,9	Combination tooth	5/8	15
0290	○	3660	27	0,9	Combination tooth	2/3	15
0300	○	3660	27	0,9	Combination tooth	3/4	15
0310	○	3660	27	0,9	Combination tooth	4/6	15
0320	○	3660	27	0,9	Combination tooth	5/8	15
0330	○	3700	27	0,9	Combination tooth	2/3	15
0340	○	3700	27	0,9	Combination tooth	3/4	15
0350	○	3700	27	0,9	Combination tooth	4/6	15
0360	○	3700	27	0,9	Combination tooth	5/8	15
0370	○	3720	27	0,9	Combination tooth	3/4	15
0380	○	3720	27	0,9	Combination tooth	5/8	15
0390	○	4400	34	1,1	Combination tooth	2/3	15
0400	○	4520	34	1,1	Combination tooth	2/3	15
0410	○	4520	34	1,1	Combination tooth	3/4	15
0420	○	4640	34	1,1	Combination tooth	2/3	15
0430	○	5090	34	1,1	Combination tooth	2/3	15
0440	○	5090	34	1,1	Combination tooth	3/4	15
0450	○	5400	41	1,3	Combination tooth	2/3	15
0460	○	5800	41	1,3	Combination tooth	2/3	15
0470	○	5800	54	1,6	Combination tooth	2/3	15
0480	○	5800	54	1,6	Combination tooth	1.4/2	15
0490	○	6096	54	1,6	Combination tooth	1.4/2	15
0500	○	6096	54	1,6	Combination tooth	2/3	15
0510	○	6190	34	1,1	Combination tooth	2/3	15
0520	○	7067	54	1,6	Combination tooth	1.4/2	15
0530	○	7200	54	1,6	Combination tooth	1.4/2	15
0540	○	7200	54	1,6	Combination tooth	2/3	15

N° article	492341 BLIZZARD by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0010	○	27	0,9	Combination tooth	3/4	15	100
0020	○	27	0,9	Combination tooth	4/6	15	100
0030	○	27	0,9	Combination tooth	5/8	15	100
0040	○	34	1,1	Combination tooth	2/3	15	100

N° article	492341 BLIZZARD by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0050	○	34	1,1	Combination tooth	3/4	15	100
0060	○	34	1,1	Combination tooth	4/6	15	100
0070	○	41	1,3	Combination tooth	2/3	15	80
0080	○	41	1,3	Combination tooth	3/4	15	80

Metal saw band Bi-metal M51

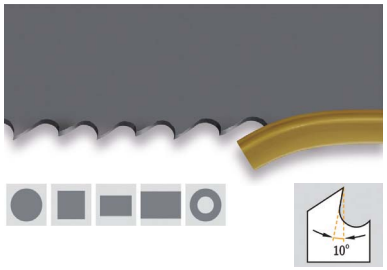
HSS Bi-metal

Design:
- saws convincingly on high-performance band sawing machines
- rake angle 10°
- the borazon-ground tooth tips produce an excellent cutting surface, absolutely angular cuts and a long service life

Use:
- for tensile strengths up to approx. 1400 N/mm²
- for rust- and acid-resistant steels
- for universal application for steel and non-ferrous metals
- for thick-walled profiles

Note:
We will be happy to produce customised dimensions for you in a timely manner!

NEW



N° article	492350 TYPHOON-SPRINT	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0010	○	2700	27	0,9	Combination tooth	3/4	10
0020	○	2720	27	0,9	Combination tooth	2/3	10
0030	○	2720	27	0,9	Combination tooth	3/4	10
0040	○	2825	27	0,9	Combination tooth	3/4	10
0050	○	2910	27	0,9	Combination tooth	2/3	10
0060	○	2910	27	0,9	Combination tooth	3/4	10
0070	○	3000	27	0,9	Combination tooth	3/4	10
0080	○	3180	27	0,9	Combination tooth	2/3	10
0090	○	3180	27	0,9	Combination tooth	3/4	10
0100	○	3350	27	0,9	Combination tooth	2/3	10
0110	○	3350	27	0,9	Combination tooth	3/4	10
0120	○	3505	27	0,9	Combination tooth	3/4	10
0130	○	3660	27	0,9	Combination tooth	2/3	10
0140	○	3660	27	0,9	Combination tooth	3/4	10
0150	○	3700	27	0,9	Combination tooth	2/3	10
0160	○	3700	27	0,9	Combination tooth	3/4	10
0170	○	3720	27	0,9	Combination tooth	2/3	10

N° article	492350 TYPHOON-SPRINT	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0180	○	4400	34	1,1	Combination tooth	2/3	10
0190	○	4520	34	1,1	Combination tooth	2/3	10
0200	○	4520	34	1,1	Combination tooth	3/4	10
0210	○	4640	34	1,1	Combination tooth	2/3	10
0220	○	5090	34	1,1	Combination tooth	2/3	10
0230	○	5090	34	1,1	Combination tooth	3/4	10
0240	○	5400	41	1,3	Combination tooth	2/3	10
0250	○	5800	41	1,3	Combination tooth	2/3	10
0260	○	5800	54	1,3	Combination tooth	2/3	10
0270	○	5800	54	1,6	Combination tooth	2/3	10
0280	○	5800	54	1,3	Combination tooth	1.4/2	10
0290	○	5800	54	1,6	Combination tooth	1.4/2	10
0300	○	6096	54	1,3	Combination tooth	1.4/2	10
0310	○	6096	54	1,3	Combination tooth	2/3	10
0320	○	6190	34	1,1	Combination tooth	2/3	10
0330	○	7067	54	1,6	Combination tooth	1.4/2	10

N° article	492351 TYPHOON-SPRINT by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0010	○	27	0,9	Combination tooth	2/3	10	100
0020	○	27	0,9	Combination tooth	3/4	10	100
0030	○	27	0,9	Combination tooth	4/6	10	100
0040	○	34	1,1	Combination tooth	2/3	10	100

N° article	492351 TYPHOON-SPRINT by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0050	○	34	1,1	Combination tooth	3/4	10	100
0060	○	34	1,1	Combination tooth	4/6	10	100
0070	○	41	1,3	Combination tooth	1.4/2	10	80
0080	○	41	1,3	Combination tooth	2/3	10	80

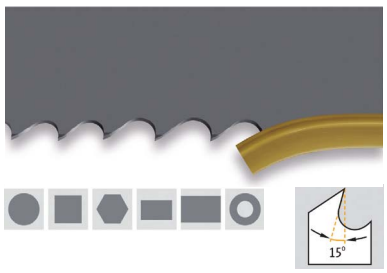
Design:
- extremely resistant and ground teeth for the toughest cutting conditions
- the borazon-ground tooth tips produce an excellent cutting surface, absolutely angular cuts and a long service life
- aggressive and favourable cutting rake angle of 15°

Note:
We will be happy to produce customised dimensions for you in a timely manner!

Use:
- for tensile strengths up to approx. 1700 N/mm²
- for stainless and acid-resistant steels
- for heat-resistant duplex steels
- for nickel base alloys
- for aluminium bronzes
- for titanium alloys

HSS Bi-metal

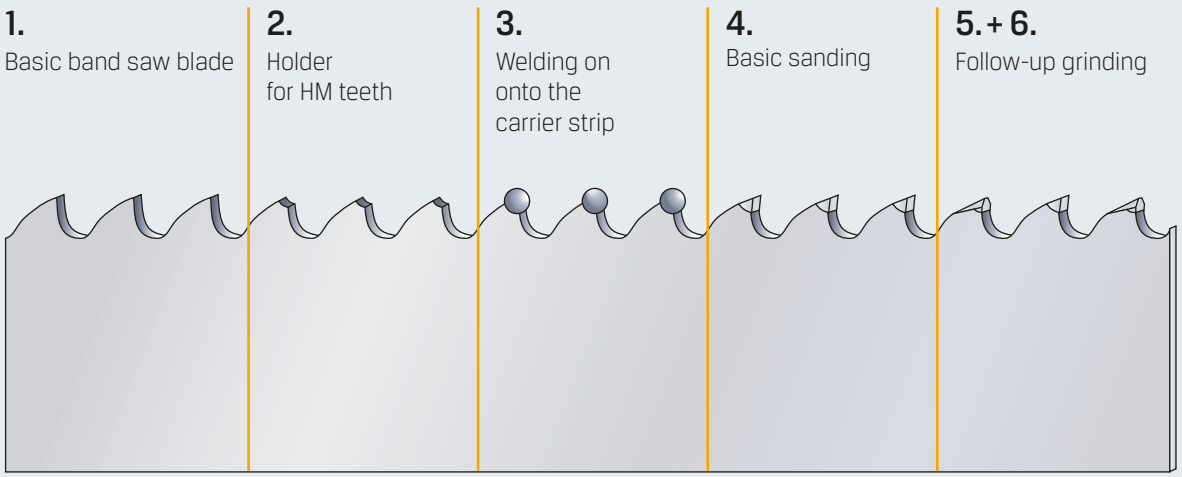
NEW



N° article	492360 TYPHOON-MAXIMA	Length mm	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
0010	○	4400	34	1,1	Combination tooth	2/3	15
0020	○	4520	34	1,1	Combination tooth	2/3	15
0030	○	4520	34	1,1	Combination tooth	3/4	15
0040	○	4640	34	1,1	Combination tooth	2/3	15
0050	○	5090	34	1,1	Combination tooth	2/3	15
0060	○	5400	41	1,3	Combination tooth	2/3	15
0070	○	5800	41	1,3	Combination tooth	2/3	15
0080	○	5800	54	1,6	Combination tooth	1.4/2	15
0090	○	5800	54	1,6	Combination tooth	2/3	15
0100	○	6096	54	1,6	Combination tooth	1.4/2	15
0110	○	6096	54	1,6	Combination tooth	2/3	15
0120	○	6190	34	1,1	Combination tooth	2/3	15
0130	○	7067	54	1,6	Combination tooth	1.4/2	15
0140	○	7200	54	1,6	Combination tooth	1.4/2	15
0150	○	7200	54	1,6	Combination tooth	2/3	15

Carbide

What makes it so successful?



Flexible:

The carrier band of the carbide bandsaw blades consists of specially tempered steel.

Extremely durable:

The tooth tips are made of made of wear-resistant carbide grades.

Perfectly joined:

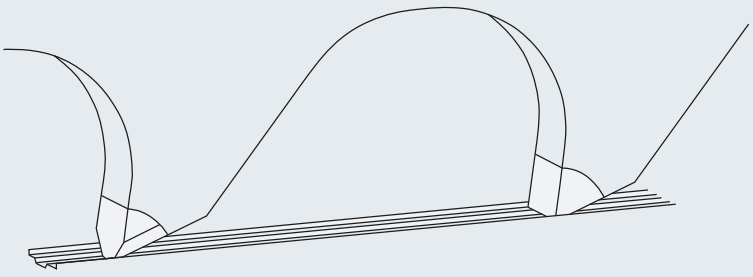
In a special process, the carbide teeth are tungsten carbide teeth are welded onto the welded onto the carrier band

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Saw blade geometry:

Particularly powerful – ARNTZ carbide band saw blades

The welded-on carbide teeth are provided with different cutting edge geometries. geometries. These achieve optimum chip splitting and therefore highest cutting performance, low-vibration cuts and clean, smooth material surfaces. material surfaces



The right application:

ARNTZ carbide band saw blades must be used on specially designed band sawing machines in order to optimise the performance of the band saw blades. saw bands to achieve optimum performance.

ARNTZ carbide saw bands are supplied as endless welded bands, customised for your sawing machine or in coils:

27 – 80 mm in lengths of approx. 50 m

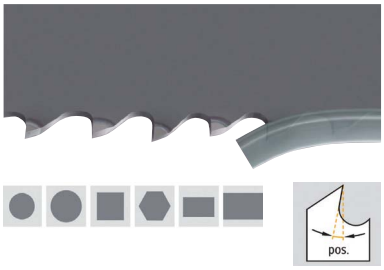
Metal saw band Carbide

Design:
- set carbide band saw blade for machining difficult-to-cut and abrasive materials
- with positive rake angle

Use:
- for titanium alloys
- for metals with high residual stress
- for stainless steels
- for special alloys
- for abrasive non-ferrous metals and graphite

Note:
- delivery only in specified packaging units
- price per meter
- we will be happy to produce customised dimensions for you in a timely manner!

NEW



N° article	492451 Black-Line-S by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m m
0010	○	27	0,9	Combination tooth	3/4	positive	50
0020	○	34	1,1	Combination tooth	2/3	positive	50
0030	○	34	1,1	Combination tooth	3/4	positive	50
0040	○	41	1,3	Combination tooth	2/3	positive	50

Design:
- carbide band saw blade with pre and regrooving geometry for machining non-ferrous metals and graphite
- special wear-resistant carbide quality
- with positive rake angle

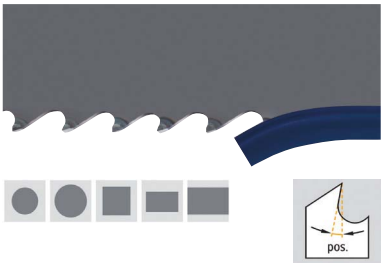
HSS-Carbide

PU 50 meters

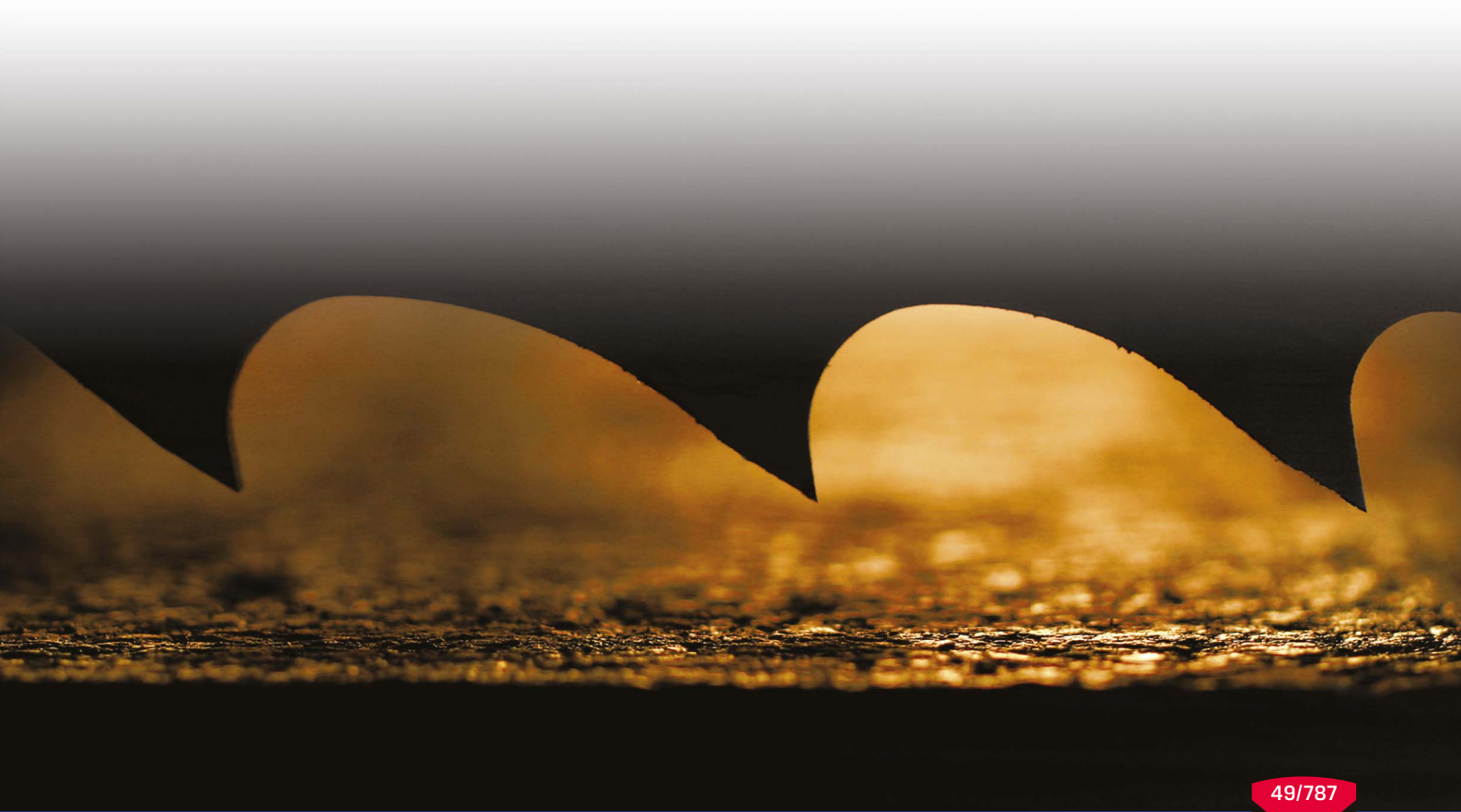
Use:
- for aluminium alloys
- for aluminium bronzes
- for copper alloys
- for sand cast aluminium and cast magnesium
- for graphite

Note:
- delivery only in specified packaging units
- price per meter
- we will be happy to produce customised dimensions for you in a timely manner!

NEW



N° article	492461 Blue-Line by the metre	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree	PU m
0010	○	27	0,9	Combination tooth	2/3	positive	50
0020	○	27	0,9	Combination tooth	3/4	positive	50
0030	○	34	1,1	Combination tooth	2/3	positive	50
0040	○	34	1,1	Combination tooth	3/4	positive	50
0050	○	41	1,3	Combination tooth	2/3	positive	50
0060	○	41	1,3	Combination tooth	3/4	positive	50



Metal Saw Blades Bimetal

Cutting Parameter Recommendations

Materials		Material dimensions Ø [mm] up to 50	51 - 75	76 - 100	101 - 150	151 - 200	201 - 250	251 - 300	Cooling [% oil]
		5 - 8	4 - 6	4 - 6 / 3 - 4	3 - 4	2 - 3	2 - 3	2 - 3	TPI
Structural, deep-drawing and free-cutting steels St37: 1.0037, C10: 1.0031 St42: 1.0040, C15: 1.0401	Vc	90	90	85 - 87	80 - 82	74 - 76	73 - 75	70 - 72	10 - 15
	Vf	83 - 85	67 - 69	60 - 63	37 - 40	32 - 34	24 - 26	20 - 23	
Structural and tempered steels St52: 1.0057, St60: 1.0060 C35: 1.0501, C45: 1.0503	Vc	72 - 75	72 - 75	72 - 75	68 - 70	68 - 70	64 - 66	64 - 66	10 - 15
	Vf	70 - 75	56 - 58	50 - 52	32 - 35	28 - 31	23 - 25	18 - 20	
Case-hardening and heat-treatable steels 16MNCr5: 1.17311 42CrMo4: 1.7225	Vc	63 - 65	63 - 65	63 - 65	58 - 60	58 - 60	55 - 57	55 - 57	10 - 15
	Vf	60 - 65	48 - 52	43 - 46	28 - 30	24 - 27	18 - 21	15 - 17	
Low alloy hot work steels 40CrMnMo7: 1.2311, 55NiCrMoV6: 1.2713	Vc	42 - 45	42 - 45	42 - 45	38 - 40	38 - 40	38 - 40	36 - 37	10 - 15
	Vf	43 - 45	31 - 33	29 - 31	19 - 22	17 - 19	13 - 15	10 - 12	
Nitriding steels, higher alloyed hot work steels X40CrMoV51: 1.2344, 40CrMnNiMo864: 1.2738	Vc	41 - 42	41 - 42	37 - 39	37 - 39	35 - 36	35 - 36	34 - 35	10 - 15
	Vf	40 - 42	30 - 32	26 - 28	16 - 18	14 - 16	11 - 12	9 - 10	
Unalloyed tool steels 100Cr6: 1.3505, C125W: 1.1663	Vc	58 - 60	58 - 60	54 - 56	54 - 56	51 - 53	50 - 51	50 - 51	10 - 15
	Vf	59 - 61	43 - 44	39 - 41	24 - 26	22 - 24	17 - 18	14 - 15	
Cold work steels X210Cr 12: 1.2080, X155CrVMo121: 1.2379	Vc	34 - 35	34 - 35	33 - 31	31 - 33	29 - 30	29 - 30	28 - 29	10 - 15
	Vf	33 - 35	24 - 26	20 - 21	14 - 15	12 - 13	9 - 10	7 - 8	
High-speed steels S6-5-2: 1.3343, S2-10-1-8: 1.3247	Vc	48 - 50	48 - 50	45 - 47	43 - 44	43 - 44	40 - 42	40 - 42	10 - 15
	Vf	48 - 51	35 - 37	32 - 34	20 - 22	17 - 19	13 - 15	10 - 12	
Rust and acid resistant steels (light) X17CrNi16-2: 1.4057, X30Cr13: 1.4028, X42Cr13: 1.2083	Vc	45 - 47	45 - 47	42 - 44	42 - 44	40 - 41	40 - 41	38 - 38	10 - 15
	Vf	47 - 49	33 - 35	30 - 32	19 - 21	17 - 18	12 - 14	9 - 10	
Rust and acid resistant steels (heavy) X17CrNi16-10: 1.4301, X2CrNiMo17-12-2: 1.4404, X6CrNiMoTi17-12-2: 1.4571	Vc	38 - 40	38 - 40	36 - 37	35 - 36	33 - 34	33 - 34	31 - 32	10 - 15
	Vf	39 - 41	29 - 30	22 - 23	16 - 17	14 - 15	11 - 12	7 - 8	
Duplex and heat resistant steels X15CrNiSi2525: 1.4841	Vc	27	26	25	23	22	21	20	10 - 15
	Vf	20	14	11	9	7	6	5	
Horizontal machines Aluminium, Al alloys: Al99,9 - AlMg4 - AlSi6Cu4	Vc	100	100	100	100	100	100	100	10 - 15
	Vf	95 - 100	80 - 85	75 - 80	50 - 55	45 - 50	40 - 45	35 - 40	
Copper / Brass KE-Cu: 2.0050, CuZn37: 2.0321, CuZn40Pb2: 2.0402	Vc	90	90	90	90	90	90	90	10 - 15
	Vf	85 - 90	65 - 70	60 - 65	45 - 50	40 - 45	30 - 35	25 - 30	

Vc: Cutting speed [m/min]
Vf Feed [mm/min]

For proper breaking in a new blade use it with approx. 50 % of the feed rate and 75 % of the cutting speed for a period of about 15 min. Specified parameters are valid for untempered, annealed materials and are only guide values.
If vibrations occur, the cutting speed has to be reduced gradually.

Metal saw band Bi-metal

WIKUS Präzision an der Schnittstelle

HSS Bi-metal

NEW

Design:
- **PRIMAR® M42** - the all-rounder for small and medium-sized workpieces
- bi-metal, with wear-resistant tooth edges made of HSS M42
- high tooth tip hardness, for steels up to 40 HRC
- **variable tooth pitch means**
  differing tooth distance within one toothing interval, which in turn means **less vibrations and a greater application range**

Tooth profile:
Standard tooth, rake angle 0°, for
- short-chipping materials
- steels with high carbon content, cast iron
- workpieces with small cross-sections
- thin-walled profiles

Claw tooth, rake angle positive, for
- universal use, especially for long-chipping, tough materials
- NF metals, construction steel, Q&T steel, stainless and acid-resistant steel
- workpieces with large cross-sections (profiles, solid material)





N° article	492011 1138×13×0.65 mm	Tooth profile	Teeth per inch	Rake angle degree
8/12S	○	Standard tooth	8/12	0
10/14S	○	Standard tooth	10/14	0

N° article	492021 2375×20×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0
10/14S	○	Standard tooth	10/14	0

N° article	492056 2710×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
8/12S	○	Standard tooth	8/12	0

N° article	492066 2835×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0

N° article	492073 2950×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
8/12S	○	Standard tooth	8/12	0

N° article	492081 3660×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
4/6S	○	Standard tooth	4/ 6	0
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0
10/14S	○	Standard tooth	10/14	0

N° article	492016 1325×13×0.65 mm	Tooth profile	Teeth per inch	Rake angle degree
8/12S	○	Standard tooth	8/12	0
10/14S	○	Standard tooth	10/14	0

N° article	492051 2450×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0

N° article	492061 2750×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0

N° article	492071 2910×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0

N° article	492076 3150×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10	0
8/12S	○	Standard tooth	8/12	0

N° article	492091 3830×27×0.9 mm	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	Standard tooth	6/10S	0

Metal saw band in rolls (30.5 m)

WIKUS Präzision an der Schnittstelle

HSS Bi-metal

Design:
PRIMAR® M42 (HSS bimetal)
- base structure made of high-alloyed tempered steel
- tooth tips made of HSS-M42
- constant toothing

Tooth shapes:
Standard tooth, rake angle 0°, for
- short-chipping materials
- steels with high carbon content, cast iron
- workpieces with small cross-sections
- thin-walled profiles and thin sheets

Claw tooth, rake angle positive, for:
- universal use, especially for long-chipping, tough materials
- NF metals, construction and Q&T steel
- workpieces with large cross-sections (profiles, solid material)

Delivery:
Roll of 30.5 m each

NEW

CUTTING PARAMETERS
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N° article	492121 PRIMAR® M42	Height mm	Thickness mm	Tooth profile	Teeth per inch	Rake angle degree
10×0,9/6K	○	10	0,9	Claw tooth	6	8
13×0,65/6K	○	13	0,65	Claw tooth	6	8
13×0,65/14S	○	13	0,65	Standard tooth	14	0
13×0,9/6K	○	13	0,9	Claw tooth	6	8

Metal saw band Bi-metal

WIKUS Präzision an der Schnittstelle

HSS Bi-metal

Design:
- **VARIO® M42 / MARATHON® M42**
- bi-metal, with wear-resistant tooth edges made of HSS M42
- high tooth tip hardness, for steels up to 40 HRC
- **variable tooth pitch means**
  differing tooth distance within one toothing interval, which in turn means **less vibrations and a greater application range**

Tooth shapes:
Standard tooth, rake angle 0°, for
- short-chipping materials
- steels with high carbon content, cast iron
- workpieces with small cross-sections
- thin-walled profiles

CUTTING PARAMETERS
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Claw tooth, rake angle positive, for
- universal use, especially for long-chipping, tough materials
- NF metals, construction steel, Q&T steel, stainless and acid-resistant steels
- workpieces with large cross-sections (profiles, solid material)

Note:
Band saw blade variant VARIO M42 available while stocks last!







N° article	492010 1138×13×0.65 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
8/12S	○	VARIO M42	Standard tooth	8/12	0
10/14S	○	VARIO M42	Standard tooth	10/14	0

N° article	492015 1325×13×0.65 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
8/12S	○	VARIO M42	Standard tooth	8/12	0
10/14S	○	VARIO M42	Standard tooth	10/14	0

N° article	492020 2375×20×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0
10/14S	○	VARIO M42	Standard tooth	10/14	0

N° article	492050 2450×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
4/6K	●	MARATHON M42	Claw tooth	4/ 6	8
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492055 2710×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492060 2750×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
4/6K	●	MARATHON M42	Claw tooth	4/ 6	8
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492065 2835×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492070 2910×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
3/4K	●	MARATHON M42	Claw tooth	3/ 4	8
4/6K	●	MARATHON M42	Claw tooth	4/ 6	8
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492072 2950×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
3/4K	●	MARATHON M42	Claw tooth	3/ 4	8
4/6K	●	MARATHON M42	Claw tooth	4/ 6	8
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492075 3150×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
4/6K	●	MARATHON M42	Claw tooth	4/ 6	8
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0

N° article	492080 3660×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
3/4K	●	MARATHON M42	Claw tooth	3/ 4	8
4/6K	●	MARATHON M42	Claw tooth	4/ 6	8
4/6S	○	VARIO M42	Standard tooth	4/ 6	0
5/8K	●	MARATHON M42	Claw tooth	5/ 8	6
6/10S	○	VARIO M42	Standard tooth	6/10	0
8/12S	○	VARIO M42	Standard tooth	8/12	0
10/14S	○	VARIO M42	Standard tooth	10/14	0

N° article	492087 3800×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8

Metal saw band Bi-metal

HSS Bi-metal

Design:
- **VARIO® M42 / MARATHON® M42**
- bi-metal, with wear-resistant tooth edges made of HSS M42 (approx. 68 - 69 HRC)
- high tooth tip hardness
- **variable tooth pitch means**
  differing tooth distance within one toothing interval, which in turn means **less vibrations and a greater application range**

Tooth profile:
Claw tooth, rake angle positive, for
- universal use, especially for long-chipping, tough materials
- NF metals, construction steel, Q&T steel, stainless and acid-resistant steels and exotic alloys
- workpieces with large cross-sections (profiles, solid material)



CUTTING PARAMETERS
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N° article	492090 3830×27×0.9 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8
5/8K	●	MARATHON M42	Claw tooth	5/8	6

N° article	492092 4100×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
2/3K	●	MARATHON M42	Claw tooth	2/3	8
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8

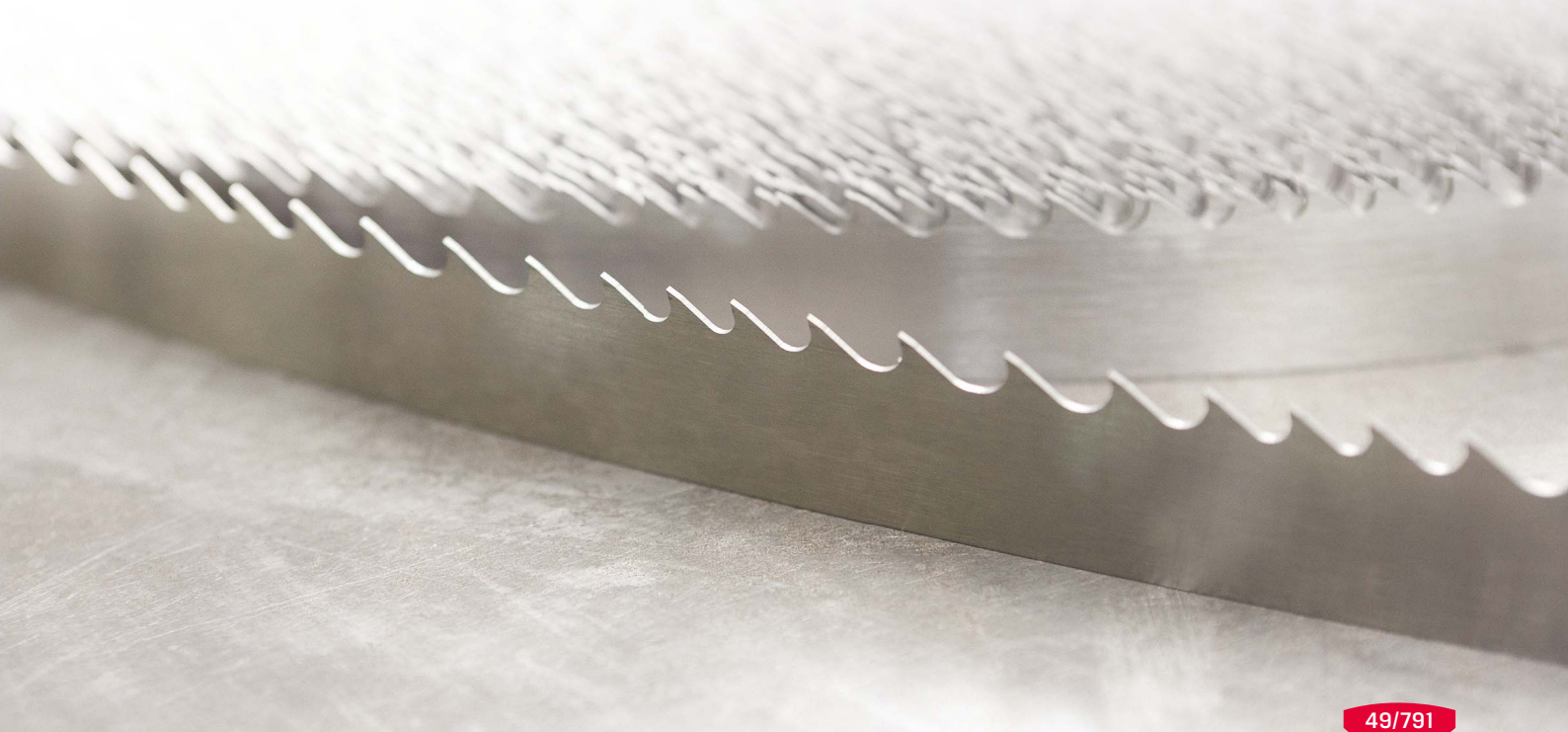
N° article	492094 4150×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
2/3K	●	MARATHON M42	Claw tooth	2/3	8
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8

N° article	492096 4400×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
2/3K	●	MARATHON M42	Claw tooth	2/3	8
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8

N° article	492097 5090×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
2/3K	●	MARATHON M42	Claw tooth	2/3	8
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8

N° article	492098 4640×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
2/3K	●	MARATHON M42	Claw tooth	2/3	8
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8

N° article	492099 5000×34×1.1 mm	Belt variant	Tooth profile	Teeth per inch	Rake angle degree
2/3K	●	MARATHON M42	Claw tooth	2/3	8
3/4K	●	MARATHON M42	Claw tooth	3/4	8
4/6K	●	MARATHON M42	Claw tooth	4/6	8



Metal saw band Bi-metal, endless welded

WIKUS Präzision an der Schnittstelle

Design:
- for customised manufacturing of endless welded saw blades
- base structure made of high-alloyed tempered steel

variable tooth pitch means
- greater application range
- significant reduction of vibrations

VARIO®/MARATHON® M42:
- **for universal use** in single and serial cuts
- for small and medium size workpieces
- for steels up to 40 HRC and NF metals

PROFLEX® M42
- with profile tooth for universal workshop operation
- for the **cutting of profiles** in single, layer and bundle cut as well as steel beams
- increased service life span, low burr formation

SELEKTA® GS M42
- with ground guide tooth (hook tooth)
- especially for performance-related use with optimum surface finish
- **use in tough and long-chipping materials**

MARATHON® X3000:
- **for difficult to machine materials** and high-alloy steels up to 45 HRC
- for solid material
- for layer and bundle cuts

Minimum order quantity 5 pieces

Price per meter!

Welding costs per saw band (SELEKTA):
Blade width 13 mm = 7,54 €
Blade width 20 mm = 7,59 €
Blade width 27 mm = 7.59 € (11.22 €)
Blade width 34 mm = 8,81 € (13,29 €)
Blade width 41 mm = 10,03 € (15,65 €)

Calculation example:
Saw blade length × price/meter + welding costs = final price

Note:
Band saw blade variant VARIO M42 available while stocks last!

HSS Bi-metal | PU 5 pieces







CUTTING PARAMETERS
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N° article	492170 Combi toothing, VARIO/MARATHON® M42	Height mm	Thickness mm	Tooth profile	Teeth per inch
27×0,9/2/3K	○	27	0,9	Claw tooth	2/3
27×0,9/3/4K	○	27	0,9	Claw tooth	3/4
27×0,9/5/8K	○	27	0,9	Claw tooth	5/8
34×1,1/2/3K	○	34	1,1	Claw tooth	2/3
34×1,1/3/4K	○	34	1,1	Claw tooth	3/4
34×1,1/4/6K	○	34	1,1	Claw tooth	4/6
34×1,1/5/8K	○	34	1,1	Claw tooth	5/8
41×1,3/2/3K	○	41	1,3	Claw tooth	2/3
41×1,3/3/4K	○	41	1,3	Claw tooth	3/4
41×1,3/4/6K	○	41	1,3	Claw tooth	4/6
41×1,3/5/8K	○	41	1,3	Claw tooth	5/8

N° article	492172 Profile toothing PROFLEX® M42	Height mm	Thickness mm	Tooth profile	Teeth per inch
27×0,9/4/6P	○	27	0,9	Profile tooth	4/ 6
27×0,9/5/7P	○	27	0,9	Profile tooth	5/ 7
27×0,9/8/11P	○	27	0,9	Profile tooth	8/11
34×1,1/3/4P	○	34	1,1	Profile tooth	3/ 4
34×1,1/4/6P	○	34	1,1	Profile tooth	4/ 6
34×1,1/5/7P	○	34	1,1	Profile tooth	5/ 7
34×1,1/8/11P	○	34	1,1	Profile tooth	6
41×1,3/3/4P	○	41	1,3	Profile tooth	3/ 4
41×1,3/5/7P	○	41	1,3	Profile tooth	5/ 7

N° article	492174 Combi toothing, SELEKTA® GS M42	Height mm	Thickness mm	Tooth profile	Teeth per inch
27×0,9/2/3K	○	27	0,9	Claw tooth	2/3
27×0,9/3/4K	○	27	0,9	Claw tooth	3/4
27×0,9/4/6K	○	27	0,9	Claw tooth	4/6
34×1,1/2/3K	○	34	1,1	Claw tooth	2/3
34×1,1/3/4K	○	34	1,1	Claw tooth	3/4
34×1,1/4/6K	○	34	1,1	Claw tooth	4/6
41×1,3/1,4/2K	○	41	1,3	Claw tooth	1.4/2
41×1,3/2/3K	○	41	1,3	Claw tooth	2/3

N° article	492180 Combi toothing, MARATHON® X3000	Height mm	Thickness mm	Tooth profile	Teeth per inch
27×0,9/3/4K	○	27	0,9	Claw tooth	3/4
27×0,9/4/6K	○	27	0,9	Claw tooth	4/6
27×0,9/5/8K	○	27	0,9	Claw tooth	5/8
34×1,1/2/3K	○	34	1,1	Claw tooth	2/3
34×1,1/3/4K	○	34	1,1	Claw tooth	3/4
34×1,1/4/6K	○	34	1,1	Claw tooth	4/6
41×1,3/2/3K	○	41	1,3	Claw tooth	2/3
41×1,3/3/4K	○	41	1,3	Claw tooth	3/4

Metal saw band Carbide, endless welded

WIKUS Präzision an der Schnittstelle

Design:
- carbide tipped metal saw bands

DUROSET®:
- **Claw tooth**, positive rake angle for universal use, set version
- good performance, good finish
- universal application, also for not carbide-ready machines

ECODUR®:
- **Trapezoid tooth**- rake angle positive for high cutting performance, unset version
- high performance, excellent finish

Minimum order quantity 1 pieces

Price per meter!

Welding costs for saw bands:
Blade width 27 mm = 7,70 €
Blade width 34 mm = 8,95 €
Blade width 41 mm = 10,20 €

Calculation example:
Saw blade length × price/meter + welding costs = final price

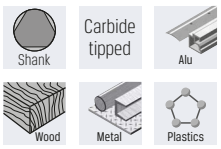


Carbide

N° article	492190 DUROSET®	492192 ECODUR®	Height mm	Thickness mm	Tooth profile	Teeth per inch
27×0,9/2/3T	–	○	27	0,9	Trapezoid tooth	2/3
27×0,9/3/4K	○	–	27	0,9	Claw tooth	3/4
27×0,9/3/4T	–	○	27	0,9	Trapezoid tooth	3/4
34×1,1/2/3K	○	–	34	1,1	Claw tooth	2/3
34×1,1/2/3T	–	○	34	1,1	Trapezoid tooth	2/3
34×1,1/3/4K	○	–	34	1,1	Claw tooth	3/4
34×1,1/3/4T	–	○	34	1,1	Trapezoid tooth	3/4
41×1,3/2/3K	○	–	41	1,3	Claw tooth	2/3
41×1,3/2/3T	–	○	41	1,3	Trapezoid tooth	2/3
41×1,3/3/4T	–	○	41	1,3	Trapezoid tooth	3/4

Carbide hole saw

Design:
- crest and shank **made of one piece**
- with replaceable centre drill, which at the same time prevents the carbide teeth from being damaged during use
- plus ejector spring
- **shank with 3 clamping surfaces**for secure hold in the chuck
- repeated regrinding is possible



493000: Flat cut version for material thickness up to 4 mm and cutting depth 12 mm
493010: Deep cut version for material thickness up to 4 mm and clear width 35 mm (up to Ø 60 mm) or 60 mm (from Ø 61)

Use:
- for premium steel up to max. 2 mm thickness
- for unalloyed steel, cast, NF metal and aluminium up to max. 4 mm thickness and for asbestos, glass fibre, plastic, gypsum and wallboards as well as for wood

Note:
For HSS hole saws (bi-metal) see 494000 in our catalogue Elektrowerkzeuge. (Power Tools)


493000


493010

N° article	493000 Flat-cut	∅ mm	Shank ∅ mm
16	●	16	10
17	●	17	10
18	●	18	10
19	●	19	10
20	●	20	10
20,5/PG13	○	20,5	10
21	●	21	10
22	●	22	10
22,5/PG16	●	22,5	10
23	●	23	10
24	●	24	10
25	●	25	10
26	●	26	10
27	●	27	10
28	●	28	10
30	●	30	10
32	●	32	10
33	○	33	10
34	●	34	10
35	●	35	10
38	●	38	10
40	●	40	10
41	●	41	10
42	○	42	10
43	●	43	10
45	●	45	10
48	○	48	10
50	●	50	10
51	○	51	10
52	○	52	10
55	●	55	10
60/PG48	●	60	10
62	○	62	10
64	○	64	10
65	●	65	10
70	○	70	13
75	○	75	13
80	●	80	13
85	○	85	13
90	○	90	13

N° article	493010 Deep cut	∅ mm	∅ mm
20	●	20	10
22	○	22	10
25	●	25	10
30	○	30	10
32	○	32	10
35	○	35	10
40	○	40	10
45	○	45	10
50	●	50	10
60/PG48	●	60	13
70	○	70	13
75	○	75	13



N° article	493030 Spare centre drill HSS for flat cut version	fitting for hole saw ∅ from - up to mm
C6	●	15 - 60
C8	○	61 - 120



N° article	493040 Spare centre drill HSS for deep cut	fitting for hole saw ∅ from - up to mm
C6	○	15 - 60
C8	○	61 - 120

Hand saw blade unbreakable

BAHCO PREMUS

HSS Bi-metal | PU 10 pieces

Design:
- high-performance bi-metal saw blade with highest cutting performance and service life
- teeth made of HSS, hardened and straight-set, serrated and proof against chip breaking
- back made of tough spring steel, indissolubly bonded by a special welding process
- huge elasticity with coincident high cutting performance and splendid blade guidance
- guaranteed unbreakable

Delivery:
In packaging units only!

Note:
Price per piece



N° article	495990 PREMUS	496000 BAHCO	Total length mm	Height mm	Thickness mm	Teeth per inch	Material
300-24	●	●	300	13	0,65	24	HSS bi-metal
300-18	–	●	300	13	0,65	18	HSS bi-metal

Hand saw blade unbreakable

PREMUS

Design and use:
Like 495990, however with progressive toothing

PU 10 pieces

Progressive toothing:
The toothing starts with 32 teeth/inch at the first cut section, descends to 24 teeth in the middle section and finally to 18 teeth/inch at the lower end

Advantage:
- easy cutting start, crucial higher performance and cutting force
- universal applications ranging from steel to light metal

Delivery:
In packaging units only!

Note:
Price per piece



N° article	496080 progressive toothing	Total length mm	Height mm	Thickness mm	Teeth per inch	Material
300-18/32	●	300	13	0,65	18/32	HSS bi-metal

Metal saw bow

BAHCO

NEW

HSS Bi-metal

Design:
- equipped with Sandflex® bi-metal blade, 300 mm (12"), 24 teeth per inch
- traditionally shaped and user-friendly metal saw bow
- alternative blade clamping at 90°, for flush cuts



N° article	497002	Total length mm
0010	8,30	517

Metal saw bow

KSTOOLS

HSS Bi-metal

Design:
- robust aluminium construction for universal application
- blade tension at 0° and 55°
- with bi-metal blade
- hand guard



N° article	497050	Total length mm
400	21,85	400

Metal saw bow

Design and use:
- with very high clamping force for straight, clean cuts with exact kerfs
- centred blade for proper balance
- spring-supported blade mounting for quick change
- optional blade clamping at 55° for flush cuts
- with a virtually unbreakable SANDFLEX bi-metal blade
- ergo®handle

HSS Bi-metal



N° article	497200	Total length mm
325	●	400

Metal saw bow

Design and use:
- high clamping force of 100 kg for straight, clean cuts with exact kerfs
- light-weight two-component frame with steel core
- optional blade clamping at 55° for flush cuts
- ergo®handle with integrated tensioning mechanism
- with a virtually unbreakable SANDFLEX bi-metal blade
- quick-action clamping

HSS Bi-metal



N° article	497210	Total length mm
319	●	400

Metal compass saw

Design:
- handle made of zinc injection moulding
- clamping bolts for blade integrated in handle
- 8 various blade settings possible
- with SANDFLEX bi-metal blade, 24 teeth per inch

HSS Bi-metal



497250

497252

N° article	497250 with bi-metal saw blade	497252 Spare compass saw blade, metal	497254 Spare compass saw blade, wood, without fig.	Total length mm
321	●	●	●	310

Metal saw PUK

Design:
- with adjustable or rigid handle
- in the adjustable version the handle may be brought to any desired position

Note:
497400 In packaging units only!

Note:
Prices per piece.



497300

497350

497400

N° article	497300 adjustable handle	497350 fixated handle	497400 Spare saw blades, metal	Total length mm	PU
310	●	–	–	310	1
290	–	●	–	290	1
150	–	–	●	150	12

Metal saw bow Mini

Design:
- robust mini frame made of aluminium
- profile frame, with pistol grip
- with 6-fold non-varying blade adjustment options
- fitting spare blades see 497400



N° article	497450 Aluminium	Total length mm
133	●	255

Dovetail Saw

Design:
- high-performance fine-toothed saw with hardened tooth tips
- teeth precision ground and straight-set
- universal toothing for cutting along the fibre or crosswise to it
- precise, clean cut, wooden handle



311



312

N° article	497600 for wood and plastic	Saw blade length mm	Teeth per inch	Handle execution
310	●	250	15/16	Straight handle
311	●	250	15/16	Cranked handle
312	●	250	15/16	Foldable handle

Mitre block

Design:
- mitre box made of solid wood, screwed and lacquered
- for L.H and R.H. operation at angles of 45°, 90° and 135°



N° article	497650	Width mm	Height mm	Total length mm
300	●	140	50	300

Fret saw bow

BAHCO

Design:
- robust steel tube frame 12 × 1 mm cross section
- 300 mm projection with clamping jaws and wing nut
- fret saw blades in hardened, extra tough but flexible quality
- price per PU



N° article	497800 for metal, with wooden handle (without saw blade)	497850 Fretsaw blade for metal (PU = 12 pieces)	Toothing
502	●	–	–
GROB	–	●	coarse
MITTEL	–	●	medium
FEIN	–	●	fine

Hand saw

BAHCO

Design:
- for all kinds of wood
- hardened tooth tips, teeth precision ground for optimum cutting performance
- universal toothing for sawing with or against the fibre direction
- robust, screwed plastic handle with 45° and 90° angle stop



N° article	497900 PrizeCut	Saw blade length mm	Teeth per inch
375	●	375	11/12
475	●	475	11/12

Hand saw

BAHCO

Design:
- XT toothing, extremely powerful in medium-hard materials, such as chipboard or plastics
- tooth tips ground and hardened
- thicker blade for vibration-free sawing
- two-component ERGO™ handle for comfortable handling
- rustproof, with tooth protection guard
- handle with 45° and 90° angle stop



N° article	498000 Superior XT	Saw blade length mm	Teeth per inch
475	●	475	9/10
550	●	550	9/10

Bow saw

BAHCO

Design:
- with very sturdy frame made of high-quality steel
- for sophisticated tasks, e.g. in the building trade

Advantages:
- light frame, 30", 865 g, for easy handling
- blade clamping mechanism, for high blade tension (up to 120 kg) ensures straight cut
- simple and secure change of blades through setscrew
- injection-moulded undetachable ergonomic handle with knuckle shield



N° article	498030 FORCE	Saw blade length mm
759	●	759

Mini bow saw

BAHCO

Design:
- in toolbox size
- oval frame of sturdy steel tube
- with a pointed tooth blade for wood and a SANDFLEX bimetal saw blade for metal and plastic
- plastic tooth protection, knuckle guard and clamping lever
- fitting spare blades for metal and plastic see 496000



N° article	498020 3806-KP	498022 Spare blade for wood	Saw blade length mm	Toothing
300	●	●	300	Pointed toothing

Design:
- made of hardened Swedish steel
- tooth tips hardened
- teeth precision ground and set



23



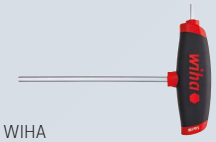
51

N° article	498035 Saw blade wood, 759 mm	Saw blade length mm	Toothing	Scope of application
23	●	759	Rip toothing	rip toothing
51	●	759	Triangular group toothing	clustered toothing

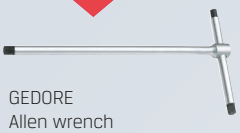
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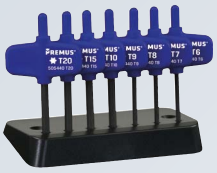
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Combination wrench, extra long
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WIHA
Allen wrench
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GEDORE
Allen wrench
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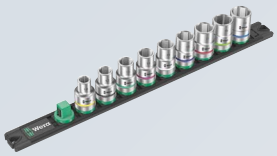
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PREMUS
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WIHA
Voltage tester contactless
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WERA
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WIHA
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WERA
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WERA
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HAZET
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WERA
Bit assortment
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WERA
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WEIDMÜLLER
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VIGOR
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STANLEY
Hammer stapler
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SUPRABEAM
LED inspection set
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DYMO
Labelling device
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VIGOR
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GRATEC
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Page 56/1010



PICARD
Engineer´s hammer
Page 57/1015



PICARD
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KNIPEX
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Page 58/1024



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One-handed clamp
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BESSEY
Ceiling and
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BESSEY
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LEINEN
Parallel vice
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VDE high leverage diagonal cutter 55/952
VDE interchangeable blade set 53/896
VDE installation pliers 55/953
VDE magazine bit holder 53/897
VDE needle-nose combination pliers 55/950
VDE needle nose pliers 55/950
VDE open-end wrench 55/951
VDE pliers wrench 55/951
VDE screwdriver set 53/895-53/897
VDE side cutter 55/952
VDE socket wrench set 3/8" Zyklop 51/846
VDE tool set 53/899
VDE torque screwdriver set 53/898
VDE waterpump pliers 55/951
VDE wire stripper 55/953-55/954
Vice jaw 58/1035
Voltage tester 53/899-53/901-53/902

W

Wad punch 58/1025
Watchmaker screwdriver set 53/906
Water pump pliers 55/931-55/935
Welding clamp set 58/1033
Welding grip pliers 55/949
WiFi videoscope set 55/980
Wire end ferrules assortment 55/964
Wire stripping side cutter 55/940
Wire stripper 55/940
Wire rope cutter 55/944
Work scissors 58/1024
Wrecking bar 56/991

Double open-end wrench

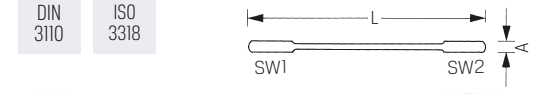
Design:
- chromium-vanadium steel
- flat heads
- heads high-gloss polished
- jaw position 15°

500010 PROJAHN
- nickel-plated, chrome-plated and mat satined

500050 BAHCO
- vanadium extra, high-gloss nickel-plated, chrome-plated and polished

500054 HAZET
- surface chrome-plated
- shank with extra strong double T-profile

DIN 3110 | ISO 3318





500010



500050



500054

N° article	500010	AF1 mm	AF2 mm	L mm	A mm
6×7	●	6	7	122	3,3
8×9	●	8	9	140	3,6
8×10	●	8	10	140	3,6
10×11	●	10	11	156	4,6
10×13	●	10	13	172	5,1
12×13	●	12	13	172	5,1
13×17	●	13	17	188	5,6
14×15	●	14	15	188	5,6
16×17	●	16	17	204	6,1

N° article	500010	AF1 mm	AF2 mm	L mm	A mm
17×19	●	17	19	220	6,5
18×19	●	18	19	220	6,5
19×22	●	19	22	234	7,2
20×22	●	20	22	234	7,2
21×23	●	21	23	247	7,5
22×24	●	22	24	247	7,5
24×26	●	24	26	266	8,2
24×27	●	24	27	266	8,2
24×30	●	24	30	280	8,4

N° article	500010	AF1 mm	AF2 mm	L mm	A mm
25×28	●	25	28	285	8,4
27×30	●	27	30	302	9,1
27×32	●	27	32	302	9,1
30×32	●	30	32	302	9,1
36×41	●	36	41	380	12,2
41×46	●	41	46	415	14,7
46×50	●	46	50	465	15,7

N° article	500050 BAHCO	AF1 mm	AF2 mm	L mm	A mm
4×5	●	4	5	105	3,2
4,5×5,5	●	4,5	5,5	105	3,2
5×5,5	●	5	5,5	105	3,2
5,5×7	●	5,5	7	122	3,9
6×7	●	6	7	122	3,9
7×8	●	7	8	122	3,9
8×9	●	8	9	138	4
8×10	●	8	10	138	4
10×11	●	10	11	153	5,2
10×13	●	10	13	153	5,2
12×13	●	12	13	168	5,8
12×14	●	12	14	168	5,8
13×14	●	13	14	168	5,8
13×15	●	13	15	183	6,3

N° article	500050 BAHCO	AF1 mm	AF2 mm	L mm	A mm
13×16	●	13	16	183	6,3
13×17	●	13	17	183	6,3
14×15	●	14	15	183	6,3
14×17	●	14	17	183	6,3
16×17	●	16	17	201	7,5
16×18	●	16	18	201	7,5
17×19	●	17	19	222	7,3
18×19	●	18	19	222	7,3
19×22	●	19	22	225	7,3
19×24	●	19	24	225	7,3
20×22	●	20	22	225	7,2
21×23	●	21	23	240	7,4
22×24	●	22	24	240	7,4
24×26	●	24	26	260	7,8

N° article	500050 BAHCO	AF1 mm	AF2 mm	L mm	A mm
24×27	●	24	27	260	7,8
25×28	●	25	28	280	8,4
27×30	●	27	30	280	8,4
27×32	●	27	32	300	9
30×32	●	30	32	300	9
30×36	●	30	36	355	11
32×36	●	32	36	355	11
34×36	●	34	36	355	11
36×41	●	36	41	385	11,5
38×42	●	38	42	385	11,5
41×46	●	41	46	400	13,3
46×50	●	46	50	446	14,2

N° article	500054 HAZET	AF1 mm	AF2 mm	L mm	A mm
4×5	●	4	5	99,5	3,2
5×5,5	●	5	5,5	99,6	3,6
6×7	●	6	7	121,3	3,5
8×9	●	8	9	139	3,8
8×10	●	8	10	140,1	4,1
10×11	●	10	11	155,7	4,6
10×13	●	10	13	172	5,1
12×13	●	12	13	172,7	5,1
13×17	●	13	17	205,5	6

N° article	500054 HAZET	AF1 mm	AF2 mm	L mm	A mm
14×15	●	14	15	187,8	5,7
16×17	●	16	17	205,7	6
16×18	●	16	18	205,7	6
17×19	●	17	19	220,9	6,7
18×19	●	18	19	221,2	6,7
20×22	●	20	22	238,9	7
21×23	●	21	23	246	7,1
22×24	●	22	24	254,6	7,1
24×26	●	24	26	269,4	7,8

N° article	500054 HAZET	AF1 mm	AF2 mm	L mm	A mm
24×27	●	24	27	269	7,8
25×28	●	25	28	284,2	8,4
27×32	●	27	32	303,8	9,1
30×32	●	30	32	303,4	9
32×36	●	32	36	343,2	10,1
34×36	●	34	36	343,2	10,1
36×41	●	36	41	396,7	10,5
41×46	●	41	46	439,5	11,4
46×50	●	46	50	498	12,3

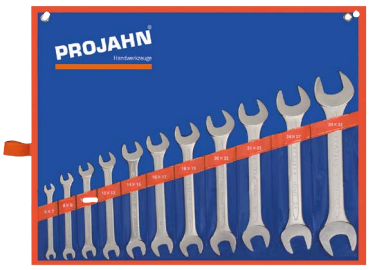
Double open-end wrench set

Design:
- set of keys 500010
- chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- flat heads, high-gloss polished
- jaw position 15°

DIN 3110 | ISO 3318



4405



4411

N° article	500170	Parts	Contents
4405	●	8	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 mm
4411	●	11	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 | 21×23 | 24×27 | 30×32 mm

Double open-end wrench set

BAHCO

Design:
- set of keys 500050
- vanadium extra steel
- polished, high-lustre nickel-plated and chrome-plated
- flat heads
- jaw position 15°

DIN 3110 | ISO 3318



N° article	500180	Parts	Contents
8T	●	8	6×7|8×9|10×11|12×13|14×15|16×17|18×19|20×22 mm
10	●	10	6×7|8×9|10×11|12×13|14×15|16×17|18×19|20×22|24×27|30×32 mm
12	●	12	6×7|8×9|10×11|12×13|14×15|16×17|18×19|20×22|21×23|24×27|25×28|30×32 mm

Double open-end wrench set

HAZET

Design:
- set of keys 500054
- chromium-vanadium steel
- shank with extra strong double T-profile
- surface chrome-plated
- flat heads, high-gloss polished
- jaw position 15°

DIN 3110 | ISO 3318

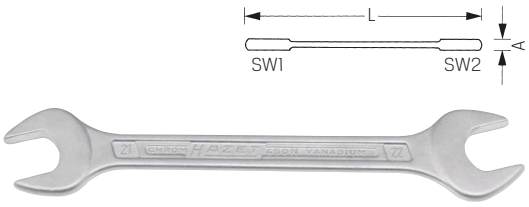


N° article	500184	Parts	Contents
10	●	10	6×7|8×9|10×11|12×13|14×15|16×17|18×19|21×22|24×26|27×32 mm
12	●	12	6×7|8×9|10×11|12×13|14×15|16×17|18×19|20×22|21×23|24×26|25×28|27×32 mm

Double open-end wrench Inch

HAZET

Design:
- chromium-vanadium steel
- shank with extra strong double T-profile
- surface chrome-plated
- flat heads, high-gloss polished
- jaw position 15°



N° article	500140	AF_1 Inch	AF_2 Inch	L mm	A mm
1/4×5/16	●	1/ 4	5/16	130	3
5/16×3/8	●	5/16	3/ 8	140	4,1
3/8×7/16	●	3/ 8	7/16	156	4,6
1/2×9/16	●	1/ 2	9/16	172	5,1
9/16×5/8	○	9/16	5/ 8	190	5,7
19/32×11/16	○	19/32	11/16	206	6

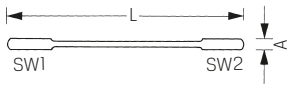
N° article	500140	AF_1 Inch	AF_2 Inch	L mm	A mm
5/8×3/4	○	5/8	3/ 4	221	6,7
25/32×7/8	○	25/32	7/ 8	239	7
7/8×15/16	○	7/8	15/16	255	7,1
15/16×1	○	15/16	1	270	7,8
1×1.1/8	○	1	1.1/ 8	284	8,4
1.1/16×1.1/4	○	1.1/16	1.1/ 4	304	9

Double open-end wrench

WGB Das Werkzeug

DIN 895

Design:
- made of special steel (strength 1,200 - 1,400 N/mm²)
- surface black
- die-forged and burnished
- sturdy version





N° article	500502	AF1 mm	AF2 mm	L mm	A mm
6×7	●	6	7	95	3,3
8×9	●	8	9	110	4
8×10	●	8	10	115	4,5
10×11	●	10	11	125	5
10×13	●	10	13	115	5,5
12×13	●	12	13	140	5,5
13×15	●	13	15	150	5,5
13×17	●	13	17	155	6
14×17	●	14	17	160	6
17×19	●	17	19	160	6,5

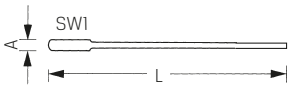
N° article	500502	AF1 mm	AF2 mm	L mm	A mm
19×22	●	19	22	195	8
19×24	●	19	24	215	9
22×24	●	22	24	220	9
24×27	●	24	27	245	10
24×30	●	24	30	265	11
30×32	●	30	32	275	12
30×36	●	30	36	305	13
32×36	○	32	36	305	13
36×41	●	36	41	345	14
46×50	●	46	50	420	16

Single open-end wrench

WGB Das Werkzeug

DIN 894

Design:
- made of special steel (strength 1,200 - 1,400 N/mm²)
- surface black
- die-forged and burnished
- sturdy version





N° article	500602	AF1 mm	L mm	A mm
6	●	6	75	3
7	●	7	80	3,2
8	●	8	95	3,5
10	●	10	105	4,5
13	●	13	135	5,5
14	●	14	140	5,5
17	●	17	151	6
19	●	19	170	7
22	●	22	195	8
24	●	24	195	8

N° article	500602	AF1 mm	L mm	A mm
27	●	27	215	9
30	●	30	240	10
32	●	32	260	11
36	●	36	275	12
41	●	41	305	13
46	●	46	340	14
50	●	50	380	15
55	●	55	440	17
60	●	60	477	18
65	●	65	510	19

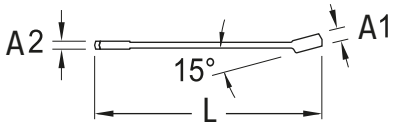
Combination wrench extra long

GEDORE WERKZEUGE FÜRS LEBEN

DIN 3113

Design:
- made of chromium-vanadium steel, mat chrome-plated
- box end 15° offset
- UD profile for gentle force transmission and even force distribution on screw head flanks

NEW





N° article	501358 cranked	AF1 mm	A1 mm	A2 mm	Total length mm
7	○	7	6,5	4	160
8	○	8	7	4,5	170
9	○	9	7,5	4,5	180
10	○	10	8,5	5	190
11	○	11	9	5,5	200
12	○	12	10	5,5	210
13	○	13	10,5	6	225
14	○	14	10,8	6,5	225
15	○	15	11,2	7	250
16	○	16	11,8	7,5	265
17	○	17	12,2	8,5	280
18	○	18	13,2	8,5	295
19	○	19	14,2	9,5	310
21	○	21	14,2	9,5	338
22	○	22	16,2	11	348
24	○	24	18,2	12	400
27	○	27	20,2	13	450
30	○	30	21,2	14	478
32	○	32	22,2	14	480
34	○	34	23,2	15	520
36	○	36	24,2	15	550
41	○	41	26	16	600
46	○	46	28	17	640

NEW

DIN 3113

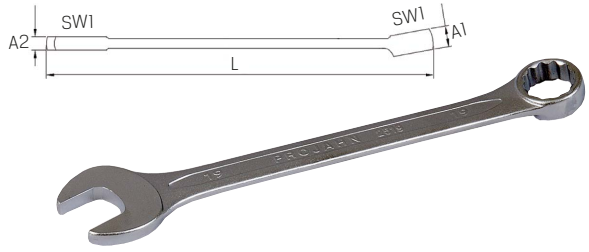


N° article	501358 Set cranked	Parts	Contents
S8	○	8	8 | 9 | 10 | 11 | 13 | 14 | 17 | 19 mm mm
S11	○	11	8 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 18 | 19 | 22 mm mm
S12	○	12	10 | 11 | 12 | 13 | 14 | 17 | 19 | 22 | 24 | 27 | 30 | 32 mm mm

Combination wrench

PROJAHN WERKZEUGE WIE DU

Design:
- chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- heads high-gloss polished
- jaw position 15° angled, ring end 15° cranked
- the special profile of the ring with its larger contact surface grabs the flank of the nut, sparing the edges

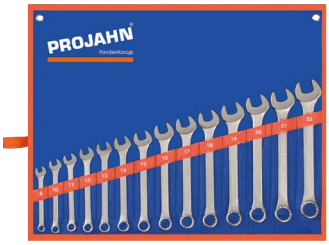


DIN 3113 A | ISO 3318

N° article	501060 cranked	AF_1 mm	L mm	L mm	A_1 mm
5,5	●	5,5	93	93	4
6	●	6	100	100	5
7	●	7	110	110	5
8	●	8	120	120	5,5
9	●	9	130	130	6
10	●	10	140	140	6,5
11	●	11	150	150	6,5
12	●	12	165	165	7
13	●	13	170	170	7,5
14	●	14	180	180	8

N° article	501060 cranked	AF_1 mm	L mm	L mm	A_1 mm
15	●	15	190	190	8,5
16	●	16	200	200	9
17	●	17	210	210	9,5
18	●	18	220	220	10
19	●	19	230	230	10,4
20	●	20	240	240	10,9
21	●	21	250	250	11,4
22	●	22	260	260	11,9
23	●	23	260	260	11,9,0
24	●	24	280	280	12,9

N° article	501060 cranked	AF_1 mm	L mm	L mm	A_1 mm
25	●	25	295	295	13,4
26	●	26	295	295	13,4
27	●	27	310	310	14,4
30	●	30	340	340	15,9
32	●	32	360	360	16,9
36	●	36	410	410	18,2
41	●	41	460	460	20
46	●	46	500	500	21
50	●	50	540	540	22,6



4408



4410

N° article	501065 set cranked	Parts	Contents
4408	●	14	8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 mm
4410	●	23	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 30 | 32 mm

Combination wrench set

PRETEC

Design:
- made of superior chromium-vanadium steel
- box end 15° offset
- chrome-plated

ISO 3318 | DIN 3113 A

10 YEARS WARRANTY



N° article	501052 cranked	Parts	Contents
0010	●	26	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 32 mm

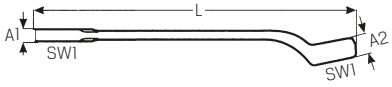
Combination wrench

BAHCO

Design:
- made of vanadium extra
- polished, high-lustre nickel-plated and chrome-plated
- jaw position 15°, ring end 15° angled

DIN 3113 B | ISO 3318 | Dynamic-Drive-Profil

Dynamic drive profile:
Lower surface pressure due to large force contact surfaces = no notch effect





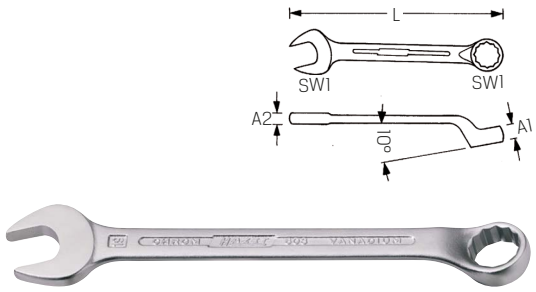
N° article	501320 cranked	AF_1 mm	L mm	A_1 mm	A_2 mm
6	●	6	100	4,5	3,7
7	●	7	110	5	3,8
8	●	8	120	5,5	4,2
9	●	9	130	6	4,5
10	●	10	140	6,5	4,8
11	●	11	150	7	5
12	●	12	160	7,5	5,2
13	●	13	175	8	5,6
14	●	14	185	8,5	6
15	●	15	195	9	6,2
16	●	16	205	9,8	6,5
17	●	17	220	10,6	7
18	●	18	235	11,4	7,2
19	●	19	250	12,2	7,5
20	●	20	275	13	8
21	●	21	275	13	8
22	●	22	300	13,5	8,5

N° article	501320 cranked	AF_1 mm	L mm	A_1 mm	A_2 mm
23	○	23	300	13,5	8,5
24	●	24	315	14,5	9
25	●	25	330	15,5	9,5
26	○	26	330	15,5	9,5
27	●	27	350	16,5	10
28	●	28	370	17	10
29	●	29	370	17	10
30	●	30	390	18	10,7
32	●	32	405	19	11,5
34	●	34	425	20	12
36	●	36	475	21	13,5
41	●	41	510	24,4	14,4
46	●	46	520	25,4	15,4
50	●	50	560	26,2	16,3
55	●	55	570	28,6	19,1
60	○	60	660	31	20

Combination wrench

Design:
- chromium-vanadium steel
- surface chrome-plated
- box end 10° cranked

DIN 3113 B | ISO 3318



N° article	501310 cranked	AF_1 mm	L mm	A_1 mm	A_2 mm
5,5	●	5,5	90	4,7	3,7
6	●	6	100	5,1	4
7	●	7	110	5,5	4,3
8	●	8	120	5,9	4,5
9	●	9	130	6,3	4,5
10	●	10	137	6,7	5
11	●	11	145	7,1	5,2
12	●	12	152	7,6	5,4
13	●	13	160	8	5,6
14	●	14	170	8,5	5,8
15	●	15	180	9	6

N° article	501310 cranked	AF_1 mm	L mm	A_1 mm	A_2 mm
16	●	16	190	9,5	6,2
17	●	17	200	10	6,4
18	●	18	210	10,5	6,7
19	●	19	220	11	7
21	●	21	240	12	7,6
22	●	22	250	12,5	7,9
24	●	24	270	13,5	8,5
27	●	27	300	15	9,3
30	●	30	340	16	10
32	●	32	360	17	10,5

Combination wrench set

Design:
- set of keys 501310
- chromium-vanadium steel
- surface chrome-plated
- box end 10° cranked

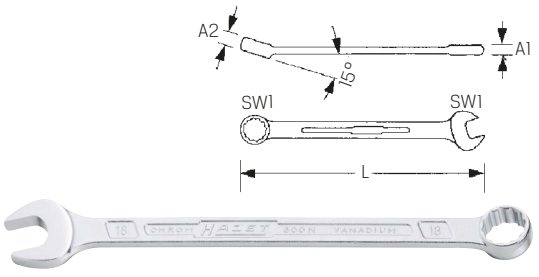
DIN 3113 B | ISO 3318



N° article	501315 set cranked	Parts	Contents
17	●	17	7|8|9|10|11|12|13|14|15|16|17|18|19|21|22|24|27 mm

Combination wrench Inch

Design:
- chromium-vanadium steel
- surface chrome-plated
- slim heads
- box end 15° offset
- shank with extra strong double T-profile



N° article	501342 cranked	AF_1 Inch	L mm	AF_1 Inch	A_1 mm
1/4	●	1/ 4	105	1/ 4	6
5/16	●	5/16	130	5/16	7
3/8	●	3/ 8	154,5	3/ 8	8
7/16	○	7/16	168,5	7/16	8,4
1/2	●	1/ 2	193	1/ 2	10
9/16	●	9/16	204,5	9/16	10
5/8	●	5/ 8	230	5/ 8	11,4
11/16	●	11/16	242,5	11/16	12,4
3/4	●	3/ 4	268	3/ 4	13,5

N° article	501342 cranked	AF_1 Inch	L mm	AF_1 Inch	A_1 mm
13/16	○	13/16	292	13/16	13,7
7/8	●	7/8	304	7/8	14
15/16	○	15/16	328	15/16	14,7
1	○	1	354	1	15,5
1.1/8	○	1.1/8	380	1.1/8	17
1.1/4	○	1.1/4	420	1.1/4	18
1.5/16	○	1.5/16	432	1.5/16	19
1.1/2	●	1.1/2	486	1.1/2	20,5

Combination wrench set Inch

Design:
- set of keys 501342
- chromium-vanadium steel
- surface chrome-plated
- slim heads
- box end 15° offset
- shank with extra strong double T-profile



N° article	501345 set cranked	Parts	Contents
12	●	12	1/4|5/16|3/8|7/16|1/2|9/16|5/8|3/4|7/8|1|1.1/8|1.5/16

Combination wrench set Inch

PROJAHN WERKZEUGE WIE DU

ISO 7738 | ISO 3318 | DIN 3113 A

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and high-gloss polished
- jaw position 15°, ring end 15° angled



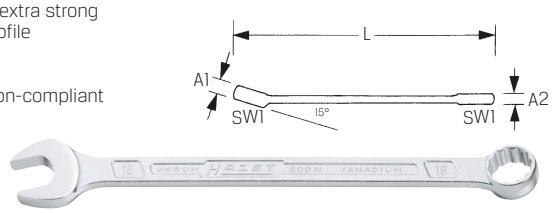
N° article	501335 set cranked	Parts	Contents
2580	●	12	1/4 | 5/16 | 3/8 | 7/16 | 1/2 | 9/16 | 5/8 | 11/16 | 3/4 | 7/8 | 15/16 | 1 inch

Combination wrench long

HAZET

Design:
- chromium-vanadium
- surface chrome-plated
- slim, polished heads with traction profile
- box end 15° offset
- shank with extra strong double T-profile

Note:
AF 5.5 mm non-compliant with DIN



N° article	501154 cranked	AF1 mm	L mm	A1 mm	A2 mm	N° article	501154 cranked	AF1 mm	L mm	A1 mm	A2 mm
5,5	●	5,5	105	6	4	20	●	20	279,5	13,5	8,5
6	●	6	105	6	4	21	●	21	292	13,7	8,5
7	●	7	118,5	6,6	4	22	●	22	304,5	14	8,5
8	●	8	130	7	4,5	23	●	23	328	14,3	9,5
9	●	9	143	8	4,5	24	●	24	328	14,7	9,5
10	●	10	154,5	8	5	25	●	25	354	15	10
11	●	11	168,5	8,4	5,5	26	●	26	354	15,5	10
12	●	12	180,5	9	5,5	27	●	27	380	16	10,5
13	●	13	193	10	6,3	28	●	28	380	16,5	11
14	●	14	204,5	10	6,5	29	●	29	380	17	11,5
15	●	15	218	11	7	30	●	30	405,5	17,5	12,2
16	●	16	230,5	11,4	7	32	●	32	420	18	12
17	●	17	242,5	12,4	7,5	34	●	34	432	19	13
18	●	18	255	13	8	36	●	36	460	20	13
19	●	19	268,5	13,5	8	41	●	41	500	20,6	14

Design:
- set of keys 501154

DIN 3113 A | ISO 3318 | ISO 7738



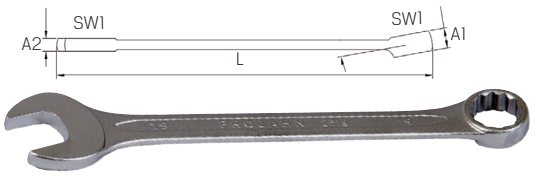
N° article	501184 set cranked	Parts	Contents
10	●	10	8 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm
17	●	17	7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 mm
21	●	21	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 | 32 | 34 mm

Combination wrench long

PROJAHN WERKZEUGE WIE DU

DIN 3113 A | ISO 3318 | ISO 7738

Design:
- chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- box end 15° offset
- jaw position 15°
- the special profile of the ring with its larger contact surface grabs the flank of the nut, sparing the edges



N° article	501350 cranked	AF1 mm	L mm	A1 mm	A2 mm	N° article	501350 cranked	AF1 mm	L mm	A1 mm	A2 mm
8	●	8	148	5,5	4,1	18	●	18	270	10	6,8
9	●	9	167	6	4,1	19	●	19	280	10,4	7,1
10	●	10	172	6,5	4,6	20	●	20	290	10,9	7,2
11	●	11	186	6,5	4,7	21	●	21	301	11,4	7,5
12	●	12	197	7	4,8	22	●	22	318	11,9	8
13	●	13	207	7,5	5,5	24	●	24	338	12,9	8,2
14	●	14	223	8	5,6	27	●	27	376	14,4	8,9
15	●	15	233	8,5	5,7	30	●	30	394	15,9	10
16	●	16	243	9	5,8	32	●	32	435	16,9	10,8
17	●	17	261	9,5	6,3						



4436



4438

N° article	501355 set cranked	Parts	Contents
4436	●	8	8 | 10 | 12 | 13 | 16 | 17 | 18 | 19 mm
4438	●	14	8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 mm

Ratchet combination wrench

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and high-gloss polished
- jaw position 15°
- 72 teeth, 5° return angle



N° article	501402 fine-toothed	AF_1 mm	max. torque Nm	Total length mm
6	●	6	27	135
7	●	7	33	135
8	●	8	43	140
9	●	9	57	140
10	●	10	86	155
11	●	11	98	170
12	●	12	112	170
13	●	13	143	180
14	●	14	191	185
15	●	15	250	200
16	●	16	264	215
17	●	17	319	230
18	●	18	359	240
19	●	19	385	250
21	●	21	435	280
22	●	22	506	285
24	●	24	630	325
27	●	27	699	360
30	●	30	837	425
32	●	32	987	425
34	○	34	987	482
36	●	36	987	482
38	○	38	1150	482
41	●	41	1300	550
46	○	46	1500	640
50	○	50	1700	640



3498



3494



3499



3500

N° article	501408 set fine-toothed	Parts	Contents
3498	●	4	10 | 13 | 17 | 19 mm
3499	●	8	8 | 10 | 12 | 13 | 16 | 17 | 18 | 19 mm
3494	●	14	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm
3500	●	20	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 | 32 mm

Joker

Product Information

- **Holding function** through metal plate in the jaw reduces the risk of losing screws and nuts
- exchangeable metal plate inside jaw with extra hard teeth reduces danger of slipping
- integrated limit stop prevents any slipping of the wrench off the screw head downwards
- return angle of only 30 ° on the jaw side
- ratchet mechanics on the ring side with **fine toothing of 80 teeth**
- with nickel-chrome coating for high corrosion protection



Stop function



Holding function



Anti-slip function

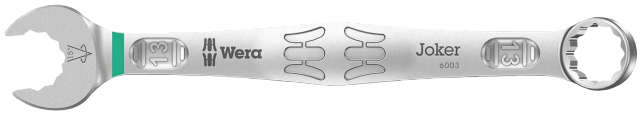


Return angle

Combination wrench

Design:
- particularly suitable for very narrow installation spaces
- special jaw geometry extends the application possibilities of the tool
- return angle of only 15 ° on the jaw side
- slender, 15° angled ring side
- with high-quality surface coating for high corrosion protection





N° article	501426 Joker 6003	AF_L mm	Total length mm
5,5	NEW ○	5,5	105
6	○	6	105
7	NEW ○	7	17,7
8	●	8	115
9	NEW ○	9	120
10	●	10	125
11	○	11	135
12	●	12	148
13	●	13	160
14	●	14	167
15	○	15	147
16	○	16	182
17	●	17	190
18	○	18	210
19	●	19	230
20	○	20	230
21	NEW ○	21	260
22	○	22	260
24	○	24	280
27	NEW ○	27	300
30	○	30	330
32	○	32	360
36	NEW ○	36	460

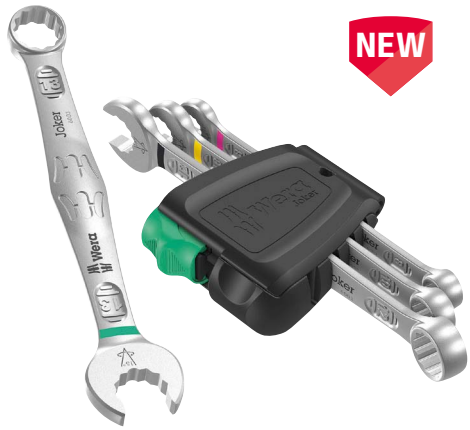


11

N° article	501427 Joker 6003 set	Parts	Contents
5	●	5	8 | 10 | 13 | 17 | 19 mm
11	●	11	8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm
15	NEW ○	15	5,5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm
22	NEW ○	22	5,5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 | 27 | 30 | 32 mm

Combination wrench set

Design:
- particularly suitable for very narrow installation spaces
- special jaw geometry extends the application possibilities of the tool
- return angle of only 15 ° on the jaw side
- slender, 15° angled ring side
- with high-quality surface coating for high corrosion protection
- with the tool finder "Take it easy" colour coding system according to sizes
- the wear-free material of the clip guarantees that the combination spanners are held securely and are easy to remove at the same time



N° article	501428 Joker 6003	Parts	Contents
4	NEW ●	4	8 | 10 | 12 | 13 mm mm

Double open-end wrench

Design:
- **with holding function** by means of a metal plate in the jaw, which reduces the danger of losing screws and nuts
- the exchangeable metal plate inside the jaw secures screws and nuts with extra hard teeth and reduces the danger of slipping off
- **the integrated limit stop** can prevent the screw head from slipping downwards and enables high torques to be applied
- return angle of only 30 ° on the jaw side



N° article	501405 Joker 6002	AF_1 mm	AF_2 mm	L mm
10×13	●	10	13	167
17×19	●	17	19	235
20×22	○	20	22	260,5
22×24	○	22	24	260,5
24×27	○	24	27	280
27×32	○	27	32	305
30×32	○	30	32	305

Ratchet combination wrench set

Design:
- set consisting of wrenches 501405 and 501409
- incl. 2 double open-end wrenches



N° article	501415 Joker 6000 | 6002	Parts	Contents
6	●	6	**Ratchet combination wrench** 10 | 13 | 17 | 19 mm **Double open-end wrench** 10 × 13 | 17 × 19 mm

Ratchet combination wrench

Design:
- **with holding function** by means of a metal plate in the jaw, which reduces the danger of losing screws and nuts
- the exchangeable metal plate inside the jaw secures screws and nuts with extra hard teeth and reduces the danger of slipping off
- **the integrated limit stop** can prevent the screw head from slipping downwards and enables high torques to be applied
- return angle of only 30 ° on the jaw side
- ratchet mechanic on the ring side with **fine toothing of 80 teeth**
- with nickel-chrome coating for high corrosion protection



N° article	501409 Joker 6000	AF_1 mm	Total length mm
10	●	10	159
13	●	13	177
17	●	17	224
19	●	19	246



4

N° article	501410 Joker 6000 set	Parts	Contents
4	●	4	10 | 13 | 17 | 19 mm
11	●	11	8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm

Ratchet combination wrench reversible

Design:
- made of chromium-molybdenum steel
- with nickel-chrome coating for high corrosion protection
- return angle of only 30° on the jaw side
- fine toothing (80 teeth) and robust locking element on the box end side
- with 15° angled ratchet side for safe working
- with practical holding function thanks to a metal plate in the jaw
- with the tool finder "Take it easy" colour coding system



N° article	501419 Joker 6001	AF_1 mm	Total length mm
8	●	8	144
10	●	10	159
11	○	11	165
12	●	12	171
13	●	13	179
14	●	14	187

N° article	501419 Joker 6001	AF_1 mm	Total length mm
15	○	15	199
16	○	16	213
17	●	17	225
18	○	18	234
19	●	19	246



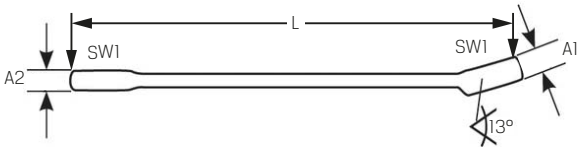
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11

N° article	501420 Joker 6001 set	Parts	Contents
4	●	4	10 | 13 | 17 | 19 mm
11	●	11	8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm

Ratchet combination wrench reversible

Design:
- made of chromium-vanadium steel
- surface chrome-plated, heads polished
- box end with reversible ratchet function
- fine toothed, 72 teeth, return angle 5°, box end 13° cranked





N° article	501403 cranked	AF_1 mm	Total length mm	A_1 mm	L mm
8	●	8	129,9	6,8	129,9
9	●	9	143	7,2	143
10	●	10	154,5	7,6	154,5
11	●	11	168,6	8	168,6
12	●	12	180,3	8,5	180,3
13	●	13	193,2	8,9	193,2
14	●	14	204,6	9,3	204,6
15	●	15	218	9,7	218
16	●	16	230,2	10,2	230,2

N° article	501403 cranked	AF_1 mm	Total length mm	A_1 mm	L mm
17	●	17	242,2	10,6	242,2
18	●	18	255	11	255
19	●	19	268,3	11,5	268,3
21	●	21	291,5	13,3	291,5
22	●	22	291,5	13,3	291,5
24	●	24	333,1	14,8	333,1
27	●	27	359,2	15,8	359,2
30	●	30	402,5	17,3	402,5
32	○	32	425,8	17,8	425,8



N° article	501404 set	Parts	Contents
5	●	5	8 | 10 | 13 | 17 | 19 mm
6N	●	6	21 | 22 | 24 | 27 | 30 | 32 mm



Ratchet combination wrench reversible

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and high-gloss polished
- jaw position 15°
- fine toothed, 72 teeth, return angle 5°, box end 15° cranked



N° article	501412 cranked	AF$_1$ mm	max. torque Nm	Total length mm
8	●	8	39	135
9	●	9	49	142
10	●	10	83	155
11	●	11	93	165
12	●	12	111	171
13	●	13	139	180
14	●	14	193	185
15	●	15	236	195
16	●	16	278	215

N° article	501412 cranked	AF$_1$ mm	max. torque Nm	Total length mm
17	●	17	317	223
18	●	18	356	235
19	●	19	379	245
21	○	21	432	280
22	●	22	499	280
24	●	24	617	320
27	●	27	674	350
30	●	30	812	415
32	●	32	963	415

Delivery:
In roll pouch



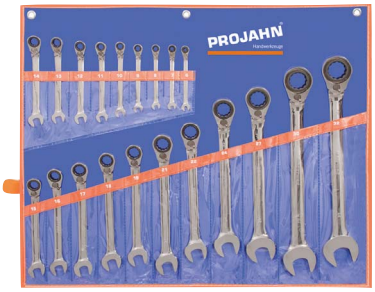
3993



3999



3994



3501

N° article	501418 set cranked	Parts	Contents
3993	●	4	10 | 13 | 17 | 19 mm
3999	●	8	8 | 10 | 12 | 13 | 16 | 17 | 18 | 19 mm
3994	●	14	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm
3501	●	20	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 | 32 mm

Ratchet combination wrench with joint

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and high-gloss polished
- box end flexible and with ring ratchet
- jaw position 15°
- fine toothing, 72 teeth, return angle 5°

N° article	501432	AF$_1$ mm	max. torque Nm	Total length mm
7	●	7	33	135
8	●	8	43	135
9	●	9	57	143
10	●	10	86	160
11	●	11	98	170
12	●	12	112	173
13	●	13	143	180

N° article	501432	AF$_1$ mm	max. torque Nm	Total length mm
15	●	15	250	200
16	●	16	264	215
17	●	17	319	230
18	●	18	359	235
19	●	19	385	250
24	●	24	630	325
27	●	27	699	365



N° article	501435 set	Parts	Contents
3496	●	4	10 | 13 | 17 | 19 mm
3497	●	8	8 | 10 | 12 | 13 | 16 | 17 | 18 | 19 mm



3496



3497

Adjustable wrench

PROJAHN WERKZEUGE WIE DU

Design:
- steel forged
- nickel-plated, chrome-plated and mat satined
- jaw continuously adjustable with mm engravings
- jaw position 15°

DIN 3117 A



N° article	501480	max. width across flats mm	Total length mm	Total length inch
6	●	19	150	6"
8	●	24	200	8"
10	●	30	250	10"
12	●	34	300	12"
15	●	44	375	12"

Ratchet ring wrench

PROJAHN WERKZEUGE WIE DU

Design:
- **4 sizes per key (2 per box end)**
- for high torque (max. 138/387 Nm)
- ideal for confined working spaces => compact sizes
- ratchet mechanism reversible
- fine toothed => 72 teeth, 5° rotation angle



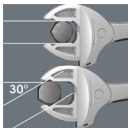
N° article	502062 4 in 1	Total length mm	AF_1 mm	AF_2 mm	AF_3 mm	AF_4 mm
2	●	158	8	10	12	13
3	●	178	9	11	14	15
4	●	226	10	13	17	19
5	●	226	16	17	18	19

N° article	502060 set	Parts	Contents
3	●	3	8×9 / 10×11 | 12×13 / 14×15 | 16×17 / 18×19 mm

Open-end wrench

Wera BE A TOOL PERSON

Design:
- the adjustable Joker 6004 covers all metric and imperial dimensions from 7 - 32 mm or 1/4" to 1 1/4"
- automatic and stepless gripping of hexagon bolts and nuts
- quick screwing without removing the key due to ratchet function
- return angle of only 30 ° on the jaw side



low return angle



automatically and infinitely self-adjusting



ratchet mechanism for fast work



N° article	501484 Joker 6004	AF_1 mm	AF_1 Inch	Total length mm
0010	●	7 - 10	1/4"-3/8"	117
0015	●	10 - 13	7/16"-1/2"	154
0020	○	13 - 16	1/2"-5/8"	188
0025	○	16 - 19	5/8"-3/4"	224
0030	○	19 - 24	3/4"-15/16"	256
0035	●	24 - 32	15/16"-1 1/4"	322



N° article	501485 Joker 6004 set	Parts	Contents
4	●	4	7 - 10 | 10 - 13 | 13 - 16 | 16 - 19 mm

Ratchet wrench set FastRatch

STAHLWILLE

Design:
- patented, especially suitable for union nuts
- metric and imperial screws/nuts can be operated with one wrench
- made of stainless tempered steel

Delivery:
Set in robust textile roll bag

N° article	501431 FastRatch	AF_1 mm	AF_1 Inch	Head thickness jaw (A_1) mm	Total length mm
8 - 5/16	●	8	5/16	4	121,4
10 - 3/8	●	10	3/ 8	4	133,3
11 - 7/16	●	11	7/16	5	140,4
12 - 15/32	○	12	15/32	5	146,3
13 - 1/2	○	13	1/ 2	6	168,4
14 - 9/16	●	14	9/16	6	174,6
16 - 5/8	○	16	5/ 8	7	191,3
17 - 21/32	○	17	21/32	7	201,7
18 - 11/16	○	18	11/16	7	212,8
19 - 3/4	○	19	3/ 4	7	238,5

N° article	501431 FastRatch set	Parts	Contents
5R	●	5	10 | 11 | 14 | 17 | 19 mm 3/8" | 7/16" | 9/16" | 21/32" | 3/4"
4	●	4	8 | 10 | 11 | 14 mm 5/16" | 3/8" | 7/16" | 9/16"



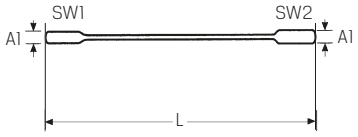
Double-ended ring wrench straight

BAHCO

DIN 837 B | ISO 3318

Design:
- made of vanadium extra
- polished, high-lustre nickel-plated and chrome-plated
- heads thin-walled and flattened on both sides

Dynamic drive profile:
Low surface pressure due to large support faces = no notch effect





N° article	501900 straight	AF_1 mm	AF_2 mm	L mm	A_1 mm
6×7	●	6	7	100	4,7
8×9	●	8	9	115	5,2
10×11	●	10	11	130	6,4
12×13	●	12	13	143	7,3
14×15	●	14	15	157	7,3
16×17	●	16	17	168	8,5

N° article	501900 straight	AF_1 mm	AF_2 mm	L mm	A_1 mm
17×19	●	17	19	185	9
18×19	●	18	19	189	9,2
20×22	●	20	22	200	10,5
24×27	●	24	27	255	11
30×32	●	30	32	285	12,8



N° article	502050 set	Parts	Contents
10	●	10	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 | 24×27 | 30×32 mm

Double-ended ring wrench

PROJAHN WERKZEUGE WIE DU

DIN 3118

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- heads 15° offset
- opening 15° offset
- AF 8×10 to 12×14 with hex profile, the rest with bi-hex profile



N° article	502210 open	AF_1 mm	AF_2 mm	Total length mm
8×10	●	8	10	140
9×11	●	9	11	153
10×11	●	10	11	152
12×14	●	12	14	172

N° article	502210 open	AF_1 mm	AF_2 mm	Total length mm
13×15	●	13	15	175
14×17	●	14	17	195
17×19	●	17	19	211
22×24	●	22	24	242



N° article	502215 set	Parts	Contents
2216	●	6	8×10 | 9×11 | 12×14 | 13×15 | 17×19 | 22×24 mm

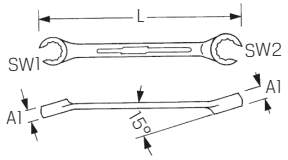
Double-ended ring wrench

HAZET

DIN 3118

Design:
- for tube fittings, cap nuts and bolts
- heads offset 15°
- jaw opening 15° slotted
- made of chromium-vanadium steel
- surface chrome-plated
- AF 8 × 10 to 12 × 14 with hex profile

Note:
AF 13 × 15 mm | 16 × 18 mm are outside the DIN range.





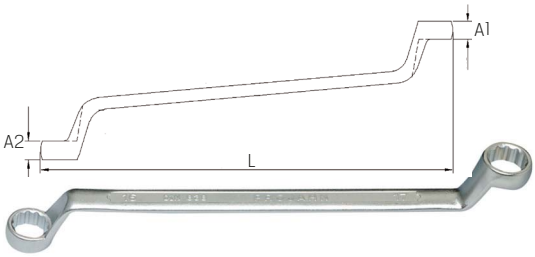
N° article	502220 open	AF_1 mm	AF_2 mm	L mm	A_1 mm	A_2 mm	N° article	502220 open	AF_1 mm	AF_2 mm	L mm	A_1 mm	A_2 mm
8×10	●	8	10	140	7	8	16×18	●	16	18	208	12	13,2
10×11	●	10	11	147	8	8,7	17×19	●	17	19	208	12	13,2
11×13	●	11	13	160	8,7	9,8	19×22	●	19	22	222	13,8	15,8
12×14	●	12	14	168	9,2	10,3	24×27	●	24	27	260	16,2	18
13×15	●	13	15	182	9,8	10,9	30×32	●	30	32	300	21	23

Double-ended ring wrench

PROJAHN WERKZEUGE WIE DU

DIN 838 | ISO 3318

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- box ends 75° deep cranked



N° article	502302 deep cranked	AF_1 mm	AF_2 mm	L mm	A_1 mm	A_2 mm
6×7	●	6	7	170	4,9	5,6
8×9	●	8	9	182	6	6,8
10×11	●	10	11	197	7,4	7,9
10×13	●	10	13	213	8,4	8,9
12×13	●	12	13	213	8,4	8,9
13×17	●	13	17	255	10,4	8,4
14×15	●	14	15	228	9,4	9,9
16×17	●	16	17	246	10,4	10,9
16×18	●	16	18	246	10,4	10,9
17×19	●	17	19	265	11,4	11,9
18×19	●	18	19	265	11,4	11,9
20×22	●	20	22	288	12,4	12,9
21×23	●	21	23	310	12,3	13,3
24×26	●	24	26	330	13,7	14,3
24×27	●	24	27	330	13,7	14,3
25×28	●	25	28	348	14,2	14,7
30×32	●	30	32	372	14,8	15,8
36×41	●	36	41	465	19	17

Delivery:
In functional roll pouch



N° article	502305 deep offset, set	Parts	Contents
4402	●	8	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 mm

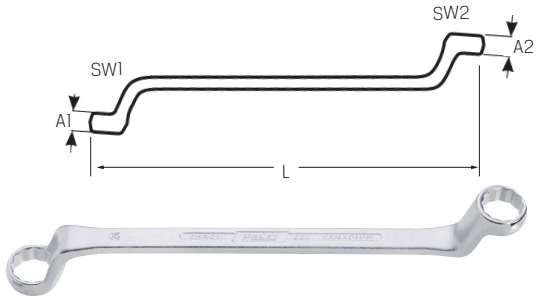
Double-ended ring wrench

HAZET

DIN 838 | ISO 3318

Design:
- made of chromium-vanadium
- surface chrome-plated, heads polished
- heads thin-walled

Note:
AF 20 × 22 mm | 21 × 23 mm | 24 × 26 mm non-compliant with DIN



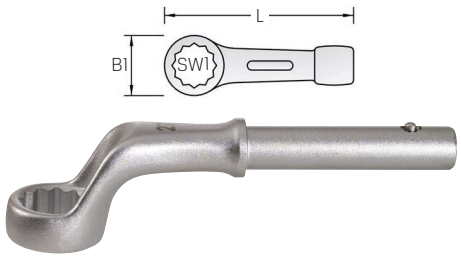
N° article	502404 deep cranked	AF_1 mm	AF_2 mm	L mm	A_1 mm	A_2 mm	N° article	502404 deep cranked	AF_1 mm	AF_2 mm	L mm	A_1 mm	A_2 mm
6×7	●	6	7	165	6	6,5	21×23	○	21	23	315	12,5	13,2
8×9	●	8	9	180	7	7,5	24×26	○	24	26	330	13,5	14,1
10×11	●	10	11	200	8	9	24×27	●	24	27	340	13,5	14,4
12×13	●	12	13	220	9	9,5	27×32	○	27	32	365	14,4	16
14×15	●	14	15	240	10	10,5	30×32	●	30	32	365	15,4	16
16×17	●	16	17	255	11	11,3	36×41	●	36	41	440	17,2	18,8
17×19	●	17	19	265	11,3	11,9							
18×19	●	18	19	265	11,6	11,9							
20×22	●	20	22	295	12,2	12,9							



N° article	502554 deep offset, set	Parts	Contents
8	●	8	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 21×22 mm
12	●	12	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 | 21×23 | 24×26 | 25×28 | 27×32 mm

Single-ended ring spanner

Design:
- made of chromium-vanadium steel, mat satined
- FlankTraction profile
- box end 75° offset
- with shaft for snap-on handle
- with spring pin locking
- heavy-duty version to deliver maximum torque



N° article	502802 deep cranked	AF1 mm	L mm	B1 mm
22	○	22	180	38
24	●	24	180	38
27	○	27	190	42
30	●	30	195	48
32	○	32	200	49
36	●	36	200	49

N° article	502802 deep cranked	AF1 mm	L mm	B1 mm
41	○	41	205	54
46	○	46	265	62
50	○	50	280	69
55	○	55	290	76
60	○	60	300	81

Tommy bar for tension ring spanner

Design:
- made of chromium-vanadium steel
- mat satin finished



N° article	502804	min. width across flats mm	max. width across flats mm	Total length mm
24 - 30	●	24	30	460
32 - 41	●	32	41	610
46 - 55	●	46	55	760
60 - 105	○	60	105	860

Striking face box-end wrench

WGB Das Werkzeug

Design:
- made of special steel
- for extremely heavy loads

DIN 7444



N° article	502822	AF1 mm	L mm	A1 mm	B1 mm
27	●	27	180	17	46
30	●	30	190	16	51
32	●	32	191	17	52
36	●	36	200	20	58
41	●	41	226	20	64
46	●	46	234	22	72
50	●	50	249	24	76

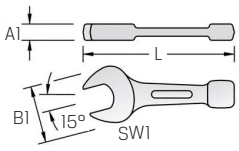
N° article	502822	AF1 mm	L mm	A1 mm	B1 mm
55	●	55	270	24	85
60	●	60	281	26	91
65	●	65	298	29	98
70	●	70	327	33	110
75	●	75	330	33	110
80	●	80	356	35	121
85	○	85	357	35	121

Striking face pattern open-end wrench

WGB Das Werkzeug

Design:
- made of special steel
- for extremely heavy loads

DIN 133





N° article	502832	AF1 mm	L mm	A1 mm	B1 mm
27	○	27	159	15	49
30	●	30	189	16	63
36	●	36	219	20	73
41	●	41	229	17	84
46	●	46	253	21	95
50	○	50	270	21	106

N° article	502832	AF1 mm	L mm	A1 mm	B1 mm
55	●	55	295	25	115
60	●	60	319	25	127
65	○	65	337	28	132
70	○	70	371	32	152
75	○	75	373	32	152
80	○	80	400	35	167

Tommy bar for pipe socket wrench

WGB Das Werkzeug

Design:
- hardened
- black

DIN 900 A

N° article	503380	∅ mm	Total length mm
5×125	●	5	125
6×160	●	6	160
8×180	●	8	180
10×200	●	10	200

N° article	503380	∅ mm	Total length mm
12×250	●	12	250
14×320	●	14	320
16×400	○	16	400
18×500	●	18	500



Double-end socket wrench

WGB Das Werkzeug

DIN 896 B

Design:
- made of seamless drawn precision steel pipe
- chromatised

Use:
Due to the thin-walled design, it can also be used on tightly fitting screws.
Pipe design with large passage, especially for use on very protruding bolts
Tube design with large passage to be used for far protruding bolts



N° article	503300 forged	AF_1 mm	AF_2 mm	Pivot pin ∅ mm	L mm
6×7	●	6	7	6	109
8×9	●	8	9	6	109
8×10	●	8	10	6	119
10×11	●	10	11	6	119
10×13	●	10	13	8	140
12×13	●	12	13	8	145
13×17	●	13	17	10	150
14×15	●	14	15	8	140
16×17	●	16	17	10	150
17×19	●	17	19	12	160

N° article	503300 forged	AF_1 mm	AF_2 mm	Pivot pin ∅ mm	L mm
18×19	●	18	19	12	160
20×22	●	20	22	12	170
21×23	●	21	23	14	170
22×24	●	22	24	14	190
24×27	●	24	27	14	190
25×28	●	25	28	14	200
30×32	●	30	32	16	200
32×36	●	32	36	18	220
36×41	●	36	41	18	220

N° article	503420 set forged	Parts	Contents
8	●	8	8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 mm | delivery **with pivot pin**
12	●	12	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 | 21×23 | 24×27 | 25×28 | 30×32 mm - delivery **without pivot pin**



8

Hex socket wrench

wiha Tools that work for you

Design:
- blade made of chromium-vanadium steel
- through-hardened
- mat chrome-plated
- interior bore for protruding threaded shanks
- roll-off protection
- Wiha-SoftFinish®handle for higher torque with better comfort



N° article	503470	AF_1 mm	Blade length mm	Total length mm
4	●	4	125	236
5	●	5	125	236
5,5	●	5,5	125	236
6	●	6	125	236
7	●	7	125	243
8	●	8	125	243
9	●	9	125	243
10	●	10	125	243
13	●	13	125	249

N° article	503472 set	Parts	Contents
5	●	5	5.5 | 7 | 8 | 10 | 13 mm

Design:
- blade made of chromium-vanadium steel
- through-hardened
- bright nickel-plated
- internal bore for protruding threaded shanks



N° article	503480 with cross handle	AF_1 mm	Blade length mm	Total length mm
5,5×125	●	5,5	125	157
6×125	●	6	125	157
7×125	●	7	125	157
8×125	●	8	125	157
8×200	●	8	200	232
9×125	●	9	125	157
10×125	●	10	125	157
10×200	●	10	200	232
12×125	●	12	125	157
13×125	●	13	125	157
17×125	●	17	125	157

Square socket wrench

Design:
- made of special steel
- hardened
- burnished

DIN 248



N° article	503595 DIN 248	AF_1 mm	Total length mm
8	●	8	160
10	●	10	195
12	●	12	235
14	●	14	270

N° article	503595 DIN 248	AF_1 mm	Total length mm
17	●	17	315
19	●	19	345
22	●	22	385
24	○	24	415

Square socket wrench

Design:
- made of special steel
- shank and mandrel hardened
- burnished

DIN 905



N° article	503600 DIN 905	AF_1 mm	Head ∅ mm	Total length mm
4	●	4	12	60
5	●	5	12	60
6	●	6	12	80
7	●	7	14,6	80
8	●	8	16	80
9	●	9	16	80
10	●	10	20	100
11	●	11	20	100
12	●	12	24	100
14	●	14	28	120

Square socket wrench

Design:
- made of special steel
- shank and mandrel hardened
- burnished

DIN 904



N° article	503650 DIN 904	AF_1 mm	Head ∅ mm	Total length mm
4	○	4	12	60
5	●	5	12	60
6	●	6	12	80
7	●	7	14,6	80
8	●	8	16	80
9	●	9	18	100
10	●	10	20	100
12	●	12	24	100
14	●	14	28	120
17	●	17	34	160
19	●	19	36	200

Three-square socket wrenches

Design:
- made of special steel
- shank and mandrel galvanised
- for triangular screws DIN 22424
- for triangular nuts DIN 22425
- size M12 qualifies for locking and unlocking of EURO bollards

DIN 22417



N° article	503700 DIN 22417	AF_1 mm	for threads	Total length mm
M4	●	6,8	M4	90
M5	●	8,3	M5	100
M6	●	10,05	M6	115
M8	●	12,05	M8	125
M10	●	15,05	M10	140
M12	●	16,55	M12	160
M16	●	20,55	M16	180

Control cabinet key

Design:
- for all common locking systems
- **8-arm version** - 2 cross keys, space-saving connected by magnets
- reversible bit: slot 1.0 × 7 mm and cross-recess PH2
- key and reversible bit coupled by stable stainless steel wire rope
- high-quality surface coating
- weight-optimised zinc die-casting design
- total length 92 mm

Use:
Multifunctional key for the actuation of locking systems from the areas of facilities engineering, (heating and sanitary, air conditioning and ventilation technology, electrical engineering), gas and water supply and shut-off systems



N° article	503705 TwinKey	Functions:
001101	●	Square 5 | 6 - 7 | 8 - 9 | 10 - 11 mm Triangular 7 - 8 | 9 - 10 | 11 - 12 mm Crescent 6 mm Stepped square 6 - 9 mm

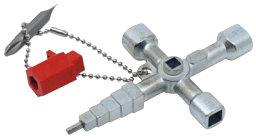




Control cabinet key

Design and use:
- for all current locking systems in the supply of gas, water and electricity
- for technical installations in buildings like air-conditioning systems, ventilation, heating and sanitary systems, stop valves, mains switchboards etc.
- zinc die-cast


400172


400184


400665


400675



N° article	503710	Functions
400172	●	Inner square 6 | 7 - 8 mm, inner square 7| 9 mm, double bit 3 - 5 mm, double bit PH2|slot, adapter for 1/4" bit, vent inner square 5 mm
400184	●	stepped outer square 6 - 10 mm, inner square 6| 8 mm inner triangular-8 mm, inner square 10 mm, double bit PH2|slot, adapter for 1/4" bit, venting inner square 5 mm, 6-kt 3 mm
400665	●	Inside square 5|6|7 - 8|9 - 10 mm, inside triangular 7 | 8 - 9 | 10 - 11 mm, plain 3 - 5 mm, crescent 6 mm, 1/4" bit holder
400675	●	1/4" hexagon socket for bits, triangular 7 mm | square 6 mm, square 7|8 mm, triangular 8|9 mm, triangular 10 mm, double bit 3 - 5 mm, double bit TX20|TX25, double bit PH2/slot, stepped square 6|7|8|9|10 mm with hex 5 mm

Control cabinet key

Design and use:
For all common opening and locking operations in electrical engineering, gas and water supply etc.


400177


400192


400214

N° article	503710	Functions
400177	●	Inside square 5 | 6 | 7 | 8 mm, inside triangular 7 | 8 | 9 mm, double bit 3 - 5 mm, adapter for 1/4" bit, double bit PHZ / slot
400192	●	Inside square 5 | 6 - 7 | 8 | 9 mm, double bit 3 - 5 mm, 1/4" outside square, 1/4" bit holder, inside triangular 6 - 7 | 8 - 9 | 10 mm
400214	●	Inside square 6|7|8 mm, stepped outside square 7 - 10 mm, outside hexagon 3 mm, driver for locks with cylinder cut-out, measuring scale up to 70 mm, bottle opener

Aerator and jet regulator wrenches

Design:
- sturdy metal key
- for mounting and removing aerators and jet regulators without damaging the chrome surface

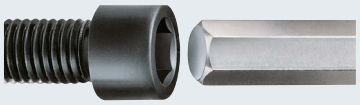






N° article	503711	fitting for
401010	●	Female threads M18×1 | M22×1 Male threads M24×1 | M28×1 CACHÉ® Flow regulator: TT M16.5×1 | TJ M18.5×1 | JR M21.5×1 | STD M24×1

Standard hexagon screwdriver
Hexagon socket screw



Width across flats (AF)	0.7	0.9	1.3	1.5	2	2.5	3	4	5	6	7
DIN 912	–	–	1.4	1.6 - 2	2.5	3	4	5	6	8	–
DIN 6912	–	–	–	–	–	–	4	5	6	8	–
DIN 7984	–	–	–	–	3	4	5	6	8	–	10
DIN 913, 914, 915, 916	1.4 1.6 1.8	2	2.5	3	4	5	6	8	10	12 14	–

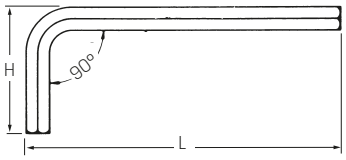
Width across flats (AF)	8	10	12	14	17	19	22	24	27	32	
DIN 912	10	12	14	16 18	20 22	24 27	30	33	36	42	
DIN 6912	10	12	14	16 18	20 22	24 27	30	33	36	–	
DIN 7884	12	14	16 18	20 22	24 –	–	–	–	–	–	
DIN 7991	12	14 16	18 20	22 24	–	–	–	–	–	–	
DIN 913, 914, 915, 916	16	18 20	22 24	–	–	–	–	–	–	–	

Allen wrench

wiha
Tools that work for you

ISO 2936 K

Design:
- made of chromium-vanadium steel, hardened
- faces plane machined
- front edges bevelled







N° article	504500 black oxidised	504505 nickel-plated	AF_1 mm	Total length mm	L mm	H mm
1,3	●	–	1,3	41	41	13
1,5	●	●	1,5	46	46	15
2	●	○	2	51	51	18
2,5	●	○	2,5	57	57	20
3	●	○	3	64	64	23
4	●	○	4	72	72	29
5	●	○	5	83	83	33
6	●	○	6	94	94	38
7	○	●	7	99	99	41
8	●	○	8	105	105	44

N° article	504500 black oxidised	504505 nickel-plated	AF_1 mm	Total length mm	L mm	H mm
9	●	●	9	114	114	47
10	●	○	10	119	119	50
12	●	○	12	134	134	57
14	●	○	14	151	151	70
17	●	○	17	173	173	80
19	●	○	19	195	195	89
22	●	○	22	217	217	102
24	●	–	24	241	241	114
27	●	–	27	271	271	127
32	●	–	32	339	339	157

Allen wrench Hex-Plus®

Wera Hex-Plus

Design:
- Hex-Plus® Allen wrench*
- made of chromium-vanadium steel, nickel-plated
- **Hex-Plus® reduces the notching of the screw by reduction of the surface pressure**

DIN 911

*Except sizes 1.5 and 14 - 19 with standard hex





N° article	504580 nickel-plated	AF mm	L mm	H mm
1,5	●	1,5	45	14
2	●	2	50	16
2,5	●	2,5	56	18
3	●	3	63	20
4	●	4	70	25
5	●	5	80	28
6	●	6	90	32
7	●	7	95	34
8	●	8	100	36

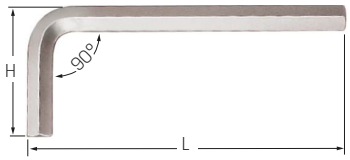
N° article	504580 nickel-plated	AF mm	L mm	H mm
9	●	9	106	38
10	●	10	112	40
12	●	12	125	45
14	●	14	160	63
17	●	17	160	63
19	●	19	180	70

Allen wrench Inch

wiha Tools that work for you

Design:
- made of chromium-vanadium steel
- hardened and nickel-plated
- front plane machined
- front edges bevelled

ASME B18.3



N° article	504600 nickel-plated	AF Inch	L mm	H mm
0,05	●	0.05	41	13
1/16	○	1/16	47	16
3/32	○	3/32	55	22
1/8	●	1/ 8	61	23
9/64	○	9/64	65	25
3/16	●	3/16	76	30
7/32	○	7/32	84	34

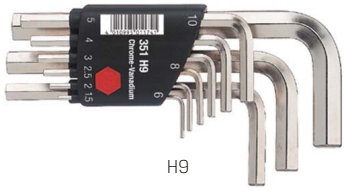
N° article	504600 nickel-plated	AF Inch	L mm	H mm
1/4	●	1/ 4	94	37
3/8	●	3/ 8	117	48
1/2	●	1/ 2	143	59
9/16	●	9/16	158	64
5/8	●	5/ 8	176	71

Allen wrench set in holder

wiha Tools that work for you

Design:
- made of chromium-vanadium steel
- bright nickel-plated
- following ISO 2936K

DIN 911



H9

N° article	504515 nickel-plated	Parts	Contents
H9	○	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Allen wrench set short

wiha Tools that work for you

Design:
- in compact holder
- made of chromium-vanadium steel
- through-hardened, bright nickel-plated
- following ISO 2936K



N° article	504719 nickel-plated	Parts	Contents
11	○	11	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 mm

Allen wrench set Inch

wiha Tools that work for you

Design:
- made of chromium-vanadium steel
- through-hardened
- bright nickel-plated
- in holder

ASME B18.3



8



13

N° article	504610 nickel-plated	Parts	Contents
8	○	8	5/64 | 3/32 | 1/8 | 5/32 | 3/16 | 7/32 | 1/4 | 5/16 Zoll
13	○	13	0,05 | 1/16 | 5/64 | 3/32 | 7/64 | 1/8 | 9/64 | 5/32 | 3/16 | 7/32 | 1/4 | 5/16 | 3/8 Zoll

Allen wrench in jackknife-style holder

wiha Tools that work for you

Design:
- made of chromium-vanadium steel
- through-hardened
- galvanically refined
- robust fibre-glass reinforced housing with eject button for easy blade selection



PG7 PK7 PG9X

N° article	504510 galvanically refined	Total length mm	Drives
PG7	●	120	**External hex** 2 | 2.5 | 3 | 4 | 5 | 6 | 8 mm
PK7	●	95	**External hex** 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 mm
PG9×	●	120	**Slot** 4.5 mm **Cross-recess** PH2 **External hex** 3 | 4 | 5 | 6 mm **TORX®** T10 | T15 | T20

Allen wrench
in mini folding holder

Design:
- made of chromium-vanadium steel
- through-hardened
- galvanically refined
- ergonomic handle, 55 mm length
- **to actuate the smallest screws**
- sturdy housing with eject button
- suspension eye with matching snap hooks

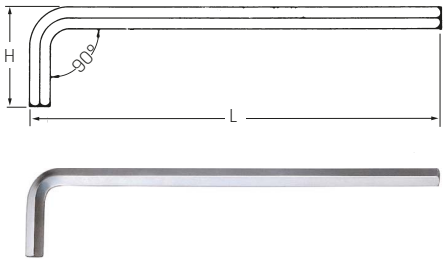


N° article	504512 galvanically refined	Total length mm	Drives
PM8×	●	55	**Slot** 1.5 | 2 mm **Cross-recess** PH00 **External hex** 0.7 | 0.9 | 1.3 | 1.5 | 2 mm

Allen wrench long

Design:
- made of chromium-vanadium steel
- hardened and nickel-plated
- faces plane machined
- front edges bevelled

ISO 2936 L



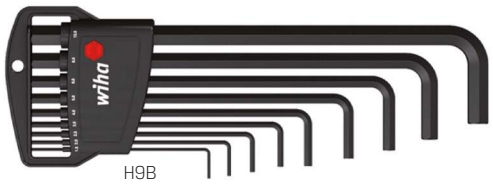
N° article	504700 nickel-plated	AF_1 mm	L mm	H mm
1,5	●	1,5	91	15
2	●	2	101	18
2,5	●	2,5	113	20
3	●	3	128	23
4	●	4	142	29
5	●	5	163	33
6	●	6	184	38
7	●	7	194	41

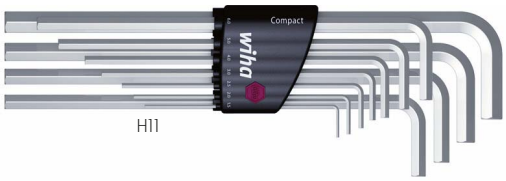
N° article	504700 nickel-plated	AF_1 mm	L mm	H mm
8	●	8	206	44
9	●	9	217	47
10	●	10	231	50
12	●	12	259	57
14	●	14	291	70
17	●	17	333	80
19	●	19	375	89

Allen wrench set long

Design:
- made of chromium-vanadium steel
- hardened throughout and manganese-phosphated (H9B) or nickel-plated (H11)
- front plane machined
- front edges bevelled

ISO 2936 L


H9B



H11

N° article	504710 set	Parts	Contents
H9B	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm
H11	●	11	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 mm

Design:
- made of chromium-vanadium steel
- hardened and nickel-plated
- faces plane machined
- front edges bevelled

ISO 2936 L



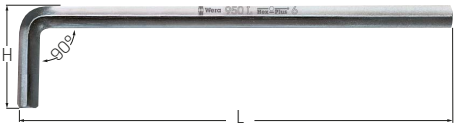
N° article	504715 set nickel-plated	Parts	Contents
9L	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Allen wrench long

Design:
- Hex-Plus® Allen wrench
- made of chromium-vanadium steel, nickel-plated
- long version
- **Hex-Plus® reduces the notching of the screw by reduction of the surface pressure**

ISO 2936 L





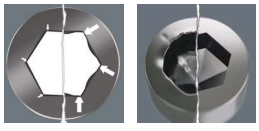
N° article	504720 nickel-plated	AF_1 mm	L mm	H mm
2	●	2	100	16
2,5	●	2,5	112	18
3	●	3	125	20
4	●	4	140	25
5	●	5	160	28

N° article	504720 nickel-plated	AF_1 mm	L mm	H mm
6	●	6	180	32
8	●	8	200	36
10	●	10	219	40
12	●	12	250	45

Allen wrench set long

Design:
- set of keysl 504720
- **Hex-Plus® reduces the notching of the screw by reduction of the surface pressure**

ISO 2936 L





N° article	504730 set nickel-plated	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Allen wrench set long

Design:
- metric
- chrome-plated frame
- with holding function on the long leg

ISO 2936 L



N° article	504732 Stainless steel, HEX-Plus®	Parts	Contents
9	○	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Hex ball head Allen wrench long

Design:
- made of chromium-vanadium steel
- through-hardened
- hardness and size to DIN / ISO 2936 long
- chrome-plated

ISO 2936 L

25°



N° article	504750 chrome-plated	AF mm	L mm	H mm
1,5	●	1,5	91	15
2	●	2	101	18
2,5	●	2,5	113	20
3	●	3	128	23
4	●	4	142	29
5	●	5	163	33

N° article	504750 chrome-plated	AF mm	L mm	H mm
6	●	6	184	38
7	●	7	195	39
8	●	8	206	44
9	●	9	217	47
10	●	10	231	50
12	●	12	259	57

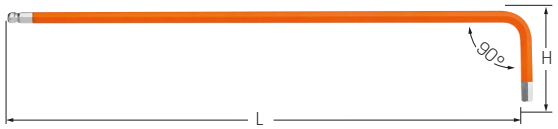
Hex ball head Allen wrench long

Design:
- made of chromium-vanadium steel
- through-hardened
- with colour marking (following ISO 2936L)
- **due to fluorescent colours also visible and distinguishable in dark environments**
- due to the colour markings quick identification of the sizes
- spherical head allows screwing under angles from up to 25°

ISO 2936 L

25°

UV



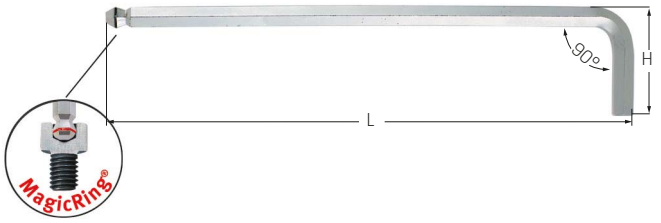
N° article	504752 with colour marking	Colour	AF mm	L mm	H mm
1,5	●	yellow	1,5	91	15
2,0	●	light blue	2	101	18
2,5	●	light green	2,5	113	20
3,0	●	orange	3	128	23
4,0	●	purple	4	142	29
5,0	●	dark green	5	163	33
6,0	●	red	6	184	38
8,0	●	dark blue	8	206	44
10,0	●	anthracite	10	231	50

Hex ball head Allen wrench long, with holding function

Design:
- made of chromium-vanadium steel, mat chrome-plated
- long version, with MagicRing®
- profile, leg length and minimum hardness according to ISO 2936L
- MagicRing® made of spring steel holds all standard screws in any position

ISO 2936 L

25°



N° article	504760 matt chrome-plated	AF mm	L mm	H mm
3	●	3	128	23
4	●	4	142	29
5	●	5	163	33

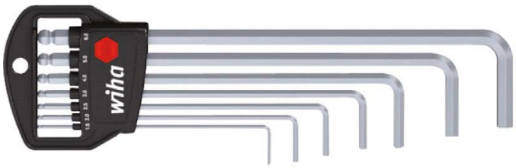
N° article	504760 matt chrome-plated	AF mm	L mm	H mm
6	●	6	184	38
8	●	8	206	44
10	●	10	231	50

Ball point hex wrench set long

Design:
- made of chromium-vanadium steel
- through-hardened
- chrome-plated

ISO 2936 L

25°



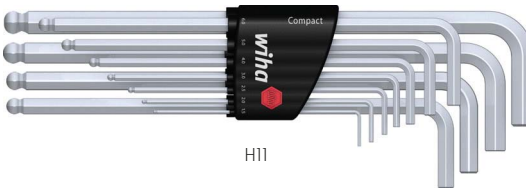
H7



S9



H9



H11

N° article	504755 chrome-plated	Parts	Contents
H7	●	7	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 mm
H9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

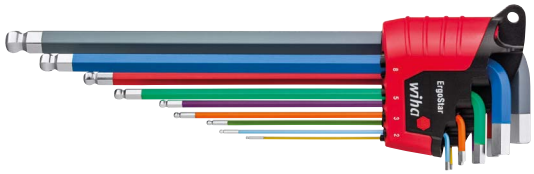
N° article	504755 chrome-plated	Parts	Contents
S9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm
H11	●	11	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 mm

Ball point hex wrench set long

wiha Tools that work for you

ISO 2936 L | 25° | UV

Design:
- set of keys 504752
- made of chromium-vanadium steel
- through-hardened
- with colour marking (following ISO 2936L)
- **in UV-light coloured glowing**
- due to the colour markings quick identification of the sizes
- spherical head allows screwing under angles from up to 25°
- in plastic holder



N° article	504754 with colour marking	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Ball point hex wrench set

Wera Be a Tool Rebel

ISO 2936 L | 25°

Design:
- with 2-component clip
- BlackLaser surface, with hose coating
- with colour coding and size marking
- output Hex-Plus®, hexagonal ball head on the long leg
- from size 3.0 mm with holding function for hexagon socket screws



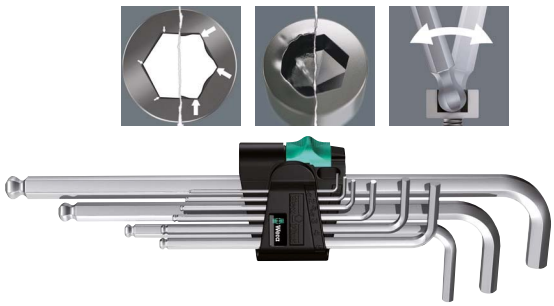
N° article	504751 with colour marking	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Ball point hex wrench set long

Wera Hex-Plus

ISO 2936 L | 25°

Design:
- with 2-component clip
- rack chrome-plated for high protection against corrosion
- **Hex-Plus® reduces the notching of the screw by reduction of the surface pressure**



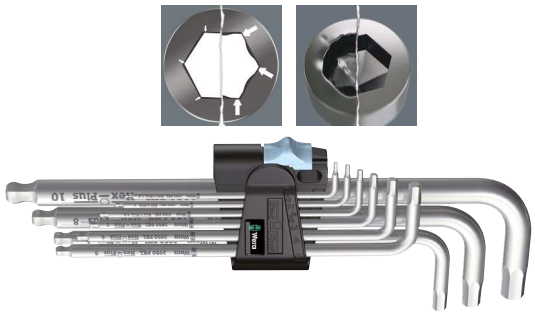
N° article	504772 chrome-plated	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Ball point hex wrench set

Wera Hex-Plus

ISO 2936 L | Rostfrei

Design:
- long version
- wrenches completely made of stainless steel for corrosion resistance
- **Hex-Plus® reduces the notching of the screw by reduction of the surface pressure**
- in solid rubber clip



N° article	504758 Stainless steel	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Ball point hex wrench set
long, with holding function

wiha Tools that work for you

ISO 2936 L | 25°

Design:
- made of chromium-vanadium steel
- through-hardened
- mirror polished
- innovative holder - by turning a key all can be taken out one by one
- always the matching key in the right location
- spherical head allows screwing under angles from up to 25° (comparable ISO 2936 long)



N° article	504770 chrome-plated	Parts	Contents
E9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 mm

Ball point hex wrench set
short

wiha Tools that work for you

ISO 2936 L | 25°

Design:
- in compact holder
- compact and sturdy
- mat chrome-plated
- especially for hard-to-reach screws
- following ISO 2936L



N° article	504779 matt chrome-plated	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Ball point hex wrench set long, short leg

Design:
- chromium-vanadium steel
- through-hardened
- mat chrome-plated
- spherical head geometry allows screwing under angles from up to 25°
- lasered labelling provides a permanent overview (from key size 3)
- ProStar holder with sliding function for one-handed opening and easy removal of single keys

Use:
Especially for hard-to-reach screws and bottlenecks due to 95° bend of the key and short leg. Protects against injuries of the knuckles





N° article	504778 matt chrome-plated	Parts	Contents
9	●	9	1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Hexagonal screwdriver

Design:
- blade made of chromium-vanadium steel
- through-hardened
- mat chrome-plated
- Wiha SoftFinish®- handle with roll-off protection



N° article	504530 matt chrome-plated	AF$_1$ mm	Blade length mm	Total length mm
2,5	●	2,5	75	179
4,0	●	4	75	186
5,0	●	5	75	186

Allen Wrench

Design:
- blade made of chromium-vanadium steel
- through-hardened
- mat chrome-plated
- Wiha SoftFinish®- handle with roll-off protection



N° article	504535 matt chrome-plated	AF$_1$ mm	Blade length mm	Total length mm
3,0	○	3	35	139
4,0	●	4	40	151
5,0	●	5	45	156
6,0	●	6	50	168
8,0	●	8	60	178

Hex ball end screwdriver

Design:
- blade made of chromium-vanadium steel
- through-hardened
- mat chrome-plated
- tip Wiha ChromTop®
- handle with roll-off protection
- Wiha-SoftFinish handle®, giving an explicit increased comfort even at higher torques



N° article	504780 matt chrome-plated	AF$_1$ mm	Blade length mm	Total length mm
2,0	●	2	100	204
2,5	●	2,5	100	204
3,0	●	3	100	204
4,0	●	4	100	211
5,0	●	5	100	211
6,0	●	6	125	243
8,0	●	8	150	268

Allen wrench with cross handle

Design:
- blade made of chromium-vanadium steel
- through-hardened - bright nickel-plated
- front edge spherical for easy insertion of the blade into the screw head
- with ergonomic, impact-resistant handle



N° article	504540 nickel-plated	AF$_1$ mm	Blade length mm	Total length mm
2×100	●	2	100	126
2,5×100	●	2,5	100	126
3×100	●	3	100	126
3×150	●	3	150	176
4×100	●	4	100	126
4×150	●	4	150	176
4×200	●	4	200	226
5×100	●	5	100	132
5×150	●	5	150	182
5×200	●	5	200	232
6×100	●	6	100	132
6×150	●	6	150	182
6×200	●	6	200	232
8×150	●	8	150	182
8×200	●	8	200	232
10×200	●	10	200	238
12×200	●	12	200	238

Allen wrench

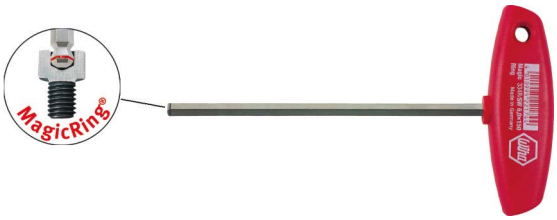
Design:
- full-length blade of chromium-vanadium steel, mat chrome-plated
- the additional side drive allows dependable screwing up and unscrewing of screw connections
- with Wiha Comfort T-handle
- soft sections at the ergonomic handle comfortably help to transfer even high torques



N° article	504546 matt chrome-plated	AF_1 mm	Blade length mm	Total length mm
2×100	●	2	100	126
2,5×100	●	2,5	100	126
3×100	●	3	100	126
4×150	●	4	150	176
5×150	●	5	150	182
6×150	●	6	150	182
8×200	●	8	200	232
10×200	●	10	200	238

Allen wrench with holding function

Design:
- blade made of chromium-vanadium steel, through-hardened
- high quality galvanically coated
- spring-steel ring (MagicRing®) captures screws in any position
- front edge spherical for easy insertion of the blade into the screw head
- with ergonomic transverse handle for high power transmission



N° article	504555 nickel-plated	AF_1 mm	Blade length mm	Total length mm
3×100	●	3	100	126
4×150	●	4	150	176
5×150	●	5	150	182
6×150	●	6	150	182
8×200	●	8	200	232

Allen wrench with holding function

Design:
- full-length blade of chromium-vanadium steel, mat chrome-plated
- the additional side drive allows dependable screwing up and unscrewing of screw connections
- with Wiha Comfort T-handle
- soft sections at the ergonomic handle comfortably help to transfer even high torques
- the **MagicRing®** holds all standard screws tight in any position thanks to spring steel ring



N° article	504562 matt chrome-plated	AF_1 mm	Blade length mm	Total length mm	L mm
3×100	●	3	100	126	126
4×150	●	4	150	176	176
5×150	●	5	150	182	182
6×150	●	6	150	182	182
8×200	●	8	200	232	232
10×200	●	10	200	238	238

Allen wrench set

Design:
- blade made of chromium-vanadium steel, through-hardened
- high quality galvanically coated
- front edges rounded for easy insertion of the blade into the screw head
- with ergonomic cross handle for high power transmission



7 6

N° article	504565 nickel-plated	Parts	Contents
7	●	7	2×100 | 2,5×100 | 3×100 | 4×150 | 5×150 | 6×200 | 8×200 mm
6	○	6	3×100 | 4×150 | 5×150 | 6×150 | 8×20 | 10×200 mm **with holding function "MagicRing®"**

Allen wrench with T-handle

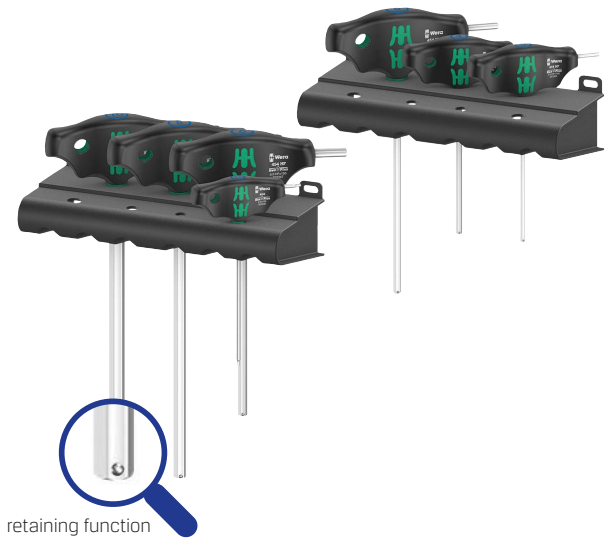
Design:
- chrome-plated surface
- hexagonal socket spanner with T-handle
- phosphatised drive tip
- with 3 hexagons of the same width across flats
- cross handle fixed



N° article	504568	AF_1 mm	Blade length mm	Blade length 2 mm	Blade length 3 mm
3	17,00	3	150	75	30
4	17,60	4	180	90	35
5	18,20	5	180	90	35
6	18,70	6	210	105	40
8	22,70	8	250	125	50
10	26,10	10	300	150	60

Allen wrench bit set

Design:
- T-handle for particularly high tightening and loosening torques
- ergonomic 2-component handle with finger grip recesses for very high power transmission
- with additional short leg for the transmission of extremely high torques
- **retaining function to hold the screw securely on the leg**



Nº article	504567 with cross handle	Parts	Contents
7	●	7	2.5 × 100 mm 3.0 × 100 mm 4.0 × 100 mm 5.0 × 150 mm 6.0 × 150 mm 8.0 × 200 mm 110.0 × 200 mm



TORX®/TORX PLUS®

Product Information

	Internal TORX®						Tapping screws		
	Cylinder	sunk head	Raised counter-sunk head	Cylin-der	Round/flat head	sunk head	Raised counter-	sunk head	Raised counter-sunk head
TORX®									
	DIN 912	DIN 963 965	DIN 964 966	DIN 7984 6912	DIN 7985	DIN 7991	DIN 7981 7982	DIN 7972 7983	DIN 7973

TORX® Size	mm	Torque Nm	Ø - M						Ø - B		
T5	1.42	0.43	*	*	*	*	*	*	*	*	*
T6	1.70	0.75	*	*	*	*	*	*	*	*	*
T7	1.99	1.40	*	*	*	*	*	–	–	–	–
T8	2.31	2.20	2.5	2.5	2.5	–	2.5	2.5	2.9	2.9	2.9
T9	2.50	2.80	–	–	–	–	–	–	–	–	–
T10	2.74	3.70	3.0	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5
T15	3.27	6.40	–	3.5	3.5	–	3.5	3.5	3.9	3.9	3.9
T20	3.86	10.50	4.0	4.0	4.0	4.0	4.0	4.0	4.2	4.2	4.2
T25	4.43	15.90	5.0	5.0	5.0	5.0	5.0	5.0	5.8 - 5.5	5.8-5.5	5.8 - 5.5
T27	4.99	22.50	**	**	**	**	**	**	**	**	**
T30	5.52	31.10	6.0	6.0	6.0	6.0	6.0	6.0	6.3	6.3	6.3
T40	6.65	54.10	8.0	8.0	8.0	8.0	8.0	8.0	–	–	–
T45	7.82	86.00	**	**	**	**	**	**	**	**	**
T50	8.83	132.00	10.0	10.0	10.0	10.0	10.0	10.0	–	–	–
T55	11.22	218.00	12.0	–	–	12.0	–	12.0	–	–	–
T60	13.25	379.00	14.0	–	–	14.0	–	–	–	–	–



TORX PLUS®

Due to the reinforced core diameter of TORX PLUS® higher torques than with TORX® profiles may be transmitted. Refined profile flanks help to generate an equilibrated surface pressure between screw and tool instead of a high point loading. This protects both the screw and the tool, thus increasing the service life.

* Special screws for M 1.6 and 2.0 for HM indexable inserts ** Special screws

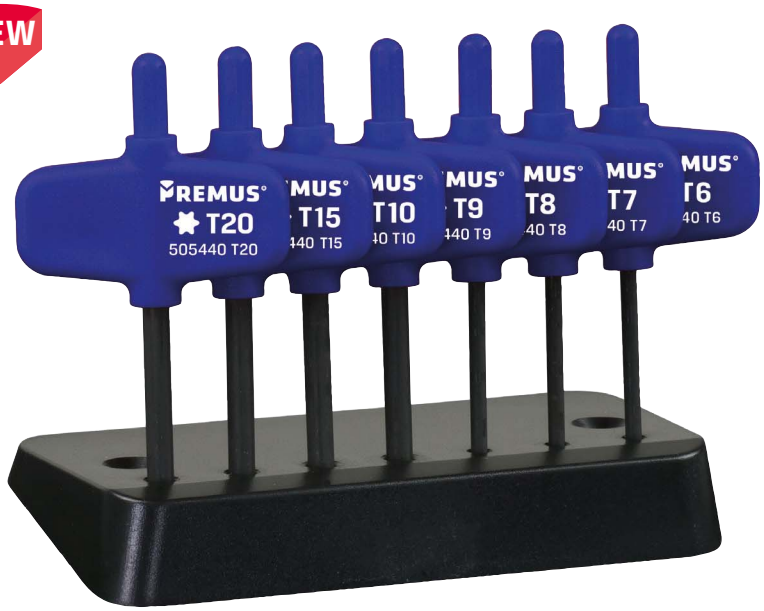
Flag handle screwdriver set in workbench stand

PREMUS®

Design:
- blade made of chromium-vanadium steel
- through-hardened
- surface manganese phosphatised
- 10 years warranty
- blade length: 40 mm

NEW

10 YEARS WARRANTY



N° article	505445 TORX®, 7-piece	Parts	Contents
0010	●	7	TORX® T6 | T7 | T8 | T9 | T10 | T15 | T20

TORX®screwdriver

Design:
- blade made of chromium-vanadium steel
- through-hardened
- surface manganese phosphatised
- handle made of impact-resistant plastic
- especially suitable for tools with carbide indexable inserts



N° article	505450 manganese phosphatised	Output size	Blade length mm
T5	●	T5	35
T6	●	T6	35
T7	●	T7	35
T8	●	T8	40
T9	●	T9	40
T10	●	T10	40
T15	●	T15	45
T20	●	T20	45

TORX PLUS®screwdriver

Design:
- blade made of chromium-vanadium steel
- through-hardened
- surface manganese phosphatised
- handle made of impact-resistant plastic
- due to TORX PLUS® drive higher torques than with TORX® profiles can be transmitted



N° article	505452 manganese phosphatised	Output size	Blade length mm
5IP	●	5IP	35
6IP	●	6IP	35
7IP	●	7IP	35
8IP	●	8IP	40
9IP	●	9IP	40
10IP	●	10IP	40
15IP	●	15IP	45
20IP	●	20IP	45

TORX®/TORX PLUS®screwdriver set in workbench stand

Design:
- blade made of chromium-vanadium steel
- through-hardened
- surface manganese phosphatised
- handle made of impact-resistant plastic
- especially suitable for tools with HM indexable inserts

7P: with TORX PLUS® output higher torque transmission



7 TORX®



7P TORX PLUS®

N° article	505455 manganese phosphatised	Parts	Contents
7	●	7	TORX® T6 | T7 | T8 | T9 | T10 | T15 | T20
7P	●	7	TORX PLUS® 6IP | 7IP | 8IP | 9IP | 10IP | 15IP | 20IP

TORX®Allen wrench short

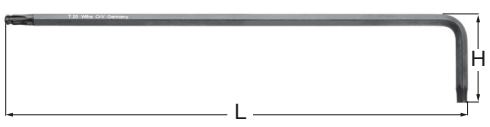
Design:
- chromium-vanadium steel
- through-hardened
- manganese phosphatised



N° article	505500 black oxidised	Output size	L mm	N° article	505500 black oxidised	Output size	L mm
T5	●	T5	39	T20	●	T20	62
T6	●	T6	41	T25	●	T25	67
T7	●	T7	44	T27	●	T27	72
T8	●	T8	47	T30	●	T30	79
T9	●	T9	51	T40	●	T40	86
T10	●	T10	54	T50	●	T50	104
T15	●	T15	57	T60	●	T60	134

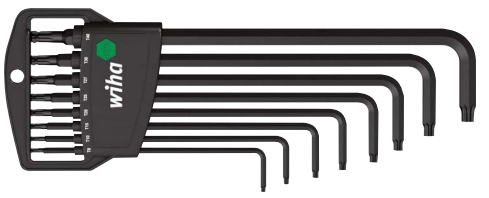
TORX®ball head Allen wrench long

Design:
- blade made of chromium-vanadium steel
- through-hardened
- manganese phosphatised
- spherical head geometry allows screwing under angles up to 25°
- with extended TORX®profile behind spherical head
- especially for hard-to-reach TORX®screws



N° article	505520 manganese phosphatised	Output size	L mm	N° article	505520 manganese phosphatised	Output size	L mm
T9	●	T9	111	T25	●	T25	163
T10	●	T10	121	T27	●	T27	176
T15	●	T15	136	T30	○	T30	191
T20	●	T20	148	T40	●	T40	210

Design:
- set compiled from 505520
- in plastic plug-in holder



N° article	505525 Set, manganese phosphated	Parts	Contents
8	●	8	T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40

TORX®Allen wrench long

Design:
- blade made of chromium-vanadium steel
- through-hardened, burnished

NEW



N° article	505528 black oxidised	Output size	Total length mm	L mm	H mm
T5	○	T5	72	72	13
T6	○	T6	80	80	15
T7	○	T7	88	88	18
T8	○	T8	101	101	20
T9	○	T9	111	111	21
T10	●	T10	121	121	23
T15	●	T15	136	136	27
T20	●	T20	148	148	29
T25	●	T25	163	163	33
T27	●	T27	176	176	36
T30	●	T30	191	191	38
T40	●	T40	210	210	43

TORX®Allen wrench set
Titanium silver, long

Design:
- full-length blade of chromium-vanadium steel
- titanium silver for better corrosion protection (no more annoying oil on the key)
- space-saving ProStar holder



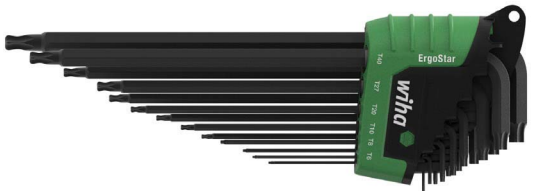
N° article	505527 Set, titanium silver	Parts	Contents
13	●	13	T5 | T6 | T7 | T8 | T9 | T10 | T15 | T20 | T25 | T30 | T40 | T45

TORX®ball point Allen key set
in ErgoStar holder

Design:
- blade made of chromium-vanadium steel, through-hardened, burnished
- spherical head geometry allows screwing under angles up to 25°
- especially for hard-to-reach TORX®screws and operations in bottlenecks
- **TORX® ball point only from size T9 upwards**

25°

NEW



N° article	505530 black oxidised	Parts	Contents
14	●	13	T5 | T6 | T7 | T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 | T45

TORX®Allen wrench set long

Design:
- with two-component clip
- blade zinc phosphatised, with hose coating
- with colour coding and size marking
- with holding function on the long leg



N° article	505524 zinc phosphated, with colour marking	Parts	Contents
9	●	9	T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40

TORX®Allen wrench set long

Design:
- made of ice-hardened steel
- with 2-component plastic clip for storage
- with colour coding and size marking
- with holding function on the long leg

Rostfrei



N° article	505526 Stainless steel, with colour coding	Parts	Contents
9	●	9	T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40

TORX®screwdriver

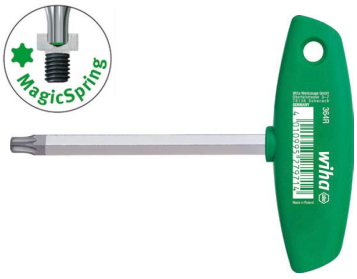
Design:
- blade made of chromium-vanadium-molybdenum steel
- through-hardened and mat chrome-plated
- tip Wiha ChromTop®
- ergonomic T-handle made of high-quality plastic, impact-proof, red, cadmium-free



N° article	505530 matt chrome-plated	Output size	Blade length mm	Total length mm
T9	●	T9	100	126
T10	●	T10	100	126
T15	●	T15	100	126
T20	●	T20	100	132
T25	●	T25	100	132
T27	●	T27	100	132
T30	●	T30	100	132
T40	●	T40	100	132
T45	●	T45	250	288
T50	○	T50	250	288

TORX®screwdriver
with holding function

Design:
- blade made of high-alloyed chromium-vanadium steel
- through-hardened and mat chrome-plated
- ergonomic cross handle made of high quality plastic
- **MagicSpring®** made of stainless steel holds TORX®screws in place
- ChromTop®blade tip guarantees maximum accuracy to size



N° article	505540 matt chrome-plated	Output size	Blade length mm	Total length mm
T9	●	T9	100	126
T10	●	T10	100	126
T15	●	T15	100	126
T20	●	T20	100	132
T25	●	T25	150	182

TORX PLUS®screwdriver

Design:
- blade made of chromium-vanadium steel
- through-hardened and mat chrome-plated
- ChromTop®blade tip guarantees maximum accuracy to size
- ergonomic cross handle made of high quality plastic
- **25 % higher torque transmission** compared to a standard TORX®profile

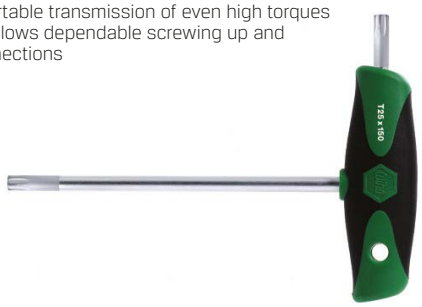


N° article	505600 matt chrome-plated	Output size	Blade length mm	Total length mm
10IP	●	10IP	100	126
15IP	●	15IP	100	126
20IP	●	20IP	100	132
25IP	●	25IP	100	182
30IP	●	30IP	100	182

TORX®screwdriver

Design:
- blade made of chromium-vanadium steel, mat chrome-plated and with ChromTop®tip
- ergonomic Wiha Comfort T-handle
- soft sections allow comfortable transmission of even high torques
- the additional side drive allows dependable screwing up and unscrewing of screw connections

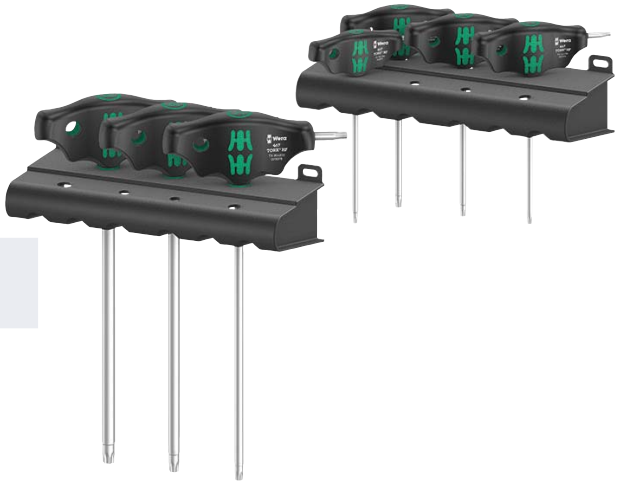
NEW



N° article	505615 matt chrome-plated	Output size	Blade length mm	Total length mm
T10	●	T10	100	126
T15	●	T15	100	126
T20	●	T20	100	132
T25	●	T25	150	132
T27	●	T27	150	132
T30	●	T30	150	132
T40	●	T40	150	132

TORX®screwdriver

Design:
- T-handle for particularly high tightening and loosening torques
- ergonomic 2-component handle with finger grip recesses for very high power transmission
- with additional short leg for the transmission of extremely high torques
- **retaining function to hold the screw securely on the leg**



N° article	505638 with cross handle	Parts	Contents
7	●	7	T10 × 100 mm T15 × 100 mm T20 × 100 mm T25 × 100 mm T30 × 200 mm T40 × 200 mm T45 × 200 mm

TORX®screwdriver Kraftform Plus

Design:
- blade made of high-quality chromium-vanadium steel
- through-hardened
- output nicromatt, with black-point tip
- handle Kraftform-Plus with roll-stop, three-component material



N° article	505640	Output size	Blade length mm	Total length mm
TX5	●	T5	60	130
TX6	●	T6	60	130
TX7	●	T7	60	130
TX8	●	T8	60	141
TX9	●	T9	60	141
TX10	●	T10	80	161
TX15	●	T15	80	178
TX20	●	T20	100	198
TX25	●	T25	100	205
TX27	●	T27	115	220
TX30	●	T30	115	220
TX40	●	T40	130	242



N° article	505642	Parts	Contents
6	●	6	T10 | T15 | T20 | T25 | T30 | T40

TORX PLUS®screwdriver Kraftform Plus

Design:
- like 505640, but for TORX PLUS®screws
- for higher torques and extended service life of tool and screw

N° article	505650	Output size	Blade length mm	Total length mm
6IP	●	6IP	60	130
7IP	●	7IP	60	130
8IP	●	8IP	60	130
9IP	●	9IP	60	141
10IP	●	10IP	80	161
15IP	●	15IP	80	178
20IP	●	20IP	100	198
25IP	●	25IP	100	205
30IP	●	30IP	115	220



TORX®screwdriver Kraftform Plus

Design:
- blade round
- **with holding function, nicromatt**
- multi-component Kraftform handle with roll-off protection



N° article	505646	Output size	Blade length mm	Total length mm
TX8	●	T8	60	141
TX9	●	T9	60	141
TX10	●	T10	80	161
TX15	●	T15	80	178
TX20	●	T20	100	198
TX25	●	T25	100	205
TX27	○	T27	115	220
TX30	●	T30	115	220
TX40	○	T40	130	242



N° article	505648 set	Parts	Contents
6	●	6	T10 | T15 | T20 | T25 | T30 | T40

TORX®screwdriver Kraftform Plus

Design:
- blade made of high-quality chromium-vanadium steel
- through-hardened
- output nicromatt, with black-point tip
- multi-component Kraftform handle with roll-off protection
- with additional bore in TORX®profile



N° article	505660 with hole	Output size	Blade length mm	Total length mm
TX7	○	T7	60	130
TX8	●	T8	60	141
TX9	●	T9	60	141
TX10	●	T10	80	161
TX15	●	T15	80	178
TX20	●	T20	100	198
TX25	●	T25	100	205
TX27	●	T27	115	220
TX30	●	T30	115	220
TX40	○	T40	130	242



N° article	505664 set	Parts	Contents
6	●	6	T10 | T15 | T20 | T25 | T30 | T40

Face spanner

Design:
- straight, with fixed pin
- made of special steel, burnished
- pin not hardened lest at overstrain a brittle fracture may occur
- for two-hole nuts

1,5 - 2,5:
Pins riveted
3 - 10:
Pins electrically welded on



N° article	506000 adjustable	Tenon ∅ mm	Tenon height mm	Adjustment range mm	Total length mm
1,5	●	1,5	2	7 - 40	115
2	●	2	2,5	7 - 40	115
2,5	●	2,5	3	7 - 40	115
3	●	3	4	11 - 60	160
4	●	4	5	11 - 60	160
5	●	5	6	14 - 100	215
6	●	6	7	14 - 100	215
8	●	8	8	22 - 125	260
10	●	10	10	22 - 125	260

Face spanner set

Design:
- face spanner with exchangeable pins (2 pieces per size)
- pins hardened, key special steel, galvanised
- the face spanner set substitutes 5 single wrench sizes
- in plastic box



N° article	506050 adjustable	Parts	Contents
5	●	5	1.5 | 2 | 2.5 | 3 | 4 mm

Jointed face spanner

Design:
- straight, with fixed pin Made of special steel, burnished
- pin not hardened lest at overstress brittle breaks may happen
- with hang-up hole
- pins electro-welded
- for two-hole nuts



N° article	506100 adjustable	Tenon ∅ mm	Tenon height mm	Adjustment range mm	Total length mm
40/3	●	3	4	18 - 40	150
40/4	●	4	5	18 - 40	150
80/4	●	4	5	40 - 80	220
80/5	●	5	6	40 - 80	220
80/6	●	6	7	40 - 80	220
125/6	●	6	7	80 - 125	295
125/7	●	7	7,5	80 - 125	295
125/8	●	8	8	80 - 125	295
200/8	●	8	8	125 - 200	405

Face spanner

DIN 3116

Design:
- made of special steel
- pins electro-welded
- galvanised

Use:
For flange nuts DIN 44716-D and for mounting grinding and cutting disks to angle grinders



N° article	506150	Design	Tenon ∅ mm	Total length mm
A	●	straight	5	180
C5	●	cranked	5	200

Hook wrench

Design:
- made of special steel
- hardened and burnished
- rounded edges for better handling

DIN 1810 A

Use:
For locknuts DIN 1804 and roller bearing nuts DIN 981

Note:
Stainless steel version on request



N° article	506200 with lug	for ∅ mm	Total length mm
12/14	●	12 - 14	110
16/20	●	16 - 20	110
25/28	●	25 - 28	136
30/32	●	30 - 32	136
34/36	●	34 - 36	170
40/42	●	40 - 42	170
45/50	●	45 - 50	206
52/55	●	52 - 55	206
58/62	●	58 - 62	240

N° article	506200 with lug	for ∅ mm	Total length mm
68/75	●	68 - 75	240
80/90	●	80 - 90	280
95/100	●	95 - 100	280
110/115	●	110 - 115	335
120/130	●	120 - 130	335
135/145	●	135 - 145	385
155/165	●	155 - 165	385
180/195	●	180 - 195	470
205/220	∅	205 - 220	470

Hook wrench with pilot

Design:
- made of special steel
- hardened and burnished
- rounded edges for better handling

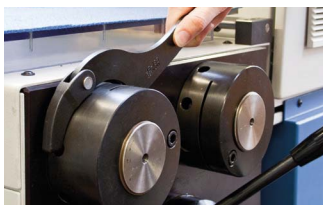
DIN 1810 B

Use:
For capstan nuts DIN 1816

Note:
Intermediate sizes or other pin ∅ and stainless versions available on request



N° article	506250 burnished	Tenon ∅ mm	for ∅ mm	Total length mm
12 - 14	●	2	12 - 14	110
16 - 18	●	2,5	16 - 18	110
20 - 22	●	2,5	20 - 22	110
25 - 28	●	3	25 - 28	136
30 - 32	●	4	30 - 32	136
34 - 36	●	4	34 - 36	170
40 - 42	●	4	40 - 42	170
45 - 50	●	5	45 - 50	206
52 - 55	●	5	52 - 55	206
58 - 62	●	5	58 - 62	240
68 - 75	●	6	68 - 75	240
80 - 90	●	6	80 - 90	280
95 - 100	●	8	95 - 100	280
110 - 115	●	8	110 - 115	335
120 - 130	●	8	120 - 130	335
135 - 145	●	8	135 - 145	380
155 - 165	●	8	155 - 165	380





Jointed hook wrench
adjustable, with lug

Design:
- made of special steel
- hardened and burnished (506300)
- ground on edge
- with hang-up hole
- hook and shank elongated
- rivet reinforced
- spring washer and optimised radius ranges
- rounded edges for better handling

Use:
For locknuts DIN 1804 and roller bearing nuts DIN 981



506300



506310

N° article	506300 burnished	506310 Stainless steel	for ∅ mm	Total length mm
20 - 35	●	○	20 - 35	165
35 - 60	●	●	35 - 60	210
60 - 90	●	●	60 - 90	280
90 - 155	●	●	90 - 155	335
155 - 230	●	○	155 - 230	460

Jointed hook wrench
adjustable, with tang

Design:
- made of special steel
- hardened and burnished
- with hang-up hole
- hook and shank elongated
- rivet reinforced
- spring washer and optimised radius ranges
- rounded edges for better handling

Use:
For capstan nuts DIN 1816



N° article	506350 burnished	Tenon ∅ mm	for ∅ mm	Total length mm
22 - 35	●	3	22 - 35	165
35 - 60	●	4	35 - 60	205
60 - 90	●	6	60 - 90	280
95 - 155	●	6	95 - 155	335
165 - 230	●	10	165 - 230	460

Jointed hook wrench
with tang for torque wrench

Design:
- with socket for torque wrench
- made of special steel
- hardened and burnished
- female square Female square

Use:
For capstan nuts DIN 1816 combined with torque wrench female square drive 1/2"



N° article	506360 burnished	Tenon ∅ mm	for ∅ mm	Total length mm
35 - 60	●	4	35 - 60	110
60 - 90	●	6	60 - 90	130

Wrench Sizes and Thread Diameters

Product Information

Comparison of metric, American and Imperial dimensions

mm	Thread diameter					Width across flats		Diameter of thread									Width across flats		
								United Standard		American National Standard ANSI B 18.2.1-1972 ANSI B 18.2.2-1972									
										Nuts			Bolts and Screws						
	Germany Metric to DIN and ISO	France NF E 2164-1967 (69) 27-411 (69)	Sweden SMS 2164-1967 2,175 - 1971	Metric for HV connections to DIN 6914-6915		Inches	mm	Normal Series ISEM 1768	Heavy Series ISEM 1769	Square Bolt, Hex Bolt Hex Cap Screw (Finished Bolt) Lag Screw	Heavy Hex Bolt Heavy Hex Screw Heavy Structural Bolt	Hex Flat, Hex Flat Jam, Hex Hex Jam, Hex Slotted, Hex Thick, Hex Thick Slotted Hex Castle	Heavy Square, Heavy Hex Flat Heavy Hex Flat Jam, Heavy Hex, Heavy Hex Jam, Heavy Hex Slotted	Square Nut	Whitworth	BS 916 1.083	Inches	mm
50	33	33	33		2	2.0000	50.80	1.3/8	1.1/4	1.3/8	1.1/4	1.3/8	1.1/4	1.3/8	1.1/4W	1.3/8	2050	52.07
55	36	36	36		2.1/16	2.0625	52.39		1.3/8		1.3/8		1.3/8					
					2.3/16	2.1.875	55.56											
60	39	39	39		2.1/4	2.2.500	57.15	1.1/2	1.1/2	1.1/2	1.1/2	1.1/2	1.1/2	1.1/2	1.3/6W	1.1/2	2220	56.39
					2.3/8	2.3.750	60.32			1.5/8					1.1/2W	1.5/8	2,410	61.21
					2.7/16	2.4.375	61.91											
65	42	42	42		2.9/16	2.5.625	65.09	1.3/4	1.3/4		1.5/8		1.5/8		1.5/8W	1.3/4	2,580	65.53
70	45	45	45		2.5/8	2.6.250	66.68				1.3/4		1.3/4		1.3/4W	2	2,760	70.10
					2.3/4	2.7.500	69.85											
75	48	48	48		2.13/16	2.8.125	71.44	2		1.7/8	1.7/8		1.7/8					76.70
					2.15/16	2.9.375	74.61			2								
					3	3.0000	76.20											
80	52	52	52		3.1/8	3.1.250	79.38		2	2.1/4	2		2		2 W	2.1/4	3150	80.01
85	56	56	56		3.3/8	3.3.750	85.72				2.1/4		2.1/4			2.1/2	3,550	90.17
90	60	60	60		3.1/2	3.5.000	88.90											
95	64	64	64		3.3/4	3.7.500	95.25			2.1/2	2.1/2		2.1/2			2.3/4	3.890	98.81
100	68	68	68		3.7/8	3.8.750	98.42											
105	72	72	72		4.1/8	4.1.250	104.78			2.3/4	2.3/4		2.3/4		3	4,180	106.17	115.06
110	76	76	76		4.1/4	4.2.500	107.95			3						3.1/4	4,530	
115	80	80	80		4.1/2	4.5.000	114.30											
120	85	85	85		4.5/8	4.6.250	117.46			3.1/4	3		3		3.1/2	4850	123.19	
125					4.7/8	4.8.750	123.82						3.1/4					
					5	5.0000	127.00											
130	90	90	90		5.1/4	5.2.500	133.35			3.1/2			3.1/2			3.3/4	5,180	131.57
135	95	95	95		5.3/8	5.3.750	136.52			3.3/4			3.1/2			4	5,550	140.97
140					5.5/8	5.6.250	142.88						3.3/4					
145	100	100	100		5.3/4	5.7.500	146.05			4			3.3/4			4.1/2	6380	152.05
150	105	105	105		6	6.0000	152.40						4					
155	110	110	110		6.1/8	6.1.250	155.48						4					
160	115	115	115															
165	120	120	120															
170																		
180	125																	
185	130																	
200	140																	
210	150																	

Socket wrench set 1/4"

Design:
- tools made of chromium-vanadium steel, polished
- 46 tools in a case
- ratchet fine toothed
- various socket wrench inserts and bit screwdriver inserts





N° article	510511 46-piece	Contents
0012	●	**13 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **3 screwdriver bits slot** 4 | 5.5 | 7 mm **3 screwdriver bits cross-recess** PH 1 | 2 | 3 **3 screwdriver bits cross-recess** PZ 1 | 2 | 3 **6 screwdriver sockets external hex** 3 | 4 | 5 | 6 | 7 | 8 mm **6 screwdriver bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **1 reversible ratchet** **2 extensions** 50 | 100 mm **1 extension, flexible** 145 mm **1 spinner handle** **1 T-handle** **1 cardan joint** **1 adapter** 1/4" male hex to 1/4" male square **4 Allen keys male hex** 1.27 | 1.5 | 2 | 2.5 mm

Socket wrench set 1/4"

Design:
- 1/4" socket bit set with short bits
- screwdriver bits for all popular screwing operations
- all tools are shakeproof embedded in a very steady tool case





N° article	510020 40-piece	Contents
0010	●	**14 socket wrench bits hexagonal** 3.5 | 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **3 screwdriver bits slot** 4 | 5.5 | 6.5 mm **3 screwdriver bits PH** 1 | 2 | 3 **3 screwdriver bits PZ** 1 | 2 | 3 **5 screwdriver sockets external hex** 3 | 4 | 5 | 6 | 8 mm **6 screwdriver bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **1 reversible ratchet** **2 extensions** 50 | 100 mm **1 sliding handle** **1 T-handle** **1 cardan joint**

Socket wrench set 1/4"

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel, chrome-plated and polished
- socket wrench bits with traction profile
- in plastic case with soft foam insert





N° article	510032 36-piece	Contents
853 - 1	●	**10 socket wrench bits hexagonal** 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **3 screwdriver bits slot** 6 | 10 | 11 mm **3 screwdriver bits PH** 1 | 2 | 3 **3 screwdriver bits PZ** 1 | 2 | 3 **5 screwdriver sockets external hex** 3 | 4 | 5 | 6 | 7 mm **7 screwdriver bits TORX® with hole** T10 | T15 | T20 | T25 | T27 | T30 | T40 **1 reversible ratchet** **2 extensions** 55 | 101.5 mm **1 spinner handle** **1 adapter** 1/4" female square to 1/4" female hex

Socket bit set

HAZET

Design:
- ergonomic design of the plastic box
- easy to wipe material
- easy removal of bits thanks to practical stand-up function
- no loose tools fly around or are rattling thanks to durable, robust clamp holders
- easy recognition of the bit profile thanks to HAZET colour code



N° article	514326 38-piece	Contents
856 - 1HP	●	**10 socket wrench bits wrench 1/4"** 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **2 bits slot** 6.5 | 8, **3 bits PH** 1| PH2 | PH3 **3 bits PZ** 1| PZ2 | PZ3, **7 bits TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 **5 bits HEX** 3 | 4 | 5 | 6 | 7 mm **1 reversible ratchet** 1/4" **1 handle** 1/4" **1 extension** 1/4" 56 mm **1 extension** 1/4" 100 mm **1 universal joint** **1 adapter** 1/4" hexagon to 1/4" square **1 adapter** 1/4" square to 1/4" hexagon



Socket wrench set 1/4"

STAHLWILLE

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel, chrome-plated and polished
- ratchet, socket handle, universal joint and extensions with QuickRelease socket spanner locking
- in robust ABS plastic box with hard foam inlay



N° article	510502 38-piece	Contents
0010	●	**10 double-hex sockets** 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **6 socket wrench bits TORX®** E4 | E5 | E6 | E7 | E8 | E10 **2 screwdriver bits PH** 1 | 2 **5 screwdriver sockets external hex** 3 | 4 | 5 | 6 | 8 mm **9 screwdriver bits TORX®** T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 **1 QuickRelease reversible ratchet** fine-toothed **1 QuickRelease extension** 54 | 150 mm **1 T-handle** **1 QuickRelease spinner handle** **1 QuickRelease cardan joint**



Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel, chrome-plated and polished
- in robust ABS plastic box with hard foam inlay



N° article	510502 63-piece	Contents
0015	○	**Content 1/4"** **9 socket wrench bits hexagonal** 4 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 mm **5 socket wrench bits TORX®** E4 | E5 | E6 | E7 | E8 **3 screwdriver sockets external hex** 3 | 4 | 5 mm **6 screwdriver bits TORX®** T8 | T9 | T10 | T15 | T20 | T25 **1 reversible ratchet** 22 teeth **2 extensions** 54 | 150 mm **1 T-handle** **1 spinner handle** **1 cardan joint** **Content 1/2"** **10 socket wrench bits hexagonal** 13 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 mm **7 socket wrench bits TORX®** E10 | E12 | E14 | E16 | E18 | E20 | E24 **5 screwdriver sockets external hex** 6 | 8 | 10 | 12 | 14 mm **7 screwdriver bits TORX®** T27 | T30 | T40 | T50 | T55 | T60 **1 reversible ratchet** 36 teeth **2 extensions** 130 | 255 mm **1 T-handle** **1 cardan joint**



Socket wrench set 1/4"

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel, chrome-plated and polished
- socket wrench bits with traction profile
- **screwdriver bits CVD TiN coated**
- in plastic case with soft foam insert

1/4" | TR | – | + | * | ⬢ | TiN



N° article	510504 30-piece	Contents
854	●	**12 socket wrench bits hexagonal** 4 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **3 screwdriver bits slot** 3.5 | 5.5 | 8 mm **2 screwdriver bits PH** 1 | 2 **2 screwdriver bits PZ** 1 | 2 **5 screwdriver bits male hex** 3 | 4 | 5 | 6 | 8 mm **1 reversible ratchet** **2 extensions** 55 | 147 mm **1 spinner handle** **1 T-handle** **1 cardan joint**

Socket wrench set 1/4"

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel, chrome-plated and polished
- socket wrench bits with traction profile
- **screwdriver bits CVD TiN coated**
- in plastic case with soft foam insert

1/4" | TR | ✿ | – | + | ⬢ | ★ | TiN



N° article	510504 33-piece, incl. TORX®	Contents
854T	●	**11 sockets male hex** 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **1 screwdriver bits slot** 5.5 mm **1 screwdriver bits PH** 2 **4 screwdriver bits male hex** 3 | 4 | 5 | 6 mm **5 screwdriver bits TORX®** T10 | T15 | T20 | T25 | T30 **5 sockets male TORX®** E5 | E6 | E7 | E8 | E10 **1 reversible ratchet** **3 extensions** 55 | 101.5 | 147 mm **1 spinner handle** **1 cardan joint**

Socket wrench set 1/4"

Design:
- hexagonal
- flank traction-profile
- mat satin finished
- chromium-vanadium
- in sturdy plastic case

1/4" | ⬢ | – | + | * | ⬢ | ★

NEW



N° article	510512 48-piece	Contents
0648	●	**13 socket wrench inserts hexagon** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **6 bits external hexagon** 3 | 4 | 5 | 6 | 7 | 8 mm **3 bits slotted** 4 | 5,5 | 7 mm **3 bits PH** 1 | 2 | 3 mm **2 bits PZ** 1 | 2 mm **7 bits TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 mm **1 universal joint** **2 extensions** 50 | 100 mm **1 flexible extension** 150 mm **T-handle with sliding piece** 110 mm **1 square socket handle** 150 mm **1 reversible ratchet** 45 tooth **6 L-keys external hexagon** 0.9 | 1.27 | 1.5 | 2 | 2.5 | 3 mm **1 adapter** 1/4" square drive to 1/4" hexagon socket

Socket wrench set 1/4", Zyklop Metal, with switch lever

Wera

Design:
- forged solid metal ratchet made of chromium-molybdenum steel with slim ratchet head
- fine toothed, with 5° return angle
- with nut locking function
- in an innovative textile folding pocket with Velcro fastener
- for attachment to the belt

N° article	510541 28-piece	Contents
0010	●	**9 socket wrench bits hexagonal** 5 | 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 mm **3 bits 25 mm** PH1 | PH2 | PH3 **2 bits 25 mm** PZ1 | PZ2 **4 bits 25 mm male hex "Hex-Plus"** 3 | 4 | 5 | 6 mm **6 bits 25 mm TORX®** T10 | T15 | T20 | T25 | T27 | T30 **1 Zyklop Metal ratchet** **2 extensions** with free-wheel sleeve 150 | 56 mm **1 adapter** 1/4" male hex to 1/4" male square



WITH HOLD FUNCTION



N° article	510541 13-piece	Contents
0020	○	**9 screwdriver bits male hex, with holding function** 5 | 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 mm **1 Zyklop Metal ratchet** **1 extension** with free-wheel sleeve 150 mm **1 wobble extension** 56 mm **1 nut extractor tool** 14 × 43 mm

51 Socket Wrenches

Socket wrench set 1/4" Zyklop Speed

Wera

Design:
- compact tool set
- for maintenance work indoors and outdoors
- ratchet Zyklop Speed with pivotable ratchet head
- socket inserts with knurling for excellent grip
- VDE insulated Kraftform holder and interchangeable blades with reduced diameter
- in an innovative textile folding pocket with Velcro fastener

N° article	510544 35-piece	Contents
0009	●	**8 socket wrench bits hexagonal** 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 mm **2 bits PZ** 1 | 2 **4 bits male hex** 3 | 4 | 5 | 6 mm **1 bit TORX®** T25 **1 bit holder** 1/4" **1 Zyklop Speed ratchet** **1 extension** with free-wheel sleeve, 75 mm **1 VDE Kraftform hand holder** **1 VDE blade slot** 2.5 mm **3 VDE blades (slim) slot** 3.5 | 4.0 | 5.5 mm **2 VDE blades (slim) PZ** 1 | 2 **2 VDE blades (slim) PH** 1 | 2 **1 VDE blade TORX®** T10 **3 VDE blades (slim) TORX®** T15 | T20 | T25 **1 voltage tester** 3.0 mm **1 Joker open-end wrench** 10 × 13 mm **1 adapter** 1/4" female square to 1/4" female hex **1 screw holder for screwdrivers**



Socket wrench set 1/4" Zyklop Speed

Design:
- ratchet made of chromium-vanadium with socket-fixing function
- in an innovative textile folding pocket with Velcro fastener
- low volume and weight
- for attachment to the belt

N° article	510544 28-piece	Contents
0010	●	**9 socket wrench bits hexagonal** 5 | 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 mm **3 bits 50 mm PH** 1 | 2 | 3 **2 bits 50 mm PZ** 1 | 2 **4 bits 50 mm male hex "Hex-Plus"** 3 | 4 | 5 | 6 mm **6 bits 50 mm TORX®** T10 | T15 | T20 | T25 | T27 | T30 **1 Zyklop Speed ratchet** **1 extension** with free-wheel sleeve 150 mm **1 wobble extension** 56 mm **1 adapter** 1/4" female square to 1/4" female hex

1/4"



Socket wrench set 1/4" Zyklop Speed

Design:
- ratchet made of chromium-vanadium with socket-fixing function
- in sturdy metal case with anti-slip rubber feet
- tools embedded in two-coloured foam insert

N° article	510545 42-piece	Contents
1/4	●	**13 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **3 bits slot** 4. | 5. | 8 mm **3 bits PH** 1 | 2 | 3 **3 bits PZ** 1 | 2 | 3 **5 bits male hex "Hex-Plus"** 3 | 4 | 5 | 6 | 8 mm **8 PZ bits® with hole** T8 | T9 | T10 | T15 | T20 | T25 | T30 | T40 **1 Zyklop Speed ratchet** **2 extensions** with free-wheel sleeve 75 | 150 mm **1 wobble extension** 56 mm **1 T-handle** **1 cardan joint** **1 adapter** 1/4" female square to 1/4" female hex

1/4"



Socket wrench set 1/4" Zyklop Speed

Design:
- in robust textile box
- freely pivotable ratchet head with 5 defined fixing positions
- socket spanners and screwdriver bits **with holding function** for screws and nuts

N° article	510546 42-piece	Contents
0010	●	**13 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 mm **2 bits slot** 5.5 | 6.5 mm **3 bits cross recess** PH1 | PH2 | PH3 **3 bits Pozidriv** PZ1 | PZ2 | PZ3 **8 bits male hex** 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 mm **9 bits TORX®** TX 8 | 9 | 10 | 15 | 20 | 25 | 27 | 30 | 40 **1 Zyklop Speed ratchet** 152 mm **1 extension** 150 mm **1 wobble extension** 56 mm **1 nut extractor tool** 14 × 43 mm

1/4"



Design:
- socket inserts on robust textile belt
- **socket spanner with holding function**
- with the tool finder "Take it easy" colour coding system according to sizes
- with non-woven backing and Velcro strips for fixing to walls, shelves, workshop trolleys etc.
- incl. snap hook for attachment to belt loops or bags

N° article	510548 10-piece	Contents
0010	○	**9 socket wrench bits hexagonal**, length 23 mm: 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 10 | 13 mm **1 textile belt** 39 × 238 mm
0015	●	**9 socket wrench bits hexagonal**, length 50 mm: 5 | 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 mm **1 textile belt** 39 × 238 mm

1/4"



Reversible ratchet 1/4"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- chrome-plated
- 2-component handle

1/4"	DIN 3120	ISO 1174

quick release safety lock



N° article	510912	Teeth	Return angle	Total length mm
5200	●	48	7.5°	140

Reversible ratchet 1/4"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- 2-component handle
- fine-toothed

1/4"	DIN 3120	ISO 1174

quick release safety lock



N° article	510948	Teeth	Return angle	Total length mm
5201	●	72	5°	137

Reversible ratchet

HAZET

Design:
- small actuating angle of 4° enables use in the tightest installation spaces
- retention function of the change-over lever against unintentional switching
- surface chrome-plated, corrosion-resistant
- 2-component handle
- fine-toothed
- **loadable up to 120 Nm**

1/4"	DIN 3122	ISO 3315

863HPS:
- with safety lock



863HP



863HPS

N° article	510960 1/4"	Teeth	Return angle	Total length mm
863HP	●	90	4°	116
863HPS	●	90	4°	116

Reversible ratchet 1/4"

STAHLWILLE

Design:
- reversible
- with QuickRelease safety lock
- 2-component handle
- for work in confined spaces with a return angle of only 4.5°
- FOD-preventive through screwless construction
- fine-toothed

1/4"	DIN 3122	ISO 3315



N° article	510954	Teeth	Return angle	Total length mm
0010	●	80	4.5°	117

Reversible ratchet 1/4", Zyklop Metal

Wera

Design:
- forged solid metal ratchet made of chromium-molybdenum
- comfortable change of direction thanks to **switch lever**
- with secure socket locking function
- high sturdiness without torque restriction
- fine-toothed

1/4"



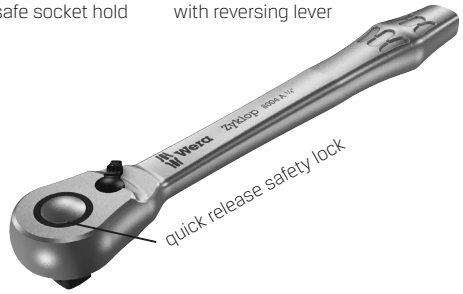
slim head, long lever



safe socket hold



with reversing lever



N° article	510972	Teeth	Return angle	Total length mm
0010	●	72	5°	141

Design:
- smooth reversing through captive **push-through square**
- with secure socket locking function
- high sturdiness without torque restriction
- forged solid metal ratchet made of chromium-molybdenum
- fine-toothed

1/4"



slim head, long lever



functional ejection mechanism



low return angle



smooth reversing



N° article	510974	Teeth	Return angle	Total length mm
0010	○	76	4.7°	141

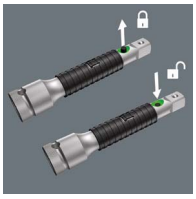
Extensions 1/4"

Design:
- flexible lock system for either permanent fixed coupling or quick exchange of bits
- with free-wheel sleeve for ultra quick fastening and releasing of screws and nuts
- made of chromium-vanadium, mat chrome-plated

1/4"



with free-wheel sleeve



flexible lock



N° article	510976 with free-wheel sleeve	Total length mm
8796	○	75
8796L	●	150

Reversible ratchet 1/4", Zyklop Speed

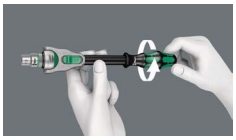
Design:
- flywheel mass construction and handy free-wheel sleeve for high working speed
- **freely swivelling ratchet head**
- defined lock position at 0° and on both sides at 15° or 90°
- at 0° position it can be used like a conventional screwdriver
- push button release
- left / right switching
- fine-toothed

1/4"









Simply hold the extension and let the ratchet rotate by 360°. This accelerates the screwing process enormously



N° article	510975	Teeth	Return angle	Total length mm
1/4	●	72	5°	152

Adapter

Design:
- made of chromium-vanadium steel
- quick-release chuck suitable for 1/4" hex bits under DIN 3126-C and E 6,3 / ISO 1173

1/4"

N° article	510978 1/4" female square to 1/4" female hex	Drive size	Output size	Total length mm
8784	●	1/4" female square	1/4" female hex	37



Spinner handle 1/4"

Design:
866U:
- made of chromium-vanadium
- surface mat chrome-plated with 2-component handle
- high transfer of power between hand and handle thanks to tactile elements, improved non-slip effect, even with oily hands
- with ball lock

1/4" | DIN 3122 | ISO 3315

400QR:
- made of chromium-vanadium
- surface mat chrome-plated
- with quick release safety lock



866U



400QR

N° article	511120	511125	Total length mm
866U	●	–	134
400QR	–	●	150

Sliding handle 1/4"

Design:
- chromium-vanadium steel
- chrome-plated

1/4" | DIN 3122 | ISO 3315



108100



865

N° article	511138	511140	Total length mm
108100	●	–	110
865	–	●	115

Cardan joint 1/4"

Design:
- chromium-vanadium steel
- chrome-plated

1/4" | DIN 3123 | ISO 3316


110000


869


407QR

N° article	511158	511160 HAZET	511165 STAHLWILLE	Total length mm
110000	●	–	–	35
869	–	●	–	36,5
407QR	–	–	●	45

Extensions 1/4", flexible

Design:
- flexible shafts allow to bypass interfering obstacles
- quick and safe working even under restricted conditions
- chromium-vanadium steel

1/4"


8605


870

N° article	511185	511186 HAZET	Total length mm
870	–	●	150
8605	●	–	150

Extensions 1/4"

Design:
- chromium-vanadium steel
- chrome-plated
- with ball lock

1/4" | DIN 3123 | ISO 3316


107150



868

N° article	511182	511184 HAZET	Total length mm
107050	●	–	50
107100	●	–	100
107150	●	–	150
867-1	–	●	25
867-2	–	●	55
867-4	–	●	101,5
868	–	●	147
868-16	–	●	402

Adapter 1/4"

Design:
- chromium-vanadium steel
- mat chrome-plated
- knurled for better grip
- with ball lock

1/4"


781A


858-1

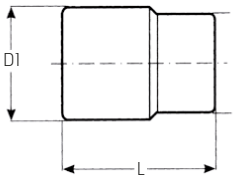
N° article	511210 HAZET	511211	Drive size	Output size	Total length mm
781A	– NEW	●	1/4" female square	3/8" male square	25,2
858-1	●	–	1/4" female square	3/8" male square	26,5

Socket wrench bit 1/4"

Design:
- made of chromium-vanadium steel
- chrome-plated
- hex profile
- knurled for better grip

511404: With traction profile

1/4"




511402


511404

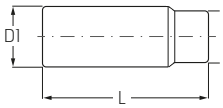
N° article	511402 hexagon	511404 HAZET hexagon	AF_1 mm	L mm	D_1 mm
3	–	●	3	25	6,2
3,5	2,96	–	3,5	25	6,2
4	2,96	●	4	25	6,8
4,5	2,96	●	4,5	25	7,4
5	2,96	●	5	25	8,1
5,5	2,96	●	5,5	25	8,7
6	2,96	●	6	25	9,3
7	2,96	●	7	25	10,9
8	2,96	●	8	25	12,1
9	2,96	●	9	25	13,4
10	2,96	●	10	25	14,6
11	2,99	●	11	25	15,5
12	2,99	●	12	25	17
13	2,99	●	13	25	18
14	3,02	●	14	25	19,5

Socket wrench bit 1/4"

Design:
- made of chromium-vanadium steel
- chrome-plated
- long version
- knurled for better grip

511415: With traction profile

1/4"




511410

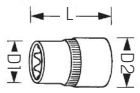

511415

N° article	511410 hexagon long	511415 HAZET hexagon long	AF_1 mm	L mm	D_1 mm
6	●	○	6	50	9,2
7	●	○	7	50	11
8	●	●	8	50	12
9	●	○	9	50	13
10	●	●	10	50	14,5
11	●	●	11	50	15,5
12	●	●	12	50	17
13	●	●	13	50	18

Socket wrench bit 1/4"

Design:
- made of chromium-vanadium steel
- chrome-plated
- knurled for better grip







511418



511420

N° article	511418 TORX®	511420 HAZET TORX®	AF1	L mm	D1 mm	D2 mm
4	●	●	E4	25	5,6	11
5	●	●	E5	25	6,7	11
6	●	●	E6	25	8	11
7	●	●	E7	25	9,6	11
8	●	●	E8	25	10,5	11,5
10	●	●	E10	25	13	12
11	●	○	E11	25	14	12,5

Screwdriver bit 1/4"

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip





N° article	511450 Slot	Width of blade mm	Total length mm
4	●	4	36
5,5	●	5,5	36
6,5	●	6,5	36

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip





N° article	511470 External hex	AF1 mm	Total length mm
2	●	2	36
3	●	3	36
4	●	4	36
5	●	5	36
6	●	6	36
7	●	7	36
8	●	8	36

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 steel
- knurled for better grip





N° article	511530 Cross-recess	Output size	Total length mm
1	●	PH1	36
2	●	PH2	36
3	●	PH3	36

Bit adapter

Design:
- for 1/4" bits
- chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined

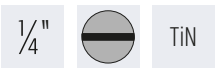




N° article	511590 1/4" female square to 1/4" female hex	Drive size	Output size	Total length mm
2760	●	1/4" female square	1/4" female hex	25

Screwdriver bit 1/4"

Design:
- chromium-vanadium steel
- **surface CVD-TiN coated for enhanced service life**
- higher torque
- corrosion resistance
- minimisation of cam-out effect (= better screw grip)
- handy, knurled, for manual operation
- tip to ISO 2380-I





N° article	511464 Slot	Width of blade mm	Blade thickness mm	Total length mm
3,5×0,6	●	3,5	0,6	28
4×0,8	●	4	0,8	28
5,5×1	●	5,5	1	28
8×1,2	●	8	1,2	28
10×1,6	●	10	1,6	28

Design:
- made of chromium-vanadium steel
- **surface CVD-TiN coated for enhanced service life**
- higher torque
- corrosion resistance
- minimisation of cam-out effect (= better screw grip)
- handy, knurled, for manual operation
- DIN 7422





N° article	511484 External hex	AF1 mm	Total length mm
2,5	●	2,5	28
3	●	3	28
4	●	4	28
5	●	5	28
6	●	6	28
8	●	8	28

Design:
- made of chromium-vanadium steel
- **surface CVD-TiN coated for enhanced service life**
- higher torque
- corrosion resistance
- minimisation of cam-out effect (= better screw grip)
- handy, knurled, for manual operation
- tip to ISO 8764-1





N° article	511544 Cross-recess	Output size	Total length mm
1	●	PH1	28
2	●	PH2	28
3	●	PH3	28
4	●	PH4	28

Screwdriver bit 1/4"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/4"



N° article	511550 Cross-recess	Output size	Total length mm
1	●	PZ1	36
2	●	PZ2	36
3	●	PZ3	36

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/4"



N° article	511570 TORX®	Output size	Total length mm
8	●	T8	36
9	●	T9	36
10	●	T10	36
15	●	T15	36
20	●	T20	36
25	●	T25	36
27	●	T27	36
30	●	T30	36
40	●	T40	36

Screwdriver bit 1/4"

HAZET

Design:
- made of chromium-vanadium steel
- **surface CVD-TiN coated for enhanced service life**
- higher torque
- corrosion resistance
- minimisation of cam-out effect (= better screw grip)
- handy, knurled, for manual operation
- tip to ISO 8764-I

1/4" TiN



N° article	511564 Cross-recess	Output size	Total length mm
1	●	PZ1	28
2	●	PZ2	28
3	○	PZ3	28

Design:
- made of chromium-vanadium steel
- **surface CVD-TiN coated for enhanced service life**
- higher torque values
- corrosion resistance
- minimisation of cam-out effect (= better screw grip)
- handy, knurled, for manual operation

1/4" TiN



N° article	511584 TORX®	Output size	Total length mm
8	●	T8	28
9	●	T9	28
10	●	T10	28
15	●	T15	28
20	●	T20	28
25	●	T25	28
27	●	T27	28
30	●	T30	28
40	●	T40	28



Socket wrench set 3/8"

PROJAHN WERKZEUGE WIE DU

Design:
- socket set with short sockets for all general screwing works
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- all tools are shakeproof embedded in a steady tool case



N° article	512502 23-piece	Contents
0010	●	**17 socket wrench bits** 6|7|8|9|10|11|12|13|14|15|16|17|18|19|20|21|22 mm **2 spark plug sockets, long** 16|21 mm **1 reversible ratchet** **2 extensions** 75|250 mm **1 sliding T-handle adapter** 1/2" female square to 3/8" male square

Socket wrench set 3/8"

HAZET

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel
- chrome-plated and polished
- socket wrench bits with traction profile
- in plastic case with soft foam insert



N° article	512504 16-piece	Contents
880N-1	●	**11 socket wrench bits hexagonal** 8|10|11|12|13|14|15|17|19|21|22 mm **1 reversible ratchet** 8816P **2 extensions** 126|254 mm **1 T-handle** **1 cardan joint**

Socket wrench set 3/8" Zyklop Speed

Wera

Design:
- ratchet made of chromium-vanadium steel with socket-fixing function
- in an innovative textile folding pocket with Velcro fastener
- thus low volume and weight



N° article	512527 29-piece	Contents
0010	●	**9 socket wrench bits hexagonal** 8|10|12|13|15|16|17|18|19 mm **1 bit 50 mm slot** 5.5 mm **3 bits 50 mm PH** 1|2|3 **3 bits 50 mm PZ** 1|2|3 **5 bits 50 mm male hex "Hex-Plus"®** 4|5|6|8 mm **4 bits 50 mm TORX®** T20|T25|T27|T30|T40 **1 Zyklop Speed ratchet 199 mm** **1 extension** with free-wheel sleeve 200 mm **1 wobble extension** 76 mm **1 adapter** 1/4" male hex to 3/8" male square 44 mm

Design:
- socket inserts on robust textile belt
- **socket spanner with holding function**
- with the tool finder "Take it easy" colour coding system according to sizes
- with non-woven backing and Velcro strips for fixing to walls, shelves, workshop trolleys etc.
- incl. snap hook for attachment to belt loops or bags



N° article	512520 10-piece	Contents
0010	●	**9 socket wrench bits hexagonal**, length 29 mm: 8|10|12|13|15|16|17|18|19 mm 1 textile belt 45×310 mm
0015	○	**9 socket wrench bits hexagonal**, length 64 mm: 8|10|12|13|15|16|17|18|19 mm 1 textile belt 45×310 mm

Socket wrench set 1/4" | 3/8"

Design:
- all tools are shakeproof stored
- in plastic case with soft foam insert

N° article	512525 46-piece	Contents
882	○	**Content 1/4"** **12 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **4 bits slot** 4 | 4.5 | 5.5 | 6 mm **2 bits PH** 1 | 2 **2 bits PZ** 1 | 2 **5 bits male hex** 3 | 4 | 5 | 6 | 8 mm **1 reversible ratchet** 863P **1 extension** 101.5 mm **1 spinner handle** **1 cardan joint** **1 adapter** 1/4" female square to 1/4" female hex **Content 3/8"** **12 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 mm **1 reversible ratchet** 8816P **1 extension** 150 mm **1 cardan joint** **1 adapter** 3/8" female square to 1/4" female hex



Socket wrench set 3/8"

Design:
- socket wrench set **with short and long** socket inserts and bit screwdriver inserts for all common screwdriving operations
- all tools are shakeproof embedded in a steady tool case

N° article	512528 61-piece	Contents
0020	●	**18 socket wrench bits hexagonal** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 mm **10 socket wrench bits hexagonal, long** 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 17 | 19 mm **2 spark plug sockets** 16 | 21 mm **3 screwdriver bits slot** 5.5 | 7 | 8 mm **3 screwdriver bits PH** 1 | 2 | 3 **3 screwdriver bits PZ** 1 | 2 | 3 **7 screwdriver sockets external hex** 3 | 4 | 5 | 6 | 7 | 8 | 10 mm **9 screwdriver bits TORX®** T15 | T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 **1 reversible ratchet** **2 extensions** 75 | 250 mm **1 cardan joint** **1 T-handle** **1 adapter** 1/2" female square to 3/8" male square



VDE, socket wrench set 3/8" Zyklop

Design:
- unit-tested, insulated, for safe working up to 1000 Volt
- fine serrated ratchet with 80 teeth, return angle 4.5°
- extremely slim construction, ergonomic grip zone
- in textile box, robust and durable

N° article	512529 17-piece	Contents
0010	○	**14 socket wrench bits**, VDE insulated, 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm **1 Zyklop reversible ratchet** 222 mm **2 extensions** 91 mm | 166 mm



Socket wrench/screwdriver bits 1/4" | 3/8" | 1/2"

Design:
- for male and female TORX®screws
- TORX®socket bit set with short bits
- bit screwdriver inserts and bits for all common screwing operations for TORX®screws
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- all tools are shakeproof embedded in a steady tool case

1/4" | 3/8" | 1/2"



Nº article	512506 TORX®	Contents
0010	●	**Content 1/4"** **5 socket wrench bits TORX®** E4 | E5 | E6 | E7 | E8 **7 screwdriver bits TORX®** T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 **6 screwdriver bits TORX® with hole** T8 | T10 | T15 | T20 | T25 | T30 **Content 3/8"** **4 socket wrench bits TORX®** E10 | E12 | E14 | E16 **4 screwdriver bits TORX®** T40 | T45 | T47 | T50 **3 screwdriver bits TORX® with hole** T40 | T45 | T50 **Content 1/2"** **2 socket wrench bits TORX®** E18 | E20 **2 screwdriver bits TORX®** T55 | T60 **1 screwdriver bit TORX® with hole** T55

Reversible ratchet Zyklop Pocket

Design:
- 3/8" ratchet and 1/4" bit screwdriver in one tool
- with integrated bit magazine (12 pieces)
- finely toothed (72 teeth / 5° return angle)
- sockets and bits are held magnetically
- freely swivelling ratchet head with defined positions at 0°, 15° and 90° to the left and right
- at 0° position it can be used like a conventional screwdriver
- ergonomic multi-component handle

1/4" | 3/8"









Nº article	512527 Set 1	Contents
0001	○	**2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **4 bits male hex** 3 | 4 | 5 | 6 mm **4 bits TORX®** T10 | T15 | T20 | T25









Nº article	512527 Set 2	Contents
0005	●	**3 socket wrench bits hexagonal** 8 | 10 | 13 mm **2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **4 bits male hex** 3 | 4 | 5 | 6 mm **4 bits TORX®** T10 | T15 | T20 | T25 **1 universal holder** 1/4", 75 mm

Reversible ratchet 3/8"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- 2-component handle

3/8"	DIN 3120	ISO 1174

N° article	512605	Teeth	Return angle	Total length mm
5210	●	48	7.5°	200



Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- 2-component handle
- fine-toothed

3/8"	DIN 3120	ISO 1174

N° article	512618	Teeth	Return angle	Total length mm
5211	●	72	5°	192



Reversible ratchet 3/8"

HAZET

Design:
- made of chromium-vanadium steel
- chrome-plated and mat satined
- 2-component handle
- fine-toothed
- **loadable up to 400 Nm**

3/8"	DIN 3122	ISO 3315

N° article	512604 HAZET	Teeth	Return angle	max. loadability Nm	Total length mm
8816HP	●	30	4°	400	200
8816HPS	●	30	4°	340	200


8816HP


8816HPS

Reversible ratchet 3/8"

STAHLWILLE

Design:
- with QuickRelease safety lock
- 2-component handle
- for work in confined spaces, return angle of only 4.5°
- FOD-preventive through screwless construction
- fine-toothed

3/8"	DIN 3122	ISO 3315



N° article	512622	Teeth	Return angle	Total length mm
0010	●	80	4.5°	193

Reversible ratchet with hinge joint 3/8"

STAHLWILLE

Design:
- with QuickRelease safety lock
- 2-component handle
- handle may be raised or lowered by approx 90°, snapping in
- locking in the straight, 30° and 60° upward position as well as at 30° downward position
- releasing of the lock by push button in the grip area
- for work in confined spaces with a return angle of only 4.5°
- FOD-preventive through screwless construction
- fine-toothed

3/8"	DIN 3122	ISO 3315



N° article	512623	Teeth	Return angle	Total length mm
0010	●	80	4.5°	300

Reversible ratchet 3/8", Zyklop Metal

Design:
- with secure socket locking function
- high sturdiness without torque restriction
- forged solid metal ratchet made of chromium-molybdenum with slim ratchet head
- fine-toothed

3/8"


slim head, long lever


secure socket hold



with ejection function


low return angle



N° article	512632 with switch lever	Teeth	Return angle	Total length mm
0010	●	72	5°	222

Design:
- forged solid metal ratchet made of chromium-molybdenum with slim ratchet head
- very smooth reversing through captive **push-through square**
- with secure socket locking function
- high sturdiness without torque restriction
- fine-toothed

3/8"



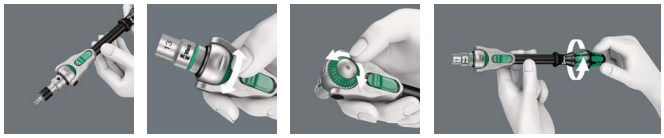
N° article	512634 with push-through square	Teeth	Return angle	Total length mm
0010	○	76	4.7°	222

Reversible ratchet 3/8", Zyklop Speed

Design:
- flywheel mass construction and handy free-wheel sleeve for high working speed
- **freely swivelling ratchet head**
- defined lock position at 0° and on both sides at 15° or 90°
- at 0° position it can be used like a conventional screwdriver
- push button release
- left / right switching
- fine-toothed

3/8"

Use:
- for 3/8 "square sockets as well as 3/8" connecting parts with square drive, with ball lock



Simply hold the extension and let the ratchet rotate by 360°. This acceleartes the screwing , process enormously.



N° article	512637	Teeth	Return angle	Total length mm
3/8	●	72	5°	199

Sliding handle 3/8"

Design:
- made of chromium-vanadium steel
- surface chrome-plated and polished

3/8"



N° article	512660	Total length mm
8815	●	198

Extensions 3/8"

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- additional forged-on hexagon for torque support with a wrench
- **the extension is pivotable by 15° either way**

3/8"

N° article	512715	Total length mm
207076	●	75



Extensions 3/8"

Design:
- made of chromium-vanadium steel
- chrome-plated
- head polished

3/8"

512724: To DIN 3123 / ISO 3316



512710



512724

N° article	512710 PROJAHN	512724 HAZET	Total length mm
207075	●	–	75
8821 - 1	–	●	36
207150	●	–	150
8821 - 3	–	●	74
207250	●	–	250
8821 - 5	–	●	126
8821 - 6	–	●	150
8821 - 10	–	●	254
8821 - 12	–	○	304

Cardan joint 3/8"

Design:
- made of chromium-vanadium steel
- chrome-plated
- heads polished

3/8"



8820



210000



428QR

N° article	512700 HAZET	512702 PROJAHN	512705 STAHLWILLE	Total length mm
8820	●	–	–	46,5
210000	–	●	–	51,5
428QR	–	–	●	60

Adapter 3/8"

Design:
- chromium-vanadium steel
- mat chrome-plated
- knurled for better grip
- with ball lock

3/8"



781B



8858-1



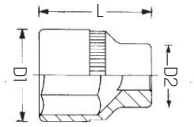
8858-2

N° article	512735 HAZET	512736	Drive size	Output size	Total length mm
781B	–	●	3/8" female square	1/4" male square	27
8858 - 1	●	NEW –	3/8" female square	1/2" male square	36
8858 - 2	●	–	3/8" female square	1/4" male square	26

Socket wrench bit 3/8"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- knurled for better grip
- with traction profile

3/8"





N° article	512776 Double-hex	AF1 mm	L mm	D1 mm	D2 mm
9	○	9	24	13	17
10	●	10	25	14,4	17
11	●	11	26	15,8	17,5
12	●	12	27	17	18,5
13	●	13	27,5	18,4	17
14	●	14	29,5	19,6	17,5
15	○	15	29,5	20,9	18

N° article	512776 Double-hex	AF1 mm	L mm	D1 mm	D2 mm
16	●	16	29,5	22,1	18
17	●	17	29,5	23,3	18,5
18	○	18	31,5	24,6	19
19	●	19	31,5	25,8	19,5
20	○	20	31,5	26,8	20
21	○	21	31,5	28,3	22,5
22	●	22	34	29,6	23,5

Socket wrench bit 3/8"

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- knurled for better grip

3/8"



N° article	512750 PROJAHN hexagon	AF1 mm	Total length mm
6	●	6	25,5
7	●	7	25,5
8	●	8	25,5
9	●	9	25,5
10	●	10	25,5
11	●	11	25,5
12	●	12	25,5
13	●	13	25,5
14	●	14	27

N° article	512750 PROJAHN hexagon	AF1 mm	Total length mm
15	●	15	27
16	●	16	27
17	●	17	27
18	●	18	27
19	●	19	29
20	○	20	29
21	●	21	29
22	●	22	31
24	●	24	31

Design:
- with traction profile

3/8" | DIN 3124 | ISO 2725-1



N° article	512774 HAZET hexagon	AF1 mm	Total length mm
6	●	6	24
7	●	7	24
8	●	8	24
9	○	9	24
10	●	10	25
11	○	11	26
12	●	12	27
13	●	13	27,5
14	●	14	29,5
15	●	15	29,5

N° article	512774 HAZET hexagon	AF1 mm	Total length mm
16	●	16	29,5
17	●	17	29,5
18	●	18	31,5
19	●	19	31,5
20	○	20	31,5
21	○	21	31,5
22	○	22	34

Socket wrench bit 3/8"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- **extra deep**
- knurled for better grip

3/8"



N° article	512782 Hexagon, long	AF1 mm	Total length mm
7	●	7	64
8	●	8	64
10	●	10	64
11	●	11	64
12	●	12	64
13	●	13	64

N° article	512782 Hexagon, long	AF1 mm	Total length mm
14	●	14	64
15	●	15	64
17	●	17	64
19	●	19	64
22	●	22	64

Spark plug socket wrench insert 3/8"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- hexagonal (14 mm bi-hex)
- **with rubber ring as holding mechanism**
- knurled for better grip

3/8"



N° article	512785 Hexagon, extra deep	AF1 mm	Total length mm
14	●	14	64
16	●	16	61
21	●	21	65

Socket wrench bit 3/8"

HAZET

Design:
- made of chromium-vanadium steel
- chrome-plated and polished

3/8"



512910

N° article	512910 HAZET TORX®	AF1	Total length mm
E5	○	E5	28
E6	○	E6	28
E7	○	E7	28
E8	○	E8	28

N° article	512910 HAZET TORX®	AF1	Total length mm
E10	○	E10	28
E11	○	E11	28
E12	○	E12	28
E14	○	E14	28

Bit adapter

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- for 1/4" bits

3/8"



N° article	512920 3/8" female square to 1/4" female hex	Drive size	Output size	Total length mm
2761	●	3/8" female square	1/4" female hex	27

Screwdriver bit 3/8"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

3/8"



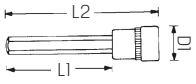
N° article	512800 External hex	AF1 mm	Total length mm
3	●	3	50
4	●	4	50
5	●	5	50
6	●	6	50
7	●	7	50
8	●	8	50
10	●	10	50

Screwdriver bit 3/8"

HAZET

Design:
- knurled for better grip
- surface CVD TiN coated
- blades special steel
- to DIN 7422

3/8" TiN





N° article	512810 External hex	AF1 mm	L1 mm	L2 mm	D1 mm
3	●	3	17	43,5	17
4	●	4	17	43,5	17
5	●	5	17	43,5	17
6	●	6	17	43,5	17
7	●	7	17	43,5	19
8	●	8	17	43,5	19
9	●	9	17	43,5	19
10	●	10	17	43,5	19

Screwdriver bit 3/8"

HAZET

Design:
- knurled for better grip
- special blade steel
- surface CVD TiN coated

3/8" TiN



N° article	512830 TORX®	Output size	Total length mm
T15	○	T15	43,5
T20	○	T20	43,5
T25	○	T25	43,5
T27	○	T27	43,5
T30	●	T30	43,5
T40	●	T40	43,5
T45	●	T45	43,5
T50	○	T50	44,5

Socket wrench set 1/2"

PROJAHN WERKZEUGE WIE DU

1/2"

Design:
- socket set with short sockets for all general screwing works
- all tools are shakeproof embedded in a steady tool case
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined



N° article	514310 30-piece	Contents
0010	●	**23 socket wrench bits** 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 26 | 27 | 28 | 30 | 32 | 34 mm **2 spark plug sockets** 16 | 21 mm **1 reversible ratchet** **2 extensions** 125 | 250 mm **1 cardan joint** **1 T-handle adapter** 1/2" female square to 1/2" male square

Socket wrench set 1/2"

VIGOR EQUIPMENT

1/2"

Design:
- all tools are shakeproof embedded in a steady tool case
- made of chromium-vanadium steel, polished



N° article	514292	Contents
0020	●	**18 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 27 | 30 | 32 mm **2 spark plug sockets** 16 | 21 mm **1 fine-tooth reversible ratchet** 250 mm **2 extensions** 125 mm, 250 mm **1 T-handle** 250 mm **1 universal joint** 75 mm

Socket wrench set 1/2"

HAZET

1/2" TR TR

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel
- chrome-plated and polished
- socket wrench bits with traction profile
- in plastic case with soft foam insert



N° article	514304 25-part, bihexagonal inserts	514325 25-part, bihexagonal inserts	Contents
900	●	–	**20 socket wrench inserts, hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 26 | 27 | 28 | 30 | 32 mm **1 reversible ratchet** 916SP **2 extensions** 123 | 248 mm **1 T-handle** **1 cardan joint**
900Z	–	●	**20 double-hex bits** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 26 | 27 | 28 | 30 | 32 mm **1 reversible ratchet** 916SP **2 extensions** 123 | 248 mm **1 T-handle** **1 cardan joint**

Socket wrench set 1/2"

HAZET

Design:
- with screwdriver sockets, bits and coupler
- in plastic case with soft foam insert
- all tools are shakeproof stored

1/2" | TiN



N° article	514360 44-piece	Contents
954N	●	**18 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 26 | 27 | 28 | 30 | 32 mm **7 screwdriver sockets male hex, TiN coated** 5 | 6 | 7 | 8 | 10 | 12 | 14 mm **4 bits 5/16" PH** 1 | 2 | 3 | 4 **4 bits 5/16" PZ** 1 | 2 | 3 | 4 **5 bits 5/16" TORX®** T27 | T30 | T40 | T45 | T50 **1 reversible ratchet** 916SP **2 extensions** 123 | 248 mm **1 T-handle** **1 cardan joint** **1 adapter** 1/4" inner square to 5/16" inner hex

Socket wrench set 1/2"

STAHLWILLE

Design:
- socket wrench bits and actuation tools made of chromium-vanadium steel, chrome-plated and polished
- in robust ABS plastic box with hard foam inlay

1/2"



N° article	514330 39-piece	Contents
0010	○	**12 socket wrench inserts, hexagonal** 8 | 10 | 13 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 mm **7 socket wrench inserts for TORX®** E10 | E12 | E14 | E16 | E18 | E20 | E24 **6 screwdriver sockets external hex** 5 | 6 | 8 | 10 | 12 | 14 **9 screwdriver sockets TORX®** T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 | T60 **1 reversible ratchet** 36 teeth **2 extensions** 130 | 255 mm **1 T-handle** **1 cardan joint**

Socket wrench set 1/2"

HAZET

Design:
- extra short version
- with knurling
- in plastic box
- with 2-component soft foam insert

1/2"



N° article	514340 12-piece	Contents
985	●	**8 screwdriver sockets external hex** 5 | 6 | 8 | 10 | 12 | 14 | 17 | 19 mm **1 reversible ratchet** 916SP **2 extensions** 123 | 248 mm **1 T-handle**

Screwdriver bit assortment 1/2"

HAZET

Design:
- short version
- with knurling
- surface CVD TiN coated
- in plastic case with soft foam insert

1/2" | TiN



N° article	514342 TORX®	Contents
992/9	●	T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 | T60

Socket wrench set 1/2" Zyklop Speed

Wera

Design:
- ratchet made of chromium-vanadium steel with socket-fixing function
- in an innovative textile folding pocket with Velcro fastener



N° article	514362 28-piece	Contents
0010	○	**10 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm **4 bits 30 mm male hex** 5 | 6 | 8 | 10 mm **2 bits 32 mm PH** 2 | 3 **2 bits 32 mm PZ** 2 | 3 **6 bits 35 mm TORX®** T20 | T25 | T30 | T40 | T45 | T50 **1 Zyklop Speed ratchet** 277 mm **1 extension with free-wheel sleeve, long** 250 mm **1 wobble extension** 52 mm **1 adapter** 1/2" inner square to 5/16" inner hex, 50 mm

Socket wrench set 1/4" | 1/2"

HAZET

Design:
- **incl. fine-tooth reversible ratchet with 90 teeth**
- actuation angle 4°
- in plastic case with soft foam insert



N° article	514326 47-piece	Contents
953HP	●	**Content 1/4"** **9 socket wrench bits hexagonal** 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **1 reversible ratchet** fine toothed, 90 teeth **1 extension** 100 mm **1 adapter** 1/4" female square to 1/4" female hex **1 spinner handle** **3 bits** slot 4 | 4.5 | 5,5 mm **2 bits** Cross recess PH 1 | 2 **2 bits** Cross recess PZ 1 | 2 **5 bits** External hex 2 | 3 | 4 | 5 | 6 mm **5 bits TORX®** T10 | T15 | T20 | T25 | T30 **Content 1/2"** **14 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 mm **1 reversible ratchet** fine toothed, 90 teeth **2 extensions** 123 | 248 mm

Socket wrench set 1/4" | 1/2" Zyklop Speed

Wera

Design:
- ratchet made of chromium-vanadium steel with socket-fixing function
- with hand holder in sturdy, non-slip metal case



N° article	514365 43-piece	Contents
43	●	**Content 1/4"** **11 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 12 | 13 mm **1 bit 89 mm slot** 5.5 mm **3 bits 89 mm PH** 1 | 2 | 3 **3 bits 89 mm PZ** 1 | 2 | 3 **4 bits 89 mm male hex** 3 | 4 | 5 | 6 mm **5 bits 89 mm TORX® with hole** T10 | T15 | T20 | T25 | T30 **1 Zyklop Speed ratchet** **1 extension, flexible lock** 150 mm **1 bit holder** with Rapidaptor®quick-change chuck **1 adapter** 1/4" female square to 1/4" female hex **Content 1/2"** **10 socket wrench bits hexagonal** 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 mm **1 Zyklop ratchet** **1 extension**, flexible lock 250 mm

Socket wrench set 1/4" | 1/2"

PROJAHN
WERKZEUGE WIE DU

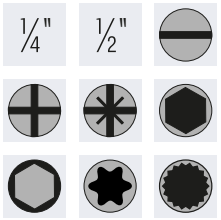
Design:
- 1/4 " and 1/2 "socket set with short and long socket inserts and bit screwdriver inserts for all common screwing operations
- all tools are shakeproof embedded in a steady tool case
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined



N° article	514370 91-piece
0010	●

Universal tool kit 1/4" | 1/2"

Design:
- socket set with short and long sockets, bit screwdriver inserts, screwdrivers and combination wrenches
- for all common screwing operations
- made of chromium-vanadium steel, mat satined
- all tools are shakeproof embedded in a steady tool case

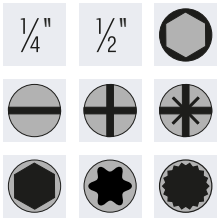




N° article	514336 97-piece
97	●

Socket wrench set 1/4" | 1/2"

Design:
- 1/4" and 1/2" hexagon socket set
- mat satin finished
- made of chromium-vanadium steel
- knurled form
- all tools are shakeproof embedded in a steady tool case

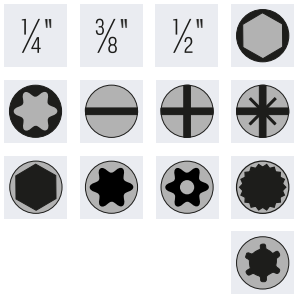




N° article	514379 96-piece
96	●

Socket wrench set 1/4" | 3/8" | 1/2"

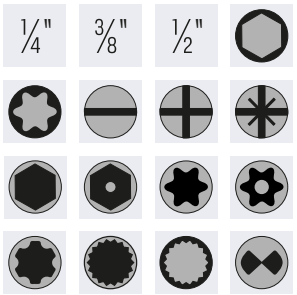
Design:
- 1/4 ", 3/8" and 1/2 "socket set with short and long socket inserts and bit screwdriver inserts for all common screwing operations
- all tools are shakeproof embedded in a steady tool case
- made of chromium-vanadium steel, polished





N° article	514383 172-piece
172	●

Design:
- 1/4", 3/8" and 1/2" socket set with short and long socket inserts and bit screwdriver inserts plus combination wrenches for all common screwing operations
- all tools are shakeproof embedded in a steady tool case
- made of chromium-vanadium steel, polished





N° article	514383 216-piece
0020	●

Reversible ratchet 1/2"

PROJAHN WERKZEUGE WIE DU

Version 516008 5220:
- made of chromium-vanadium steel, chrome-plated
- quick-release safety lock
- 2-component handle

1/2" | DIN 3120 | ISO 1174



N° article	516008	Teeth	Return angle	Total length mm
5220	●	48	7.5°	257

Reversible ratchet 1/2"

HAZET

Version 516012 916HPL:
- made of chromium-vanadium steel, chrome-plated
- 2-component handle
- with extra long handle
- fine-toothed
- **loadable up to 1,000 Nm**

1/2" | DIN 3122 | ISO 3316



N° article	516012 HAZET	Teeth	Return angle	Total length mm
916HPL	●	90	4°	415

Reversible ratchet 1/2"

PROJAHN WERKZEUGE WIE DU

Design 516059 5221:
- made of chromium-vanadium steel, chrome-plated
- quick-release safety lock
- 2-component handle
- fine-toothed

1/2" | DIN 3120 | ISO 3315



N° article	516059 PROJAHN	Teeth	Return angle	Total length mm
5221	●	72	5°	250

Reversible ratchet 1/2"

HAZET

Versions 916HPK and 916HP and 916HPS:
- made of chromium-vanadium steel, chrome-plated
- 2-component handle
- fine-toothed
- **loadable up to 1,000 Nm**

1/2" | DIN 3122 | ISO 3315



N° article	516060 1/2"	Teeth	Return angle	max. loadability Nm	Total length mm
916HPK	NEW ●	90	4°	400	200
916HP	●	90	4°	1000	275
916HPS	●	90	4°	850	275

Reversible ratchet 1/2"

STAHLWILLE

Design:
- with QuickRelease safety lock
- 2-component handle
- for work in confined spaces, return angle of only 4.5°
- FOD-preventive through screwless construction
- fine-toothed

1/2" | DIN 3122 | ISO 3315



N° article	516064	Teeth	Return angle	Total length mm
0010	●	80	4.5°	265,5

Reversible ratchet with hinge joint 1/2"

STAHLWILLE

Design:
- with QuickRelease safety lock
- 2-component handle
- handle may be raised or lowered by approx 90°, snapping in
- locking in the straight, 30° and 60° upward position as well as at 30° downward position
- releasing of the lock by push button in the grip area
- for work in confined spaces with a return angle of only 4.5°
- suitable for FOD (Foreign Object Damage) sensitive areas due to screwless design
- fine-toothed

1/2" | DIN 3122 | ISO 3315



N° article	516066	Teeth	Return angle	Total length mm
0010	●	80	4.5°	416

Reversible ratchet 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- 6-fold telescopic from 305 - 445 mm
- max. torque 600 Nm
- chromium-vanadium steel
- 2-component handle

1/2" | DIN 3120 | ISO 1174



N° article	516079 with telescopic handle	Teeth	Return angle	Total length mm
4289	●	48	7.5°	305

Reversible ratchet 1/2"

Design:
- made of chromium-vanadium steel, chrome-plated
- 2-component handle
- steplessly extendable from 414 - 614 mm
- easy fixing by means of a handy locking nut
- anti-twist handle ensures optimum power transmission without slipping
- latching function of the lever provides protection against unintentional switching
- fine-toothed
- **loadable up to 1,000 Nm**

1/2"



N° article	516080 with telescopic handle	Teeth	Return angle	Total length mm
916HPLG	●	90	4°	614

Reversible ratchet with hinge joint 1/2"

Design:
- made of chrome vanadium steel
- chrome-plated, polished surface
- with 2-component handle
- ratchet head can be swivelled 180
- with joint - for use in hard-to-reach places and to bypass interfering edges
- with ball lock

1/2" | DIN 3122 | ISO 3315



N° article	516081 long version	Teeth	Return angle	Total length mm
916GL	○	32	11.25°	511

Reversible ratchet 1/2", Zyklop Metal

Design:
- comfortable change of direction thanks to switch lever
- with secure socket locking function
- high sturdiness without torque restriction
- forged solid metal ratchet made of chromium-molybdenum
- fine-toothed

1/2"


slim head, long lever


secure socket hold


with reversing lever



N° article	516082	Teeth	Return angle	Total length mm
0010	●	72	5°	281

Coupler ratchet 1/2", Zyklop Metal

Design:
- smooth reversing through captive push-through square
- with secure socket locking function
- high sturdiness without torque restriction
- forged solid metal ratchet made of chromium-molybdenum
- fine-toothed

1/2"


slim head, long lever



with ejection function


low return angle


smooth reversing



N° article	516084	Teeth	Return angle	Total length mm
0010	●	76	4.7°	281

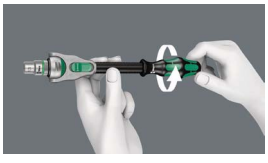
Reversible ratchet 1/2", Zyklop Speed

Design:
- flywheel mass construction and handy free-wheel sleeve for high working speed
- **freely swivelling ratchet head**
- defined lock position at 0° and on both sides at 15° or 90°
- at 0° position it can be used like a conventional screwdriver
- push button release
- left / right switching
- fine-toothed

Use:
- for 1/2 "square sockets as well as 1/2" connecting parts with square drive, with ball lock

1/2"






quick release safety lock


defined lock positions

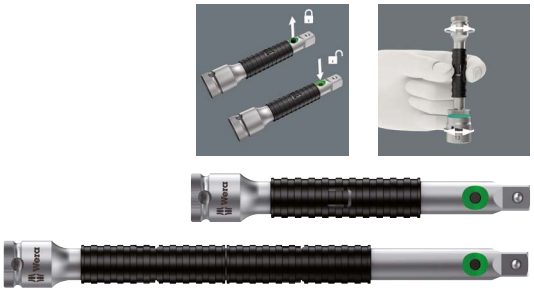
N° article	516085	Teeth	Return angle	Total length mm
1/2	●	72	5°	277

Extensions 1/2"

Wera

Design:
- made of chromium-vanadium steel, mat chrome-plated
- flexible lock system for either permanent fixed coupling or quick exchange of bits
- with free-wheel sleeve for ultra quick fastening and releasing of screws and nuts

1/2"



N° article	516090 with free-wheel sleeve	Total length mm
8796	●	125
8796L	●	250

Coupler ratchet 1/2"

PROJAHN

Design:
4297:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- with ergonomic 2K handle
- for 1/2" square
- for right and left rotation

4297-1:
- interchangeable square drive 1/2"
- made of chromium-vanadium steel

1/2"



N° article	516065	Teeth	Return angle	Total length mm
4297	●	48	7.5°	255
4297-1	●	–	–	33

Sliding handle 1/2"

HAZET

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished

1/2" | DIN 3122 | ISO 3315



N° article	516280	Total length mm
915	●	298

Cardan joint 1/2"

HAZET | PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- chrome-plated
- heads polished

510QR:
Quick Release

1/2" | DIN 3123 | ISO 3316



N° article	516310 PROJAHN	516320 HAZET	516325 STAHLWILLE	Total length mm
310000	●	–	–	67
920	–	●	–	70
510QR	–	–	●	80

Extensions 1/2"

HAZET | PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel, chrome-plated

1/2"



N° article	516352 PROJAHN	516354 HAZET	Total length mm
307125	●	–	125
307250	●	–	250
917-1	–	●	45
917-3	–	●	76
917-5	–	●	123
918-10	–	●	248
918-23	–	●	575

Extensions 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated and chrome-plated
- additional forged-on hexagon for torque support with a wrench
- **pivotable 15° to each side**

1/2"



N° article	516382 15° swivelling	Total length mm
307126	●	127
307251	●	250

Extensions 1/2"

HAZET

1/2"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- **swivel angle to each side 12.5°**
- by inserting the socket wrench insert up to the stop, the pivotable extension can also be used as a rigid extension
- for the actuation of screw connections in a narrow space or for avoiding interference edges







N° article	516385 12.5° swivelling	Total length mm
919-1	●	46
919-5	●	123

Adapter 1/2"

HAZET Wera

1/2"

Design:
- chromium-vanadium steel
- mat chrome-plated
- knurled for better grip
- with ball lock



781C



958-2

N° article	516410 HAZET	516411 Wera	Drive size	Output size	Total length mm
781C	–	●	1/2" female square	3/8" male square	35,5
958-2	●	–	1/2" female square	3/8" male square	36
958-1	●	–	1/2" female square	3/4" male square	50

Adapter set

HAZET Wera

Design:
- made of chromium-vanadium steel
- surface chrome-plated

1/4" 3/8" 1/2" 3/4"



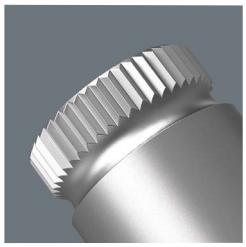
N° article	516430 6-piece	Contents
958N/6	●	1 adapter 1/4" female square to 3/8" male square 1 adapter 3/8" female square to 1/4" male square 1 adapter 3/8" female square to 1/2" male square 1 adapter 1/2" female square to 3/8" male square 1 adapter 1/2" female square to 3/4" male square 1 adapter 3/4" female square to 1/2" male square

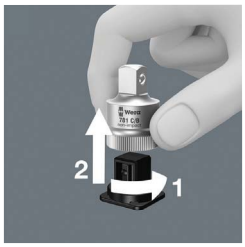
Design:
- chromium-vanadium steel
- mat chrome-plated
- knurled at the rear end for high grip at manual operation
- with ball lock
- robust textile belt with 5 connecting parts for socket spanner inserts
- with non-woven backing and Velcro strips for fixing to walls, shelves, workshop trolleys etc.
- incl. snap hook for attachment to belt loops or bags

1/4" 3/8" 1/2" 3/4"

NEW





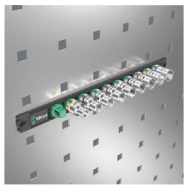


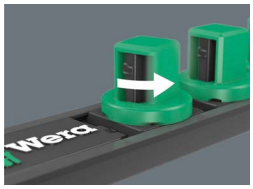


N° article	516587 6-piece	Contents
1/5	●	1 Adapter 3/8"-Innenvierkant auf 1/4"-Außenvierkant 1 Adapter 1/2"-Innenvierkant auf 1/4"-Außenvierkant 1 Adapter 1/4"-Innenvierkant auf 3/8"-Außenvierkant 1 Adapter 1/2"-Innenvierkant auf 3/8"-Außenvierkant 1 Adapter 3/8"-Innenvierkant auf 1/2"-Außenvierkant 1 Textilgurt

Socket wrench bit 1/2"

Design:
- socket inserts on magnetic strip with socket holder
- for manual and machine actuation (non-impact)
- magnetic strip for temporary attachment to walls, shelves or workshop trolleys
- smooth-running turning mechanism for a secure hold and easy removal of the nuts
- with "Take-it-Easy" tool finder with colour coding according to size
- with ball catch groove, knurling at the rear end for a good grip





Nº article	516601 Hexagon, 9-piece	Contents
10 - 19	●	**9 screwdriver bits male hex,** 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

NEW



Design:
- with Velcro area for easy attachment to walls, shelves, tool trolleys etc.
- including self-adhesive counter Velcro strips for the selection and definition of fastening points
- **with holding function**

Nº article	516600 Hexagon, 10-piece	Contents
10 - 19	●	**10 screwdriver bits male hex, with holding function** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

WITH HOLD FUNCTION



Design:
- socket inserts on robust textile belt
- with the tool finder "Take it easy" colour coding system according to sizes
- knurled at the rear end for high grip at manual operation
- hexagonal profile enables the transmission of high forces and puts less stress on the edges of the screw nut
- long version enables screw connections in tight spaces
- with non-woven backing and Velcro strips for fixing to walls, shelves, workshop trolleys etc.
- incl. snap hook for attachment to belt loops or bags






Nº article	516602 Hexagon, long 6-piece	Contents
10 - 19	●	**6 socket wrench bits hexagonal**, length 83 mm: 10 | 13 | 15 | 16 | 17 | 19 mm **1 textile belt** 45 × 275 mm



Screwdriver bit 1/2"

Design:
- made of chromium-vanadium steel, mat chrome-plated
- for manual and machine operation
- with ball retaining groove
- knurled at the rear end for high grip at manual operation
- **with holding function**
- with colour coding



N° article	516605 Hexagon socket, long with holding function	AF mm	Total length mm
4	●	4	60
5	●	5	60
6	●	6	60
7	○	7	60
8	●	8	60
10	●	10	60
12	●	12	60
14	●	14	60
17	●	17	60
19	●	19	60



N° article	516606 Hexagon socket, long with holding function	AF mm	Total length mm
4	●	4	140
5	●	5	140
6	●	6	140
7	○	7	140
8	●	8	140
10	●	10	140

WITH HOLD FUNCTION



N° article	516605 Hexagon socket set, with holding function	Contents	Total length mm
4-17	●	9 screwdriver bits male hex, with holding function 4|5|6|7|8|10|12|14|17	60

N° article	516606 Hexagon socket set, long with holding function	Contents	Total length mm
4-10	●	6 screwdriver bits male hex, with holding function 4|5|6|7|8|10	140

Design:
- made of chromium-vanadium steel, mat chrome-plated
- for manual and machine operation
- with ball retaining groove
- knurled at the rear end for high grip at manual operation
- **with holding function**
- with colour coding



N° article	516610 TORX® with holding function	Output size	Total length mm
T20	○	T20	60
T25	○	T25	60
T27	○	T27	60
T30	●	T30	60
T40	●	T40	60
T45	○	T45	60
T50	●	T50	60
T55	○	T55	60
T60	○	T60	60

WITH HOLD FUNCTION



N° article	516610 TORX®set with holding function	Contents
T20-T60	●	9 screwdriver bits TORX®, with holding function T20|T25|T27|T30|T40|T45|T50|T55|T60

Socket wrench bit 1/2"

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- the special profile grabs the screw at its flank and spares the edges (516715)
- to DIN 3124 / ISO 2725
- knurled for better grip



516710



516715

N° article	516710 Hexagon	516715 Double-hex	AF mm	Total length mm
8	●	●	8	38
9	●	●	9	38
10	●	●	10	38
11	●	●	11	38
12	●	●	12	38
13	●	●	13	38
14	●	●	14	38
15	●	●	15	38
16	●	●	16	38
17	●	●	17	38
18	●	●	18	38
19	●	●	19	38
20	●	●	20	38

N° article	516710 Hexagon	516715 Double-hex	AF mm	Total length mm
21	●	●	21	38
22	●	●	22	41
23	●	●	23	41
24	●	●	24	41
26	●	○	26	44
27	●	●	27	44
28	●	○	28	44
30	●	●	30	44
32	●	●	32	44
34	●	●	34	44
36	●	●	36	50

Socket wrench bit 1/2"

HAZET

Design:
- made of chromium-vanadium steel
- surface chrome-plated and polished
- handy, knurled, for manual operation
- HAZET traction profile spares tool and screw
- charging the driving flats allows to manipulate even damaged screws (e.g. with rounded edges)
- to DIN 3124 / ISO 2725

Note:
- hexagon spanner widths 9|23|25|26|28|29|36 outside the DIN series
- bi-hex spanner widths 9|23|25|26|28|32|33|34|36 outside the DIN series



516734



516735

N° article	516734 Hexagon	516735 Double-hex	AF_1 mm	Total length mm
8	●	●	8	38
9	●	○	9	38
10	●	●	10	38
11	●	●	11	38
12	●	●	12	38
13	●	●	13	38
14	●	●	14	38
15	●	●	15	38
16	●	●	16	38
17	●	●	17	38
18	●	●	18	38
19	●	●	19	38
20	●	●	20	38

N° article	516734 Hexagon	516735 Double-hex	AF_1 mm	Total length mm
21	●	●	21	38
22	●	●	22	41,5
23	●	○	23	41,5
24	●	●	24	44
25	●	○	25	44
26	●	●	26	44
27	●	●	27	46
28	●	○	28	47
29	○	–	29	50
30	●	●	30	50
32	●	●	32	50
34	●	–	34	52

Socket wrench bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- knurled for better grip



N° article	516775 TORX®	AF_1	Total length mm	∅ mm
E10	●	E10	40	12,3
E11	●	E11	40	13,3
E12	●	E12	40	14,3
E14	●	E14	40	15,8
E16	●	E16	40	19,6
E18	●	E18	40	21

N° article	516775 TORX®	AF_1	Total length mm	∅ mm
E20	●	E20	40	23
E22	●	E22	40	25,4
E24	●	E24	40	28

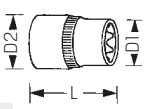


N° article	516778 TORX®set 7-piece	Contents
4223	●	E12|E14|E16|E18|E20|E22|E24

Socket wrench bit 1/2"

HAZET

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- for male TORX®screws
- handle bar knurled
- for manual operation





N° article	516784 TORX®	AF_1	L mm	D_1 mm	D_2 mm
10	○	E10	38	13,3	22
11	○	E11	38	14	22
12	●	E12	38	14,9	22
14	○	E14	38	16,7	22

N° article	516784 TORX®	AF_1	L mm	D_1 mm	D_2 mm
18	○	E18	38	21	27
20	○	E20	38	23,5	27
24	○	E22	41,2	28,5	27

Socket wrench bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- to DIN 3124 / ISO 2725
- knurled for better grip



N° article	516750 Hexagon, long	AF_1 mm	Total length mm
10	●	10	77
11	●	11	77
12	●	12	77
13	●	13	77
14	●	14	77
15	●	15	77
17	●	17	77
18	●	18	77
19	●	19	77
22	●	22	77

Spark plug socket wrench insert 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- **with rubber ring as holding mechanism for spark plug**
- knurled for better grip



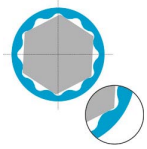
N° article	516758 Hex socket, extra deep	AF_1 mm	Total length mm
16	●	16	65
21	●	21	65

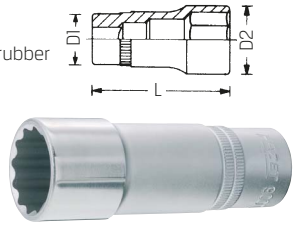
Socket wrench bit 1/2"

HAZET

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- long version
- with traction profile, handy, knurled
- for manual actuation
- to DIN 3124 / ISO 2725-1

Note:
- width across flats 20.8 mm with retaining rubber for spark plugs





N° article	516770 12-point, long	AF_1 mm	L mm	D_1 mm	D_2 mm
10	●	10	85	14,9	22
11	○	11	85	16,4	22
12	●	12	85	17,5	22
13	●	13	85	18,8	22
14	●	14	85	19,9	22,5
15	○	15	85	21,5	23,2
16	●	16	85	22,7	23,6
17	●	17	85	24,1	23,6
18	●	18	85	24,6	23,6
19	●	19	85	26,8	26
20,8	●	20,8	85	28,5	24,5
21	○	21	85	28,6	24,5
22	●	22	85	30,4	25
24	●	24	85	32,6	27,5
27	●	27	85	36,3	30
30	●	30	85	40,1	33

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- socket made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/2" | ⬢



N° article	516800 External hex	AF_1 mm	Total length mm
5	●	5	60
6	●	6	60
7	●	7	60
8	●	8	60
10	●	10	60
12	●	12	60
14	●	14	60
17	●	17	60
19	●	19	60

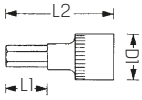
Screwdriver bit 1/2"

HAZET

Design:
- for female hex screws
- knurled for better grip
- special blade steel
- surface CVD TiN coated

1/2" | ⬢ | TiN

Note:
- width across flats 4|5|17 and 19 outside the DIN range





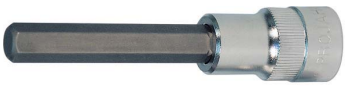
N° article	516810 External hex	AF_1 mm	L_1 mm	L_2 mm	D_1 mm
4	●	4	22	60	23
5	●	5	22	60	23
6	●	6	22	60	23
7	●	7	22	60	23
8	●	8	22	60	23
10	●	10	22	60	23
12	●	12	22	60	24,6
14	●	14	22	60	24,6
17	●	17	20	60	28,5
19	●	19	20	60	31,5
22	●	22	20,5	60	28

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- socket made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/2" | ⬢



N° article	516825 External hex long	AF_1 mm	Total length mm
5	●	5	100
6	●	6	100
7	●	7	100
8	●	8	100
10	●	10	100
12	●	12	100
17	●	17	100
19	●	19	100

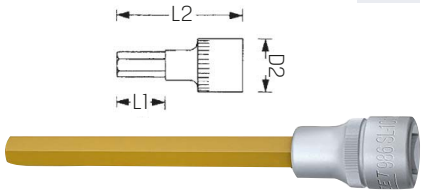
Screwdriver bit 1/2"

HAZET

Design:
- long version
- knurled for better grip
- blades special steel
- surface CVD TiN coated
- optimally suited for continuous loads
- made in Germany

1/2" | ⬢ | TiN | DIN 7422

NEW



N° article	516831 Square drive long	AF_1 mm	L_1 mm	L_2 mm	D_1 mm
5	○	5	102	140	23
6	○	6	102	140	23
7	○	7	102	140	23
8	○	8	102	140	23
10	○	10	102	140	23

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- nut made of chromium-vanadium steel, knurled for better grip
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel

1/2" | ⬢



N° article	516850 External hex 11-piece	Contents
4234	●	**5 sockets male hex 60 mm long** 5|6|8|10|12 mm **6 sockets male hex 100 mm long** 5|6|7|8|10|12 mm **1 socket rail**

Screwdriver bit 1/2"

HAZET

Design:
- in SmartCase with soft foam insert
- surface CVD TiN coated

1/2" | ⬢ | TiN



N° article	516815 External hex, 9-piece	Contents
986/9	●	**9 screwdriver sockets external hex** 5|6|7|8|10|12|14|17|19 mm

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- socket made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/2" | ⬟



N° article	516900 TORX®	Output size	Total length mm
T10	○	T10	60
T15	●	T15	60
T20	●	T20	60
T25	●	T25	60
T27	○	T27	60
T30	●	T30	60

N° article	516900 TORX®	Output size	Total length mm
T40	●	T40	60
T45	●	T45	60
T50	●	T50	60
T55	●	T55	60
T60	●	T60	60
T70	●	T70	60

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- socket made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/2" | ⬟



N° article	516938 TORX® long	Output size	Total length mm
T10	○	T10	100
T15	○	T15	100
T20	●	T20	100
T25	●	T25	100
T27	●	T27	100
T30	●	T30	100

N° article	516938 TORX® long	Output size	Total length mm
T40	●	T40	100
T45	●	T45	100
T50	●	T50	100
T55	●	T55	100
T60	●	T60	100

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- nut made of chromium-vanadium steel, knurled for better grip
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel

1/2" | ⬟



N° article	516915 TORX® 10-piece	Parts	Contents
4236	●	10	**10 socket wrench bits TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 **1 socket rail**

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- socket made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/2" | ⬟

N° article	516970 Multipoint	for screws	Total length mm
M5	●	M5	60
M6	●	M6	60
M8	●	M8	60
M10	●	M10	60
M12	●	M12	60
M14	●	M14	60
M16	●	M16	60

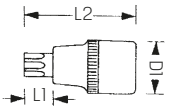


Screwdriver bit 1/2"

HAZET

Design:
- short version
- knurled for better grip
- blades special steel
- surface CVD TiN coated

1/2" | ⬟ | TiN





N° article	516910 TORX®	Output size	L_1 mm	L_2 mm	D_1 mm
T20	●	T20	17	55	23
T25	●	T25	17	55	23
T27	●	T27	17	55	23
T30	●	T30	17	55	23
T40	●	T40	17	55	23

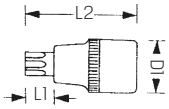
N° article	516910 TORX®	Output size	L_1 mm	L_2 mm	D_1 mm
T45	●	T45	17	55	23
T50	●	T50	17	55	23
T55	●	T55	18	56	24,6
T60	○	T60	18	56	24,6

Screwdriver bit 1/2"

HAZET

Design:
- long version
- knurled for better grip
- blades special steel
- surface CVD TiN coated

1/2" | ⬟ | TiN





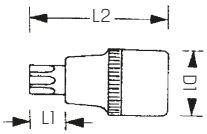
N° article	516939 TORX® long	Output size	L_1 mm	L_2 mm	D_1 mm
T50	●	T50	62	100	23
T55	○	T55	57	96	23,3
T60	○	T60	45	83	23
T70	○	T70	67	105	24,6

Screwdriver bit 1/2"

HAZET

Design:
- extra long version
- knurled for better grip
- blades special steel
- surface CVD TiN coated

1/2" | ⬟ | TiN





N° article	516940 TORX® extra long	Output size	L_1 mm	L_2 mm	D_1 mm
T40	○	T40	100	138	23
T45	○	T45	100	138	23
T50	●	T50	100	138	23
T55	○	T55	102	138	23

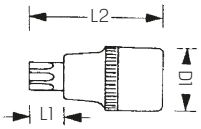
Screwdriver bit 1/2"

HAZET

Design:
- short version
- knurled for better grip
- blades special steel
- surface CVD TiN coated

1/2" | ⬟ | TiN





N° article	516974 Multipoint	for screws	L_1 mm	L_2 mm	D_1 mm
M5	○	M5	14	52	23
M6	●	M6	14	52	23
M8	●	M8	15	53	23
M10	●	M10	15	53	23
M12	○	M12	17	55	23
M14	○	M14	20	58	24,6
M16	○	M16	22	60	24,6

Screwdriver bit 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- socket made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel
- knurled for better grip

1/2"



N° article	516975 Multipoint long	for screws	Total length mm
M5	○	M5	100
M6	●	M6	100
M8	●	M8	100
M10	●	M10	100
M12	●	M12	100
M14	●	M14	100
M16	○	M16	100

Screwdriver set 1/2"

PROJAHN WERKZEUGE WIE DU

Design:
- nut made of chromium-vanadium steel, knurled for better grip
- nickel-plated, chrome-plated and mat satined
- bit made of S2 special steel

1/2"



N° article	516978 Multipoint 11-piece	Parts	Contents
4233	●	11	**7 screwdrivers multipoint, 60 mm long** M5 | M6 | M8 | M10 | M12 | M14 | M16 **4 screwdrivers multipoint, 100 mm long** M5 | M6 | M8 | M10 **1 socket rail**

Reversible ratchet 3/4"

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium steel
- nickel-plated, chrome-plated and mat satined
- with quick releaser and switch lever
- 24 teeth

3/4"



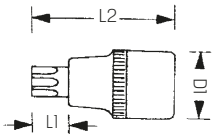
N° article	517140	Teeth	Return angle	Total length mm
400001	●	24	15°	500

Screwdriver bit 1/2"

HAZET

Design:
- long version
- knurled for better grip
- blades special steel
- surface CVD TiN coated

1/2" TiN





N° article	516976 Multipoint long	for screws	L_1 mm	L_2 mm	D_1 mm
M6	○	M6	62	100	23
M8	●	M8	62	100	23
M9	○	M9	62	100	23
M10	●	M10	62	100	23
M12	○	M12	62	100	23
M14	○	M14	62	100	23

Socket wrench set 3/4"

KS TOOLS

Design:
- made of chromium-vanadium steel, chrome-plated

3/4"



N° article	517092 21-piece	Contents
21	●	**16 socket wrench bits hexagonal** 19 | 21 | 22 | 23 | 24 | 26 | 27 | 29 | 30 | 32 | 35 | 36 | 38 | 41 | 46 | 50 mm **1 reversible ratchet** 500 mm **3 extensions** 100 | 200 | 400 mm **1 sliding handle** 450 mm

Reversible ratchet 3/4"

HAZET

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- shank with release pin for pin locking
- output with lock pin

3/4"



N° article	517154	Teeth	Return angle	Total length mm
1016/2	●	32	11.25°	620

Sliding handle 3/4"

Design:
- made of chromium-vanadium steel
- chrome-plated

3/4" | DIN 3122





N° article	517162 PROJAHN	517164 HAZET	Total length mm
408000	●	–	450
1015/2	–	●	500

Extensions 3/4"

Design:
- made of chromium-vanadium steel
- nickel-plated and chrome-plated

3/4"



N° article	517182	Total length mm
407100	●	100
407200	●	200
407400	●	400

Extensions 3/4"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- drive with ball and pin locking device
- output with lock pin

3/4"



1017-8

N° article	517188	Total length mm
1017-8	●	200
1018	●	400

Adapter 3/4"

Design:
- made of chromium-vanadium steel
- surface chrome-plated
- interchangeable square on type 1058-2

ISO 3316 | 3/4" | DIN 3123


1058-1


1058-2

N° article	517192	Drive size	Output size	Total length mm	Design:
1058-1	●	3/4" female square	1" male square	60,6	with pin locking device
1058-2	●	3/4" female square	1/2" male square	52,3	with ball locking device

Cardan joint 3/4"

Design:
- made of chromium-vanadium steel
- surface chrome-plated
- with ball and pin locking device
- with release pin for safety device

3/4" | DIN 3123 | ISO 3316



N° article	517184	Total length mm
1021	●	105

Socket wrench bit 3/4"

Design:
- made of chromium-vanadium steel
- nickel-plated and chrome-plated
- shank surface mat satined
- wrench end surface high-gloss polished

3/4" | 3/4" | 3/4"



N° article	517193 Hexagon	AF1 mm	Total length mm
19	●	19	50,5
21	○	21	50,5
22	●	22	50,5
23	○	23	50,5
24	●	24	50,5
26	○	26	50,5
27	●	27	50,5
29	○	29	52

N° article	517193 Hexagon	AF1 mm	Total length mm
30	●	30	52
32	●	32	55
35	○	35	58
36	●	36	58
38	●	38	60
41	●	41	64
46	●	46	67
50	●	50	72

Socket wrench bit 3/4"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- handy, knurled, for manual operation
- with release pin for pin safety locking
- to DIN 3124 / ISO 2725-1

3/4"

Note:
- hexagon spanner widths 19|38|42|55|60 outside the DIN series



N° article	517194 Hexagon	AF1 mm	Total length mm
19	●	19	52
21	●	21	52
22	●	22	52
24	●	24	52
27	●	27	54
30	●	30	55
32	●	32	58
33	○	33	59
34	●	34	60

N° article	517194 Hexagon	AF1 mm	Total length mm
36	●	36	61,5
38	○	38	65
41	●	41	68,5
42	○	42	70
46	●	46	73
50	●	50	76
55	●	55	82
60	●	60	88

Socket wrench bit 3/4"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- handy, knurled, for manual operation
- with release pin for pin safety locking
- to DIN 3124 / ISO 2725

3/4"

Note:
- bi-hex spanner widths 35|34|38 outside the DIN series



N° article	517196 Double-hex	AF1 mm	Total length mm
22	●	22	52
24	●	24	52
27	○	27	54
30	●	30	55
32	●	32	58
34	○	34	60
35	○	35	61,5

N° article	517196 Double-hex	AF1 mm	Total length mm
36	●	36	61,5
38	○	38	65
41	●	41	68,5
46	●	46	73
50	○	50	76
55	●	55	82

Screwdriver bit 3/4"

Design:
- surface chrome-plated, tip burnished
- non-slip, knurled, for manual actuation
- blades special steel
- with release pin for safety device

DIN 7422 | 3/4"



N° article	517197 External hex	AF1 mm	Total length mm
14	●	14	54,5
17	●	17	54,5
19	●	19	56,5
22	●	22	56,5

Reversible ratchet 1"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- shank with release pin for pin locking
- output with lock pin

DIN 3122 | 1"



N° article	518054	Teeth	Return angle	Total length mm
1116/2	○	32	11.25°	824

Sliding handle 1"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- with pin locking device

DIN 3122 | 1"



N° article	518064	Total length mm
1115/2	●	700

Extensions 1"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- shank with release pin for pin locking
- output with lock pin

ISO 3316 | 1" | DIN 3123



N° article	518094	Total length mm
1117-8	●	200
1117-16	●	400

Adapter 1"

Design:
- made of chromium-vanadium steel
- surface chrome-plated
- shank with release pin for pin locking
- output with lock pin

ISO 3316 | 1" | DIN 3123



N° article	518104	Drive size	Output size	Total length mm
1158-2	●	1" square socket	3/4" male square	70

Cardan joint 1"

Design:
- made of chromium-vanadium steel
- surface chrome-plated
- shank with release pin for pin locking
- output with lock pin

1"



N° article	518096	Total length mm
1121	○	144

Socket wrench bit 1"

Design:
- made of chromium-vanadium steel
- nickel-plated and chromium-plated
- shank surface mat satined
- wrench end surface high-gloss polished
- to DIN 3124 / ISO 2725

1"



N° article	518110 Double-hex	AF1 mm	Total length mm
36	●	36	65,5
38	○	38	65,5
41	○	41	70,5
46	●	46	75,5
50	○	50	75,5
55	○	55	80,5

N° article	518110 Double-hex	AF1 mm	Total length mm
60	○	60	84,5
65	●	65	87,5
70	○	70	93,5
75	○	75	97,5
80	○	80	103,5

Socket wrench bit 1"

Design:
- made of chromium-vanadium steel
- surface chrome-plated, polished
- handle bar knurled
- shank with release pin for pin locking
- to DIN 3124 / ISO 2725-1

1"



N° article	518114 Double-hex	AF1 mm	Total length mm
32	○	32	60
36	●	36	67
41	●	41	68
46	○	46	72
50	○	50	74
55	○	55	78

N° article	518114 Double-hex	AF1 mm	Total length mm
60	○	60	83
65	○	65	86
70	○	70	89
75	○	75	92
80	○	80	94

Tool case

Design:
- universal tool assortment arranged on four panels in solid tool case (lockable)
- clear arrangement of the tools
- tools secured against falling out
- 2 tool panels with insert compartments





N° article	519740 Compact 164-piece	Height mm	Width mm	Depth mm	Contents
0005	●	280	425	130	**Content 3/8"** **17 socket wrench bits hexagonal** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 mm **1 reversible ratchet** 3/8" **1 extension** 150 mm **1 cardan joint** **1 adapter** 3/8" female square to 1/4" female hex **Content 1/4"** **1 bit screwdriver 1/4"** **3 screwdrivers slot** 3 | 5.5 | 6 mm **2 screwdrivers PH** 1 | 2 **1 screwdriver PZ** 2 **1 voltage tester** 230 V **1 precision screwdriver set** 4-piece **9 hexagon key wrenches male hex with spherical head** 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm **10 combination wrenches** 8 | 10 | 11 | 12 | 13 | 14 | 15 | 17 | 19 | 22 mm **1 telephone pliers** 200 mm **1 combination pliers** 180 mm **1 waterpump pliers** 240 mm **1 side cutter** 160 mm **1 concrete pliers** 250 mm **1 universal scissors** 180 mm **1 crimping pliers** 240 mm, incl. 40 cable lugs **1 safety cutter knife** incl. 5 spare blades **1 engineer's hammer** 300g **1 metal saw**, incl. 3 saw blades **1 spirit level** 300 mm **1 tape measure** 3 m **1 telescopic magnetic pick-up tool** **1 bit box**, 31-piece (slot | PH | PZ | male hex | TORX® with hole) **20 cable ties** 3.5 × 150 mm

Tool case

Design:
- robust ABS case
- clear arrangement of the tools
- tools secured against falling out
- 2 tool panels with insert compartments, foldable
- 2 locks incl. keys





N° article	519740 Electric 128-piece	Height mm	Width mm	Depth mm	Contents
0015	●	340	460	145	**Content 1/4"** **12 socket wrench bits** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **1 reversible ratchet** **2 extensions** 50 | 100 mm **1 T-handle** **1 cardan joint** **1 bit screwdriver** 1/4" **Content 1/2"** **12 socket wrench bits** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 mm **1 reversible ratchet** **1 extension** 125 mm **1 cardan joint** **4 VDE screwdrivers slot** 2.5 | 4 | 5.5 | 6.5 mm **2 VDE screwdrivers PH** 1 | 2 **1 voltage tester** 230 V **9 hex Allen wrenches with spherical head** 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm **9 combination wrenches** 8 | 10 | 11 | 12 | 13 | 14 | 17 | 19 | 22 mm **1 adjustable end wrench** 8"/200 mm **1 telephone pliers** 150 mm **1 combination pliers** 150 mm **1 side cutter** **1 VDE wire stripper** 150 mm **1 VDE electrician´s knife** 150 mm **1 universal scissors** **1 safety cutter knife** incl. 5 blades **1 engineer´s hammer** 400g **1 handsaw frame** 150 mm **1 spirit level** 400 mm **1 tape measure** 5 m **3 carpenter's pencils** **1 wooden folding ruler** 2 m **1 scraper** **1 flat chisel** 200 mm **1 sharp chisel** 200 mm **1 bit box**, 31-piece (slot | PH | PZ | male hex | TORX® with bore | bit holder 60 mm **20 cable ties** 3.5 × 150 mm

Tool case

Design:
- universal tool assortment arranged on four panels in solid tool case (lockable)
- clear arrangement of the tools
- tools secured against falling out
- 2 tool panels with insert compartments

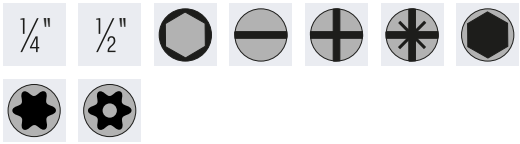




Nº article	519740 Universal 149-piece	Height mm	Width mm	Depth mm	Contents
149	●	340	460	145	**Content 1/4"** **12 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **1 reversible ratchet** **3 bits** slot 4,5 | 5.5 | 6,5 mm **6 bits** Cross recess PH 1 | 2 | 3 **6 bits** Cross recess PZ 1 | 2 | 3 **9 bits TORX®** with bore TX 8 | 9 | 10 | 15 | 20 | 25 | 27 | 30 | 40 **6 bits** Hex 3 | 4 | 5 | 6 | 7 | 8 mm **2 extensions** 50 | 100 mm **1 T-handle** **1 cardan joint** **1 bit holder** 60 mm **1 magnetic bit screwdriver** **1 adapter** 1/4" female square to 1/4" female hex **1 adapter** 1/4" male hex to 1/4" male square **Content 1/2"** **14 socket wrench bits** Hex 10 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 | 32 mm **1 reversible ratchet** **2 extensions** 125 | 250 mm **1 cardan joint** **1 T-handle adapter** 3/8" female square to 1/2" male square **1 adapter** 1/2" female square to 5/16" female hex **9 hexagon key wrenches** Hexagon socket with ball head 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm **10 combination wrenches** 8 | 10 | 11 | 12 | 13 | 14 | 15 | 17 | 19 | 22 mm **2 bits** 5/16" slot 8 | 10 mm **2 bits** 5/16" cross recess PH 3 | 4 **4 bits** 5/16" TORX® TX 40 | 45 | 50 | 55 **3 bits** 5/16" external hex 10 | 12 | 14 mm **1 telephone pliers** 170 mm **1 combination pliers** 180 mm **1 waterpump pliers** 250 mm **1 side cutter** 160 mm **1 concrete pliers** 250 mm **3 screwdriver** slot 3,5 | 5.5 | 6,5 mm **2 screwdriver** Cross recess PH 1 | 2 **1 screwdriver** Cross recess PZ 2 **1 voltage tester** Slot 110 to 250 V **1 universal knife** **1 engineer´s hammer** 300g **1 metal saw** 300 mm **1 pocket vernier** 150 mm **1 punch and chisel set**, 5-piece **1 half-round file** **1 scraper** **1 firmer chisel** **1 carpenter's pencil** **1 torch** **1 telescopic magnetic pick-up tool** **1 measuring tape** 5 m **20 cable ties** 3.5 × 150 mm

Tool trolley

Design:
- robust ABS trolley
- with locking telescopic handle
- clear arrangement of the tools
- tools secured against falling out
- 2 tool panels with insert compartments, foldable
- 2 lockable closures incl. keys
- integrated roller system and support
- external dimensions W × D × H = 460 × 390 × 170 mm









N° article	519750 Universal 130-piece	Height mm	Width mm	Depth mm	Contents
0010	●	170	460	390	**Content 1/4"** **12 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **1 bit ratchet** 2700 **1 reversible ratchet** 5200 **2 extensions** 100 | 150 mm **1 spinner handle** **1 cardan joint** **1 adapter** 1/4" female square to 1/4" female hex **1 bit set** 30-piece **1 bit holder** **Content 1/2"** **16 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 | 30 | 32 mm **1 reversible ratchet** 5220 **2 extensions** 125 | 250 mm **1 T-handle** 300 mm **1 cardan joint** **12 combination wrenches** 8 | 9 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 18 | 19 | 22 mm **1 bit screwdriver** 1/4", magnetic **2 screwdrivers slot** 4.0 | 8.0 mm **1 VDE screwdrivers slot** 3.0 mm **1 voltage tester** 230 V **2 screwdrivers PH** 1 | 2 **2 VDE screwdrivers PH** 1 | 2 **2 screwdriver PZ** 1 | 2 **9 hexagon key wrenches male hex with spherical head** 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm **9 hexagon key wrenches TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 | T45 | T50 **1 telephone pliers** **1 combination pliers** **1 waterpump pliers** 250 mm **1 side cutter** **1 concrete pliers** 250 mm **1 universal knife** **1 engineer´s hammer** 300 g **1 metal saw** 260 mm **1 pocket vernier** 150 mm **1 aluminium spirit level** 400 mm **1 punch and chisel set** 5-piece **1 adjustable end wrench** 10 | 250 mm **1 telescopic magnetic pick-up tool** **1 tape measure** 5 m

Tool backpack

Design:
- equipped with 22 branded tools, partly VDE tested galvanised to DIN EN 60900
- lightweight, flexible, hard-wearing and splash-proof version made from recycled synthetic fibres
- waterproof base tray made of impact-resistant plastic for a stable stand
- one MOLLE (Modular Lightweight Load-carrying Equipment) strap inside and four MOLLE straps outside for attaching any adapters, carabiners, accessories as required
- a total of 21 retaining loops and 37 pockets, some of which have zips
- two separate inner compartments on the front and back for tools, measuring devices, notebook or tablet
- fully fold-out front and back
- removable tool panel
- ergonomic back padding
- with carry handle
- case strap for attaching to telescopic handles of tool cases

NEW

Note:
519780 0010 without tools shown.



0010


0020



N° article	519780 Modular X18	max. payload kg	Capacity litres	Height mm	Width mm	Depth mm	Contents
0010	○	15	18	50	35	25	–
0020	○	15	18	50	35	25	22-teilig

Tool trolley BIG Basic Move

Design:
- equipped with 24 branded tools, partly VDE tested
- hard-wearing execution made of ABS material, with all-round aluminium frame
- sturdy, ergonomic carrying handle
- two removable tool panels made of dirt-repellent PP
- twin wall PP sheet profiles with 21 equippable tool pockets
- first tool panel with ten tool pockets plus eleven narrow and one large tool pockets on the bottom side
- second tool panel with ten narrow tool pockets and a document compartment on the lid side
- cover panel with 13 large tool pockets and one flat compartment
- telescopic handle and two easy-running skate wheels
- two metal tilt locks and three-digit numerical code lock
- labelling field for individual marking



N° article	519812 equipped 24-piece	max. payload kg	Capacity litres	Height mm	Width mm	Depth mm
0110	●	20	33	280	515	430

Tool trolley BIG Twin Move

Design:
- equipped with 63 branded tools, partly VDE tested
- hard-wearing design made of ABS material
- all-round aluminium frame with firmly mounted, stable centre panel that can be fitted on both sides
- can be opened on one or both sides, free-standing in all opening positions
- telescopic handle and two easy-running skate wheels
- two metal tilt locks and three-digit numerical code lock
- a total of 95 plug-in options



N° article	519813 equipped 63-piece	max. payload kg	Capacity litres	Height mm	Width mm	Depth mm
0110	●	30	38	435	520	290

Tool trolley Robust45 MOVE

KNIPEX

Design:
- equipped with 63 branded tools, partly VDE tested
- airworthy, made of impact-proof polypropylene
- **gas pressure damper in the hinge**
- dust, water and temperature resistant
- several tool boards with numerous plug-in possibilities
- bottom tray with aluminium dividers
- telescopic handle
- large smooth-running castors
- automatic pressure compensation valve

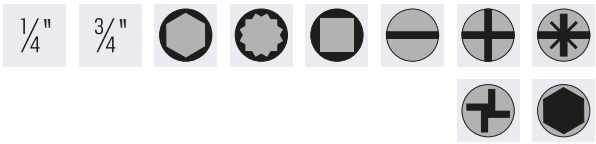


N° article	519814 equipped 63-piece	max. payload kg	Capacity litres	Height mm	Width mm	Depth mm
0110	●	35	45	263	609	428

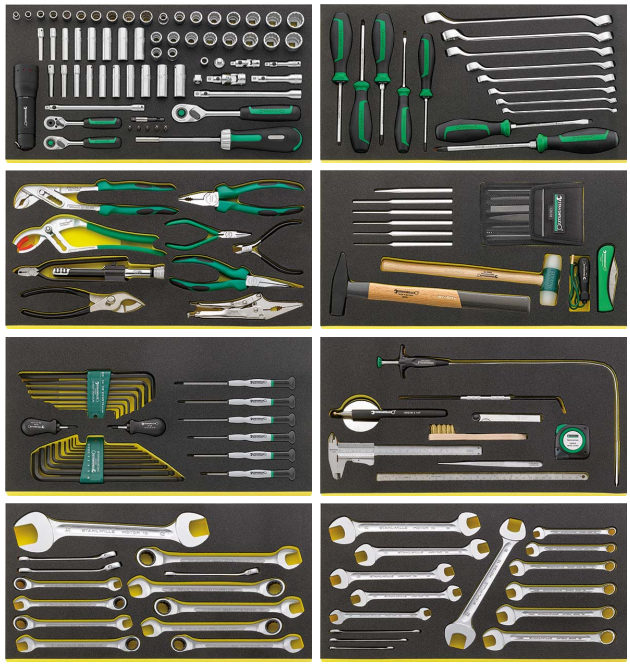
Tool trolley AOG kit

STAHLWILLE

Design:
- equipped with 163 brand-name tools in TCS inserts
- **for maintenance on aircraft and helicopters**
- robust and resilient tool trolley made of polypropylene
- extendable telescopic handle and 2 side carrying handles
- 2 easy-running double castors
- 7 removable drawers with pull-out stop in 2 different heights, closable with transparent lid
- 1 removable shelf with 2 handles
- 2 transparent drawer lids
- with one top and one front removable lid
- drawers can be used as separate tool box due to transparent lid
- resistant to Skydrol, acetone, petrol and hydraulic oils
- lockable at 3 positions by padlock







N° article	519820 equipped, 163-piece	Height mm	Width mm	Depth mm	Contents	Weight kg
0020	○	485	600	410	trolley insert 1, 65-piece trolley insert 2, 9-piece trolley insert 3, 9-piece trolley insert 4, 16-piece trolley insert 5, 13-piece trolley insert 6, 25-piece trolley insert 7, 15-piece trolley insert 8, 15-piece	29

Torque screwdriver

wiha Tools that work for you

EN/ISO 6789 | ±10 %

Design:
- torque value preset by default
- robust industrial version, ideal for screwing indexable inserts
- accuracy ± 10 %
- handy multi-component handle for optimum power transmission
- click signal when the preset torque is reached
- quick identification by marking at the end of the handle
- unlimited opening torque
- mechanism resistant to industrial lubricants

Use:
For controlled tightening at a given torque, in combination with a Wiha torque 4 mm interchangeable blade (520003-520012)



N° article	520000 easyTorque	Torque Nm	Blade ∅ mm	Total length mm
0,6	●	0,6	4	130
0,9	●	0,9	4	130
1,2	●	1,2	4	130
2,0	●	2	4	130
3,0	●	3	4	130
5,0	●	5	4	130

Torque screwdriver

wiha Tools that work for you

EN/ISO 6789 | ±6 %

Design:
- with scale and variable torque setting option
- numerical display of torque value via screen scale
- click signal when the preset torque is reached
- continuously adjustable with setting tool
- accuracy ± 6%, traceable to national standards

Use:
For controlled tightening at a given torque, in combination with a Wiha torque 4 mm interchangeable blade (520003-520012)

Delivery:
In stable box including factory test report





N° article	520001 TorqueVario®-S	min. torque Nm	max. torque Nm	Blade ∅ mm	Total length mm
0,1-0,6	●	0,1	0,6	4	127
0,4-1,0	●	0,4	1	4	127
0,5-2,0	●	0,5	2	4	131
0,8-5,0	●	0,8	5	4	138
2,0-7,0	●	2	7	4	142

Torque screwdriver Set

wiha Tools that work for you

1/4" | EN/ISO 6789 | ±6 %

Design:
- variable torque adjustment 0.8-5 Nm
- numerical display of torque value via screen scale
- click signal when the preset torque is reached
- continuously adjustable with setting tool
- accuracy ± 6%, traceable to national standards
- ergonomically shaped torque screwdriver handle

Use:
For controlled screwing at a specified torque, for example in industrial assembly work or screwing of indexable inserts.

Delivery:
In stable box including factory test report

NEW



N° article	520019 TorqueVario®-S in a set	min. torque Nm	max. torque Nm
14	●	0,8	5

Torque screwdriver

wiha Tools that work for you

Form C 6,3 | Form E 6,3 | ±6 %

Design:
- torque continuously adjustable
- ergonomic plastic-metal composite handle with large digital display
- optimal adapted dimension of handle
- audible and perceptible click indicates when the torque limit has been reached
- accuracy ± 6%, traceable to national standards
- torque bit universal holder with exchange blade for holding C 6.3 and E 6.3 bits
- **Click Control - integrated counter records all applications**
- **individual setting of calibration alert cycle possible with order** (standard setting 5,000 applications)
- units selectable (Nm to in.lbs or Ncm to oz.in)

Use:
For controlled screwing at a given torque, in combination with a Wiha torque 4 mm interchangeable blade







N° article	520002 iTorque®	min. torque Nm	max. torque Nm	Blade ∅ mm	Total length mm
0,4-1,5	○	0,4	1,5	4	134
0,8-3,0	○	0,8	3	4	134
1,0-5,0	●	1	5	4	134

Exchangeable blade
For WIHA torque screwdriver

Design:
- made of chromium-vanadium steel
- through-hardened
- mat chrome-plated
- chrome top®blade tip guarantees maximum accuracy to size

Use:
For controlled screwing at a given torque, in combination with a Wiha torque handle



N° article	520003 External hex	AF_1 mm	max. torque Nm	Blade Ø mm	Total length mm
1,5	●	1,5	0,9	4	175
2,0	●	2	1,8	4	175
2,5	●	2,5	3,8	4	175
3,0	●	3	5,5	4	175
4,0	●	4	8	4	175



N° article	520005 External hex with spherical head	AF_1 mm	max. torque Nm	Blade Ø mm	Total length mm
1,5	●	1,5	0,4	4	175
2,0	●	2	0,9	4	175
2,5	●	2,5	2	4	175
3,0	●	3	3,8	4	175
4,0	●	4	8	4	175


520007


520009

N° article	520007 TORX®	520009 TORX® with MagicSpring®	Output size	max. torque Nm	Blade Ø mm	Total length mm
T5	●	–	T5	0,4	4	175
T6	●	●	T6	0,6	4	175
T7	●	●	T7	0,9	4	175
T8	●	●	T8	1,3	4	175
T9	●	●	T9	2,5	4	175
T10	●	●	T10	3,7	4	175
T15	●	●	T15	5,5	4	175
T20	●	●	T20	8	4	175
T25	●	–	T25	8	4	175


520010


520012

N° article	520010 TORX PLUS®	520012 TORX PLUS® with MagicSpring®	Output size	max. torque Nm	Blade Ø mm	Total length mm
5IP	●	–	5IP	0,5	4	175
6IP	●	●	6IP	0,8	4	175
7IP	●	●	7IP	1,3	4	175
8IP	●	●	8IP	2	4	175
9IP	●	●	9IP	3	4	175
10IP	●	●	10IP	4,5	4	175
15IP	●	●	15IP	6,6	4	175
20IP	●	●	20IP	8	4	175

Torque T-handle

EN/ISO 6789 ±6 %

Design:
- torque continuously adjustable
- numerical torque display with window scale
- with slip clutch
- torque continuously adjustable with adjustment tool Torque setter
- cross handle with soft zones for optimum torque transmission
- click signal when the preset torque is reached
- accuracy ± 6%, traceable to national standards
- with window scale

Use:
For controlled tightening at a given torque, in combination with a Wiha torque 6 mm interchangeable blade (520060-520062)

Delivery:
In plastic box incl. factory test report



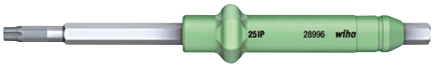
N° article	520054 TorqueVario®-STplus adjustable	min. torque Nm	max. torque Nm	Blade Ø mm	Total length mm
5-14	●	5	14	6	120

Exchangeable blade
for WIHA cross-handle

Design:
- made of chromium-vanadium-molybdenum steel
- through-hardened
- mat chrome-plated
- ChromTop®blade tip guarantees maximum accuracy to size



N° article	520060 TORX®	Output size	max. torque Nm	Blade Ø mm	Total length mm
T15	●	T15	5,5	6	130
T20	●	T20	10	6	130
T25	●	T25	15	6	130



N° article	520062 TORX PLUS®	Output size	max. torque Nm	Blade Ø mm	Total length mm
15IP	●	15IP	6,6	6	130
20IP	●	20IP	13	6	130
25IP	●	25IP	15	6	130

Exchangeable blade
for WIHA TorqueFix-Key®

Design:
- made of chromium-vanadium-molybdenum steel
- through-hardened
- titanium silver



N° article	520006 TORX®	Output size	max. torque Nm	Blade Ø mm	Total length mm
T6	●	T6	0,6	4	75
T7	●	T7	0,9	4	75
T8	●	T8	1,3	4	75
T9	●	T9	2,5	4	75
T10	●	T10	3,8	4	75
T15	●	T15	5,5	4	75
T20	●	T20	8	4	75

Torque wrenches

wiha Tools that work for you

Design:
- torque value **preset to fixed value**
- automatic release
- ergonomic handle
- especially for hard-to-reach screws
- click signal when the preset torque is reached
- accuracy ± 6%, traceable to national standards
- opening torque approx. +30% over tightening torque
- blades made of high-quality chromium-vanadium-molybdenum steel
- through-hardened
- galvanised

Use:
For controlled screwing at a specified torque.

Delivery:
Without interchangeable blade, in plastic box including factory test report

ISO 6789 | BS/EN 26789 | ASME B107.14M

± 6 %

N° article	520004 TorqueFix key®	Torque Nm	Blade ∅ mm	Total length mm
0,6	●	0,6	4	68
0,9	●	0,9	4	68
1,2	●	1,2	4	68
1,4	●	1,4	4	68
2,0	●	2	4	68
3,0	●	3	4	68





Torque screwdriver

Wera Be a Tool Rebel

Design:
- Kraftform handle with anti-roll protection
- presetting via micrometer scale by hand or with integrated auxiliary tool or open-end wrench
- Rapidaptor® quick-change chuck 1/4" to DIN 3216-C 6,3 and E 6.3 (ISO 1173)
- for high torques (over 3.0 Nm) version with pistol grip
- **precision ± 6 % (EN ISO 6789)**

Form C 6,3 | Form E 6,3 | ± 6 % | ISO 6789

Use:
As soon as the required torque is reached, the screwdriver triggers audibly and sensibly. Unlimited release torque for loosening fixed screws





N° article	520014 adjustable, automatic triggering	Measuring range, min. Nm	Measuring range, max. mm	Scale division Nm	Total length mm
0,3-1,2	●	0,3	1,2	0,05	155
1,2-3,0	●	1,2	3	0,1	155
3,0-6,0	●	3	6	0,25	150
4,0-8,8	●	4	8,8	0,25	150

Design:
- Kraftform handle with anti-roll protection
- for effortless transmission of the preset torque
- protected against manipulation and unintentional resetting
- for female TORX®screws
- hex blade (4 or 8 mm), reduced
- Black-Point tip
- from 5.0 Nm with pistol grip
- **precision ± 10 %**

± 10 % | ISO 6789

Use:
As soon as the required torque is reached, the screwdriver triggers audibly and sensibly. Unlimited release torque for loosening fixed screws Ideal for the assembly of indexable inserts. Improved work results due to the torque-controlled tightening of the inserts





N° article	520015 TORX® Preset	Output size	Torque Nm	Total length mm
TX6	●	T6	0,6	170
TX7	●	T7	0,9	170
TX8	●	T8	1,2	170
TX9	●	T9	1,4	170

N° article	520015 TORX® Preset	Output size	Torque Nm	Total length mm
TX10	●	T10	2	170
TX15	●	T15	3	170
TX20	●	T20	5	160

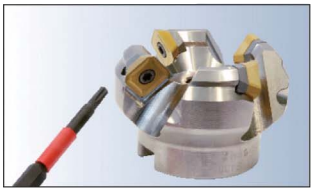
N° article	520016 TORX PLUS® Preset	Output size	Torque Nm	Total length mm
6IP	●	6IP	0,6	105
7IP	●	7IP	0,9	105
8IP	●	8IP	1,2	105
9IP	●	9IP	1,4	105
10IP	●	10IP	2	105
15IP	●	15IP	3	105

Torque screwdriver DINA PLUS

Design:
- each blade with exactly preset torque value
- large selection of colour-marked interchangeable blades (T6 - T20, IP6 - IP20)
- individually reorderable, arranged in ascending order in a handy kit
- handle made of anodised aluminium

Advantages:
- no overtightening
- no presetting required

Size	Torque Nm
T 6 | 6IP	0,6
T 7 | 7IP	0,9
T 8 | 8IP	1,2
T 9 | 9IP	1,4
T10 | 10IP	2
T15 | 15IP	3
T20 | 20IP	5





520039



520040

N° article	520039 Set, 15-piece	Contents
0010	●	**TORX®** T6 | T7 | T8 | T9 | T10 | T15 | T20 **TORX PLUS®** IP6 | IP7 | IP8 | IP9 | IP10 | IP15 | IP20

N° article	520040 Torque Screwdriver	min. torque Nm	max. torque Nm	Blade ∅ mm	Total length mm
0010	●	0,6	5	6	131,4

N° article	520041 Spare blades TORX®	Output size	max. torque Nm	Blade ∅ mm	Total length mm
T6	●	T6	0,6	6	175
T7	●	T7	0,9	6	175
T8	●	T8	1,2	6	175
T9	●	T9	1,4	6	175
T10	●	T10	2	6	175
T15	●	T15	3	6	175
T20	●	T20	5	6	175

N° article	520042 Spare blades TORX Plus®	Output size	max. torque Nm	Blade ∅ mm	Total length mm
6IP	●	6IP	0,6	6	175
7IP	●	7IP	0,9	6	175
8IP	●	8IP	1,2	6	175
9IP	●	9IP	1,4	6	175
10IP	●	10IP	2	6	175
15IP	●	15IP	3	6	175
20IP	●	20IP	5	6	175

Torque screwdriver

Design:
- clearly noticeable and audible torque release when the preset torque is reached
- unlimited loosening moment
- plug-in bit holder with magnet for all common bits with 1/4" hex drive or adapter with hex drive 6.3 = 1/4" for connection with sockets
- accuracy (tolerance) in accordance with EN ISO 6789
- torque handle with insert bit holder and offset screwdriver
- made in Germany

1/4" | ±6 % | ±10 % | EN/ISO 6789





6001 - 1,5

N° article	520022 adjustable, automatic triggering	min. torque Nm	max. torque Nm	Tolerance +/- %
6001 - 1,5	●	0,6	1,5	10
6001 - 3,0	●	1,5	3	6
6001 - 5,4	●	3	5,4	6

Torque screwdriver

Design:
- pre-set production torque wrench - without scale
- with 1/4"" hexagon socket for operating 1/4"" bits according to bits according to DIN 3126 - C 6.3
- classified to DIN EN ISO 6789 type II class F, with traceable factory certificate
- for controlled clockwise and counter-clockwise tightening operations
- when the set value is reached, slides noticeably through automatic reset to the starting position
- the pre-setting can be made at the factory or by the user on suitable torque testers

1/4" | ±6 % | EN/ISO 6789

Note:
Delivery incl. test certificate according to DIN EN ISO 6789-2:2017.
0015 - 0020 is supplied with additional sliding handle.





N° article	520023 Pro FS without scale	min. torque Nm	max. torque Nm
0010	●	0,2	1,5
0015	●	0,5	4,5
0020	●	2,5	13,5

Torque Wench

PREMUS®

Design:

- with fine-tooth reversible ratchet
- click signal when the preset torque is reached
- **release accuracy ± 3 %**
- setting of desired torque quick and easy by turning the handle
- safe locking of the handle by slewing ring
- including factory test certificate to current DIN EN ISO standard 6789, traceable to national standards
- **no need to turn back to the smallest scale value**
- **made by Hazet**

1/4" | 3/8" | 1/2" | EN/ISO 6789 | ± 3 %



N° article	520020 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Total length mm
5 - 25	●	1/4" male square	5	25	0,25	274
10 - 60	●	3/8" male square	10	60	0,5	347
20 - 120	●	1/2" male square	20	120	1	437
40 - 200	●	1/2" male square	40	200	1	530

Torque Wench

HAZET®

Design:
- **accuracy ± 3% (5107-3 CT ± 4 %)** of scale value (in direction of actuation) to DIN EN ISO 6789-2:2017
- fine scale division
- with permanently installed reversible ratchet
- reaching the set value can be heard and felt
- adjusting the desired torque value by turning the handle
- safe locking of the setting values by a latching function in the slewing ring
- laser marking for permanent readability
- no need to turn back to the smallest scale value
- with serial number and calibration certificate

1/4" | 3/8" | 1/2" | 3/4" | ± 3 % | ± 4 % | EN/ISO 6789




Laser marking


Safe locking

N° article	520030 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Tolerance +/- %	Total length mm
5107 - 3CT	●	1/4" male square	1	9	0,1	4	234
5107B-3CT	NEW ●	1/4" female hex	1	9	0,1	4	234
5108 - 3CT	●	1/4" male square	2,5	25	0,25	3	234
5108B-3CT	NEW ●	1/4" female hex	2,5	25	0,1	3	234
5110 - 3CT	●	3/8" male square	10	60	0,5	3	320
5111 - 3CT	●	3/8" male square	20	120	0,5	3	375
5120 - 3CT	●	1/2" male square	10	60	0,5	3	320
5121 - 3CT	●	1/2" male square	20	120	1	3	421
5122 - 3CT	●	1/2" male square	40	200	1	3	519
5123 - 3CT	●	1/2" male square	60	320	2	3	628
5143 - 3CT	●	1/2" male square	100	400	2,5	3	790
5145 - 3CT	●	3/4" male square	300	800	2,5	3	1271

Torque Wench

1/4" | DIN ISO 1173 | ± 10 %

Design:
- for controlled clockwise and counter-clockwise tightening operations
- **tightening and loosening with and without torque**
- fine-toothed reversible ratchet (72 teeth / 5° return angle)
- with ergonomic 2-component handle
- easy setting and securing of the torque value
- with audible and tactile engagement when reaching the scale values
- **no more over-tightening, thanks to over-slipping release mechanism when reaching the set torque value**
- **0010:** with magnetic bit holder





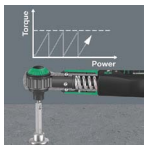
0020



NEW









N° article	520068 Safe-Torque A2	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Tolerance +/- %	Total length mm
0010	○	1/4" female hex	2	12	0,1	10	244
0020	○	1/4" male square	2	12	0,1	10	244

Design:
- for controlled clockwise and counter-clockwise tightening operations
- **tightening and loosening with and without torque**
- fine-toothed reversible ratchet (72 teeth / 5° return angle)
- with ergonomic 2-component handle
- easy setting and securing of the torque value
- with audible and tactile engagement when reaching the scale values
- **no more over-tightening, thanks to over-slipping release mechanism when reaching the set torque value**
- in a practical set with socket spanners and bits
- with magnetic bit holder
- in compact, textile box with high robustness

1/4" | DIN ISO 1173 | ± 10 %

NEW

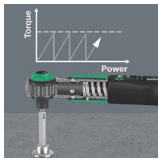


0100



0110







N° article	520068 Safe-Torque A1 set 1	Parts	Output size	Contents
0100	●	23	1/4" female hex	**1 torque wrench** 1/4", 2 - 12 Nm **9 socket wrench bits** 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 × 23 mm **1 bits cross-recess** PH 2 **5 bits 50 mm male hex** 2.5 | 3 | 4 | 5 | 6 mm **6 bits 50 mm TORX®** T10 | T15 | T20 | T25 | T27 | T30 **1 adapter** 1/4" female square to 1/4" male square
0110	○	10	1/4" male square	**1 torque wrench** 1/4", 2 - 12 Nm **8 socket wrench bits** 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 × 23 mm **1 extension with free-wheel sleeve, short** 1/4" × 75 mm

Torque Wench

Wera

Design:
- for clockwise tightening
- reversible ratchet with 45 teeth
- easy setting and securing of the torque value
- **with audible and tactile engagement or release** mechanism when the set torque value is reached
- with ergonomic 2-component handle

1/4"	3/8"	1/2"	±3 %	±4 %	EN/ISO 6789



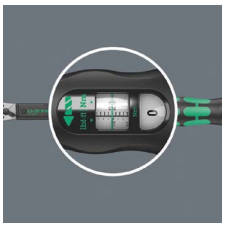
0010



0015-0024



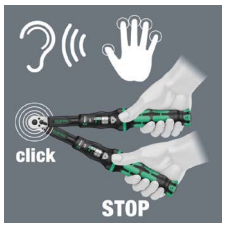
0025



Easy setting and securing of the desired torque value; readable on main and fine scale.



with audible and tactile engagement when reaching the scale values.



With audible and tactile engagement when the scale values are reached.

N° article	520070 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Tolerance +/- %	Total length mm
0010	●	1/4" male square	2,5	25	0,1	4	290
0015	●	1/4" female hex	2,5	25	0,1	4	290
0017	●	3/8" male square	10	50	0,25	3	360
0022	●	1/2" male square	10	50	0,25	3	360
0024	●	1/2" male square	20	100	0,5	3	405
0025	●	1/2" male square	40	200	1	3	510
0030	●	1/2" male square	60	300	1	3	595
0040	○	3/4" male square	200	1000	1	3	1250

Torque wrench set

Wera

Design:
- 13-piece screwdriving tool set for applications with torque control
- robust design with high accuracy of ± 3 %, according to DIN EN ISO 6789-1:2017-07
- easy setting and securing of the torque value with audible and tactile engagement when the scale value is reached (click 1)
- when the set value is reached, the torque spanner releases audibly and perceptibly (click 2)

1/2"	±3 %	EN/ISO 6789



N° article	520072 13-piece	Contents
0025	●	**1 torque wrench** 1/2", 40 - 200 Nm **4 socket wrench bits** 10 | 13 | 17 | 19 mm **3 bit sockets** 6 | 8 | 10 mm **4 bit sockets** TX 30 | 40 | 45 | 50 **1 Zyklop extension** with free-wheel sleeve, short, 1/2"

Torque Wench

HAZET

Design:
- integrated lever reverse ratchet function
- **release accuracy ± 4 %** of set value to DIN EN ISO 6789:2003 (D)
- with display of torque in a window
  => safe and precise setting of desired release value
- rotatable handle for setting the required values
- built-in locking system prevents unintentional shifting
- with serial number and calibration certificate
- no need to turn back to the smallest scale value
- made in Germany

1/2"	EN/ISO 6789	±4 %





N° article	523120 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Tolerance +/- %	Total length mm
5121 - 2CLT	●	1/2" male square	20	120	1	4	435
5122 - 2CLT	●	1/2" male square	40	200	1	4	545
5123 - 2CLT	●	1/2" male square	60	320	2	4	660

Torque Wench

GEDORE
WERKZEUGE FÜRS LEBEN

Design:
- robust, matt powder-coated tubular steel construction, with galvanised ratchet and high-quality plastic parts
- ergonomic handle, shaped according to the natural gripping posture
- double scale N-m / lbf-ft with vernier (N-m)
- enlarged viewing window protects against abrasion and dirt
- with vernier scale for N-m main scale for setting intermediate scale values; lbf-ft setting only via main scale
- scale mark positioned directly above the scale
- classified according to DIN EN ISO 6789-2:2017 type II class A
- including traceable test certificate (DIN EN ISO 6789-2:2017)
- calibrated to a maximum permissible deviation of +/- 3%
- for controlled right and left tightening (Change square for change of direction)

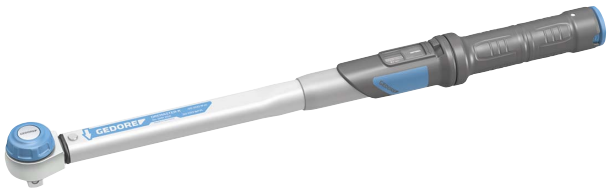
3/4"	3/8"	1/2"
1/4"	EN/ISO 6789	±3 %



N° article	520203 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Vernier Nm	Total length mm
TF-K5 NEW	○	1/4" male square	1	5	0,25	0,025	223
TF-K25 NEW	●	1/4" male square	5	25	1	0,1	273
TF-K50 NEW	●	3/8" male square	10	50	2,5	0,25	303
TF-K100	●	1/2" male square	20	100	5	0,5	403,2
TF-K200	●	1/2" male square	40	200	10	1	494
TF-K300	●	1/2" male square	60	300	10	1	586
TF-K400	●	3/4" male square	80	400	10	1	694,5
TF-K550	●	3/4" male square	110	550	10	1	966
TF-K850	●	3/4" male square	250	850	10	1	1388

Design:
- sturdy, satin chrome-plated tubular steel construction, with chrome-plated ratchet
- ergonomically shaped 2K (component) plastic handle with calibration aid
- change-over between main scale Nm and secondary scale lbf-ft
- with micrometer scale for Nm main scale for setting intermediate values
- release system generates a tactile and audible release signal
- option for quick adjustment by Allen wrench (not included)
- secured adjusting/setting system
- classified to DIN ISO 6789:2003 type II class A, with traceable factory certificate
- **calibrated to a permissible deviation of ± 3% and better**
- for controlled clockwise and counter-clockwise tightening operations

1/2"	3/4"	EN/ISO 6789
±3 %		



N° article	520202 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Total length mm
DMK100	●	1/2" male square	20	100	423,5
DMK200	●	1/2" male square	40	200	514,5
DMK300	●	1/2" male square	60	300	606,4
DMK400	●	3/4" male square	80	400	714,8
DMK550	●	3/4" male square	110	550	953,2
DMK750	●	3/4" male square	150	750	1228,2
DMK850	○	3/4" male square	250	850	1375,2

Torque Wench

GEDORE
WERKZEUGE FÜRS LEBEN

Design:
- **all-metal construction** made of high-strength aluminium alloy
- torque wrench with square drive 1/4" to 3/4" (depending on model)
- torque range from 6 to 1,000 Nm (depending on model)
- an integrated lever chain **guarantees high accuracy and long tool life**, at the same time lowering the load to a minimum
- automatic short-path release with noticeable and audible signal
- **release accuracy ± 3 %** of set scale value
- double scale Nm and lbf-in/ft.
- including factory test certificate to current DIN EN ISO standard 6789, traceable to national standards
- **8571 - 01** with aluminium extension tube* with extension pipe

1/4"	3/8"	1/2"
3/4"	EN/ISO 6789	±3 %



N° article	520250 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Total length mm
8554 - 01	○	1/4" male square	6	30	268
8561 - 01	●	1/2" male square	25	120	462
8573 - 00	○	1/2" male square	40	200	551
8562 - 10	○	1/2" male square	60	300	617
8570 - 10	○	3/4" male square	80	360	717
8574 - 10	○	3/4" male square	110	550	812
8563 - 10	●	3/4" male square	155	760	812
8571 - 01	○	3/4" male square	520	1000	812

Ratchet adapter

GEDORE
WERKZEUGE FÜRS LEBEN

Design:
- made of chromium-vanadium steel
- smooth-running, sturdy ratchet insert

Use:
Combined with 520250 torque wrench DREMOMETER for controlled tightening of screws

1/4"	3/8"	1/2"
3/4"		



N° article	520260 for R.H. drive	520265 for L.H. drive	Drive size	Diameter mm	Hauteur mm
754 - 00	○	–	1/4" male square	24	21
754 - 01	○	–	3/8" male square	35	28
754 - 02	●	–	1/2" male square	46	35
754 - 04	●	–	3/4" male square	65	53
754 - 11	–	○	3/8" male square	35	28
754 - 12	–	○	1/2" male square	46	35
754 - 14	–	○	3/4" male square	65	53

Torque Wench

HAZET

1/4" | EN/ISO 6789 | ±2%

Design:
- integrated lever reverse ratchet function
- **release accuracy ± 2 %** in operating direction from the adjusted scale value to DIN EN ISO 6789: 2003 (D) (type 6106-1CT ± 4 %
- with serial number and certificate
- especially for e.g. engine, transmission, industrial, machine or model construction
- no need to turn back to the smallest scale value
- with calibration certificate and serial number

N° article	520024 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Total length mm
6106-1CT	●	1/4" male square	1	6	0,1	197
6108-1CT	●	1/4" male square	2	10	0,2	198
6109-2CT	●	1/4" male square	4	40	0,4	256



6106-1 CT

Torque Wench

HAZET

3/8" | 1/2" | 3/4" | 1"
EN/ISO 6789 | ±2% | ±3% | ±4%

Design:
- **± 2 % triggering accuracy of the scale value** (in direction of actuation)
- integrated switch lever
- integral **Reversible ratchet**
- with calibration certificate and serial number
- rotatable handle for setting the required values
- built-in locking system prevents unintentional shifting
- rotary knob for additional locking of the setting
- to DIN EN ISO 6789:2003 (D)
- no need to turn back to the smallest scale value
- made in Germany

- **6143-1CT**
- two-component handle for improved feel
- simplified locking for setting the torque value
- window for optical control of the locking
- with 3 further coloured coding rings for marking personalisations or special work processes
- without signal button

6150-1CT to 6170-1CT
- dismountable, ideal for industrial climbers or work in the fields of wind power, aviation and heavy industry, shipyards, commercial vehicles etc.
- **± 3 % or ± 4 % triggering accuracy of the set scale value** (dependent on version)

N° article	523100 adjustable, automatic triggering	Output size	min. torque Nm	max. torque Nm	Scale division Nm	Tolerance +/- %	Total length mm
6110-1CT	●	3/8" male square	5	60	0,5	2	335
6111-1CT	●	3/8" male square	20	120	1	2	389
6121-1CT	●	1/2" male square	20	120	1	2	435
6122-1CT	●	1/2" male square	40	200	1	2	547
6123-1CT	●	1/2" male square	60	320	2	2	661
6143-1CT	○	3/4" male square	100	400	2,5	2	802
6144-1CT	○	3/4" male square	200	500	2,5	2	1046
6145-1CT	●	3/4" male square	300	800	2,5	2	1283
6150-1CT	○	3/4" male square	400	1000	5	3	1789
6160-1CT	○	1" male square	600	1600	5	3	2455
6170-1CT	○	1" male square	800	2000	6	4	3033



Torque Wench for insertion tools

STAHLWILLE

EN/ISO 6789 | ±4%

Design:
- mounting for interchangeable plug-in tools
- quick adjustment of the torque by sliding control knob
- double stop signal
- **no resetting to 0 required, as the measuring element is only loaded during the tightening process**
- left-handed tightening by turning the plug-in tools around

- **display deviation ± 4 %**
- calibration certificate according to DIN EN ISO 6789-2:2017

730/5, 730/65 and 730/30
- with QuickRelease safety lock
- double scale Nm / ft-lb or Nm / in-lb



730/2 + 730/4



730/5 - 730/65

N° article	523130 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm
730/2	●	9 × 12	4	20	4	179
730/4	●	9 × 12	8	40	4	223
730/5	●	9 × 12	6	50	4	315
730/10	●	9 × 12	20	100	4	370
730/12	●	14 × 18	25	130	4	410
730/20	●	14 × 18	40	200	4	455
730/30	●	14 × 18	60	300	4	520
730/40	●	14 × 18	80	400	4	590
730/65	●	14 × 18	130	650	4	875

Torque Wench
for insertion tools

STAHLWILLE

EN/ISO 6789 | ±3 %

Design:
- mounting for interchangeable plug-in tools
- with QuickRelease safety lock
- rapid, precise setting by QuickSelect fast adjustment
- double stop signal
- **no resetting to 0 required, as the measuring element is only loaded during the tightening process**
- left-handed tightening by turning the plug-in tools around
- dual scale with colour differentiation of Nm / ft-lb
- **display deviation ± 3 %**
- calibration certificate according to DIN EN ISO 6789-2:2017



N° article	523132 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Total length mm
730N/5	●	9 × 12	10	50	330
730N/10	●	9 × 12	20	100	386
730N/12	●	14 × 18	25	130	421
730N/20	●	14 × 18	40	200	467
730N/40	●	14 × 18	80	400	607
730N/65	●	14 × 18	130	650	890

Torque Wench
for insertion tools

HAZET

BS/EN 26789 | ±3 %

Design:
- **± 3 % triggering accuracy of the scale value** (in direction of actuation)
- plug-in connection for holding insertion tools
- with calibration certificate and serial number
- handle with increased grip for easier power transmission
- built-in locking system prevents unintentional shifting
- safe locking of the setting values by a latching function in the slewing ring
- easy to read, high-contrast scale
- to DIN EN ISO 6789-2:2017 (D)
- no need to turn back to the smallest scale value
- made in Germany



5280-3CT



5290-3CT



5292-3CT

N° article	523135 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Scale division Nm	Total length mm
5280 - 3CT	●	9 × 12	2,5	25	0,25	218
5290 - 3CT	●	9 × 12	10	60	0,5	291
5292 - 3CT	●	14 × 18	40	200	0,1	484

Torque Wench for insertion tools

Wera

Design:
- for controlled clockwise and counter-clockwise tightening operations
- easy setting and securing of the torque value
- with audible and tactile engagement or release mechanism when the set torque value is reached
- with ergonomic 2-component handle

EN/ISO 6789 | ±3 % | ±4 %



0010



0025

N° article	523140 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm
0010	●	9 × 12	2,5	25	4	283
0020	●	9 × 12	20	100	3	372
0025	●	14 × 18	40	200	3	480
0035	○	14 × 18	80	400	3	655

Torque Wench for insertion tools

HAZET

Design:
- basic unit with square drive for insert tools (523250 to 523360)
- DIN EN ISO 6789:2017 (D)
- **resolution accuracy ± 2%** in direction of actuation
- haptic and acoustic release
- optical release (models with signal button)
- no need to turn back to the smallest scale value
- 4 coloured coding rings (black, green, red, yellow) for marking / personalisation or special work processes
- with serial number and calibration certificate
- made in Germany

EN/ISO 6789 | ±2 %



6280-1CT - 6282-1CT



6291-2CT - 6293-1CT

N° article	523150 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm	Design:
6280 - 1CT	●	9 × 12	2	10	2	181	without signal head
6282 - 1CT	●	9 × 12	4	40	2	240	without signal head
6290 - 1CT	●	9 × 12	5	60	2	306	without signal head
6291 - 2CT	●	9 × 12	20	120	2	389	with signal head
6291 - 1CT	●	14 × 18	20	120	2	401	with signal head
6292 - 1CT	●	14 × 18	40	200	2	511	with signal head
6293 - 1CT	○	14 × 18	60	320	2	625	with signal head
6294 - 1CT	○	14 × 18	100	400	2	718	without signal head
6295 - 1CT	○	14 × 18	200	500	2	962	without signal head

Torque Wench for plug-in tools

GEDORE WERKZEUGE FÜRS LEBEN

Design:
- torque wrench for interchangeable insert tools
- rectangular holder incl. ejector aid
- for controlled clockwise and counter-clockwise tightening operations
- robust, matt powder-coated tubular steel construction with high-quality plastic parts
- ergonomic handle, shaped according to the hand's natural gripping posture
- clearly visible and tactile hand centring aid as well as calibration aid in the centre of the handle
- vertical alignment of the scale, torque adjustment thus suitable for left- and right-handers
- the trigger system generates a clearly perceptible and audible release signal
- triggering accuracy ± 3 % of the set numerical value
- double scale Nm and lbf-ft with vernier (Nm), enlarged viewing window protects against abrasion and dirt
- classified to DIN EN ISO 6789-2:2017 type II class A, with traceable factory certificate
- including roll-away protection

Use:
- for controlled screw tightening in industry and crafts
- operation only with end fittings with standardised depth gauges, otherwise inaccuracies can arise

EN/ISO 6789 | ±3 %

NEW



TF-SE25



TF-SE200

N° article	523171 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Scale division Nm	Tolerance +/- %	Total length mm
TF-SE25	○	9 × 12	5	25	1	3	273
TF-SE50	○	9 × 12	10	50	2,5	3	232
TF-SE100	○	9 × 12	20	100	5	3	369,5
TF-SE150	○	9 × 12	30	150	10	3	460,5
TF-SE200	○	14 × 18	40	200	10	3	470,5
TF-SE300	○	14 × 18	60	300	10	3	561,5
TF-SE400	○	14 × 18	80	400	10	3	648,5

Torque Wench for insertion tools

GEDORE WERKZEUGE FÜRS LEBEN

Design:
- classified to DIN EN ISO 6789:2003 type II class A, with traceable factory certificate
- **calibrated to a permissible deviation of ± 3% and better**
- for controlled clockwise and counter-clockwise tightening operations
- robust, silk-matt chrome-plated steel tube construction, with chrome-plated rectangular mount
- ergonomically shaped 2K (component) plastic handle with calibration aid
- change-over between main scale Nm and secondary scale lbf-ft
- with micrometer scale for Nm main scale for setting intermediate values
- release system generates a tactile and audible release signal
- option for quick adjustment by Allen wrench (not included)
- secured adjusting/setting system
- with factory depth gauge: 17.5 mm (9 x 12 mm) or 25 mm (14 x 18 mm)

Use:
- for controlled screw tightening in industry and crafts
- operation only with end fittings with standardised depth gauges, otherwise inaccuracies can arise
- depending on the insert, it is possible to work either forwards or sideways

EN/ISO 6789 | ±3 %



N° article	523172 adjustable, automatic triggering	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm
DMSE100	○	9 × 12	20	100	3	398,5
DMSE150	○	9 × 12	30	150	3	489,5
DMSE200	●	14 × 18	40	200	3	499,5
DMSE300	●	14 × 18	60	300	3	590,5
DMSE400	●	14 × 18	80	400	3	677,5

Torque multiplier

GEDORE WERKZEUGE FÜRS LEBEN

Design:
- mechanic, hand-operated torque multiplier
- for controlled tightening or loosening of screws
- with single-stage planetary gear
- housing made of high-performance aluminium
- guaranteed accuracy better than ± 3 % tolerance
- output square drives with bore for impact screwdriver inserts with locking pin and retaining ring

Use:
- applicable in conjunction with a torque wrench
- for industry, construction sites, commercial and automotive workshops, agricultural engineering, construction machinery, bridges, ships, aircraft and railway construction, refineries, machine and plant construction and maintenance

Delivery:
Torque multiplier DREMOPLUS in sturdy shipping case with foam insert, integrated reaction arm depending on ordered version, factory test certificate and setting table

Model Z: Z-shaped cranked reaction arm made of chromium-vanadium steel
Model L: L-shaped straight torque arm and adjustable reaction square, made of light metal

½" | ¾" | 1" | ±3 %



DVV-13Z



DVI-28L



DVI-28Z



DVV-40Z

N° article	523192 DREMOPLUS ALU	max. torque Nm	Drive size	Output size	Gear ratio	Tolerance +/- %	Poids kg
DVV-13Z	○	1300	1/2" male square	3/4" male square	1:5.0	3	1,9
DVI-28L	○	2800	3/4" male square	1" male square	1:5.5	3	3,4
DVI-28Z	○	2800	3/4" male square	1" male square	1:5.5	3	3,9
DVV-40Z	○	4000	1/2" male square	1" male square	1:16	3	5,4

Electronic torque wrench

STAHLWILLE

Design:
- very slim, compact and ergonomic model
- with software SENSOMASTER4
- fine tooth ratchet with 80 teeth and QuickRelease technology as integrated part
- display deviation of ±4 %
- for controlled clockwise and counter-clockwise tightening operations
- USB interface for data exchange with 2500 memory locations
- optional evaluation mode with LED and buzzer

Delivery:
Including micro USB cable, calibration certificate according to DIN EN ISO 6789-2:2017 and Li-metal battery UN3091

USB | 1/4" | EN/ISO 6789 | ±4 %

N° article	523194 SENSOTORK® 701	Output size	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm
701	●	1/4" male square	1	20	4	210

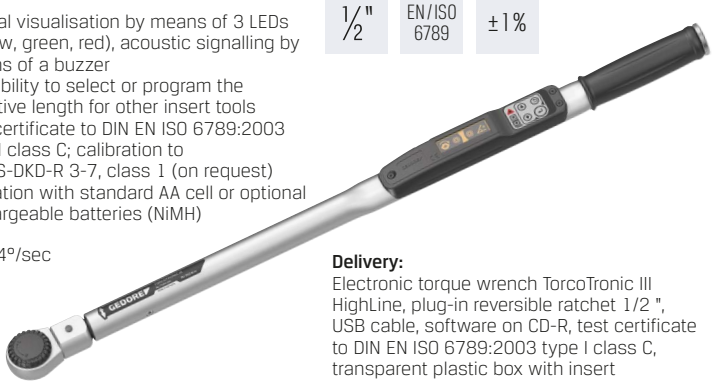


Electronic torque wrench

GEDORE WERKZEUGE FÜRS LEBEN

Design:
- microprocessor-controlled electronic torque wrench
- for controlled clockwise and counter-clockwise tightening operations
- to DIN EN ISO 6789, traceable to National Standards
- robust workshop construction
- large measuring range in Nm, switchable to lbf-ft
- torque and rotation angle measurement
- 4 different measuring modes
- 5 screwing parameters can be stored
- USB interface for data exchange
- **2000 storage locations**
- **measuring accuracy torque ± 1%, ± 1 digit**
- measuring accuracy rotation angle ± 1%, but at least ± 1° to 360° in at least 4°/sec
- different depth gauges for end fittings programmable
- **easily readable, illuminated display**
- resolution torque 0.1 Nm, resolution of rotation angle 0.1°
- easy-to-use PC software for trouble-free programming and documentation of data and their export to MS Excel® keyboard lock
- optical visualisation by means of 3 LEDs (yellow, green, red), acoustic signalling by means of a buzzer
- possibility to select or program the effective length for other insert tools
- test certificate to DIN EN ISO 6789:2003 type I class C; calibration to DAkkS-DKD-R 3-7, class 1 (on request)
- operation with standard AA cell or optional rechargeable batteries (NiMH)

1/2" | EN/ISO 6789 | ±1%



Delivery:
Electronic torque wrench TorcoTronic III HighLine, plug-in reversible ratchet 1/2 ", USB cable, software on CD-R, test certificate to DIN EN ISO 6789:2003 type I class C, transparent plastic box with insert

N° article	523178 TORCOTRONIC III	Output size	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %
TT3KH120	○	1/2" male square	9 × 12	10	120	1
TT3KH350	○	1/2" male square	14 × 18	70	350	1

Electronic torque/angle spanner System 7000 sTAC-Top

HAZET

Design:
- display deviation torque right and left: from ± 1 % / ± 1 digit
- display deviation of rotation angle right and left: ± 1 % / ± 1°
- USB-C interface for programming the torque angle spanner and **documentation of the bolting data via laptop and PC**
- **4fold signalling of the process of screwing through acoustic signal (buzzer), vibration and 360° LED display with "traffic light function"**
- adjustable signalling: Acoustic Signal On/Off and Vibration On/Off
- variable threshold value (pre-warning level)
- large, high-contrast, easy-to-read OLED display (180° rotatable)
- measured value**display in 13 mm font size**including an "i.O./n.O." screw case evaluation
- for documentation of the bolting data via laptop and PC
- locking function against unauthorised adjustment with selectable code
- automatic, time-dependent, energy-saving stand-by mode
- selectable torque units: Nm, lbf ft, lbf.in or Kgf.m
- measuring range for rotation angle (adding) up to 999°
- memory for up to **3,000 results** incl. date and time
- possibility to program parameter sets and time schedules
- control function: Programmable rotation angle control for torque-tightening and torque control for rotation angle tightening
- possibility to select or program the effective length for other insert tools
- battery and memory display
- for high-precision screw connections with torque / rotation angle where high accuracy or documentation is required
- sTAC torque angle spanners can also be used independently, without the SmartTAC app
- display of the software version with serial number, calibration date and service indicator / usage counter
- programming and evaluation software for laptop and PC 7910-sTAC (subject to a charge)
- SmartTAC app for Android and Apple iOS devices for the 7000-2 sTAC series (free download)
- tested in accordance with DIN EN ISO 6789-2:2017, VDI / VDE 2648, sheet 2
- made in Germany

3/8" | 1/2" | 3/4" | USB | EN/ISO 6789 | ±1% | IP40

1 AKKU



Delivery:
With detailed operating instructions and DAkkS-, in an aluminium frame case with foam inserts including HAZET insertion ratchet, replaceable Li-Ion battery and 1 metre USB 3.1 / A-C cable

N° article	523187 5s TAC	Drive size	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm
7291	○	3/8" male square	9 × 12	10	100	1	383
7292	○	1/2" male square	14 × 18	20	200	1	520
7294	○	3/4" male square	14 × 18	40	400	1	945

Electronic angle torque wrench SENSOTORK® 713R

STAHLWILLE

Design:
- **display deviation ± 1 %**
- illuminated LCD display
- large measuring or rotation range
- selectable units of measurement (Nm, ft-lb, in-lb)
- clockwise and counter-clockwise tightening
- insertion tools 9 × 12 or 14 × 18 mm can be used
- QuickSelect fast setting
- repetitive screwing sequences can be stored up in a workflow schedule
- screwing operations are saved with time stamp
- results can be stored directly, transferred to a PC or only displayed
- password protection against unauthorised access
- various display languages selectable
- programmable via PC
- resistant to oils, greases, fuels, brake fluids and Skyrol®
- operating temperature range -20 °C to +60 °C
- **meets DKD-R 3-7, class 2**
- calibration certificate according to DIN EN ISO 6789-2:2017
- torque and rotation angle measurement

3/8" | 1/2" | 3/4" | USB | ±1%

Delivery:
Including reversible ratchet, certificate, 2 Mignon batteries 1.5 V and plastic (types 6|200) or sheet steel case (type 40)



N° article	523186 with insertion tool reversible ratchet	Drive size	Push-in square mm	min. torque Nm	max. torque Nm	Tolerance +/- %	Total length mm
60	○	3/8" male square	9 × 12	3	60	1	378
200	○	1/2" male square	14 × 18	10	200	1	608
400	○	3/4" male square	14 × 18	20	400	1	838

Electronic torque tester

HAZET

Design:
- to DIN EN ISO 6789:2003
- accuracy ± 1 %
- **3 operation modes:**
  Tracking mode
  Click mode for click point indication (1st peak)
  DIAL mode for peak value indication (final peak)
- compatible with testing software 7901 E-D
- large and easy to read **LED display** with backlight
- calibrated measuring range in clockwise direction of rotation
- selection of the desired units configurable
- switchable torque display in Nm × kgfm × kgfcm × lbf.ft × lbf.in × ft. lb × in.lb
- 3-fold signalling of the measurement result:
- numerical display in 17 mm font size
- traffic light function for assessing the torque value
- acoustic signal
- quick test function with auto reset
- display and membrane keypad splash-proof
- robust aluminium housing for workshop use
- calibration in Nm, torque units lbf.ft and lbf.in selectable
- possibility to enter target torque setting and percentage tolerance setting
- autonomous operation via power bank (5 V / 1 A) possible

Delivery:
USB power supply unit including mains plug adapters, cable (2.0 m) USB 2.0 A plug - USB 2.0 Micro B plug, calibration certificate and quick start guide and plastic case.

EN/ISO 6789 | USB | ±1% | IP40

7901E with stationary square mount, 12.5 mm = 1/2"
7902E: with stationary hexagon mount 27 mm
7903E with fixed 3/8" hexagon socket including adapter 10 mm (3/8") hexagon socket to 6.3 mm (1/4") square socket and adapter 10 mm (3/8"), hexagon socket to 10 mm (3/8") square socket



7903E



7901E



7902E

N° article	523188	Drive size	Measuring range, min. Nm	Measuring range, max. mm	Tolerance +/- %
7903E	○	3/8" external hex	1,5	30	1
7901E	○	1/2" female square	10	350	1
7902E	○	External hexagon SW 27 mm	50	1100	1

Reversible ratchet adapter

HAZET

Design:
- made of chromium-vanadium steel
- surface chrome-plated
- die-forged

- **type 6602-1 and 6604-1 particularly low overall height**

1/4" | 3/8" | 1/2" | 3/4" | DIN 3120 | ISO 1174-1A

N° article	523250 Fine toothing (72 teeth)	523255 quick-release safety lock	523260 Standard toothing	Output size	Push-in square mm
6401N	●	–	–	1/4" male square	9 × 12
6401-1S	–	●	–	1/4" male square	9 × 12
6401-1	–	–	●	1/4" male square	9 × 12
6402	●	–	–	3/8" male square	9 × 12
6402-1S	–	●	–	3/8" male square	9 × 12
6402-1	–	–	●	3/8" male square	9 × 12
6403	●	–	–	1/2" male square	9 × 12
6403-1S	–	●	–	1/2" male square	9 × 12
6403-1	–	–	●	1/2" male square	9 × 12
6404	●	–	–	1/2" male square	14 × 18
6404-1S	–	●	–	1/2" male square	14 × 18
6404-1	–	–	●	1/2" male square	14 × 18
6602-1	–	–	○	3/8" male square	14 × 18
6604-1	–	–	○	1/2" male square	14 × 18
6406	●	–	–	3/4" male square	14 × 18



523250



523255

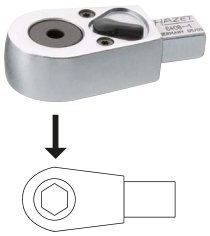


523260

Reversible ratchet adapter
as bit holder

Design:
- made of chromium-vanadium steel
- die-forged
- surface chrome-plated

Antrieb



N° article	523290	Output size	Push-in square mm	Teeth	Return angle
6408	●	1/4" female hex	9 × 12	20	18
6408 - 1	○	5/16" female hex	9 × 12	30	12

Insert tool holder

Design:
- made of chromium-vanadium steel
- die-forged
- surface chrome-plated

1/2" | DIN 3120 | ISO 1174-1A



N° article	523280	Output size	Push-in square mm
6414	●	1/2" male square	14 × 18

Insert tool set

GEDORE WERKZEUGE FÜRS LEBEN

N° article	523300 Insert open-end wrench, mounting side 9 x 12 mm	523310 Insert open-end wrench, mounting side 14 x 18 mm
8	●	–
10	●	–
11	●	–
12	●	–
13	●	○
14	●	○
15	●	○
16	●	●
17	●	●
18	●	●
19	●	●
21	–	●
22	–	●
24	–	●
27	–	●
30	–	●
32	–	●
34	–	○
36	–	●
38	–	○
41	–	●

N° article	523350 Insert ring wrench, mounting square 9 x 12 mm	523360 Insert ring wrench, mounting square 14 x 18 mm
7	○	–
8	○	–
10	●	–
12	●	–
13	●	○
14	○	○
15	○	○
16	○	○
17	○	●
18	○	●
19	●	●
21	○	○
22	○	○
24	–	●
27	–	●
30	–	●
32	–	○
36	–	●
41	–	○

N° article	523320 Open insert ring wrench, insert square 9×12 mm
10	○
11	○
12	○
13	●
14	○
16	○
17	○
19	○
22	●

N° article	523368 Plug-in ratchet ring wrench, square plug 9×12 mm (GEDORE)
10	●
13	●
17	●
19	●

Design:
- switching function for clockwise/anticlockwise rotation
- 40 teeth, return angle 9°
- max.: 320 Nm
- flat, low-cranked construction for working in confined spaces
- die-forged
- surface chrome-plated



N° article	523370 Plug-in ratchet ring wrench, square plug 14×18 mm
16	○
17	○
18	○
19	○
21	○

Design:
- made of chromium-vanadium steel
- die-forged
- surface chrome-plated

ISO 1173 | 1/4" | 5/16"

Drive



N° article	523380 Insert tool holder for bits	Output size	Push-in square mm
6420B	●	1/4" female hex	9 × 12
6420C	○	5/16" female hex	9 × 12
6420D	○	5/16" female hex	14 × 18



N° article	523382 Insert adapter	Square seat mm	Push-in square mm
6423D	●	9 × 12	14 × 18
6423C	●	14 × 18	9 × 12

Delivery:
Includes spring, pin and cover.

Note:
The release values may change when tools are welded on.



N° article	523388 Weld-on insert blank	Push-in square mm
6430C	●	9 × 12
6430D	●	14 × 18

Insert tool set

Design:
- made of chromium-vanadium steel
- die-forged
- surface chrome-plated

1/2"



Nº article	523387 7-piece, Push-in square 14×18 mm	Output size	Contents
6450D/7	○	1/2 inch	**1 insert reversible ratchet,** insert square 14×18 mm, 1/2" male square **6 insert open-end wrenches,** Square socket 14×18 mm, SW 16|17|18|19|22|24 mm

1/4"



Nº article	523387 7-piece, Push-in square 14×18 mm	Output size	Contents
6450D/7	○	1/2 inch	**1 insert reversible ratchet,** insert square 14×18 mm, 1/2" male square **6 insert open-end wrenches,** Square socket 14×18 mm, SW 16|17|18|19|22|24 mm

1/4" 3/8" 1/2"



Nº article	523389 29-piece	Contents
6400 CD/29	○	**1 bit insert reversible ratchet,** insert square 9×12 mm, 1/4" male square **1 insert reversible ratchet,** insert square 9×12 mm, 1/4" male square **1 insert reversible ratchet,** insert square 9×12 mm, 3/8" male square **1 insert reversible ratchet,** insert square 14×18 mm, 1/2" male square **1 push-through square,** 10 mm (3/8") / square 12.5 mm (1/2") **1 insert square drive,** insert square 14×18 mm, 1/2" male square **1 insert square adapter,** insert square 9×12mm to insert square 14×18 mm **1 insert open-end wrenches,** insert square 14×18 mm, A/F 24 mm **4 insert ring wrenches,** open, Insert square 9×12 mm, A/F 10|14|19|22 mm **8 insert ring wrenches,** insert square 9×12 mm, A/F 8|10|11|12|13|14|15|16 mm **9 insert ring wrenches,** insert square 14×18 mm, A/F 13|16|17|18|19|21|22|24|27 mm

Screwdriver set

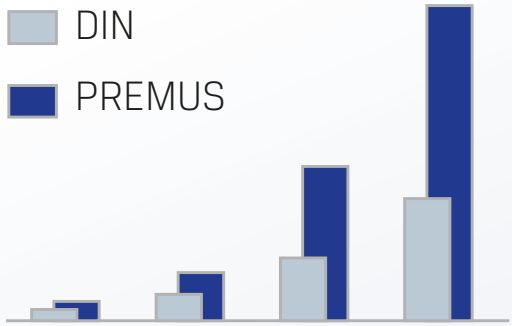
PREMUS®

MADE IN GERMANY

Design:

- perfectly shaped, ergonomic handle for unique working comfort
- 2-component handle with comfortable soft grip for fatigue-free and arm-friendly working
- with cross hole for hanging up the tool
- grip head with integrated roll-off protection
- seamless smooth cap for minimal friction
- blades made of chromium-molybdenum-vanadium alloy steel
- Black-Tip for the most precise fit
- best performance data up to 100 % above DIN

NEW





10 YEAR GUARANTEE



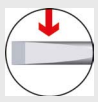
N° article	530190 6-piece	Contents
0010	●	**2 Slot** 4,0 | 6,5 mm **2 Cross-recess** PH1 | PH2 **2 Cross-recess** PZ1 | PZ2

Screwdriver SoftFinish®

Design:
- ergonomic Wiha SoftFinish®handle
- blade of chromium-vanadium steel, mat chrome-plated
- with full-length round blade
- with roll-off protection
- screw symbol printed on the end of the handle
- Wiha handle size concept with optimum balance between force and control

NEW





with round blade for deep-seated screws

N° article	530270 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
2,5	●	2,5	0,4	75	179
3,0	●	3	0,5	80	184
3,5	●	3,5	0,6	100	204
4,0	●	4	0,8	100	211
5,5	●	5,5	1	125	236
6,5	●	6,5	1,2	150	268
8,0	●	8	1,2	175	299
10,0	○	10	1,6	200	324
12,0	○	12	2	250	374

NEW



N° article	530275 Cross recess PH	Output size	Blade length mm	Total length mm
PH0/60	○	PH0	60	164
PH1/80	●	PH1	80	191
PH1/200	○	PH1	200	311
PH2/100	●	PH2	100	218
PH2/200	●	PH2	200	318
PH3/150	○	PH3	150	274

NEW



N° article	530280 Cross recess PZ	Output size	Blade length mm	Total length mm
PZ0/60	○	PZ0	60	164
PZ1/80	●	PZ1	80	191
PZ2/100	●	PZ2	100	218
PZ2/300	○	PZ2	300	418
PZ3/150	○	PZ3	150	274

Screwdriver set

Design:
- maximum power transmission thanks to ergonomically shaped Wiha SoftFinish®handle
- blade of chromium molybdenum vanadium steel, mat chrome-plated
- optimum ratio between guidance, speed and torque
- with full-length round blade
- with roll-off protection
- screw symbol printed on the end of the handle

NEW



N° article	530290 Slot / PH / PZ / TORX®	Parts	Contents
12	●	12	**3 Slot** 4,0 | 3,5 | 6,5 mm **3 Cross-recess** PH1 | PH2 | PH3 **2 Cross-recess** PZ1 | PZ2 **4 TORX®** T15 | T20 | T25 | T30

Screwdriver with wooden handle

WGB Das Werkzeug

Design:
- blade made of chromium-vanadium steel, nickel-plated
- continuous blade with hexagonal socket
- hardwood handle with leather cap

DIN ISO 2380



N° article	530011 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
3,5	●	3,5	1,2	75	170
4,5	●	4,5	0,8	90	185
5,5	●	5,5	1	100	200
7	●	7	1,2	125	235
9	●	9	1,6	150	270
10	●	10	1,6	175	195
12	●	12	2	200	330
14	●	14	2,5	250	380

Cross-recess screwdriver

WGB Das Werkzeug

Design:
- blade made of chromium-vanadium steel, nickel-plated
- continuous blade with hexagonal socket
- hardwood handle with leather cap

DIN ISO 8764



N° article	530021 Cross-recess PH	Blade length mm	Total length mm
PH1	●	80	175
PH2	●	100	220
PH3	●	150	270

Design:
- blade made of chromium-vanadium steel, nickel-plated
- continuous blade with hexagonal socket
- hardwood handle with leather cap

DIN ISO 8764



N° article	530031 Cross-recess PZ	Blade length mm	Total length mm
PZ1	●	80	175
PZ2	●	100	220
PZ3	●	150	270

Screwdriver set

WGB Das Werkzeug

Design:
- made of chromium vanadium steel, nickel-plated
- hardwood handle with leather cap
- continuous blade with hexagonal socket
- in a display box

DIN ISO 2380 | DIN ISO 8764



N° article	530041 Slot / PH	Parts	Contents
5	●	5	**Slot**: 4.5 | 5.5 | 7.0 mm **Cross-recess** PH1 | PH 2

Screwdriver with Kraftform Plus handle

Wera Be a Tool Rebel

Design:
- blade made of special-alloyed steel
- guaranteed high wear-resistance
- nicromatt, **Lasertip blade** prevents slipping out of the screw head
- ergonomic 2C Kraftform handle with anti-roll protection (except size 12)





N° article	530310 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
2,5	●	2,5	0,4	75	145
3,0	●	3	0,5	80	161
3,5	●	3,5	0,6	100	181
4,0	●	4	0,8	100	198
5,5	●	5,5	1	125	223
6,5	●	6,5	1,2	150	255
7,0	●	7	1,2	150	255
8,0	●	8	1,2	175	287
10,0	●	10	1,6	200	312
12,0	●	12	2	250	367

Note:
PH0/60 and PZ0/60 = without Lasertip



N° article	530320 Cross-recess PH	Output size	Blade length mm	Total length mm
PH0/60	●	PH0	60	141
PH1/80	●	PH1	80	178
PH1/200	●	PH1	200	298
PH2/100	●	PH2	100	205
PH2/200	●	PH2	200	305
PH3/150	●	PH3	150	262

Note:
PH0/60 and PZ0/60 = without Lasertip



N° article	530330 Cross-recess PZ	Output size	Blade length mm	Total length mm
PZ0/60	●	PZ0	60	141
PZ1/80	●	PZ1	80	178
PZ1/200	●	PZ1	200	298
PZ2/100	●	PZ2	100	205
PZ2/200	●	PZ2	200	305
PZ3/150	●	PZ3	150	262

Screwdriver set

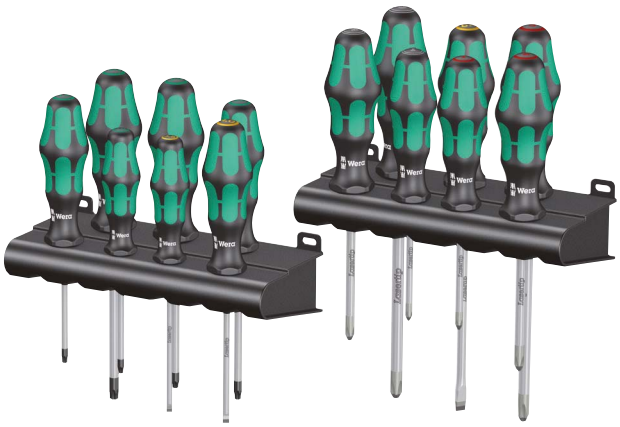
Design:
- blade made of special-alloyed steel
- guaranteed high wear-resistance
- nicromatt, **Lasertip blade** prevents slipping out of the screw head
- ergonomic 2C Kraftform handle with anti-roll protection (except size 12)

Design:
Delivery incl. rack.



N° article	530340 Slot / PH	Parts	Contents
6	●	6	**Slot** 3.0 | 4.0 | 5.5 | 6.5 mm **Cross-recess** PH1 | PH2





N° article	530340 Slot / PH / PZ / TORX®	Parts	Contents
14	●	14	**Slot** 3.5 | 4.0 | 6.5 mm **Cross-recess** PH1 | PH2 | PH3 **Cross-recess** PZ1 | PZ2 | PZ3 **TORX®** T10 | T15 | T20 | T25 | T30

Screwdriver with hex blade

Design:
- with hexagonal blade made of high-alloy special steel
- **Lasertip blade**prevents slipping out of the screw head
- 2C handle with roll-off protection
- with hex bolster (except sizes 3.5 / 4.0 PH0)

Note:
PH0 = without Lasertip



N° article	530352 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Hex bolster AF mm	Total length mm
3,5	●	3,5	0,6	75	–	156
4,0	●	4	0,8	90	–	171
4,5	●	4,5	0,8	90	8	188
5,5	●	5,5	1	100	10	198
6,5	●	6,5	1,2	125	10	230
7,0	●	7	1,2	125	10	230
9,0	●	9	1,6	150	13	262
10,0	●	10	1,6	175	13	287







N° article	530354 Cross-recess PH	Output size	Blade length mm	Hex bolster AF mm	Total length mm
PH0	●	PH0	60	–	141
PH1	●	PH1	80	8	178
PH2	●	PH2	100	10	205
PH3	●	PH3	150	13	262

Screwdriver with impact cap

Design:
- **continuous hexagonal blade** made of chromium-vanadium special steel
- nicromatt, Black Point tip
- 2C handle with roll-off protection, (except sizes 12 | 14 | PH4)
- with hex bolster for the transfer of higher torque from blade width 4.5 mm
- **with impact cap**



N° article	530520 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Hex bolster AF mm	Total length mm
3,5	●	3,5	0,6	80	–	161
4,5	●	4,5	0,8	90	8	188
5,5	●	5,5	1	100	10	205
7,0	●	7	1,2	125	10	230
9,0	●	9	1,6	150	13	262
10,0	●	10	1,6	175	13	287
12,0	●	12	2	200	16	317
14,0	●	14	2,5	250	16	367



N° article	530523 Cross-recess PH	Output size	Blade length mm	Hex bolster AF mm	Total length mm
PH1	●	PH1	80	8	178
PH2	●	PH2	100	10	205
PH3	●	PH3	150	13	262
PH4	●	PH4	200	16	317

Design:
Delivery incl. rack.



6I

N° article	530526 Set, Slot / PH	Parts	Contents	Design:
6	●	6	**Slot** 3.5 | 4.5 | 5.5 | 7.0 mm **Cross-recess** PH1 | PH2	–
6I	●	6	**Slot** 3.5 | 4.5 | 5.5 | 7.0 mm **Cross-recess** PH1 | PH2	With 1/4" square socket in the impact cap

Design:
- **continuous hexagonal blade** made of chromium-vanadium special steel
- nicromatt, Black Point tip
- 2C handle with roll-off protection
- with hex bolster for the transfer of higher torque from blade width 4.5 mm
- **with impact cap**
- delivery incl. rack



N° article	530526 set 13-piece	Parts	Contents
13	●	13	**Slot** 3.5 | 4.5 | 5.5 | 7.0 | 9.0 mm **Cross recess PH** 1 | 2 | 3 **Cross recess PZ** 1 | 2 | 3 **TORX®** T20 | T25

Design:
- with solid through-blade made of high-alloy steel
- 2C handle with roll-off protection
- **with Lasertip blade** (dependent on version)
- delivery incl. rack





N° article	530526 set	Parts	Contents
12	●	12	**Slot** VDE insulated: 2.5 | 3.5 mm **Voltage tester** slot unipolar 3.0 mm **Slot** 4.0 mm **Cross-recess** PH2 **Cross-recess** PZ1 | PZ2 **TORX®** T15 | T 20 | T25 **Slot** 5.5 | 7.0

Screwdriver Stainless steel

Design:
- round blades made of stainless steel
- for increased corrosion resistance and to prevent external rust
- **with Lasertip blade**
- multi-component Kraftform handle with roll-off protection

Note:
3.0 | PH0 | PZ0 = without Lasertip







N° article	530536 Slot	Width of blade mm	Blade length mm	Total length mm
3,0	●	3	80	161
3,5	●	3,5	100	181
4,0	●	4	100	198
5,5	○	5,5	125	223



N° article	530537 Cross-recess PH	Output size	Blade length mm	Total length mm
PH0	●	PH0	60	141
PH1	●	PH1	80	178
PH2	●	PH2	100	205
PH3	○	PH3	150	262



N° article	530538 Cross-recess PZ	Output size	Blade length mm	Total length mm
PZ0	○	PZ0	60	141
PZ1	○	PZ1	80	178
PZ2	●	PZ2	100	205
PZ3	○	PZ3	150	262

Design:
- round blades made of stainless steel
- for increased corrosion resistance and to prevent external rust
- **with Lasertip blade**
- multi-component Kraftform handle with roll-off protection

Delivery
Rack included.



N° article	530540 Set, slot | PH	Parts	Contents
6	●	6	**Slot** 3.0 | 4.0 | 5.5 | 6.5 mm **Cross-recess** PH1 | PH2

N° article	530542 Set, slot | PH | PZ	Parts	Contents
6	●	6	**Slot** 3.0 | 6.5 mm **Cross-recess** PH1 | PH2 **Cross-recess** PZ1 | PZ2

Screwdriver short version ("Stubby")

Design:
- blades made of chromium-vanadium special steel
- chrome-plated and through-hardened
- especially suited for operations in confined spaces
- with 2K handle and roll-off protection



N° article	530241 WERA Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
3,5	●	3,5	0,6	24,5	78,5
4,0	●	4	0,8	24,5	78,5
5,5	●	4,5	1	24,5	78,5
6,5	●	6,5	1,2	24,5	78,5
8,0	●	8	1,2	24,5	78,5



N° article	530242 WIHA Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
4,0	●	4	0,8	25	81
5,5	●	5,5	1	25	81
6,5	●	6,5	1,2	25	81



N° article	530253 WERA Cross recess PH	Output size	Blade length mm	Total length mm
PH1	●	PH1	25	79
PH2	●	PH2	25	79
PH3	○	PH3	25	79



N° article	530253 WERA Cross recess PZ	Output size	Blade length mm	Total length mm
PZ1	●	PZ1	25	79
PZ2	●	PZ2	25	79
PZ3	○	PZ3	25	79



N° article	530252 WIHA Cross recess PH	Output size	Blade length mm	Total length mm
PH01	●	PH01	25	81
PH02	●	PH02	25	81



N° article	530252 WIHA Cross recess PZ	Output size	Blade length mm	Total length mm
PZ01	●	PZ01	25	81
PZ02	●	PZ02	25	81

VDE screwdrivers

Design:
- made of high-alloyed special steel (except TORX® and external hex)
- guaranteed high wear-resistance
- **Lasertip blade** prevents slipping out of the screw head
- ergonomic 2C Kraftform handle with anti-roll protection
- for work at live parts up to 1000 V
- burnished and insulated
- to EN 60900

Note:
2.5 | 3.0 | PH0 | PZ0 = without Lasertip






N° article	531910 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
2,5	●	2,5	0,4	80	161
3,0	●	3	0,5	100	181
3,5	●	3,5	0,6	100	181
4,0	●	4	0,8	100	198
5,5	●	5,5	1	125	223
6,5	●	6,5	1,2	150	255
8,0	●	8	1,2	175	287
10,0	●	10	1,6	200	312




N° article	531912 Cross recess PH	Output size	Blade length mm	Total length mm
PH0	●	PH0	80	161
PH1	●	PH1	80	178
PH2	●	PH2	100	205
PH3	●	PH3	150	262




N° article	531914 Cross recess PZ	Output size	Blade length mm	Total length mm
PZ0	●	PZ0	80	161
PZ1	●	PZ1	80	178
PZ2	●	PZ2	100	205
PZ3	●	PZ3	150	262



N° article	531922 TORX®	Output size	Blade length mm	Total length mm
TX9	○	T9	80	161
TX10	●	T10	80	161
TX15	●	T15	80	178
TX20	●	T20	80	178
TX25	●	T25	100	205
TX30	●	T30	100	205



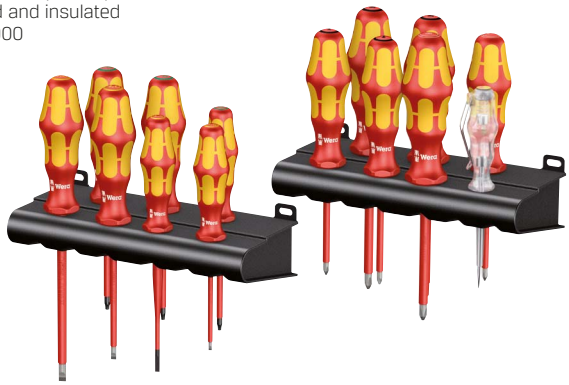


N° article	531930 Set, Slot / PH	Parts	Contents
7	●	7	**Slot** 2.5 | 3.5 | 4.0 | 5.5 mm **Cross-recess** PH1 | PH2 **Voltage tester** unipolar 3.0 mm



N° article	531934 Set, Slot / PZ	Parts	Contents
7	●	7	**Slot** 2.5 | 3.5 | 4.0 | 5.5 mm **Cross-recess** PZ1 | PZ2 **Voltage tester** unipolar 3.0 mm

Design:
- made of high-alloy special steel
- guaranteed high wear-resistance
- **Lasertip blade** prevents slipping out of the screw head
- ergonomic, multi-component Kraftform handle with roll-off protection
- for work at live parts up to 1000 V
- burnished and insulated
- to EN 60900



N° article	531933 Set, Universally	Parts	Contents
14	●	14	**Slot** 2.5 | 3.5 | 4.0 | 5.5 mm **Cross-recess** PH1 | PH2 **Cross-recess** PZ1 | PZ2 **Combination blade (slot/Pozidriv), for PlusMinus screws** PZ/S1 | PZ/S2 **TORX®** T10 | T15 | T20 **Voltage tester** unipolar, for 150 - 250 Volt, 3.0 mm

VDE interchangeable blade set

Design:
- 16-piece set with Kraftform VDE handle with roll-off protection and VDE exchangeable blades (each 154 mm long)
- with voltage tester (up to 250 V to VDE 0680/6)
- fully insulated up to 1000 V
- following DIN EN 60900/VDE 0682 (IEC 60900:2004)
- in a compact folding pocket with Velcro closure and belt loop





N° article	531936 Kraftform Kompakt® 16-piece	Parts	Contents
16	○	16	**VDE Kraftform blade-holding handle** **Voltage tester**, unipolar, for 150 - 250 Volt, 3.0 mm **Slot exchangeable blades** 2.5 | 3.5 | 4.0 | 5.5 mm **Cross-recess exchangeable blades** PH1 | PH2 **Cross-recess exchangeable blades** PZ1 | PZ2 **Combi exchangeable blades (Slot/Pozidriv), for PlusMinus screws** PZ/S1 | PZ/S2 **TORX®exchangeable blades** T10 | T15 | T20 | T25

VDE interchangeable blade set
extra slim

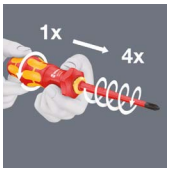
Design:
- 16-piece set with Kraftform VDE handle with roll-off protection and VDE interchangeable blades with reduced diameter (each 154 mm long)
- with voltage tester (up to 250 V to VDE 0680/6)
- fully insulated up to 1000 V
- following DIN EN 60900/VDE 0682 (IEC 60900:2004)
- in a compact folding pocket with Velcro closure and belt loop



N° article	531936 Kraftform Kompakt® 16-piece	Parts	Contents
0010	○	16	**VDE Kraftform blade-holding handle** **Voltage tester**, unipolar, for 150 - 250 Volt, 3.0 mm **4 interchangeable blades slot** 2.5 | 3.5 | 4 | 5.5 mm **2 interchangeable blades cross-recess** PH1 | PH2 **2 interchangeable blades cross-recess** 2× PZ1 | 2× PZ2 **4 interchangeable blades TORX®** T10 | T15 | T20 | T25

VDE screwdrivers
with planetary gear

Design:
- **quadruples the screwing speed purely mechanically**
- activation and deactivation of the turbo function at the touch of a button
- robust, maintenance-free gearbox made of steel
- powerful screwing and easy fine adjustment due to fixable planetary gears
- max. torque 14 Nm
- exclusively for Wera VDE interchangeable blades







N° article	531931 Kraftform Turbo Manual holder	Total length mm
0005	○	125

VDE screwdriver set
with planetary gear

Design:
- **quadruples the screwing speed purely mechanically**
- activation and deactivation of the turbo function at the touch of a button
- robust, maintenance-free gearbox made of steel
- powerful screwing and easy fine adjustment due to fixable planetary gears
- max. torque 14 Nm
- exclusively for Wera VDE interchangeable blades

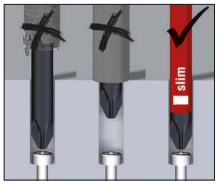


N° article	531932 Kraftform Kompakt Turbo i 1	Parts	Contents
16	●	16	**1 VDE Kraftform Turbo hand holder with transmission ratio 1 : 4** **1 VDE Kraftform hand holder** **4 interchangeable blades slot** 2.5 | 3.5 | 4 | 5.5 mm **2 interchangeable blades cross-recess** PH1 | PH2 **2 interchangeable blades cross-recess** PZ1 | PZ2 **2 interchangeable blades combination (slot/Pozidriv)** PZ/S1 | PZ/S2 **4 interchangeable blades TORX®** T10 | T15 | T20 | T25

VDE screwdrivers slimFix

Design:
- VDE screwdriver with **slimFix blade**
- with ergonomic SoftFinish handle with roll-off protection
- fully insulated up to 1000 V (to IEC 60900:2004)
- blade made of high-quality chromium-vanadium-molybdenum steel
- through-hardened, burnished
- the protective insulation sprayed onto the blade is in the front area of the blade completely integrated

Use:
Thanks to the integrated protective insulation, low-lying screw and spring elements can be reached and actuated





N° article	531942 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
3,5	●	3,5	0,6	100	204
4,0	●	4	0,8	100	211
4,5	●	4,5	1	125	236
5,5	●	5,5	1	125	243
6,5	●	6,5	1,2	150	268



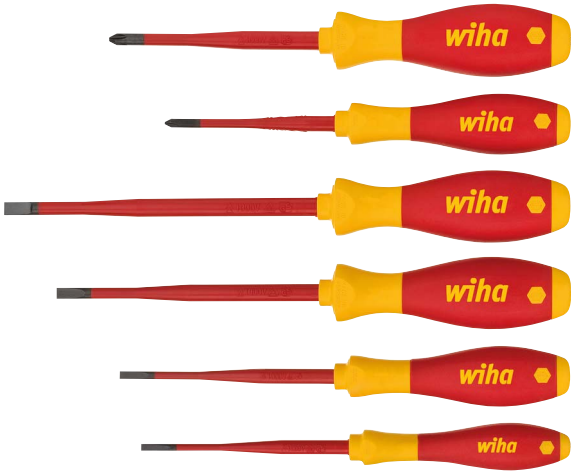
N° article	531944 Cross-recess PH	Output size	Blade length mm	Total length mm
PH1	●	PH1	80	191
PH2	●	PH2	100	218



N° article	531946 Cross-recess PZ	Output size	Blade length mm	Total length mm
PZ1	●	PZ1	80	191
PZ2	●	PZ2	100	218

VDE screwdriver set slimFix

Design:
- VDE screwdriver with **slimFix blade**
- with ergonomic SoftFinish handle with roll-off protection
- fully insulated up to 1000 V (to IEC 60900:2004)
- blade made of high-quality chromium-vanadium-molybdenum steel
- through-hardened, burnished
- the protective insulation sprayed onto the blade is in the front area of the blade completely integrated



N° article	531948 set Universally	Parts	Contents
6	●	6	**Slot** 3.5 | 4.0 | 5.5 | 6.5 mm **Cross-recess** PH1 | 2
12	●	12	**Slot** 3.5 | 4.0 | 5.5 | 6.5 mm **Cross-recess** PH1 | 2 **Cross-recess** PZ1 | 2 **Combination blade (slot/Pozidriv)** for PlusMinus screws SL/PZ2 **TORX®** T15 | T20 | T25

VDE bit holder with bit magazine

Design:
- the bit depot stowed in the handle contains 4 slimBits
- thanks to the magnetic locking function, the bit depot can be opened and closed easily
- manufactured according to IEC 60 9000 | DIN EN ISO 6789
- ideal screwing live parts up to 1,000 V AC

NEW



N° article	531950 PocketMax®	Parts	Contents
4	●	4	**1 Slim Bit Schlitz** 3,5 mm **2 Slim Bits Kreuzschlitz** PH1 | PH2 **1 Slim Bit Prozidriv PlusMinus** SL-PZ2

VDE torque screwdriver adjustable

Design:
- torque continuously adjustable with adjustment tool Torque setter
- ergonomic multi-component handle
- protective insulation 1000 V AC
- click signal when the set torque value is reached
- manufactured to IEC 60900: 2004, EN ISO 6789, BS EN 26789 and ASME B107.14M
- with slimTorque VDE bit holder for 6 mm slimBits

±6 %

Use:
For controlled screwing in the range of voltage-carrying parts up to 1000 V AC



Delivery:
In plastic box including factory test protocol and torque setter

N° article	531960	min. torque Nm	max. torque Nm	Handle length mm	Tolerance +/- %
0010	○	0,5	2	131	6
0012	○	0,8	5	138	6
0014	○	2	7	142	6

Design:
- made of superior chromium-vanadium steel
- through-hardened, burnished
- manufactured according to IEC 60900:2004
- protective insulation sprayed directly onto the bit
- of sizes 2.5 and 3.0 no slim versions



N° article	531960 Exchangeable blade Slot	Width of blade mm	Blade thickness mm	Blade length mm
0030	●	2,5	0,4	75
0032	●	3	0,5	75
0034	●	4	0,8	75
0036	●	5,5	1	75
0038	●	6,5	1,2	75



N° article	531960 Exchangeable blade PH	Output size	Blade length mm
0040	●	PH1	75
0042	●	PH2	75



N° article	531960 Exchangeable blade PZ	Output size	Blade length mm
0044	●	PZ1	75
0046	●	PZ2	75

Note:
Of the sizes 2.5 and 3.0 there are no slim versions



N° article	531960 Exchangeable blade TORX®	Output size	Blade length mm
0050	●	T8	75
0052	●	T10	75
0054	●	T15	75
0056	●	T20	75
0058	●	T25	75

VDE torque screwdriver set infinitely variable

Design:
- bit holder with SoftFinish®® electric multi-component handle
- ClickFix quick release holder locks bits securely
- with protective insulation sprayed directly onto the slimBits
- manufactured according to IEC 60 9000 | DIN EN ISO 6789
- for screwing live parts up to 1,000 VAC
- hard-wearing bag
- release accuracy of ± 6 %

±6 %



0021



0022

N° article	531960 13-piece	531960 18-piece	Contents
0021	●	–	**VDE torque screwdriver** 0.8 - 5.0 Nm **Screwdriver with bit holder** **Bit holder** **adjustment tool** **slimBits slot** 2.5 | 3.5 | 5.5 mm **slimBits cross-recess** PH1 | PH2 **slimBits cross-recess** PZ1 | PZ2 **slimBits Pozidriv PlusMinus** SL/PZ1 | SL/PZ2
0022	–	●	**VDE torque screwdriver** 0.8 - 5.0 Nm **Bit holder** **adjustment tool** **slimBits slot** 2.5 | 3.0 | 5.5 | 6.5 mm **slimBits cross-recess** PH1 | PH2 **slimBits cross-recess** PZ1 | PZ2 **slimBits Pozidriv PlusMinus** SL/PZ1 | SL/PZ2 **slimBits TORX®** T9 | T10 | T15 | T20 | T25

VDE tool set

PROJAHN

Design:
- standard set with the most common VDE tools
- ergonomic shape
- ideal for electrical, heating, plumbing, air conditioning and ventilation technology

DIN EN 60900



Nº article	531972 12-piece	Contents
12	●	**3 VDE screwdrivers** slot 2,5 | 4 | 6,5 mm **3 VDE screwdrivers** Cross recess PH0 | PH1 | PH2 **1 voltage tester** 125 - 250 V **1 VDE wire stripper** 160 mm **1 VDE electrician´s knife** 200 mm **1 VDE combination pliers** 160 mm **1 VDE diagonal cutter** 160 mm **1 VDE telephone/radio/flat nose pliers** 200 mm

VDE tool set

wiha Tools that work for you

Design:
- bit holder with SoftFinish® electric multi-component handle
- PicoFinish® handle suitable for fine and delicate screw connections
- manufactured according to IEC 60 9000 \| DIN EN ISO 6789
- for screwing live parts up to 1,000 V AC
- the 6 mm slimBits and sockets are only available in the speedE®, slimVario® or TorqueVario®-S electric tools to use
- in robust textile bag

NEW



Nº article	531975 slimVario®	Parts	Contents
32	○	32	**4 slim bits slotted** 2 | 3.5 | 5.5 | 6.5 mm **3 slim bits Phillips** PH0 | PH1 | PH2 **2 slim bits Prozidriv PlusMinus** SL/PZ1 | SL/PZ2 **2 slim bits Phillips** PZ1 | PZ2 **3 slim bits hexagon** 3 | 4 | 5 mm **4 slim bits TORX®** T10 | T15 | T20 | T25 **8 VDE socket wrench inserts hexagon** 5 | 5.5 | 6 | 7 | 8 | 10 | 11 | 13 mm **1 adapter slimVario®** electric for 1/4" socket wrench **1 adapter slimVario®** electric for slimBits 6 mm **1 screwdriver with bit holder SoftFinish® slimVario®** electric **1 precision screwdriver PicoFinish® slimVario®** electric **1 screwdriver with bit holder SoftFinish®** electric slimVario Stubby **1 functional bag**

Voltage tester
single-pole to VDE 0680/6

Wera Be a Tool Rebel

Design:
- fully insulated up to the blade
- blade made of chromium-vanadium steel
- gloss-nickel-plated and through-hardened
- with integral glow tubules
- with stable metal pen-style clip
- for 150 - 250 Volt



Nº article	532502 Slot	Width of blade mm	Blade length mm	Total length mm
3,0V	●	3	70	145

Voltage tester single-pole to VDE 0680/6

Design:
- fully insulated up to the blade
- with ABS handle and blade made of tool C60
- with sturdy clip
- voltage indication by glow lamp
- for 125 - 250 Volt



Nº article	532504 Slot	Width of blade mm	Blade length mm	Total length mm
3,0	●	3	60	150

Magnetic trays stainless

PROJAHN

Design and use:
- with powerful rubber-covered permanent magnets
- to keep small tools and all kinds of odds and ends



Nº article	531940 stainless	Size mm	Magnet holding force, max. g
RUND	●	∅ 150	1.200
ECKIG	●	240 × 140	1.200

Magnetic tray

VIGOR Equipment

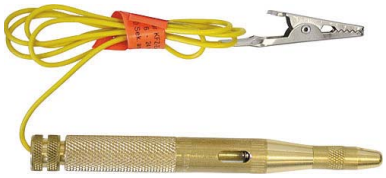
Design and use:
- sturdy plastic housing with optimised magnets
- to keep small tools and all kinds of odds and ends
- attachment to workshop trolleys, lifting platforms or metal cabinets



Nº article	531945	Size mm	Magnet holding force, max. g
RUND	●	∅ 150	2.500

Low voltage testers

Design:
- in nickel-plated brass housing
- connecting cable with alligator clip
- needle tip for testing current flow without stripping



N° article	532600 Car light testers	for voltage volts	Total length mm
6 - 24	●	6 - 24	880

Low voltage testers

Weidmüller

Design:
- automotive voltage tester with cable test
- especially suitable for troubleshooting electronic components
- connecting cable with alligator clip
- suitable for cars, trucks and e-bikes
- works without batteries



N° article	532602 Car light testers	for voltage volts	Total length mm
5 - 48	●	5 - 48	158

Voltage tester two-pole

Weidmüller

Technical data:	
Min./max. Voltage measuring range	12 V / 690 V
Protection class	CAT IV = 300 V CAT III = 600 V
Peak voltage resistance	5 kV
Standard	EN/IEC 61010 EN 61243-3 2010
Continuity indicator	no
Display	LED
Working temperature	-15 °C to +55 °C
Polarity	+/-
Power supply	from the test object
Protection class	IP64
Length × width × height	190×55×21 mm

IP64

Design:
- LED display for voltage and polarity
- clearly phased LED display
- handy format
- works without batteries
- single-handed operation for sockets
- with probe tip protection



N° article	532700 VT	Indicating range for voltage volts
0005	●	12 | 24 | 50 | 120 | 230 | 400 | 690

Technical data:	
Min./max. Voltage measuring range	12 V / 690 V
Protection class	CAT IV = 300 V CAT III = 600 V
2,564 mm	6 kV
Standard	EC 61243:2014 (DIN EN 61243-3:2015-08)
Continuity indicator	optical/acoustic
Display	LED
Working temperature	-15 °C to +55 °C
Polarity	+/-
Power supply	2 batteries 1.5 V AAA
Protection class	IP54
Length × width × height	235×28×60 mm

IP54

Design:
- LED display for voltage and polarity
- polarity display
- continuity and semiconductor testing with optical and acoustic display
- for one-hand operation
- probe extension for screwing on
- probe cover to shorten the probe and to protect it
- compact construction
- battery monitoring



N° article	532700 VT Master	Indicating range for voltage volts
0010	●	12 | 24 | 50 | 120 | 230 | 400 | 690

Voltage tester two-pole

Weidmüller

Technical data:	
Min./max. Voltage measuring range	6 V / 690 V
Protection class	CAT IV = 600 V CAT III = 690 V
Load switching via push button	Yes
FI triggering via push button	30mA
Peak voltage resistance	8 kV
Standard	EC 61243-3:2014 (DIN EN 61243-3:2015-08)
Continuity indicator	optical/acoustic
Display	LED
Working temperature	-15 °C to +55 °C
Polarity	+/-
rotary field testing	Yes
Single-pole outer conductor test (phase)	Yes
Power supply	2 batteries 1.5 V AAA
Measuring point illumination	Yes
Protection class	IP65
Length × width × height	264×33×67 mm

Design:
- with rotating field display - clear indication of left- and right-hand rotating field
- LED display for voltage and polarity
- with switchable load (30 mA) for triggering of FI
- continuity and semiconductor testing with optical and acoustic display
- probe tip illumination with white LED
- for single-handed and single-pole phase testing
- probe extension for screwing on
- probe cover to shorten the probe and to protect it



N° article	532700 VT Combi Pro	Indicating range for voltage volts
0012	●	6 | 12 | 24 | 50 | 120 | 230 | 400 | 690

Technical data:	
Min./max. Voltage measuring range	1 V / 1000 V
Protection class	CAT IV = 600 V CAT III = 1000 V
Load switching via push button	Yes
FI triggering via push button	30mA
Resistance measuring range	Yes
Peak voltage resistance	8 kV
Standard	IEC 61243-3:2014 (DIN EN 61243-3:2015-08)
Continuity indicator	optical/acoustic
Display	LCD
Working temperature	-15 °C to +55 °C
Polarity	+/-
rotary field testing	Yes
Single-pole outer conductor test (phase)	Yes
Power supply	2 batteries 1.5 V AAA
Measuring point illumination	Yes
Protection class	IP65
Length × width × height	264×33×67 mm

Design:
- with rotating field display - clear indication of left- and right-hand rotating field
- LCD display for voltage and polarity
- with switchable load (30 mA) for triggering of FI
- continuity and semiconductor testing with optical and acoustic display
- measurements can be frozen by HOLD button
- probe tip illumination with white LED
- for single-handed and single-pole phase testing
- resistance and frequency measurement
- probe extension for screwing on
- probe cover to shorten the probe and to protect it



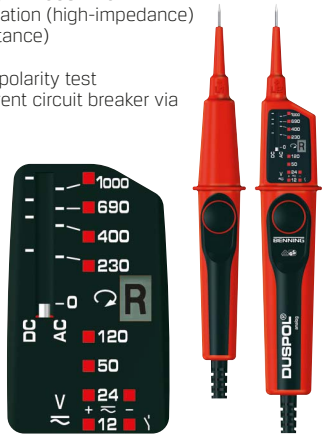
N° article	532700 VT Digi Pro	Indicating range for voltage volts
0014	●	1 - 1000 -

Voltage tester

BENNING

Technical data:	
Voltage	12-1,000 V AC/DC
Protection class	CAT IV 600 V CAT III 1,000 V
Load switching via push button	Is = 600 mA (1000 V_{DC})
FI triggering via push button	30mA
Standard	DIN EN 61243-3, VDE 0682-401
Display	LED / plunger coil
Polarity	± LED
rotary field testing	LCD symbol R
Single-pole outer conductor test (phase)	LCD symbol R
Protection class	IP65

Design:
- approved according to DIN EN 61243-3, VDE 0682-401
- direct display without push button actuation (high-impedance)
- load applied via push button (low-resistance)
- with vibration alert
- directional field, single-pole phase and polarity test
- deliberate triggering of the residual current circuit breaker via push buttons
- dust and water spray protected (IP65)
- overvoltage category CAT IV 600 V)



N° article	532755 DUSPOL® analog	Indicating range for voltage volts
ANALOG	●	12 - 1000 V AC/DC

Technical data:	
Voltage	1-1,000 V AC 1-1,200 V DC
Protection class	CAT IV 600 V CAT III 1,000 V
Max. frequency range	1,000 Hz
Load switching via push button	Is = 550 mA (1000 V_{DC})
FI triggering via push button	30mA
Resistance measuring range	0.1-300 kΩ
Standard	DIN EN 61243-3, VDE 0682-401
Continuity indicator	acoustic and optical (buzzer and yellow LED)
Min. continuity test	0-100 kΩ
Display	LED / illuminated LCD display
Polarity	± LCD
Diode testing	0.3 V - 2.0 V
rotary field testing	green LED (right/left)
Single-pole outer conductor test (phase)	red flash LED
Cable break detector	yellow LED flashing
Measuring point illumination	white LED
Protection class	IP65

Design:
- as basic unit DUSPOL® analogue, but with true effective value measurement method TRUE RMS
- low volt range 1.0 V to 11.9 V
- automatic LC-display illumination via light sensors
- measurement of the forward voltage of diodes



N° article	532755 DUSPOL® digital	Indicating range for voltage volts
DIGITAL	●	1 - 1000 V AC / 1 - 1200 V DC

Voltage tester

BENNING

Technical data:	
Voltage	12-1,000 V AC/DC
Protection class	CAT IV 600 V CAT III 1,000 V
Load switching via push button	Is = 550 mA (1000 V_{DC})
FI triggering via push button	30mA
Standard	DIN EN 61243-3, VDE 0682-401
Continuity indicator	acoustic and optical (buzzer and yellow LED)
Min. continuity test	0-100 kΩ
Display	LED
Polarity	± LED
Diode testing	Passage/blocking direction
rotary field testing	green LED (right/left)
Single-pole outer conductor test (phase)	red flash LED
Cable break detector	yellow LED flashing
Measuring point illumination	white LED
Protection class	IP65

IP65

Design:
- as basic unit DUSPOL® analogue, but with detector for the non-contact localisation of cable breaks on open, live lines



N° article	532755 DUSPOL® expert 1000	Indicating range for voltage volts
EXPERT1000	●	12 - 1000 V AC/DC

Continuity and circuit tester

BENNING

Design:
- for testing of high and low impedance resistances
- continuity and diode test via LED and test buzzer
- display via 3 LEDs: 0-100 Ω / 1 kΩ / 10 kΩ
- acoustic display with test buzzer up to approx. 100 Ω
- external voltage indicator 6 - 400 V (LED / test buzzer)
- polarity test, single-pole outer conductor test (phase)
- non-contact cable break detector
- spot-focusable high-power LED torch
- buzzer volume and brightness of the LED torch individually adjustable in 4 steps
- protection class CAT III 300 V
- very precise and bright LED torch
- power supply 3× 1.5 V battery type AA



N° article	532770 DUTEST® per
0 - 100	●

Voltage tester

Weidmüller

Technical data:	
Voltage	90-1,000 V AC
Protection class	Cat IV 1,000 V
Standard	DIN EN 61010-1, DIN EN 61326
power supply	3 × AAA batteries 1.5 V
Protection class	IP65
Length × width × height	155×23×25 mm

IP65

Design:
- contactless voltage tester
- with optical and acoustic display

Delivery:
Incl. 3 AAA batteries



N° article	532774 kontaktlos, VT CL
0012	●

Voltage tester contactless

wiha
Tools that work for you

Technical data:	
Voltage	12 - 1.000 V AC
Standard	EN 61010-1 / IEC 61326
Protection class	IP 67
ATEX approval	No
Operating temperature	-20 - +40 °C
Total length	150 mm
power supply	2× AAA batteries
Measurement category	CAT IV 1.000 V
Acoustic signal	Yes
Non-contact voltage testing	Yes

IP67

Delivery:
2× AAA batteries.

Design and use:
- for detecting and localising live conductors, cable interruptions and breaks, blown fuses, defective lamps on fairy lights and single wire detection - fast voltage testing through non-contact measurement
- measuring tip can be used for all sockets worldwide
- for voltage range from 12 - 1,000 V AC
- with visual LED indicator, from blue (weak) through orange to red (strong)
- with integrated, bright LED torch function
- with attachment clip

NEW





Art.-Nr.	532773 Volt Detector
0010	●

Digital multimeter HDT60

Design and use:
- ABS plastic housing
- tested according to EN 61010-1, EN 61010-6 / -1 / -1, DIN VDE 0411, EN 61010, IEC 61010, CAT III / 600 V
- basic types of measurement for current, voltage, resistance, continuity, diode, capacity and frequency

IP40

Delivery:
1 set of test pins (red/black), 9 V battery



Size		HDT60
532802		●
Display range		3,5" digital, LCD-Anzeige
Basic accuracy	%	1,5
Voltage AC/DC		1 mV - 600 V
Voltage AC/DC		0,1 mA - 10 A
Resistance		2 kΩ - 2 MΩ
Temperature	°C	-40 bis +400
Power supply		Batterie 1,5V	9V IEC 6LR 61
Weight		245 g
Size		145 × 72 × 40 mm
Protection class		IP 40

Digital multimeter MM series

BENNING

Design and use:
- robust housing
- large format 4" or 3.5" LCD display
- digital measuring device with high security for many industrial applications, i.a. all basic measurement types for current, voltage, resistance, continuity, diode, capacity, frequency

Delivery:
Incl. protective bag, safety test leads and battery set
MM 2, MM 3, MM 5-2 with rubber holster



MM2-2



MM2



MM3



MMP3



MM5-2

Size		MM2 - 2	MM2	MM3	MMP3	MM5 - 2
532804		NEW ○	●	○	●	●
Display range		6.000	2.000	2.000	5.000	6.000
Basic accuracy	%	0,20	0,50	0,50	0,60	0,50
Resistance		0,1 Ω - 60 MΩ	0,1 Ω - 20 MΩ	0,1 Ω - 20 MΩ	0,1 Ω - 40 MΩ	0,1 Ω - 40 MΩ
Temperature	°C	–	–	–	–	-40 - +400
Design		With automatic and manual measuring range selection.	With manual measuring range selection.	With manual measuring range selection.	Small, slim and light, only approx. 130 g. Minimal dimensions 132 × 86 × 19 mm For all-purpose use, incl. leather case and measuring leads.	With TRUE RMS measuring method Continuity test via red LED and buzzer with Volt sensor. Measuring input for AC/DC current, microampere-DC and temperature as well as LC display with lighting.

Digital multimeter

BENNING

Design:
- **True RMS multimeter for correct display of the effective value of an alternating current**
- highest measurement category CAT IV 600 V for maximum safety
- AutoV function for automatic AC/DC voltage detection
- low input impedance for suppression of capacitive/inductive interspersed voltages
- integrated volt sensor signals phase voltages and cable breaks in lines without contact
- LC display with bar graph display and backlighting

Use:
For all demanding measuring tasks in industry and trade

Delivery:
Protective rubber frame, bag, 9 V block battery, test leads and wire temperature probe

VOLT SENSOR

Größe		MM7-1
532804		○
Display range		6.000
Basic accuracy	%	0,08
Voltage	AC/DC	10 µV - 1.000 V
Voltage	AC/DC	10 µA - 10 A
Resistance		0,1 Ω - 40 MΩ
Temperature	°C	-40 bis +400
Capacity		1 nF - 10 mF
Frequency		0,01 Hz - 100 kHz
Continuity / Diode		• / •
Volt sensor		•
Memory function		HOLD, MAX/MIN
Measuring range selection		automatic
Measurement method		TRUE RMS
Measurement category		CAT IV 600 V



MM7-1

Digital current clamp Digital current clamp

BENNING

Design and use:

CM1-2
- safe AC current measurement up to 400 A AC
- localisation of cable breaks, defective lamps and exposed cables
- a volt sensor signals phase voltages via an acoustic signal

CM1-4
- safe AC current measurement up to 200 A AC via open current clamp
- precise due to TRUE RMS measurement method

CM2
- measure high currents safely and contactless
- DC and AC measurement up to 300 A AC/DC

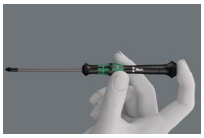


CM 1-2 CM 1-4 CM 2

Größe		CM1-2	CM1-4	CM2
532809		●	●	○
Display range		2.000	9.999	4.000
Basic accuracy	%	1,00	1,00	0,50
Voltage	AC/DC	0,1 V - 600 V AC/DC	6 V - 1.000 V AC/DC	1 mV / 0,1 mV - 600 V AC/DC
Voltage	AC/DC	0,1 A - 400 A AC	0,1 A - 200 A AC	100 mA / 10 mA - 300 A AC/DC
Resistance		0,1 Ω - 20 M Ω	1 Ω - 50 kOhm	0,1 Ω - 40 M Ω
Pincer Opening		30 mm	16 mm	25 mm
Measurement category		CAT III 600 V	CAT IV 600 V, CAT III 1000 V	CAT III 300 V, CAT II 600 V
Functions		Continuity test, measured value memory (HOLD), measurement inputs for voltage, resistance, continuity and diode test	Continuity test, measured value memory (HOLD)	Continuity test, true effective measurement method TRUE RMS, measurement/maximum value acquisition (H/MAX), differential measurements (REL), measurement inputs for voltage, resistance and continuity test
Scope of delivery		Safety test leads, batteries and protective bag	Test lead set, tip guard, contact tip extension, batteries and belt holster	Safety test leads, batteries and protective bag

Electronics screwdrivers Kraftform Micro

Design:
- hardened blade made of special steel
- nicromatt, Black Point tip
- blades with reduced diameter tip guarantee safe hold in countersunk bores
- multi-component handle Kraftform Micro with roll-off protection and turnable cap







N° article	538305 Slot	Width of blade mm	Blade thickness mm	Blade length mm	Total length mm
0,8	●	0,8	0,16	40	137
1,2	●	1,2	0,25	40	137
1,5	●	1,5	0,23	40	137
1,8	●	1,8	0,3	60	157
2,0	●	2	0,4	60	157
2,0L	○	2	0,4	100	197
2,5	●	2,5	0,4	80	177
3,0	●	3	0,5	80	177
3,5	●	3,5	0,6	80	177
4,0	●	4	0,8	80	177



N° article	538310 PH	Blade length mm	Total length mm
PH00	●	60	157
PH0	●	80	177
PH1	●	80	177

N° article	538310 PZ	Blade length mm	Total length mm
PZ0	○	60	157
PZ1	○	80	177



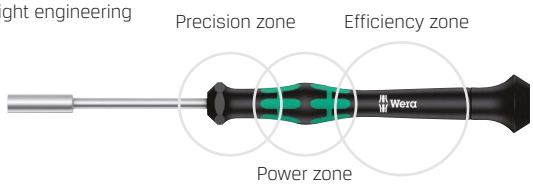
N° article	538315 TORX® (from TX7 with hole)	Blade length mm	Total length mm
TX3	●	40	137
TX4	●	40	137
TX5	●	40	137
TX6	●	40	137
TX7	●	60	157
TX8	●	60	157
TX9	●	60	157
TX10	●	60	157
TX15	○	60	157
TX20	●	60	157



N° article	538330 External hex	$AF_{\perp}$ mm	Blade length mm	Total length mm
0,7	●	0,7	40	137
0,9	●	0,9	40	137
1,3	●	1,3	40	137
1,5	●	1,5	60	157
2,0	●	2	60	157
2,5	●	2,5	60	157
3,0	●	3	60	157

Three-zone design concept
Efficiency zone by turnable cap plus fast turning range
Power zone for transferring high releasing/tightening torques
Precision zone for the right rotation angle during adjustment work

Use:
For precise fastening in the electronic and light engineering sectors etc.



N° article	538335 Hex socket	$AF_{\perp}$ mm	Blade length mm	Total length mm
2,0	○	2	60	157
2,5	●	2,5	60	157
3,0	●	3	60	157
3,2	○	3,2	60	157
3,5	○	3,5	60	157
4,0	●	4	60	157
4,5	○	4,5	60	157
5,0	○	5	60	157
5,5	●	5,5	60	157

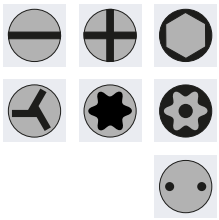


N° article	538355 Slot / PH	Parts	Contents
6	●	6	**Slot** 1.8 | 2.0 | 2.5 | 3.0 mm **Cross-recess** PH00 | PH0



N° article	538366 Slot / PH / hex / TORX®	Parts	Contents
12	●	12	**Slot** 1.5 | 1.8 | 2.0 | 2.5 | 3.0 mm **Cross-recess** PH00 | PH0 **Hex-Plus, external hex** 0.9 | 1.5 | 2.0 mm **TORX®, with holding function** T5 | T6

Electronics screwdriver set

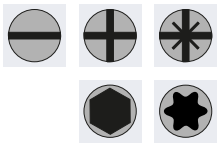




N° article	538367 Slot / PH / hex / TORX® Microstix / Chip lifter	Parts	Contents
12	●	12	**Slot** 1.5 | 2.5 mm **Cross-recess** PH000 | PH00 | PH0 **Hex socket** 2.5 | 3.0 mm **TORX®, with hole** TX8 | TX10 **TORX®** 1 IPR × 44 mm **Microstix®** m × 40 mm **lifter** 1.0 × 3.5 × 50 mm

Watchmaker's screwdriver bit set

Design:
- all important precision bits in one set
- ideal for fine applications in electronics and precision mechanics, in the automotive, hobby and model construction sector
- easy removal of the bits
- space-saving plastic box

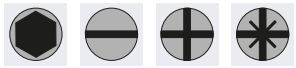




N° article	538376 31-piece	Parts	Contents
4714	●	31	**Slot** 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 mm **Cross-recess** PH000 | PH00 | PH0 | PH1 **Cross-recess** PZ0 | PZ1 **TORX®** T4 | T5 | T6 | T7 | T8 | T9 | T10 | T15 | T20 **External hex** 0.7 | 0.9 | 1.3 | 1.5 | 2.0 | 2.5 | 3.0 | 4.0 mm **Precision bit screwdriver**

Watchmaker's screwdriver set

Design:
- made of chromium-vanadium steel
- handles of metal with rotary cap
- in plastic case





6

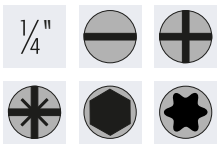


16

N° article	538385	Parts	Contents
6	●	6	**Slot** 1.4 | 2.0 | 2.4 | 3.0 mm **Cross-recess** PH0 | PH1
16	●	16	**Slot** 1.0 | 1.4 | 2.0 | 2.4 | 3.0 | 3.5 mm **Cross-recess** PH00 | PH0 | PH1 **Cross-recess** PZ1 **Hex socket** 3.0 | 4.0 | 5.0 mm **External hex** 1.5 | 2.0 | 2.5 mm

Bit box Collector

Design:
- robust box made of high-strength plastic
- box opens automatically at the push of a button
- SoftFinish® multi-component handle, magnetic, with bit holder 1/4"
- with 25 mm standard bits
- CentroFix Force quick-change holder, magnetic





N° article	539756 32-piece	Contents
32	●	**3 bits slot** 4.5 | 5.5 | 6.5 mm **9 bits cross recess** 2 × PH1 | 5 × PH2 | 2 × PH3 **9 bits cross recess** 2 × PZ1 | 5 × PZ2 | 2 × PZ3 **6 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **3 bits male hex** 4.0 | 5.0 | 6.0 mm **1 ClicFix quick-change holder,** magnetic, form E 6.3 **1 bit holder with handle,** magnetic, 1/4"

Screwdriver / Set Vario

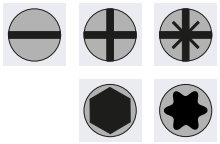
Design:
- Kraftform handle with roll protection and 10 mm hex bolster
- for 6 mm combi blades and adapter
- by means of an adapter these 6 mm handles may be used to drive 1/4" hex and square sockets to DIN 3126 - D 6.3 and DIN 3120





N° article	539600 Handle	Total length mm
A	●	98

Design 539700:
incl. combi blades.





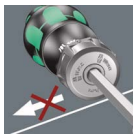


N° article	539700 set	Parts	Contents
11	●	11	**1 Vario handle** for 6 mm combi blades **2 double blades slot** 4.0/6.0 | 5.0/7.0 mm **1 double blade cross-slot** PH1/PH2 **1 double blade cross-slot** PZ1/PZ2 **3 double blades male hex** 4/4 | 5/5 | 6/6 mm (1 end spherical) **3 double-blades TORX®** T10/T15 | T20/T25 | T30/T40

Ratchet screwdriver / Set Vario

Design:
- Kraftform Plus handle with roll protection
- for 6 mm combi blades and adapter
- ratchet with fine-toothing for small return angle
- with shift ring (left, fix, right)
- max. torque of up to 50 Nm
- 6 mm female hex seat
- **magnetic**



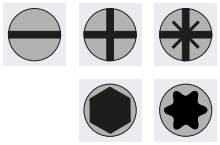






N° article	539705 Manual holder	Total length mm
80RA	●	115

Design:
in folding bag with 6 double blades 175 mm.





N° article	539710 set	Parts	Contents
7	●	7	**1 hand holder with ratcheting function**, for 6 mm combi blades **1 double-blade slot** 4.0/6.0 mm **1 double-blade male hex** 4/5 mm **1 double blade cross-slot** PH1/PH2 mm **1 double-blade** PZ1/PZ2 mm **2 double-blades TORX®** T10/T15 | T20/T25

Screwdriver with planetary gear

Design:
- with Rapidaptor quick-change chuck
- **quadruples the screwing speed purely mechanically**
- activation and deactivation of the turbo function at the touch of a button
- robust, maintenance-free gearbox made of steel
- powerful screwing and easy fine adjustment due to fixable planetary gears
- max. torque 14 Nm

1/4"







N° article	539711 Kraftform Turbo bits hand holder	Output size	Handle length mm
0005	●	1/4 inch	146

Screwdriver set with planetary gear

Design:
- Kraftform Turbo hand holder with Rapidaptor quick-change chuck and 89 mm long bits in robust textile bag
- **quadruples the screwing speed purely mechanically**
- activation and deactivation of the turbo function at the touch of a button
- robust, maintenance-free gearbox made of steel
- powerful screwing and easy fine adjustment due to fixable planetary gears
- max. torque 14 Nm

1/4"









N° article	539712 Kraftform Kompakt Turbo 1	Parts	Contents
19	●	19	**1 Kraftform hand holder Turbo** **3 bits slot** 4 | 5.5 | 6.5 mm **3 bits cross recess** PZ1 | PZ2 | PZ3 **3 bits cross recess** PH1 | PH2 | PH3 **4 bits male hex** 3 | 4 | 5 | 6 mm **5 bits TORX®** T10 | T15 | T20 | T25 | T30

Combi screwdriver blade

Design:
- 6 mm hex blade
- nicromatt
- Black-Point tip





N° article	539650 External hex / external hex with spherical head	Output size mm
2,5	●	2,5
3	●	3
4	●	4
5	●	5
6	●	6





N° article	539660 PH	Output size
1/2	●	PH1, PH2





N° article	539670 PZ	Output size
1/2	○	PZ1, PZ2
2/3	○	PZ2, PZ3



N° article	539680 TORX®	Output size
6/8	●	T6, T8
7/9	●	T7, T9
10/15	●	T10, T15
20/25	●	T20, T25
30/40	●	T30, T40

Design:
- for the mounting of 1/4" screwdriver bits DIN 3126 form C 6,3

1/4"



N° article	539760 Bit holder with permanent magnet	Output size	Length mm
165	●	1/4 inch	165

Design:
- for the mounting of 1/4" wrench sockets to DIN 3120

1/4"



N° article	539780 External square	Output size	Length mm
175	○	1/4 inch	175

Ratchet screwdriver

Design:
- Kraftform Plus handle with roll protection
- ratchet with fine-toothing for small return angle
- with shift ring (left, fix, right)
- max. torque of up to 50 Nm
- 1/4" hex socket with Rapidaptor® technology for fast bit change
- for bits with 1/4" external hexagon drive according to DIN 3126-C 6.3 and E 6.3 (ISO 1173) or Wera connection series 1 and 4
- **magnetic**



1/4"



N° article	539715 with hex socket	Output size	Total length mm
816RA	●	1/4 inch	142

T-handle with ratchet function

Wera

Design:
- fine-toothed reversible ratchet (80 teeth / 4.5° return angle), simplifies and speeds up screwing without tedious reattachment
- integrated ratchet completely embedded in the handle
- quick-turn sleeve for very high working speed
- with ergonomic 2-component handle with finger grip recesses
- very high power transmission and fatigue-free work
- with switch lever (left / right) for one-hand operation
- with Rapidaptor quick-change chuck

1/4"

NEW

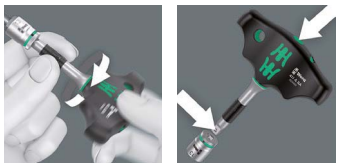


N° article	539730 Cross-handle manual bits holder with ratchet function	Output size	Blade length mm
0005	●	1/4" female square	89

Design:
- fine-toothed reversible ratchet (80 teeth / 4.5° return angle), simplifies and speeds up screwing without tedious reattachment
- integrated ratchet completely embedded in the handle
- quick-turn sleeve for very high working speed
- with ergonomic 2-component handle with finger grip recesses
- very high power transmission and fatigue-free work
- with switch lever (left / right) for one-hand operation
- 1/4" square socket with secure ball lock

1/4"

NEW





N° article	539730 Cross-handle adapter screwdriver with ratchet function	Output size	Total length mm
0010	○	1/4" male square	89

T-handle with ratchet function in set

Wera

Design:
- fine-toothed reversible ratchet (80 teeth / 4.5° return angle), simplifies and speeds up screwing without tedious reattachment
- integrated ratchet completely embedded in the handle
- quick-turn sleeve for very high working speed
- with ergonomic 2-component handle with finger grip recesses
- very high power transmission and fatigue-free work
- with switch lever (left / right) for one-hand operation
- 1/4" square socket with secure ball lock
- in a practical set with bits
- in compact, textile box with high robustness

1/4"

NEW



N° article	539731 Kraftform Kompakt 400 RA set 2	Parts	Contents
0015	○	9	**1 T-handle adapter screwdriver** 1/4" × 45 mm **8 socket wrench bits** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm

Design:
- with Rapidaptor quick-change chuck
- fine-toothed reversible ratchet (80 teeth / 4.5° return angle), simplifies and speeds up screwing without tedious reattachment
- integrated ratchet completely embedded in the handle
- quick-turn sleeve for very high working speed
- with ergonomic 2-component handle with finger grip recesses
- very high power transmission and fatigue-free work
- with switch lever (left / right) for one-hand operation
- in a practical set with bits
- in compact, textile box with high robustness Bit holder

1/4"



NEW



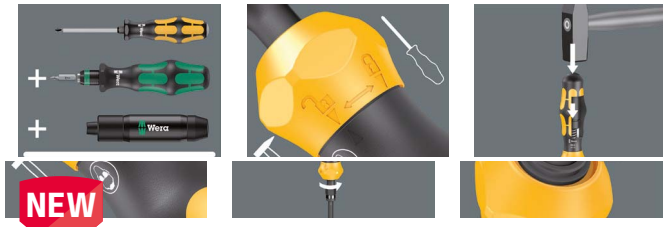
N° article	539731 Kraftform Kompakt 400 RA set 1	Parts	Contents
0010	●	17	**1 T-handle bitholding crewdriver** 1/4 × 45 mm **2 bits cross-recess** PH2 | PH3 **2 bits cross-recess** PZ2 | PZ3 **6 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **5 bits male hex** 3 | 4 | 5 | 6 | 8 mm **1 bit slot** 5.5 mm

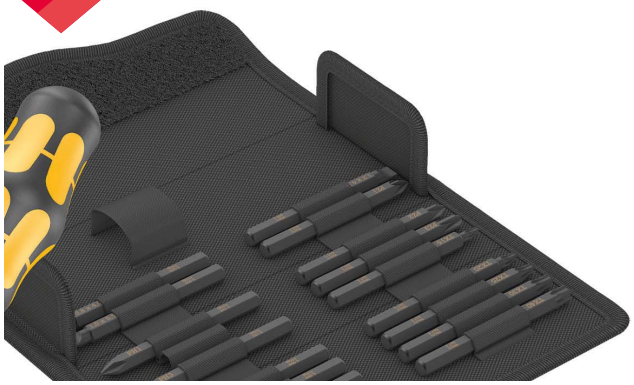
Impact screwdriver set

Wera

Design:
- for loosening stubborn screw connections
- impact wrench function and screwdriver function can be switched over as required
- hammer impulse is converted into a rotary movement with a loosening torque of approx. 25 Nm
- loss-free power transmission via a continuous blade
- robust bit holder
- combines the advantages of manual impact wrenches and screwdrivers with continuous blade
- hexagonal socket for higher power transmission by spanner aid with an open-end spanner
- in a practical set with extra tough interchangeable blades
- in compact, textile box with high robustness

1/4" | ISO 1173





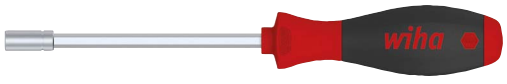
N° article	539740 Kraftform Kompakt 900 set 1	Parts	Contents
0010	●	19	**1 Kraftform Plus impact screwdriver** 1/4" × 163.5 mm **3 bits cross recess** PH1 | PH2 | PH3 **3 bits cross recess** PZ1 | PZ2 | PZ3 **5 bits TORX®** T15 | T20 | T25 | T30 | T40 **4 bits female square** 3 | 4 | 5 | 6 mm **3 bits slot** 0.8 × 4 | 1 × 5.5 | 1.2 × 6.5 mm

Bit holder

wiha

Design:
- blade made of chromium-vanadium steel, through-hardened, gloss nickel-plated
- with SoftFinish® multi-component handle with roll-off protection
- bit seat made of stainless steel, with powerful permanent magnet

1/4"



N° article	539750 rigid, magnetic	Blade length mm
125	●	125

Design:
- blade of plastic coated wire mesh
- SoftFinish® multi-component handle with roll-off protection
- bit holder with circlip
- for angled screwing

1/4"



N° article	539750 flexible	Blade length mm
150	●	150

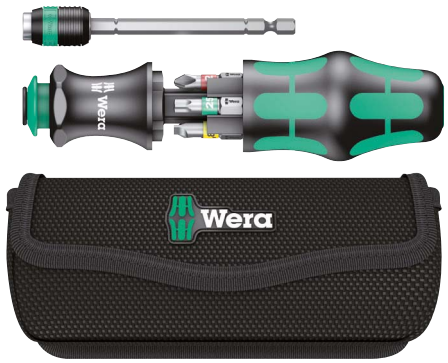
Magazine bit holder

Wera

Design:
- manual holder Kraftform with bayonet blade and quick-change chuck Rapidaptor®
- multi-component Kraftform handle with roll-off protection and integrated magazine
- bayonet blade retractable in the handle
- with the tool finder "Take it easy" colour coding system

1/4"

Delivery:
In robust textile bag



N° article	539752 8-piece	Contents
KK20TF1	●	**1 magazine bit holder Kraftform Kompakt** **1 Rapidaptor universal holder** 1/4", 100 mm **1 bit slot** 5.5 mm **2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **1 bit TORX®** T25

Screwdriver with bit magazine magnetic

wiha

Design:
- 8 standard bits safely stowed in the handle
- thanks to the magnetic locking function, the bit depot can be opened and closed easily
- the magnetic bit holder ensures quick bit changes

NEW



N° article	539751 SL | PH | PZ | TORX®	Contents	Design
8	●	8	**Slot** 4.5 mm | 6.5 mm **Cross-recess** PH1 | PH2 **Cross-recess** PZ1 | PZ2 **TORX®** T15 | T20

Magazine bit holder short

wiha

Design:
- ergonomic SoftFinish® multi-component handle with roll-off protection
- bit seat made of stainless steel with powerful permanent magnet, incl. 25 mm standard bits
- **6 drive systems in a single tool**
- especially suited for operations in confined spaces
- the alternative to a screwdriver set

1/4"



PH / PZ



TORX

N° article	539753 magnetic	Contents
PH/PZ	●	**Cross-recess** PH1 | PH2 | PH3 **Cross-recess** PZ1 | PZ2 | PZ3
TORX	●	**TORX®** T10 | T15 | T20 | T25 | T30 | T40

Magazine bit holder magnetic

wiha Tools that work for you

Design:
- blade made of high-quality chromium-vanadium steel
- through-hardened
- ergonomic SoftFinish®multi-component handle with roll-off protection
- optimum power transmission
- bit seat made of stainless steel with powerful permanent magnet, incl. 25 mm standard bits
- 8 drive systems in a single tool
- the alternative to a screwdriver set



N° article	539754 8-piece	Contents
8	●	**Slot** 6.5 mm **Cross-recess** PH1 | PH2 | PH3 **Cross-recess** PZ2 **TORX®** T15 | T20 | T25

Design:
- blade made of high-quality chromium-vanadium steel
- through-hardened
- ergonomic SoftFinish®multi-component handle with roll-off protection
- optimum power transmission
- bit seat made of stainless steel with powerful permanent magnet, incl. 25 mm standard bits
- 12 bits compactly stored in the handle body
- the alternative to a screwdriver set



N° article	539754 13-piece	Contents
13	●	**Slot** 5.5 mm **Cross-recess** PH2 **Cross-recess** PZ1 | PZ2 | PZ3 **TORX®** T15 | T20 | T25 | T30 **External hex** 3.0 | 4.0 | 5.0 mm

Magazine bit holder short

Wera Be a Tool Rebel

Design:
- handle/interchangeable blade system for lightning fast replacement of the required blade
- ergonomic 2-component Kraftform handle
- bits with BiTorsion zone to cushion load peaks



N° article	530255 set	Parts	Contents
19	●	19	**1 stubby handle** **3 bits slot** 2× 5.5 | 6.5 mm **2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **6 bits male hex** 2 | 2.5 | 3 | 4 | 5 | 5.5 mm **5 bits TORX®** T10 | T15 | T20 | T25 | T30

ESD bit holder with bit magazine short

Wera Be a Tool Rebel

Design:
- handle/interchangeable blade system for lightning fast replacement of the required blade
- ESD bit holder for electrostatically safe work, magnetic
- ergonomic 2-component Kraftform handle



N° article	530256 set	Parts	Contents
10	○	10	**1 stubby ESD handle** **5 bits slot** 3 | 4.5 | 5.5 | 6.5 | 8 mm **4 bits cross-recess** PH00 | PH0 | PH1 | PH2

Magazine bit holder short

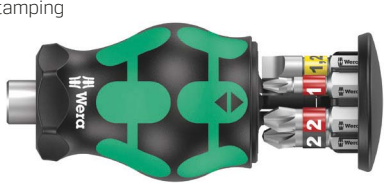
Wera Be a Tool Rebel

Design:
- short compact stubby shape for working in tight spaces with 6 bits in the integrated magazine
- ergonomic 2-component Kraftform handle for precise working
- 1/4" bit holder with strong permanent magnet
- captive and swivelling bit magazine for easy removal and safe storage of bits
- with the tool finder "Take it easy" Colour coding according to profiles and size stamping



N° article	530257 Slot | PH | TORX®	Parts	Contents
MAGAZIN 1	○	6	**1 bit slot** 5.5 mm **2 bits cross recess** PH1 | PH2 **3 bits TORX®** T15 | T20 | T25

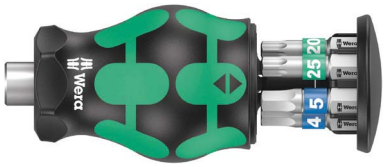
Design:
- short compact stubby shape for working in tight spaces with 6 bits in the integrated magazine
- ergonomic 2-component Kraftform handle for precise working
- 1/4" bit holder with strong permanent magnet
- captive and swivelling bit magazine for easy removal and safe storage of bits
- with the tool finder "Take it easy" Colour coding according to profiles and size stamping



N° article	530257 Slot | PH | PZ	Parts	Contents
MAGAZIN 2	○	6	**2 bits slot** 5.5 | 6.5 mm **2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2

Magazine bit holder short

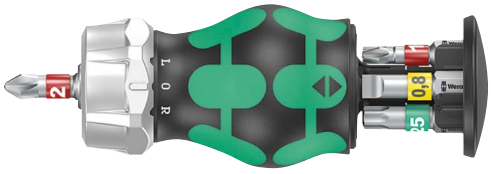
Design:
- short compact stubby shape for working in tight spaces with 6 bits in the integrated magazine
- ergonomic 2-component Kraftform handle for precise working
- 1/4" bit holder with strong permanent magnet
- captive and swivelling bit magazine for easy removal and safe storage of bits
- with the tool finder "Take it easy" Colour coding according to profiles and size stamping



N° article	530257 Male hexagon | TORX®	Parts	Contents
MAGAZIN 3	○	6	**3 bits male hex** 3 | 4 | 5 mm **3 bits TORX®** T15 | T20 | T25

Design:
- short compact stubby shape for working in tight spaces with 6 bits in the integrated magazine
- ratchet function with fine toothing for low return angle (right / left)
- ergonomic 2-component Kraftform handle for precise working
- 1/4" bit holder with strong permanent magnet
- captive and swivelling bit magazine for easy removal and safe storage of bits
- with the tool finder "Take it easy" Colour coding according to profiles and size stamping

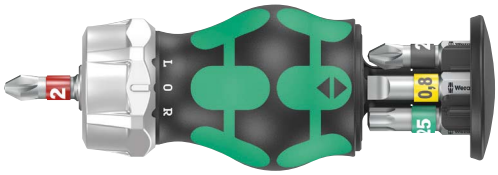
NEW



N° article	530257 Slot | Cross-recess | TORX®	Contents
MAGAZIN 5	●	**1 bit slot** 5.5 mm **2 bits cross recess** PH1 | PH2 **3 bits TORX®** T15 | T20 | T25

Design:
- short compact stubby shape for working in tight spaces with 6 bits in the integrated magazine
- ratchet function with fine toothing for low return angle (right / left)
- ergonomic 2-component Kraftform handle for precise working
- 1/4" bit holder with strong permanent magnet
- captive and swivelling bit magazine for easy removal and safe storage of bits
- with the tool finder "Take it easy" Colour coding according to profiles and size stamping

NEW



N° article	530257 Slot | Cross-recess | TORX®	Contents
MAGAZIN 6	○	**1 Bit Schlitz** 5,5 mm **2 Bits Kreuzschlitz** PH1 | PH2 **2 Bits Kreuzschlitz** PZ1 | PZ2 **1 Bits TORX®** T25

Bicycle tools Bicycle Set 15

Design:
- very space-saving and therefore ideal for mobile use
- glass-fibre reinforced plastic tyre levers
- innovative, extremely compact 4-in-1 bit
- 1/4" hexagon socket in the tyre lever to take a 1/4" bit
- one bit for four different screw sizes
- the tyre lever's hexagon socket allows a torque of up to 10 Nm
- tyre lever with valve extractor for French valves (Sclaverand) and bleeder for car tyre valves

NEW



N° article	530266 Tyre lever	Parts	Contents
0010	○	5	**2 tyre levers with bit receptacle** 105 mm **1 tyre lever with valve extractor** 105 mm **1 4-in-1 bit** 3+4 | 5+6 mm **1 4-in-1 bit** T25 | 2,5+5+6 mm

Claw bit screw holder with free-wheel sleeve

Design:
- for all standard screwdrivers with blade Ø of 4.5 - 6.0 mm (size PH/PZ 1 and 2)
- works non-magnetic
- made of wear-proof material
- trigger forces well beyond EN standards
- with free-wheel sleeve for easy guiding
- screw claw releases the screw automatically after screwing

Use:
For holding screws when working in difficult-to-access areas. Suitable for workshop and electrical applications

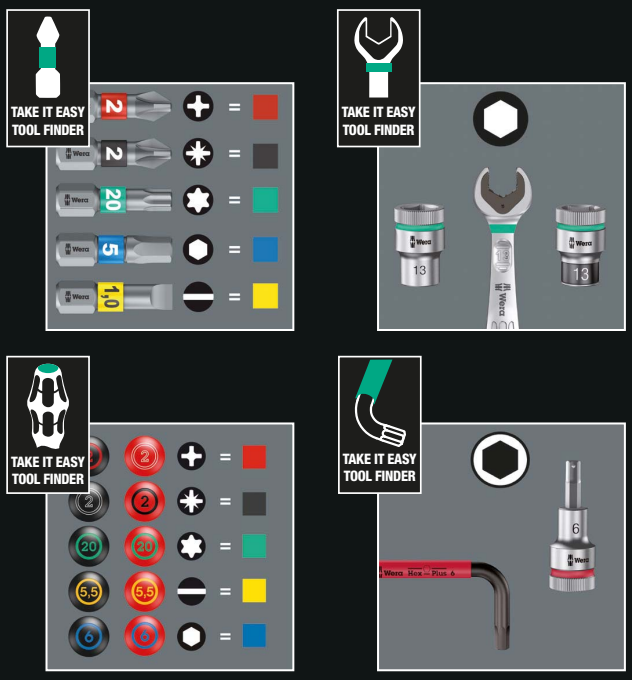




N° article	530598
1441	●

Take it Easy Tool Finder.

Makes finding the right tool super easy. Coloured banderoles according to profiles make it easier to find the right drive. The Wera tool finder is available from Wera for all top bit lines: Impaktor, Stainless, Diamond, BiTorsion. In addition, screwdrivers, angle spanners, nuts, bit nuts and open-ended wrenches are also available with Take it easy tool finder.



Tools with holding function

8767 TORX® HF

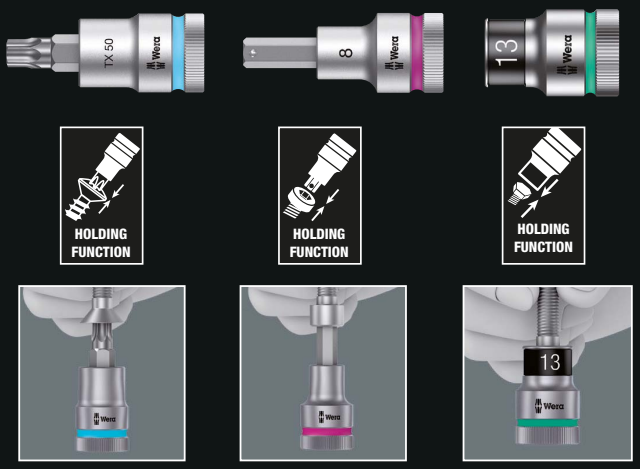
Due to the clamping force resulting from the surface pressure between the output drive tip and the screw profile, screws are held scurely on the tool according to specification Acument Intellectual Properties!

8740 HF

The clamping of the hexagon socket screw on the bit nut is ensured by a spring-loaded ball on the bit.

8790 HF

The clamping of the hexagon head screw in the socket set is ensured by two spring-loaded balls and a permanently elastic high-strength shrink hose.



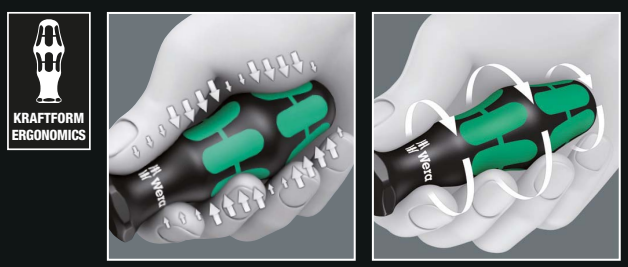
Lasertip blade tips

The micro-rough surface bites into the screw head and prevents it from slipping out. For slotted, Phillips and Pozidriv. Wera Lasertip reduces the required contact pressure and increases the power transmission.



Kraftform handle

The Kraftform handle is adapted to the shape of the human hand and is featured as a multi-component construction. With soft zones for firm gripping and high torque. With hard zones for high working speed.





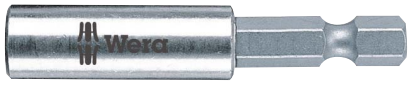
Universal holder

Design:
- coupling plug
- as connection piece between bit and screwing tool
- for mounting bits with 1/4" hex drive to DIN 3126 C 6.3 / type E 6.3 = short version

542000: With circlip, non-magnetic (no attraction of metal swarf)
542100: With stainless steel sleeve, circlip and strong permanent magnet
542160: with Rapidaptor®quick-change chuck with strong permanent magnet, short
542162: with Rapidaptor®quick-change chuck with strong permanent magnet
542164: with Rapidaptor®quick-change chuck, ring magnet and stop sleeve

1/4" | Form C 6,3 | Form E 6,3 | DIN 3126


542000


542100


542160


542162


542164

N° article	542000	542100	542160	542162	542164	542100 Total length mm	542000 Total length mm	542162 Total length mm	542164 Total length mm	542160 Total length mm	Output size
A5,5	–	●	–	–	–	72	–	–	–	–	1/4*
E6,3	●	●	–	●	●	75	57	75	57	–	1/4*
E6,3K	–	●	–	–	–	50	–	–	–	–	1/4*
E6,3/K	–	–	●	–	–	–	–	–	–	50	1/4*
G7	–	○	–	–	–	75	–	–	–	–	1/4*

Universal holder Impaktor

Design:
- bit holder to cushion extreme impulse peaks
- integrated double torsion spring and the use of impactor bits create the world's first TriTorsion system with up to 10 times the service life
- suitable for bits with external hexagon drive according to DIN ISO 1173-C 6.3
- with annular magnet and circlip to hold long and heavy screws
- Magnet can be retracted and thus switched off

1/4" | Form C 6,3 | DIN 3126

N° article	542240	Output size	Total length mm
897/4IR	●	1/4*	57



Connection part

Design:
- made of chromium-vanadium steel
- for dynamic permanent load
- for holding sockets with 1/4" female square drive according to DIN 3126 C 6.3 / type E 6.3

1/4" | Form C 6,3 | Form E 6,3 | DIN 3126



N° article	542500	Output size	Total length mm
E6,3×50	●	1/4*	50
E6,3×100	●	1/4*	100

Universal holder BiTorsion®

Design:
- BiTorsion® with Rapidaptor®quick-change chuck
- torsion zone reduces peak loads and increases tool life
- to mount bits with 1/4" hex drive to DIN 3126 C 6,3

1/4" | Form C 6,3 | DIN 3126



N° article	542250	Output size	Total length mm
897/4R	●	1/4*	57

Bit

Design:
- DIN 3126-C 6.3
- **tough but flexible make** particularly for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form E 6,3 | DIN 3126

N° article	543005 Slot	Width of blade mm	Blade thickness mm	Total length mm
0,5×3,0	●	3	0,5	25
0,6×4,5	●	4,5	0,6	25
0,8×5,5	●	5,5	0,8	25
1,0×5,5	●	5,5	1	25
1,2×6,5	●	6,5	1,2	25



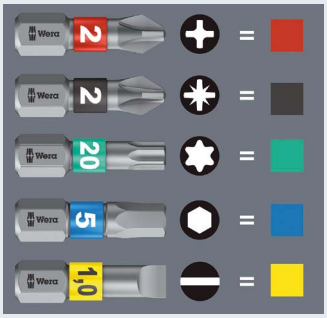
Bit adapter

Design:
- made of chromium-vanadium steel
- for dynamic permanent load
- for mounting screwdriver bits with 1/4" hex drive DIN 3126 C 6.3
- with circlip

1/4" | Form C 6,3 | DIN 3126

N° article	542600	Output size	Total length mm
1/4	●	1/4*	25
3/8	●	3/8*	30
1/2	●	1/2*	35





"Take it easy" tool finder

with colour coding according to profiles and size stamp – for easy and fast finding of the required tool.

Bit Diamond

Design:
- DIN 3126-C 6.3
- **diamond coated** for extra secure fit

1/4" | Form C 6,3 | DIN 3126 | Diamond | PU 10 pieces



N° article	543010 Slot	Width of blade mm	Blade thickness mm	Total length mm
0,8×5,5	○	5,5	0,8	25
1,0×5,5	○	5,5	1	25
1,2×6,5	○	6,5	1,2	25

Bit Impaktor

Design:
- Impaktor bit to DIN 3126-F 6.3
- for customary impact wrenches
- rough diamond coating reduces slipping off from the screws

1/4" | Form F 6,3 | DIN 3126 | Diamond | PU 5 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	543206 External hex, Hex-Plus®	AF_1 mm	Total length mm
4	○	4	50
5	○	5	50
6	○	6	50

Bit

Design:
- DIN 3126-C 6.3
- grey, specially blasted surface
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form C 6,3 | DIN 3126

N° article	543300 Cross-recess PH	Output size	Total length mm
PH0×25	●	PH0	25
PH1×25	●	PH1	25
PH1×50	●	PH1	50
PH2×25	●	PH2	25
PH2×50	●	PH2	50
PH3×25	●	PH3	25



Bit

Design:
- DIN 3126-C 6.3
- grey, specially blasted surface
- **tough but flexible make** particularly for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form C 6,3 | DIN 3126



N° article	543200 External hex, Hex-Plus®	AF_1 mm	Total length mm
2	●	2	25
2,5	●	2,5	25
3	●	3	25
4	●	4	25
5	●	5	25
6	●	6	25
8	●	8	25

Design:
- DIN 3126-C 6.3
- bits with 1/4" male hex drive
- grey, specially blasted surface
- **tough but flexible make** particularly for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form C 6,3 | DIN 3126



N° article	543250 External hex with spherical head	AF_1 mm	Total length mm
2,5	●	2,5	25
3	●	3	25
4	●	4	25
5	●	5	25
6	●	6	25

Bit Impaktor

Design:
- Impaktor bit to DIN 3126-F 6.3
- for customary impact wrenches
- rough diamond coating reduces slipping off from the screws

1/4" | Form F 6,3 | DIN 3126 | Diamond | PU 5 pieces

Delivery:
In packaging units only!

Note:
Price per piece



N° article	543207 Cross-recess PH	Output size	Total length mm
PH2	○	PH2	50
PH3	○	PH3	50

Bit

Design:
- DIN 3126-C 6.3

Type BDC:
BiTorsion®, diamond coated for extra secure fit
Type BTZ:
tough but flexible version for screw connections in metal
Type BTH:
ultra-hard for screw joints in wood

1/4" | Form C 6,3 | DIN 3126 | Diamond


543715


543720


543725

N° article	543715 Cross-recess PH, type BDC	543720 Cross-recess PH, type BTZ	543725 Cross-recess PH, type BTH	Output size	Total length mm
PH1	●	●	○	PH1	25
PH2	●	●	●	PH2	25
PH3	○	●	○	PH3	25

Design:
- DIN 3126-C 6.3

Type BDC:
BiTorsion®, diamond coated for extra secure fit
Type BTH:
ultra-hard for screw joints in wood
Type BTZ:
tough but flexible version for screw connections in metal

1/4" | Form C 6,3 | DIN 3126 | Diamond


543410


543415


543420

N° article	543410 Cross recess PZ, BDC	543415 Cross recess PZ, BTH	543420 Cross recess PZ, BTZ	Output size	Total length mm
PZ1	○	○	●	PZ1	25
PZ2	●	●	●	PZ2	25
PZ3	●	○	●	PZ3	25

Design:
- DIN 3126-C6.3
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form C 6,3 | DIN 3126



N° article	543500 TORX®	Output size	Total length mm
TX5	●	T5	25
TX6	●	T6	25
TX7	●	T7	25
TX8	●	T8	25
TX9	●	T9	25
TX10	●	T10	25

N° article	543500 TORX®	Output size	Total length mm
TX15	●	T15	25
TX20	●	T20	25
TX25	●	T25	25
TX27	●	T27	25
TX30	●	T30	25
TX40	●	T40	25

Design:
- DIN 3126-C6.3
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form C 6,3 | DIN 3126



N° article	543502 TORX PLUS®	Output size	Total length mm
5IP	●	5IP	25
6IP	●	6IP	25
7IP	●	7IP	25
8IP	●	8IP	25
9IP	●	9IP	25
10IP	●	10IP	25

N° article	543502 TORX PLUS®	Output size	Total length mm
15IP	●	15IP	25
20IP	●	20IP	25
25IP	●	25IP	25
27IP	●	27IP	25
30IP	●	30IP	25
40IP	●	40IP	25

Bit

Design:
- DIN 3126-C6.3
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form C 6,3 | DIN 3126



N° article	543400 Cross recess PZ	Output size	Total length mm
PZ0×25	●	PZ0	25
PZ1×25	●	PZ1	25
PZ1×50	●	PZ1	50
PZ2×25	●	PZ2	25
PZ2×50	○	PZ2	50
PZ3×25	●	PZ3	25

Design:
- DIN 3126-C 6.3

Type BDC:
diamond coated for extra secure fit
Type BTZ:
tough but flexible version for screw connections in metal

1/4" | Form C 6,3 | DIN 3126 | Diamond


543510


543515

N° article	543510 TORX® type BDC	543515 TORX® Type BTZ	Output size	Total length mm
TX10	●	●	T10	25
TX15	●	●	T15	25
TX20	●	●	T20	25
TX25	●	●	T25	25
TX30	●	●	T30	25
TX40	●	●	T40	25

Bit Impaktor

Design:
- Impaktor bit to DIN 3126-F 6.3
- for customary impact wrenches
- rough diamond coating reduces slipping off from the screws

Delivery:
In packaging units only!

Note:
Price per piece

1/4" | Form F 6,3 | DIN 3126 | Diamond | PU 5 pieces



N° article	543208 Cross recess PZ	Output size	Total length mm
PZ2	○	PZ2	50
PZ3	○	PZ3	50

Bit long version

Design:
- DIN 3126-E 6.3
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form E 6,3 | DIN 3126


543504


545505

N° article	545505 TORX®	Output size	Total length mm
TX6	●	T6	50
TX8	●	T8	50
TX10	●	T10	50
TX15	●	T15	50
TX20	●	T20	50
TX25	●	T25	50
TX27	●	T27	50
TX30	●	T30	50
TX40	●	T40	50

N° article	543504 TORX PLUS®	Output size	Total length mm
5IP	●	5IP	50
6IP	●	6IP	50
7IP	●	7IP	50
8IP	●	8IP	50
9IP	●	9IP	50
10IP	●	10IP	50
15IP	●	15IP	50
20IP	●	20IP	50
25IP	●	25IP	89
27IP	○	27IP	89
30IP	●	30IP	50
40IP	○	40IP	89

Bit Impaktor

Design:
- Impaktor bit to DIN 3126-F 6.3
- for customary impact wrenches
- rough diamond coating reduces slipping off from the screws

Delivery:
In packaging units only!

Note:
Price per piece

1/4" | Form F 6,3 | DIN 3126 | Diamond | PU 5 pieces



N° article	543209 TORX®	Output size	Total length mm
TX25	○	T25	50
TX30	○	T30	50
TX40	○	T40	50

Bit long version

Design:
- DIN 3126-E 6.3
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form E 6,3 | DIN 3126



N° article	545000 Slot	Width of blade mm	Blade thickness mm	Total length mm
0,5×3	●	3	0,5	50
0,5×4	○	4	0,5	50
0,6×3,5	●	3,5	0,6	50
0,6×4,5	●	4,5	0,6	50
0,8×4	●	4	0,8	50

N° article	545000 Slot	Width of blade mm	Blade thickness mm	Total length mm
0,8×5,5	●	5,5	0,8	50
1,0×5,5	●	5,5	1	50
1,2×6,5	○	6,5	1,2	50
1,2×8	●	8	1,2	50
1,6×8	○	8	1,6	50

1/4" | Form E 6,3 | DIN 3126



N° article	545200 Male hex, Hex-Plus®	AF_1 mm	Total length mm
3	●	3	50
4	●	4	50
5	●	5	50

N° article	545200 Male hex, Hex-Plus®	AF_1 mm	Total length mm
6	●	6	50
8	●	8	50

Bit long/extra long version

Design:
- DIN 3126-E 6.3
- **tough but flexible make** - particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form E 6,3 | DIN 3126





N° article	545500 TORX®	Output size	Total length mm
TX10	●	T10	70
TX15	●	T15	70
TX20	●	T20	70
TX25	●	T25	70
TX27	●	T27	70
TX30	●	T30	70
TX40	●	T40	70

N° article	545510 TORX®, extra long	Output size	Total length mm
TX8	●	T8	89
TX10	●	T10	89
TX15	●	T15	89
TX20	●	T20	89
TX25	●	T25	89
TX27	●	T27	89
TX30	●	T30	89
TX40	●	T40	89

Bit long/extra long version

Design:
- DIN 3126-E 6.3
- grey, specially blasted surface
- **tough but flexible make**
- particularly suited for heavy-duty screwing tasks, e.g. in sheet metal or metal

1/4" | Form E 6,3 | DIN 3126

Note:
TH = TORSION, against premature wear
L = long
EL = extra long



N° article	545300 Cross-recess PH	Output size	Total length mm
1TH	●	PH1	50
1L	●	PH1	70
1EL	●	PH1	89
2TH	●	PH2	50
2L	●	PH2	70
2EL	●	PH2	89
3TH	●	PH3	50
3L	●	PH3	70
3EL	○	PH3	89

1/4" | Form E 6,3 | DIN 3126



N° article	545400 Cross-recess PZ	Output size	Total length mm
1TH	●	PZ1	50
1L	●	PZ1	70
1EL	○	PZ1	89
2TH	●	PZ2	50
2L	●	PZ2	70
2EL	●	PZ2	89
3TH	●	PZ3	50
3L	○	PZ3	70
3EL	●	PZ3	89

Design:
- **extra strong version**
- particularly suited for soft screwing tasks, e.g. in wood

1/4" | Form E 6,3 | DIN 3126



N° article	545425 Cross-recess PH	Output size	Total length mm	Design
1TH	●	PH1	50	TH
2TH	●	PH2	50	TH
3TH	●	PH3	50	TH

1/4" | Form E 6,3 | DIN 3126



N° article	545455 Cross-recess PZ	Output size	Total length mm	Design
1TH	●	PZ1	50	TH
2TH	●	PZ2	50	TH
3TH	●	PZ3	50	TH

Fine tooth bit ratchet 1/4*

STAHLWILLE

Design:
- switchable, with press-out function
- for working in confined spaces
- only 4.5° return angle
- 2-component handle
- fine-toothed
- hexagon socket with annular compression spring
- FOD-preventive through screwless construction

1/4"



N° article	543617 for 1/4" bits	Teeth	Return angle	Total length mm
0010	○	80	4.5°	115

Fine tooth bit ratchet 1/4*

HAZET

Design:
- switchable, with spring lock for safe holding of the bits
- for working in confined spaces
- only 4° return angle (90 teeth)
- **torque 120 Nm**
- 2-component handle
- fine-toothed
- protection against ingress of dirt
- made in Germany

1/4"



N° article	543618 for 1/4" bits	Teeth	Return angle	Total length mm
863HPB	●	90	4°	116

Bit ratchet 1/4" Zyklop Mini 1

Wera

Design:
- die-forged solid steel version
- fine-tooth ratchet mechanism
- forward and reverse switch
- ergonomic Kraftform handle
- for immediate employment with 1/4" bits
- including adapter bit 1/4 "external hex on 1/4" external square for mounting of 1/4" socket inserts

1/4"





N° article	543620	Teeth	Return angle	Total length mm
8001A	●	60	6°	87

Bit ratchet set 1/4" Zyklop Mini 1

Wera

Design:
- 10-piece bit set with all-steel bit ratchet

1/4"



N° article	543620 10-piece	Contents
BR9SB	●	**1 bit ratchet** 8001A 1/4" × 87 mm **2 male hex "Hex-Plus" bits** 4 | 5 mm **2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **3 bits TORX®** T15 | T20 | T25

Bit ratchet set 1/4" Zyklop Mini 2

Wera

Design:
- nylon bag with Velcro area for easy attachment to walls, shelves, tool trolleys etc.
- including self-adhesive counter Velcro strips for the selection and definition of fastening points

1/4"

DIN 3126



N° article	543624 29-piece	Contents
0015	●	**1 Zyklop Mini 1** 1/4" × 87 mm **1 Zyklop Mini 2** 1/4" × 107 mm **1 bit holder** 1/4" female hex socket, magnetic, 78 mm **1 adapter** 1/4" male hex to 1/4" male square **2 bits cross recess** PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **6 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 mm **6 male hex "Hex-Plus" bits** 3 | 4 | 5 | 6 mm **9 socket wrench bits** Hex 4 | 5 | 5,5 | 6 | 7 | 8 | 10 | 12 | 13 mm

Bit assortment colour-marked

PROJAHN
WERKZEUGE WIE DU

Design:
- colour-marked bits
- facilitate the finding of the right size and the fitting drive
- including bit magnetic holder and bit holder with quick-release chuck

N° article	543630 15-piece	Contents
4091	●	**2 bits slot** 4 | 6 mm **2 bits cross recess** PZ1 | PZ2 **2 bits cross recess** PH1 | PH2 **5 bits TORX®** T10 | T15 | T20 | T25 | T30 **3 bits male hex** 3 | 4 | 5 mm **1 bit magnetic holder** 60 mm



1/4"

N° article	543631 32-piece	Contents
32	●	**2 bits slot** 4 | 5 mm **4 bits cross recess** PH1 | PH2 | PH2 | PH3 **4 bits cross recess** PZ1 | PZ2 | PZ2 | PZ3 **7 bits TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 **7 bits TORX® with hole** T10 | T15 | T20 | T25 | T27 | T30 | T40 **6 bits male hex** 2 | 2.5 | 3 | 4 | 5 | 6 mm **1 socket bit adapter** 1/4" × 1/4" **1 magnetic holder with quick-action chuck** 60 mm



1/4"

N° article	543633 71-piece	Contents
4090	●	**25 mm** **6 bits slot** 4 | 6 mm **12 bits cross recess** PH1 | PH2 | PH3 **12 bits cross recess** PZ1 | PZ2 | PZ3 **21 bits TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 **75 mm** **9 bits male hex** 4 | 5 | 6 mm **2 bits slot** 4 | 6 mm **3 bits cross recess** PH1 | PH2 | PH3 **2 bits cross recess** PZ1 | PZ2 **2 bits TORX®** T20 | T25 **1 magnetic holder** **1 holder with quick-change chuck**



1/4"

N° article	543634 18-piece	Contents
4093	●	**2 bits 75 mm slot** 4 | 6 mm **3 bits 75 mm cross-recess** PH1 | PH2 | PH3 **3 bits 75 mm cross-recess** PZ1 | PZ2 | PZ3 **7 bits 75 mm TORX ®** T10 | T15 | T20 | T25 | T27 | T30 | T40 **3 bits 75 mm male hex** 3 | 4 | 5 mm



Bit-Check „Kompakt"

Product Information



The new Bit-Check generation „Kompakt"

Wera's Bit-Checks are extremely compact and ideal companions also for mobile applications.

Bit assortment

Design:
- bit set with universal holder
- 1 universal holder with stainless steel sleeve, circlip and strong permanent magnet
- bits, tough-but-flexible, for universal use

N° article	543635 TORX®	Parts	Contents
0021	●	10	**1 universal holder** with Rapidaptor®quick-change chuck 50 mm **9 bits TORX®** T6 | T8 | T9 | T10 | T15 | T20 | T25 | T30 | T40
0011	●	30	**1 universal holder** with quick-change chuck 50 mm **29 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40



¼"

N° article	543635 Bit-Check 30 Metal 1, 30-piece	Contents
0012	●	**1 universal holder** with quick-change chuck 50 mm **3 bits slot** 4.5 | 5.5 | 6.5 mm **8 bits cross recess** PH1 | PH2 | PH3 **9 bits cross recess** PZ1 | PZ2 | PZ3 **6 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **3 bits male hex "Hex-Plus"** 4 | 5 | 6 mm



¼"

N° article	543635 PH / PZ / TORX®	Parts	Contents
0022	○	12	**1 universal holder** with Rapidaptor® quick-change chuck 50 mm **3 bits cross recess** PH1 | PH2 **3 bits cross recess** PZ1 | PZ2 **5 bits TORX®** T10 | T15 | T20 | T25 | T30
0013	●	30	**1 universal holder** with Rapidaptor® quick-change chuck 50 mm **9 bits cross recess** PH1 | PH2 | PH3 **10 bits cross recess** PZ1 | PZ2 | PZ3 **10 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40



Bit assortment

Wera

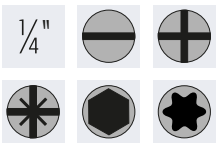
Design:
- erectable, multi-component bit-check
- 1 bit holder Impaktor 1 (1/4" × 75 mm)
- particularly suitable for use with commercially available impact wrenches
- diamond coating for secure fit in the screw





N° article	543636 BC 30 Impakor 1 30-piece	Contents
0010	○	**1 universal holder** Impaktor R **7 bits cross recess** PH1 | PH2 | PH3 **7 bits cross recess** PZ1 | PZ2 | PZ3 **11 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **4 bits male hex** 3 | 4 | 5 | 6 mm

Design:
- assortment incl. 1/4" bit holder
- in functional plastic box



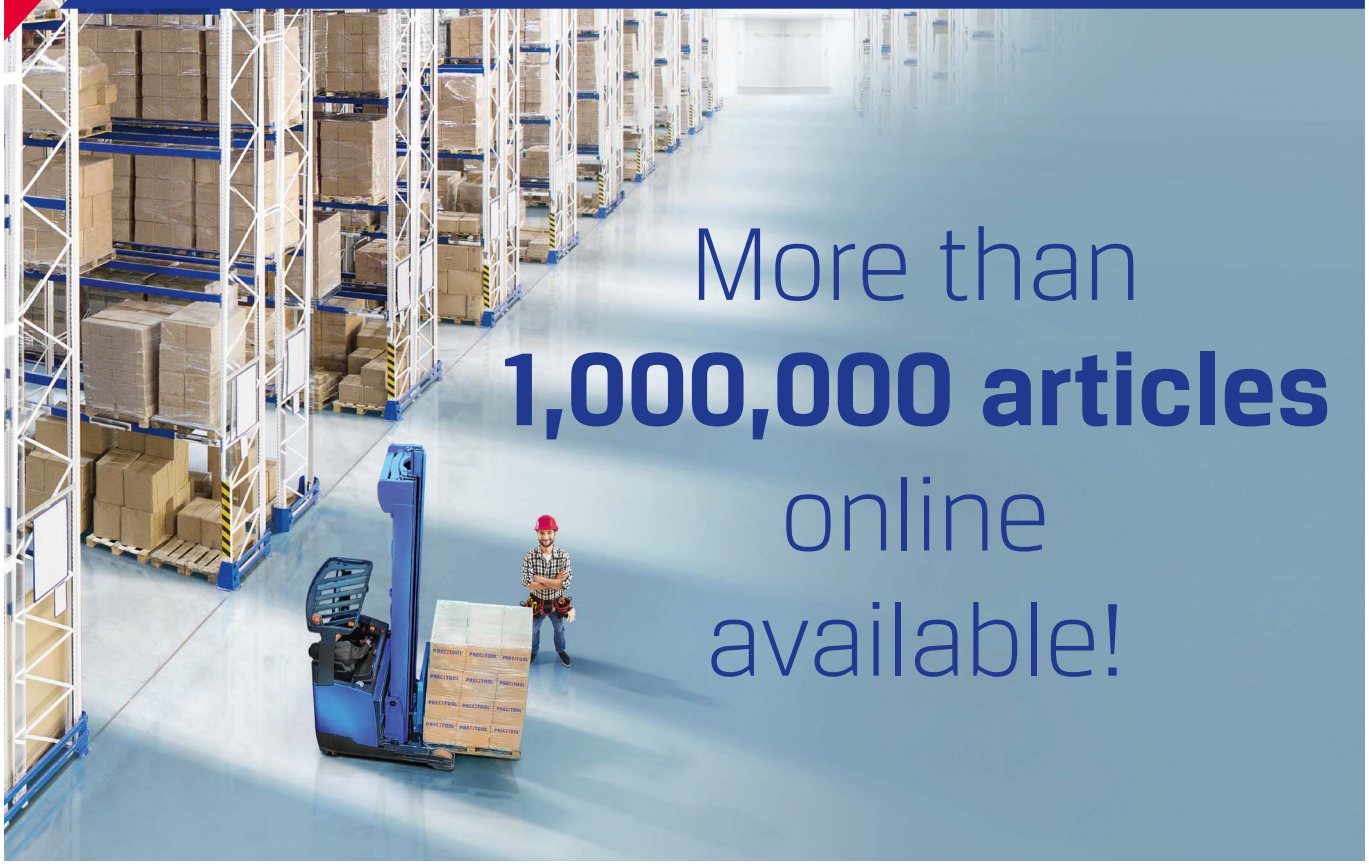


N° article	543686 Universal, 61-piece	Contents
61	●	**1 universal holder** **3 bits slot** 4.5 | 5.5 | 6.5 mm **15 bits cross recess** PH1 | PH2 | PH3 **15 bits cross recess** PZ1 | PZ2 | PZ3 **11 bits Hex-Plus** 2.5 | 3.0 | 4.0 | 5.0 mm **16 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40

Your full-range provider

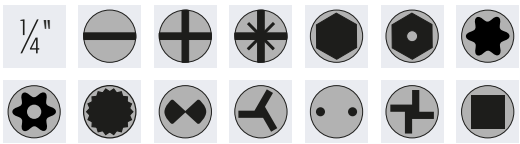
For every application the proper tool!

PRECITOOL®



Bit assortment CLASSIC

Design:
- with external hex drive to DIN 3126 / ISO 1173 - C 6.3
- for manual or electric screwdriver
- including bit holder and 1/4" socket adapter
- proper arrangement of the bits
- in sturdy plastic case





N° article	543656 100-piece	Contents
100	●	**1 bit holder** 60 mm **2 adapter** 1/4" male hex to 1/4" male square **1 adapter** 1/4" female square to 1/4" female hex **9 bits slot** 3 | 4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 8 mm **8 bits** PH0 | PH1 | PH2 | PH3 **8 bits** PZ0 | PZ1 | PZ2 | PZ3 **9 bits male hex** 1.5 | 2 | 2.5 | 3 | 4 | 5 | 5.5 | 6 | 8 mm **10 bits male hex** 1/16" | 5/64" | 3/32" | 7/64" | 1/8" | 9/64" | 5/32" | 3/16" | 7/32" | 1/4" **6 bits male bi-hex with bore** 2 | 2.5 | 3 | 4 | 5 | 6 mm **6 bits male bi-hex with bore** 5/64" | 3/32" | 7/64" | 1/8" | 9/64" | 5/32" **9 bits TORX®** T8 | T10 | T15 | T20 | T25 | T27 | T30 | T40 | T45 **9 bits TORX® with hole** T8 | T10 | T15 | T20 | T25 | T27 | T30 | T40 | T45 **3 bits multipoint** M5 | M6 | M8 **3 bits clutch type G (butterfly)** 1 | 2 | 3 **4 bits Tri-Wing** 1 | 2 | 3 | 4 **4 bits spanner** 4 | 6 | 8 | 10 mm **3 bits TORQ-SET®** 6 | 8 | 10 mm **4 bits square** 0 | 1 | 2 | 3 **1 hook driver**

Bit assortment 1/4" Kraftform Kompakt 100

Design:
- compact tool set with 52 screwing tools
- in surface-friendly, compact textile bag with high robustness
- low volume and weight

Use:
- for bits with 1/4" external hexagon drive to DIN 3126-C 6.3 and E6.3 (ISO 1173) or Wera connection series 1 and 4
- by use of an adapter 1/4" nuts can be employed



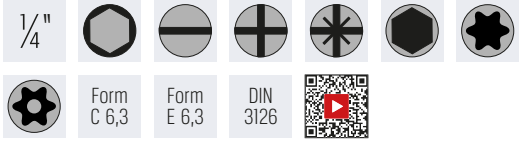


N° article	543683 52-piece	Contents
0010	●	**1 hand-held bit holder Kraftform** with Rapidaptor®quick-change chuck **1 universal holder Rapidaptor®®** **2 bits slot** 0.8×5.5 | 1.0×5.5 mm **8 bits cross recess** PH1 | PH2 | PH3 **3 bits 50 mm cross-recess** PH2 | PH3 **8 bits cross recess** PZ1 | PZ2 | PZ3 **3 bits 50 mm cross-recess** PZ2 | PZ3 **12 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **3 bits 50 mm TORX®** T25 | T30 | T40 **3 bit Impaktor 50 mm male hex** 4.0 | 5.0 | 6.0 **8 hex pin wrenches with spherical head "Hex-Plus"** 1.5 | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 | 6.0 | 8.0 mm

Bit ratchet set 1/4" Tool-Check PLUS

Design:
- bit-ratchet die-forged, solid steel version

Use:
- for bits with 1/4" external hexagon drive to DIN 3126-C 6.3 and E6.3 (ISO 1173) or Wera connection series 1 and 4
- by use of an adapter 1/4" nuts can be employed





N° article	543622 39-piece	Contents
0015	●	**7 screwdriver bits female hex** 5.5 | 6 | 7 | 8 | 10 | 12 | 13 mm **1 bit slot** 5.5 mm **6 bits cross recess** PH1 | PH2 | PH3 **5 bits cross recess** PZ1 | PZ2 | PZ3 **5 male hex "Hex-Plus" bits** 3 | 4 | 5 | 6 | 8 mm **6 PZ bits®** T10 | T15 | T20 | T25 | T30 | T40 **5 bits TORX® with hole** T10 | T15 | T20 | T25 | T30 **1 adapter** 1/4" male hex to 1/4" male square **1 bit ratchet** 8001A 1/4" **1 Kraftform handle** **1 universal holder Rapidaptor®**

Bit ratchet set 1/4" SmartHolder

Design:
- stable, easily accessible storage of tools
- bit magazine with set-up function by pressing the push-button on the side
- easy to wipe material
- easy removal of bits thanks to practical stand-up function
- no loose tools fly around or are rattling thanks to durable, robust clamp holders
- when closed, all parts are always securely locked in place
- quick removal of the sockets by turning and pulling upwards
- easy recognition of the bit profile thanks to HAZET colour code





N° article	543621 39-piece	Contents
0010	●	**6 screwdriver bits female hex** 5.5 | 7 | 8 | 10 | 12 | 13 mm **1 bits slot** 0.6 × 4.5 mm **1 bit slot long** 0.8 × 5.5 mm **3 bits cross recess** PH1 | PH2 | PH3 **1 bit cross-recess long** PH2 **3 bits cross recess** PZ1 | PZ2 | PZ3 **2 bits cross recess long** PZ1 | PZ2 **6 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **3 bits TORX® long** T20 | T25 | T30 **5 bits male hex** 3 | 4 | 5 | 6 | 8 mm **4 bits male hex long** 3 | 4 | 5 | 6 mm **1 mini all-steel fine-tooth reversible ratchet** 1/4* **1 bit holder** 1/4" with magnet **1 adapter** 1/4" male hex to 1/4" male square **1 adapter** 1/4*

Bit and offset screwdriver set

Design:
- can either be opened flat or, similar to a tablet case, set upright
- easy to wipe material
- easy removal of bits and offset screwdrivers thanks to practical stand-up function
- no loose tools fly around or are rattling thanks to durable, robust clamp holders
- practical, quick-opening magnetic lock
- easy recognition of the bit profile thanks to HAZET colour code



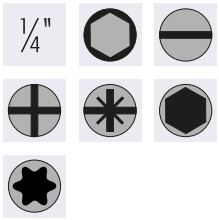




N° article	543623 69-piece	Contents
0010	●	**4 bits slot** 0.4 × 1.5 | 0.6 × 4.5 | 0.8 × 5.5 | 1.2 × 6.5 mm **1 bit slot long** 0.8 × 5.5 mm **7 bits cross recess** PH1 | 2 | 3 **2 bits cross recess long** PH1 | 2 **7 bits cross recess** PZ1 | 2 | 3 **2 bits cross recess long** PZ1 | 2 **5 bits male hex** 2 | 3 | 4 | 5 | 6 mm **4 bits male hex long** 3 | 4 | 5 | 6 mm **17 bits TORX®** T6 | T7 | T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 **3 bits TORX long®** T20 | T25 | T30 **7 bits TORX® with hole** T10H | T15H | T20H | T25H | T27H | T30H | T40H **7 Allen keys** 1.5 | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 | 6.0 **1 bit magnetic holder** **1 bit adapter** **1 adapter** 1/4" male hex to 1/4" male square

Bit and offset screwdriver set

Design:
- can either be opened flat or, similar to a tablet case, set upright
- easy to wipe material
- easy removal of bits and offset screwdrivers thanks to practical stand-up function
- no loose tools fly around or are rattling thanks to durable, robust clamp holders
- practical, quick-opening magnetic lock
- easy recognition of the bit profile thanks to HAZET colour code



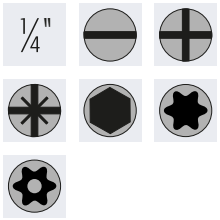
NEW



N° article	543623 59-piece	Contents
0040	●	**8 socket wrench bits** Hex socket 5.5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 mm **1 bit slot** 0.4 × 1.5 mm **1 bit slot** long 0.8 × 5.5 mm **1 bit slot** Extra long 0.8 × 5.5 mm **3 bits cross recess** PH1 | PH2 | PH3 **2 bits cross recess** long PH2 | PH3 **2 bits cross recess** extra long PH1 | PH2 **2 bits cross recess** PZ1 | PZ2 **2 bits cross recess** long PZ2 | PZ3 **2 bits cross recess** extra long PZ1 | PZ2 **3 bits male hex** 4 | 5 | 6 mm **2 bits male hex** long 3 | 4 mm **4 bits male hex** extra long 3 | 4 | 5 | 6 mm **6 bits TORX®** T10 | T15 | T20 | T25 | T30 | T40 **5 bits TORX®** long T10 | T15 | T20 | T25 | T30 **3 bits TORX®** extra long T20 | T25 | T30 **7 Allen keys** 1.5 | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 | 6.0 **1 bit holder** Hexagon 1/4" with bayonet lock **1 bit magnetic holder** **1 bit ratchet** 863 HPB, 120 Nm **1 bit holder** 810 BHK with 3-component handle **1 adapter** 1/4" male hex to 1/4" male square

Bit assortment 1/4*

Design:
- can either be opened flat or, similar to a tablet case, set upright
- easy to wipe material
- easy removal of bits thanks to practical stand-up function
- no loose tools fly around or are rattling thanks to durable, robust clamp holders
- practical, quick-opening magnetic lock
- easy recognition of the bit profile thanks to HAZET colour code



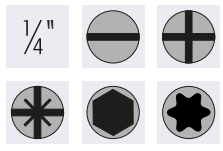
NEW



N° article	543623 96-piece	Contents
0060	●	**6 bits slot** 0.4 × 1.5 | 0.5 × 4 | 0.6 × 4.5 | 0.8 × 5.5 | 1 × 6 | 1.2 × 6.5 | 1.2 × 8 mm **1 bit slot long** 0.8 × 5.5 mm **10 bits cross recess** PH1 | PH2 | PH3 **7 bits cross recess long** PH1 | PH2 | PH3 **11 bits cross recess** PZ1 | PZ2 | PZ3 **4 bits cross recess long** PZ1 | PZ2 | PZ3 **11 bits male hex** 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 mm **5 bits male hex long** 3 | 4 | 5 | 6 | 8 mm **22 bits TORX®** T6 | T7 | T8 | T9 | T15 | T20 | T25 | T27 | T30 | T40 **10 bits TORX® long** T10 | T15 | T20 | T25 | T27 | T30 | T40 **10 bits TORX® with hole** T7 | T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 **2 adapter** 1/4" male hex to 1/4" male square

Bit-Sortiment 1/4"

Design:
- one-hand click closure for easy opening and closing
- heavy-duty mini bit ratchet up to 70 Nm
- magnetic bit holder





Art.-Nr.	543632 33-piece	Contents
4095	●	**1 mini bit ratchet** **1 bit magnetic holder** 60 mm **1 socket bit adapter** 1/4" male hex to 1/4" male square **2 bits slot** 4 | 5 mm **4 bits cross recess** PH1 | PH2 | PH2 | PH3 **4 bits cross recess** PZ1 | PZ2 | PZ2 | PZ3 **7 bits TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 **7 bits TORX® with hole** T10 | T15 | T20 | T25

Bit assortment

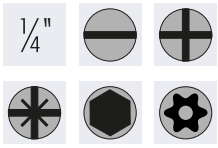
Design:
- 17-piece set with 89 mm bits in a practical folding bag
- hand holder 816 R with quick-change chuck Rapidaptor
- multi-component Kraftform handle for fatigue-free work
- with the tool finder "Take it easy" Colour coding according to profiles and size stamp
- Hex-Plus makes hexagon socket screws last longer
- suitable for docking onto the Wera 2go system





N° article	543679 17-piece	Contents
KK60	●	**1 bit holder** with Rapidaptor®quick-change chuck **1 bit slot** 5.5 mm **3 bits cross recess** PH1 | PH2 | PH3 **3 bits cross recess** PZ1 | PZ2 | PZ3 **5 bits TORX®** T10 | T15 | T20 | T25 | T30 **4 bits male hex HexPlus** 3 | 4 | 5 | 6 mm

Design:
- 17-piece set with 89 mm bits in a practical folding bag
- **hand holder 816 RA with ratchet function**
- fine toothing for small return angle
- change-over ring (right, fixed, left)
- for a max. torque of up to 50 Nm





N° article	543680 17-piece	Contents
KK60RA	●	**1 bit holder** with Rapidaptor®quick-change chuck **1 bit slot** 5.5 mm **3 bits cross recess** PH1 | PH2 | PH3 **3 bits cross recess** PZ1 | PZ2 | PZ3 **5 bits TORX®** T10 | T15 | T20 | T25 | T30 **4 bits male hex HexPlus** 3 | 4 | 5 | 6 mm



Design:
- with multi-component Kraftform handle
- universal holder with quick-change chuck
- in plastic box



N° article	543695 All-round, 32-piece	Contents
ALLROUND	○	**1 Kraftform handle** with quick-change chuck Rapidaptor® **1 universal holder** Rapidaptor®® **3 bits slot** 4.5 | 5.5 | 6.5 mm **9 bits cross recess** PH1 | PH2 | PH3 **9 bits cross recess** PZ1 | PZ2 | PZ3 **3 male hex "Hex-Plus" bits** 4 | 5 | 6 **6 bits TORX® with hole** T10 | T15 | T20 | T25 | T30 | T40



N° article	543695 Security, 32-piece	Contents
SECURITY	○	**1 Kraftform handle** with quick-change chuck Rapidaptor® **1 universal holder** Rapidaptor®® **6 bits male hex with bore "Hex-Plus"** 2 | 2.5 | 3 | 4 | 5 | 6 **9 bits TORX® with hole** T7 | T8 | T9 | T10 | T15 | T20 | T25 | T30 | T40 **4 bits spanner** 4 | 6 | 8 | 10 **4 bits TORQ-SET®** 6 | 8 | 10 | 1/4" **4 bits Tri-Wing®®** 1 | 2 | 3 **4 bits square drive** 0 | 1 | 2 | 3

Design:
- **HSS countersink bit set**
- hand holder Kraftform with quick-action chuck
- incl. universal bit holder Rapidaptor®







N° article	543698 8-piece	Contents
846	●	**1 holder Kraftform** **1 universal holder** **6 bits countersink HSS** 6.3 | 8.3 | 10.4 | 12.4 | 16.5 | 20.5 mm

IMPACT socket

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1/2" | DIN 3129



N° article	548700 1/2* Hexagon	AF_1 mm	Total length mm	N° article	548700 1/2* Hexagon	AF_1 mm	Total length mm
9	○	9	39	18	●	18	39
10	●	10	39	19	●	19	39
11	●	11	39	21	●	21	39
13	●	13	39	22	●	22	39
14	●	14	39	24	●	24	39
15	●	15	39	27	●	27	39
16	●	16	39	30	●	30	48
17	●	17	39	32	●	32	48

IMPACT socket

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1/2"



N° article	548705 1/2" hex, long	AF_1 mm	Total length mm	N° article	548705 1/2" hex, long	AF_1 mm	Total length mm
10	●	10	77	19	●	19	77
13	●	13	77	21	●	21	77
14	●	14	77	22	●	22	77
15	●	15	77	24	●	24	77
16	●	16	77	27	●	27	78
17	●	17	77	30	●	30	78
18	●	18	77	32	●	32	78

IMPACT cardan joint

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1/2" | DIN 3121



N° article	548712 1/2*	Total length mm
381000	●	67

IMPACT screwdriver bit

PROJAHN WERKZEUGE WIE DU

Design:
- for utmost demands
- made of chromium-vanadium-molybdenum steel
- surface burnished
- safe junction to machine by means of transversal hole and grooved ring to insert safety pin and retention ring

1/2" | DIN 3121



N° article	548735 1/2* External hex	AF_1 mm	Total length mm
4	●	4	78
5	●	5	78
6	●	6	78
8	●	8	78
10	●	10	78
12	●	12	78
14	●	14	78
17	●	17	78
19	●	19	78

IMPACT extension

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1/2"



N° article	548710 1/2*	Total length mm
387075	●	75
387125	●	125

Locking pin

PROJAHN WERKZEUGE WIE DU



N° article	548714 fitting for 1/2" square drive	for AF mm
391410	●	10 - 14
393216	●	16 - 32

Circlip

PROJAHN WERKZEUGE WIE DU



N° article	548716 for 1/2" square drive	for AF mm
381410	●	10 - 14
383216	●	16 - 32

IMPACT adapter

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1/2" | DIN 3121



N° article	548725 1/2*	Drive size	Output size	Total length mm
381234	●	1/2" female square	3/4" male square	56

IMPACT screwdriver bit

PROJAHN WERKZEUGE WIE DU

Design:
- for utmost demands
- made of chromium-vanadium-molybdenum steel
- surface burnished
- with transversal bore and grooved ring

1/2" | DIN 3121



N° article	548745 1/2* TORX®	Output size	Total length mm
TX30	●	T30	78
TX40	●	T40	78
TX45	●	T45	78
TX50	●	T50	78
TX60	●	T60	78

IMPACT socket

Design:
- especially for wheel mounting and dismantling of aluminium rims
- with plastic insert to protect the surfaces of the wheel bolts
- plastic sleeve (replaceable) outside to protect the rims when attaching the wheel bolts
- plastic sleeves colour-coded
- with hole for retaining pin or retaining spring and groove f or O-ring

1/2" | TR



17 19 21

N° article	548711 1/2" hex, long	AF_1 mm	Total length mm
17	●	17	85
19	●	19	85
21	●	21	85

IMPACT, socket wrench set

Design:
- especially for wheel mounting and dismantling of aluminium rims
- damage-free actuation of wheel bolts due to rotating plastic protector
- plastic sleeve on the outside to protect the rims when applying the wheel bolts
- plastic sleeves colour-coded
- set with all necessary sockets
- suitable for machine operation

1/2" | TR



N° article	548755 1/2* Hexagon, long	Parts	Contents	Total length mm
903SPC/3	●	3	17 | 19 | 21 mm	85

IMPACT, socket wrench set

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1/2" | DIN 3121 | DIN 3129



3080



3086



3861

N° article	548750 1/2*	Parts	Contents
3080	●	10	**Hexagon** 10 | 13 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 24 mm
3086	●	12	**Hexagon** 10 | 11 | 13 | 14 | 17 | 19 | 21 | 22 | 23 | 24 mm, **Extensions** 125 mm **Cardan joint**
3861	●	9	**External hex** 4 | 5 | 6 | 8 | 10 | 12 | 14 | 17 | 19 mm
3851	●	9	**TORX** T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 | T60

IMPACT, socket wrench set

Design:
- for use with electric or compressed air-powered impact wrenches
- hexagonal profile enables high power transmission with simultaneous precision and protection of the profile
- impactor technology for above-average service life
- with cross bore and annular groove for fastening locking pin and locking ring
- magnetic strip for temporary attachment to walls, shelves or workshop trolleys
- smooth-running turning mechanism for a secure hold and easy removal of the nuts
- with "Take-it-Easy" tool finder with colour coding according to size

1/2" | DIN 3129



NEW



N° article	548752 1/2" hex	Contents
9	●	**Sechskant** 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 mm

IMPACT socket

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

3/4" | DIN 3129


549000


549005

N° article	549000 3/4", hex	549005 3/4" hex, long	549000 Total length mm	549005 Total length mm	AF_1 mm
17	●	–	51	–	17
19	●	–	51	–	19
21	○	○	51	89,5	21
22	●	●	51	89,5	22
24	●	●	51	89,5	24
27	●	●	51	89,5	27
30	●	●	54	89,5	30
32	●	●	56	89,5	32
34	●	–	57	–	34
36	●	●	57	89,5	36
41	●	●	57	89,5	41
46	●	–	65	–	46

IMPACT adapter

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

3/4" | DIN 3121


483410


483412

N° article	549025 3/4*	Drive size	Output size	Total length mm
483410	●	3/4" female square	1" male square	64
483412	●	3/4" female square	1/2" male square	56

IMPACT, socket wrench set

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

3/4" | DIN 3129



N° article	549050 3/4* Hexagon	Parts	Contents
3085	●	8	26 | 27 | 29 | 30 | 32 | 35 | 36 | 38 mm

IMPACT extension

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

3/4" | DIN 3121



N° article	549010 3/4*	Total length mm
487100	●	100
487200	●	200

IMPACT cardan joint

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

3/4" | DIN 3121



N° article	549012 3/4*	Total length mm
481000	●	108

Locking pin plus O-ring

PROJAHN WERKZEUGE WIE DU



N° article	549030 for square drive 3/4"	for AF mm	Design
482619	●	19 - 26	O-ring
485027	●	27 - 50	O-ring
492619	●	19 - 26	S-pin
495027	●	27 - 50	S-pin

IMPACT socket

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1" | DIN 3129



N° article	549400 1" Hexagon, long	AF_1 mm	Total length mm
24	●	24	90
27	●	27	90
30	●	30	90
32	●	32	90
36	●	36	90
41	●	41	90
46	●	46	100

IMPACT extension

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1" | DIN 3121



N° article	549410 1"	Total length mm
587200	○	200

IMPACT cardan joint

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1" | DIN 3121



N° article	549412 1"	Total length mm
581000	○	130

IMPACT adapter

PROJAHN WERKZEUGE WIE DU

Design:
- made of chromium-vanadium-molybdenum steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring

1" | DIN 3121



N° article	549425 1"	Drive	Output	Total length mm
581034	●	1" square socket	3/4" male square	75

Locking pin plus O-ring set

PROJAHN WERKZEUGE WIE DU

Note:
Set consisting of 2 retaining rings



N° article	549430 for 1" square drive	for AF mm	Design:
587019	●	19-30 / 30-70	0-set
597019	●	19 - 70	S-pin

IMPACT, socket wrench set

PROJAHN WERKZEUGE WIE DU

Design:
- forged special steel
- for utmost demands
- surface burnished
- with transversal bore and grooved ring
- 90 mm length
- in metal box

1" | DIN 3129



N° article	549450 1" Hexagon, long	Parts	Contents
3088	○	8	24 | 27 | 30 | 32 | 33 | 34 | 36 | 38 mm



Needle-nose combination pliers

KNIPEX

DIN ISO 5746

Design:
- forged of special tool steel, multi stage oil-hardened
- with inductive hardened cutting edges (approx. 61 HRC)
- stable tips, gripping surface convex on one side
- for soft, medium and hard wire
- milled groove in the gripping area allows secure holding and pulling of small workpieces such as nails, pins and bolts
- for working in difficult-to-access areas thanks to a slim head and tapered jaws

N° article	550015 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting values hard wire (HRC 48) ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
145	●	3	2	16	145
185	NEW ●	3.8	3	13	185

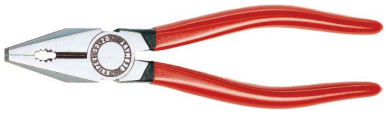


Combination pliers

KNIPEX

DIN ISO 5746

Design:
- forged of special tool steel, multi stage oil-hardened
- with inductive hardened cutting edges (approx. 63 HRC)
- for soft and hard wire
- long cutting edges for thicker cables
- for versatile use with gripping zones for flat and round material



550001



550008

N° article	550001 Polished, handles plastic coated	550003 Polished, with multi-component sleeve	550008 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting values hard wire (HRC 48) ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
160	●	●	●	3.1	2	16	160
180	●	●	●	3.4	2.2	16	180
200	●	●	●	3.8	2.5	16	200

High leverage combination pliers

KNIPEX

DIN ISO 5746

Design:
- made of special tool steel
- fully oil-hardened and tempered
- cutting edges additionally inductive hardened (approx. 63 HRC)
- long cutting edges for thicker cables
- 35 % force saving compared to conventional combination pliers
- for cables with larger cross-sections (Ø up to 25 mm²)
- for soft or hard wire and piano wire
- with gripping sections for flat and round materials for versatile use



550085

N° article	550085 Polished, with multi-component sleeve	550087 chrome-plated, with multi-component sleeve	Cutting values hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
180	●	–	2.5	2	16	180
200	●	●	2.8	2,2	25	200
225	●	●	3	2,5	25	225

Front gripper / Slip joint pliers TwinGrip

Design:
- made of chromium-vanadium electrical steel
- drop-forged and oil-hardened
- box-joint pliers hinge
- 5-way adjustable sliding joint with push-button adjustment
- gripping surfaces with inductive hardened teeth (approx. 61 HRC)
- unique combination of front-grip and side-grip function
- 2-zone gripping jaws for maximum grip when loosening and tightening screws and bolts
- for working in hard-to-reach working areas thanks to slim head shape and slim turning zone



N° article	550020 black atramentised, head polished, handles plastic coated	550021 black atramentised, head polished, with multi-component sleeve	Clamping width from-to mm	Clamping width inch	Total length mm
200	●	●	4-22	5/32 - 7/8	200

Pincers (Nipper pliers)

DIN ISO 9243

Design:
- made of special tool steel, forged, oil-hardened
- additionally hardened cutting edges (approx. 60 HRC)
- for heaviest duty
- precise workmanship
- high wear resistance and balanced weight distribution



N° article	551003 black atramentised, head polished	Cutting capacity medium hard wire (HRC 40) ∅ mm	Total length mm
160	●	1.8	160
180	●	2	180
210	●	2.2	210
225	●	2.2	225
250	●	2.2	250

Concretor´s nippers (Mechanic´s nippers/Rabitz

DIN ISO 9242

Design:
- made of special tool steel in extra quality
- drop forged and oil-hardened, head polished
- with inductive hardened cutting edges (approx. 61 HRC)
- with extra slim cutting head and long handles
- low input due to high transmission
- **551205 with 25% more power saving**



N° article	551103 black atramentised, head polished	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting values hard wire (HRC 48) ∅ mm	Total length mm
220	●	2.4	1.6	220
250	●	2.4	1.6	250
280	●	2.8	1.8	280
300	●	3.1	1.8	300



N° article	551203 nickel-plated	551205 black atramentised, polished head, plastic-coated handles	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting values hard wire (HRC 48) ∅ mm	Total length mm
300	●	●	3.8	2	300

Revolving punch pliers

Design:
- body made of high-strength steel sheet, oil-hardened
- with opening spring, opening limit stop and safety catch
- 6 interchangeable hole punches
- precise hole punching and stamping works in leather, paper, textile and soft plastic material





N° article	551210 powder coated	Number of hole punches	Hole punch ∅ mm	Total length mm
9070	●	6	2|2,5|3|3,5|4|5	220

Waterpump pliers

Design:
- made of chromium-vanadium steel
- drop-forged and high-quality tempered
- box slip joint
- the limit stop operates in both directions and excludes contusions

DIN ISO 8976



N° article	551400 red varnished	Clamping width, max. mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
175	●	26	3/4	6	175
240	●	33	1 1/2	7	240
300	●	45	1 1/4	7	300

Waterpump pliers Alligator

KNIPEX

DIN ISO 8976

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- box joint => double guide
- 9-stage arc-shaped catch adjustment
- **30% increased gripping capacity**
- gripping surfaces with hardened teeth (approx. 61 HRC)
- self-clamping on pipes and nuts
- no slipping on the workpiece





551303



551305

N° article	551303 black atramentised, handles with plastic coating	551305 chrome-plated, with multi-component sleeve	Clamping width, max. mm	Clamping range tube ∅ inch	Total length mm
180	●	–	36	1 1/2	180
250	●	●	46	2	250
300	●	●	60	2 3/4	300
400	●	–	95	3 1/2	400

Pliers wrenches

KNIPEX

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- parallel guided smooth jaws
- **One-hand adjustment** by push of a button
- continuous gripping of all spanner sizes across flats up to the specified capacity
- high clamping force due to **10-fold amplification of the applied manual force**
- for gripping, holding, pressing or bending workpieces
- for gentle assembly of surface-finished fittings

180S, 250S and 300Sgrey atramentised, head polished





551655 125



551655 180S



551655 250S



551655 250



551658 250



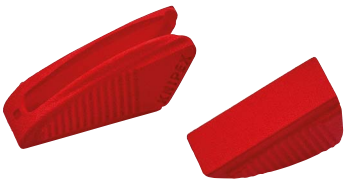
551655 300S

N° article	551654 chrome-plated	551655 chrome-plated handles plastic coated	551658 chrome-plated, with multi-component sleeve	Clamping width, max. mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
100	●	–	–	21	3/4	10	100
125	–	●	–	23	7/8	11	125
150	–	●	●	27	1	14	150
180	–	●	●	40	1 1/2	15	180
180S	–	●	–	40	1 1/2	15	180
250	–	●	●	52	2	19	250
250S	–	●	–	52	2	19	250
300	–	●	–	68	2 1/2	24	300
300S	–	●	–	68	2 1/2	24	300
400	–	●	–	85	3 3/8	25	400

Protective jaw covers for pliers wrenches

Design and use:
- for sensitive materials thanks to soft, smooth gripping surfaces
- allows the use on chrome even with damaged jaws
- for the revised pliers wrench (model from 2018) in the 250 length: damage-free gripping, holding and pressing
- set consisting of 3 pairs of plastic protective jaws

N° article	551659 for pliers wrench	fitting for
180	●	Pliers wrench length 180 mm
250	●	Pliers wrench length 250 mm
300	●	Pliers wrench length 300 mm





Waterpump pliers Cobra

Design:
- made of chromium-vanadium electrical steel, oil-hardened
- box joint (= double guide)
- **One-hand adjustment** at the touch of a button (except 551302)
- no unintentional shifting possible
- gripping surfaces with specially hardened teeth (approx. 61 HRC)
- self-clamping on pipes and nuts
- no slipping on the workpiece

DIN ISO 8976





551302 100



551663 125





551664 560





551665 250



551666 250

NEW



551669

N° article	551302 grey atramentised	551663 grey atramentised, handles with non-slip plastic coating	551664 grey atramentised, handles plastic coated, XL/XXL	551665 chrome-plated, with multi-component sleeve	551666 grey atramentised, with multi-component sleeve	551669 PU = 3 pairs	Clamping width, max. mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm	fitting for
100	●	–	–	–	–	–	24	1	11	100	–
180	–	●	–	–	–	●	–	–	–	–	Water pump pliers Cobra 180 mm
250	–	●	–	●	●	●	–	–	–	–	Water pump pliers Cobra 250 mm
300	–	●	–	●	●	●	–	–	–	–	Water pump pliers Cobra 300 mm
125	–	●	–	–	–	–	27	1	13	125	–
150	–	●	–	–	–	–	30	1 1/4	11	150	–
400	–	–	●	–	–	–	95	3 1/2	27	400	–
560	–	–	●	–	–	–	120	4 1/2	20	560	–

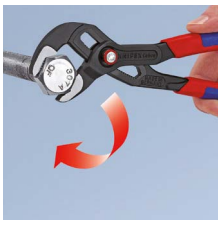
Waterpump pliers Cobra QuickSet

DIN ISO 8976

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- secure locking of the hinge bolt with additional sliding function
- **additional quick adjustment** at the workpiece by pushing without pressing the button









551686



551687

N° article	551686 grey atramentised, handles with non-slip plastic coating	551687 grey atramentised, with multi-component sleeve	Clamping width, max. mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
250	●	●	46	2	25	250
300	●	–	60	2 3/4	25	300

Multiple slip joint spanner

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- box-joint design, double guiding provides high stability
- ergonomic handle with anti-slip plastic cover
- **single-hand fine adjustment** by push of a button
- jamming guard prevents crushes
- fast tightening and loosening of screw connections according to the ratchet principle
- self-locking in the range of AF 17 - 32 mm





N° article	551675 grey atramentised, handles with non-slip plastic coating	AF_1 mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
250	●	10 - 32	3/8 - 1 1/4	15	250







Waterpump pliers Grip Cobra

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- self-clamping on pipes and nuts
- **extra slim head shape** for restricted working spaces
- box joint => double guide
- jamming guard prevents crush injuries
- single hand fine adjustment via spring-loaded push-button
- gripping surfaces with hardened teeth (approx. 61 HRC)
- self-locking

DIN ISO 8976



N° article	551680 grey atramentised, handles with non-slip plastic coating	AF_1 mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
250	●	34	1 1/4	19	250

Pipe wrench 90°

Design:
- made of chromium-vanadium steel, forged
- double-T profile handles
- jaw opening inductive hardened and 90° angled
- toothing offset against the direction of rotation
- with locknut protection, clamping protection
- powder coated

DIN 5234 | Form A



N° article	551820 Standard	Clamping range mm	Clamping range tube ∅ inch	Total length mm
1	●	0 - 42	1	305
1.1/2	●	0 - 60	1 1/2	405
2	●	0 - 70	2	560
3	●	10 - 105	3	650
4	●	10 -130	4	750

Corner pipe wrench 45°

Design:
- made of chromium-vanadium steel, forged
- double-T profile handles
- jaw opening inductive hardened and 45° angled
- toothing offset against the direction of rotation
- with locknut protection, clamping protection
- powder coated

DIN 5234 | Form B



N° article	551860 Standard	Clamping range mm	Clamping range tube ∅ inch	Total length mm
1/2	●	0 - 35	1/2	265
1	●	0 - 42	1	310
1.1/2	●	0 - 60	1 1/2	410
2	●	0 - 70	2	570
3	●	25 - 110	3	695

Corner pipe wrench 45°

Design:
- made of chromium-vanadium steel, forged
- double-T profile handles
- jaw opening in S-shape, inductive hardened and 45° angled
- toothing offset against the direction of rotation
- with locknut protection, clamping protection
- powder coated

DIN 5234 | Form C



N° article	551920 S-type pipe wrench	Clamping range mm	Clamping range tube ∅ inch	Total length mm
1/2	●	0 - 35	1/2	265
1	●	0 - 42	1	315
1.1/2	●	0 - 60	1 1/2	420
2	●	0 - 70	2	530
3	●	10 - 110	3	680

Corner pipe wrench

Design:
- made of chromium-vanadium steel, forged
- time-saving precise quick adjustment
- **One-hand adjustment** by push of a button
- no unintentional misalignment of the handle
- high wear resistance due to additional hardened toothing
- high force transmission due to fully hardened pliers halves
- handles with dipped plastic cover
- special lacquering finish
- jamming protection prevents crushes
- Master version

DIN 5234 | Form C

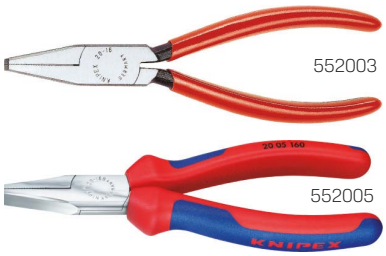


N° article	551946 S-type pipe wrench with one-hand adjustment	Clamping range mm	Clamping range tube ∅ inch	Total length mm
1	●	0 - 42	1	325
1.1/2	●	0 - 60	1 1/2	425
2	●	0 - 70	2	560

Flat nose pliers with short jaws

Design:
- made of special tool steel, forged, oil-hardened
- short, flat jaws
- with serrated gripping surfaces

ISO 5745



N° article	552003 Polished, handles plastic coated	552005 chrome-plated, with multi-component sleeve	Jaw length mm	Total length mm
125	●	–	27	125
140	●	●	28	140
160	●	●	30	160

Flat nose pliers with long jaws

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- long, flat jaws
- with serrated gripping surfaces
- highly resilient and low-wear

ISO 5745



N° article	552103 Polished, handles plastic coated	552105 chrome-plated, with multi-component sleeve	Jaw length mm	Total length mm
140	●	●	42	140
160	●	●	46,5	160

Needle nose pliers with long jaws

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- long, flat jaws
- with serrated gripping surfaces
- highly resilient and low-wear

ISO 5745

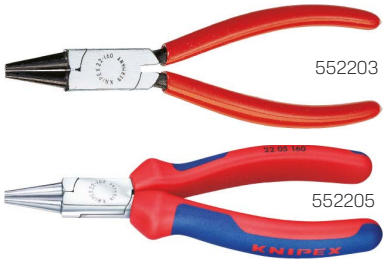


N° article	552113 Polished, handles plastic coated	552115 chrome-plated, with multi-component sleeve	Jaw length mm	Total length mm
140	●	●	42	140
160	●	●	46,5	160

Round nose pliers with short jaws

Design:
- made of special tool steel, oil-hardened
- with short round jaws
- smooth tips

ISO 5745

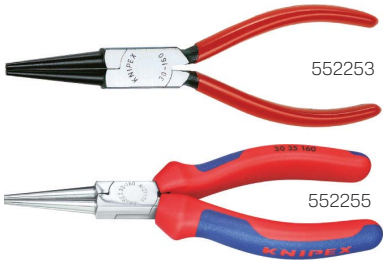


N° article	552203 Polished, handles plastic coated	552205 chrome-plated, with multi-component sleeve	Jaw length mm	Total length mm
140	●	●	28	140
160	●	●	30	160

Round nose pliers with long jaws

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- with long, round jaws
- gripping surfaces neatly smooth ground
- highly resilient and low-wear

ISO 5745



N° article	552253 Polished, handles plastic coated	552255 chrome-plated, with multi-component sleeve	Jaw length mm	Total length mm
140	–	●	37,5	140
160	●	●	41	160

Needle nose pliers with cutting edge

Design:
- made of vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 61 HRC)
- acute snipe nosed jaws with edges
- cutting edge with facet
- for gripping and cutting in precision mechanics
- with serrated gripping surfaces

ISO 5745


552703


552705

N° article	552703 Polished, handles plastic coated	552704 Polished, with multi-component sleeve	552705 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting values hard wire (HRC 48) Ø mm	Jaw length mm	Total length mm
140	●	●	●	2.5	1.6	42	140
160	●	●	●	2.5	1.6	50	160
200	●	●	●	3.2	2.2	73	200

Adjusting pliers

Design:
- made of special tool steel, forged, oil-hardened
- gripping surfaces polished, edges meticulously deburred
- head polished, handles plastic coated
- to grip tiny components and wires of the smallest diameters as well as for bending relay springs
- with smooth gripping surfaces

Form A | Form B | Form C

40° | DIN ISO 5235


A


B

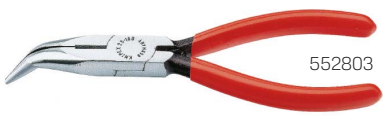

C

N° article	553003 Polished, handles plastic coated	Jaw shape	Jaw length mm	Total length mm
A	●	flat, straight, pointed	34	135
B	●	flat, straight, wide	34	135
C	●	flat, angled, wide	32	135

Needle nose pliers with cutting edge and bent

Design:
- made of vanadium electric steel, forged, oil-hardened
- with inductive hardened edges
- acute snipe nosed jaws 40° offset, with cutting edges
- for gripping and cutting in precision mechanics
- with serrated gripping surfaces

40° | ISO 5745


552803


552805

N° article	552803 Polished, handles plastic coated	552804 Polished, with multi-component sleeve	552805 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting values hard wire (HRC 48) Ø mm	Jaw length mm	Total length mm
160	●	–	●	2.5	1.6	50	160
200	●	●	●	3.2	2.2	73	200

Concreter´s nippers

45°

DIN ISO 5743

Design:
- made of special tool steel, oil-hardened
- slim, long construction
- handles with anti-slip plastic cover
- toothed corrugated profile for gripping round parts
- for gripping, adjustment and assembly work in difficult to reach places
- gentle and safe gripping, holding and guiding of small screws and cables as well as other round parts through milled grooves with a smooth surface
- corrugated gripping profile, cross profiles for gripping, holding and guiding
- with serrated gripping surfaces



N° article	553005 straight, long version	553006 curved, 45 °, long version	Jaw length mm	Total length mm
280	●	●	76,5	280

Side cutter slim shape

DIN ISO 5749

Design:
- made of vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 61 HRC)
- for hard and soft wire
- precise cut even with fine CU wires
- precise cut right up to the tips of the blades
- cutting edge with facet





N° article	553501 Polished, handles plastic coated	553503 Polished, with multi-component sleeve	553505 chrome-plated, with multi-component sleeve	Cutting capacity soft wire (HRC 19) Ø mm	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting capacity hard wire (HRC 48) Ø mm	Total length mm
110	●	–	–	3	2	1,2	110
125	●	●	●	3	2,3	1,5	125
140	●	●	●	4	2,5	1,8	140
160	●	●	●	4	3	2	160
180	●	●	●	4	3	2,5	180

High leverage diagonal cutter

DIN 5749

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- inductive hardened precision cutting edges (approx. 64 HRC)
- for heaviest duty
- with forged-on joint axis
- high cutting performance with minimal effort
- size 250 mm suitable for Cu conductors up to 16 mm² and Al conductors up to 35 mm²
- cutting edge with facet



553625


553603


553623

N° article	553603 Polished, handles plastic coated	553623 Polished, with multi-component sleeve	553625 polished, with multi-component sleeve and opening spring	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting capacity hard wire (HRC 48) Ø mm	Cutting capacity piano wire Ø mm	Total length mm
160	●	●	●	3,4	2,5	2	160
180	●	●	●	3,8	2,7	2,2	180
200	●	●	–	4,2	3	2,5	200
250	●	–	–	4,6	3,5	3	250

High leverage diagonal cutter

KNIPEX

DIN ISO 5749

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- with forged-on joint axis
- for heaviest duty
- with inductive hardened cutting edges (approx. 64 HRC)
- high cutting performance with minimal effort
- 250 mm long side cutter is suitable for Cu conductors up to 16 mm² and Al conductors up to 35 mm²
- cutting edge with facet



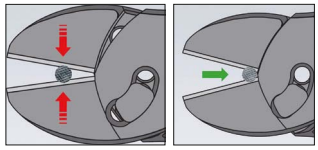
N° article	553905 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Total length mm
160	●	3,4	2,5	2	160
180	●	3,8	2,7	2,2	180
200	●	4,2	3	2,5	200
250	●	4,6	3,5	3	250

High leverage diagonal cutter TwinForce

KNIPEX

DIN ISO 5749

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 64 HRC)
- easy cutting with minimal effort
- **cuts reliably all kinds of wire, but strip material as well**
- side cutter with possibility of re-positioning the profile at the joint
- low cutting impact: Tension on hands, muscles and tendons is relieved
- for coarse and finest cutting
- cutting edge with facet





N° article	553906 Polished, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Total length mm
180	●	5,5	4,6	3,2	3	180

High leverage diagonal cutter X-CUT

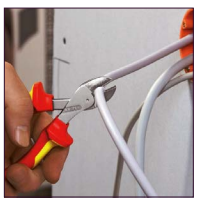
KNIPEX

DIN ISO 5749

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- pushed-through joint for utmost stability
- joint axis with double-bearing for tough and permanent use
- high cutting performance with minimal effort
- **40 % power saving** in comparison to power diagonal cutters of the same length
- **large opening width** for thicker cables
- precise cut even with fine CU wires
- compact, weight-saving construction
- cutting edge with facet









553907



553908

N° article	553907 Polished, with multi-component sleeve	553908 chrome-plated, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Cutting capacity stranded Cu cable ∅ mm	Total length mm
160	●	●	4,8	3,8	2,7	2,2	12	160

Wire stripping side cutter

Design:
- made of vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 60 HRC)
- precision stripping holes for solid conductors
- indispensable pliers for electrical installation
- convenient cutting of NYM cables up to 5 × 2.5 mm²
- with extended edge
- high cutting performance due to power joint
- cutting edge with small facet



N° article	553970 Polished, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity soft wire (HRC 19) ∅ mm	Stripping values mm²	Total length mm
160	●	1.5	2,5	1.5+2.5	160

Side cutter for plastic

Design:
- made of vanadium electric steel, forged, oil-hardened
- with opening spring
- surface-ground cutting edges without facet
- for even cutting-off of cast-on sections at plastic parts or other soft materials like lead (not suited for other metals)
- plane ground cutting edges (no facet)

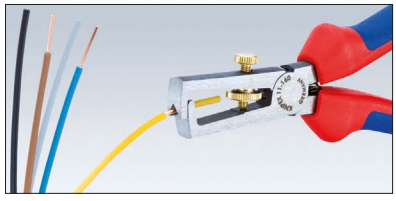




N° article	553941 polished, handles plastic covered, straight	553942 polished, with multi-component sleeve, straight	553943 polished, handles plastic covered, 45° bent	553946 polished, handles plastic covered, 85° bent	Total length mm
125	–	●	–	–	125
140	●	–	–	–	140
160	●	–	●	●	160
180	●	–	–	–	180

Wire stripping pliers

Design:
- made of special tool steel, forged, oil-hardened
- with setscrew for one-hand adjustment of requested wire or strand diameter
- for single-wire, stranded and fine stranded conductors with plastic or rubber insulation
- with opening spring





N° article	553960 Polished, handles plastic coated	553961 Polished, with multi-component sleeve	553965 chrome-plated, with multi-component sleeve	Wire cross-section ∅ mm	Conductor cross-section mm²	Total length mm
160	●	●	●	5	10	160

Automatic wire stripper

Weidmüller

Design:
- housing made of fibreglass-reinforced plastic
- with length stop and diagonal cutter
- self-adjusting
- **for stranded, round and flat cables**
- for stripping and cutting



N° article	557600 Mini Stripax, self-adjusting	557620 Spare knife heads (without fig.)	Stripping values mm²	Total length mm
135	●	○	0.08-1	135

Automatic wire stripper with die blades

KNIPEX

Design:
- pliers burnished
- blade made of special tool steel, oil-hardened
- precise stripping due to two pairs of blades (exchangeable)
- adjustable limit stop for identical stripping lengths
- especially **for difficult to remove insulation materials** like Teflon®, silicone, Radox®, Kapton®, rubber and multilayered insulations
- **clean and precise cut due to precisely ground form cutters**
- fine-wired strands are stripped gently



121202

N° article	557625 burnished, with multi-component sleeves	Stripping values mm²	Total length mm
121202	●	0.03 - 2.08	195
121206	●	0.14-6	195

Automatic wire stripper self-adjusting

KNIPEX

Design:
- housing made of tough, fibreglass-reinforced plastic
- easily replaceable blades and plastic jaws
- **cutting depth can be adjusted** for different insulation materials
- with wire cutter for CU an Al conductors
- adapts automatically to different conductor cross sections
- for thin flat conductors up to 10 mm width
- length stop adjustable from 3 - 18 mm







1240



1250

N° article	557630 self-adjusting	Stripping values mm²	Total length mm
1240	●	0.03-10	200
1250	○	2.50 - 16	200

Design:
- housing made of tough, fibreglass-reinforced plastic
- with ergonomic soft component sections in handle
- knife block and length stop interchangeable
- automatic size adjustment with length stop and with fine adjustment
- fast, precise square crimping of individual wire-end ferrules according to DIN 46228 part 1 + 4
- self-adjusting between 0.25 - 4 mm²
- stripping with fine adjustment for flexible and solid conductors between 0.03 - 10 mm² (AWG 32 - 8)
- clean cut of conductors up to 10 mm² (AWG 8)
- with crimping function up to 4 mm² and integrated cable shears up to 10 mm²
- adapts automatically to different conductor cross sections
- optimum adaptation to special materials or temperature conditions



1242



1252



1272







N° article	557640 self-adjusting	Stripping values mm²	Total length mm
1242	●	0.03-10	195
1252	●	0.08 - 16	195
1272	NEW ●	4 - 10	190

Automatic wire stripper Strip 6

Weidmüller

Design:
- for stripping and cutting of fine-stranded and solid conductors with PVC insulation
- with newly developed blade cassettes, which surround the cable and cut it off all around



N° article	557641 self-adjusting	Stripping values mm²	Total length mm
190	●	0.08 - 6	190

Automatic wire stripper

JOKARI original

Design:
- housing made of fibreglass-reinforced plastic
- with automatic adjustment to the cable cross sections
- optimally positioned side cutter up to 2.5 mm²
- adjustable length stop
- for cables with PVC insulations
- blades replaceable





N° article	557650 self-adjusting	Stripping values mm²	Length stop mm	Total length mm
180	●	0.2 - 6	5 - 15	165

Automatic wire stripper

KNIPEX

Design:
- housing made of tough, fibreglass-reinforced plastic
- with soft component section in the handle
- with wire cutter for Cu and Al conductors up to max. 2.5 mm²
- adjustable length stop
- high operating comfort, slim head shape
- for single-wire, stranded and fine stranded conductors with standard insulation
- adapts automatically to different conductor cross sections
- blade made of special tool steel, oil-hardened, replaceable



N° article	557660 self-adjusting	Stripping values mm²	Length stop mm	Total length mm
1262	●	0.2-6.0	6 - 18	180

Automatic wire stripper
Stripax®Stripax® Ultimate

Weidmüller

TÜV SÜD DIN ISO 9654

Design:
- made of fibreglass-reinforced plastic
- **removable grip plates** for different grip sizes
- jaws open automatically after stripping operation
- cutter cassettes easy to replace
- with **segment blade technique**, i.e. the conductor is enclosed, the blades adjust automatically to the thickness of the insulating cover and remove it
- for processing of multiple conductors, flexible and solid conductors with PVC insulation

190/UL: For hard insulation (UL-specified conductors and halogen-free insulation materials)





190 + 190/16





190/UL

N° article	557642 self-adjusting	557644 Spare blade (PU = 1 pair)	Stripping values mm²	Total length mm
190	●	●	0.08 - 10	190
190/16	●	–	6 - 16	190
190/UL	●	–	0.25 - 6	190

Automatic wire stripper
Stripax®, in a set

Weidmüller

TÜV SÜD DIN ISO 9654

Design:
Wire stripper Stripax ® 190:
- made of fibreglass-reinforced plastic
- removable handle shells for different handle sizes
- jaws open automatically after stripping operation
- cutter cassettes easy to replace
- segment blade technique, i.e. the conductor is enclosed, the blades adjust automatically to the thickness of the insulating cover and remove it
- for processing of multiple conductors, flexible and solid conductors with PVC insulation
- total length 190 mm

Cable cutter KT 8 VDE:
- for damage-free cutting of copper and aluminium cables
- also suitable for smaller cross-sections
- VDE approval to DIN EN 60900, 1,000 V
- not suitable for cutting steel wire, steel-reinforced cables, aluminium alloys and hard-drawn copper conductors
- total length 165 mm

NEW



190/KT8

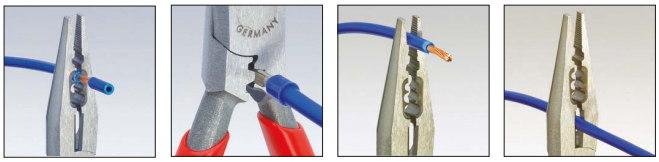
N° article	557643 self-adjusting	Stripping values mm²	Cutting capacity Cu and Al ∅ mm	AWG
190/KT8	○	0.08 - 10	6	6

Electrician´s pliers

Design:
- made of vanadium electric steel
- forged and oil-hardened
- with inductive hardened cutting edges (approx. 60 HRC)
- for cabling work
- to grip and bend wires
- to cut soft, medium and hard wire
- with precision stripping holes
- for crimping ferrules
- with serrated gripping surfaces
- cutting edge with facet



N° article	557692 Head polished, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Total length mm
160	●	2.5	1,6	160



End cutters

DIN ISO 5748

Design:
- made of special tool steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 61 HRC)
- for hard and soft wire
- also fit for twisting and cutting of binding wire
- cutting edge with facet



N° article	554002 Polished, handles plastic coated	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Total length mm
180	●	2,5	4	3,2	180
200	●	2,8	4	3,5	200

High leverage end cutting nippers

DIN ISO 5748

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 64 HRC)
- with cutting edges for soft and hard piano wire
- high cutting performance with minimal effort
- cutting edge with facet



N° article	554003 Polished, handles plastic coated	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity piano wire ∅ mm	Total length mm
160	●	2,5	4,5	3,4	2	160

Compound-leverage end cutter (Bolt end cutter)

DIN ISO 5748

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 64 HRC)
- high cutting performance, e.g. piano wire up to Ø 3 mm
- easier cutting due to high transmission ratio
- lower effort and better handling
- cutting edges angled 85°
- cutting edge with facet



N° article	554006 Polished, handles plastic coated	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity piano wire ∅ mm	Total length mm
200	●	3,3	6	4	3	200

Compound-leverage end cutter (Bolt end cutter)

VBW

DIN ISO 5748

Design:
- fully forged, red lacquered
- with inductive hardened cutting edges (approx. 64 HRC)
- high cutting performance due to lever transmission
- for spring wire up to 2,000 N/mm² (approx. 52 HRC) and special wire

N° article	554010 polished, with opening spring	Cutting capacity hard wire (HRC 48) Ø mm	Cutting capacity soft wire (HRC 19) Ø mm	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting capacity piano wire Ø mm	Total length mm
180	○	2,5	3,5	3	2,25	180
210	○	2,8	3,5	3,5	2,5	210
235	○	3	3,5	3,5	2,75	235



Wire rope cutter

KNIPEX

Design:
- made of chromium-vanadium steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 64 HRC)
- convenient working due to handy, slim construction
- with opening spring and locking device
- suitable for medium-hard wire ropes, cables and round steel bars
- high ratio

N° article	554015 head polished, handles plastic coated	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting capacity piano wire Ø mm	Cutting capacity stranded Cu cable Ø mm	Cutting capacity stranded Cu cable Ø mm²	Cutting capacity wire rope Ø mm	Total length mm
190	●	4	2,5	7	10	5	190



Wire rope cutter

KNIPEX

Design:
- compact size, low weight and high performance
- double-bearing, box joint for high stability
- with inductive hardened cutting edges (approx. 64 HRC)
- with opening spring and locking device
- particularly powerful cutting, up to 30 % force required

N° article	554017 Head polished, handles with multi-component sleeve	Cutting capacity stranded Cu cable Ø mm²	Cutting capacity wire rope Ø mm	Total length mm
160	●	6	4	160



Bolt cutter

VBW

Design:
- blade and tube head of special steel, drop-forged
- with inductive hardened edges
- limit stop, readjustable
- precise and easy adjustment of the blades by eccentric screws
- completely high-quality annealed

N° article	559005 WAGGONIT®	559008 Spare cutting edge, complete with bolts	Cutting capacity soft wire (HRC 19) Ø mm	Cutting capacity medium hard wire (HRC 40) Ø mm	Cutting capacity hard wire (HRC 48) Ø mm	Total length mm
460	●	●	8	6	5	460
610	●	●	9	8	7	610
760	●	○	11	9	8	760
910	●	○	13	10	9	910



Bolt cutter

Design:
- made from aluminium tubes
- blade and tube head of special steel, drop-forged
- noticeably lighter, high-strength pair of light metal handles
- forged-on stopper with comfortable shock absorber
- precise and easy adjustment of the blades by eccentric screws
- high-quality annealed- telescopic function for minimum storage space requirement (570 mm)

N° article	559007 LightCUT®	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Total length mm
800	●	10	8	7	800



Concrete mesh cutter

Design:
- blade made of chromium-vanadium high performance steel, oil-hardened and tempered
- joints made of steel, forged
- forged-on stopper with comfortable shock absorber
- easy grasping of flat lying structural steels
- precise adjusting and readjusting of the knives (12-fold)
- high cutting performance with minimal effort



N° article	559006 VBW BauCUT	559009 KNIPEX grey atramentised, with multi-component sleeves	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Total length mm
950	●	●	6	11	9	950

Bolt cutter

Design:
- joint made of special tool steel, forged
- cutting edges made of chromium-vanadium high performance steel, forged and oil-hardened
- with inductive hardened cutting edges (approx. 62 HRC)
- legs made of steel tube, powder-coated
- screwed cutter head, replaceable
- very flat head and joint area
- forged stop with absorber
- precise and easy adjustment of the blades by eccentric screws
- high cutting performance with minimal effort



N° article	559030 Head grey atramentised with multi-component sleeves	559032 Spare cutting head	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Total length mm
460	●	○	8	6	5	460
610	●	○	9	8	7	610
760	●	○	11	9	8	760
910	●	○	13	10	9	910

Compact bolt cutter

Design:
- made of chromium-vanadium high-performance steel
- forged and oil-hardened
- cutting edges additionally inductive hardened (approx. 64 HRC)
- head black atramentised
- extra high cutting performance with low strain through effective joint construction
- easy cutting of large cross-sections due to micro-structured cutting edge (559020-559024)
- cuts nails, rivets, bolts etc. up to Ø 5.2 mm
- recess in the cutting edge facilitates the cutting of thick wires (only 559028)
- improved transmission mechanism results in significantly more favourable leverage ratios



559026



559020



559022



559024





559026



559028

N° article	559020 handles plastic coated	559022 with multi-component sleeve	559024 with multi-component sleeve, opening spring	559026 with multi-component sleeve, opening spring, 20° angled	559028 Handles plastic coated, recess in the blade	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity mediumhard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Total length mm
160	●	–	–	–	–	5,3	4,4	3,2	3	160
200	●	●	●	●	–	6	5,2	4	3,6	200
250	–	–	–	–	●	–	6	4,3	4,2	250

Locking ring pliers for outer rings

Design:
- made of chromium-vanadium steel
- forged and oil-hardened
- black atramentised, head polished
- handles plastic coated
- sturdy version with rugged, anti-slip precision tips
- for mounting circlips on shafts

DIN 5254 A

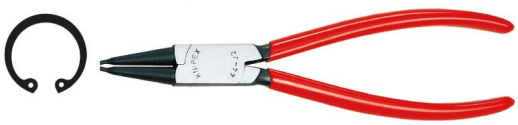


N° article	554103 Form A, straight	for outer ring ∅ mm	Tip ∅ mm	Total length mm
A0	●	3 - 10	0,9	140
A1	●	10 - 25	1,3	140
A2	●	19 - 60	1,8	180
A3	●	40 - 100	2,3	210
A4	●	85 - 140	3,2	320

Locking ring pliers for internal rings

Design:
- made of chromium-vanadium steel
- forged and oil-hardened
- black atramentised, head polished
- handles plastic coated
- sturdy version with rugged, anti-slip precision tips
- for mounting circlips in bores

DIN 5256 C



N° article	554123 Form C, straight	for inner ring ∅ mm	Tip ∅ mm	Total length mm
J0	●	8 - 13	0,9	140
J1	●	12 - 25	1,3	140
J2	●	19 - 60	1,8	180
J3	●	40 - 100	2,3	225
J4	●	85 - 140	3,2	320

Locking ring pliers for outer rings

DIN 5254 B

Design:
- made of chromium-vanadium steel
- forged and oil-hardened
- black atramentised, head polished
- handles plastic coated
- sturdy version with rugged, anti-slip precision tips
- for mounting circlips on shafts



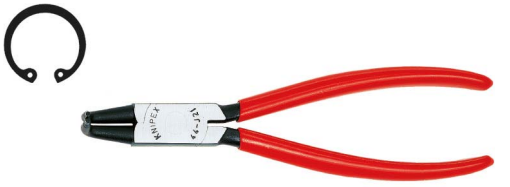


N° article	554113 Form B, 90° angled	554115 Form B, 45° angled	for outer ring Ø mm	Tip Ø mm	Total length mm
A01	●	–	3 - 10	0,9	140
A11	●	–	10 - 25	1,3	140
A12	–	●	10 - 25	1,3	130
A21	●	–	19 - 60	1,8	180
A22	–	●	19 - 60	1,8	185
A31	●	–	40 - 100	2,3	210
A41	●	–	85 - 140	3,2	320

Locking ring pliers for internal rings

DIN 5256 D

Design:
- made of chromium-vanadium steel
- forged and oil-hardened
- black atramentised, head polished
- handles plastic coated
- sturdy version with rugged, anti-slip precision tips
- for mounting circlips in bores





N° article	554133 Form D, 90° bent	554135 Form D, 45° bent	for inner ring Ø mm	Tip Ø mm	Total length mm
J01	●	–	8 - 13	0,9	130
J11	●	–	12 - 25	1,3	130
J12	–	●	12 - 25	1,3	140
J21	●	–	19 - 60	1,8	180
J22	–	●	19 - 60	1,8	180
J31	●	–	40 - 100	2,3	225
J41	●	–	85 - 140	3,2	320

Locking ring pliers for large external rings

DIN 5254 A

Design:
- body made of rolled steel, high strength
- black powder coated
- tips made of special tool steel, oil-hardened
- with detachable locking mechanism
- with interchangeable tips
- for mounting circlips on shafts



N° article	554143 Form A, straight	554147 Pair of spare points	for outer ring Ø mm	Tip Ø mm	Total length mm
A5	●	●	122 - 300	3,5	560
A6	○	●	252 - 400	4,5	570

Locking ring pliers for large internal rings

DIN 5256 C | DIN 5256 D

Design:
- body made of rolled steel, high strength
- black powder coated
- tips made of special tool steel, oil-hardened
- with detachable locking mechanism
- with interchangeable tips
- for mounting circlips in bores

J5 and J6: straight form
J51: 90° offset



N° article	554153 Form B, straight/angled	554157 Pair of spare points	for inner ring Ø mm	Tip Ø mm	Total length mm
J5	●	●	122 - 300	3,5	570
J6	●	○	252 - 400	4,5	590
J51	○	○	122 - 300	3,5	580

Locking ring pliers for outer rings

Design:
- made of chromium-vanadium electric steel, forged and oil-hardened
- head grey atramentised, handles plastic coated
- opening spring captive in joint
- **inserted tips** made of spring steel wire, drawn
- significantly longer tool life compared to turned tips
- precise, light-weight screw joint, slim pliers head
- large contact area at the tips => no twisting of the rings
- for mounting circlips on shafts



DIN 5254 A



N° article	554160 Form A, straight	for outer ring ∅ mm	Tip ∅ mm	Total length mm
A0	●	3 - 10	0,9	140
A1	●	10 - 25	1,3	140
A2	●	19 - 60	1,8	180
A3	●	40 - 100	2,3	225
A4	●	85 - 140	3,2	320

DIN 5254 B



N° article	554162 Form B, 90° angled	for outer ring ∅ mm	Tip ∅ mm	Total length mm
A01	●	3 - 10	0,9	130
A11	●	10 - 25	1,3	130
A21	●	19 - 60	1,8	165
A31	●	40 - 100	2,3	210
A41	●	85 - 140	3,2	305

Locking ring pliers for internal rings

Design:
- made of chromium-vanadium electric steel, forged and oil-hardened
- head grey atramentised, handles plastic coated
- **inserted tips** made of spring steel wire, drawn
- significantly longer tool life compared to turned tips
- precise, light-weight screw joint, slim pliers head
- large contact area at the tips => no twisting of the rings
- for mounting circlips in bores



DIN 5256 C



N° article	554165 Form C, straight	for inner ring ∅ mm	Tip ∅ mm	Total length mm
J0	●	8 - 13	0,9	140
J1	●	12 - 25	1,3	140
J2	●	19 - 60	1,8	180
J3	●	40 - 100	2,3	225
J4	●	85 - 140	3,2	320

DIN 5256 D



N° article	554167 Form D, 90° bent	for inner ring ∅ mm	Tip ∅ mm	Total length mm
J01	●	8 - 13	0,9	130
J11	●	12 - 25	1,3	130
J21	●	19 - 60	1,8	165
J31	●	40 - 100	2,3	210
J41	●	85 - 140	3,2	305

Circlip pliers set

Design:
- set with 8 standard pliers for inner and outer rings (554160-554167)
- tip shape: straight and 90° angled
- made of chromium-vanadium electric steel, forged and oil-hardened
- head grey atramentised, handles plastic coated
- opening spring captive in joint
- **inserted tips** made of spring steel wire, drawn
- significantly longer tool life compared to turned tips
- precise, light-weight screw joint, slim pliers head
- large contact area at the tips => no twisting of the rings
- for mounting circlips on shafts in in bores
- in a handy plastic case



N° article	554168 8-piece set	Contents
8	●	**2 internal circlip pliers straight** 12 - 25 | 19 - 60 mm **2 internal circlip pliers angled** 12 - 25 | 19 - 60 mm **2 external circlip pliers straight** 10 - 25 | 19 - 60 mm **2 external circlip pliers angled** 10 - 25 | 19 - 60 mm

Locking ring pliers for outer rings

KNIPEX

DIN 5254 A | DIN 5254 B

Design:
- pliers body made of chromium-vanadium electric steel, forged, oil-hardened
- with inserted tips for safe working
- significantly longer tool life compared to turned tips
- large contact surfaces at the tips means no twisting of the rings and easy assembly
- screwed joint means precise, play-free movement of the pliers
- opening spring in the joint, protected and captive
- anti-slip plastic cover on the handles
- **inserted tips** made of spring steel wire, drawn
- **with overstretch protection (adjustable by stop), adjustment by means of Allen screw**
- **adjustable opening limit**



A2



A11

N° article	554169 straight, with opening limit stop	554170 angled (90°), with opening limitation	for outer ring Ø mm	Tip Ø mm	Total length mm
A1	●	–	10 - 25	1,3	140
A11	–	●	10 - 25	1,3	130
A2	●	–	19 - 60	1,8	180
A21	–	●	19 - 60	1,8	165

Assembly pliers for circlips on shafts

KNIPEX

DIN ISO 5743

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- with opening spring
- to mount retaining rings and circlips without grip holes

4510: For retaining rings with min. ring split gap of 3.6 mm
4521: Curved jaws with centring for retaining rings according to standard from Ø 12 mm, minimum opening of rings 2.2 mm



4510


4521

N° article	554175	Handle	Total length mm
4510	○	burnished	170
4521	●	plastic coated	200

Universal locking pliers

PROJAHN

Design:
- made of chromium-vanadium steel, nickel-plated
- with forged jaws
- clamping width and pressure adjustable through knurled screw
- with quick release lever for safe release of the locking pliers
- gripping surfaces longitudinally serrated for a secure hold of the workpieces



N° article	554201 with oval jaw shape	Clamping range mm	Total length mm
0010	●	41	175
0015	●	48	250

Langbeck locking pliers

PROJAHN

Design:
- made of chromium-vanadium steel, nickel-plated
- with forged jaws
- **with extra long and slim serrated**
- optimal for narrow and hard-to-reach areas
- clamping width and pressure adjustable through knurled screw
- with quick release lever for safe release of the locking pliers
- gripping surfaces longitudinally serrated for a secure hold of the workpieces



N° article	554201 long, slim jaws	Clamping range mm	Total length mm
0050	●	44,5	150

Welding grip pliers

PROJAHN

Design:
- made of chromium-vanadium steel, nickel-plated
- with forged jaws
- clamping width and pressure adjustable through knurled screw
- with quick release lever for safe release of the locking pliers

0100: Upper gripper jaw 90° unrolled

0120: Narrow gripper jaws with high shackle, deeply protruding for bulky workpieces


0100


0120

N° article	554201 U-shaped jaws	Clamping range mm	Total length mm
0100	●	45	225
0120	●	73	275

VED needle-nose combination pliers

Design:
- made of special tool steel, forged, oil-hardened
- sturdy tips
- gripping surface convex on one side
- for soft, medium and hard wire
- milled groove in the gripping area allows safe holding and pulling of small workpieces
- to work in areas where access is difficult
- slim head shape and tapered jaws
- **VDE approval to DIN EN 60900, 1,000 V**
- serrated gripping surfaces

DIN ISO 5746



N° article	554355 chrome-plated, with multi-component sleeve	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity mediumhard wire (HRC 40) ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
145	●	2	3	16	145
185	NEW ●	3	3.8	13	185

VDE high leverage combination pliers

Design:
- made of special tool steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 64 HRC)
- **35 % power saving** due to novel, emended lever ratio
- with gripping sections for flat and round materials
- cutting edges for soft, hard and piano wire
- long cutting edges for thicker cables
- **VDE approval to DIN EN 60900, 1,000 V**
- serrated gripping surfaces

DIN ISO 5746



N° article	554360 chrome-plated, with multi-component sleeve	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Cutting capacity stranded Cu cable ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
180	●	2,5	2	11,5	16	180
200	●	2,8	2,2	13	25	200

VDE combination pliers

Design:
- made of special tool steel, oil-hardened
- with inductive hardened cutting edges (approx. 60 HRC)
- for hard and soft wire
- long edges for thicker cables
- **VDE approval to DIN EN 60900, 1,000 V**
- serrated gripping surfaces

DIN ISO 5746



N° article	554357 chrome-plated, with multi-component sleeve	Cutting values hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Cutting capacity stranded Cu cable ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
160	●	2	3,1	10	16	160
180	●	2.2	3,4	12	16	180
200	●	2.5	3,8	13	16	200

VDE flat nose/round nose pliers

Design:
- made of special tool steel
- forged and oil-hardened
- flat nose pliers (554457) with short, flat and serrated jaws
- round nose pliers (554557) with short, plain jaws
- **VDE approval to DIN EN 60900, 1,000 V**

DIN ISO 5745



554457



554557

N° article	554457 chrome-plated, with multi-component sleeve	554557 chrome-plated, with multi-component sleeve	Total length mm
160	●	●	160

VDE needle nose pliers
with cutting edge

Design:
- made of vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 62 HRC)
- for soft, medium and hard wire
- flat round, long jaws
- serrated gripping surface
- **VDE approval to DIN EN 60900, 1,000 V**

DIN ISO 5745

40°



554657



554757

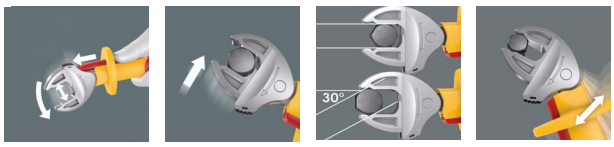
N° article	554657 chrome-plated, with multi-component sleeve, straight	554757 chrome-plated, with multi-component sleeve, 40° angled	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting values hard wire (HRC 48) ∅ mm	Total length mm
160	●	●	2.5	1.6	160
200	●	●	3.2	2.2	200

VDE open-end spanner

Design:
- the adjustable Joker 6004 VDE covers all metric and imperial dimensions from 7 - 19 mm or 1/4" to 3/4"
- insulated handles for safe working up to 1,000 volts with slip protection
- sliding function for contactless and safe opening of the non-insulated jaws
- automatic and stepless gripping of hexagon bolts and nuts
- quick screwing without removing the key due to ratchet function
- return angle of only 30 ° on the jaw side
- VDE approval to DIN EN 60900, 1,000 V

NEW





N° article	554301 Joker 6004 VDE	AF mm	Width across flats inch	Total length mm
0010	○	7-10	1/4"-3/8"	119
0015	○	10-13	7/16"-1/2"	155
0020	○	13-16	1/2"-5/8"	190
0025	○	16-19	5/8"-3/4"	226



NEW

N° article	554302 set	Parts	Contents
0010	○	4	7 - 10 | 10 - 13 | 13 - 16 | 16 - 19

VDE pliers wrench

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- handles with multi-component sleeve
- quick adjustment at the push of a button directly on the workpiece
- high clamping force due to 10-fold manual force amplification
- replaces an entire set of wrenches, metric and imperial
- no edge damage
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900

N° article	554805 chrome-plated, with multi-component sleeves	AF_1 mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
250	●	52	2	19	250



VDE waterpump pliers Alligator

DIN ISO 8976

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- gripping surfaces with hardened teeth (approx. 61 HRC)
- self-clamping at the work piece => no slipping
- with box-joint design and hand guard
- 9-notch adjustment positioning for 30 % more gripping capacity
- jamming guard prevents crushes
- self-clamping on pipes and nuts
- **VDE approval to DIN EN 60900, 1,000 V**



N° article	554807 chrome-plated, with multi-component sleeve	AF_1 mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
250	●	46	2	9	250

VDE waterpump pliers Cobra

DIN ISO 8976

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- **One-hand adjustment** by push of a button
- gripping surfaces with hardened teeth (approx. 61 HRC)
- good access to the workpiece due to slim construction
- jamming guard prevents crushes
- self-clamping on pipes and nuts
- optimum power transmission, favourable leverage
- **VDE approval to DIN EN 60900, 1,000 V**



N° article	554810 chrome-plated, with multi-component sleeve	AF_1 mm	Clamping range tube ∅ inch	Adjustment levels	Total length mm
250	●	46	2	24	250

VDE diagonal cutter

KNIPEX

DIN ISO 5749

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 62 HRC)
- slim head
- for soft and hard wire
- clean cut at thin Cu wires
- cutting edge with facet
- **VDE approval to DIN EN 60900, 1,000 V**



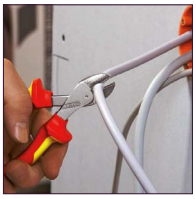
N° article	554857 chrome-plated, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Total length mm
125	●	3	2.3	1,5	125
140	●	4	2.5	1,8	140
160	●	4	3	2	160
180	●	4	3	2,5	180

High leverage diagonal cutter X-CUT

KNIPEX

DIN EN 60900

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- pushed-through joint for utmost stability
- joint axis with double-bearing for tough and permanent use
- high cutting performance with minimal effort
- **40 % power saving** in comparison to power diagonal cutters of the same length
- **large opening width** for thicker cables
- precise cut even with fine CU wires
- compact, weight-saving construction
- VDE approval to DIN EN 60900, 1,000 V





N° article	553909 chrome-plated, VDE tested	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Cutting capacity stranded Cu cable ∅ mm	Total length mm
160	●	4,8	3.8	2,7	2,2	12	160

High leverage diagonal cutter

KNIPEX

DIN ISO 5749

Design:
- made of chromium-vanadium electric steel, forged, oil-hardened
- with inductive hardened precision cutting edges (approx. 62 HRC)
- for the toughest demands, forged joint axle
- for soft and piano wire
- cutting edge with facet
- **VDE approval to DIN EN 60900, 1,000 V**



N° article	554907 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Total length mm
160	●	3.4	2,5	2	160
180	●	3.8	2,7	2,2	180
200	●	4.2	3	2,5	200
250	●	4.6	3,5	3	250

VDE dismantling pliers

KNIPEX

DIN ISO 5743

Design:
- made of vanadium electric steel, forged, oil-hardened
- with inductive hardened cutting edges (approx. 62 HRC)
- slim head construction and optimally angled cable sheath cutter
- round cutting edge with depth limitation for easy and damage-free stripping
- all edges inductive hardened to approx. 61 HRC
- cutting, dismantling and stripping with one tool
- for time-saving dismantling and stripping of all round sheathed and damp-proof cables
- with side cutter for cutting and trimming conductors, wires, small screws and nails
- cutting edge with facet
- **VDE approval to DIN EN 60900, 1,000 V**



N° article	554915 chrome-plated, with multi-component sleeve	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Stripping capacity values ∅ mm	Stripping values mm²	Total length mm
165	●	3.2	2,2	8 - 13	0.75 -1.5/2.5	165

VDE installation pliers

Design:
- made of special tool steel, forged, oil-hardened
- multifunctional pliers for electrical installation with **6 features (gripping, bending, deburring, cutting, stripping, crimping)**
- cable shears with precision blades, inductive hardened, for Cu and Al cables
- smooth gripping surfaces at the tips
- clear-cut outside edge on the jaw for working on flush-mounted s ockets and for deburring of cable holes
- crimp die nest for ferrules 0.5 - 2.5 mm²
- slim dimensions for easy access
- bolted joint for precise, zero backlash operation of the pliers
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900

200F with opening spring





200





200F

N° article	554920 chrome-plated, with multi-component sleeve	Cutting capacity stranded Cu cable ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Stripping capacity values ∅ mm	Total length mm
200	●	15	50	0.75 -1.5/2.5	200
200F	●	15	50	0.75 -1.5/2.5	200

VDE cable shears

Design:
- made of special tool steel, forged, oil-hardened
- sharp hardened cutting edges with precision grinding
- readjustable joint screw
- easy, clean, single-handed cutting
- low deformation of the conductor cross-sections
- **length 165 mm** for multi-core conductors up to 15 mm or 50 mm²
- **length 200 mm** with initial and final cut, cables to 25 mm and max. 70 mm²
- not suitable for steel wire and hard-drawn copper conductors
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900





160



165



200





N° article	554937 chrome-plated, with multi-component sleeve	Cutting capacity stranded Cu cable ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Total length mm
160	●	15	50	160
165	●	15	50	165
200	●	20	70	200

VDE crimping pliers

Design:
- made of vanadium electric steel, forged, oil-hardened
- for crimping ferrules
- crimping in 4 marked trapezoidal profiles
- for secure connection of sleeve and conductor
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900



N° article	554924 chrome-plated with multi-component sleeve	Capacity mm²	Total length mm
145	●	0,25-2,5	145

VDE crimping pliers

Design:
- made of special tool steel, forged, oil-hardened
- light and slim construction
- for crimping ferrules
- crimping in 9 marked semicircular profiles with conical side surfaces for secure connection of sleeve and conductor
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900



N° article	554926 chrome-plated with multi-component sleeve	Capacity mm²	Total length mm
180	●	0,25-16	180

VDE wire stripper

Design:
- made of special tool steel, forged and oil-hardened
- with setscrew for one-hand adjustment of requested wire or strand diameter
- with opening spring
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900



N° article	554957 chrome-plated with multi-component sleeve	Stripping capacity values ∅ mm	Stripping values mm²	Total length mm
160	●	5	10	160

VDE wire stripper with cable shears

Design:
- made of special tool steel, forged and oil-hardened
- with inductive hardened cutting edges (approx. 57 HRC)
- **integrated cable shears** for clean, crush-free cutting of Cu and Al cables
- with setscrew for one-hand adjustment of requested wire or strand diameter (max. 5 mm or 10 mm²)
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900

N° article	554958 chrome-plated, with multi-component sleeve	Cutting capacity stranded Cu cable ∅ mm	Cutting capacity stranded Cu cable ∅ mm²	Stripping value ∅ mm	Stripping values mm²	Total length mm
180	●	15	50	5	10	180



Electronic side cutter

Design:
- made of tool steel, INOX
- head polished
- cutting edge hardness approx. 57 HRC
- handles with multi-component sleeve insulated
- VDE tested
- cutting edge without facet
- with opening spring
- **VDE approval to DIN EN 60900, 1,000 V**

DIN ISO 9654



N° article	554990 Super Knips®	Cutting capacity soft wire (HRC 40) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Total length mm
125	●	0.2 - 1.6	1	125

VDE cable knife

Design:
- tip made of special tool steel, oil-hardened
- stable, fixed blade with straight cutting edge
- transparent protective cap
- excellent power transmission due to thumb recess and finger hook at the end of the handle
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900

180: Blade back covered with plastic



180



185

N° article	558140 with multi-component sleeve	Blade length mm	Total length mm
180	●	50	180
185	●	50	185

VDE dismantling knife

Design:
- blade made of surgical steel, stainless, air-hardened
- stable, fixed hook blade, crescent-shaped
- with sliding shoe at the tip
- no damage to the conductor insulation
- with transparent protective cap
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900



N° article	558145 with multi-component sleeve	Blade length mm	Total length mm
155	●	38	155



VDE cable cutter

Design:
- made of special tool steel in extra quality
- forged and oil-hardened
- hardened cutting edges with precision grinding
- smooth and clean cutting without deformations
- **one-hand operated** using the ratchet principle
- low power requirement due to very high gear ratio
- two-gear sprocket ring drive for easy cutting
- with hand guard
- for copper and aluminium cables
- not suitable for wire ropes or steel wire
- **VDE approval to DIN EN 60900, 1,000 V**

DIN EN 60900

280: For aluminium conductors up to 4 × 150 mm² sector cables
320: Three-gear sprocket ring drive, head varnished and polished



250



320

N° article	554985 varnished, with multi-component sleeve	Cutting capacity stranded Cu cable and Al cable ∅ mm	Cutting capacity stranded Cu cable and Al cable ∅ mm²	Total length mm
250	●	32	240	250
280	●	52	380	280
320	○	60	600	320

Electronics gripping pliers

Design:
- short flat nose pliers with smooth jaws
- ergonomically shaped non-slip handles
- heat-treated carbon steel
- phosphated surface for glare-free working
- opening spring for fatigue-free work
- opening limiter for good handling
- jaw width 3.0 mm, smooth edges, steel thickness 3 mm

N° article	555170 with multi-component sleeve	Jaw length mm	Total length mm
0010	●	20	146



Electronic side cutter

Design:
- micro side cutter with 21° angled head
- cutting length 8 mm for smooth cutting of copper and soft wires
- rounded edges so that no components are damaged in narrow areas
- the 21° angled head allows a smooth cut on the working site
- slim cutting head ideal for difficult accessible working areas
- ergonomically shaped non-slip handles
- heat-treated carbon steel
- phosphated surface for glare-free work and against corrosion

0020: Head extra strong (3 mm)



0010



0015



0020

N° article	555171 with multi-component sleeve	Cutting edge length mm	Cutting capacity Cu wire ∅ mm	Head width mm	Total length mm
0010	●	8	0,8	9,5	132
0015	●	8	1,3	13,5	138
0020	●	8	1,3	13,5	138

Electronics diagonal cutter set in nylon roll-up pouch



0010



0020

N° article	555175 Set	Contents	Parts
0010	●	**Electronic tool set, 5-piece** **1 tweezers** with flat round jaws **1 side cutter** with smooth cut for soft wires **1 needle-nosed pliers** long **1 screwdriver** Slot **1 screwdriver** PH	5
0020	●	**Electronic tool set, 8-piece** **2 tweezers** flat and round tips **2 side cutters** Micro and medium head for soft wire **2 needle-nosed pliers** long, grooved and smooth jaws **2 Micro screwdrivers** Slot and PH	8

Precision electronics gripping pliers

DIN ISO 9655 | ESD

Design:
- made of ball bearing chrome steel, forged, oil-hardened
- forged of chromium-vanadium ball-bearing steel
- screwed joint with opening spring
- approx. **20% less weight** compared to conventional electronic pliers
- joint adjusted free of play by means of self-locking screws
- precision ground joint faces guarantee a low-friction motion
- **ESD version**

3412: Flat nose pliers, wide jaws, straight
3422: Snipe nose pliers, straight jaws
3432: Round nose pliers, pointed jaws, straight

N° article	555180 polished, with multi-component sleeve	Jaw length mm	Head width mm	Total length mm
3412	○	21,9	11,2	135
3412ESD	●	21,9	11,2	135
3422	○	22,7	11,2	135
3422ESD	○	22,7	11,2	135
3432	○	23,7	11,2	135
3432ESD	○	23,7	11,2	135



3412



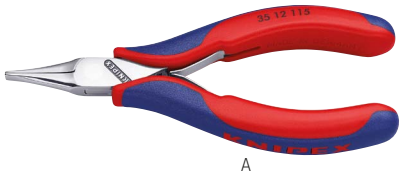
3432 ESD

Electronics gripping pliers

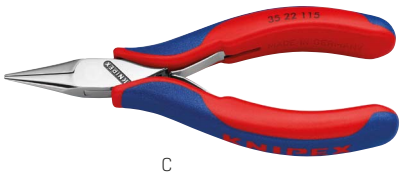
DIN ISO 9655 | 45°

Design:
- made of ball bearing chrome steel, oil-hardened
- play-free box-type joint
- with captive, low-friction opening spring
- smooth ground gripping surfaces
- carefully deburred edges
- for ultra fine installation work
- for gripping, holding and bending

A:Flat jaws
B: Round jaws
C: flat round jaws
G:Flat round jaws, angled tip 45°



A



C



B



G

N° article	555185 mirror-polished, with multi-component sleeve	Jaw length mm	Head width mm	Total length mm
A	●	22,5	11	115
A/145	○	40	12	145
B	●	22,5	11	115
C	●	22,5	11	115
C/145	●	40	12	145
G	●	40	11	115

Electronics gripping pliers ESD

DIN ISO 9655 | 45° | ESD

Design:
- made of ball bearing chrome steel, oil-hardened
- play-free box-type joint
- with captive, low-friction opening spring
- smooth ground gripping surfaces
- carefully deburred edges
- for ultra fine installation work
- for gripping, holding and bending
- **ESD version**

3512 ESD Flat jaws
3522 ESD flat round jaws
3532 ESD pointed round jaws
3542 ESD Flat round jaws, angled tip 45°



3512 ESD



3532 ESD



3522 ESD



3542 ESD

N° article	555188 mirror-polished, with multi-component sleeve	Jaw length mm	Head width mm	Total length mm
3512ESD	●	22,5	11	115
3522ESD	●	22,5	11	115
3532ESD	●	22,5	11	115

Electronic side cutter

Design:
- made of ball bearing chrome steel, oil-hardened
- cutting edges additionally inductive hardened (approx. 62 HRC)
- sturdy box-joint design, free of play
- low-friction double spring for smooth and even opening
- **ESD version** (555210)

DIN ISO 9654



7732



7772



7702 ESD



7752 ESD

N° article	555200 mirror-polished, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Jaw length mm	Head width mm	Total length mm	Head version
7722	●	0,3 - 1,3	1	–	14	11	115	round head, without Facette
7732	●	0,3 - 1,3	1	0,5	14	11	115	pointed head, with small facet
7742	●	0,3 - 1,3	0,8	–	14	11	115	pointed head, without facet
7742/130	●	0,3 - 1,6	1,3	–	18	15	130	pointed head, without facet
7752	●	0,3 - 1	0,8	0,5	14	11	115	pointed head, with small facet
7772	●	0,3 - 0,8	–	–	10,5	11	115	pointed miniature head, with small facet

N° article	555210 mirror-polished, with multi-component sleeve, ESD	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Jaw length mm	Head width mm	Total length mm	Head version
7702ESD	●	0,3 - 1,6	1,2	0,6	14	11	115	round head, with small facet
7732ESD	●	0,3 - 1,3	1	0,5	14	11	115	pointed head, with small facet
7742ESD	●	0,3 - 1,3	0,8	–	14	11	115	pointed head, without facet
7752ESD	●	0,3 - 1	0,8	0,5	14	11	115	pointed head, with small facet
7772ESD	○	0,3 - 0,8	–	–	10,5	11	115	pointed miniature head, with small facet

Electronic side cutter ESD

Design:
- made of ball bearing chrome steel, oil-hardened
- cutting edges additionally inductive hardened (approx. 64 HRC)
- precision ground sharp cutting edges
- smooth-running double spring for smooth and even opening
- approx. **20% less weight** compared to conventional electronic pliers
- **ESD version**

DIN ISO 9654



7902



7902 mini ESD

N° article	555250 Polished, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Jaw length mm	Head width mm	Total length mm	Head version
7902	●	0,2 - 1,7	1,3	0,7	10	11	125	round head, mit Facette
7902ESD	●	0,2 - 1,7	1,3	0,7	10	11	125	round head, mit Facette
7922	●	0,1 - 1,7	1	–	10	11	125	round head, ohne Facette
7922ESD	○	0,1 - 1,7	1	–	10	11	125	round head, ohne Facette
7932	●	0,2 - 1,5	1,1	0,6	11	11	125	spitzer Kopf, mit Facette
7932ESD	●	0,2 - 1,5	1,1	0,6	11	11	125	spitzer Kopf, mit Facette
7942	●	0,1 - 1,5	0,8	–	11	11	125	pointed head, without facet
7942ESD	●	0,1 - 1,5	0,8	–	11	11	125	pointed head, without facet
7902MINI	○	0,2 - 1,4	1	0,6	6,5	9	120	Minikopf, mit Facette
7902MINIESD	○	0,2 - 1,4	1	0,6	6,5	9	120	Minikopf, mit Facette
7922MINI	○	0,1 - 1,3	0,8	–	6,5	9	120	Minikopf, ohne Facette
7922MINIESD	○	0,1 - 1,3	0,8	–	6,5	9	120	Minikopf, ohne Facette

Electronic side cutter Super Knips

Design:
- made of INOX or special tool steel, oil-hardened
- cutting edges additionally inductive hardened, approx. 64 HRC (INOX approx. 54 HRC)
- ground, very sharp cutting edges without facet
- precisely machined tips cut even clinging wires from ∅ 0.2 mm
- with opening spring and opening limiter
- extremely smooth operation for fatigue-free working
- **ESD version**

7803: Made of stainless steel
7813: Made of stainless steel (INOX) with wire clamp, prevents uncontrolled release of wire sections
7861: Made of special tool steel, head burnished, also suitable for cutting fibre optic cables
7871: Made of special tool, head burnished, with wire clamp, prevents uncontrolled release of wire sections

DIN ISO 9654


7803


7803140


7861 ESD

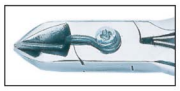

7806140

N° article	555300 with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Jaw length mm	Head width mm	Total length mm
7803	●	0,2 - 1,6	1	–	9	13,5	125
7803ESD	●	0,2 - 1,6	1	–	9	13,5	125
7803140	●	0,2 - 2,1	1,2	–	12,3	15,7	140
7813	●	0,2 - 1,6	1	–	9	13,5	125
7861	●	0,2 - 1,6	1,2	0,6	9	13,5	125
7861ESD	●	0,2 - 1,6	1,2	0,6	9	13,5	125
7806140	●	0,2 - 2,1	1,4	–	12,3	15,7	140
7871	●	0,2 - 1,6	1,2	0,6	9	13,5	125

Electronic side cutter with facet and lead catcher

Design:
- made of ball bearing chrome steel, oil-hardened
- cutting edges additionally inductive hardened (approx. 62 HRC)
- sturdy box-joint design, free of play
- low-friction double spring for smooth and even opening
- with wire clamp => prevents uncontrolled release of the wire sections
- for fine cutting work, e.g. in electronics and precision mechanics
- cutting edge with small facet

DIN ISO 9654


Lead catcher



N° article	555307 mirror-polished, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Jaw length mm	Head width mm	Total length mm
115	●	0,3 - 1,6	1,2	0,6	14	11	115

Electronic side cutter for hard wire

Design:
- made of special tool steel in extra quality
- forged and oil-hardened
- screwed joint for high precision and high load capacity
- cutting edges additionally inductive hardened (approx. 64 HRC)
- low-friction double spring for smooth and even opening
- for soft and hard wire and piano wire
- slim head for the finest assembly work

125F: With facet
125FD: With bevel and wire clamp, prevents uncontrolled release of wire sections
125KF: With small bevel, for flush cutting, i.a. of Cu and diode leads

DIN ISO 9654



N° article	555403 burnished, handles plastic coated	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Cutting capacity piano wire ∅ mm	Jaw length mm	Head width mm	Total length mm
125F	●	0,2 - 1,3	1	0,6	0,4	14	10,5	125
125FD	●	0,2 - 1,3	1	0,6	0,4	14	10,5	125
125KF	●	0,2 - 1,3	0,9	0,4	0,3	14	10,5	125

Electronics end cutters

DIN ISO 9654

Design:
- made of ball bearing chrome steel, oil-hardened
- cutting edges additionally inductive hardened (approx. 56 HRC)
- low-friction double spring for smooth and even opening
- box-joint precision design
- for finest cutting work, e.g. in electronics and precision mechanics

115G with small bevel
115S with large bevel

N° article	555903 mirror-polished, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Cutting capacity medium hard wire (HRC 40) ∅ mm	Cutting capacity hard wire (HRC 48) ∅ mm	Jaw length mm	Head width mm	Total length mm
115G	●	2	1	0,6	6	11	115
115S	●	1,4	0,8	–	6	11	115



555903

Electronic diagonal cutter

DIN ISO 9654

Design:
- made of ball bearing chrome steel, oil-hardened
- cutting edges additionally inductive hardened (approx. 56 HRC)
- low-friction double spring for smooth and even opening
- box-joint precision design
- for finest cutting work, e.g. in electronics and precision mechanics
- without facet



555905

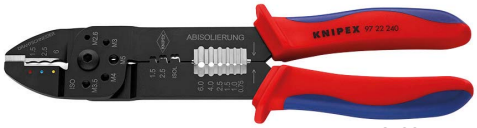
N° article	555905 mirror-polished, with multi-component sleeve	Cutting capacity soft wire (HRC 19) ∅ mm	Jaw length mm	Head width mm	Total length mm
115S	●	1,3	10	11	115

Crimping pliers

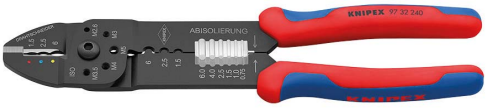
Design:
- special steel, high strength
- for cutting cables, stripping wires and crimping insulated cable lugs and connectors as well as open connectors
- with threaded holes for cutting Cu or Ms thread pins with M 2.6; M 3; M 3.5; M 4 and M 5
- screwed joint for high stability and smooth running

9722: for insulated cable lugs and connectors as well as open, uninsulated connectors

9732: for insulated cable lugs and cable connectors



9722



9732

N° article	557700 lacquered, with multi-component sleeves	Capacity mm²	AWG	Total length mm
9722	●	0,5 - 6	20 - 10	240
9732	●	0,5 - 6	20 - 10	240

Crimping pliers for ferrules

Design:
- made of special tool steel
- forged and oil-hardened
- 9 particularly deep profiles with conical side faces
- for the crimping of ferrules to DIN 46228 part 1 and 4
- easy crimping due to optimised transmission

9771:
Polished, handles plastic coated

9772:
Polished, with multi-component sleeve


9771



9772

N° article	557760	Capacity mm²	AWG	Total length mm
9771	●	0.25-16	24 - 6	180
9772	●	0.25-16	24 - 6	180

Design:
- made of chromium-vanadium electrical steel
- forged and oil-hardened
- for the crimping of ferrules to DIN 46228 part 1 and 4

9761 F:
with opening spring

9761 A and F:
handles plastic coated

9762 A:
with multi-component sleeve



9761A



9762A

N° article	557765	Capacity mm²	AWG	Total length mm
9761A	●	0.25-2.5	24 - 14	145
9761F	○	0.25-2.5	24 - 14	145
9762A	●	0.25-2.5	24 - 14	145

Crimping pliers with gear ratio, for wire end ferrules

Weidmüller

Design:
- for ferrules to DIN 46228T 1 and 4, with and without plastic collar

PZ 6 ROTO:
- also for twin ferrules in the cross section range of 0.5 - 2.5 mm²
- compulsory lock guarantees quality crimp
- possibility of unlocking in case of faulty operation
- one die for the entire cross section range
- rotatable die for inserting the ferrules from the front or from the side
- weight 428 g

PZ 16:
- crimp conforms to European standard EN 60947-1
- approval to VG 95211 (military designation VG 95 236 T 14 B 002)
- three crimping stations corresponding to the conductor cross sections
- lateral ferrule insertion
- weight 418 g



PZ6 ROTO



PZ16

N° article	557710 burnished, with multi-component sleeves	Capacity mm²	Total length mm
PZ6ROTO	●	0.14-6	200
PZ16	○	6.00-16	200

Crimping pliers self-adjusting

KNIPEX

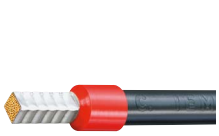
Design:
- made of chromium-vanadium electrical steel in special grade, oil-hardened
- for the crimping of ferrules to DIN 46228 part 1 and 4
- **self-adjusting to the respective ferrule size**
- fitting for all twin ferrules within the capacity range
- consistent high crimp quality due to (unlockable) forced locking device
- factory-set (calibrated) precise crimping pressure, re-adjustable
- lateral insertion of the ferrules into the tool
- force amplification by toggle lever
- handy construction with low weight

975304:
- **capacity expansion**
- with switch to set the crimping range to 16 mm²
- square crimping for optimum contact surfaces in the clamping connection

975314:
- **capacity expansion**
- hexagonal crimping for tight connection dimensions (up to 10 mm²)



Changing the crimping capacity from 10 mm² to 16 mm² by simply switching





975304



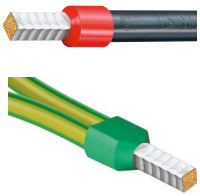


975314

N° article	557778 burnished, with multi-component sleeve	Capacity mm²	AWG	Total length mm
975304	●	0,08-10+16	28 - 6	180
975314	●	0.08-10	28 - 8	180

Crimping pliers self-adjusting

Design:
- made of chromium-vanadium electrical steel in special grade, oil-hardened
- for the crimping of ferrules to DIN 46228 part 1 and 4
- **self-adjusting to the respective ferrule size**
- fitting for all twin ferrules within the capacity range
- consistent high crimp quality due to (unlockable) forced locking device
- factory-set (calibrated) precise crimping pressure, re-adjustable
- force amplification by toggle lever
- handy construction with low weight
- crimping from 0.08 - 10 mm² and 16 mm² in one profile with selector lever for setting the crimping range 0.08 - 10 or 16 mm²





N° article	557720 burnished, with multi-component sleeve	Capacity mm²	AWG	Total length mm
975309	●	0,08-10+16	28 - 6	190

Crimping pliers Twistor®16, self-adjusting

Design:
- made of chromium-vanadium electrical steel in special grade, oil-hardened
- self-adjusting crimping pliers for ferrules
- **crimping head freely rotatable through 360°, with 8 locking positions**
- square crimp profile, high capacity range
- crimp opening accessible from both sides, extra-long end sleevescan be fed in
- crimping of twin end sleeves (ferrules) up to 2 x 6 mm² possible
- consistent high crimp quality due to (unlockable) forced locking device
- advantageous transmission ratio due to knee lever mechanism

Use:
For crimping end sleeves (ferrules) from almost any working position





N° article	557722	Capacity mm²	AWG	Total length mm
975318	●	0.14-16	26 - 6	200

Crimping pliers Twistor T, self-adjusting

Design:
- square crimp profile, large capacity range from 0.14 to 10 mm²
- two-handed operation for easy crimping of large conductor cross-sections
- crimping pliers adjust automatically to the different cross-sections
- crimp opening accessible from both sides, extra-long end sleevescan be fed in
- **360° rotatable crimping head; with 8 tactile locking positions**
- consistent high crimp quality due to (unlockable) forced locking device
- lightweight and handy tool, manual force increased by toggle mechanism - chrome vanadium electric steel in special quality, oil-hardened



NEW



N° article	557724 chrome-plated with multi-component sleeves	Capacity mm²	AWG	Total length mm
975319	●	0,14-10	26 - 8	200

Crimping pliers CTI 6 G

Weidmüller

Design:
- for PVC and polyamide insulated connectors
- with stop for exact positioning of the contacts
- compulsory lock guarantees quality crimp
- possibility of unlocking in case of faulty operation
- low manual force required due to slotted pressing

Use:
For cable lugs, pin cable lugs, parallel and serial connectors as well as plug connectors



N° article	557779 burnished, with multi-component sleeve	Capacity mm²	Total length mm
0,5-6	●	0,5-6	250

Crimping pliers

Design:
- made of special tempered alloy steel
- handles made of fibreglass-reinforced plastic
- compact construction, low weight
- high crimping power due to efficient transmission ratio
- pressure head readily convertible with various inserts



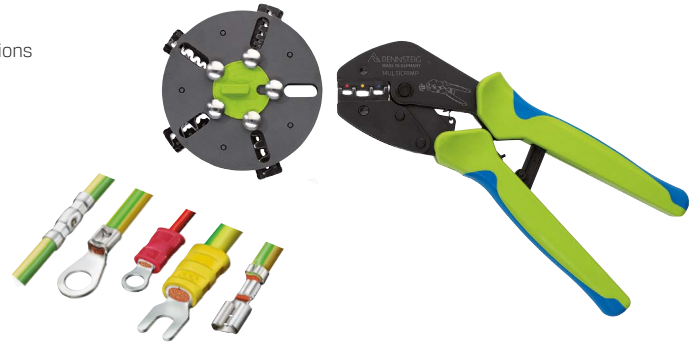
557781

Art.-Nr.	557781 burnished, with multi-component sleeve	Capacity mm²	AWG	Connectors	Scope of application	Total length mm
PEW9.45	●	0,1 - 2,5	27 - 13		non-insulated flat connectors	215
PEW9.50	○	0,5 - 6	20 - 10		non-insulated flat connectors	215
PEW9.60	●	0,5 - 6	20 - 10		insulated connectors	215
PEW9.60 - 3	○	0,5 - 6	20 - 10		Heat shrinkable tubing connectors	215
PEW9.1071	○	0,5 - 10	20 - 7		Butt connectors and non-insulated connectors	215

Crimping pliers MultiCrimp, with change magazine

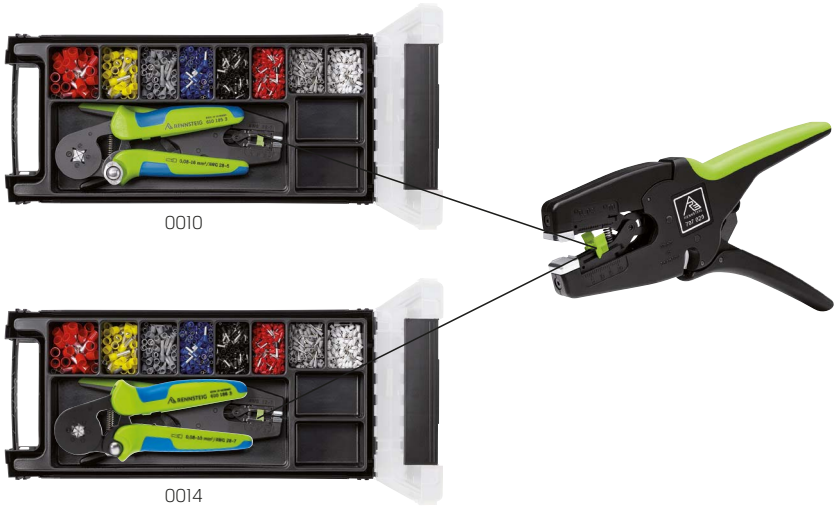
Design:
- crimping pliers with five replaceable crimping dies
- unlockable forced locking device for reliable, solderless electrical crimp connections

N° article	557783 burnished, with multi-component sleeve	Contents
2205	●	**Pliers with magazine, 5-piece insert:** **1 insert for uninsulated flat connectors:** 0.5-6 mm² **1 insert for insulated connectors:** 0.5-6 mm² **1 insert for wire end ferrules:** 0.25-6 mm² **1 insert for wire end ferrules:** 10 | 16 | 25 mm² **1 insert for butt connectors and uninsulated connectors:** 0.5-1.5 | 1.5-2.5 | 4-6 | 6-10 mm²



Crimping assortment with crimping pliers and stripping pliers

Design:
- with insulated ferrules
- complete with crimping pliers and stripping pliers
- in plastic box with transparent cover
- all sets contain the following ferrules:
  0.5 / 0.75 mm² = 150 pieces each
  1 / 1,5 / 2,5 / 4 mm² = 100 pieces each
  6 / 10 mm² = 50 pieces each



0010

0014

N° article	557802 Assortment	Contents	Quantity of ferrules
0010	●	Ferrules 0.5 | 0.75 | 1 | 1.5 | 2.5 | 4 | 6 | 10 mm² Crimping pliers PEW 8.185 Stripping pliers MultiStrip® 10	800
0014	NEW ●	Ferrules: 0,5 | 0,75 | 1 | 1,5 | 2,5 | 4 | 6 | 10 mm² Crimping pliers PEW 8.286 Abisolierz pliers MultiStrip® 10	800

Ferrules

Weidmüller

Design:
- ferrules assortment to DIN 0.5-16 mm²²
- total content 2,200 pieces
- in multi-purpose case



Nº article	557806 Assortment	Capacity mm²	Contents	Dimension mm
0,5-16	●	0,5 - 16	500 × each AEH 1/14 | 1.5/14 250 × each AEH 0.5/14 | 0.75/14 | 2.5/14 | 4/17 100 × each AEH 6/20 50 × each AEH 10/22 | 16/24	355 × 230 × 50

Cable lug

Weidmüller

Design:
- cable lugs from 0.5 - 6 mm²
- total content 600 pieces
- in multi-purpose case



Nº article	557807 Assort-ment	Capacity mm²	Contents	Dimension mm
0,5-6	●	0.5 - 6	50 × ring cable lugs each LIR 1.5M5V | 2.5M5V | 6M6V 50 × plug connectors each LIP 1.5R12V | 2.5R12V | 6R14V 50 × joint connectors each LIB 1.5B25VF | 2.5B25VF | 6B26VF 50 × blade terminals each LIF 1.5F638R | 2.5F638R | 6F638R	355 × 230 × 50

Crimp set contacts

Weidmüller

Design:
- crimp set contacts with insulated connectors and wire-end ferrules according to DIN colour code
- total content 2,000 pieces
- in multi-purpose case



Nº article	557810 Assortment	Capacity mm²	Contents	Dimension mm
0,5-6	○	0.5 - 6	100 pcs. each ring cable lugs LIR: 1.5M4V | 1.5M5V | 2.5M5V | 6M6V 100 each pin cable lugs LIP: 1.5R12V | 2.5R12V | 6R14V 100 pcs. of butt connectors each: LIB: 1.5B25VF | 2.5B25VF | 6B26VF 100 pcs. each blade terminals LIF: 1.5F288R | 1.5F638R | 2.5F638R | 6F638R 500 pcs. each H: 0.5/14 | 0.75/14 | 1.0/14 | 1.5/14 | 2.5/14 250 pcs. each H: 4.0/17" | 6.0/20"	320 × 400 × 55

Ferrules

KNIPEX

Design:
- handy and transparent dispenser box
- rotating lid with opening to remove individual ferrules
- stackable and reclosable
- dimension ∅ 90 mm, height 44 mm

0010+0015: Equipped with insulated ferrules to DIN colour code
0020: Equipped with insulated twin ferrules to DIN colour code



0010 0015 0020

Nº article	557809 Assortment	Capacity mm²	Contents
0010	●	0,5 - 2,5	50× each 0.5 mm² | 2.5 mm² 100× each 0.75 mm² | 1 mm² | 1.5 mm²
0015	●	4 - 16	50× 4 mm² each 20× each 6 mm² | 10 mm² 10× 16 mm² each
0020	●	0,75 - 2,5	50× each: 2× 0.75 mm² | 2× 1 mm² | 2× 1.5 mm² | 2× 2.5 mm²

Insertion tool for UTP and STP cables

RENNSTEIG

Design:
- tool for IDC termination of cables on patch panels, contact boxes or fields
- for UTP and STP cables
- inserting and cutting of the cable simultaneously
- insertion without cutting possible
- with integrated draw hook and release blade



Nº article	557808	Conductor ∅ mm	Design:	Length mm
0,4-0,8	●	0,4 - 0,8	Housing made of plastic	175

Ferrules assortment

Weidmüller

Design:
- for cutting, stripping and crimping wire-end ferrules up to 6 mm²
- consisting of plastic case with inserts, PZ 6 Roto L crimping pliers for wire-end ferrules with plastic collars in Weidmüller identification colours



N° article	557811 4,500-piece	Capacity mm²	Contents	Dimension mm
0,5-6	●	0,25 - 6	1 piece crimping pliers PZ 6 roto L 500 pieces each. H 0.5/14 orange / 500 pieces each. H 0.75/14 white 1,000 pieces each. H 1/14 yellow / 1,000 pieces each. H 1.5/14 red 500 pieces each. H 2.5/14 blue / 500 pieces each. H 4/17 grey 500 pieces each. H 6/20 black	340 × 270 × 60

Cable processing set

JOKARI original

Design:
- the four functions for fast and precise work are cutting - stripping - twisting - crimping
- no adjustment to the conductor cross-section is necessary
- high transmission ratio makes crimping of wire-end ferrules extremely easy
- precise length stop for uniform stripping
- twisting system ensures safe insertion of the conductor into the ferrule
- integrated side cutter for wires up to max. 2.5 mm²
- suitable for stranded wires with PVC insulation
- crimping of wire-end ferrules into tape goods according to VDE

Scope of delivery:
1 piece Jokari QUADRO Plus, 240 ferrules



N° article	557815 QUADRO Plus	Capacity mm²	AWG	Contents
0,5-2,5	○	0,5 - 2,5	20 - 14	1 piece Jokari QUADRO Plus 240 wire end ferrules: 50 each: 0.5 mm², 0.75 mm², 1 mm², 1.5 mm², 40 pieces 2.5 mm² 3 piece wire end ferrule magazines

Shrinking tube assortment

HellermannTyton

Design:
- equipped with 5 sizes
- shrink ratio 3:1 covers wider range of applications
- made of polyolefin (PEX)
- shrinking temperature from 90 °C
- self-extinguishing from 120 °C spread of fire
- dielectric strength 20 kV, according to ASTM D 2671
- insulation class B (VDE 0530)
- in assortment box



N° article	557813 ShrinKit 321 basic 220-piece	Conductor Ø mm	Contents	Dimension mm
1-16	●	1,5 - 18	100 × Ø 1.5 mm each, length 35 mm, wall thickness 0.45 mm, black 50 × Ø 3 mm each, length 35 mm, wall thickness 0.55 mm, black 60 × Ø 6 mm each, length 35 mm, wall thickness 0.7 mm, black 5 × Ø 12 mm each, length 80 mm, wall thickness 0.7 mm, black 5 × Ø 18 mm each, length 80 mm, wall thickness 0.8 mm, black	189 × 177 × 40

Shrinking tube assortment

HellermannTyton

Design:
- 17 universal shrink tubes in five different sizes and colours
- shrink ratio 3:1 covers wider range of applications
- material polyolefin (PO)
- from +120° C fire spread self-extinguishing (except transparent)
- dielectric strength 20 kv, according to ASTM D 2671
- shrink temperature from 90 °C, insulation class (VDE 0530)
- in assortment box

Nº article	557815 ShrinKit 321 universal	Conductor Ø mm	Contents	Dimension mm
1-20	○	1 - 20	75 each Ø 1.5 / 0.5 mm, length 40 mm, wall thickness 0.45 mm, black 75 each Ø 1.5 / 0.5 mm, length 40 mm, wall thickness 0.45 mm, green-yellow 100 each Ø 3 / 1 mm, length 40 mm, wall thickness 0.55 mm, blue 100 each Ø 3 / 1 mm, length 40 mm, wall thickness 0.55 mm, green-yellow 100 each Ø 3 / 1 mm, length 50 mm, wall thickness 0.55 mm, black 100 each Ø 3 / 1 mm, length 50 mm, wall thickness 0.55 mm, transparent 100 each Ø 3 / 1 mm, length 50 mm, wall thickness 0.55 mm, black 50 each Ø 6 / 2 mm, length 60 mm, wall thickness 0.70 mm, transparent 50 each Ø 6 / 2 mm, length 60 mm, wall thickness 0.70 mm, green-yellow 50 each Ø 6 / 2 mm, length 60 mm, wall thickness 0.70 mm, blue 50 each Ø 6 / 2 mm, length 60 mm, wall thickness 0.70 mm, red 50 each Ø 6 / 2 mm, length 60 mm, wall thickness 0.70 mm, black 15 each Ø 12 / 4 mm, length 100 mm, wall thickness 0.70 mm, black 15 each Ø 12 / 4 mm, length 100 mm, wall thickness 0.70 mm, transparent 15 each Ø 12 / 4 mm, length 100 mm, wall thickness 0.70 mm, red 10 each Ø 12 / 4 mm, length 170 mm, wall thickness 0.70 mm, green-yellow 10 each Ø 12 / 4 mm, length 170 mm, wall thickness 0.70 mm, blue 10 each Ø 24 / 8 mm, length 200 mm, wall thickness 1 mm, black	384×316×68



Adhesive base set in assortment case

SapiSelco

Design:
- adhesive base set consists of fixing base, hook brackets and cable ties
- total content 350 pieces
- in multi-purpose case



NEW



Nº article	557816 350-piece	Contents
0010	●	**100 cable ties** 3.5×150 mm, black **100 cable ties** 4.5×200 mm, black **20 mounting bases** Ø 27.5 mm, round, black **10 self-adhesive clips** 26×13 mm, black **20 mounting bases** 30×15×12 mm, black **50 adhesive sockets** 19×19 mm, black, square, self-adhesive **50 adhesive sockets** 27×27 mm, black, square, self-adhesive

Cable shears

Weidmüller

Design and use:
- for damage-free cutting of copper and aluminium cables
- not suitable for steel wire, steel-reinforced cables, aluminium alloys and hard-drawn copper conductors
- VDE approval to DIN EN 60900, 1,000 V

DIN ISO 9654



Nº article	557823 Handles with multi-component sleeve	Cutting capacity Cu and Al Ø mm	AWG	Total length mm
KT8	●	8	6	185
KT12	●	12	6	225

Cable shears

RENNSTEIG

Design:
- forged of special tool steel
- readjustable joint screw
- for clean, smooth cuts
- with hand guard

D15: for copper and aluminium cables
D20: for copper and aluminium cables with initial and final cut (1st and 2nd edge) also possible up to 25 mm, not suitable for hard-drawn copper conductors





Nº article	557820 burnished, handles plastic coated	Cutting capacity Cu and Al Ø mm	Cutting capacity Cu and Al Ø mm²	Total length mm
D15	●	15	50	170
D20	●	20	70	200

Cable shears

Design:
- head forged of special tool steel
- handles made of high-tensile aluminium tube
- novel blade geometry for easy and precise cuts
- minimised power input through optimum lever-action
- for copper and aluminium cables



N° article	557825 burnished, with multi-component sleeve	Cutting capacity Cu and Al ∅ mm	Cutting capacity Cu and Al ∅ mm²	Total length mm
SZ27	●	27	185	505

Cable cutter

Design:
- made of special tool steel in extra quality
- forged and oil-hardened
- head lacquered
- hardened cutting edges with precision grinding
- smooth and clean cutting without deformations
- **one-hand operated** using the ratchet principle
- low power requirement due to very high gear ratio
- two-gear sprocket ring drive for easy cutting
- with hand guard
- for copper and aluminium cables
- not suitable for wire ropes or steel wire

280: For aluminium conductors up to 4 × 150 mm² sector cable can be used
320: 3-gear sprocket drive, for Cu- u. Al cables up to ∅ 60 mm, head burnished and polished


280


250


320

N° article	557830 with multi-component sleeve	Cutting capacity Cu and Al ∅ mm	Cutting capacity Cu and Al ∅ mm²	Total length mm
250	●	32	240	250
280	●	52	380	280
320	○	60	600	320

Cable and general working knife fixed

Design:
With solid fixed blade and wooden haft



N° article	558050 fixed	Blade length mm	Total length mm
190	○	70	190

Electrician's knife foldable

Design:
- for daily use
- very sharp blade in high quality
- sturdy blade made of stainless steel
- durable and robust
- ergonomic due to handle shape for comfortable holding and handling
- handle made of robust, impact-resistant plastic
- tether attachment at the end of the knife for attaching a chain, cord or similar



N° article	558055 foldable	Blade length mm	Total length mm
120	●	80	120

Folding knife

Design:
- for daily use
- aluminium handle with finger recesses
- blade fixation in unfolded state
- sturdy blade made of high-quality stainless steel
- lightweight and handy
- with convenient belt clip



N° article	558056 foldable	Blade length mm	Total length mm
115	●	86	201

Safety knife

Hultafors

Design:
- made of Japanese knife steel
- its special fastening possibility on buttons of the professional clothing prevents it from getting lost
- blade made of 2.5 mm thick carbon steel with a hardness of 58-60 HRC
- **blunt tip to avoid puncture injuries**
- cutting edge ground in several steps and finally honed onto leather
- shank and holster made of particularly impact-resistant PP plastic
- holster attachment either to belt or to buttons

Scope of delivery:
Including holster



N° article	558058 Type 203	Blade length mm	Total length mm
203	●	88	203

Cable, working and pocket knife foldable

Design:

1:
- robust knife with riveted wooden handle from FSC certified and foldable blade
- large, strong blade, with wire stripper
- to DIN 6479
- weight 78 g

2K:
- safety knife, 1-piece, stainless with plastic handle shells and blade lock
- electrician's blade with 2 notches for stripping PVC cables

5:
- stainless
- with special hard plastic hafts
- blade arresting via push button
- with blade blocking
- with scalloped edge

12:
- robust knife with riveted wooden handle from FSC certified beech wood
- with screwdriver blade 43 mm and bottle opener function
- with reamer 46 mm (awl)
- with knife blade 77 mm


1


2K


5


12

N° article	558100 foldable	Blade length mm	Total length mm
1	●	86	200
2K	●	79	191
5	●	78	190
12	●	70	172

Craftsman's knife HVK

Hultafors

Design:
- made of Japanese knife steel
- its special fastening possibility on buttons of the professional clothing prevents it from getting lost
- blade made of 2.5 mm thick carbon steel with a hardness of 58-60 HRC
- cutting edge ground in several steps and finally honed onto leather
- shank and holster made of particularly impact-resistant PP plastic
- holster attachment either to belt or to buttons

Scope of delivery:
Including holster



N° article	558058 Type 208	Blade length mm	Total length mm
208	○	93	208

Stripping knives

JOKARI original

TiN

Design:
- cable insulation stripping knife with self-adjusting switch from circular to longitudinal cutting
- cutting depth selection by a knurled screw at the end of the handle
- **blades TiN coated**for increased tool life
- multi-component handle for better grip and more safety

28 G: With straight cutter
28 H: With hook pre-cutter
27: Without pre-cutter
11: Spare stripping blade TiN coated











28 G (Secura)



28 H (Secura)



27 (Secura)

11 (Secura)

N° article	558150	Operating range mm	Total length mm
28G	●	8 - 28	170
28H	●	8 - 28	170
27	●	8 - 28	132
11	●	–	114

Cable stripper

JOKARI original

TiN

Design and use:
- universal stripper (inlying blade)
- to strip all common round cables from 0.25 to 13 mm
- **blades TiN coated** for longer service life (except PWS-PLUS 002)

PWS-PLUS 002:
- lightweight and handy mini precision stripping tool
- for stripping conductors and stranded wires AWG 30 to 20
- including adjustable length stop
- with cutting device for wires up to ∅ 1.0 mm
- replaceable lever blade

TOPCOAXPLUS:
- for stripping of all common coaxial cables
- with integrated socket wrench AF 11 mm for tightening F-connectors
- no adjustment of the cutting depth necessary

12:
- for stripping all common round cables no adjustment of the cutting depth necessary
- suitable for work in junction and distribution boxes
- housing made of wear-resistant polymide

15S:
- additionally with stripping unit (for 0.2 | 0.3 | 0.8 | 1.5 | 2.5 | 4.0 mm²)
- multi-component handle for better grip and more safety

XL:
- the long, ergonomic construction of the stripping tool simplifies the work in wall outlets
- four-blade pattern
- internal length scaling
- non-slip 2-component handle



002



TOPCOAXPLUS



002



TOPCOAXPLUS



12



15S (Secura)



XL

N° article	558152	Operating range mm	Total length mm
002	○	0.25 - 0.8	102
TOPCOAXPLUS	●	4.8 - 7.5	115
12	●	8 - 13	124
15S	●	8 - 13	124
XL	○	8 - 13	176

Cable knives

JOKARI original

TiN

Design:
- cable knife with change cable clamp system
- for stripping all common round cables
- **with automatic blade protection of the hook blade**
- additional protection by locking switch
- a sight window in the bracket allows to monitor the cutting
- blades titanium nitride coated
- cutting depth of the blades adjustable
- good feel due to soft grip areas on the handle
- housing made of high-quality, wear-resistant polyamide
- 2× inner blade
- with interchangeable brackets 0021 and 0022



N° article	558153 Stripping knife	Operating range mm	Total length mm
0010	●	8 - 35	167



0020 0021 0022 0023 0024

N° article	558153 Change bracket for cable stripping knife	Operating range mm
0020	○	4 - 16
0021	○	8 - 28
0022	○	27 - 35
0023	○	35 - 50
0024	○	50 - 70



Hakenklinge

N° article	558153 Replacement hook blade for cable knives, TiN-coated	Operating range mm
0030	○	4 - 70

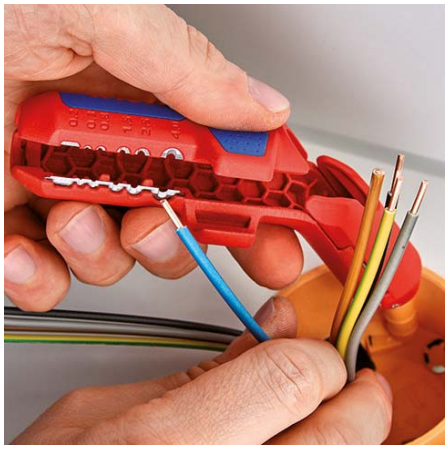


N° article	558153 Cable stripping knife set 4-70	Operating range mm
0040	●	4 - 70

Universal stripping tool

Design and use:
- for time-saving dismantling and stripping of all round sheathed and damp-proof cables (e.g. NYM cable 3 × 1.5 mm² to 5 × 2.5 mm²), data cable (e.g. twisted pair) and coaxial cable
- ergonomic gun handle for easy incision, stripping and lengthwise slitting of the cable sheath
- simplified insertion of single conductors for stripping using positioning bars
- convenient insertion of coaxial and data cables thanks to opening aid
- with soft plastic zone for comfortable handling and secure hold

0010L: for left-handers







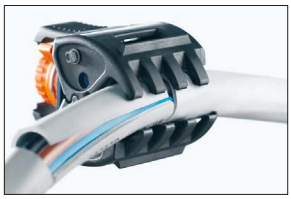




N° article	558154 ErgoStrip	Stripping values round cable ∅ mm	Stripping values coaxial cable ∅ mm	Stripping values conductor and stranded wire mm²	Total length mm
0010	●	8 - 13	4.8 - 7.5	0.2 - 4	135
0010L	●	8 - 13	4.8 - 7.5	0.2 - 4	135

Stripping tool

Design and use:
- for stripping cables inside cable ducts
- for PVC-insulated cables
- for stripping the insulation at any given point
- for forcing open the incised insulation by integrated cutting edge





N° article	558160 AM 16	Stripping values round cable ∅ mm	Cutting depth mm	Total length mm
6-17,3	●	5 - 17	0,8 - 2,5	53

Design and use:
- for PVC round cables
- **arrestable blade for transverse, longitudinal and spiral cutting**
- retaining bracket with integrated cutting edge for breaking open the incised insulation

6 - 25: Adjustable cutting depth for insulation thicknesses up to 4.5 mm
25 - 36: Adjustable cutting depth for insulation thicknesses up to 4.5 mm



6-25



25-36



N° article	558162 AM 25	558162 AM 35	Stripping values round cable ∅ mm	Total length mm
6-25	●	–	6 - 25	157
25-36	–	○	25 - 36	174

Universal knife InterLock™

STANLEY

Design:
0-10-788:
- **with retractable blade**
- robust zinc die casting, with inserts of soft plastic
- InterLock™ connection for secure hold of the blade
- rapid blade exchange without tool
- magazine with space for up to 8 blades in handle
- the blade can be fixed in five positions
- with integrated cord cutter
- incl. 3 spare blades

1-10-199:
- **with fixed blade**
- robust housing made of die-cast zinc
- InterLock™ connection for secure hold of the blade
- magazine with space for up to 5 blades in handle
- incl. 3 spare blades

1-10-099:
- **with retractable blade**
- robust housing made of die-cast zinc
- InterLock™ connection for secure hold of the blade
- the blade can be fixed in five positions
- magazine with space for up to 5 blades in handle
- incl. 3 spare blades



0-10-788



1-10-199



1-10-099

N° article	558210 Quick-exchange professional knife	558230 Universal knife
0-10-788	●	–
1-10-199	–	●
1-10-099	–	●

All-round knife / Cutter

STANLEY

Design:
0-10-810:
- metal body designed for maximum power transmission
- blade and guide are pushed out and retracted together
- for a great number of applications at work and leisure time
- suited for all standard blades
- with belt clip

0-10-813:
- ideal sports knife for work and leisure
- blade slider made of zinc for strength and durability
- with toothed sport blade (75 mm long) and trapezoidal blade
- rapid blade exchange without tool
- easy opening of the sport blade with one hand
- sport blade with safety lock
- InterLock™ mechanism prevents simultaneous opening of both blades

0-10-825:
- ergonomics design
- **with retractable blade**
- rapid blade exchange without tool
- replacement blades can be stored in the handle
- 3 trapezoidal blades included in delivery
- with belt clip

0-10-237:
- **quick change of blade due to automatic blade replenishment**
- magazine with space for up to 4 blades in handle, one blade mounted
- ergonomic design - secure hold even when used forcefully
- inserts made of soft plastic - for high control and a secure grip
- 5 blades included



0-10-810



0-10-813



0-10-825



0-10-237

N° article	558240 Universal knife Quickslide	558242 Sport utility knife QUICKSLIDE	558244 Folding knife FATMAX®	558245 All-round knife / cutter with retractable blade
0-10-810	●	–	–	–
0-10-813	–	●	–	–
0-10-825	–	–	●	–
0-10-237	–	–	–	○

Safety knife With ceramic blade

Design:
- made of ABS plastic with high impact strength
- automatic blade retraction when the feed mechanism is released
- reduction of the risk of accidents
- ideal for cutting all packaging materials, cardboard, plastic etc.
- special design of the ceramic blade with 0.5 mm especially thin and durable
- the ceramic blade is not magnetic or conductive and is also resistant to rust and chemicals
- the ceramic blade can be used on both sides
- easy and tool-free blade change

Delivery:
Ceramic blade included.

NEW



N° article	558267 Plastic, with ceramic blade
0010	●

Knife blade made of ceramics

LUTZ BLADES exactly

Design:
- trapezoidal ceramic blade
- **non-magnetic or conductive and also resistant to rust and chemicals**
- special design of the ceramic blade with 0.5 mm especially thin and durable
- 60 mm long cutting edge with two holding notches
- the trapezoidal blade can be used on both sides

NEW

N° article	558268 Trapezoidal ceramic blade	Length mm	Thickness mm	PU
0010	●	60	0,5	1 blade

Safety knife FATMAX®

STANLEY FATMAX

Design:
- ideal for cutting all packaging materials, cardboard, plastic
- very high safety for people and goods **with fully automatic blade retraction** as soon as the material is no longer in contact or the slider is no longer actuated
- extra large slider with improved ergonomics for left- and right-handers
- rubberised comfort handle prevents slipping for better control while cutting
- robust and durable metal construction
- the device has a 3-step cutting depth
- easy and tool-free blade change
- storage space for spare blades in handle

Delivery:
Incl. 4 safety blades



N° article	558256 Metal, with slider
10367-0	●

Design:
- ideal for cutting all packaging materials, cardboard, plastic
- very high safety for people and goods **with fully automatic blade retraction** as soon as the material is no longer in contact or the slider is no longer actuated
- the pliers handle ensures less strain and is ideal for permanent use and for smaller hands
- rubberised comfort handle prevents slipping and thus improves control when cutting
- robust and durable metal construction
- the device has a 3-step cutting depth
- easy and tool-free blade change
- storage space for spare blades in handle

Delivery:
incl. 1 safety blade



N° article	558257 Metal, with pliers handle
10370-0	●

Safety knife with automatic blade GS

STANLEY

Design:
- safety knife with retractable blade
- **automatic blade retraction** when the feed mechanism is released
- reduction of the risk of accidents
- profiled metal body for comfortable working
- including specially rounded high performance blade



N° article	558250
1-10-089	●

Safety knife

LUTZ BLADES exactly

Design:
- robust housing made of metal
- for daily use
- the blade is folded out via a button and is separately secured with a blocking device
- suitable for all commercially available trapezoidal and hook blades
- with convenient belt clip

NEW



N° article	558253 foldable	Total length mm
175	●	175

Replacement Blade Recommendations

Product Information

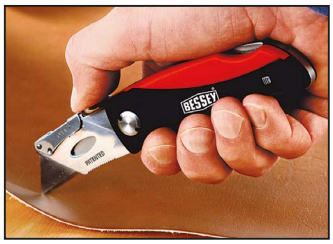
Knife	1-10-089	1-10-099	1-10-199	0-10-237	0-10-788	0-10-810	0-10-813	0-10-825
Blade	0-11-700	0-11-700	0-11-700	0-11-700	0-11-700	0-11-700	0-11-700	0-11-700
	0-11-800	0-11-800	0-11-800	0-11-800	0-11-800	0-11-800	0-11-800	0-11-800
	6-11-921	6-11-921	6-11-921	6-11-921	6-11-921	6-11-921	6-11-921	6-11-921

Knife	10362-0	10363-0	10364-0	10367-0	10370-0	10373-0
	11012-2	11012-2	11012-2	11012-2	11012-2	
Blade						0-11-700
						0-11-800

Blade folding knife

Design:
- robust cutter knife with retractable blade
- comfort plastic handle
- thumb pad for maximum contact pressure
- blade storage with 5 spare blades
- with belt clip

160-SET
- convenient nylon zip-up case
- folding utility knife for replaceable blades
- four different blades for various materials:
  15× trapezoidal blades
  5× hook blades
  2× linoleum blades
  2× scoring blades





160


160-SET

N° article	558252	Cutting depth mm
160	●	28
160-SET	●	28

Knife blade made of steel

Design:
0-11-700:
- **trapezoidal blade**
- with patented, **inductive hardened cutting edge**
- sharper cuts, longer durability and tool life
- ideal for a variety of materials like paper, cardboard, leather, foils, plastic etc.



0-11-700

0-11-800:
- **trapezoidal blade**
- tungsten carbide coated carbide alloy
- coated cutting edge, unbreakable and flexible with maximum hardness
- **up to 5 times more durable than comparable blades**



0-11-800

6-11-921:
- **trapezoidal blade**
- for general and heavy cutting work
- ideal for carpet, vinyl and materials where a stronger blade is needed


6-11-921

N° article	558270	Length mm	Height mm	PU
0-11-700	●	63	20	5 blades
0-11-800	●	63	19	5 blades
6-11-921	○	62	19	10 blades

Cutter

Design:
0010 + 0015:
- ergonomically shaped plastic cutter
- 9 or 18 mm snap-off blade
- push button mechanism
- **auto-lock mechanism**

0025:
- all-metal cutter with 18 mm snap-off blade and wheel lock
- for heavy-duty cutting operations

Delivery:
Including blade


0010


0015


0025

N° article	558290 with snap-off blade	Width of blade mm	Housing material
0010	●	9	Plastic
0015	●	18	Plastic
0025	●	18	Metal

Foil cutter FATMAX®

Design:
- concealed blade for extremely low risk of injury
- interchangeable standard blades
- rubberised comfort handle prevents slipping and thus improves control when cutting
- multi-functional use thanks to metal tape separator
- distinctive knife nose enables piercing and cutting through single and double corrugated board

Delivery:
Incl. 1 standard blade

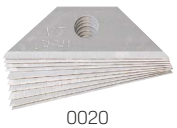


N° article	558265 Plastic, with replaceable blade
10373-0	●

Cardboard cutter

Design and use:
0010:
- for opening cartons and packaging foils
- with remover for shot-in parcel staples
- with spare blade
- blade change by means of a screw
- plastic handle is ergonomically shaped and rests firmly and securely in the hand
- the blade is shielded behind a metal bracket to protect the package content

0020:
- 10 replacement blades for foil cutter 0010
- price per PU


0020



0010

N° article	558292 Knife blade for safety cardboard knives	558292 Safety cardboard cutter	Length mm	PU
0010	–	●	195	–
0020	●	–	90	10 blades

Cutter

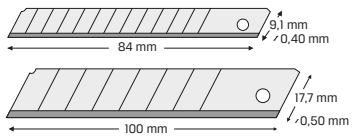
Design:
- robust, durable magnesium housing
- innovative, **variably extendable stabilising rail**
- fixed blade thanks to high-quality blade lock
- original equipment with high-quality snap-off blades, two spare blades in the handle drawer, can be changed without tools
- flat, ergonomic sliders separately for blade and stabilising rail



N° article	558317 with snap-off blades and magazine	Width of blade mm
0010	●	18

Snap-off blade

Design:
- in folding box
- price per PU

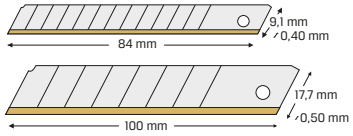


N° article	558322 in knife cassette	Width of blade mm	PU
0010	●	9	10 blades
0015	●	18	10 blades
0020	●	18	50 blades

Snap-off blade TiN coated

Design:
- TiN coated
- price per PU

TiN



N° article	558324 in knife cassette	Width of blade mm	PU
0010	●	9	10 blades
0015	●	18	10 blades
0020	○	18	50 blades

Cutter

Design:
1-10-150/151:
- standard cutter in plastic version
- two-piece body for quick blade exchange
- safe break off of the used up blade by removable end cap

1-10-095/018:
- metal die-cast body for high stability
- patented InterLock™ connection secures fixed blade
- easy blade exchange without tool
- lateral blade slider with lock


1-10-150


1-10-095


1-10-151


1-10-018

N° article	558300 with snap-off blades and magazine	558310 with snap-off blades and magazine	Width of blade mm	Housing material
1-10-150	●	–	9	Plastic
1-10-095	●	–	9	Cast aluminium
1-10-151	–	●	18	Plastic
1-10-018	–	●	18	Cast aluminium

Cutter

Design:
- made of ABS plastic with high impact strength
- blade guide made of stainless steel
- automatic blade feed => rapid exchange of blades
- with safety catch
- blade cleaner with spring => secure sealing of the plug-in
- with magazine for up to 6 blades
- **incl. 4 snap-off blades**



N° article	558320 PU = 10 pieces	Width of blade mm
0-11-300	●	9
0-11-301	●	18
2-11-725	●	25
K18	●	18

Cutter set with snap-off blades

Design:
- metal die-cast body for high stability
- patented InterLock™connection secures fixed blade
- easy blade exchange without tool
- lateral blade slider with lock
- **200 blades in 20 dispensers**

NEW







N° article	558319	Contents
10019-9	○	**1** Cuttermesser **200 pieces snap-off blades** 18 mm **1** Organiser

Snap-off blade for cutters

Design:
- top-quality segment blades made of steel
- delivered in proper blade dispenser
- price per PU

K18: standard quality



0-11-300



0-11-301



K 18

Art.-Nr.	558320 VPE = 10 Stück	Klingenbreite mm
0-11-300	3,90	9
0-11-301	4,65	18
2-11-725	12,60	25
K18	4,62	18

Snap-off blade CARBIDE

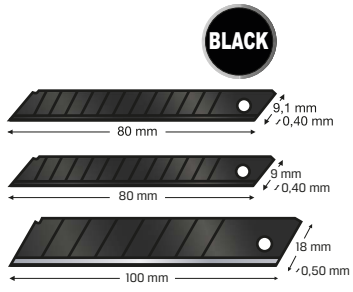
Design:
- coated cutting edge, unbreakable and flexible with maximum hardness
- tungsten carbide coated carbide alloy is applied by high-performance laser
- **up to 5 times more durable than comparable blades**
- price per PU



N° article	558327 PU = 5 pieces	Width of blade mm
STHT0-11818	●	18
STHT0-11825	●	25

Snap-off blade

Design:
- colour black
- in blade cassette
- price per PU



N° article	558326 in knife cassette	Width of blade mm	PU
0010	●	9	10 blades
0015	●	18	10 blades
0020	○	18	50 blades

Snap-off blade collection box

Design:
- blade box for safe disposal of blades and blade remnants
- integrated break-off device which also prevents the blades from falling out accidentally
- effortless disposal by simply snapping the cover mechanism into place. Once the box is full, the safety button can be pressed in and the blade box can be permanently closed.





N° article	558328 for used blades	Length mm	Width mm	Height mm
0010	○	25	65	120

Scalpel aluminium rubberised

Design:
- blade easily replaceable through twist mechanism
- 30° and 45° ground blades
- 5 spare blades each 30° and 45°



N° article	558331 D-500 GP (SB)	Length mm	Height mm
0010	○	156	0,9

Scalpel hobby knife

Design:
0-10-401:
- especially for accurate cutting tasks
- with round metal handle
- total length 120 mm, 6 mm ∅

0-11-411:
- replacement blade with short round edge
- 45 mm long
- price per PU


558330

558335

N° article	558330 Scalpel	558335 Spare blade (PU = 5 pcs)
0-10-401	●	–
0-11-411	–	●

Scalpel hobby knife

Design:
- housing made of ABS plastic
- push-button mechanism for extending the blade
- width 26 mm
- height 15 mm
- width of the blade 11.1 mm

Delivery:
Including TiN blade

NEW



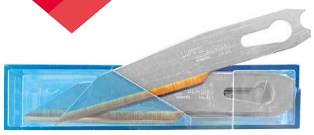


N° article	558360 Scalpel	Blade length mm	Total length mm
0010	○	59,4	155

Design:
- scalpel blades made of carbon steel with TiN hard coating
- long service life
- suitable for craft knives, carpet, foils, leather work and wet wallpaper
- professional scalpel blades in safety dispenser
- price per PU

TiN

NEW

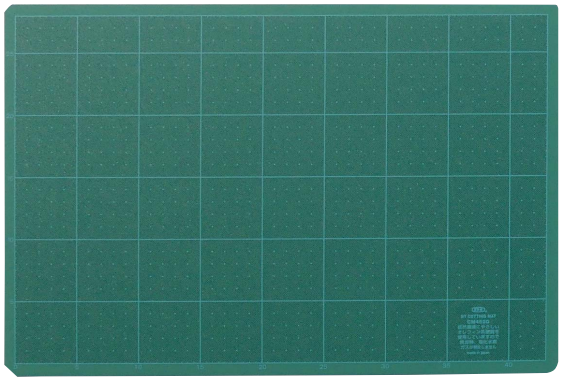


N° article	558362 Replacement scalpel blade	Width of blade mm	Blade length mm	Total length mm	PU pieces
0010	○	0,65	11,1	59,4	10

Cutting pad

Design:
- green cutting pad made of environmentally friendly, recycled PO synthetic resin
- the mat has a hard core
- grid lines on the cutting surfaces facilitate the cutting work

0010: Suitable for DIN A4
0015: Suitable for DIN A3



N° article	558341	Length mm	Width mm	Height mm
0010	●	300	220	3
0015	●	450	300	3

Multi tool Leatherman

Design:
- made of stainless steel

19: Made of stainless steel, handle shells made of aluminium

N° article	558350	Parts	Length mm	Equipment	Weight g
14	●	14	96	**Wingman®in nylon holster, 14 functions** Stripping blade Can opener Wire cutter with spring actuation Wood/metal file Bottle opener small screwdriver Combination knife made of 420HC stainless steel Cross-recess screwdriver Ruler (1.5 inch / 3.8 cm) medium screwdrivers standard pliers with spring actuation Parcel opener Scissors with spring actuation Needle-nosed pliers with spring actuation	194
17	●	17	98	**Wave® Plus, in nylon holster, 17 functions** Needle-nosed pliers Wire cutter Hard wire cutter Knife with flattened tip Serrated knife Saw Scissors Wood/metal file Diamond coated file Large and small bit holder incl. 2 double-sided bits Large screwdriver Ruler cm/inch Bottle opener/can opener Stripping blade Suspension eye Small cross-recess and watchmaker´s screwdrivers Cross-recess no 1-2 and slot 5 mm	243
19	●	19	113	**Supertool® 300, in leather holster, 19 functions** Needle-nosed pliers Wire cutter, exchangeable Hard wire cutter, exchangeable Cable cutter Crimper Knife made of 420HC stainless steel Serrated knife made of 420HC stainless steel Wood/metal file Saw Small, medium and large screwdriver Cross-recess screwdriver Awl with eye Ruler cm/inch Can opener/bottle opener Stripping blade Suspension eye	289


14


17


19

Mini precision tweezers

Design:
- premium stainless steel, straight shape
- smooth gripping surfaces, matt, scratch- and mirror-free surface
- extra short and light tweezers with slim tips
- high temperature resistance and excellent corrosion resistance to most chemicals, salts and acids
- ideal for working in confined spaces


925102


922105


922106


922104

N° article	558508 straight	Form of tip	Total length mm
925102	●	blunt	70
922105	●	Needle tip	70
922106	●	Needle tip	80
922104	●	Needle tip	90

Precision tweezers

Design:
- stainless steel, straight shape
- stainless, antimagnetic, anti-glare mat finished
- smooth gripping surfaces mat finished for optimum grip
- high tenacity and very good corrosion resistance
- straight pattern, with particularly slim tips
- for fine mounting work


922207


922204


922206

N° article	558510 straight	Form of tip	Total length mm
922207	●	Needle tip	115
922204	●	Pointed	128
922206	●	Needle tip	120

Precision tweezers

Design:
- stainless steel, straight shape
- wide round tips
- gripping surfaces fine serrated, matt finish
- ribbed handles
- high tenacity and very good corrosion resistance


926443


927245

N° article	558515 straight	Form of tip	Total length mm
926443	●	blunt	120
927245	●	blunt	145

Design:
- premium stainless steel, anti-magnetic
- with polished edges
- suitable for working on SMD components
- smooth gripping surfaces, matt, scratch- and mirror-free surface
- high temperature resistance and excellent corrosion resistance to most chemicals, salts and acids
- **made by hand**


920254

N° article	558530	Form of tip	Total length mm
920254	●	angled 30°, blunt	115

Precision cross-over tweezers

Design:
- stainless steel
- gripping surfaces fine toothed, tarnished, efficient clamping
- high-precision self-closing function due to its own spring force
- high tenacity and very good corrosion resistance

929589+929590 with grip plates


929491


929589


929590

N° article	558525	Form of tip	Total length mm
929491	●	straight, blunt	160
929589	●	straight, blunt	165
929590	●	angled 40°, blunt	162

Design:
- gripping surfaces fine serrated
- ribbed handles
- slim tips


922235


923436


923437

N° article	558520 with guide pin	Design	Form of tip	Total length mm
922235	●	Stainless steel	straight, pointed	155
923436	●	Stainless steel	angled 25°, pointed	152
923437	●	Steel, black varnished	angled 25°, pointed	155

Design:
- nickel-plated and dip-insulated
- for finest assembly work
- **tested to DIN EN 60900**


922761
922762
922764
924701
922763

N° article	558535 insulated	Form of tip	Gripping surface	Total length mm
922761	●	straight, pointed	plain, matted	130
922762	●	straight, blunt	fine serrated	150
923764	●	angled 45°, pointed	fine serrated	150
924701	●	angled 30°, blunt	smooth	142
926763	●	straight, blunt	serrated	145

Plastic tweezers

Design:
- carbon fibre reinforced plastic, straight shape
- multiple usable ESD variant
- surface resistance between 10^2 - 10^3 Ohm
- temperature stable up to 130° degrees, short term up to 190° degrees
- gentle on the surface of sensitive electronic components
- fully elastic, fatigue-resistant, vibration-damping and water-repellent
- good chemical resistance


920904


920905

N° article	558542 ESD	Form of tip	Total length mm
920904	●	blunt	115
920905	●	blunt	115

ESD tweezers

Design:
- stainless steel, anti-magnetic
- ESD coating, non-reflective black, surface resistance approx. 10 Ohm
- tips non-reflective brushed
- gripping surfaces mat finished for optimum support



N° article	558540 ESD	Form of tip	Total length mm
920878	●	angled 45°, blunt	120
922870	●	straight, pointed	110
922872	●	straight long, pointed	135
923875	●	angled 45°, pointed	120
925874	●	round, blunt	120
922869	●	straight, needle pointed	120
922102	●	straight, needle pointed	125
927877	●	straight, blunt	145
920879	●	straight, for positioning	122

ESD universal tweezers set

Design:
- five high-quality tweezers groups in a set: Precision tweezers, universal tweezers, ESD, plastic and insulated tweezers
- optimal selection
- roll pouch included



N° article	558550 5-piece	Form of tip
0010	●	straight, blunt straight, pointed straight, needle pointed angled 45°, needle pointed

Precision tweezers set

Design:
- five high-quality precision tweezers made of premium stainless steel in a set
- for particularly demanding fine work
- with polished edges, matt, scratch- and mirror-free surface
- high temperature resistance and excellent corrosion resistance to most chemicals, salts and acids
- made by hand
- roll pouch included



N° article	558551 5-piece	Form of tip
0010	●	straight, blunt straight, pointed straight, needle pointed angled 45°, needle pointed

Inspection mirror

Bauer Böcker

Design:
- mirror in metal edging
- shank chrome-plated

225:
With plastic edging

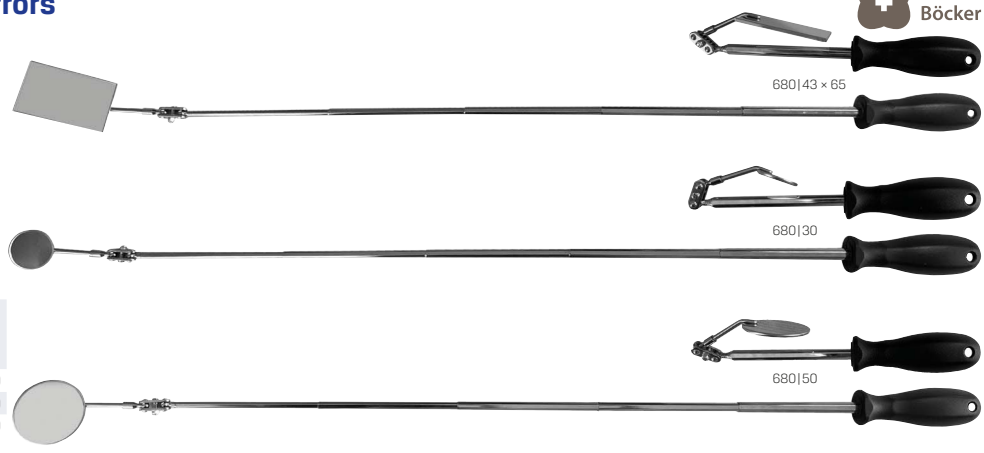


N° article	558920 round	Mirror ∅ mm	Total length mm
210	○	30	210
225	●	25	225

Telescopic inspection mirrors

Bauer Böcker

Design:
- inspection mirror with telescopic handle, nickel-plated
- a round mirror is mounted onto a rotatable joint
- plastic handle black



N° article	558960	Mirror ∅ mm	Mirror width mm	Mirror height mm	Total length mm
680/43×65	●	–	43	65	300-740
680/30	●	30	–	–	300-740
680/50	●	50	–	–	300-740

Telescopic magnetic pick-up tool

PRETEC

Design:
- telescopic
- with clip and marking mandrel
- diameter sleeve 8 mm

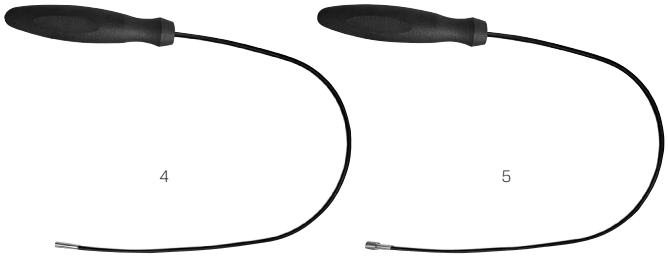


N° article	558977	Magnet ∅ mm	Adhesive power g	Total length mm
4850-1	●	6	500	150 - 660

Mini magnetic pick-up tool flexible

Design:
- flexible shaft of coated copper wire
- with PP hexagonal handle

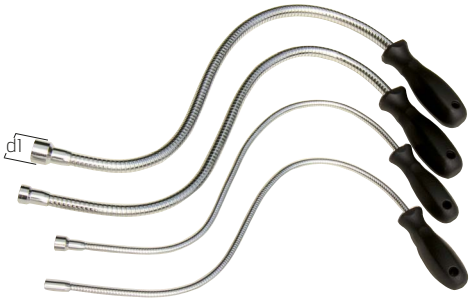
Use:
For retrieving heavy metal parts from small interstices.



N° article	279549 flexible	Magnet ∅ mm	Length mm	Adhesive power g	Weight kg
4	●	4	400	120	0,12
5	●	5	400	270	0,27

Magnetic pick-up tool

Design:
- flexible, good alignable steel shaft
- with powerful neodymium magnet



N° article	279550 flexible	d_1 mm	Magnet ∅ mm	Length mm	Adhesion, min. N	Weight g
8	●	8	6	460	5	0,7
12	●	12	10	460	10	0,76
15	●	15	13	520	18	0,212
19	●	19	17	520	30	0,276

Claw pick-up tool

Bauer Böcker

Design:
- 3 gripping jaws, hold together parts independently by spring pressure
- with flexible shaft
- claw opening max. 42 mm



N° article	558980	Total length mm
500	●	500

Double-end wire and spring hook

BAHCO

Double-ended

Design:
- chrome-plated with ribbed hex handle
- made of stainless steel

Use:
For gripping and straightening wire connections as well as inserting and removing tension springs Hook ∅ 1.5 mm inside



N° article	558990	Total length mm
165	●	165

Inspection mirror

Bauer Böcker

Design:
- inspection mirror, suitable for live working up to 1000 V
- with protective insulation
- with flexible shaft
- 3-fold magnification

NEW







N° article	558965 round, 1000 V
0010	○

Claw pick-up tool

Bauer Böcker

Design:
- suitable for live working up to 1000 V
- 3 gripping jaws, hold together parts independently by spring pressure
- with protective insulation
- with flexible shaft
- claw opening max. 15 mm

NEW







N° article	558981 1000 V	Total length mm
0010	○	570

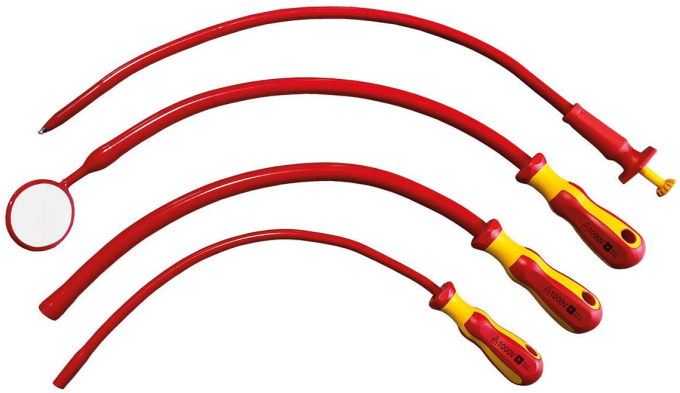
Inspection tool kit 1000 V

Bauer Böcker

Design:
- suitable for live working up to 1000 V
- with protective insulation

NEW





N° article	558985 4-piece	Parts	Contents
0010	○	4	Claw-type gripper 1 inspection mirror ∅ 55 mm 1 magnetic lifter 1.100 g 1 magnetic lifter 1.800 g

WiFi videoscope set

KS TOOLS

IP68

Design:
- easy to connect to the smartphone via WiFi
- for Android smartphone (via Android system 4.4+) and iPhone IOS system (via IOS 8.0)
- 5.5 mm HD camera
- wireless and easy to set up
- photos and videos are stored directly on the smartphone
- transportable and network-independent system
- largest possible viewing angle due to special camera in the probe head
- versatile applicable
- 6 dimmable mini-LED lamps
- approx. 60 minutes of continuous operation possible
- rechargeable Li-Ion battery via USB

Delivery:
Includes hook, magnet, mirror and protective cap for screwing onto the probe head.

NEW



N° article	558995 5-piece	Contents
0005	●	**Wi-Fi transmitter with integrated HD Wi-Fi videoscope probe** 0°, ∅ 5.5 mm **Accessories set**, 4-piece

Inspection kit

Bauer Böcker

Design:
0002 + 0004
- Inspection mirror with anti-twist telescopic rod, chrome-plated
- Oval mirror is attached to a quick-release fastener with safety magnet holder and 360° joint
- With rubberized handles

0004:
- With mounting clamp 18 cm with rubberized handles
- Including case

0010:
- Industrial inspection set with extensive equipment
- In a case with zipper
- Including batteries, clip and push-button switch



0002 0004

N° article	558984	Contents
0002	●	**Mirror set:** 2 oval mirrors 30 × 45 mm and 46 × 69 mm **Telescope:** 190 - 800 mm extensible **Connection:** Quick release with safety magnetic holder and 360° joint
0004	●	**Mirror set:** 2 oval mirrors 30 × 45 mm and 46 × 69 mm **Telescope:** 190 - 800 mm extensible **Connection:** Quick release with safety magnetic holder and 360° joint **Mounting clamp pliers:** 18 cm with rubberised handles
0010	●	**Telescopic magnetic pick-up tool** length 150-660 mm, magnet ∅ 8 mm, holding force 500 g **Claw-type gripper** length of the flexible shaft 500 mm, claw opening max. 15 mm **Telescopic inspection mirror round**, mirror ∅ 50 mm, length handle 300 × 740 mm **Rectangular mirror**, mirror 43 × 65 mm, length handle 300 × 740 mm **Pen light** aluminium, ∅ 13 × 140 mm **Illuminant** LED batteries 2× Micro AAA



0010

LED inspection set

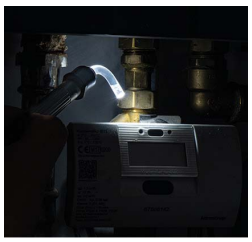
suprabeam®

Design:
- Suprabeam torch Q1, focusable
- with the latest CREE power chip LED technology
- made of high-strength double-anodised aluminium
- excellent light in all positions due to special, sliding HyperFocus™
- luminosity 40-160 lm
- telescopic magnetic lifter with ∅ 40 mm inspection mirror, adhesive force 500 g
- telescopic handle extendable 200-555 mm, rotatable 360°
- with clip and marking mandrel
- delivery including 2× AAA batteries

IPX4

NEW







N° article	558986 3-piece	Contents
0010	●	1 Suprabeam torch Q1, LED, 160 lm, rotating Hyperfocus™ wheel 1 Light angle guide suitable for Suprabeam Q1 1 Telescopic magnetic lifter with ∅ 40 mm inspection mirror

Chain pipe wrench

KS TOOLS

Design:
- made of chromium-vanadium steel
- hardened toothing
- die-forged
- for difficult to access places



N° article	559452 light weight version	Clamping width, max. mm
110	●	110

Telescopic pipe cutter

KS TOOLS

Design:
- handle made of metal
- with 4 guide rollers
- exact telescopic guide
- easy and quick adjusting of the working area
- integrated, removable deburrer
- spare cutting wheel inside the rotary handle



559720

N° article	559720 Telescopic pipe cutter	Pipe ∅ mm	Small cutting wheel mm
3-42	●	3 - 42	20×4.9×5.12

N° article	559722 Telescopic pipe cutter, INOX	Pipe ∅ mm	Small cutting wheel mm
3-42	●	3 - 42	20×4.9×5.12

N° article	559724 Spare cutting wheel	Small cutting wheel mm
CU	●	20×4.9×5.12
V2A	●	20×4.9×5.12



Pipe cutter

KS TOOLS

Design:
- housing made of high-quality steel
- frame drop-forged
- chrome-plated spindle with T-handle
- wide guide rolls for safe guiding of the cutting wheel
- simple pressure control to alleviate the pressure at welded or non-circular pipes
- **hardened cutting wheel made of high-alloy steel for clean, deburring-free cutting**
- by changing the cutting wheel also suitable for cutting cast iron



559732



559730

N° article	559730 Pipe cutter, for steel tubes	559732 Spare cutting wheel	Pipe ∅ mm	Small cutting wheel mm
1/8-2	●	–	3.2 - 50.8	31.4×18.9×8.3
STAHL	–	●	–	31.4×18.9×8.3

Small pipe cutter

KS TOOLS

Design:
- handy construction
- for operations in hard-to-reach places and at parallel running pipes
- two guide rollers, grooved, for cutting close to the flared ends
- pressure regulation through large knurled button

Use:
For copper, brass and thin-walled steel tubing, as well as PVC rigid plastic and plastic-coated pipes



N° article	559710 Small pipe cutter	Pipe ∅ mm	Small cutting wheel mm
3-16	●	3 - 16	18.2×3×4.85
3-22	●	3 - 22	18.2×3×4.85



N° article	559712 Spare cutting wheel	Small cutting wheel mm
CU	●	18.2×3×4.85

External deburrer

Design:
- for deburring screws and threads as well as for adjusting deformed drive shafts, tie rods, wheel studs, tubes etc.
- **cutting platelets made of high-strength tungsten steel**
- hexagonal drive 6.3 mm
- point angle 72°

Suitable for the following materials:
- stainless steel
- steel
- brass
- non-ferrous metals
- plastics
- wood
- glass fibre

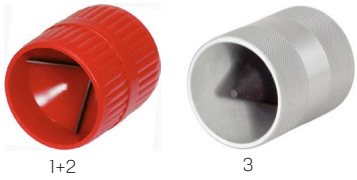


N° article	559801	min. ∅ mm	max. ∅ mm	Point angle Degree	∅ area mm
0010	●	3	19	72	3-19
0020	●	13	35	72	13-35
0030	●	34	54	72	34-54

Internal and external deburrer

Design:
With 3 ground cutting edges made of hardened special steel
Base body:
1: Metal
2: Plastic
3: Aluminium

Use:
For clean internal and external deburrings
1+2: For copper, light metal and soft steel pipes
3: For copper, aluminium, steel, stainless steel and plastic pipes


1+2 3

N° article	559805	min. ∅ mm	max. ∅ mm	∅ area mm
1	●	3	40	3-40
2	●	3	42	3-42
3	●	10	54	10-54

Automatic pipe cutter

Design:
- smooth-running automatic pipe cutter
- quick adjustment through ratchet telescope guiding
- automatic spring-supported retraction

Use:
For copper, brass, aluminium and thin-walled steel pipes plus for plastic coated pipes



N° article	559740 for copper pipes, 6 - 64 mm	Pipe ∅ mm	Small cutting wheel mm
6-64	●	6 - 64	18.2×6.2×4.8

N° article	559742 Spare cutting wheel, 6 - 64 mm	Small cutting wheel mm
CU	●	18.2×6.2×4.8

N° article	559750 for copper pipes, 50 - 140 mm	Pipe ∅ mm	Small cutting wheel mm
50-140	○	50 - 140	32×10.9×8.6

N° article	559752 Spare cutting wheel, 50 - 140 mm	Small cutting wheel mm
CU	●	32×10.9×8.6

Cutter for plastic pipes

Design:
- blades from special knife steel made in Solingen
- cuts unreinforced plastic pipes with wall thicknesses of up to 2.4 mm
- with locking mechanism for safe transport
- rotatable knife block for cutting plastic pipes (blade in the middle) or drip and sealing sleeves (blade on the outside)



N° article	559804	Cutting values HT and plastic pipe ∅ mm	Cutting values sealing sleeves ∅ mm
0010	●	20 - 50	20 - 50

Pipe cutter for plastic pipes

Design:
- blade and ratchet feed from both sides
- replaceable hardened blades
- wide pipe-rest for right-angled cut

Use:
Plastic pipe shears for easy and effortless one-hand cutting of PE, PP, PB and PVDF pipes. Particularly suitable for the preparation of socket welding



N° article	559780 with ratchet feed	Pipe ∅ mm
32	●	0 - 32
42	●	0 - 42
63	●	0 - 63

Pipe cutter

Design:
- QuickLock spring-loaded quick-release fastener
- precise positioning of the cutting wheel on the pipe
- cutting wheel made of high-quality ball bearing steel
- with precisely ground deburrer, easy to remove
- lightweight and durable aluminium metal housing
- spare wheel in the handle knob
- for sanitary work such as cutting gas and water pipes made of copper, brass and stainless steel
- for electrical work such as cutting steel conduits and stripping SWA cables









N° article	559718 TubiX®	Pipe Ø mm
180	●	6 - 35
260	NEW ●	–

Pipe cutter for plastic waste pipes

Design:
- spring-loaded cutting blade
- easy cutting thanks to self-adjusting rollers with plain bearings
- recutting or fine cutting possible from approx. 10 mm cut-off length
- suitable for HT and many other brands of plastic pipes
- conveniently cutting and chamfering plastic pipes up to Ø 50 mm in a single step
- smooth cut, no readjustment, no deburring
- wall thicknesses up to 2.4 mm
- tool body made of glass fibre-glass reinforced plastic
- reversible blade with double cutting edge for reversing when worn
- reversible blade made of high-quality ball-bearing steel that can be changed without tools





NEW



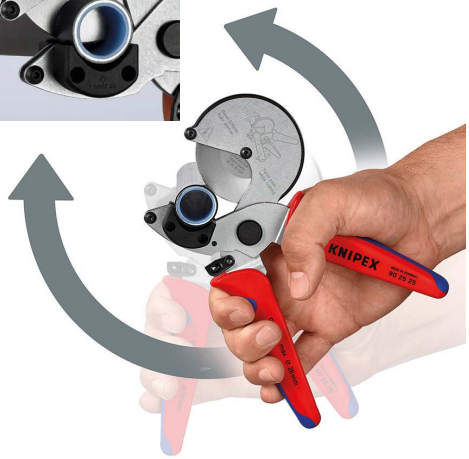
N° article	559785 DP50
50	●

Pipe cutter for composite and plastic pipes

Design:
- up to 60% lower effort
- the rotational movement enables effortless penetration of the cutting wheel with minimised deformation of the pipe
- wide plastic mould supports enable perfectly right-angled sections
- cuts aluminium composite and plastic pipes more easily than conventional shears with a fixed blade
- also for composite pipes with increased aluminium layer thickness (such as Geberit Mepla)
- for cutting composite and plastic pipes up to Ø Ø 26 mm
- allows very short correction sections
- with locking mechanism for safe transport
- made of chromium-vanadium electrical steel in special grade, oil-hardened



NEW



N° article	559788 with multi-component handle sleeves	Dimension mm	Cutting capacity up to Ø mm
0010	○	210×81×38	26

Sanitary four-way key for tap extensions

Design:
- made of chromium-vanadium steel, powder coated
- 4× external hexagon
- for installing and dismantling of radiator valves and return pipe screw connections
- 3× internal thread for hanger bolts



N° article	559808	for screws Ø	Hexagon socket inch	Width mm	Total length mm
4	●	M8 | M10 | M12	3/8 | 1/2 | 3/4 | 1	200	200

Pipe cutter for plastic pipes

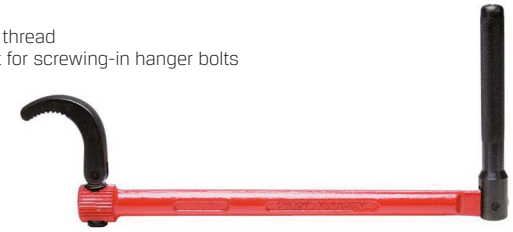
Design:
- housing made of aluminium die casting, red varnished
- blade made of special tool steel, oil-hardened
- for burr-free cutting of plastic pipes (e.g. plastic armoured conduits)
- blade exchangeable and retrievable from any position
- low effort required due to special cutting edge geometry and optional transmission ratio



N° article	559809	Pipe Ø mm
6,0-35	●	6 - 35

Basin wrench with swivelling claw

Design:
- for right and left thread
- with attachment for screwing-in hanger bolts



N° article	559816	max. clamping width mm	Total length mm
10-32	○	32	275

Siphon pliers

Design:
- made of chromium-vanadium special steel
- forged and chrome-plated
- gripping jaws with exchangeable gentle-touch top jaws
- optimal gripping pattern to fasten screwing connections
- safe and gentle gripping of valuable fittings without damage
- high-gloss chrome-plated
- with dip-insulated handle



N° article	559821 4-fold adjustable	559831 Replacement jaws (pair)	max. clamping Ø mm	Total length mm
62	●	●	60	225

Strap wrench
Strap and fittings wrench

Design:
- made of aluminium special alloy
- with replaceable nylon strap

Use:
- for gentle work on chromium-plated fittings
- no damage to polished surfaces



N° article	559818	max. clamping width mm	Total length mm
90	●	90	190

Spud wrench with ½" square drive

Design:
- combination wrench made of chromium-vanadium steel
- hardened and nickel-plated
- with 1/2" square drive
- for installing and dismantling of radiator valve nipples, return pipe screw connections and short tap extensions

½"

1: Set of spud wrench plus 1/2" push-through ratchet
2: Spud wrench, applicable for cam drive, hex and bi-hex drives, sz. 3/8", 1/2", 3/4" and 1"



N° article	559829	Weight g
1	●	670
2	○	120

Fitting wrench

Design:
- all-steel, forged
- smooth jaws for protection of fittings and sensitive or polished surfaces
- exchangeable protective jaws
- fitting pliers, 90° - 1"



1"

N° article	559806 with quick adjustment	Clamping length mm	Total length mm
1	●	45	315

Strap wrench Strap wrench

Design:
- secure hold through ultra-grip special nylon strap
- due to centric prism support neither damage to polished surfaces nor deformation of pipes

Use:
For socket welding of plastic pipes with larger diameter



N° article	559811	Clamping range mm	Total length mm
20-160	●	20 - 160	250

Precision pressure test pump up to 20 bar

Use:
- for quick and accurate testing of pressure and denseness of pipe systems and containers
- ideal for the filling of solar systems
- indispensable test device for every plumber
- filling and testing in one pass
- for water an oils

Technical data:
- shut-off system with 2 valves
- pressure gauge with manometer protection
- operation pressure max. 20 bar
- container volume 12 litres
- high pressure hose 1.5 m length with 1/2" connection



12VA 12

N° article	559812	Housing material
12	●	Metal, powder coated
12VA	○	Stainless steel (V2A)

Blind riveting pliers

Design:
- for blind rivets 3.2|4.0|4.8|6.4 mm
- for copper, brass, steel and stainless steel rivets
- very low force requirement with extremely short construction form
- 2-component handles



N° article	559923 V2788	Total length mm
0020	○	320

Blind riveting pliers

Design:
- riveting pliers for blind rivets and rivet nuts
- Blind rivets 3.2|4.0|4.8|6.4 mm for copper, brass, steel and stainless steel rivets
- rivet nuts M5, M6, M8 and M10 for copper, brass, steel and stainless steel rivets
- 2-component handles



N° article	559923 V3735	Total length mm
0010	○	320

Hand riveter NTS

Design:
- **with opening spring** for automatic mandrel ejection
- for processing of blind rivets up to 5 mm Ø aluminium and 4 mm Ø stainless steel

Delivery:
Incl. 4 different nose pieces for rivets made of aluminium Ø 3|3.2|2.4|4|4.8|5 mm, copper Ø 3.2 mm and steel Ø 4 mm



N° article	559900	Device stroke mm	Total length mm
NTS	●	8	275

Hand riveter NTX-F

Design:
- **with opening spring** for automatic mandrel ejection
- for processing of blind rivets up to 5 mm Ø aluminium and 4 mm Ø stainless steel

Delivery:
With 3 different nose pieces



N° article	559910	Device stroke mm	Total length mm
NTX-F	●	8	260

Lever riveting tool HN2

Design:
- pliers housing and handle made of aluminium die-cast
- closed design for dirt protection
- joint torsionally stiff mounted
- wearproof and smooth-running
- gear segment transmission with favourable lever configuration
- repeated following-up on the workpiece is also possible without any problems
- with rivet mandrel collecting container

Use:
For blind rivets from 3 to 6.4 Ø of all materials

delivery incl. 5 mouthpieces (16/32, 16/29, 16/36, 16/40 and 16/45)



N° article	559915	Device stroke mm	Total length mm
HN2	263,00	10	570

Riveting kit NTX

Design:
- hand-held riveting pliers NTX (575 g) made of high-quality die-cast aluminium with pliers' legs made of CrV steel
- pliers incl. mouthpieces 10/18,10/24 and 10/32
- assembly wrench
- stable plastic box

7541023: 5 dimensions aluminium/steel and steel/steel
7540027: 12 dimensions aluminium/steel and copper/steel



7540027

N° article	559920	Device stroke mm	Contents
7541023	●	8	Hand riveter (260 mm) 5 blind rivet dimensions: Alu/steel 3×6 mm Alu/steel 3×8 mm Alu/steel 4×6 mm Alu/steel 4×10 mm Steel/steel 3×6 mm
7540027	●	8	Hand riveter (260 mm) 12 blind rivet dimensions: Alu/steel 3×8 mm Alu/steel 3×10 mm Alu/steel 3×12 mm Alu/steel 4×5 mm Alu/steel 4×6 mm Alu/steel 4×8 mm Alu/steel 4×10 mm Alu/steel 4×12 mm Copper/steel 3×6 mm Copper/steel 4×6 mm Alu/steel 3×5 mm Alu/steel 3×7 mm

Blind rivet nut setter GBM

Design:
- GBM 10 with threaded mandrel and nosepiece M5
- including threaded mandrels and nosepieces M4 and M6
- various blind rivet nut dimensions M4 to M 6 made of aluminium for materials to be riveted from 0.25 to 3 mm thickness
- blind rivet nut box, including 4 blind rivet nut dimensions
- stable plastic box



N° article	559922	Contents
GBM10-BOX	●	1 blind rivet nut setting device GBM 10 4 blind rivet nut dimensions: Alu M4×6×11 mm Alu M5×7×11.5 mm Alu M5×7×13.5 mm Alu M6×9×15.5 mm

Hand riveting pliers set Flipper kit

Design:
- patented power flow and force transmission
- incl. container for spent mandrels
- replaces up to 15 sizes of standard rivets
- optimal filling of the drill hole even with larger drill holes
- case impact resistant, rattle-proof and well-balanced
- blind rivets alu/steel
- with 3 PolyGrip® Blind rivet dimensions (Ø 3.2 / 4 / 4.8 mm)
- total length hand riveter 212 mm



N° article	559929
3	●

Battery-powered blind riveter Birdie®

Design:
- with brushless motor and 10,000 N setting force
- sets blind rivets up to Ø 5 mm of all materials
- stroke 25 mm, therefore also suitable for extra long rivets
- smallest and lightest battery riveter in its performance class
- the BLDC motor is extremely durable and almost wear-free
- lightweight with only 900g (Without rechargeable battery)
- simple, fast and tool-free nose piece change and maintenance of the chuck jaws
- colour-coded nosepieces facilitate assignment to the blind rivet in use
- anti-tip function ensures shorter setting cycle
- large soft-grip area ensures fatigue-free working
- working light ensures safe setting in any lighting conditions
- transparent collecting container

Scope of delivery:
Including mouthpieces 17/27, 17/29, 17/32, CAS Li-Ion battery 18V / 2 Ah, charger for CAS batteries and L-Boxx.

NEW



559937



559938

N° article	559937 Birdie®set	559938 Birdie®	Device stroke mm	Weight kg	Scope of delivery
BIRDIE-SET	○	–	25	1,35	1 CAS-Li-Ion-Akku 18V / 2 Ah, Ladegerät, inklusive Mundstücke 17/27, 17/29, 17/32, in L-Boxx
BIRDIE	–	○	25	0,9	ohne Akku und Ladegerät, inklusive Mundstücke 17/27, 17/29, 17/32, im Karton

Battery-powered blind riveter
AccuBird® Pro

CAS CORDLESS ALLIANCE SYSTEM | 18 V Li-Ion | 1 AKKU

Brushless Motor | L-BOXX

Design:
- with brushless motor and 13,000 N setting force
- sets blind rivets up to Ø 6 mm of all materials
- the BLDC motor is extremely durable and almost wear-free
- **the setting process is up to 4 times faster than with commercially available recharge battery devices**
- inclined head and large soft grip area ensure fatigue-free work

Delivery:
Including nose pieces 17/24, 17/27, 17/29, 17/32, 17/36, 17/40, pressure bush for larger blind rivets, CAS-Li-Ion battery 18V / 2 Ah, charger for CAS batteries and L-Boxx.



N° article	559935	Device stroke mm	Weight kg
ACCUBIRDPRO CAS	○	25	2

Battery-powered blind rivet nut setter FireBird®

14,4 V Li-Ion | 1 AKKU

Design:
- with 13,000 N setting power
- blind rivet nuts up to M10 aluminium, M8 steel and up to M6 stainless steel
- drill-on of the blind rivet nut with reduced torque and automatic switch-off
- triggering of the setting process functionally separated from the drilling process
- electronic control of the preset setting stroke
- twisting of the threaded mandrel with high torque
- robust and compact with impact resistant housing
- fatigue-free working thanks to balanced centre of gravity and ergonomic handle
- easy stroke adjustment

Delivery:
Including mouthpiece and threaded mandrels M4, M5 and M6, quick-change battery 14.4 V / 2 Ah, charger and plastic case.



N° article	559936	Device stroke mm	Weight kg
FIREBIRD	○	6	2,1

Battery-powered blind riveter
AccuBird® / PowerBird®

14,4 V Li-Ion | 1 AKKU

Design:
- wireless for flexible use in the assembly area and on the shop floor
- with 10,000 N setting power
- same forward and return speed of the gripping mechanism
- immediate resetting after riveting operation
- sets blind rivets of all materials up to Ø 5 mm
- electronic control
- with auto-reverse function

Delivery:
Including mouthpieces 17/24, 17/27, 17/29, 17/32, slide battery 14V / 2 Ah, charger and plastic case



N° article	559930	Device stroke mm	Weight kg
ACCUBIRD	●	20	2

N° article	559931 Quick-change battery 14.4 V (Li-Ion)	Device stroke mm	Loading capacity Ah
2	○	20	2
4	○	20	4

Pneumatic-hydraulic blind riveter
Taurus®

Design:
- with novel gripping jaw system to enhance tool life and for secure anti-slip seat of the rivet mandrels
- excellent performance/weight ratio
- attuned travel for rapid sequences of strokes
- notable air savings through twofold use of compressed air
- hose connection 6 mm Ø (1/4")

Taurus® 1
- working range from 2.4 - 3.2 mm all materials and up to 4 mm aluminium/steel
- operating pressure 5 - 7 bar
- setting force 5,500 N at 6 bar

Taurus® 2
- working range up to 5 mm Ø all materials and 6 mm Ø alu/steel
- operating pressure 5 - 7 bar
- setting force 9,000 N at 5 bar

Delivery:
Taurus® 1
Mounting keys AF 12/14, AF 14/17, 1 bottle of hydraulic oil (100 ml), 1 oil refill container, mouthpieces 17/18, 17/20 and 17/22

Taurus® 2
Mounting keys AF 12/14, AF 14/17, 1 bottle of hydraulic oil (100 ml), 1 oil refill container, mouthpieces 17/24, 17/29 and 17/32



Taurus® 1 Taurus® 2

N° article	559945	Device stroke mm	Weight kg	Air consumption per rivet litres
TAURUS1	○	15	1,3	1
TAURUS2	●	18	1,6	2,3

Blind rivet PolyGrip®

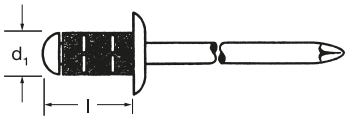
Design:
- large grip range with a single rivet dimension
- wide closing head support => no damage to the parts to be joint
- outstanding hole filling capacity compensates even above-average hole tolerances
- compact closing head for securely locked rivet mandrel section, no rattling noises, splash-proof
- processing with all setting tools, including blind rivet automatic GAV

Alu/steel:
Tabular rivet AlMg 2.5
Rivet mandrel Steel, galvanised

Alu/Nirosta:
Tabular rivet: Alu AlMg 2.5
Rivet mandrel stainless steel A2 - no. 1.4541

Note:
Price per packaging unit





N° article	559952 Alu/steel, domed head (standard)	Rivet shank ∅ mm	Rivet shank length mm	Clamping range mm	PU pieces
3,2×8	●	3,2	8	0,5-5	1000
3,2×9,5	●	3,2	9,5	1,5-6,5	1000
3,2×11	○	3,2	11	3-8	1000
4×10	●	4	10	0,5-6,5	500
4×13	●	4	13	3,5-9,5	500
4×17	●	4	17	7-13	500
4,8×10	●	4,8	10	0,5-6,5	500
4,8×15	●	4,8	15	4,5-11	500

N° article	559956 Alu/Nirosta, domed head (standard)	Rivet shank ∅ mm	Rivet shank length mm	Clamping range mm	PU pieces
3,2×8	○	3,2	8	0,5-5	1000
3,2×9,5	○	3,2	9,5	1,5-6,5	1000
3,2×11	○	3,2	11	3-8	1000
4×10	○	4	10	0,5-6,5	500
4×13	○	4	13	3,5-9,5	500
4,8×10	○	4,8	10	0,5-6,5	500
4,8×15	○	4,8	15	4,5-11	500

N° article	559954 Alu/steel, large flange	Rivet shank ∅ mm	Rivet shank length mm	Clamping range mm	PU pieces
3,2×8	○	3,2	8	0,5-5	1000
4×10	○	4	10	0,5-6,5	500
4,8×10	●	4,8	10	0,5-6,5	250

N° article	559958 Alu/Nirosta, large flange	Rivet shank ∅ mm	Rivet shank length mm	Clamping range mm	PU pieces
3,2×8	○	3,2	8	0,5-5	1000
4×10	○	4	10	0,5-6,5	500
4,8×10	○	4,8	10	0,5-6,5	250

Blind rivet nut PolyGrip®

Design:
- as an alternative to weld nuts, punching nuts and cage nuts or self-tapping screws
- only one-sided accessibility required
- can be used in thin-walled carrier materials (sheets, plastics etc.)
- optimal fastening solution for mixed and lightweight construction (plastic, CFRP etc.)
- possibility of an electrically conductive connection
- no thermal influence on the component (as is the case with weld nuts, for example)
- no damage to the surface
- permanent, vibration-resistant and maintenance-free connection
- short assembly time for rivet connection and subsequent screw connection

Advantages of GESIPA®PolyGrip® blind rivet nuts:
- avoiding confusion by reducing the number of variants, since a single PolyGrip® blind rivet nut can replace several conventional blind rivet nuts
- increased process safety when using force-controlled processing equipment

Note:
Price per packaging unit

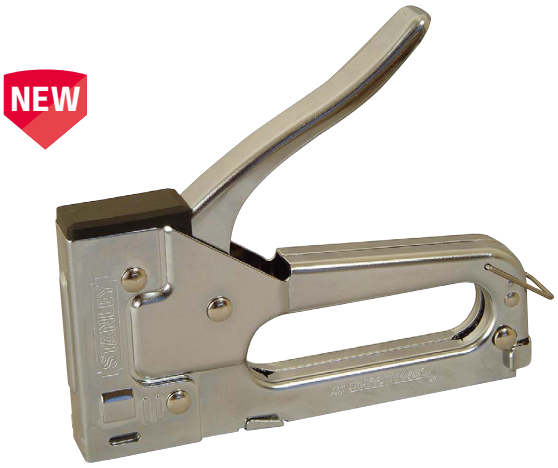


N° article	559980 Steel/steel domed head (standard)	Thread	Rivet shank ∅ mm	Rivet shank length mm	Clamping range mm	PU pieces
M5	○	M5	7	13,5	0,25-5	500
M6	●	M6	9	18	0,25-6	250
M8	○	M8	11	20	0,5-6,5	100

N° article	559982 Stainless steel/stainless steel round head screw (standard)	Thread	Rivet shank ∅ mm	Rivet shank length mm	Clamping range mm	PU pieces
M5	○	M5	7	13,5	0,25-5	500
M6	○	M6	9	18	0,5-6	250
M8	○	M8	11	20	0,5-6,5	100

Handheld stapler

Design:
- hand-held tacker for occasional use
- robust steel construction, high-gloss polished
- fully retractable handle
- jamming guard prevents crush injuries
- convenient and time-saving reloading of the staple compartment
- for staples Stanley® type A (6, 8, 10 mm)



N° article	559992	Weight kg
TR45	●	0,546

Hammer stapler

Design:
- robust and durable full metal hammer stapler
- optimum impact weight
- ergonomic handle for fatigue-free working
- integrated staple compartment for quick reloading
- for flat wire staples type G (6, 8, 10 mm)



N° article	559996	Weight kg
PHT150	●	1,001

Fine wire clamp / Flat wire clamp

Design:
- staples types A and G for electric and manual tacker
- rust-resistant, coated steel
- suitable for a wide range of applications
- compatible with most products from well-known manufacturers
- sturdy and resealable packaging

Use:
Fine wire staple type A:
for fastening fabrics, mesh, thin metal labels, wire mesh and thin wooden slats

Flat wire staple type G:
or fastening films, aluminium lamination, paper and cardboard, waxed and oiled papers and labels

Note:
Price per packaging unit



N° article	559993	Description	Contents per PU
1000-6	●	Fine wire staple type A | 6 mm	1000
5000-6	●	Fine wire staple type A | 6 mm	5000
1000-8	●	Fine wire staple type A | 8 mm	1000
5000-8	●	Fine wire staple type A | 8 mm	5000
1000-10	●	Fine wire staple type A | 10 mm	1000
5000-10	●	Fine wire staple type A | 10 mm	5000

N° article	559997	Description	Contents per PU
1000-6	●	Flat wire staple type G | 6 mm	1000
5000-6	●	Flat wire staple type G | 6 mm	5000
1000-8	●	Flat wire staple type G | 8 mm	1000
5000-8	●	Flat wire staple type G | 8 mm	5000
1000-10	●	Flat wire staple type G | 10 mm	1000
5000-10	●	Flat wire staple type G | 10 mm	5000

Flat chisel for metal processing

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head

DIN 6453



N° article	560100	Cutting edge width mm	Shank width mm	Shank thickness mm	Total length mm
100	●	15	14	9	100
125	●	18	17	11	125
150	●	18	17	11	150
175	●	21	20	12	175
200	●	24	23	13	200
250	●	25	23	13	250
300	●	26	23	13	300

Cape chisel for metal processing

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- blade with tapered end

DIN 6451



N° article	560200	Cutting edge width mm	Shank width mm	Shank thickness mm	Total length mm
125	●	5	17	11	125
150	●	6	17	11	150
175	●	7	17	11	175
200	●	8	20	12	200
250	●	9	23	13	250
300	●	9	23	13	300

Slot chisel

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- with long, extra flat cutting edge

DIN 7255



240/P

N° article	560500	Cutting edge width mm	Shank width mm	Shank thickness mm	Total length mm	Design:
240/S	●	26	26	7	240	–
240/P	●	26	26	7	240	with hand guard

Design:
- double-edged
- cutting end 25° cranked
- safe working due to increased hand freedom
- additional lateral cutting edge for slotting and parting
- optimum blade geometry







N° article	560505 25° bent	Cutting edge width mm	Shank thickness mm	Total length mm
240	●	26	7	240

Grooving chisel for metal processing

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- with curved cutting edge
- octagonal shank

similar DIN 6455



N° article	560600	Cutting edge width mm	Shank Ø mm	Total length mm
3	●	3	10	150
4	●	4	10	150
5	●	5	10	150

Parting chisel for metal processing

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- 2 cutting edges with clearance angle on all sides
- octagonal shank

DIN 7255

Use:
For removing ridges between holes



N° article	560650	Cutting edge width mm	Shank Ø mm	Total length mm
2	●	2	10	150
3	●	3	10	150
4	●	4	12	150
5	●	5	12	150

Mason´s chisel

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- cutting edge ground
- octagonal shank

DIN 7254 B flat | DIN 7256 pointed



560700



560750

N° article	560700 flat	560750 pointed	Cutting edge width mm	Shank Ø mm	Total length mm
200	●	●	23	16	200
250	●	●	23	16	250
300	●	●	26	18	300
400	●	●	30	20	400
500	●	○	30	20	500

Joint chisel

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head

DIN 7255



N° article	560810 wide	Cutting edge width mm	Shank width mm	Shank thickness mm	Total length mm
250	●	50	23	13	250

Hand guard

Design:
- made of special rubber
- guaranteed firm fit in the chisel shaft



N° article	560780 for chisels	fitting for
16-26	●	Octagonal shank: ∅ 16 - 20 mm Oval shank: 20 × 12 to 26 × 13 mm

Electrician´s chisel

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- cutting edge ground
- extra slim version
- octagonal shank

DIN 7255



N° article	560800	Cutting edge width mm	Shank ∅ mm	Total length mm
200	●	8	8	200
250	●	8	8	250
300	●	12	12	300

Nail puller

Design:
- made of forged tool steel
- hardened and powder coated



N° article	560900 6-edge profile	Shank ∅ mm
500	●	18
600	●	18
800	●	18

Crowbar

Design:
- made of special steel, with straight cutting edge and tip
- hardened and lacquered



N° article	560922 straight	Shank ∅ mm	Weight kg
1250	●	30	6,5
1500	●	30	8

Pry bar

Design:
- made of special steel
- nickel-plated



2165-1



2165-2



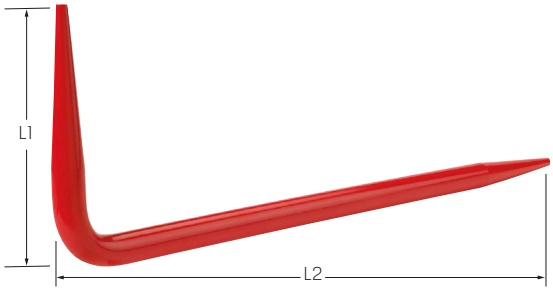
2165-3

N° article	560950	Total length mm
2165-1	●	400
2165-2	●	400
2165-3	●	400

Angular assembly bar

Design:
- made of special tool steel
- hardened
- conical working ends quenched and tempered, lacquered

Use:
For coaxial alignment of flanges and other parts



N° article	560952 90° bent	Cone length mm	L_1 mm	L_2 mm	Tip ∅ mm
14	●	70	120	400	6
16	●	80	130	450	6
20	●	90	150	500	7

Tyre lever

Design:
- double-T profile made of chromium-vanadium steel
- chrome-plated



N° article	560960	Total length mm
8	●	199
12	●	303
16	●	396
20	●	500
24	●	598

Pin punch

Design:
- chromium-vanadium air-hardened steel
- with tempered impact head
- octagonal shank

DIN 6450



N° article	561100	Diameter mm	Shank diameter mm	Total length mm
2	●	2	10	150
2,5	●	2,5	10	150
3	●	3	10	150
4	●	4	10	150
5	●	5	10	150
6	●	6	10	150

N° article	561100	Diameter mm	Shank diameter mm	Total length mm
7	●	7	12	150
8	●	8	12	150
10	●	10	12	150
12	●	12	12	150
14	●	14	12	150

Pin punch set

Design:
- made of high-alloy tool steel **- with increased hardness (59 HRC)**
- chrome-plated and powder-coated
- durable and handy surface protection
- shatterproof

DIN 7255



6



6 KS



6 M

N° article	561110 6-piece	Contents	Design
6	●	∅ 3 | 4 | 5 | 6 | 8 | 10 mm	in plastic holder
6KS	●	∅ 3 | 4 | 5 | 6 | 8 | 10 mm	in plastic case
6M	●	∅ 3 | 4 | 5 | 6 | 8 | 10 mm	in metal box



N° article	561110 6-piece, colour-marked	Contents	Design
6RC	●	∅ 3 | 4 | 5 | 6 | 8 | 10 mm	in metal case, colour-marked

Pin punch with hand guard

Design:
- made of chromium-vanadium steel
- impact head tempered
- working end polished
- 2-component hand guard PVC as protection and for vibration dampening

DIN 7255



N° article	561130 with hand guard	∅ mm	Total length mm
3	●	3	150
4	●	4	150
5	●	5	150
6	●	6	150
8	●	8	150

DIN 7255



N° article	561136 long, with hand guard	∅ mm	Total length mm
8	●	8	225
10	●	10	240
12	●	12	260
14	●	14	275
16	○	16	290

Pin punch set with hand guard

Design:
- made of chromium-vanadium steel
- impact head tempered
- working end polished
- 2-component hand guard PVC as protection and for vibration dampening
- in plastic case

DIN 7255



561135



561137

N° article	561135 5-piece	561137 5-piece, long	561135 Contents	561137 Contents
5	●	●	∅ 2 | 3 | 4 | 5 | 6 mm	∅ 8 | 10 | 12 | 14 | 16 mm

Pin punch

Design:
- zinc chromated
- mandrel made of hardened chromium-vanadium steel (115 GrV3) with a hardness of 55 - 59 HRC
- guide sleeve knurled, driver pin hardened
- ground and polished

Use:
The tip is positioned with the guide sleeve pushed forward When striking, the tip is supported by the movable sleeve, which at the same time prevents the drive tip from being broken



N° article	561200 with guide sleeve	∅ mm	Total length mm
0,9	●	0,9	80
1,4	●	1,4	84
1,8	●	1,8	88
2,4	●	2,4	92
2,8	●	2,8	96
3,4	●	3,4	98
3,9	●	3,9	100
5,9	●	5,9	102

Chisel and punch set

Design:
- chromium-vanadium air-hardened steel, forged
- with tempered impact head
- octagonal shank



6 6KS 6M

N° article	561450 6-piece	Contents	Design
6	●	2 flat chisels 125 | 150 mm 1 cape chisel 125 mm 2 centre punches 120 mm 2 drift punches ∅ 3 | 4 mm	in plastic holder
6KS	●	2 flat chisels 125 | 150 mm 1 cape chisel 125 mm 2 centre punches 120 mm 2 drift punches ∅ 3 | 4 mm	in plastic case
6M	●	2 flat chisels 125 | 150 mm 1 cape chisel 125 mm 2 centre punches 120 mm 2 drift punches ∅ 3 | 4 mm	in metal box

Drift punch

Design:
- made of chromium-vanadium air-hardened steel
- with conical mandrel
- with tempered impact head
- octagonal shank

DIN 6458 D



N° article	561300 heavy version	∅ mm	Shank ∅ mm	Total length mm
2	●	2	10	120
3	●	3	10	120
4	●	4	12	120
5	●	5	12	120
6	●	6	12	120
8	●	8	12	120
10	●	10	12	120
12	●	12	14	150

Drift punch set

Design:
- made of chromium-vanadium air-hardened steel
- with conical mandrel
- with tempered impact head
- octagonal shank

DIN 6458



6 6KS 6M

N° article	561400 6-piece	Contents	Design
6	●	5 drift punches ∅ 1 | 2 | 3 | 4 | 5 mm 1 centre punch 561500 120/10	in plastic holder
6KS	●	5 drift punches ∅ 1 | 2 | 3 | 4 | 5 mm 1 centre punch 561500 120/10	in plastic case
6M	●	5 drift punches ∅ 1 | 2 | 3 | 4 | 5 mm 1 centre punch 561500 120/10	in metal box

Pin punch set with guide sleeve

Design:
- zinc chromated
- mandrel made of hardened chromium-vanadium steel (115 GrV3) with a hardness of 55 - 59 HRC
- guide sleeve knurled, driver pin hardened
- ground and polished



561255 561280

N° article	561255 8-piece in plastic box	561280 8-piece in metal box	Contents
8	●	●	∅ 0.9 | 1.4 | 1.8 | 2.4 | 2.8 | 3.4 | 3.9 | 5.9 mm

Punch and drop-mallet

HALDER

Design:
- for particularly gentle straightening and assembly work with precisely dosed impact effect
- with nylon impact inserts
- hard
- highly wear resistant
- no chipping
- oil and grease resistant
- **from Ø 20 recoil-free**

Use:
For joining workpieces, housing assembly, assembly/repair work, maintenance work with limited accessibility and for gentle installation and removal of bushings and ball bearings.



20-50



10-15

N° article	561460	Head ∅ mm	Design
10	●	10	Drift punch
12	●	12	Drift punch
15	●	15	Drift punch
20	●	20	Knocker
30	●	30	Knocker
40	●	40	Knocker
50	●	50	Knocker

Centre punch

Design:
- made of chromium-vanadium air-hardened steel
- with tempered impact head
- octagonal shank

DIN 7250



N° article	561500	Shank Ø mm	Total length mm
100/8	●	8	100
120/10	●	10	120
120/12	●	12	120
150/16	●	16	150

Centre punch

Design:
- made of chromium-vanadium air-hardened steel
- with inserted carbide tip
- octagonal shank



N° article	561540 with carbide tip	Shank Ø mm	Total length mm
120	●	10	120

Automatic centre punches

Design:
- with replaceable tip, shank knurled
- the centre punch is always under tension
- simply by manual actuation the stroke (approx. 28 kp) is triggered
- the impact force can be set at the knurled screw



N° article	561600 Automatic centre punches	561601 Spare tip (without fig.)	Shank Ø mm	Impact force N
20-50	●	●	11	20-50
60-130	●	●	14	60-130
180-250	●	●	17	180-250

Rivet setter and rivet header

Design:
- made of chromium-vanadium air-hardened steel
- with tempered impact head, bright
- octagonal shank

DIN 6434 | DIN 6435



561700



561750

N° article	561700 Riveting setter	561750 Rivet setters	Hole size mm	for rivets Ø mm	Head diameter mm
2	●	●	2,5	2	3,5
3	●	●	3,5	3	5,2
4	●	●	4,5	4	7
5	●	●	6	5	8,8
6	●	●	7	6	10,5

Centre punches

Design:
- specially tempered, continuous centre punch tip
- resharpenable

Use:
Precise, offset-free centre punching on workpieces. Insert adjustable centring body into drilling template or sample workpiece. Expand the slotted centring sleeve via knurl until it is in contact with the bore wall. Use a hammer to hit the punch.



N° article	561605 adjustable	for min. bore mm	for max. bore mm	Total length mm
6-8	●	6	8	95
8-11	●	8	11	105
11-16	●	11	16	115

Centre punch set

Design:
- specially tempered, continuous centre punch tip
- resharpenable

Use:
Precise, offset-free centre punching on workpieces. Insert adjustable centring body into drilling template or sample workpiece. Expand the slotted centring sleeve via knurl until it is in contact with the bore wall. Use a hammer to hit the punch.



N° article	561606 3-piece, adjustable	Contents
3	●	Ø 6-8 | 8-11 | 11-16 mm

Awl

Design:
- blade made of chromium-vanadium steel
- through-hardened and ground
- bright nickel-plated
- with plastic handle, transparent lacquered



N° article	561800 Awl	Blade Ø mm	Blade length mm	Total length mm
6×100	●	6	100	185

Number punch set Standard font 0 - 9

Design:
- standardised impact punches according to DIN 7353
- standardised typeface according to DIN 1451
- hardness of the engraving between 58 and 61 HRC
- punch bright nickel plated
- complete in unbreakable plastic box



N° article	562000	Font height mm	Shank thickness mm	Shank length mm
1	●	1	6	65
2	●	2	7	70
3	●	3	7	70
4	●	4	8	70
5	●	5	9	70
6	●	6	10	75
8	●	8	12	80
10	●	10	14	80

Letter punch set A - Z, incl. ampersand (&) character

Design:
- standardised impact punches according to DIN 7353
- standardised typeface according to DIN 1451
- hardness of the engraving between 58 and 61 HRC
- punch bright nickel plated
- complete in unbreakable plastic box



N° article	562500	Font height mm	Shank thickness mm	Shank length mm
1	○	1	6	65
2	●	2	7	70
3	●	3	7	70
4	●	4	8	70
5	●	5	9	70
6	●	6	10	75
8	●	8	12	80
10	●	10	14	80

Type holder set

Design:
- embossing tool for fast labelling with several letters and numbers at the same time
- the uniform embossing of the entire set by a single hammer stroke guarantees a clear typeface
- for marking type plates, tools, machine parts etc.

Contents:
AAA BB CC DD EEEE FF GG HH III JJ KK LLL MM NNN OOO PP Q RRR SSS TT UUU V WW XX Y Z & # // ..., 1111 2222 333 4444 555 666 777 888 999 000 ++ 10 blank types, 1 type holder, 1 tweezers, in L-BOXX®



N° article	562510 in L-BOXX® Mini	Font height mm	Number of digits
1,5	○	1,5	15
2	○	2	15
2,5	○	2,5	10
3	○	3	10
4	○	4	10
5	○	5	8

Electric engraver for metal lettering

Design:
- transformer in wooden case, with cable and plug
- stylus, grounding plate and engraving styli
- 6 font weights selectable
- line voltage 230 V/output voltage 2-8 V
- average output 40 VA

Use:
For lettering of any metal incl. non-ferrous ones, in electric arc technique

563580: Price per pack!



N° article	563500 Electric engraver complete	563550 Spare stylus	563580 Replacement electrodes (Package à 10 pieces)
UNIVERSAL	●	●	●

Electric engraver

Design:
- universal engraving device, ergonomically shaped plastic housing
- double insulated and maintenance-free
- electromagnetic drive according to the oscillating armature principle (230 Volt, 50/60 Hz)
- impact strength/stroke length (max. 3 mm) infinitely and precisely adjustable

Use:
For clean freehand marking and engraving of all metals, plastics, stone, glass, wood.

Scope of delivery:
4 tips (one diamond and one carbide tip each, two modelling tips), 1 adapter for tips, plastic case



N° article	563655 VG.490
VG490	●

Labelling device

DYMO

Design:
- robust, user-friendly device for easy production of self-adhesive labels
- durable thermal transfer printing
- fast formatting with the help of shortcut keys
- **QWERTZ PC keyboard (for QWERTY layout please ask)**
- print preview in large LCD display
- with 6 font sizes, 8 font styles, 4 frames and underlining
- with 228 symbols and cliparts
- powered by 6 AAA batteries (not included) or power pack (not included)
- accepts DYMO D1 labels in 6, 9 or 12 mm widths

Strip type
D1



N° article	563701 LabelManager™ 160
LM160	●

Design:
- large two-line display
- enter text easily on the computer-style keyboard **with QWERTZ layout (for QWERTY please ask)**
- edit text easily with one-touch fast-formatting keys
- with 6 font sizes, 6 font styles, 9 frames and underlining
- 220 symbols and clip art images
- labels via PC or Mac®- connectivity with fonts and graphics of your choosing from your computer
- accepts DYMO D1 labels in 6 mm, 9 mm and 12 mm widths
- **type LM280K** in case

Scope of delivery:
Electronic label printer, rechargeable battery pack, USB cable, D1 starter label cartridge (12 mm x 3 m black on white, 9 mm x 3 m black on transparent), quick start card, quick reference guide, charging adapter and warranty card

Strip type
D1
USB





N° article	563702 LabelManager™ 280
LM280	●
LM280K	●

Design:
- as stand-alone or via PC or Mac® employable
- suitable for barcodes, logos, large quantities of labels from data files, etc.
- large 4-line display with backlight
- with 8 fonts, 7 font sizes, 12 font styles, 8 frames and underlining
- with rechargeable battery
- accepts DYMO D1 labels in 6, 9, 12 and 19 mm widths
- **Type LM420PK** in case

Scope of delivery:
Label printer incl. lithium-ion battery pack, power supply unit, 4×d1 label cassettes 7 m long (6 mm black on transparent, 9 mm black on yellow, 12 mm black on white, 19 mm black on red) and brief instruction

Strip type
D1
Li-Ionen
USB



LM420PK



LM420P

N° article	563704 LabelManager™ 420P
LM420P	●
LM420PK	●

Design:
- cassettes with self-adhesive tape (length 7 m)
- for labelling device DYMO LM
- with back slot
- removable, UV-resistant, water-repellent
- temperature resistant from -18 °C to +90 °C

Strip type
D1



N° article	563716 Strap width 6 mm	563718 Strap width 9 mm	563720 Strap width 12 mm	563722 Strap width 19 mm	563724 Strap width 24 mm	Design
0010	–	●	●	●	○	black on transparent
0020	●	●	●	●	●	black on white
0030	–	–	●	–	–	blue on white
0040	–	–	●	–	–	red on white
0050	–	–	●	–	–	black on blue
0060	–	–	●	–	–	black on red
0070	●	●	●	●	●	black on yellow
0080	–	–	○	–	–	black on green

Laser marking

Product Information

Precise marking technology for a wide range of applications

Laser marking is a sophisticated technology used in numerous industries to precisely mark materials. It offers an efficient and permanent solution for applying labels, codes, logos and other information to various surfaces

Laser marking basics

Laser marking is based on the precise concentration of light energy on a small area of a material.
The laser beam is adjusted to either erode material, discolor it or trigger a chemical reaction,
creating a permanent mark. The precision and control achieved with this method make it ideal for applications where accuracy and readability are critical.

Different Technologies of Laser Marking

Fiber Laser Marking

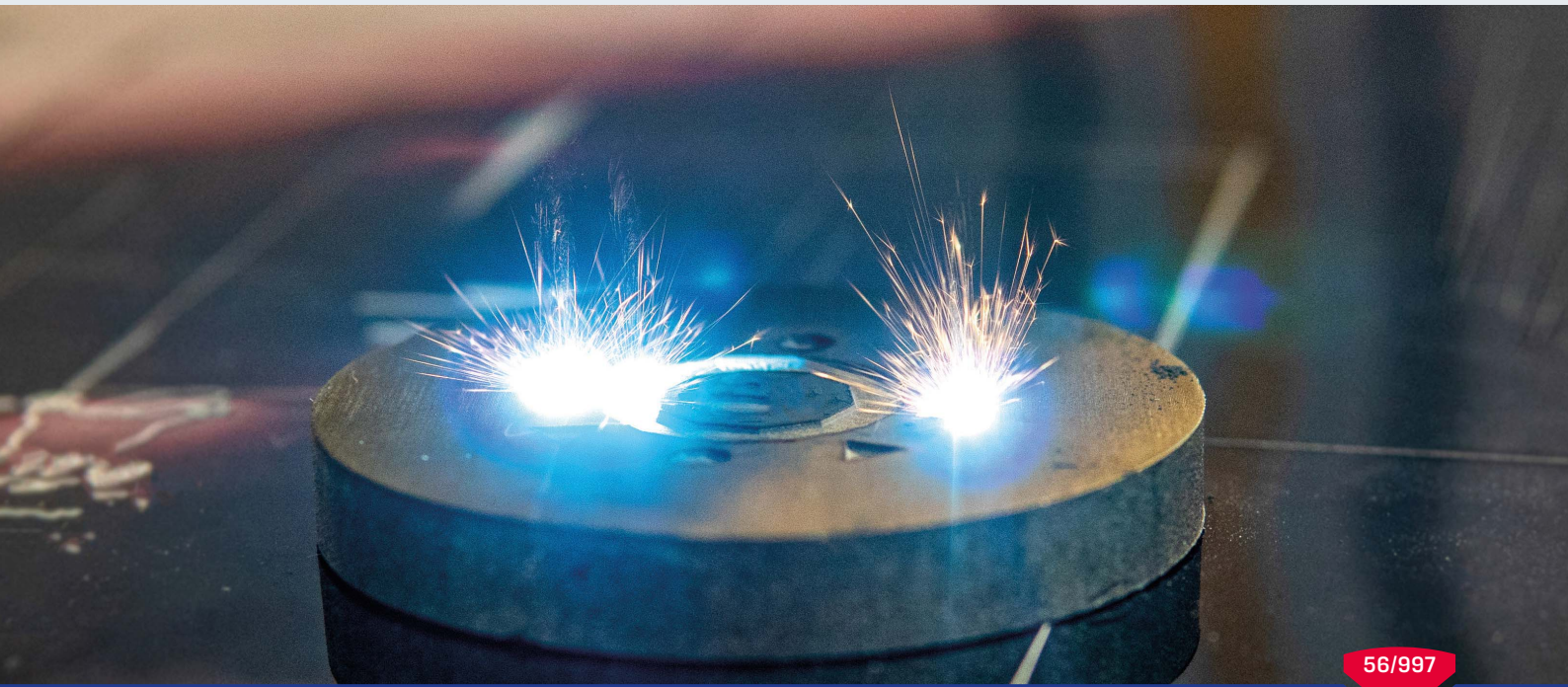
This is a common method that uses a fiber laser beam to mark the material. Fiber lasers offer high speeds, precision, and are usually low maintenance. They are often used for metals, plastics, and ceramics.

CO2-Laser Marking

CO2 lasers produce infrared rays that are mainly suitable for plastics, wood, and glass. They can melt surfaces and create changes in the material color.

UV-Laser Marking

Ultraviolet (UV) lasers are ideal for sensitive materials such as medical devices and electronics. They produce fine and high-resolution markings.



Laser marking

Product Information

PRETEC BY PRECITOOL

Laser marking applications:

Automotive

VIN numbers, date codes and serial numbers are marked on parts and components to ensure traceability and quality control.

Medical

Medical instruments, implants and packaging are provided with precise codes and information to ensure identification and security

Electronics

Circuit boards, microchips and electronic components are marked to ensure traceability during manufacturing and assembly.

Food and beverage

Packaging, labels and even food itself can be marked with lasers to provide information about ingredients, expiration dates and origin.

Aerospace

Critical parts of aircraft and spacecraft are marked to ensure safety and quality in demanding environments.

Jewelry and watchmaking

Precious metals and gemstones are finely and precisely marked to certify authenticity and quality.

Advantages of laser marking:

Precision

Laser markings are extremely precise and enable the creation of fine details and delicate lettering.

Durability

Markings are long-lasting and resist abrasion, chemicals and environmental influences.

Contactless

Since no physical contact is required, the risk of damaging the material is minimized.

Versatility

Laser marking can be carried out on a wide range of materials, including metals, plastics, glass, ceramics and more

Speed

The marking processes are often quick and can be automated to increase productivity.



Laser marking

Product Information

Laser marking is an advanced technology that has become indispensable in many industries. Its ability to produce precise, permanent and high-quality marks on a wide range of materials makes it a valuable solution for marking requirements.

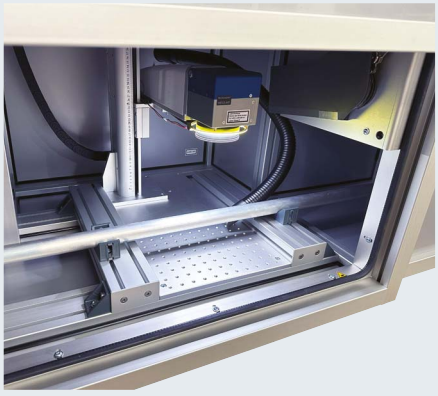
Whether in the automotive, medical, electronics or other industries, laser marking helps improve product traceability, Quality and safety and will continue to drive innovation and advancements in various fields

Marking processes in comparison

	LASER MARKING	NEEDLES	SCRIBING	ETCHING	EMBOSSING	PAD PRINTING / INKJET
Quality	high	high	high	high	good	medium
Durability	high	high	high	medium	high	medium
Material stress	low	high	high	medium	high	low
Flexibility	high	medium	medium	none	medium	medium
Investment	high	medium	high	low	low	medium
Wear	low	high	high	low	high	high
Environmental compatibility	high	medium	medium	low	high	low
Process duration (10 digits, font height 2 mm)	>0.6 sec	3 sec	5 sec	30 sec	ca. 1 sec	ca. 1 sec
ADVANTAGES and DISADVANTAGES	- economical, fast and flexible process - direct marking on the component: counterfeit-proof; no additional materials required; Pretreatment is not required - low operating costs as there is no tool wear or consumables - highest flexibility (just-in-time) in marking - traceability of production results through machine-readable coding	- high noise up to 120 dB - part marking in plastic or metal up to a hardness of 62 HRC - workpiece clamping required in X and Y - compressed air consumption	- reduced noise emission compared to needle marking under 72 dB(A) - high quality marking of continuous lines - high wear - partial machining by displacement - complex clamping in the X, Y and Z directions - compressed air consumption	- inflexible template required - manual process variable data not possible - short service life of a template - electrolyte (acid) is toxic, polluting - operator must wear gloves and safety goggles - limited material selection (material must contain carbon) - difficult positioning and repeatability	- high-precision markings (deep and clearly visible) - part marking in plastic or metal - up to a hardness of 62 HRC - workpiece clamping required in X and Y - high noise up to 120 dB	- color labeling possible - inflexible and small printing area - aggressive, toxic, chemicals -polluting - high, pungent odor development - limited material can be printed - high maintenance effort, therefore machine downtimes - high consumption costs (ink and solvent) - marking is not permanent



Laser cell can be individually adapted to your needs



We integrate laser marking into your process flow

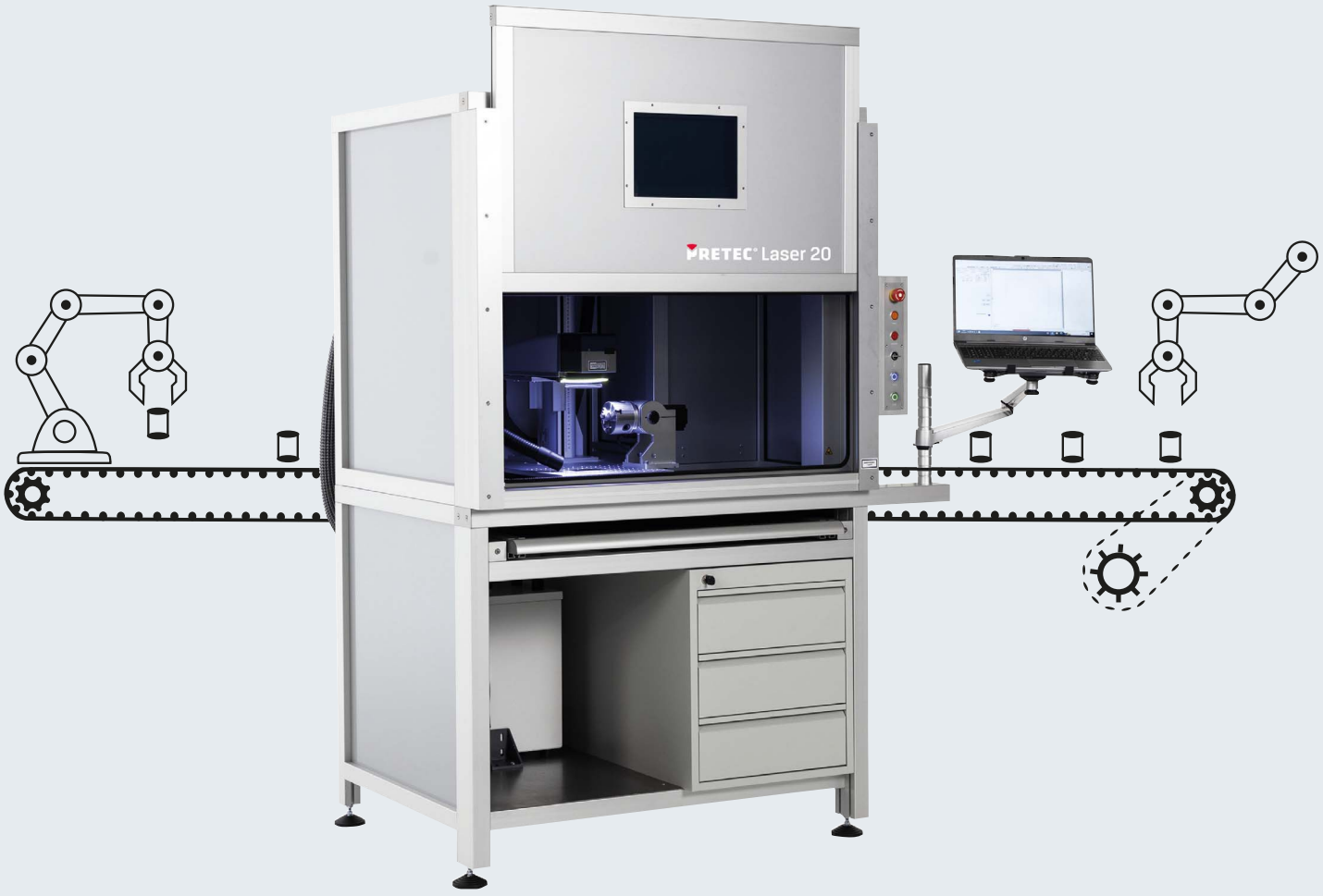
We offer you a seamless integration of our marking systems into the production flow.

It is also possible to offer complete links via automation systems.
Whether robots, cobots or conveyor belts, we can support you with this.

The use of robots or computer-controlled systems enables consistent marking without human errors. The automatic alignment and positioning of the laser ensures high quality, even on irregular surfaces. Production lines can be seamlessly integrated, which increases throughput and minimizes downtime.

Automation in laser marking also offers the possibility of processing large amounts of data, for example when individually coding products for traceability and quality control. This is particularly important in industries such as medical technology, the automotive industry and electronics manufacturing.
The benefits of this automation are manifold: increased precision, reduced operating costs, shortened marking times and the ability to implement sophisticated designs.
Companies can become more competitive by increasing their production efficiency while improving marking quality.

Overall, automation in laser marking helps to optimize manufacturing processes and deliver high-quality products.



PRETEC marking laser

Product Information

PRETEC® BY PRECITOOL

230 V

Complete package consisting of:

- **Laser unit**
- **Notebook** Win 10 with SSD hard drive
- **Safety extraction** including hose set
- **Pilot laser** and **focus finder**
- **Labeling software** consisting of:
  - Laser control unit
  - CAD module
  - Software tool for easy parameter determination
- **Grid plate** for attaching devices

Technical data:		
Electrical connection value		230 V / 100 V (single-phase) 50/60 Hz, 10 A
max. workpiece size	mm	900 × 350 × 420
max. workpiece weight	kg	75
Z-axis travel	mm	450
Average laser power	W	20-60 (depending on model)
Laser protection class		1 according to DIN EN 60825-1
Laser wavelength	mm	1064
Focusing optics	mm	f = 160
Depth of field (Rayleigh length)	mm	± 3
Marking field size	mm	110 × 110
Interface		TCP/IP, iOS, USB
Protection class		IP54
Dimensions (W × D × H)	mm	1170 × 890 × 990 / 1810 (stand-Alone)
Weight	kg	100

	Laser cell	version
Article no.	563010...	**Laser cell** PRETEC® Laser complete package (notebook, software, pilot laser, focus finder and safety extraction)

Design:

- compact, robust device with ergonomic door and large viewing window
- available with rotary axis for circumferential labeling on request
- simple and straightforward – operation for series production at the push of a button
- internal light can be switched on/off for better visibility of the focus finder and pilot laser
- higher laser output of up to 60 watts with optimized beam quality available for an additional charge
- high-contrast laser marking
- very short marking times possible
- flexible use due to suitability for tempering processes and deep engraving



Image similar. Including optional extras at extra cost.

from 19.950,- *

* plus transport and packaging

Options

	for marking laser	version
Article no.	563015 0010	**Optics 175:** larger marking field von 175 × 175 mm
Article no.	563015 0020	**Rotation axis:** clamping range of 60 mm inside, 80 mm outside | max. workpiece weight 5,0 kg | for marking round parts on the outer surface
Article no.	563015 0030	**automatic door:** electrical opening and closing of the door after or before marking
Article no.	563015 0040	**Stand alone model:** laser cell and substructure, in which the extraction, and drawers have been integrated, form a unit

Version PL2 + PL2.20:

- ergonomic door with large window
- internal light can be switched on/off
- marking start button/laser process display
- quickly installed/removable T-slot plate
- focus finder and scale integrated
- rotation axis can be integrated



Fig. with additional charge for special equipment!

Table trolley design:

- suitable for LASERSIGN PL2, PL2.20
- 2 swivel castors with brakes and 2 fixed castors
- 3 drawers and 1 door with "touch-to-open" function
- internal cabling
- integration of the extraction system into the table
- flexible use within the company possible at any time
- possible at any time system ready for use within 20 minutes (Plug & Play)

Scope of delivery:

- Laser unit with integrated computer
- Operating package (21.5" monitor, keyboard (German or English), mouse and Windows operating system
- Extraction system including hose set
- Labeling software
- Pilot laser and focus finder

N° article		0020
563011 Table trolley	(RG5686)	○ +
Table trolley suitable for		PL2 + PL2.20
Dimensions W × D × H	mm	1230 × 900 × 1050
Version		with 40 mm wooden worktop, **without** monitor holder

N° article		0030 LASERSIGN PL2	0040 LASERSIGN PL2.20
563000 with TBH extraction	(RG 5679)	○ +	○ +
max. workpiece size (W × D × H)	mm	350 × 320 × 236 (without T-slot plate)	350 × 320 × 236 (without T-slot plate)
max. workpiece weight	kg	5	5
Travel path manual Z-axis	mm	178	178
Electrical connection		240/100 V (single-phase), 50/60 Hz, 10 A	240/100 V (single-phase), 50/60 Hz, 10 A
Dimensions W × D × H	mm	540 × 673 × 600 (with door open)	540 × 673 × 600 (with door open)
Laser protection class		1 according to DIN EN 60825 - 1	1 according to DIN EN 60825 - 1
Wavelength	nm	1064 (Nd: YVO_4)	1064 (Nd: YVO_4)
Focusing optics	mm	160	160
Depth of field (Rayleigh length)	mm	+/- 2,3	+/- 2,3
Working distance	mm	204,5	200,5
Marking field size	mm	110 × 110	110 × 110
Interface		TCP/IP, I/Os	TCP/IP, I/Os
Protection class		IP54	IP54
Weight (laser cell)	kg	approx. 35	approx. 42
Extraction		TBH BF10	TBH BF10

Version PL3.20

- generous installation space
- automatic door with large window
- internal light can be switched on/off
- marking start button/laser process display
- motorized Z-axis
- integrated focus finder
- rotation axis can be integrated
- possibility of side opening (both sides) fo passing through long material or belt integration (taking laser safety into account)

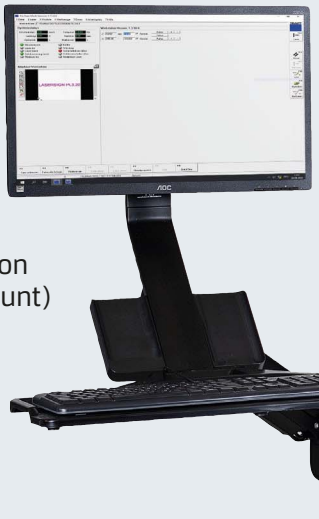




Fig. with additional charge for special equipment!

Table trolley design:

- suitable for LASERSIGN PL3.20
- 2 swivel castors with brakes and 2 fixed castors
- 3 drawers and 1 door with „touch-to-open" function
- Monitor holder with keyboard shelf
- internal cabling
- Integration of the extraction system in the table
- no need for a forklift when the PL3.20 is delivered
- flexible use within the company at any time
- System ready for use within 20 minutes (plug & play)

Scope of delivery:

- Laser unit with integrated computer
- Operating package: 21.5" monitor, keyboard (German or English), mouse and Windows operating system
- Extraction system including hose set
- Labeling software
- Pilot laser and focus finder

Item no.		0030
563011 Table trolley	(RG 5686)	○ +
Table trolley suitable for		**PL3.20**
Dimensions W × D × H	mm	1230 × 830 × 1010
Version		for direct mounting PL3.20, **with** monitor holder and keyboard shelf

Item no		0050 LASERSIGN PL3.20
563000 **with TBH extraction**	(RG 5679)	○ +
max. workpiece size (W × D × H)	mm	900 × 460 × 400
max. workpiece weigh	kg	up to 250 (more possible after consultation)
Automatic Z-axis travel	mm	400
Electrical connection		240/100 V (single-phase), 50/60 Hz, 10 A
Dimensions W × D × H	mm	1090 × 915 × 1120 (with door open)
Laser protection class		1 according to DIN EN 60825 - 1
Wavelength	nm	1064 (Nd: YVO_4)
Focusing optics	mm	160
Depth of field (Rayleigh length)	mm	+/- 2,3
Working distance	mm	200,5
Marking field size	mm	110 × 110
Interface		TCP/IP, I/Os
Protection class		IP54
Weight (laser cell)	kg	approx 200
Extraction		TBH BF10

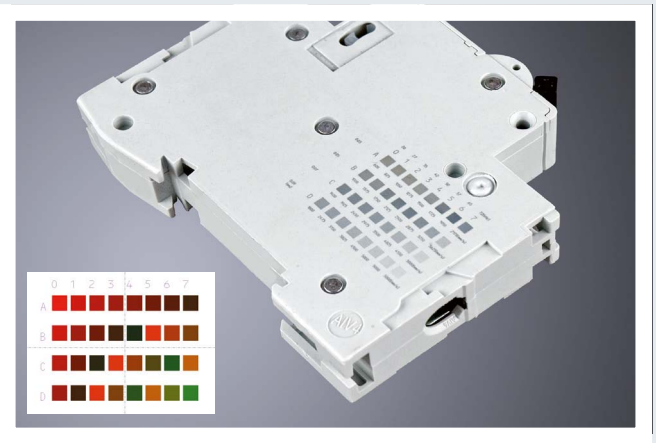
Easier, faster and better marking

The Navigator software - well thought out down to the last detail

Numerous technical highlights make the marking laser a particularly future-proof solution. It can be optimised precisely for your application. This does not only apply for the setting of parameters such as shape and length of the laser pulses, but also for the integration into your production process and for the simple operation thanks to innovative software solutions and other options.
This flexibility and ease of use ensures that you can optimize your productivity and produce the highest quality at the lowest possible cost.

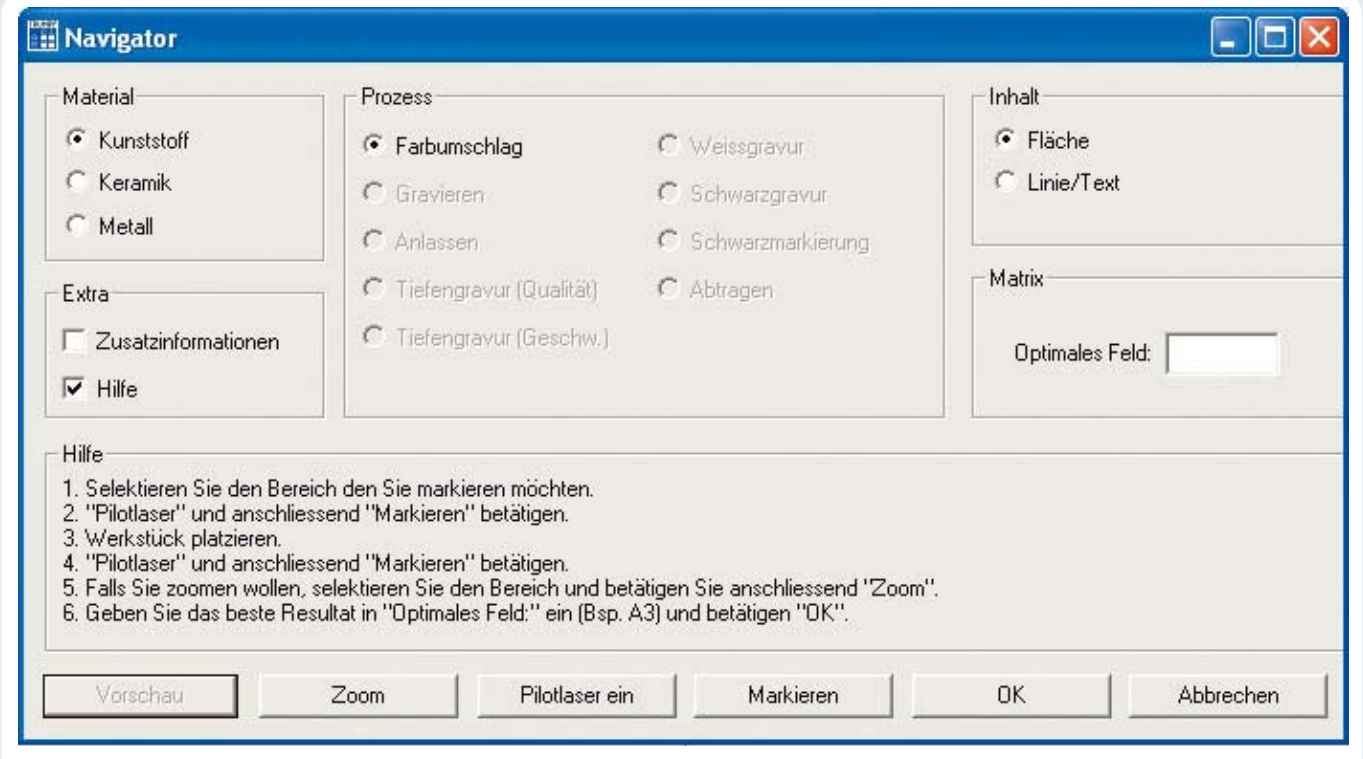
Navigator (included in the package)

According to popular wisdom, he who wants to achieve good laser markings needs to have a profound understanding of laser technology.
With our NAVIGATOR software module we override this established rule by turning our experience in application development into an integral component of our lasers. In that way even operators with no previous knowledge can find the right laser settings for different materials easily and quickly.

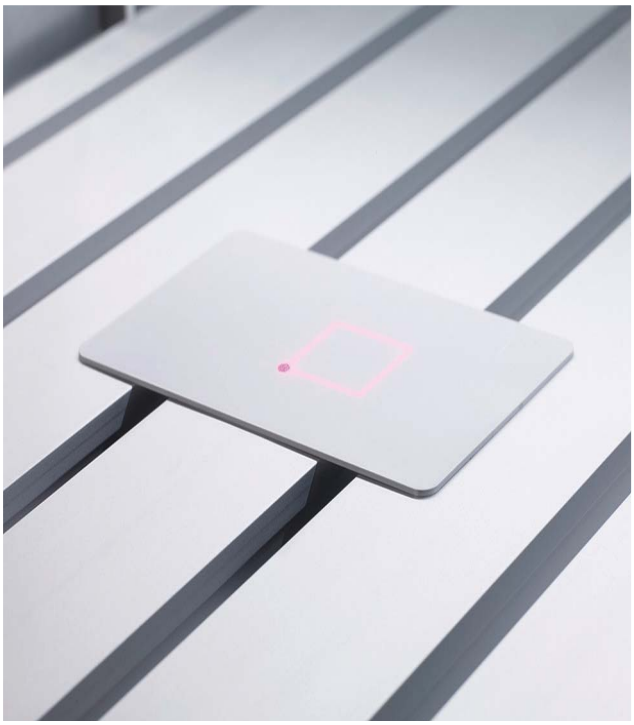


Determination of optimal parameters in 3 steps:

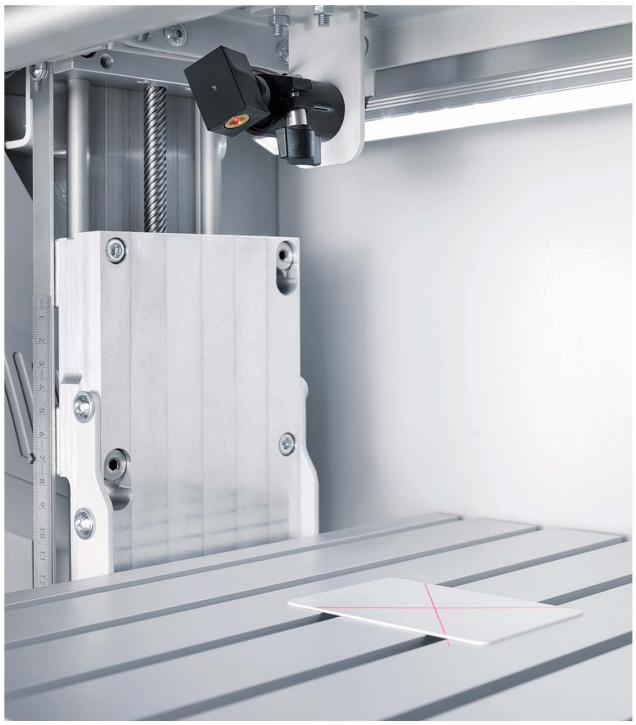
1. Choice of materials; **2.** Choice of process; **3.** Selection of print presentation (Line or filling)
Possibility for further optimisation by means of zoom function



Accessories | LASERSIGN PL2 / PL2.20 / PL3.20



Included in the package: Pilot laser.
Shows the size of the marking and also serves to easier positioning of the workpiece.



Included in the package: Focus Finder. Thanks to the user-friendly Focus Finder, you can quickly and easily determine the perfect focus position and can also flexibly bring concave or convex surfaces into focus.



Rotary axis for circumferential labelling:
- with manual chuck

Item no.	563005 Rotary axis (RG 5684)	Clamping range ∅ mm	Max. Workpiece weight kg	Description
0010	○ +	3 - 88	2,5	Rotary axis for circumferential labeling suitable for PL2 / PL2.20 and PL3.20. Price only applies in conjunction with orderinga marking laser. **Price for retrofitting on request!**
0012	○ +	3 - 125	10	Rotary axis for circumferential labeling suitable for PL3.20. Price only applies in conjunction with ordering a marking laser. **Price for retrofitting on request!**



Item no.	563005 Training (within Germany)* (RG 5684)	Description
0030	○ +	Marking laser training PL2 / PL2.20
0031	○ +	Marking laser training PL3.20

Item no.	563005 Commissioning (within Germany)* (RG 5684)	Description
0025	○ +	Commissioning PL2 / PL2.20
0026	○ +	Commissioning PL3.20

* Other European countries on request.

Mobil-Mark

Product Information

Quasar – The mobile fiber laser for small, heavy or large objects

The patent for highly efficient, permanent marking.
The mobile fiber laser Quasar marks surfaces made of practically any material – especially plastic and metal.
The highly flexible device is available in three performance classes as standard and delivers precise, delicate engraving results – from annealing marking to deep engraving.
The areas of application of the Quasar are as diverse as they can be: from prototype or single piece marking to individual marking of workpieces from small series.





Your advantages at a glance:

- precise, delicate engraving
- flexible because mobile
- large-area labeling performance
- for every surface geometry
- patented protection system
- can be individually networked
- Laser protection class without complex laser protection housing



Mobil-Mark
flexible laser marking

Technical data table:		
Output power	W	20 / 30 / 60 (depending on model)
Laser diode lifespan	h	100.000
Wavelength	mm	1.064 nm
Pulse frequency range	kHz	1 - 400 (Q20/30), 1 - 4.000 (Q60)
Pulse width	ns	200 (Q20/30), 2 - 500 (Q60)
Laser focus diameter	µm	approx. 40 (optics f = 80 mm)
Marking speed	mm/s	maximum 5.000

from 38.500,-

Item no.	563050 Mobile marking laser QUASAR (RG 5688)	Output power
0010	◯ +	20 W
0015	upon request	30 W
0020	upon request	60 W

Options

Item no.	563055 for marking laser QUASAR (RG 5689)	Ausführung
0020	◯	Training (within Germany)*

* Other European countries on request.

Firmer chisel

Design:
- made of original SANDVIK steel, regrindable
- cutting edge ground fit for service
- handle 100 % impact-proof plastic
- 2/3 of the blade hardened to 58 - 60 HRC



N° article	563800	Cutting edge width mm	Blade length mm
10	●	10	140
12	●	12	140
18	●	18	140
24	●	24	140
32	●	32	140

Firmer chisel set

Design:
- made of original SANDVIK steel, regrindable
- cutting edge ground fit for service
- handle 100 % impact-proof plastic
- 2/3 of the blade hardened to 58 - 60 HRC





N° article	563850 3-piece	563851 6-piece	Contents
3	●	–	12 | 18 | 25 mm
6	–	●	6 | 10 | 12 | 16 | 20 | 26 mm

Three-square hollow scraper

Design:
- made of superior special chromium steel
- blade hardness approx. 62 - 65 HRC
- working face with fine bright ground cutting edges
- **concave cut**

DIN 8350 C



N° article	564000 with wooden handle	Width of blade mm	Blade length mm
100	●	14	100
125	●	14	125
150	●	14	150
175	●	14	175
200	●	16	200
250	●	16	250

Three-square flat ground scraper

Design:
- made of superior special chromium steel
- blade hardness approx. 62 - 65 HRC
- working face with fine bright ground cutting edges
- **concave cut**
- with triangular solid blade

DIN 8350 B



N° article	564030 with wooden handle	Width of blade mm	Blade length mm
100	●	10	100
125	●	10	125
150	●	10	150
175	●	10	175
200	●	14	200

Three-square precision scraper

Design:
- three-edged hollow profile scraper blade with black plastic protective cap
- black plastic handle



N° article	564032 with plastic handle	Blade length mm	Total length mm
150	●	25	150

Flat scrapers

Design:
- made of superior special chromium steel
- blade hardness approx. 62 - 65 HRC
- working face with fine bright ground cutting edges
- **concave cut**
- with flat blade

DIN 8350 A



N° article	564100 with wooden handle	Width of blade mm	Total length mm
150	●	20	150
200	●	20	200
250	●	25	250

HM flat scraper

Design:
- sturdy scraper with plastic handle
- clamping device for carbide scraping blades with 4 cutting edges
- the HM blade is ready-to-use ground and lapped



N° article	564500 with replaceable scraper plate	564550 Spare carbide scraping blade	Size of carbide blade mm	Total length mm
20	●	●	25 × 20 × 2	300
25	●	●	25 × 25 × 2	330
30	●	●	25 × 30 × 2	330

Universal scraper

BAHCO

Design:
- for universal use
- tungsten carbide blades allow the scraping of paint, glue, varnish and rust on any surface such as wood, metal or concrete
- two-component handle for comfortable handling
- 3-sided blade
- narrow blade holder for better accessibility in difficult to reach places

additionally at cutting width 50 mm
- especially for precision work
- equipped with blade and holster
- narrow blade holder and precision thumb grip



N° article	564570 with carbide blade	Cutting edge width mm
25	●	25
50	●	50

N° article	564572 Spare HM blade	Cutting edge width mm
25	●	25
50	●	50

Universal scraper

TAJIMA

Design:
- striking cap made of cast with reinforced shank
- for precise scraping tasks and the toughest chisel applications
- including three 18 mm snap-off blades



N° article	564573 with interchangeable blade	Cutting edge width mm	Blade thickness mm	Total length mm
100/200	●	100	1,8	200
100/300	●	100	1,8	300

Universal scraper

EQUIPMENT VIGOR

Design:
- blade can be replaced quickly and safely
- fitted with one blade
- total length 160 mm



N° article	564575	Cutting edge width mm	Total length mm
60	●	60	160

Plastic window scraper

Design:
- equipped with a standard blade (60 mm)



N° article	564574 with interchangeable blade	Cutting edge width mm
60	●	60

Scraper set.

EQUIPMENT VIGOR

Design:
- for removing badges, stickers, adhesive residues or engine seals etc.
- easy replacement of the blades
- different blades allow adaptation to different areas of application

NEW

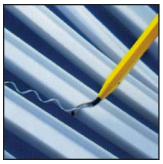


N° article	564575 16-piece
16	●

Universal Hand deburrer with S-shaped blade 3.2 mm

Design:
- aluminium hex handle, 8 mm
- with vest pocket clip and integral blade
- blade GT-E100

Use:
For deburring steel, aluminium, wood and plastic





N° article	564800 with fixed blade	Contents
EO	●	With deburring blade E 100

Design:
- handy aluminium hex handle, 12 mm
- with steel seat and exchangeable blade
- blade GT-E100

Use:
For deburring steel, aluminium, wood and plastic





N° article	564810 with exchangeable blade	Contents
RB	●	With deburring blade E 100

Hand deburrer set

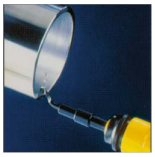
Design:
- universal plastic handle EL 1000GT plus blade holder EL 0100GT with length adjustment 6 - 125 mm
- **for all blades ∅ 2.6 mm**
- one blade each GT-B10 (HSS) for standard deburring functions at steel, aluminium and cast and GT-B20 (HSS) for brass and cast





N° article	565010 GT	Contents
EL1100GT	●	Plastic handle EL 1000 GT, blade holder EL 0100 GT, one blade each GT-B10 | GT-B20

Design:
- for heavy-duty deburring operations
- **blade mounting ∅ 3.2 mm**
- universal plastic handle EL 1000GT
- blade holder EL 0200GT with length adjustability (6 - 125 mm)
- one blade each GT-E100 (HSS) for steel, aluminium, plastic, GT-E200 (HSS) for brass and cast and GT-E300 (HSS) for inside and outside burrs on bores in sheet metal and pipes





N° article	565040 GT-E	Contents
EL1200GT	●	Plastic handle EL 1000 GT, blade holder EL 0200 GT, one blade each GT-E100 | GT-E200 | GT-E300

Design:
- plastic handle EL 2100 GT with wear-proof steely blade seat for **all blades ∅ 3.2 mm**
- for all tools with crank drive, magazine in handle
- one blade each GT-E100 (HSS) for steel, aluminium and plastic, GT-E200 (HSS) for brass and cast iron and GT-E300 (HSS) for internal and external burrs in bores on sheets and pipes



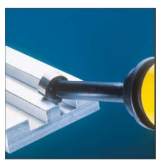


N° article	565015 GT-K	Contents
EL6000GT	●	Plastic handle EL 2100 GT, 1 blade each GT-E100 | GT-E200 | GT-E300

Keyway deburrer

Design:
- for deburring narrow and wide grooves adequate to the blade size
- for keyways on arbors and bores
- universal plastic handle EL-1000GT
- blade holder with length adjustability EL 0400GT
- one blade GT-N80K

N° article	565060	Contents
EL1400GT	●	Plastic handle EL 1000 GT, blade holder EL 0400 GT, blade GT-N80K





Double deburrer

GRATTEC Entgratwerkzeuge

Design:
- for deburring on both sides of plates with thickness 0 - 12 mm
- plastic handle with hand guard
- incl. two HSS cutting disks GT-N80
- optional available with cutting disks for INOX





N° article	565030	Contents
DB2000GT	●	Plastic handle with hand guard 2 blades GT-N 80

Three-square scrapers

GRATTEC Entgratwerkzeuge

Design:
- plastic handle EL 1000GT
- blade holder EL 0602GT with female thread
- interchangeable triangular blade GT-T60 7 x 60 mm with male thread
- incl. protective cap





N° article	565020 GT-Maxi	Contents
EL1601GT	●	Plastic handle EL 1000 GT, blade holder EL 0602 GT, triangular blade GT-T60

Internal deburrer

GRATTEC Entgratwerkzeuge

Design:
- especially for the deburring of the inner surfaces of cross-holes, recesses and undercuts
- universal plastic handle EL 1000GT
- blade holder EL 0500GT
- 45° cranked deburring blade GT-D66





N° article	565050	Contents
EL1501GT	●	Plastic handle EL 1000 GT, blade holder EL 0500 GT, deburring blade GT-D66

Deburrer Softgrip

GRATTEC Entgratwerkzeuge

Design:
- deburrer with ergonomic handle
- with twin blade holder for blades with 2.6 mm and 3.2 mm shank

Delivery:
With one blade each GT-B10 S (HSS-Co) for routine and GT-E100 S (HSS-Co) for heavy-duty deburring operations at steel, aluminium and plastic





N° article	564900 with twin blade attachment	Contents
SG1000GT	●	Plastic handle SG 3000 GT, 1 blade each GT-B10 S | GT-E100 S

Deburring countersink

GRATTEC Entgratwerkzeuge

Design:
- for deburring and chamfering of bores
- universal plastic handle EL 1000GT
- blade holder EL 0300GT
- HSS countersink ∅ 20 mm GT-C20





N° article	565070	Contents
EL1300GT	●	Plastic handle EL 1000 GT, blade holder EL 0300 GT, countersink GT-C20

Easy Grat

GRATTEC Entgratwerkzeuge

Design:
- ideal for most deburring jobs
- 4 ergonomic holders EL-EZ 5000
- 1 blade each GT-E100, GT-B10, GT-CR2600, GT-D50

NEW



N° article	565095 8-piece	Contents
EB7001GT	●	4 ergonomic holders EL-EZ 5000 1 blade each GT-E100 | GT-B10 | GT-CR2600 | GT-D50

Hand deburring assortment

GRATTEC Entgratwerkzeuge

14-piece, consisting of:
- double deburrer DB 2000GT
- universal plastic handle EL 1000GT
- blade holders EL 0100GT | EL 0200GT
- holder with deburrers EL 0400GT and GT-N80K | EL 0300GT and GT-20 | EL 0500GT and GT-D50 | EL 0500GT and GT-D66
- blades GT-C12 | GT-B10 | GT-B20 | GT-E100 | GT-E200 | GT-E300
- hex key ELD K10



N° article	565090 GRATTEC box 14-piece
EL2000GT	●

Design:
- **7-piece** hand deburrer set in handy plastic storage box
- for deburring of concave edges, bores, pinch-off holes, faces and grooves
- **covers 80% of all deburring tasks**
- deburring tools immediately ready to hand



N° article	565099 Universal 7-piece	Contents
EL-7000	●	Rapid burr EL-RB 1000 (564810) E set EL-1200 (565040) B set EL-1100 (565010) Medium triangular scraper EL-1600 Deburrer EL-1300 (565070) Groove deburrer (565060) Interior deburrer EL-1501 (565050)

Handle for deburring tools

GRATTEC Entgratwerkzeuge

Design:

EL1000GT:
- universal handle made of plastic
- for all GRATTEC blade holders
- blade magazine in hollow handle

SG3000GT:
- ergonomic plastic handle with comfortable finger recess
- with twin holder for blades type E and type B

EL2100GT:
- plastic handle with wear-resistant steel blade guide
- integrated blade guide for type E blades
- suitable for all tools with crank drive
- blade magazine in hollow handle



N° article	565100	Design:
EL1000GT	●	Universal handle
EL2100GT	●	Compact handle
SG3000GT	●	Softgrip handle

Hand deburrer

GRATTEC Entgratwerkzeuge

Design:
- versatile multifunctional deburring tool with 4 GRATEC blades
- each tool with its own release mechanism
- all blades replaceable
- 1 HSS blade GT-E100 for demanding deburring work on steel, aluminium and plastic
- 1 HSS blade GT-B20 for normal deburring work on brass and cast iron
- 1 HSS triangular scraper GT-D50 for fine deburring work
- 1 crank drive countersink GT-BC1040 for deburring bores up to ∅ 10.4 mm



N° article	565085 Multi tool
RG1000GT	●

Deburring set case

GRATTEC Entgratwerkzeuge

Design:
- 83-piece deburring set in case
- all-round equipment for almost every deburring task



N° article	566098 83-piece	Contents
AK	●	4 handles 9 blade holders 31 rotating blades 10 countersinks 8 triangular scrapers 1 ceramic blade 3 N blades 2 L blades 11 deburrers 4 Allen keys

Blade holder

GRATTEC Entgratwerkzeuge



N° article	565120 for deburring tools	for blade type	Design
EL0100GT	●	B	length adjustable from 30-115 mm, shaft ∅ 2.6 mm, total length 131 mm
EL0200GT	●	E	length adjustable from 30-115 mm, shaft ∅ 3.2 mm, total length 131 mm
EL0300GT	●	C	length adjustable from 30-115 mm, with M7 thread
EL0400GT	●	K	adjustable in length
EL0500GT	●	D	length adjustable, for scrapers GT-D50 and GT-D66, with clamping of the blade by worm screw, incl. Allen key
EL0602GT	●	T	adjustable in length, for scrapers GT-T40 and GT-T60

Deburring blade

GRATTEC Entgratwerkzeuge

N° article	565130 Type B ∅ 2.6 mm	Design	Product image
GT-B10	●	HSS blade for normal deburring work on steel, aluminium and plastics	
GT-B10L	●	as GT-B10, but made of HSS-Co for extra long tool life	
GT-B10S	●	as GT-B10, but TiN-coated to extend the tool life	
GT-B10TIN	●	like GT-B10, diamond-coated for work on ceramics and glass	
GT-B10C	●	like GT-B10 especially for left-handers	
GT-B20	●	as GT-B10, but in solid carbide for stainless steel and various plastics	
GT-B20C	●	HSS blade for normal deburring work on brass and cast iron with symmetrically ground cutting edge for right- and left-handed use	
GT-B30	●	as GT-B20, but in solid carbide for stainless steel and various plastics	
GT-B60	●	HSS blade for removing the inner and outer burr at the same time	

Deburring blade

GRATTEC Entgratwerkzeuge

Design:
- shank ∅ 3.2 mm
- for blade holder EL 0200GT and handles SG 3000GT, EL 2100GT

N° article	565140 Type E / BC / BO ∅ 3.2 mm	Design	Product image
GT-E100	●	HSS blade for heavy deburring work on steel, aluminium and plastics (∅ 3,2 mm)	
GT-E100L	●	GT-E100 for left-handers	
GT-E100TIN	●	GT- E100 TIN-coated to extend the tool life	
GT-E100C	●	GT- E100 with carbide cutting edge for stainless steel and some plastics	
GT-E100S	●	HSS-CO blade for wear resistance	
GT-E101	●	Blade with thick shank and thin cutting edge for steel, aluminium and plastic	
GT-E101L	●	GT-E101 for left-handers	
GT-E101TIN	●	GT-E101 TIN-coated for extended service life	
GT-E150	●	HSS blade with thick shank and thin cutting edge for small holes from ∅ 1.2 mm	

N° article	565140 Type E / BC / BO ∅ 3.2 mm	Design	Product image
GT-E200	●	HSS blade for heavy deburring work on brass and cast iron	
GT-E200C	●	GT-E200 with carbide cutting edge for stainless steel and some plastics	
GT-E202	●	HSS blade with thick shank and thin cutting edge for brass and cast iron	
GT-E300	●	HSS blade for simultaneous removal of heavy internal and external burrs on drill holes in sheet metal and pipes	
GT-E350	●	HSS blade for strong burrs onstraight edges	
GT-E600	●	HSS blade for strong burrs on cross bores	
GT-BC1000	●	Patented HSS blade for internal threads for cleaning and deburring from ∅ 9 mm	
GT-BO1000	●	Patented HSS blade for recesses up to 3 mm on the inside diameter.	

Deburring blade

GRATTEC Entgratwerkzeuge

Design:
For double deburrer DB 2000GT

N° article	565150 Type N	Design	Product image
GT-N80	●	Round cutting discs for the double deburrer. The blade is usable on both sides over the entire circumference and excels by a very long lifetime.	
GT-N80M42	●	Like GT-N80, but hardened to HRc 68. For stainless steel	
GT-N70K	●	HSS blade for narrow keyways 1.2-8 mm with 8 cutting edges. Chamfered corners to deburr shallow grooves.	

N° article	565150 Type N	Design	Product image
GT-N80K	●	HSS standard blade for the keyway burr. Keyway width 2.4-11 mm.	
GT-N80KM42	●	Like GT-N80, but hardened to HRc 68. For stainless steel	
GT-N90K	●	HSS blade like GT-N70K but for keyway widths 3-15 mm.	

Hole deburrer

GRATTEC Entgratwerkzeuge

Design:
Matching blade holder: EL 0300GT.

N° article	565160 HSS 90°	Design	Product image
GT-C12	●	HSS 90°, countersink-x ∅ 12 mm	

N° article	565160 HSS 90°	Design	Product image
GT-C20	●	HSS 90°, countersink-x ∅ 20 mm	

N° article	565160 HSS 90°	Design	Product image
GT-C30	●	HSS 90°, countersink-x ∅ 30 mm	

Deburring blade

GRATTEC Entgratwerkzeuge

Design:
Matching blade holder: EL 0500GT and EL 0602GT.

N° article	565170 for triangular scraper	Design	Product image
GT-D50	●	HSS triangular scraper 3.2 × 50 mm for fine deburring work. Fits into the EL 0500GT holder	
GT-D55	●	GT-D50 in solid carbide. Fits into the EL 0500GT holder	
GT-D75	●	HSS triangular scraper 3.2 × 75 mm for fine deburring work. Fits into the EL 0500GT holder	
GT-T40	●	Triangular scraper 5 × 40 mm. Fits into the EL 0602GT holder.	

N° article	565170 for triangular scraper	Design	Product image
GT-T60	●	Triangular scraper 7 × 60 mm. Fits into the EL 0602GT holder.	
GT-D66	●	Cranked HSS triangular scraper 3.2 × 50 mm for the inside of cross holes. Fits into the EL 0500GT holder.	
GT-D77	●	Like GT-D66 but 75 mm long. Fits into the EL 0500GT holder	

Backward deburrer

GRATTEC Entgratwerkzeuge

Design:
- ideal for deburring of front and back sides of holes
- by pressing the control button the blade may be put into an upright position to simplify the insertion into the hole
- the blade is exchangeable
- with hex socket screwdriver for blade change in the shaft

N° article	565190	Contents
RC1000GT	●	Swivel HSS blade GT-BR1000, ∅ 3-5.5 mm, Allen key for changing the blade
RC2000GT	●	Swivel HSS blade GT-BR2000, ∅ 5.5-10 mm, Allen key for changing the blade
RC2200GT	●	Swivel HSS blade GT-BR2200, ∅ 10-22 mm, Allen key for changing the blade


RC1000GT

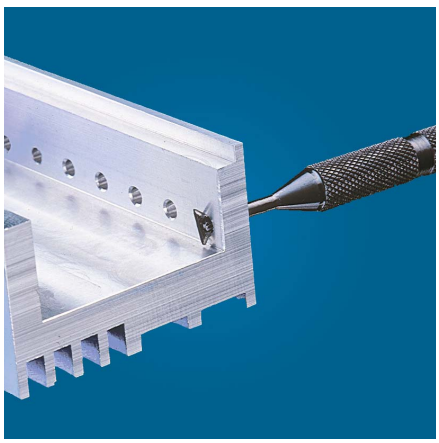

RC2000GT


RC2200GT

Design:
- ideal for deburring of front and back sides of holes
- by pressing the control button the blade may be put into an upright position to simplify the insertion into the hole
- the blade is exchangeable
- with hex socket screwdriver for blade change in the shaft
- in practical storage box



N° article	565195 set	Contents
RC3000	●	Set consisting of 1 piece each: RC1000GT, RC2000GT, RC2200GT







Engineer´s hammer

PRETEC

DIN 1041

Design:
- head drop-forged
- carefully hardened, fine ground all-around, stove enamelled
- peen and face polished
- curved hickory handle, clear varnished
- VPA/GS tested



N° article	570052 with hickory handle	Head weight g	Handle length mm
100	●	100	260
200	●	200	280
300	●	300	300
400	●	400	310
500	●	500	320

N° article	570052 with hickory handle	Head weight g	Handle length mm
800	●	800	350
1000	●	1000	360
1500	●	1500	380
2000	●	2000	400

Hammer handle
for locksmith's hammer

PRETEC

Design:
- for locksmith's hammer with oval eye
- double curved and lacquered
- suitable for fitter's hammer (570052)

NEW



N° article	570212 Ashwood	Head weight g	Total length mm
260	●	100	260
280	●	200	280
300	●	300	300
320	●	500	320
350	●	600	350
360	●	800	350
380	●	1000	360
400	●	2000	400

Engineer´s hammer

STANLEY

Design:
- fibreglass core for more power and long durability
- efficiency through optimised weight balance to prevent signs of fatigue
- epoxy resin reinforced connection between head and handle
- ergonomic anti-slip handle
- polished head



N° article	570241 with fibreglass handle	Head weight g	Handle length mm
200	●	200	295
300	●	300	295
500	●	500	295
800	●	800	295
1000	●	1000	295

Engineer´s hammer ROTBAND-PLUS

GEDORE WERKZEUGE FÜRS LEBEN

DIN 1041

Design:
- forged **hammer head DIN 1041**made of special tool steel
- carefully hardened and tempered
- black varnished, face and peen bright
- double curved **hickory handle DIN 5111**
- additionally with long, hardened stem protection sleeve
- patented stem attachment with wood screw, lok-king plate and ring wedge



N° article	570250 with hickory handle	Head weight g	Handle length mm
100	●	100	260
200	●	200	280
300	●	300	305
400	●	400	305
500	●	500	320
600	●	600	330
800	●	800	350
1000	●	1000	360
1500	●	1500	380
2000	●	2000	400

Hammer handle ROTBAND-PLUS

GEDORE WERKZEUGE FÜRS LEBEN

DIN 5111

Design:
- double curved hickory handle
- with additional protecting sleeve of hardened steel, ring wedge, locking plate and wood screw

Note:
With this standard wooden handle DIN 5111 each DIN hammer head can be converted into a ROT-BAND-PLUS hammer



N° article	570260 with hickory handle	Head weight g	Total length mm
200	●	200	280
300	●	300	300
400	●	400	310
500	●	500	320
600	●	600	330
800	●	800	350
1000	●	1000	360
1500	●	1500	380
2000	●	2000	400

Engineer´s hammer BlackTec®

PICARD

Design:
- head black powder coated, corrosion protected
- made of alloyed special steel, carefully hardened and tempered
- face and peen ground, edges neatly broken
- strong connection of head and handle by 2 component glue
- **3-component plastic handle with internal fibreglass core, low vibration**
- rubberised gripping surface

DIN 1041



N° article	570255 BlackTec® with fibreglass handle	Head weight g	Handle length mm
300	●	300	300
500	●	500	325
800	●	800	355
1000	●	1000	362
1500	●	1500	365

Sledge hammer

PRETEC

Design:
- head drop-forged and ground on all sides
- face and peen hardened and tempered
- black varnished, faces bright
- with ashwood handle

DIN 1042



N° article	570502 with ashwood handle	Head weight g	Handle length mm
3	●	3000	600
4	●	4000	700
5	●	5000	800
6	●	6000	800
8	●	8000	900
10	●	10000	900

Sledge hammer ROTBAND-PLUS

GEDORE WERKZEUGE FÜRS LEBEN

Design:
- forged hammer head DIN 1042
- by ring wedge, locking plate and wood screw the hammer head and the wooden handle are combined to one unit
- **hickory handle with additional long steel handle protection sleeve**

DIN 1042



N° article	570504 with hickory handle	Head weight g	Handle length mm
3	●	3000	600
5	●	5000	800

Sledge hammer handle

PRETEC

Design:
- made of hickory
- hammer handle according to DIN 5112



N° article	570511 Hickory	Total length mm
600	●	600
700	●	700
800	●	800
900	●	900

Club hammer

PRETEC

Design:
- head drop-forged
- hardened C45 steel
- stove-enamelled, ground bevels
- face polished
- head ring wedged
- curved ashwood handle with blue dyed ends
- VPA/GS tested

DIN 6475



N° article	570802 with ashwood handle	Head weight g	Handle length mm
1	●	1000	260
1,25	●	1250	280
1,5	●	1500	280
2	●	2000	300

Club hammer handle

PRETEC

Design:
- fitting for club hammers
- hammer handle according to DIN 5135
- curved shape



N° article	570811 Hickory	Total length mm
260	●	260
280	●	280
300	●	300

Club hammer ROTBAND-PLUS

GEDORE

Design:
- forged club hammer head DIN 6475
- **curved hickory handle with additional long steel handle protection sleeve**
- by ring wedge, locking plate and wood screw the hammer head and the wooden handle are combined to one unit

DIN 6475



N° article	570822 with hickory handle	Head weight g	Handle length mm
1000	●	1000	260
1250	●	1250	260
1500	●	1500	280
2000	●	2000	300

Club hammer BlackTec®

PICARD

Design:
- head black powder coated, corrosion protected
- made of alloyed special steel, carefully hardened and tempered
- ground face, edges neatly broken
- strong connection of head and handle by 2 component glue
- **3-component plastic handle with internal fibreglass core, low vibration**
- rubberised gripping surface

DIN 6475

NEW



N° article	570827 BlackTec® with fibreglass handle	Head weight g	Handle length mm
1000	●	1000	280
1250	●	1250	280
1500	●	1500	285
2000	●	2000	305

Light-metal hammer

HA-SO

Design:
- made of aluminium
- cylindrical shape
- with double curved lacquered ashwood handle

DIN 6491 B



N° article	570850 with ashwood handle	Head diameter mm	Head length mm	Handle length mm
250	●	36	86	300
500	●	45	100	320

Copper hammer BlackTec®

PICARD

Design:
- made of copper, mining sledge pattern
- strong connection of head and handle by 2 component glue
- **3-component plastic handle with internal fibreglass core, low vibration**
- rubberised gripping surface

NEW



N° article	570905 with fibreglass handle	Head weight g	Handle length mm
250	●	250	305
500	●	500	330
1000	●	1000	355
1500	●	1500	380
2000	●	2000	305

Copper hammer

HA-SO

Design:
- club hammer pattern
- faces and surfaces ground and polished
- edges bevelled
- complete with ashwood handle

similar DIN 5130



N° article	570900 with ashwood handle	Head weight g	Handle length mm
500	●	500	310
750	●	750	330
1000	●	1000	350
1500	●	1500	360
2000	●	2000	400

Roofing hammer

RUTHE QUALITÄT

Design:
- tubular steel handle with black PVC grip
- head black lacquered
- with head safety device, nail groove and magnet
- roughened face
- VPA/GS tested

DIN 7239



N° article	570910	Head weight g
600	●	600

Roofing hammer

PICARD

DIN 7239

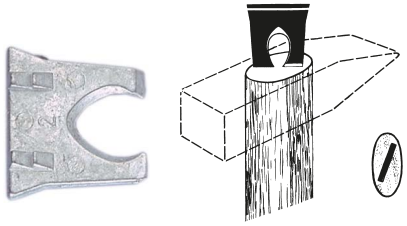
Design:
- head black powder coated, corrosion protected
- made of special alloyed steel, hardened and tempered
- with magnetic nail holder
- with head securing
- tubular steel handle with black PVC grip
- VPA/GS tested



N° article	570911	Head weight g	Handle length mm
600	●	600	320

Hammer wedge

Design:
- with two different bevel ground claw ends
- when driven into the handle, these wedges dig their claws into the wood



N° article	572000 Claw handle wedge	Width mm
2	●	18
3	●	22
4	●	28
5	●	31
6	●	34
8	●	40

Ring wedge

Design:
- made of steel, turned
- blank with sharpened impact end
- for secure handle mounting



N° article	572100	Diameter mm
1	●	9
2	●	10
4	●	11
5	●	12
6	●	13
7	●	15
8	●	17

Mallet

Design:
- made of white beechwood
- with pressed-in metal sheathing
- with slightly crowned striking faces
- with ashwood handle

DIN 7462 B



N° article	572500 with ashwood handle	Head diameter mm	Head length mm	Handle length mm	Weight g
2	●	60	120	300	400
3	●	70	140	320	550
4	●	80	160	350	850

Rubber hammer

Design:
- made of special rubber, tough hardness (90 Shore)
- with two flat faces
- with ashwood handle

DIN 5128

Type 5
with one crowned and one flat face



N° article	572600 Rubber hammer with ashwood handle	572610 Spare handle ash (without fig.)	Head diameter mm	Handle length mm	Weight g
1	●	○	54	320	320
2	●	○	64	340	520
2A	●	○	65	340	530
3	●	●	74	380	780
4	●	●	90	380	1185

Soft-face hammer

HALDER

MADE IN GERMANY

Design:
- thicker wall strengths and struts in the reinforced cast steel housing for high stability - especially when using the SIMPLEX copper impact inserts
- significantly higher impact force due to additional weight
- 2 different impact inserts
  => copper with plastic sleeve, hard
  => soft metal impact insert, hard, insensitive to heat

Use:
For very high impact, straightening work, plant construction, sheet metal working or assembly, repair and maintenance work.



N° article	572898 SIMPLEX	Head diameter mm
30	●	30
40	●	40

Soft-face hammer BASEPLEX

HALDER

Design:
- basic body made of high-quality zinc die-cast with handle protection collar and receptacle for the impact inserts
- ergonomically shaped lacquered wooden handle
- interchangeable impact inserts

Nylon
- white, hard, very wear resistant, no chipping, oil and grease resistant
- universally applicable, suitable for powerful impacts

Cellulose acetate (CA)
- red, hard, oil and grease resistant
- universally usable, for normal stress



572890

572891

572892

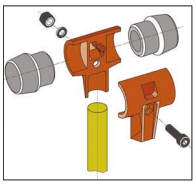
N° article	572890 CA/CA	572891 Nylon/Nylon	572892 Nylon/CA	Head ∅ mm	Total length mm
25	●	●	●	25	270
30	●	●	●	30	280
40	●	●	●	40	330
50	●	●	●	50	340

Soft-face hammer SIMPLEX with exchangeable inserts

HALDER

Design:
- two-piece housing made of malleable cast iron with impact inserts
- beadings and groovings inside the housing prevent slipping of the inserts or twisting of the handle, even at hefty strokes
- impact inserts and handle can be replaced quickly and easily
- impact head height is also full usable height

Use:
For heavy and light material-saving strokes in mechanical engineering, assembly, repair and maintenance work, building construction, civil engineering etc.





573000



573200



573100



573250

N° article	573000 with rubber composition inserts (black), medium hard	573100 with plastic inserts (red), hard	573200 with superplastic inserts (white), medium hard	573250 with nylon inserts (white), hard	Head ∅ mm
30	●	○	●	●	30
40	●	●	●	●	40
50	●	●	●	●	50
60	●	●	○	●	60
80	●	–	○	●	80

Soft-face hammer SIMPLEX with exchangeable inserts

HALDER

Design:
- two-part malleable cast iron clamping housing with impact inserts
- beads and grooves in the housing prevent the inserts from slipping or the handle from twisting, even with the most powerful blows
- quick and easy exchange of inserts and handle
- impact head height is also full working height

Use:
For heavy and light material-protecting impacts in mechanical engineering, assembly, repair/maintenance work, structural/civil engineering etc.



573500



573400



573600

N° article	573400 combined, 1 insert each TPE-soft/TPE-mid (blue/grey)	573500 combined, one insert each rubber comp./plastic (black/red)	573600 combined, one insert each rubber composite/ nylon (black/white)	Head ∅ mm	Head length mm	Total length mm
30	●	●	●	30	90	295
40	●	●	●	40	115	325
50	●	●	●	50	135	370
60	●	●	●	60	145	405
80	NEW ○	–	●	80	175	450

Replacement insert for SIMPLEX soft-face hammers

HALDER



573800:
- **rubber composite insert**
- Shore hardness approx. 95 A
- **gentle blow**, medium hard, cushioning



573830:
- **TPE-MID insert**
- medium hard
- abrasion-resistant



573850:
- **superplastic insert**
- tough and unbreakable
- **medium hard blow**
- for edge impacts
- wear-resistant



573900:
- **soft metal insert**
- **for highest impact force**
- insert for lead and copper hammers
- hard, insensitive to heat



573810 :
- **TPE-Soft insert**
- soft
- abrasion-resistant
- **heavily damping**
- ideally suited for sensitive work



573840:
- **transparent plastic insert**
- **for the hard blow**
- the most commonly used insert
- oil and grease resistant



573860:
- **nylon insert**
- tough **for the hard blow**
- for powerful position strokes
- no chipping
- oil and grease resistant



573910:
- **copper insert**
- **for very high impact force**
- with plastic sleeve
- hard, insensitive to heat

N° article	573800 Rubber composite (black) medium hard	573810 TPE-Soft (blue) soft	573830 TPE-MID (grey) medium hard	573840 Plastic (transparent red) hard	573850 Super plastic (white) medium hard	573860 Nylon (white) hard	573900 Soft metal (silvery) hard	573910 Copper with plastic sleeve hard	Head ∅ mm
80	●	○	○	–	●	●	●	–	80
30	●	●	●	●	●	●	●	●	30
40	●	●	●	●	●	●	●	●	40
50	●	●	●	●	●	●	●	–	50
60	●	NEW ●	NEW ●	●	●	●	●	–	60

Replacement housing/handle for SIMPLEX soft-face hammers

HALDER

Design 573950:
- housing complete with screw, nut and spring washer

Design 573980:
- high-quality wooden handle
- grip area double lacquered



573950



573980

N° article	573950 Malleable cast iron clamping housing	573980 Replacement handle, vibration damping, ergonomically shaped	Head ∅ mm
30	●	●	30
40	●	●	40
50	●	●	50
60	●	●	60
80	●	●	80

Nylon hammer recoil-free

HALDER

Design:
- recoilless, for very powerful strokes
- low-noise and joint-friendly
- impact inserts made of special nylon with maximum strength
- different impact surfaces: 1 side flat, 1 side rounded (avoids damage and marks)
- vibration-damping, ergonomically shaped, very stable and lacquered hickory handle
- handle protection sleeve

MADE IN GERMANY

NEW



N° article	576110 SUPERCRAFT	Head ∅ mm
25	●	25
30	●	30
40	●	40

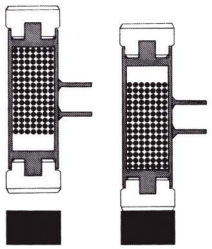
Nylon hammer SUPERCRAFT recoil-free, exchangeable soft faces

HALDER

Design:
- recoil-free due to steel shot in the hammer housing
- nylon inserts turned from extruded rod material => tough, hard and resistant, no chipping (even at minus temperatures), low noise
- inserts and handles easily interchangeable

Use:
For straightening workpieces on machinery or for gentle impact during assembly work

576500:
Ø 30 also suited for impact head Ø 35 mm
Ø 40 also suited for impact head Ø 45 mm and Ø 50 mmNylon inserts for recoil-free soft face hammers cat. no. 576100 - 576260





576100



576200

NEW



576270

576400



576500

N° article	576100 with lacquered hickory handle	576200 unbreakable tubular steel handle and oil-resistant rubber grip	576270 with unbreakable 3-component handle	576400 Spare impact insert made of special nylon	576500 Spare hickory handle, ergonomically shaped, varnished	Head Ø mm
20	●	–	–	●	●	20
25	●	●	–	●	○	25
30	●	●	–	●	●	30
35	●	●	–	●	–	35
40	●	●	NEW ●	●	●	40
45	●	●	–	●	–	45
50	●	●	NEW ●	●	○	50
60	●	●	NEW ●	●	●	60
70	●	●	–	●	○	70
80	●	–	–	○	○	80

sledge hammer SUPERCRAFT recoil-free, exchangeable soft faces

HALDER

Design:
- recoil-free due to steel shot in the hammer housing
- nylon inserts turned from extruded rod material => tough, hard and resistant, no chipping (even at minus temperatures), low noise
- inserts and handles easily interchangeable

Use:
At fixture construction, machine and tool making, heavy industry, for repair and demolition works and much else Very noise-repressingSpare handles for recoil-free sledge hammers



N° article	575600 sledge hammer	575800 Spare impact insert made of special nylon	575950 Spare hickory handle, ergonomically shaped, varnished	Head Ø mm	Weight kg	Total length mm
80	●	●	●	80	4	880
100	●	●	●	100	7	1000
100-10	○	○	○	100	10	1000

Combi (locksmith's and soft-face) hammer

HALDER

Design:
- combined locksmith's and soft-face hammer
- made of high-quality tempered steel, face hardened and tempered
- **exchangeable nylon inserts**
- red marker to indicate varying impact faces
- steel tube handle made of seamless drawn precision steel tube with comfortable rubber grip



N° article	572870 FERROPLEX	Head Ø mm	Total length mm
30	●	30	290
35	●	35	295

Soft-face hammer recoil-free

HALDER

Design:
- moulded housing of steel sheet, made of one piece
- Inserts made of polyurethane, interchangeable, rectangular, medium-hard
- ergonomic shaped rubber handle
- enables carefully targeted strokes even in corners and at fringes
- **recoil-free**



N° article	576600 SECURAL	576620 Spare impact insert for SECURAL hammer	Head width mm	Head length mm	Total length mm
30×40	●	●	40	30	300
35×45	●	●	45	35	300

Compound leverage snips
Berlin pattern D102

Design:
- head and handle drop-forged
- inductive hardened cutting edges
- **right-hand cut**
- quality steel (HRC 56)
- handles PVC covered



Use:
For straight cuts

N° article	580052 right-hand cut	Total length mm
250	●	250
300	●	300

Pelican tin snips Pelican shape D118

Design:
- head and handle drop-forged
- inductive hardened cutting edges
- **right-hand cut**
- quality steel (HRC 56)
- handles PVC covered

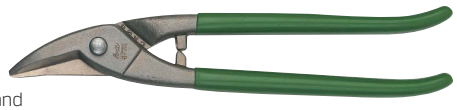


Use:
For long, straight and continuous cuts. Long cutting edge, therefore ideal for the cutting of sheet metal

N° article	580152 right-hand cut	Total length mm
300	●	300

Hole cutting snips D107

Design:
- head and handle drop-forged
- inductive hardened cutting edges
- **L.H. or R.H. cutting**
- quality steel (HRC 56)
- handles PVC covered



Use:
For continuous straight and figure cuts (wide radii)

N° article	580252 right-hand cut	580282 left-hand cutting	Total length mm
250	●	●	250

Sheet metal hole cutting snips D114

Design:
- head and handle drop-forged
- inductive hardened cutting edges
- **L.H. or R.H. cutting**
- quality steel (HRC 56)
- handles PVC covered
- very slim cutting head



Use:
For continuous straight and figure cuts (narrow radii)

N° article	580352 right-hand cut	580382 left-hand cutting	Total length mm
250	●	●	250

Ideal tin snips D116

Design:
- head and handle drop-forged
- inductive hardened cutting edges
- **L.H. or R.H. cutting**
- quality steel (HRC 56)
- handles PVC covered

Use:
For continuous straight and figure cuts



N° article	580452 right-hand cut	580482 left-hand cutting	Total length mm
260	●	●	260

Ideal tin snips without opening stop D216-280

Design:
- **without opening stop,** with a specially pointed scissors head
- cutting edge with micro-serration for anti-slip work
- L.H. or R.H. cutting
- scissors completely tempered and burnished and cutting edge inductively hardened
- handles PVC covered



580454



580456

Use:
For continuous straight and figure cuts

N° article	580454 right-hand cut	580456 left-hand cutting	Total length mm
280	●	●	280

Ideal tin snips with lever transmission

Design:
- extreme compact cutting head
- double lever transmission
- ergonomic handle with soft core insert

Use:
For short straight cuts and narrow radii

Technical data 180 R+L (D15A):
Cutting capacity in stainless steel sheet 800 N/mm² up to 0.8 mm
Cutting capacity in normal sheet metal 600 N/mm² up to 1.2 mm
Quality of the cutting edges stainless steel special, hardness min. HRC 61
Cutting edge length 20 mm

Technical data 260 R+L (D29ASS):
Cutting capacity in stainless steel sheet 800 N/mm² up to 0.8 mm
Cutting capacity in normal sheet metal 600 N/mm² up to 1.2 mm
Quality of the cutting edges stainless steel special, ardness min. HRC 61
Cutting edge length 33 mm

N° article	581150	Cutting direction	Total length mm
180R	●	right	180
180L	●	left	180
260R	●	right	260
260L	●	left	260





180R



260R

Ideal tin snips Double lever ratio and reduced opening angle

Erdi

Design:
- smooth-running and extremely wear-resistant
- **reduced handle opening angle** for better handling with the same cutting length
- with a compact scissor head and partially recessed head screw connection, urve sections are easier and more precise
- with locking bolt
- **double lever transmission** reduces the effort and increases the cutting performance
- cutting length 30 mm
- max. sheet thickness 1.2 mm



N° article	581151	Cutting direction	Total length mm
230R	●	right	230
230L	●	left	230

Ideal tin snips with lever transmission

Erdi

Design:
- cutting head made of stainless steel
- cutting edges double hardened
- quality HRC 58 - 60
- cutting edge with micro-serration for anti-slip work
- ergonomic 2-component handles with slip protection

High cutting performance:
Sheet material up to 1.8 mm, stainless steel sheets up to 1.2 mm

Use:
For continuous straight and figure cuts Smallest radii at difficult-to-reach spots due to extra flat head **Particularly manoeuvrable**



N° article	581152	Cutting direction	Total length mm
240R	●	right	240
240L	●	left	240

Design:
- cutting head made of stainless steel
- cutting edges double hardened
- quality HRC 58 - 60
- cutting edge with micro-serration for anti-slip work
- ergonomic 2-component handles with slip protection

High cutting performance:
Sheet material up to 1.8 mm, stainless steel sheets up to 1.2 mm

Use:
For continuous straight and figure cuts



N° article	581252	Cutting direction	Total length mm
260R	●	right	260
260L	●	left	260

Shape cutting snips with lever transmission

Erdi

Design:
- heads drop-forged
- cutting edges made of stainless steel, double hardened
- quality HRC 58 - 60
- cutting edge with micro-serration for anti-slip work
- ergonomic 2-component handles with slip protection

High cutting performance:
Sheet material up to 1.8 mm, stainless steel sheets up to 1.2 mm

Use:
For curved cuts and short, straight cuts

240G:
With wide radius to the right and left

240-SET
Set consisting of 240R, 240L and 240G

R = right-hand cut
L = left-hand cut
G = straight

N° article	581452 with lever transmission	Cutting direction	Total length mm
260R	●	right	260
260L	●	left	260

N° article	581453 with lever transmission	Cutting direction	Total length mm
240R	●	right	240
240L	●	left	240
240G	●	straight	240
240-SET	●	right, left, straight	240



240-SET



260L



240R



240L



240G

Ideal tin snips with micro toothing

Design:
- for continuous straight and figure cuts
- cutting edge with micro-serration for anti-slip work
- extra robust
- handles drop-forged
- handles lacquered

Technical data:
Cutting capacity in stainless steel sheet:
800 N/mm² up to 0.8 mm
Cutting capacity in normal sheet metal:
600 N/mm² up to 1.2 mm
Quality of the cutting edges :
stainless steel special, hardness
min. HRC 61
Cutting edge length: 24 mm





N° article	581455	Cutting direction	Total length mm
240L	●	left	240
240R	●	right	240

All-purpose scissors
All-purpose scissors

Design:
- cutting edges made of stainless steel
- ergonomic plastic handles with soft components
- edges straight and serrated
- self-opening with functional closure

190 A: with angled blades

Use:
Universal scissors, e.g. for fine sheets, plastic, leather, paper, fabric, carpet flooring etc.





N° article	581902	Total length mm
140	●	140
190	●	190
190A	●	190

Safety strap cutter
with lever transmission

Design:
- head drop-forged
- with lever transmission, self-opening through integrated spring
- for effortless one-handed cutting of steel straps up to 32 × 1 mm
- ergonomic handles with guard and soft component insert

Use:
The scissors can easily be pushed under tensioned steel straps due to its tapered, flat lower part. Holding device prevents the steel ends from bouncing up when the cutting process is completed Thereby **greatly reduced risk of injury**



N° article	582902	Total length mm
260	●	260

Combination shears

Design:
INOX
= straight
- self-opening with locking device
- finely serrated blade
- plastic-coated handles
- suitable for right-handers



N° article	581980	Total length mm
190	○	190

Cable shears

Design:
140-FG
- universal scissors with 2K handles
- INOX cutting edge 56 HRC
- cutting edges finely serrated and screwed
- 3.5 mm blade thickness, robust, for rough use

140:
- with 2K handles
- INOX cutting edge 56 HRC
- for cutting up to 16 mm² fine-wire conductors
- lower blade serrated, incl. wire cutter





N° article	582000	Total length mm
140-FG	○	140
140	○	140

All-purpose scissors All-purpose scissors

Design:
- cutting edge and handle forged in one piece for high stability
- cutting edge with serration for slip-proof working
- ERGO handle for fatigue-free work
- sandblasted, chrome-plated blades to protect against corrosion
- cuts cold-rolled steel up to 0.6 mm thick

NEW



N° article	581903 angled	Total length mm
200	●	200

Telephone and cable scissors

Design:
- short and sturdy build
- for cutting insulating tubes, rubber, leather and thin wires
- nickel-plated
- lower blade serrated, incl. wire cutter



N° article	582000	Total length mm
125	●	125

Electrician's shears

KNIPEX

Design:
- angled cutting edge and optimised handle design for improved ergonomics
- precision ground with fine serration for a clean, slip-free cut
- cutting edges made of stainless steel, cutting edge hardness 56 HRC
- with crimping points for wire end ferrules
- with opening spring, lockable for transport
- suitable for cutting flexible and fine-stranded cables, solid or stranded up to Ø 15 mm - 5 × 1.5 mm²

NEW





N° article	582005 angled	Total length mm
160	●	160

Paper scissors

Design:
- exceptionally long and slim scissors
- with straight and very sharp edges
- nickel-plated



N° article	582600	Total length mm
200	●	200
250	●	250

Kevlar®scissors

Design:
- working scissors especially for aramid fibres
- special cutting edge geometry
- cutting edge 62 HRC hardened
- with serration on the cutting edge
- joint bolted
- hand-friendly, impact-resistant handles made of plastic



160



240

N° article	582002 with toothing	Total length mm
160	●	160
240	●	240
265	●	265



265

Multi-purpose shears

Erdi

Design:
- made of stainless steel, screw-jointed
- handles of impact-proof plastic with comfortably shaped finger loops
- these light-weight, handy shears are equally suited for right and left handers



N° article	582500	Total length mm
160	●	160
180	●	180

Work scissors

Design:
- heavy, extra sturdy make
- with straight, smooth edges and robust and large finger loops
- rugged and readjustable screw joint
- handles black lacquered
- heavy version



N° article	582700	Cutting edge	Total length mm
250	●	smooth polished	250
300	●	smooth polished	300

Work scissors

Design:
- ergonomic nylon handles for right-handers
- with large finger loops
- straight and rounded cutting edge
- stainless steel



155



200



215



240



265

N° article	582705	Cutting edge	Total length mm
155	●	smooth polished	155
200	●	with serrated edge	200
215	●	smooth polished	215
240	●	smooth polished	240
265	●	fine serrated	265

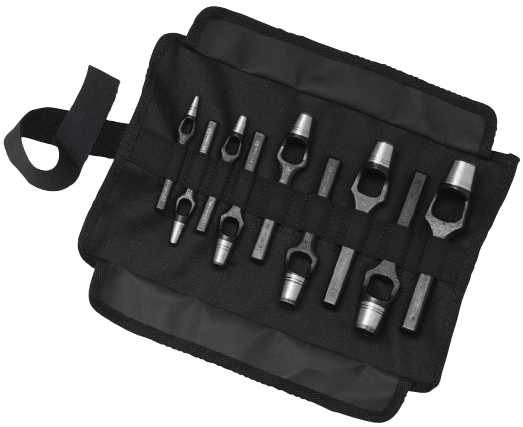
Wad punch

Design:
- made of tool steel, sturdy, forged shape
- with bright whistle
- inside and outside slightly conical
- black dip painted
- set in roll pouch



Use:
For the production of sealing rings or round cut-outs made of rubber, plastic, leather, felt, fabric, cork or similar materials

Note:
Use a wooden, leather or similar underlay pad when punching



N° article	585002 round	∅ mm	N° article	585002 round	∅ mm	N° article	585002 round	∅ mm
2	○	2	18	●	18	35	●	35
3	●	3	19	●	19	36	●	36
4	●	4	20	●	20	38	●	38
5	●	5	21	○	21	40	●	40
6	●	6	22	●	22	42	●	42
7	●	7	23	○	23	44	○	44
8	●	8	24	●	24	45	●	45
9	●	9	25	●	25	46	○	46
10	●	10	26	●	26	48	●	48
11	●	11	27	○	27	50	●	50
12	●	12	28	●	28	55	○	55
13	●	13	29	○	29	60	○	60
14	●	14	30	●	30	65	○	65
15	●	15	31	○	31	70	○	70
16	●	16	32	●	32	75	○	75
17	●	17	34	●	34			

N° article	585003 set	Contents
3-19	●	9 pieces size 3-19 (2 mm increasing)
2-20	●	19 pieces size 2-20 (1 mm increasing)
2-30	●	15 pieces size 2-30 (2 mm increasing)

Punching tool set in case

Design:
- holder with precision ground, exchangeable punching dies
- in one operation two punching dies with different diameters can be fixed in the holder

Use:
For quick manufacture of sealing rings and washers made of rubber, cardboard, leather, foams, artificial and fibre materials, lead etc.

Note:
Use wood, leather or similar material as punching pad

Lieferung im Koffer



N° article	585011 set	∅ mm	Contents
3-20	●	3 - 20	1 punching knife each for Ø: 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 mm
3-30	●	3 - 30	1 punching knife each for Ø: 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 mm
2-50	○	2 - 50	1 punching knife each for Ø: 2 | 3 | 4 | 5 | 6 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 mm | Centre point
2-60	●	2 - 60	1 punching knife each for Ø: 2 | 3 | 4 | 5 | 6 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 mm | Centre point

N° article	585012 Spare punching knife	∅ mm
2	○	2
3	○	3
4	○	4
5	○	5
6	○	6
7	○	7
8	○	8
9	○	9
10	○	10
12	○	12
14	○	14
16	○	16
18	○	18
20	○	20
22	○	22
24	○	24
26	○	26
28	○	28
30	○	30
32	○	32
34	○	34
36	○	36
38	○	38
40	○	40
42	○	42
44	○	44
46	○	46
48	○	47
50	○	50
52	○	52
54	○	54
56	○	56
58	○	58
60	○	60

Sheet metal punch (Screw hole punch)

Design:
- consisting of traction screw, punch and die
- made of tool steel, hardened and burnished
- all parts in highest precision

Use:
For punching round holes in sheet steel, V2A sheet metal, aluminium, copper and brass sheets up to 3 mm material thickness. Hand-held or hydraulically operated. Ideal for use in difficult to reach areas: Switch cabinets, large sheet metal panels, car body construction, dashboards etc.

Note:
Please lubricate pressure screw and die The pre-drilled hole should be approximately 1 mm larger than the pressure screw All round holes of the 586000/586020 up to size 60 can also be used with the hand-held hydraulic punch 586100 in conjunction with pull bolts 586180

Sz. 28.3 and **32** for punching stainless steel sinks to fasten ½" mixer taps

** These values can also be exceeded at the expense of the pressure screw

N° article	586000 with pressure screw	586020 with ball bearing mounted pressure screw	Ø mm	Borehole Ø mm	fitting for armoured conduit threads	fitting for threads	max. sheet thickness ** mm
12,5	○	○	12.5	11	PG7	M 12×1.5	1,5
15,2	●	○	15.2	11	PG9	–	1,5
16	●	●	16	11	–	M 16×1.5	2
16,5	○	○	–	11	–	–	2
18,6	●	●	18.6	11	PG11	–	2
20	○	●	20	11	–	M 20×1.5	2
20,5	●	●	20.5	11	PG13.5	–	2
22	●	○	22	11	–	–	2
22,5	●	●	22.5	11	PG16	–	2
25	●	●	25	11	–	M 25×1.5	2
25,5	○	○	–	11	–	–	2
28,3	●	○	28.3	11	PG21	–	2
30	○	●	30	11	–	–	2
32	●	●	32	11	–	M 32×1.5	2
32,5	○	○	–	20	–	–	3
35	○	●	35	20	–	–	3
37	○	○	37	20	PG29	–	3
38	○	○	38	20	–	–	3
40	○	●	40	20	–	M 40×1.5	3
40,5	○	○	–	20	–	–	3
45	○	●	45	20	–	–	3
47	○	○	47	20	PG36	–	3
50	○	●	50	20	–	M 50×1.5	3
50,5	○	○	–	20	–	–	3
54	○	○	54	20	PG42	–	3
60	○	●	60	20	PG48	–	3
63,5	○	○	–	20	–	M 63×1.5	3
70	○	○	70	20	–	–	3
80	○	○	80	20	–	–	3



586000 586020

Metal punch set

Design:
- consisting of 1 sheet metal punch each with pressure screw 586000 or 1 sheet metal punch each with ball bearing pressure screw 586020
- in steel sheet case



Fig. similar

N° article	586030 with standard pressure screw	Design / Content	586035 with ball bearing mounted pressure screw	Design / Content
12,5-37	○	**PG standard set for manual operation PG 7 - PG 29** 7 round punches Ø: 12.5 = PG 7 | 15.2 = PG 9 | 18.6 = PG 11 | 20.5 = PG 13.5 | 22.5 = PG 16 | 28.3 = PG 21 | 37 = PG 29 3 screws: M 6×30 | M 8×1×35 | M 10×1×55	○	**PG standard set for manual operation PG 7 - PG 29** 12.5 = PG 7 | 15.2 = PG 9 | 18.6 = PG 11 | 20.5 = PG 13.5 | 22.5 = PG 16 | 28.3 = PG 21 | 37 = PG 29 7 round punches Ø 12.5 = PG 7 | 15.2 = PG 9 | 18.6 = PG 11 | 20.5 = PG 13.5 | 22.5 = PG 16 | 28.3 = PG 21 | 37 = PG 29M 6×40 | M 8×1×40 | M 10×1×55
12,5-60	○	**PG standard set for manual operation PG 7 - PG 48** 10 round punches Ø: 12.5 = PG 7 | 15.2 = PG 9 | 18.6 = PG 11 | 20.5 = PG 13.5 | 22.5 = PG 16 | 28.3 = PG 21 | 37 = PG 29 | 47 = PG 36 | 54 = PG 42 | 60 = PG 48 5 screws: M 6×30 | M 8×1×35 | M 10×1×55 | M 12×1,5×70 | M 16×1,5×80	○	**PG standard set, S version for manual operation PG 7 - PG 48** 10 round punches Ø 12.5 = PG 7 | 15.2 = PG 9 | 18.6 = PG 11 | 20.5 = PG 13.5 | S 22.5 = PG 16 | S 28.3 = PG 21 | S 37 = PG 29 | S 47 = PG 36 | S 54 = PG 42 | S 60 = PG 48 5 ball bearing screws M 6×40 | M 8×1×40 | M 10×1×55 | M 16×1.5×55 | M 20×1.5×80 1 screw hole step drill
12,5-60,5	○	**metric. Standard set for manual operation M 12 - M 63** 8 round punches Ø: 12.5 = M 12 | 16.5 = M 16 | 20.5 = M 20 | 25.5 = M 25 | S 32.5 = M 32 | S 40.5 = M 40 | S 50.5 = M 50 | 63.5 = M 63 5 screws: M 6×30 | M 10×1×55 | M 16×1.5×55 | M 16×1.5×70 | M 20×1.5×80	–	–
12,5-63,5	–	–	○	**metric. Standard set for manual operation M 12 - M 63** 8 round punches Ø: 12.5 = M 12 | 16.5 = M 16 | 20.5 = M 20 | 25.5 = M 25 | S 32.5 = M 32 | S 40.5 = M 40 | S 50.5 = M 50 | 63.5 = M 63 5 screws: M 6×40 | M 10×1×55 | M 16×1.5×55 | M 16×1.5×70 | M 20×1.5×80 1 screw hole step drill

Spare pressure screw for hole punch for sheet metal hole punch

N° article	586040 Spare standard pressure screw	586045 Spare ball bearing pressure screw	Thread	Thread pitch mm	Screw length mm	for sheet metal hole punch size mm
M6×30	○	–	M6	–	30	12.7
M6×40	–	●	M6	–	40	12.7
M8×1×35	○	–	M8	1	35	15.2
M8×1×40	–	●	M8	1	40	15.2
M10×1×45	○	–	M10	1	45	16 - 25.5
M10×1×55	●	●	M10	1	55	28.3-16 | 16-38
M12×1,5×70	○	○	M12	1,5	70	40 - 50
M16×1,5×80	○	●	M16	1,5	80	32.5 - 40.5
M20×1,5×80	○	○	M20	1,5	80	50.5
M20×1,5×90	○	○	M20	1,5	90	63.5



Manual hydraulic punch

Design:
- operation pressure 600 bar
- 360° rotatable and swivellable
- ideal for hard-to-reach spaces
- for punches up to 63.5 mm Ø
- for box punches up to 36 x 62 mm
- fitting for all manufactures

Delivery:
In sheet steel box



N° article	586100	Contents
1	○	Punch complete in steel sheet case, 4 traction screws 8, 10, 12 and 16 mm, for round hole punches Ø 14 - 63.5 mm, 4 shims

Hydraulic traction bolt for hydraulic punch

Design:
- with thread 3/4 - 16 UNF
- fitting for hydraulic punch (586100)



N° article	586180	Thread	Thread pitch mm	Screw length mm
8	●	M8	1	88
10	●	M10	1	88
12	○	M12	1,5	103
16	○	M16	1,5	113

Deep jaw bar clamp

BESSEY

DIN 5117

Design:
- sliding and fixed arm in sturdy double-T form made of malleable iron
- 2-fold fluted hollow profile bar of steel
- trapezoid thread spindle of steel
- burnished, with movable pressure plate and ergonomically shaped wooden handle
- heavy version
- **clamping force up to 7,000 N**



N° article	587102 TGNT	Clamping range mm	Projection mm	Rail cross section mm
400/200	●	400	200	35 × 11
600/200	●	600	200	35 × 11
400/250	●	400	250	40 × 11
600/250	●	600	250	40 × 11
400/300	●	400	300	45 × 12
600/300	●	600	300	45 × 12
800/300	○	800	300	45 × 12
800/400	○	800	400	45 × 12

Bar clamp

BESSEY

DIN 5117

Design:
- sliding and fixed arm in sturdy double-T form made of malleable iron
- stable profiled rail with ribbing
- ergonomic shaped wooden handle
- with plastic protective caps on the clamping surfaces
- from size 500 no protective caps
- **clamping force up to 5,000 N**



N° article	586902 TPN	Clamping range mm	Projection mm	Rail cross section mm
100	●	100	50	15 × 5
120	●	120	60	20 × 5
160	●	160	80	25 × 6
200	●	200	100	27 × 7
250	●	250	120	29 × 9
300	●	300	140	32 × 10
400	●	400	175	32 × 10

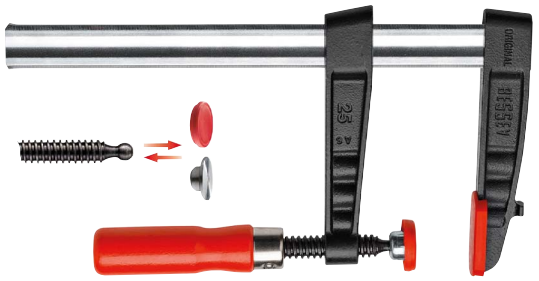
N° article	586902 TPN clamping force up to 6,500 N	Clamping range mm	Projection mm	Rail cross section mm
500	●	500	120	35 × 11
600	●	600	120	35 × 11
800	●	800	120	35 × 11
1000	●	1000	120	35 × 11
1250	●	1250	120	35 × 11
1500	○ +	1500	120	35 × 11

Bar clamp with anti-slip protection

DIN 5117

Design:
- sliding and fixed arm in sturdy double-T form made of malleable iron
- stable profiled rail with ribbing
- reinforced version for higher clamping force and larger spans
- ergonomic shaped wooden handle
- pressure pads replaceable without tools
- **with anti-slip protection**
- from size 500 no protective caps

TG: Clamping force up to 6,000 N
TGK: Clamping force up to 7,000 N



N° article	587002 TG	Clamping range mm	Projection mm	Rail cross section mm
120	●	120	60	20 × 5
160	●	160	80	25 × 6
200	●	200	100	27 × 7
250	●	250	120	29 × 9
300	●	300	140	32 × 10
400	●	400	175	32 × 10

N° article	587002 TGK	Clamping range mm	Projection mm	Rail cross section mm
500	●	500	120	35 × 11
600	●	600	120	35 × 11
800	●	800	120	35 × 11
1000	●	1000	120	35 × 11
1250	●	1250	120	35 × 11
1500	● +	1500	120	35 × 11
2000	○ +	2000	120	35 × 11
2500	○ +	2500	120	35 × 11

All-steel screw clamp

DIN 5117

Design:
587200:
- made of profile steel, tempered and galvanised
- tempered sliding and fixed arms for resilient, elastic clamping
- with smooth-running galvanised spindle, movable pressure plate and hand oriented wooden handle
- **clamping force up to 5,000 N**

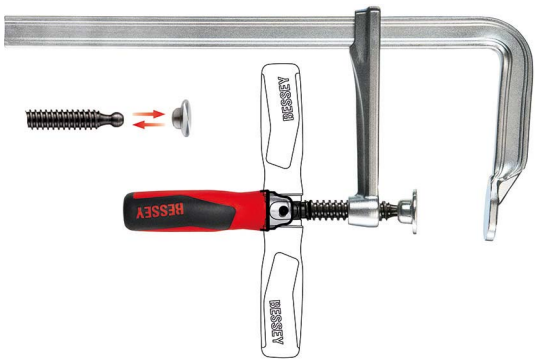
587205:
- tempered sliding and fixed arms for resilient, elastic clamping
- with 2-component plastic handle
- due to optimised rail profile **20 % increased clamping power** per spindle turn
- maximum safety through straight transmission along the sliding arm
- from 80 mm jib length pressure plates exchangeable without tools
- **clamping force up to 6,000 N**



N° article	587200 GS	587205 GZ-2K	Clamping range mm	Projection mm	Rail cross section mm
100	●	●	100	60	11.5 × 5.7
120	●	●	120	60	13.5 × 6.5
160	●	●	160	80	16 × 7.5
200	●	●	200	100	19.5 × 9.5
250	●	●	250	120	22 × 10.5
300	●	●	300	140	25 × 12
400	●	●	400	120	25 × 12
500	●	●	500	120	25 × 12
600	●	●	600	120	25 × 12
800	●	●	800	120	27 × 13
1000	●	●	1000	120	27 × 13
1250	–	●	1250	120	28 × 11

All-steel screw clamp with folding handle

Design:
- made of profile steel, tempered and galvanised
- tempered sliding and fixed arms for resilient, elastic clamping
- with 2-component plastic handle with folding function for additional leverage effect when tightening
- the collapsible handle can be folded by 90° and rotated by 360°
- pressure pads replaceable without tools
- **clamping force up to 5,000 N**

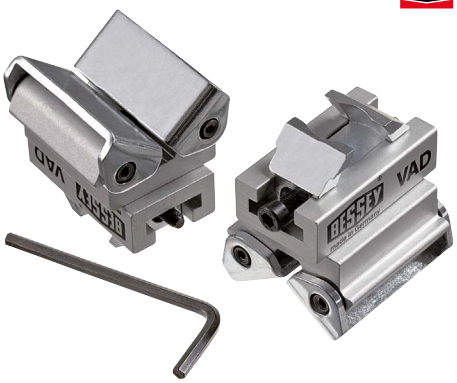


N° article	587207 GZ-KG	Clamping range mm	Projection mm	Rail cross section mm
250	●	250	120	24.5 × 9.5
300	●	300	120	24.5 × 9.5
400	●	400	120	24.5 × 9.5
500	●	500	120	24.5 × 9.5
600	●	600	120	24.5 × 9.5

Variable multi angle pad

Design:
- adapts especially to round, oval and angular workpieces
- stepless angle adjustment from 60° inside to 60° outside
- suitable for original BESSEY screw clamps TG made of malleable cast iron as well as all-steel clamps GZ and GMZ from 100 mm reach





N° article	587220 VAD	Clamping surface width mm
0010	●	45

One-handed clamp EZS

Design:
- toolless conversion for spreading thanks to intelligent release mechanism in upper section
- ergonomically shaped 2-component plastic handle with pump lever behind the burnished rail
- universally applicable, comfortable one-handed operation
- with protective pads on the clamping surfaces
- **clamping force up to 2,000 N**



N° article	587301 EZS	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
150	●	150	80	19 × 6	0,72
300	●	300	80	19 × 6	0,83
450	●	450	80	19 × 6	0,93
600	●	600	80	19 × 6	1,04

One-handed clamp with rotating handle

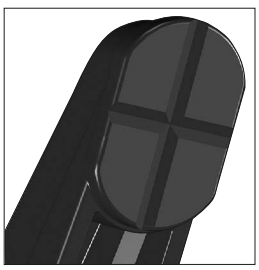
Design:
- 12-stage locking mechanism for securely holding the selected handle position
- large clamping surfaces with removable protective caps
- **innovative 360° rotation mechanism enables the handle unit to be positioned around the rail**
- clamping force up to 1,400 N
- reversible for spreading
- no tools required thanks to simple release mechanism with push-button on the top section
- one-handed operation without effort



N° article	587303 EZ360	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
150	●	150	80	18 × 5	0,78
300	●	300	80	18 × 5	0,87
450	●	450	80	18 × 5	0,96
600	●	600	80	18 × 5	1,06

Geared clamp GearKlamp

Design:
- 2K plastic handle positioned around the rail for use of the clamp in confined spaces
- smooth-running trapezoidal thread spindle with swivelling pressure plate
- quick slide button for fast shifting of the sliding bar
- **patented mechanism that separates the handle from the spindle** positioned around the rail, secure hold even of round, pointed and angular parts due to cross prism on the upper part
- **clamping force up to 2,000 N**



cross prism



N° article	587305 GK	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
150	●	150	60	25 × 12	0,61
300	●	300	60	25 × 12	0,71
450	●	450	60	25 × 12	0,82
600	●	600	60	25 × 12	0,94

All-steel lever clamp
for uniform tension build-up

Design:
- stationary jaw made of original BESSEY profile, bent, with forged-on pressure plate
- sliding jaw, drop-forged, tempered and galvanised
- ratchet mechanism ensures metered, fast and vibration-proof clamping
- eccentric made of sintered steel, extreme wear-proof
- ergonomic shaped clamping lever, plastic coated
- swivelling steel pressure plate, case-hardened and electro-galvanised
- **clamping force up to 8,500 N**

Use:
For efficient clamping or vibration-proof holding of parts with high clamping pressure



N° article	587302 GH	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
160	●	160	80	17.5 × 6.8	0,64
200	●	200	100	22 × 8.5	1,11
250	●	250	120	24.5 × 9.5	1,44
300	●	300	140	28 × 11	2,22
400	●	400	120	28 × 11	2,39
500	●	500	120	28 × 11	2,61
600 NEW	○	600	120	28 × 11	2,78
800 NEW	●	800	120	28 × 11	3,14
1000 NEW	●	1000	120	28 × 11	3,57

Magnesium lever clamp

Design:
- stationary and sliding jaw made of magnesium die casting, surface-coated
- **very light-weight**
- stationary jaw with cross serration, removable plastic cap
- pivotable pressure plate made of glass fibre reinforced polyamide
- VIBRAFIX multi-stage locking mechanism for dosed and vibration-proof clamping
- the ergonomically shaped clamping arm is unbreakable
- **clamping force up to 1,200 N**

Use:
The fixed bracket with cross prism also holds round, pointed or angular parts securely.



N° article	587310 KLIKlamp	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
120	●	120	80	20 × 5	0,26
160	●	160	80	20 × 5	0,29
200	●	200	80	20 × 5	0,32
250	●	250	80	20 × 5	0,35
300	●	300	80	20 × 5	0,38
400	●	400	80	20 × 5	0,45

Spring clamp

Design:
- movable contact surfaces for optimum contour adaptation
- light and handy design, ergonomic handles
- maximum stability



N° article	587312 Clippix XC	Clamping range mm	Projection mm	Poids kg
25	●	25	30	0,02
35	●	35	37	0,05
50	●	50	50	0,12
75	●	75	70	0,18

All-steel high-performance clamp
heavy version

Design:
- heavy-duty clamp for heavy and heaviest stress
- the optimised profile guarantees 20% increased clamping power
- fixed jaw and pressure plate made of one piece
- sliding jaw in U-shape forged of tempered steel
- movable, exchangeable heat-resistant special pressure pad (A) with sintered steel inlay can be swivelled up to 35°
- **for max. clamping pressure up to 12,000 N** (equivalent to 40 Nm torque at 150 mm span width)

Use:
For steelwork, shipbuilding, engineering and vehicle construction



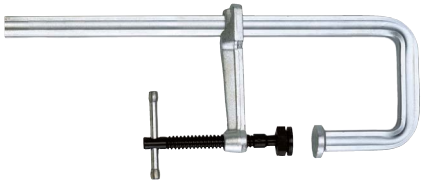
N° article	587500 SGM	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
250	●	250	140	34 × 13	2,5
300	●	300	140	34 × 13	2,5
500	●	500	140	34 × 13	3,4
800	●	800	140	34 × 13	4,4
1000	●	1000	140	34 × 13	4,9
1500	● +	1500	140	34 × 13	6,5

All-steel high-performance U-shaped clamp heavy version

Design:
- stationary jaw annealed and extremely torsion-resistant
- heat-resistant, movable special pressure plate (up to 35°)
- sliding bar made of die-forged Q & T steel
- suitable for step-over clamping without supplements, in particular of T or double-T profiles
- **clamping force up to 12,000 N** (tightening torque 40 Nm)

Use:
For steelwork, shipbuilding, engineering and vehicle construction



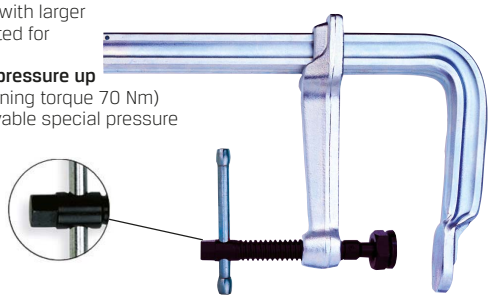


N° article	587510 SGU	Clamping range mm	Projection mm	Rail cross section mm	Poids kg
300	●	300	140	30 × 15	3,75

All-steel high-performance clamp

Steel construction clamp, extra heavy version

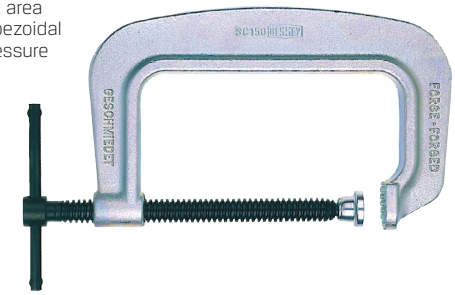
Design:
- like 587500, albeit with larger rail profile, thus suited for heaviest tasks
- **for max. clamping pressure up to 22,000 N** (Tightening torque 70 Nm)
- heat-resistant, movable special pressure plate (up to 35°)
- spindle end with 19 mm hexagon



N° article	587550 STBM	Clamping range mm	Projection mm	Rail cross section mm	Weight kg
300	●	300	175	40 × 20	5,2
400	●	400	175	40 × 20	5,7
500	●	500	175	40 × 20	6,4
600	●	600	175	40 × 20	6,8
1000	○	1000	175	40 × 20	8,8

C-clamp

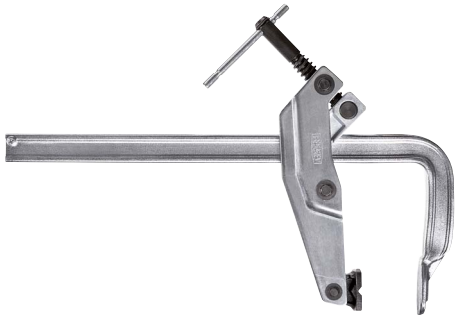
Design:
- die-forged, annealed
- free access to the work area
- strong spindle with trapezoidal thread and movable pressure plate
- **clamping force up to 22,000 N**



N° article	587559 SC	Clamping range mm	Projection mm	Weight kg
60	●	60	55	0,57
80	○	80	65	0,99
100	○	100	75	1,4
120	○	120	85	2,1
150	●	150	95	2,35
200	○	200	105	4

Claw clamp

Design:
- external spindle, protected against weld spatters
- free access to the work area
- ideal for clamping and spreading round or square workpieces
- sturdy pressure pad swivels up to 30°
- **clamping force up to 7,500 N**



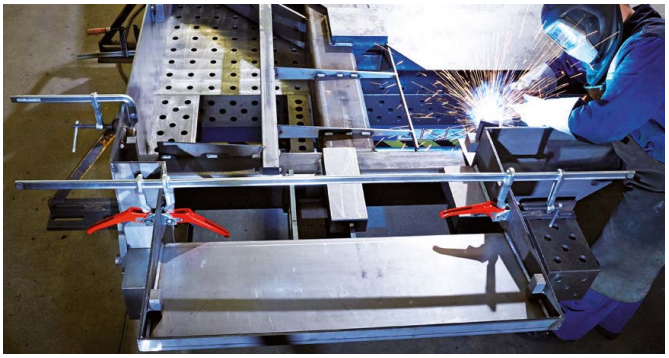
N° article	587558 GRA	Clamping range mm	Projection mm	Rail cross section mm
300	○	300	120	28 × 11
600	○	600	120	28 × 11
1000	○	1000	120	28 × 11

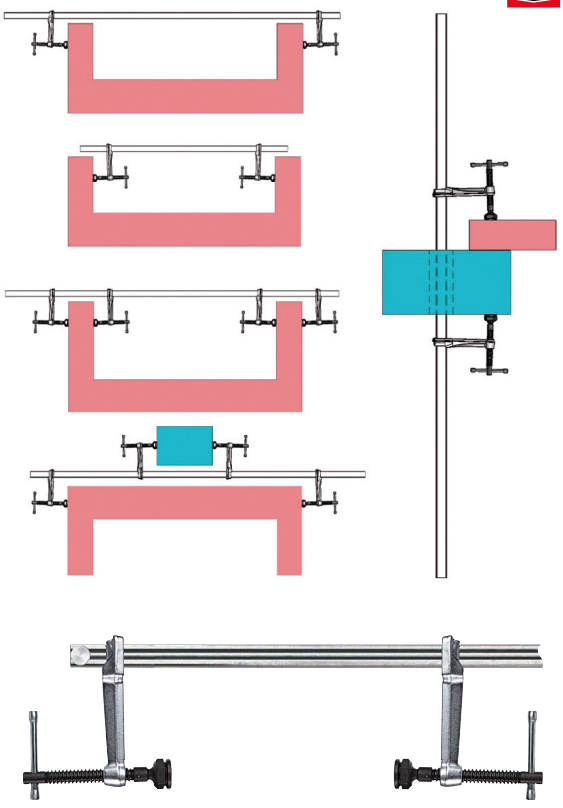
Variable high-performance clamp set

Design:
- central positioning on the workpiece prevents tilting
- long service life thanks to heat-resistant special pressure plate with sintered steel insert, pivotable up to 35°
- toolless conversion for spreading
- the clamp can be pushed through an opening in the workpiece
- versatile application possibilities thanks to interchangeable skid bars in various designs

Type SLV: Clamping force up to 6,500 N
Type GLV: Clamping force up to 9,000 N

Note:
Other types of sliding arms available as option





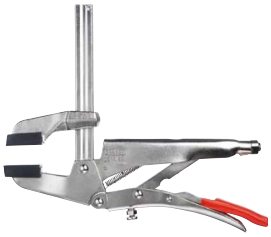
N° article	587560 SLV	Clamping range mm	Projection mm	Rail cross section mm
1000	○	1000	120	30 × 15
1500	○	1500	120	28 × 11
2000	○	2000	120	28 × 11

N° article	587562 GSV	Clamping range mm	Projection mm	Rail cross section mm
3000	○	3000	140	28 × 11

Locking pliers

Design:
- heavy steel parallel grip pliers
- parallel clamping surfaces
- prismatic recess for small round parts
- including protective caps for gentle clamping of sensitive surfaces





N° article	587564 GRZ	Clamping range mm	Reach mm	Weight kg
100	●	100	65	1
200	●	200	65	1,2

Design:
- C-grip pliers made of steel
- for pinpoint and double-sided step-over clamping





N° article	587566 GRZC	Clamping range mm	Reach mm	Clamping length mm	Weight kg
110	●	110	80	40	1,1

Design:
- pipe grip pliers made of steel
- for holding round bodies of the same diameter
- including protective caps
- gentle clamping of sensitive surfaces
- suitable for tack welding, temperature resistant up to 200 °C

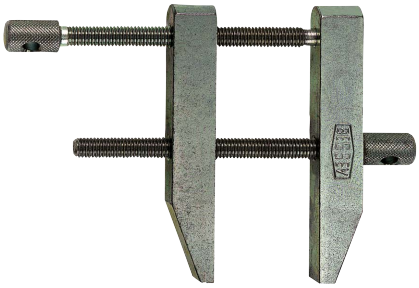




N° article	587567 GRZRO	Clamping range mm	Reach mm	Weight kg
110	●	110	65	1,3

Parallel screw clamp

Design:
- double spindle guide
- exact parallel movement of both clamping surfaces

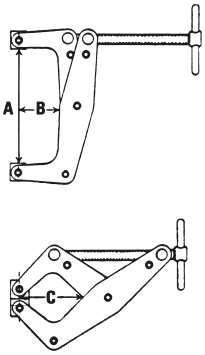


N° article	587570 PA	Clamping range mm	Projection mm	Weight kg
28	●	36	19	0,08
40	●	46	26	0,1
55	●	60	35	0,18
70	●	87	50	0,43
105	●	116	72	0,92

Toggle speed clamp

Design:
- for universal internal and external clamping of a wide variety of workpiece shapes

4 different surfaces
- 1 grooved
- 1 with V prismatic surface
- 1 cross prism surface
- 1 smooth
- **clamping force up to 3,500 N**
- toggle handle
- trapezoidal threaded spindle, burnished



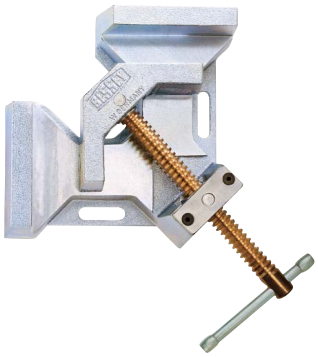


N° article	586890	Clamping range A mm	Clamping depth opened B mm	Clamping depth closed C mm	Clamping pad width mm
25	●	25	15	20	8
50	●	50	33	42	12
75	●	75	35	49	16
115	●	115	58	78	22
150	●	150	110	128	22

Angle clamp

Design:
- body and jaws made of high-quality cast iron, galvanised
- trapezoid threaded spindle made of s teel, copper-plated, hence no adhesion of welding beads
- spindle nut flexible mounted
- push-through toggle handle for high mping force
- lateral long slots for clamping on welding and machine tables
- exact 90° angle



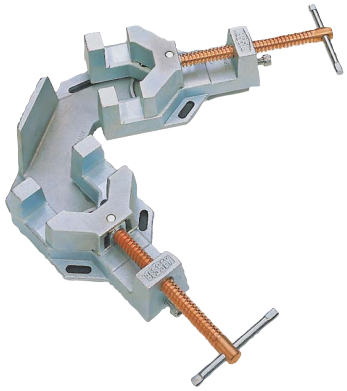


N° article	587700 WSM	Clamping range mm	Continuity mm	Jaw height mm	Jaw width mm	Weight kg
90	●	2× 90	60	35	110	3,58
120	●	2×120	100	61	120	7,35

Welding clamp set

Design and use:
- solid body and base plate made of high quality cast iron
- copper-plated spindle prevents adhesion of weld spatter
- angle range continuously adjustable from 5° - 180°
- clamping aid for differently strong components at arbitrarily adjustable angles





N° article	587702 SM 10	Clamping range mm	Jaw width mm	Weight kg
100-SET	●	100	35	10,66

Clamping element for welding table TWV/TW

Design:
- tempered profile
- sliding arm for springy and elastic tensioning
- infinitely adjustable outreach
- smooth trapezoidal thread spindle
- pressure plate replaceable without tools
- for position-accurate, individual clamping
- **clamping force**
  16 mm bolt up to 3,000 N
  28 mm bolt up to 5,500 N



fixed outreach

variable outreach

N° article	587800 with 2-component handle	Bolt ∅ mm	Clamping height mm	Reach mm	Rail cross section mm	Design
16/100	○	16	200	100	22 × 8.5	fixed outreach
16/150	○	16	200	30 - 150	22 × 8.5	variable outreach
28/120	○	28	300	120	28 × 11	fixed outreach
28/140	○	28	300	140	28 × 11	fixed outreach
28/175	○	28	300	110 - 175	28 × 11	variable outreach

Design:
- tempered profile
- sliding arm for springy and elastic tensioning
- infinitely adjustable outreach
- smooth trapezoidal thread spindle
- pressure plate replaceable without tools
- for position-accurate, individual clamping
- with lever handle for fast and vibration-proof clamping
- **clamping force**
  16 mm bolt up to 3,000 N
  28 mm bolt up to 5,500 N



fixed outreach



variable outreach

N° article	587802 with lever handle	Bolt ∅ mm	Clamping height mm	Reach mm	Rail cross section mm	Design
16/100	○	16	200	100	22 × 8.5	fixed outreach
16/150	○	16	200	60 - 150	22 × 8.5	variable outreach
28/120	○	28	300	120	28 × 11	fixed outreach
28/140	○	28	300	140	28 × 11	fixed outreach
28/175	○	28	300	110 - 175	28 × 11	variable outreach

Design:
- adapts especially to round, oval and angular workpieces
- stepless angle adjustment from 60° inside to 60° outside

Type 16VAD/28VAD:
- with bolt
- for fast alignment and fixing of the workpiece at the welding table

Type VAD:
- without bolt
- for variable displacement at the welding table



N° article	587810 Vario table clamping attachment	Bolt ∅ mm	Clamping surface width mm
16VAD	○	16	45
28VAD	○	28	45
VAD	○	–	45

Design:
- Accessories for speed clamps with horizontal base
- with bolts for direct use on a welding table
- without bolts for screwing on the extension TWX





N° article	587812 Quick release adapter	Bolt ∅ mm	Hole for fastening screw	fitting for
16	○	16	M5	299350 45 | 299350 65 | 299650 25
28	○	28	M6	299350 45 | 299350 65 | 299650 25

Clamping element for welding table TWV/TW

Design:
- accessories for quick-release adapters
- round material can be steplessly lowered into the table, using the positioning ring



N° article	587814 Extensions	Bolt ∅ mm	Adjustment range mm	fitting for
16	○	16	15 - 200	587812 16 | 587810 16VAD | 587810 VAD
28	○	28	15 - 300	587812 28 | 587810 28VAD | 587810 VAD

Design:
- accessories for extension
- steplessly swivellable spindle from -52° to +52°
- lockable trapezoidal nut for secure fixing of the workpiece
- 2-component plastic handle with 175 mm long spindle
- **clamping force up to 3,000 N**



N° article	587815 Swivel adapter	Bolt ∅ mm	Clamping range mm	fitting for
28	○	28	160	587814 28

Ceiling and assembly support

Design:
- loadable up to a maximum of 350 kg with fully retracted telescopic pole
- sturdy construction thanks to heavy-duty steel tubes and non-slip PVC contact surfaces
- one-hand operation thanks to 2-component plastic handle with pump mechanism
- quick-slide button for fast retraction and extension of the telescopic pole
- adjustable holding force by turning the support on the handle
- can also be used on slopes thanks to infinitely variable swivelling contact surfaces from -45° to +45



NEW





N° article	587818 STE	Adjustment range mm	Load capacity with min. extension length kg	Load capacity with max. extension length kg	Weight kg
250	●	1450 - 2500	350	160	3,3
300	●	1700 - 3000	350	110	3,8
370	●	2070 - 3700	350	65	4,5

Ceiling mount

Design:
- accessories for ceiling supports with an outer diameter of the telescopic inner tube of 25 mm and 28 mm
- to increase the support surface
- even force distribution thanks to three-winged contact surfaces
- quick, tool-free assembly

NEW



N° article	587818 STE-DS	fitting for	Weight kg
0005	●	ST, STE	0,42

Design:
- accessories for ceiling supports with an outer tube diameter of 29 mm and 32 mm
- stable stand
- quick, tool-free assembly
- easy and stable construction

NEW



N° article	587818 STE-BS	fitting for	Weight kg
0010	●	ST, STE	1,66

Design:
- for convenient transport and protected storage of two ceiling and assembly supports and the associated accessories (STE-LH and STE-SP35)
- comfortable thanks to padded carrying strap
- 4 outer pockets for additional storage space
- hard-wearing material

NEW



N° article	587818 STE-BAG	fitting for	Weight kg
0015	○	STE300, STE370	1

Hand vices with reinforced legs

Design:
- legs made of high-strength alloyed tempered steel, galvanised
- with wide jaw and ground prism
- joint guide with captive round steel splay spring
- versatile trapezoid spindle easy exchangeable
- with washer and wing nut
- legs reinforced



N° article	588000	Clamping range mm	Jaw width mm	Spindle ∅ mm	Total length mm
100	●	18	40	8	100
120	●	22	45	8	120
130	●	25	48	9	130
145	●	28	52	11	145
160	●	35	58	11	160
180	●	40	60	13	180

Heavy-duty hand vices with reinforced legs

Design:
- legs made of high-strength alloyed tempered steel, galvanised
- with wide jaw and ground prism
- joint guide with captive round steel splay spring
- versatile trapezoid spindle easy exchangeable
- extra strong, sturdy design with hexagon nut and crank
- legs reinforced



N° article	588100	Clamping range mm	Jaw width mm	Spindle ∅ mm	Total length mm
180	●	40	70	18	180
200	●	50	80	18	200
250	●	60	90	20	250

Vice jaws with reinforced legs

Design:
- legs made of high-strength alloyed tempered steel, galvanised
- with wide throat, jaws without prism grooving
- joint guide with captive round steel splay spring
- throat 45° inclined
- without spindle
- legs reinforced



N° article	588300	Clamping range mm	Jaw width mm	Total length mm
125	●	30	30	125
150	●	35	40	150

Small hand vice with wing nut Watchmaker´s hand vice

Design:
- legs made of high-strength alloyed tempered steel, galvanised
- with fine jaws, for clamping particularly fine workpieces
- joint guide with captive round steel splay spring
- inside of the jaw grooved with prismatic incision
- good grip due to knurled handle
- with washer and wing nut

S: With pointed jaws
B: With wide jaws


115S and 130S


115B and 130B

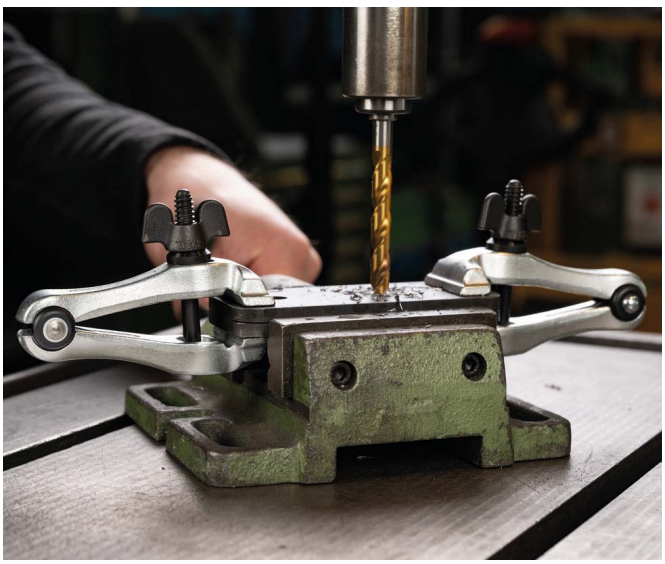
N° article	588350	Jaw width mm	Total length mm
115B	●	16	115
130B	●	20	130
115S	○	7	115
130S	○	10	130

Tool Holder with through hole

Design:
- with rigid clamping part and clamping nut
- shank made of brass
- grooved and nickel-plated



N° article	588450	Clamping range mm	Total length mm
0-1,0	●	0 - 1	80
1,0-2,0	●	1 - 2	80



Parallel vice Leinen Junior

LEINEN

Design:
- made of high-strength solid grey cast iron
- with cast-on tubular clamping jaws, backward opening
- with exchangeable jaws
- parallelism of jaws in toolmaker quality
- play-free moving of upper and lower part due to precision manufactured dovetail guide



N° article	588480 Leinen Junior, blue	588481 Leinen Junior, grey	588482 Leinen Junior green	Jaw width mm	Clamping range mm	Clamping length mm	for tube ∅ (tubular chuck jaws)	Weight kg
100	○	○	●	100	140	84	16 - 75	12,5
125	●	○	●	125	180	88	16 - 68	24
150	○	○	● +	150	280	98	25 - 65	41

Design:
360° pivotable



N° article	588483 Turntable Leinen junior 360° rotatable blue	588484 Turntable Leinen junior 360° rotatable grey	588485 Turntable Leinen junior, 360° rotatable green	for jaw width mm
100	○	○	●	100
125	○	○	●	125
150	○	○	●	150

Design:
- made of high-strength solid grey cast iron
- with cast-on tubular clamping jaws, backward opening
- with exchangeable jaws
- parallelism of jaws in toolmaker quality
- play-free moving of upper and lower part due to precision manufactured dovetail guide



N° article	588480 Leinen Junior, blue	588481 Leinen Junior, grey	588482 Leinen Junior green	Jaw width mm	Clamping range mm
100	○	○	●	100	140
125	●	○	●	125	180
150	○	○	●	150	280

Design:
360° pivotable

N° article	588487 Pair of replacement jaws	Jaw width mm
100	●	100
125	●	125
150	○	150



Parallel vice

FZA

Design:
- **opening to the front** forged of steel
- tubular clamping jaws forged-on and hardened
- inductive hardened jaws, sliding parts and anvil
- ground surfaces, sliding parts and anvil
- adjusting screws
- knurled jaws

588610: 360° swivelling, with two locking levers

588615: The vices can be easily, quickly and safely brought to a height of 215 mm by a gas spring and are rotatable by 360°. The rotary lift may be used for other types of vices


588601


588604


588610


588615

N° article	588601 FZA parallel vice with fixed jaws	588602 FZA parallel vice with exchangeable jaws	Jaw width mm	Clamping range mm	Clamping length mm	for tube ∅ (tubular chuck jaws) mm	Weight kg
100	●	–	100	100	50	14 - 38	5,05
120	●	●	120	120	65	15 - 46	10,3
140	●	●	140	180	90	20 - 100	19
160	●	○ +	160	210	100	22 - 100	28,5

N° article	588604 Pair of spare jaws, knurled (only for 588602)	588610 Turntable FZA	588615 Rotary lift FZA	for jaw width mm
100	–	○	○	100
120	○	○	●	120
140	○	○	●	140
160	○	○	○	160

Parallel vice HEUER

BROCKHAUS HEUER

Design:
- **entirely made of steel, forged**
- **opening to the front** with forged-on, hardened pipe clamping jaws underneath the normal clamping jaws
- high stability due to strong, centre-mounted spindle
- high and optimally distributed clamping force
- centric - without special tools - adjustable prism guide, very well protected against damage and dirt
- large guide surfaces machined on all sides
- protected and machined precision spindle bearing
- fast opening and closing thanks to two-gear trapezoidal thread spindle
- large deep clamping option due to compact dimensions
- surface-hardened and milled clamping jaw surfaces, with reinforced anvil base for straightening work



588600



588620



588650



588680

N° article	588600 HEUER, with fixed jaws	588620 HEUER, with exchangeable jaws	Jaw width mm	Clamping range mm	Clamping length mm	for tube ∅ (tubular chuck jaws)	Weight kg
100	●	–	100	125	50	16 - 30	4,5
120	●	●	120	150	65	16 - 55	9
140	●	●	140	200	80	27 - 70	16
160	●	●	160	225	100	27 - 100	27
180	●	–	180	225	100	27 - 100	29

N° article	588650 Turntable	588680 Spare jaws (only for 588620)	Jaw width mm
100	○	–	100
120	●	○	120
140	○	○	140
160/180	●	–	160
160	–	○	160

Height adjuster HEUER-LIFT

BROCKHAUS HEUER

Design and use:
- even better clamping force through special surface treatment of the column plus a novel clamping bracket
- adjustment to the body height of the operator is vital for ergonomic working
- effortless and easy adjustment of vices by 200 mm, rotatable by 360°
- a gas pressure spring, attuned to the respective vice weight, makes the vice practically weightless; hence it can be brought into the desired working position almost without the need for force after releasing the clamping lever
- suitable for HEUER vice

Delivery:
Without vice



N° article	588700	for jaw width mm
100	○	100
120	●	120
140	●	140
160	●	160
180	○	180

Fold & stow adjustable height stand HEUER

BROCKHAUS HEUER

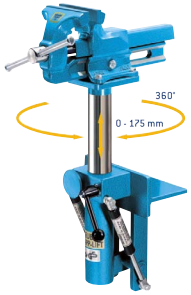
Design:
- solid steel construction, easy handling
- in working position the vice is stable and vibration-free connected to the bench, however it may be folded away in brief below the bench
- two telescopic shock absorbers keep the vice in equilibrium in any position and thus reduce the risk of injury
- suitable for HEUER vices and many other brands

HEUER folding lift:
Effortless and safe height adjustment of vices by approx. 175 mm, rotatable through 360°.

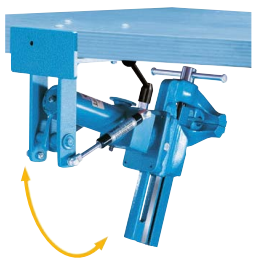
Delivery:
Without vice



588800



588820



N° article	588800 Folding device HEUER-Klapp	588820 Folding lift HEUER-Klapp	for jaw width mm	Weight HEUER Klapp kg	Weight HEUER folding lift kg
120	○	●	120	11.5	14
140	○	○	140	11.9	14

Parallel vice

BROCKHAUS HEUER

Design:
- forged entirely from steel
- with 4.8 kg **extremely lightweight** (at 10 kN clamping force)
- **innovative quick adjustment of clamping width** from 0-125 mm at the touch of a button
- quick adjustment of clamping width by pulling the front jaw
- separate display of opening width facilitates presetting
- a pressure spring guarantees safe locking
- with exchangeable and reversible jaws **(one clamping face smooth, one serrated)**
- tubular chuck jaws integrated in both front and rear jaws
- 588831 120-SET in practical case set, with table clamp and various magnetic jaws

Combinable with:
HEUER jaws (120 mm 588838 F-N)
HEUER table clamp (100 mm 588835 size 100)
HEUER rotary plate (100 mm 588650 size 100)

Scope of delivery 588831 120-SET:
HEUER Compact parallel vice, table clamp, 1 pair each of magnetic protection jaws type N (neutral), type F (fibre), type G (rubber) and type P (prisms)



N° article	588831 HEUER compact 2.0	Jaw width mm	Clamping range mm	Clamping length mm	for tube ∅ (tubular chuck jaws)	Weight kg
120	●	120	125	65	15 - 50	4,8
120-SET	●	–	–	–	–	–

Design:
- for parallel vice 588831
- suited to attach the vice in a flexible way to the worktop
- without the need to drill holes it is quickly mounted to or removed from the worktop
- a strong wing screw offers easy and safe handling

Table clamp:
1: For HEUER Compact (588831) with jaw width 100 mm or 120 mm
2: For HEUER vices with jaw width 120 mm



N° article	588835 Table clamp	for jaw width mm	Table thickness mm	Weight kg
1	●	100	10 - 60	1
2	●	120	10 - 60	1

Protective jaw for jaw width 120 mm

BROCKHAUS HEUER

Design:
- the profile is right-angled and plane parallel
- integrated special magnets for secure hold
- magnetic force does not penetrate up to the clamping surfaces (no magnetisation of the workpieces)

F: Clamping face made of **fibre**, for clamping workpieces (also heated ones) with fine milled, fine planed, ground or polished surfaces
P: Clamping face made of **Aluminium**, with prisms, for clamping workpieces in various forms
G: Clamping face made of **rubber**, smooth, for clamping thin-walled tubes and shaped pieces, wood and plastic parts
N: Clamping face made of **Aluminium**, profiled, for clamping coarse to medium-fine machined workpieces

Scope of delivery set:
1 pair of protective jaws type G,
1 pair of protective jaws type P,
1 pair of protective jaws type N,
1 pair of protective jaws type F,
1 nylon bag with Velcro fastener and two eyelets for hanging.



N° article	588838	Jaw width mm
F	●	120
P	●	120
G	●	120
N	●	120
SET	●	120

Parallel vice

Design:
- forged of steel
- opening to the front
- exchangeable tube clamping jaws
- inductive hardened jaws, sliding parts and anvil
- ground surfaces, sliding parts and anvil
- adjusting screws
- knurled jaws

588870: 360° swivelling, with two locking levers

588875: The vices can be easily, quickly and safely brought to a height of 215 mm by a gas spring and are rotatable by 360°. The rotary lift may be used for other types of vices



588860



588864



588870



588875

N° article	588860 Mondial	588862 Mondial, with tube jaws	Jaw width mm	Clamping range mm	Clamping length mm	for tube ∅ (tubular chuck jaws) mm	Weight kg
100	●	○	100	125	65	12 - 55	6,4
125	●	●	125	150	80	12 - 75	10,1
150	●	●	150	200	100	17 - 90	17,5
175	●	●	175	220	120	17 - 120	25,5

N° article	588864 Spare tube clamping jaws (for 588860/588862)	588870 Turntable Mondial	588875 Rotary lift Mondial	for jaw width mm
100	○	○	○	100
125	○	●	●	125
150	○	●	●	150
175	○	○	○	175

Technician´s vice

Design:
- consisting of bottom part with ball joint
- mounting shank part with serration to receive the clamping devices
- vice, clamp and mounting plate made of special light-metal alloy, hammer-blow enamelled
- covered threaded steel spindle; clamping jaws open to the front
- horizontal, vertical, can be locked at any angle by means of the quick-release lever
- additionally pivotable from about 15° up to 360°
- the ball joint allows rotation of 360° and turning of 90° at the same time

A: With mounting plate
B: With bench clamp



46A/80A



46B/80B

N° article	588960 with ball joint	Jaw width mm	Clamping range mm	Clamping length mm	Design of jaws	Weight kg
46A	●	46	70	35	Plastic	1,71
46B	●	46	70	35	Plastic	2
80A	●	80	100	52	Aluminium	5
80B	●	80	100	52	Aluminium	5,8

N° article	588970 Spare pair of plastic clamping jaws	Jaw width mm
46A/B	●	46
80A/B	○	80

N° article	588980 Spare pair of aluminium clamping jaws	Jaw width mm
46A/B	●	46
80A/B	○	80

Parallel vice

LEINEN

Design:
- max. stability through high-performance solid grey cast iron
- with exchangeable knurled jaws
- absolutely play-free moving of upper and lower part due to precision manufactured dovetail guide
- safe guidance even in a wide open state by specially designed "long" top part
- parallelism of jaws in toolmaker quality
- **backward opening**
- high impact strength, no jaw position change and loosening when subjected to impact loads

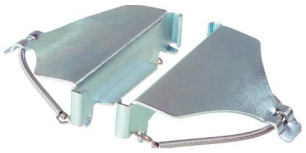


N° article	588910 LEINEN, with bracket	Jaw width mm	Clamping range mm	Clamping length mm	Clamping range of the bracket mm	Weight kg
60	●	60	65	32	50	2,8
80	●	80	100	60	70	7,3

N° article	588912 Spare pair of clamping jaws, knurled	Jaw width mm
60	○	60
80	○	80

Protective jaw for all types of vices

Design:
- the gentle-touch vice jaws are hooked to the vice quickly and easily
- fibre, polyamide or aluminium jaws are used for gentle clamping of the workpieces



589050



589060



589070



589080

N° article	589050 Mounting bracket for protective jaws	589060 Pair of fibre inserts	589070 Pair of polyamide inserts	589080 Pair of aluminium inserts	Jaw width mm
100	●	●	●	●	100
125	●	●	●	●	125
150	●	●	●	●	150

Vice top jaw

HA-SO

Design:
Bar of 1 metre length to be cut to the desired dimension

589150: Made of light metal, pressed, not cast, therefore smooth and without cavities in the metal fabric Dimensions (angle) 55×32.5 mm.
589170: Made of plastic in proven PVC amalgamation, softer than aluminium but dimensionally more stable Dimensions (angle) 30×30 mm.



589150



589170

N° article	589150 made of light metal	589170 made of plastic	Length mm
1M	●	●	1.000

Magnetic vice top jaw

HA-SO

Design:
- with sturdy aluminium body and integrated bar magnets
- square and plane parallel profile, well adjusting to the vice without reducing its accuracy
- due to built-in magnets, the jaws adhere securely to the vice
- no penetration of the magnetism to the outer surfaces, thus no attracting of iron chips or magnetisation of the workpieces

Type N: Clamping surfaces made of special aluminium, horizontal prism 7 mm
Type P: like 589300, but with prismatic clamping surfaces 120°/90°, vertical and horizontal, prism width 12 mm and 7 mm
Type F: with fibre clamping surfaces, for clamping fine-milled, ground or polished workpieces
Type G: with clamping surfaces made of special rubber, for clamping thin-walled tubes and shaped pieces, wood and plastic parts



589300



589310



589320



589340

N° article	589300 Pair of magnetic aluminium jaws, type N	589310 Pair of magnetic aluminium V jaws, type P	589320 Pair of magnetic fibre jaws, type F	589340 Pair of magnetic rubber jaws, type G	Jaw width mm
100	●	●	●	●	100
120	●	●	●	●	120
125	●	●	●	●	125
135	●	●	○	●	135
140	●	●	●	●	140
150	●	●	●	●	150
160	●	●	●	●	160
175	●	●	○	○	175

Puller

Design:
- sturdy construction
- with reversible hooks (for internal and external use)
- crossbeam with high flexural strength
- puller made of chrome alloyed tool steel
- pull-off hooks have large contact surfaces for gentle removal
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)
- cross beam additionally with hex profile to enable counter support with a wrench

Use:
As universal puller for both interior and exterior application

Note:
Extensions 590200 can be used to achieve greater clamping depths



590100



590120



590150

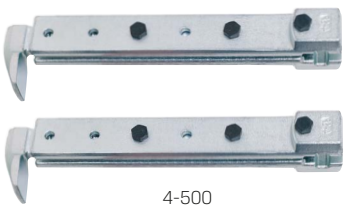
N° article	590100 Two-armed	Type	Clamping range mm	Clamping length mm
20/1	●	20/ 1	90	100
20/10	●	20/10	120	100
20/2	●	20/ 2	160	150
20/20	●	20/20	200	150
20/3	●	20/ 3	250	200
20/30	●	20/30	350	200
20/4	○	20/ 4	520	200

N° article	590120 Replacement spindle	Spindle length mm	fitting for type
1-10	●	160	20/1 | 20/10
2-20	●	220	20/2 | 20/20
3-30	●	300	20/3 | 20/30
4	○	400	20/4

N° article	590150 Spare arms (pair)	fitting for type
1-90	●	20/1 | 20/10
2-150	●	20/2 | 20/20
3-200	●	20/3 | 20/30 | 20/4

Puller leg extension

Design:
- encompassing hook complete with extended sliding pieces
- sz. 4-500 adjustable for clamping depths of 300 - 500 mm



4-500

N° article	590200 Pair	Hook length mm	Hook width mm	fitting for type
1-190	○	200	20	20/1 | 20/10
2-300	○	300	24	20/2 | 20/20
3-300	●	300	35	20/3 | 20/30 | 20/4
3-400	○	400	35	20/3 | 20/30 | 20/4
4-500	○	300 - 500	40	20/3 | 20/30 | 20/4

Design:
With hand knurling wheel for quick release and relocation of the hooks without using a wrench

Use:
As universal puller for both interior and exterior application

Note:
Extensions 590200 can be used to achieve greater clamping depths Sz. 4-500 is adjustable for clamping depths of 300-500 mm.



N° article	590220 Two-armed	Type	Clamping range mm	Clamping length mm
20/1+	●	20/1+	90	100
20/10+	●	20/10+	120	100
20/2+	●	20/2+	160	150
20/20+	●	20/20+	200	150
20/3+	○	20/3+	250	200
20/30+	○	20/30+	350	200

Universal puller set

L-BOXX

Design:
- 6-piece standard puller set with additional long spindle
- includes the basic equipment of 2- and 3-armed pullers commonly needed in any workshop
- cross beam additionally with hex profile to enable counter support with a wrench
- including extensions, which can be combined with each other if need be
- GLIDE & FIX technology ensures a particularly easy shifting and/or a firm fixation of the extractor hooks on the traverse
- universally applicable (for removing ball bearings, bearings, gear wheels, etc.)
- can be used as internal and external extractor
- also suitable for removal at asymmetrical workpieces
- **3 years warranty** (after online registration within 30 days of purchase)
- in KUKKO-L-BOXX system



N° article	590231 two- and three-armed	Clamping range mm	Clamping width, max. mm	Clamping length mm	Clamping depth, max. mm
K-2030-10	●	120	130	100	350

Hydraulic ram

Design:
- hydraulic body with bold spindle
- durable and robust
- time-saving work, as no replacement of the spindle is required

Use:
Positioned between end of the shaft and puller screw, the hydraulic is activated by tightening the spindle (To avoid overloading, additional presses should only be used with extractors as of size 3)





N° article	590300	Stripping force kN	Stroke mm	Height of the cylinder mm
9-1	○	100	10	60
9-2	●	150	15	87

Separator and extractor tool

Design and use:
- hooks with conical cutting edges at one end, with claws at the other
- the edges are pressed with clamps behind flush-mounted parts, such as axle bearings, ball bearing rings, pinions etc.
- optimal for confined spaces
- the multiple bores in the puller hooks allows working with variable clamping depths
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)



N° article	590500 Two-armed	Type	Clamping range mm	Clamping length mm
210/1	●	210/1	95	170
210/2	○	210/2	135	270
210/3	○	210/3	150	325

Puller

Design:
- with self-centring quick-action clamping
- automatic readjustment of the handle
- with the onset of the spindle pressure the arms stick with automatically increasing power to the piece to be pulled off
- the extractor arms made of special steel are drop-forged

Use:
For small electric motors, battery terminals, small ball bearings etc. These handy, space-saving models with slim hooks are particularly suitable for car electrics, electrical workshops, compressed air maintenance and similar applications



N° article	590400 Two-armed	Type	Clamping range mm	Clamping length mm
43/1	●	43/1	60	50
43/2	●	43/2	70	70
43/3	●	43/3	80	80

Puller for pitman arm

Design:
- extra robust puller
- made of high-strength, alloyed tempered steel, galvanised, with space-saving clamp and spindle
- the clamp presses the hooks firmly against the parts to be pulled off
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)

Use:
Also for ball bearings, cog wheels and similar parts



N° article	590550 Two-armed	Type	Clamping range mm	Clamping length mm
204/1	●	204/1	80	90
204/2	●	204/2	100	100
204/3	○	204/3	150	140

Design:
- sturdy construction
- **with hexagonal spindle head**
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)
- automatic self-centring of the pull-off hooks

Use:
For extracting particularly fixed gear wheels, pinions, ball bearings, pulleys etc.



N° article	590450 Two-armed	Type	Clamping range mm	Clamping length mm
44/1	●	44/1	100	100
44/2	●	44/2	120	120
44/3	●	44/3	160	160
44/4	○	44/4	250	200
44/5	○	44/5	300	250

Ball-joint separator

Design:
- made of high-strength, alloyed quenched and tempered steel, galvanised
- with wedge-shaped opening
- bell shape
- direct pressure on the ball stud
- optimal if there is a lot of space available

Use:
For squeezing out the ball studs when dismantling a ball joint

Note:
For trapped pieces we recommend the use of a hydraulic spindle



N° article	590580	Type	Clearance height mm	Clamping range mm	Fork opening mm
128/1	●	128/1	38	36	18
128/2	●	128/2	48	45	23
128/3	●	128/3	60	60	29
128/4	●	128/4	106	76	40

Puller

Design:
- extra strong version
- puller made of chrome alloyed tool steel
- potent one-piece crossbeam for extreme loads
- pulling hooks for all applications (mechanic and hydraulic operation)
- usable as external and internal puller

Use:
For extracting heavy pulleys, gear wheels and similar parts



N° article	590600 Three-armed	Type	Clamping range mm	Clamping length mm
11/0A	○	11/0A	375	200
11/1A	○	11/1A	520	200
11/2A	○	11/2A	650	200

Design:
- universal application
- exchangeable hooks for any required clamping depth
- usable as external and internal puller
- three-armed pullers provide secure grip and centric pulling off
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)
- puller made of chrome alloyed tool steel



N° article	590610 Three-armed	Type	Clamping range mm	Clamping length mm
30-1	●	30 - 1	90	100
30-10	●	30 - 10	130	100
30-2	●	30 - 2	160	150
30-20	●	30 - 20	200	150
30-3	●	30 - 3	250	200

Design:
- with self-centring and automatic quick clamping
- automatic readjustment of the handle
- with the onset of the spindle pressure the arms stick with automatically increasing power to the piece to be pulled off
- the extractor arms made of special steel are drop-forged

Use:
For small electric motors, battery terminals, small ball bearings, etc. Particularly suitable for car electrics, electrical workshops, compressed air maintenance and similar applications



N° article	590700 Three-armed	Type	Clamping range mm	Clamping length mm
43/11	●	43/11	60	50
43/12	●	43/12	70	70
43/13	●	43/13	80	80

Puller

Design:
- sturdy construction
- with hexagonal spindle head
- with self-centring and automatic quick clamping
- automatic readjustment of the handle
- with the onset of the spindle pressure the arms stick with automatically increasing power to the piece to be pulled off
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)
- puller made of chrome alloyed tool steel

Use:
Sturdy version for extracting particularly stuck gear wheels, pinions, ball bearings, pulleys etc.



N° article	590750 Three-armed	Type	Clamping range mm	Clamping length mm
45/1	●	45/1	100	100
45/2	●	45/2	120	120
45/3	●	45/3	160	160
45/4	●	45/4	250	200
45/5	○	45/5	300	250
45/6	○	45/6	375	275

Separator and extractor tool

Design:
- puller made of chrome alloyed tool steel
- for quick and easy separation of tightly mounted ball bearings, gears, inner rings etc.

Separating device:
- with two semicircular parting jaws
- rapid and centric clamping through pressure spindle
- the wedge-shaped jaws edge themselves between bearing and seat

Pulling device:
- consisting of traverse, pressure spindle and two connecting threaded bolts which are screwed onto the separating device and pull off the released bearing



590800



590820

N° article	590800 Separator	Clamping range, min. mm	Clamping range, max. mm	Clamping width B mm
17/0	●	8	60	60
17/1	●	12	75	75
17/2	●	22	115	115
17/3	○	25	155	155

N° article	590820 Puller	Clamping width, min. mm	Clamping width, max. mm	Tension bolt length mm
18/0	●	50	110	150
18/1	●	60	150	200
18/2	●	60	200	250
18/3	○	80	300	300

Separator and extractor tool set

Design:
- 4-piece separator set
- 1 separator series 17
- 1 puller series 18
- especially handy, as separating jaws are tensioned quickly and centrically with pressure spindle
- sharp cutting edges make it possible to pull off flush fitted parts
- large contact surfaces protect the part to be pulled off
- the tension bolts of the pull-off device (series 18) must be screwed into the separating device for removal
- for removal of closely attached ball bearings, gears, inner rings and other flush mounted parts
- **5 years warranty** (after online registration within 30 days of purchase)



17-B

Nº article	590825	Contents
17-K	○	1 separator 17/0 1 puller 18/0 1 pair of extensions 19/1-P Clamping range 5 - 60 mm Delivery in KUKKO L-BOXX
17-A	○	1 separator 17/1 1 puller 18/1 1 pair of extensions 19/1-P Clamping range 12 - 75 mm Delivery in KUKKO L-BOXX
17-B	○	1 separator 17/2 1 puller 18/2 1 pair of extensions 19/2-P Clamping range 22 - 115 mm Delivery in KUKKO L-BOXX
17-C	○	1 separator 17/13 1 puller 18/3 1 pair of extensions 19/3-P Clamping range 25 - 155 mm Supplied in a sheet metal case

Internal extractor set

L-BOXX

Design:
- multi-part set with internal extractors and counter supports
- universally applicable for all customary extraction works of bearings large or small
- can be combined with both counter supports and slide hammers
- due to a good clamping effect the bearings are seized securely and extracted quickly
- robust version for high performance and long tool life
- for extracting internal densely fitting ball bearings, ball bearing outer rings and bushings
- **5 years warranty** (after online registration within 30 days of purchase)



25B

Nº article	590880	Type	for bore ∅ from - to mm	Contents
25A	●	25-A	12-46	6 internal extractors, 2 counter supports, Delivery in KUKKO L-BOXX
25B	●	25-B	12-70	8 internal extractors, 2 counter supports, Delivery in KUKKO L-BOXX
25C	○	25-C	12-110	8 internal extractors, 3 counter supports, Delivery in KUKKO L-BOXX

Internal extractor

Design:
- internal extractors have two extending jaws, which are spread apart on a wedge spindle by tightening the clamping nut
- the countersupport with a strong spindle and two supporting arms is connected to the internal extractor by a threaded connection
- all parts made of chrome-alloyed tool steel
- threaded spindle tempered, with toggle

Use:
For removing ball bearings, ball bearing outer rings and bushes. Even bearings which are very close to the rear wall are reliably gripped by the excellent tensioning effect and quickly pulled out

Nº article	590850 Internal extractor	Type	for bore ∅ from - to mm
21/01	●	21/01	8-12
21/02	●	21/02	10-14
21/1	●	21/ 1	12-16
21/2	●	21/ 2	14-19
21/3	●	21/ 3	18-23
21/4	●	21/ 4	20-30
21/5	●	21/ 5	28-40
21/6	●	21/ 6	35-46
21/7	●	21/ 7	45-58
21/8	○	21/ 8	56-70
21/9	○	21/ 9	70-100

Nº article	590860 Counter-support	fitting for type
22/1	●	21/01 | 21/02 | 21/1 | 21/2 | 21/3 | 21/4 | 21/5
22/2	●	21/3 | 21/4 | 21/5 | 21/6 | 21/7 | 21/8
22/3	○	21/6 | 21/7 | 21/8 | 21/9




21/01-02


21/3


21/7


21/9


Countersupport

Slide hammer set for internal and needle bearing extractors

Design:
- for contactless and sparing extraction of bearings etc.
- prevents pressure damages on the bearings
- also usable in confined working space, as no support area is needed
- for extracting a bearing with a slide hammer, an internal extractor, series 21, is obligatory
- slide hammer devices can be used where threaded pins are screwed directly into the parts to be removed
- by pulling back the slider, the part to be extracted is driven out
- ergonomically shaped, solid slider for optimal power transmission
- when sliding back, the slide bar completely disappears into the slider so that bruises and abrasions of the hand are avoided
- the threaded pins are interchangeable
- stroke length 220 mm
- in plastic case

Use:
For extracting internal ball bearings, ball bearing outer rings and bushings For extracting parts with centre threaded holes, e.g. taper pins and cylinder pins

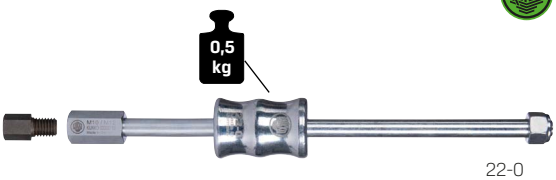


N° article	590882 10-piece	Contents
KS-22-01	●	M3 | M4 | M5 | M6 | M8 | M10 KS-22-01-GH = M12 galvanised: M7 | M10 | 15-16G

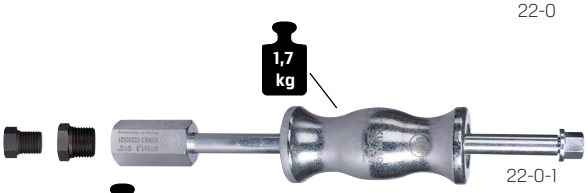
Slide hammer galvanised

Design:
- for contactless and sparing extraction of bearings etc.
- prevents pressure sores from forming in the bearing
- also usable in confined working space, as no support area is needed
- in order to be able to remove a bearing, an internal extractor of the series 21 or 21-E is required - these can also be combined with threaded adapters

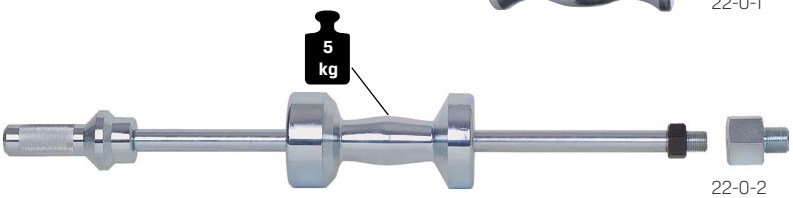
Use:
For extracting internal ball bearings, ball bearing outer rings and bushings



22-0



22-0-1



22-0-2

N° article	590883	Weight kg
22-0	○	0,7
22-0-1	●	2,5
22-0-2	●	6,5

Puller force-transferring, self-centring

Design:
- the comfortable two and three arm puller concept with automatic self-clamping
- self-lock and self-centring in an especially space-saving construction
- the integrated force transmission with spring mechanism increases the clamping force proportionally to the pull-off force
- the elastic effect and the narrow design make pulling possible in places which are difficult to access


482-2 482-3 483-2/3

N° article	590885 Two-armed	Clamping range mm	Clamping length mm	N° article	590885 Three-armed	Clamping range mm	Clamping length mm
482-2	●	85	90	483-2	○	85	90
482-3	○	150	150	483-3	○	150	150

Puller with swivelling puller hook

Design:
41-0/42-0: tiny version in especially rugged construction with hex spindle
41-1/42-2: Small, handy styling for car´s electrics, battery clamps, precision engineering, electricians´ workshops etc.
41-3/42-5: With standard length hook

N° article	590886 Two-armed	Clamping range mm	Clamping length mm
41-0	●	60	40
41-1	●	65	65
41-2	●	80	80
41-3	●	90	120
41-4	○	130	160
41-5	○	180	200


41-0 41-2 41-3

N° article	590886 Three-armed	Clamping range mm	Clamping length mm
42-0	●	60	40
42-1	●	65	65
42-2	●	80	80
42-3	●	90	120
42-4	●	130	160
42-5	○	180	200


42-0 42-2 42-3

Small-part puller

Design:
- especially to pull off small parts like bearings, sprockets, nozzles etc. from electric or pneumatic driven drills, screwdrivers, food processors, dynamos, wiper drives and the like
- puller with particularly slim claws for narrow spaces and a special pressure spindle for even the smallest shafts
- the drive is provided with an automatic power transmission, that is, the greater the pulling pressure, the greater the access to the part to be pulled off

43-001: Two-armed
43-011: Three-armed


43-001


43-011

N° article	590887	Clamping range mm	Clamping length mm
43-001	●	60	50
43-011	●	60	50

Puller with swivelling puller hook

Design:
- robust, universal version for pulling off fan wheels
- the harder the pull, the tighter the grip
- the extra thin hooks move through the two or three slits and grip the fan's collar
- the multiple bores in the puller hooks allows working with variable clamping depths
- optimal adaptation of the spindle to the shaft due to 2-sided spindle end (ball and tip)

201-S: Two-armed
202-S: Three-armed


201-S


202-S

N° article	590888	Clamping range mm	Clamping length mm
201-S	○	200	200
202-S	●	200	200

Ball-bearing extractor set

Design:
- sturdy construction made of special steel
- specially shaped pullers for precise seating in the ball bearing

L-BOXX

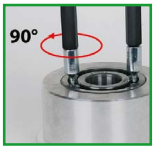
Use:
For easy extraction of ball bearings of all types without removal of the shaft This is done by tightening the pressure spindle of the puller against the shaft on which the bearing is seated



69-B







N° article	590890	Contents	Centre distance pullers, min. mm	Centre distance pullers, max. mm
69-A	○	for ISO ball bearings 6004-6010|6201-6206|6300-6304 Delivery in L-BOXX Mini	20	110
69-B	○	for ISO ball bearings 6207-6211|6305-6308|6403-6405 Delivery in L-BOXX Mini	40	140
69-C	○	for ISO ball bearings 6021-6032|6309-6321|6212-6230|6406-6417 Delivery in L-BOXX	60	240

Design and use:
For trouble-free removal of grooved ball bearings, which are seated on a shaft and must be gripped between the inner and the outer ring

L-BOXX



N° article	590892	Contents
KS-70-A-K	○	1 puller no. 70-711-K, length 150 mm 1 puller no. 70-712-K, length 150 mm (with 6 support rings) 1 puller no. 70-713-K, length 170 mm (with 5 support rings) 1 puller no. 70-714-K, length 180 mm (with 1 support ring) 1 puller no. 70-715-K, length 180 mm (with 5 support rings) 1 puller no. 70-721-K, length 217 mm (with 6 support rings) 1 puller no. 70-722-K, length 217 mm (with 9 support rings) Delivery in L-BOXX

Bearing fitting tool kit

L-BOXX

Design:
- quick and secure installation of bearings and sealings
- the required force is generated through hits on the sleeve with the recoilless and non-sparking hammer
- impact rings with a rubber edging, therefore unique locking mechanism with impact tube
- the correct combination of impact ring and impact tube ensures that the installation forces are never transmitted via the rolling elements of the bearing
- no direct metal-to-metal contact, therefore axes, bearing housings and sealing rings are not damaged
- lightweight version made of impact-resistant polyacetal

Use:
For quick, precise and secure installation of bearings, bushings, seal rings and pulleys. Particularly suitable for use on construction sites and off-site assembly

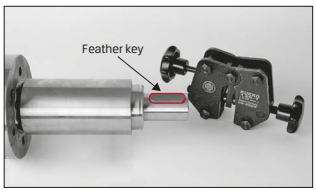


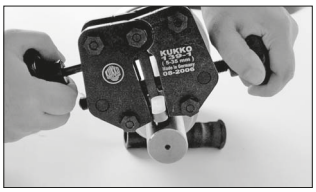
N° article	590893 39-piece	Ideal for	Contents
71-L	○	SKF, FAG, Timken, NTN and the equivalent bearings from other manufacturers	33 impact rings made of extremely impact-proof plastic (Diameter 10 - 50 mm) 3 impact pipes made of anodised aluminium (Diameter 19, 32, 50 mm) 1 recoil-free hammer 1 selection table for rolling bearings 1 plastic case

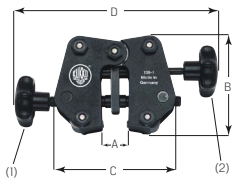
Key-lifter for keys of slots

Design:
With the help of this tool stuck wedges from keyways of shafts can be extracted easily and without damage

Use:
First adjust the clamping jaws to the width of the stuck wedge by turning the handle (1) and fully extend them to the stop by turning the knob (2). Then place the tongs and tighten the hand wheel to secure the jaw clamps on the wedge. Tightening the hand wheel activates the eccentric mechanism and pulls the wedge upwards out of the groove. To remove the extracted wedge from the forceps, open the clamping jaws by turning the hand wheel back to the initial position.







N° article	590895	A / B / C / D mm	Clamping range, min. mm	Clamping range, max. mm
139-1	○	0-35, 110, 122-144, 236	3	35

Fork separator

Design:
- made of hardened special steel
- handle bar knurled
- with solid wedge-shaped fork head

Use:
For loosening track rod ends, shock absorbers, pitman arms etc., especially under narrow conditions After the wedge-shaped fork end has been positioned, the parts are separated by hammer strokes



N° article	590900	Fork opening mm
135/1	●	18
135/2	●	23
135/3	●	29

Stud extractor

Design:
- a useful version for confined spaces
- actuation through ring spanner or socket wrench

N° article	590910	for stud bolts ∅ mm	AF_1 mm	Drive size
6	●	6	21	1/2" female square
7	○	7	21	1/2" female square
8	●	8	21	1/2" female square
10	●	10	21	1/2" female square
12	●	12	21	1/2" female square
16	○	16	24	round



Design and use:
- large clamping range
- due to low arrangement of the knurl wheel even short ends of studs can be seized



N° article	590920	for stud bolts ∅ mm	AF_1 mm
52	●	5-19	19

Nut splitter

Design:
- made of tempered special steel
- with hex nut for tightening the hardened chisel cutter

54: Double-edged with double splitting effect for nuts of grades 5, 6 and 8
55: For splitting of nuts up to grade 6


54-2


55-2

Use:
For splitting nuts being stuck or overtightened without damaging the threaded bolt. The splitting chisels of the nut splitters are wear parts. Blunt, flared or broken chisels must be exchanged immediately.

N° article	590925 mechanical	for nuts AF_1 mm
54-2	●	10 - 27
55-0	●	4 - 10
55-1	●	10 - 18
55-2	○	19 - 27

Nut splitter

Design:
- for splitting of irretrievable nuts in quality class 5, 6, 8 and 10
- the double cranked shape makes these tools useful for confined spaces
- the hydraulic minimises the required manual input



56-1



56-2

Nº article	590926 hydraulic	for nuts AF_1 mm
56-1	●	7 - 24
56-2	○	22 - 36

Thread cutter

Design:
- quick fixing with adjusting screw
- no measuring of the thread necessary
- automatic adjustment of the blade to any thread lead
- for regrooving right and left threads (please observe direction of rotation)
- usable for most thread types, such as inch, metric right or left, fine or coarse threads

NEW



Nº article	590945 UNI, for male threads	for threads Ø mm
0010	●	4 - 13
0015	●	16 - 38

Thread cutter

Design:
- quick fixing with adjusting screw
- no measuring of the thread necessary
- automatic adjustment of the blade to any thread lead
- for regrooving right and left threads (please observe direction of rotation)
- usable for most thread types, such as inch, metric right or left, fine or coarse threads
- big advantage in comparison to taps is the possibility to reach under the first damaged grooves (often at the start of the thread) and then work outwards

NEW



Nº article	590945 UNI, for internal threads	for threads Ø mm
0050	●	8 - 11
0055	●	12 - 16
0060	●	16 - 20
0065	○	22 - 32

Thread cutter set

Design:
- quick fixing with adjusting screw
- no measuring of the thread necessary
- automatic adjustment of the blade to any thread lead
- for regrooving right and left threads (please observe direction of rotation)
- usable for most thread types, such as inch, metric right or left, fine or coarse threads

NEW



Nº article	590945 UNI, for male threads	for threads Ø mm
0100	●	4 - 38

Thread cutter set

Design:
- quick fixing with adjusting screw
- no measuring of the thread necessary
- automatic adjustment of the blade to any thread lead
- for regrooving right and left threads (please observe direction of rotation)
- usable for most thread types, such as inch, metric right or left, fine or coarse threads
- big advantage in comparison to taps is the possibility to reach under the first damaged grooves (often at the start of the thread) and then work outwards

NEW



Nº article	590945 UNI, for internal threads	for threads Ø mm
0110	●	8 - 20

Thread cutter set

Design:
- quick fixing with adjusting screw
- no measuring of the thread necessary
- automatic adjustment of the blade to any thread lead
- for regrooving right and left threads (please observe direction of rotation)
- usable for most thread types, such as inch, metric right or left, fine or coarse threads
- big advantage in comparison to taps is the possibility to reach under the first damaged grooves (often at the start of the thread) and then work outwards

NEW



0140



0150

N° article	590945 UNI, for internal and external threads	Contents
0140	●	for internal thread ∅ 8-16 and external thread ∅ 4-18 mm
0150	●	for internal thread ∅ 8-32 and external thread ∅ 4-38 mm

Screw extractor

Design:
- made of tough but flexible chromium-vanadium steel
- with conical left-hand thread and quadrangular shank end

Use:
For removing broken bolts and screws (with right-hand threads). A hole is drilled into the part to be removed, the screw extractor is inserted and screwed out by turning left



N° article	590950 Screw extractor	for threads	Bore ∅ mm
1	●	M3-M6	1.8
2	●	M6-M8	2.5
3	●	M8-M11	3.7
4	●	M11-M14	5.5
5	●	M14-M18	7
6	●	M18-M24	10
7	●	M24-M33	13.5

Screw extractor set

Design:
- made of tough-but-flexible chromium-vanadium steel
- with conical left-hand thread and quadrangular shank end
- optimised operation geometry
- advantages result from reduced necessary drilling depths and at the same time considerably increased transmittable torques
- for unscrewing torn off screws with right-hand thread



N° article	590970 Screw extractor Super traction	for threads	Bore ∅ mm
T1	●	M4-M5	2
T2	●	M5-M7	3.2
T3	●	M8-M12	4.5
T4	●	M12-M14	6.5
T5	●	M16-M20	8.5


1-8

N° article	590980 set	for threads
1-5	●	M3-M18
1-6	●	M3-M24
1-8	●	M3-M33


T1-T5

N° article	590980 Set, in case	for threads
T1-T5	●	M4 - M20

Screw extractor

FOR RIGHT AND LEFT THREAD

Design:
- made of CrV steel, hardened
- surface burnished, cutting surface polished
- with lathe centre
- for screw sizes M5 to M30

Use:
- for damage-free removal of broken screws or threaded bolts from tapped holes
- for safe and firm seat, the extractor is knocked into the borehole
- anti-slip 2-edged grip recess in the screw or threaded bolt to be released





N° article	590982 for right and left thread	for threads	Bore Ø mm
1	●	M5-M6	3.2 - 4.8
2	●	M8-M10	4.8-7.1
3	●	M10-M12	6.4 - 9.5
4	●	M12-M16	8.7 - 12.7
5	●	M16-M20	11.1 - 15.9
6	●	M20-M24	14.3 - 19.1
7	●	M30	19.1 - 23.8



1-3



1-5 MK

N° article	590982 Set, 3-piece	590982 Set, 5-piece	for threads
1-3	●	–	M5-M12
1-5MK	–	●	M5-M20

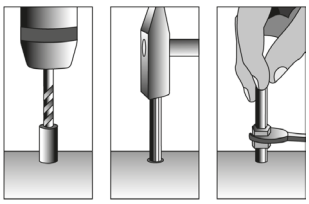
Screw extractor set

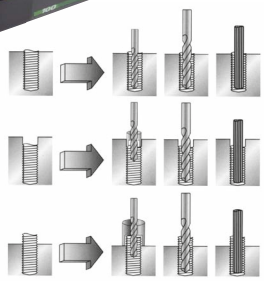
L-BOXX

Design and use:
- for removing broken bolts and screws
- complete with extractor, HSS tungsten carbide tipped spiral bits and bit guides for easy tapping of broken-off connectors, even deep inside of tapped bores.
- this version includes a torsion stud with 6 axial-grip cutters for transmission of maximal force
- one slip-on nut with fully broached inner profile, so the applied torque takes effect in the immediate vicinity of the break

Operation mode:
A small hole is drilled into the part to be removed, the this hole is drilled out to the size required for the appropriate torsion stud. In case the bolt or screw is protruding or situated deep within the tapped bore, the appropriate bit guide is placed on the broken-off part and the drilling is performed through the tapped bore. Then the torsion stud is pound into the bore and the fitting internal nut is installed. By counter-clockwise rotation the broken piece is screwed out







N° article	590990 25-piece	for threads
49-U-B	●	M5-M16 | 3/16"-5/8"

Bench shears

Design:
- robust construction made of tempered steel
- removable lever for easy carrying
- the blades are hardened and ground
- this guarantees a maximum tool life

Use:
For sheet material, flat rolled and round-bar steel



N° article	593010 Bench-type lever shears	593015 Spare upper blade	593018 Spare bottom blade	Cutting capacity sheet steel mm	Cutting capacity round steel mm	Blade length mm	Weight kg
2/BR4	●	○	○	4	11	120	8
2/BR5	●	●	●	5	11	150	10
2/BR6	●	○	○	6	13	180	18

Manual toggle lever press with toggle

Design:
- transmission via toggle mechanism
- this kind of construction deigns amazing high pressures despite its rather compact dimensions
- important to note: at toggle lever transmission, the maximum pressure output is not reached until the toggle lever is straight, i.e. shortly before end of stroke
- precise in operation
- working height can be adjusted by simply loosening the clamping screws on the stand
- hand lever user-friendly arranged
- return via spring
- spindle hardened and ground
- long spindle guide for optimum pressure performance
- T-slot centrically milled according to DIN 650

HK800: Additionally with working height fine-tuning for millimetre-exact adjustment of the press head to the desired working height. The fine-tuning is achieved in both directions via a threaded spindle


HK800

N° article	593250	Compressive force kN	Stroke mm	Working height from-to mm	Spindle diameter mm	Spindle hole mm	Projection mm	Table face mm	Largeur des pierres de fente mm	Stand height mm	Base area mm	Weight kg
HK500	●	5	40	60 - 150	20	10 H7	73	115× 70	10	290	115×175	10
HK800	●	8	40	50 - 200	24	10 H7	90	120×160	12	410	160×230	22

Manual toggle lever press with gear rack

Design:
- power transmission by means of a gear rack
- contrary to presses with toggle these kind of constructions offer full pressure capacity over the entire stroke length
- they are used wherever non-varying pressure is required


HZ150

N° article	593300	Compressive force kN	Stroke mm	Working height from-to mm	Spindle diameter mm	Spindle hole mm	Projection mm	Table face mm	Largeur des pierres de fente mm	Stand height mm	Base area mm	Weight kg
HZ150	●	1,5	40	75 - 170	20	10 H7	70	115× 70	10	290	115×175	9,5
HZ250	●	2,5	45	80 - 220	20	10 H7	90	120×160	12	390	160×230	22

Angle bender

Design:
- robust construction
- headstock and body made of break-resistant spheroidal iron
- pressure plate and bending plate drop-forged, hardened

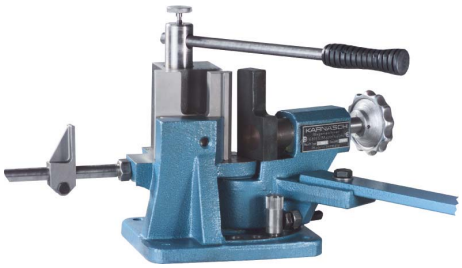
Max. bending power cold:
Flats (DIN 1017) 100×6 mm or 50×12 mm
Rounds (DIN 1013) 18 mm
Squares (DIN 1014) 18 mm
Flat copper 100×12 mm
Angular steel (notched, DIN 1208) 60×8 mm

Max. bending power hot:
Flats (DIN 1017) 100×12 mm or 60×20 mm
Rounds (DIN 1013) 30 mm
Squares (DIN 1014) 30 mm
Angular steel (notched, DIN 1208) 100×12 mm

Accessories included:
Sharp-edged jaw, radius jaw R = 4, length stop and bending stop

Note:
Separate accessories, e.g. special bending profiles and jaws, available on request

Use:
Bending angle 0° - 120°, for cold and hot bending of flat, square and round steel. Suitable for round as well as sharp-edged bending. Length or angle stop is for serial production

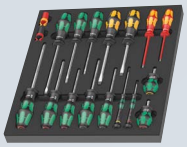


N° article	593500	Length mm	Base area mm	Weight kg
100/E	● +	260	205×175	24

NEW



WERA
Workshop trolleys
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WERA
Workshop trolley insert
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BAUER & BÖCKER
LED head lamp
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SCANGRIP
LED head lamp
Page 61/1089



SCANGRIP
LED
inspection light
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SCANGRIP
LED hand
lamp
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AS - SCHWABE
Torch LED Profi
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SCANGRIP
LED hand lamp
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SCANGRIP
Rechargeable battery
connector **Page 61/1099**



SCANGRIP
Rechargeable LED
spotlight **Page 61/1099**



SCANGRIP
Rechargeable LED
spotlight **Page 61/1100**

SCANGRIP
Rechargeable
LED spotlight
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Assortment box
Page 64/1111



PRESSOL
Measuring beakers
Page 65/1125



PRESSOL
Petrol can
Page 65/1126



PRESSOL
Handhebel-Fettpresse
Page 65/1127



PRESSOL
Hand-lever grease gun
Page 65/1127



MARKAL
Permanent marker
Page 65/1132



MARKAL
Wax pencil
Page 65/1132



MARKAL
Wax pencil
Page 65/1132



PRETEC
Cable tie
Page 65/1136



PIG
Absorbent mat
Page 68/1139



PIG
Magnetic roll
holder
Page 68/1139



PIG
Floor mat
Page 68/1141



PIG
Flood barrier
Page 68/1142



PIG
Drip pan
Page 61/1143



WELLER
Soldering iron
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WELLER
Soldering station
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WELLER
Soldering tips
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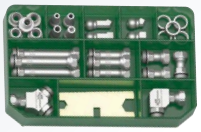
WELLER
ESD table soldering mat set
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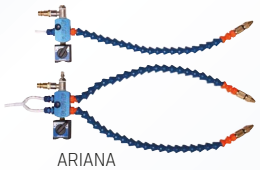
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PIRANHA COOLING-LINE
High-pressure coolant
ducting system
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PIRANHA COOLING-LINE
High-pressure coolant
ducting system
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ARIANA
MQL spray system
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PREMUS
Blow gun
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TYPHOON
High-performance blow gun
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TYPHOON
Extension pipe
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CEJN
Spray gun
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EWO
Safety coupling
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Hose
clamp
assortment
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WEKEM
Structural adhesive
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WEKEM
Hand grease gun
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WEKEM
Mixing nozzle set
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6 Furnishing/Organising



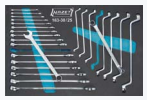
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Text and Icon Pictograms for Quicker Selection

DIN 1283	Standard specification		Surface sealing
Ex	Suitable for ex-protection areas		Joint connection
	Airworthy		Thread seal
IP68	Protection class		Screw lock
PU 6 pieces	Indication of the packaging unit		



Factory Equipment

An Extensive Programme

can be found in our separate catalogue "Betriebseinrichtung" (Factory Equipment)

- CNC storage technology



- Workbenches



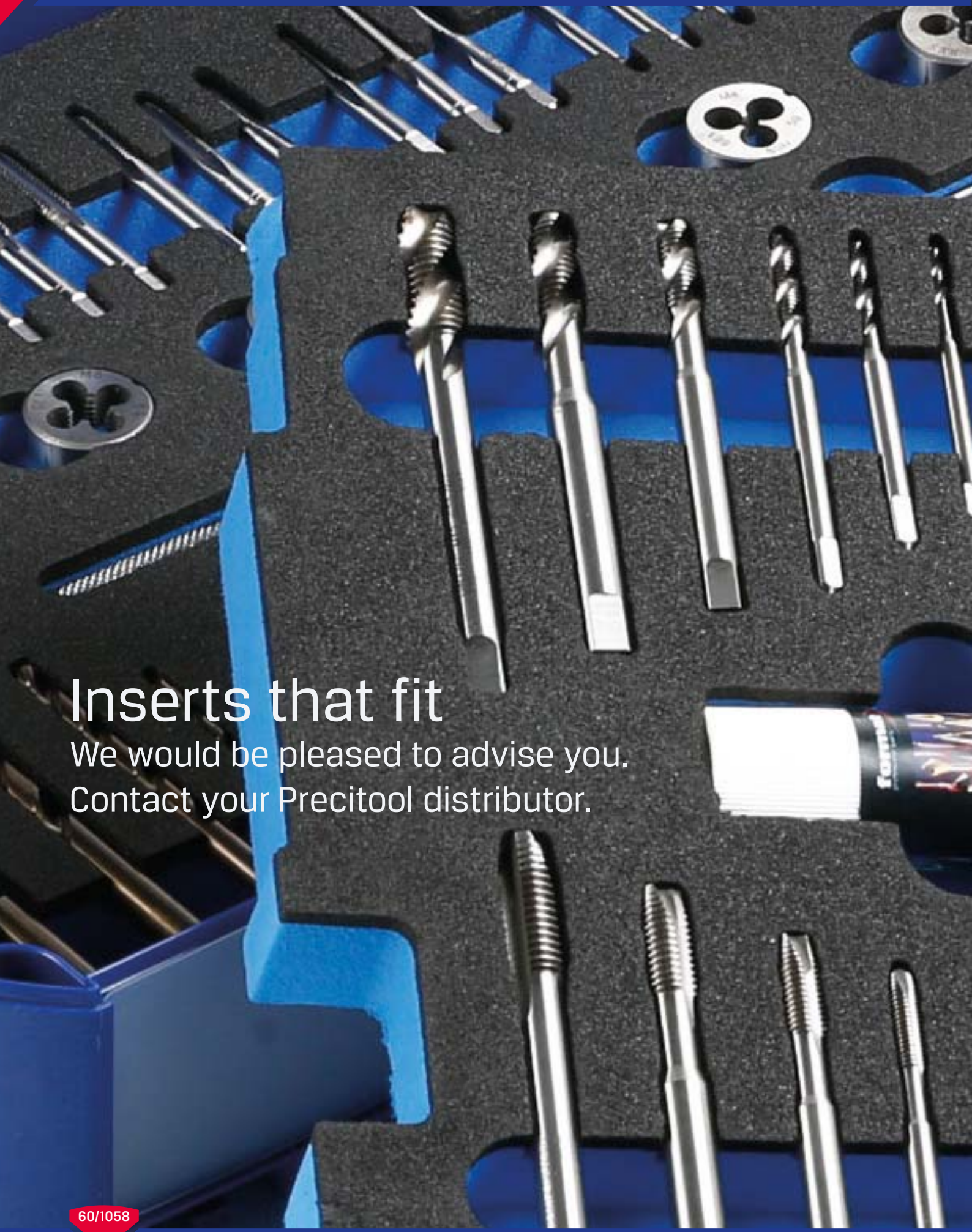
- Drawer cabinets





Foam Inserts – Individual and Custom-Fit

Product Information

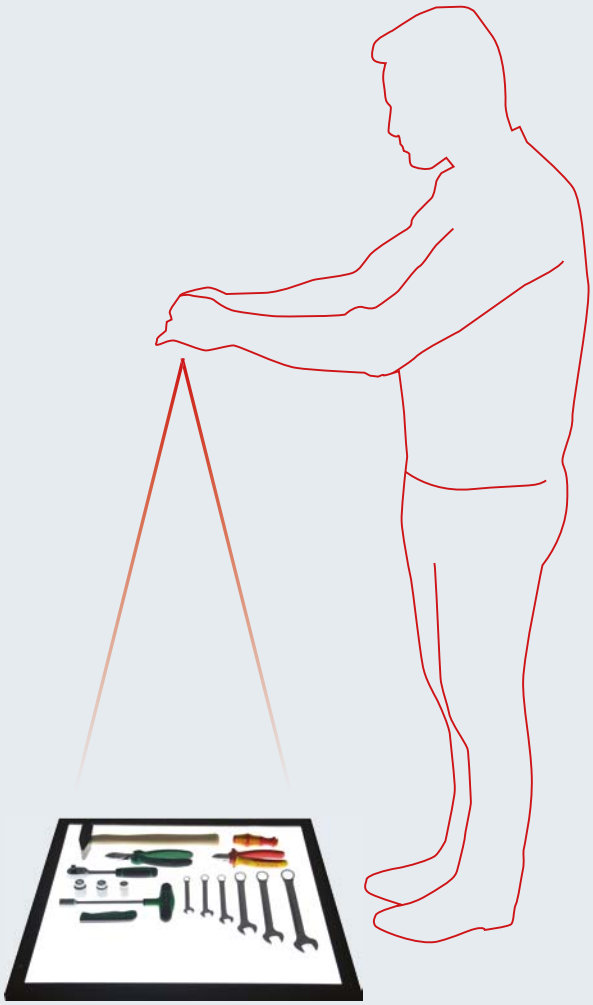


Inserts that fit

We would be pleased to advise you.
Contact your Precitool distributor.

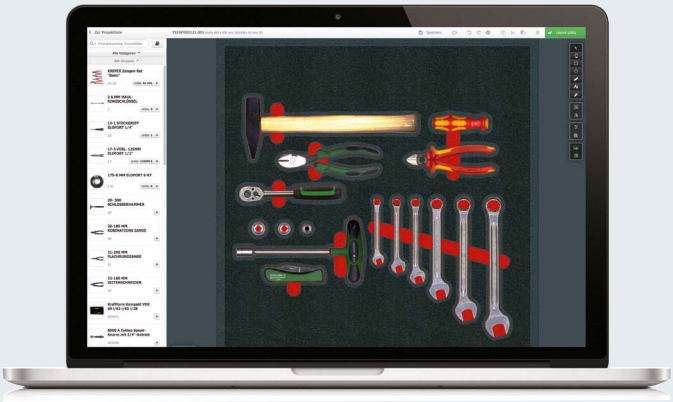
Your individual foam insert

- simple
- exactly fitting
- tailor-made



1. Virtually configurable

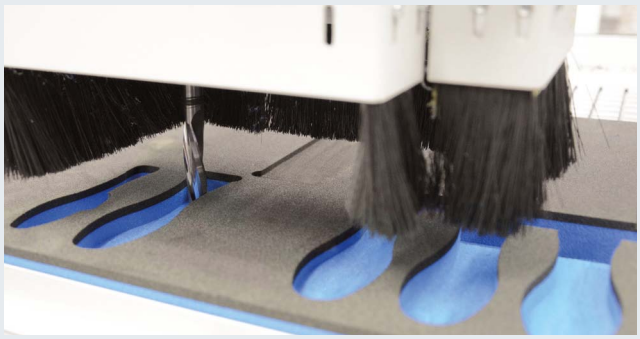
In close cooperation with you we design together via web-based software how to place your tools reasonably.
This can concern both existing as well as new tools from our range.
The inserts can also be provided with inscriptions and customised logos on request.



2: State-of-the-art production

The layouts are checked in advance for plausibility by a technician. Then, on ultra-modern milling and laser systems, your individual foam inserts are produced.

During the process, the foam inserts are subjected to a first quality check.



3: Ready and delivered

After a final inspection you will receive your custom-made inserts a few days later.
Each insert bears a unique identification number on its back. This number is traceable in the process, supports re-ordering and can be used for further layouts.



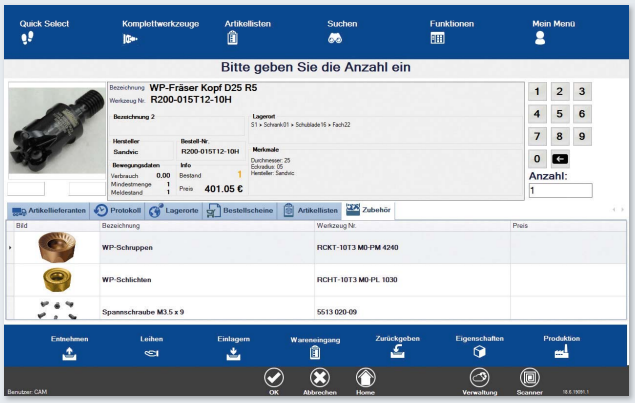
If you are interested, please contact your local PRECITOOL distributor.

PRECITOOL tool management

24 hours a day, 365 days a year



- Cuts tool and management costs
- Saves time during the tool search
- Gives independency from makers and vendors
- Supports automatic order-placing with an internet connection
- Grants continuous tool availability
- Has an integrated management of measuring equipment
- Is simple and quick to operate



You can support and manage existing storage systems, including even manual operated shelving systems, if need be. The system can be easily integrated into existing environments and used immediately.

Customer needs can be fulfilled at a moment's notice without losing updatability. Thanks to its modular construction, the system can be upgraded at any time.

In addition to personal training on site, we can support you any time with the help of "Teamviewer Quick-Support" in administration and via the touch screen computer.



The System

We always have the perfect solution for you depending on your requirements:

- Electronically locked drawer cabinets (optional opening activation)
- Electronically locked valuables compartment
- Automated dispensers (spiral and 3D units)
- Paternoster systems and lean lifts
- Electronically locked pull-out cabinets

What´s in it for you to use PRECITOOL hand-out systems?

25 % less tool costs

50 % faster tool search

100 % independence from suppliers



Our trademarks

PREMUS®
HIGH PERFORMANCE BY PRECITOOL

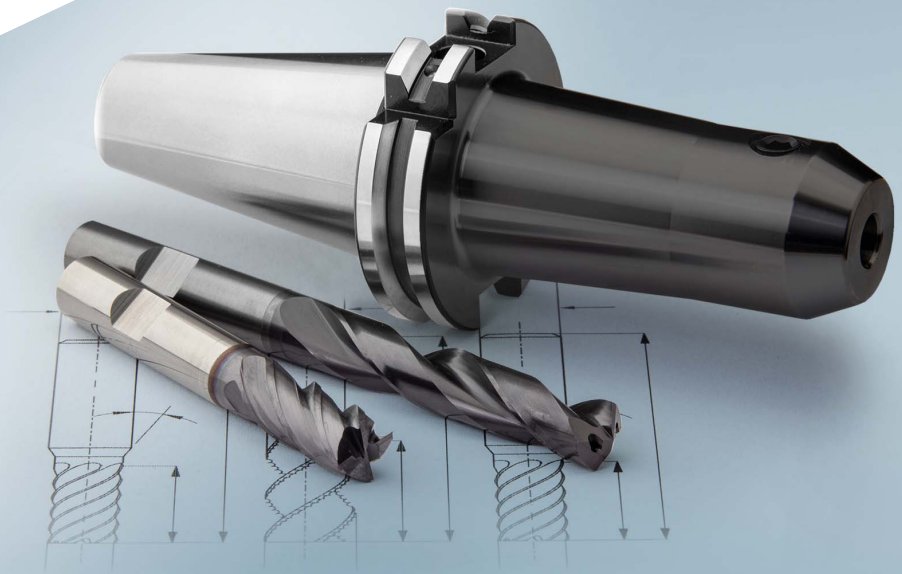
HIGH PERFORMANCE



- high-performance
- outstanding price/performance ratio
- innovative
- best-in-class

PRETEC®
BY PRECITOOL

DAILY BREAD



- good performance
- reasonable price
- sophisticated & proven

PRETEC®
BY PRECITOOL

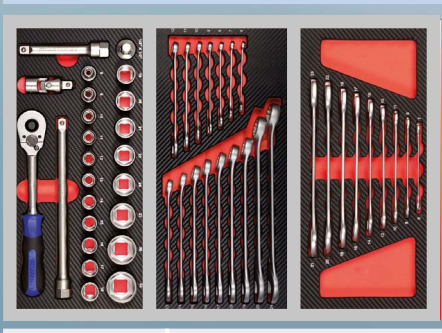
Workshop trolleys

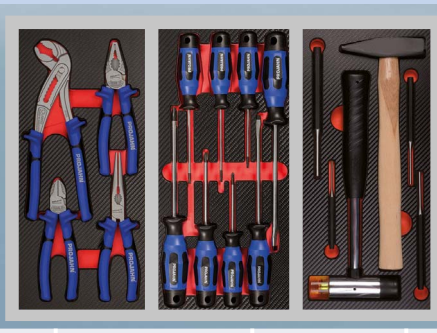


Design:

- high stability and torsional rigidity
- load capacity per drawer 40 kg
- central locking via cylinder lock
- castors with roller brake and rotary brake
- carrying capacity: 450 kg

Equipment 1 (67 pieces)

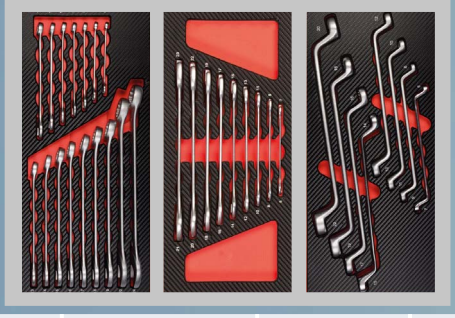


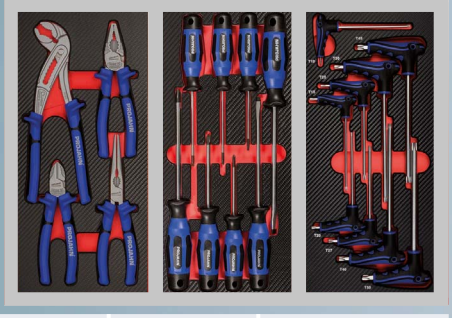


Item no.	N including equipment 1 (67-pieces)	Quantity of drawers	Height mm	Width mm	Depth mm	Weight approx. kg
0070	● +	7	970	680	459	58

Equipment 2 (142 pieces)







Item no.	600901 including equipment 2 (142-pieces)	Quantity of drawers	Height mm	Width mm	Depth mm	Weight approx. kg
0075	● +	7	970	680	459	58

Workshop trolleys
Load capacity 300 kg

PROJAHN

3/3 | FE 100% | 40 kg

Design:
- made of sheet steel, powder coated
- robust, with 0.8 mm wall thickness
- robust drawers **with ball-bearing mounted full extension** (3× 75 mm / 3× 150 mm front height)
- castors with roller brake and rotary brake
- load capacity per drawer 35 kg
- central safety stop system (tilt protection) => max. 1 drawer can be pulled out
- central locking via cylinder lock
- 2 fixed and 2 steerable castors made of plastic
- **carrying capacity 300 kg**



N° article	600901 unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0015	○ +	6	1010	678	459	50

Workshop trolleys
Load capacity 450 kg

PRETEC

3/3 | FE 100% | 40 kg

Design:
- high stability and torsional rigidity
- easy-moving, durable drawers **with ball-bearing mounted full extension** (5× 75 mm / 2× 150 mm front height)
- load capacity per drawer 40 kg
- central locking via cylinder lock
- sturdy, oil- and acid-resistant castors
- castors with roller brake and rotary brake
- lateral perforated panels with square hole perforation
- drawer pull-out stop
- **carrying capacity 450 kg**



N° article	600901 unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0018	● +	7	970	680	459	58

Workshop trolleys
Load capacity 600 kg

PRETEC

3/3 | FE 100% | 40 kg

Design:
- particularly robust professional workshop trolley
- **ball-bearing mounted drawers with full extension,** 5× 75 mm / 2× 150 mm
- central locking
- double wall steel sheet construction (0.9 mm wall thickness)
- central safety stop system (tilt protection) => max. one drawer can be pulled out
- oil- and acid-resistant castors
- load capacity per drawer 40 kg
- 2 swivel and 2 fixed castors, ball-bearing mounted
- **carrying capacity 600 kg**



N° article	600901 unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0020	● +	7	1000	676	459	63

Workshop trolleys
Load capacity 500 kg

PROJAHN

3/3 | FE 100% | 40 kg

Design:
- made of sheet steel, powder coated
- large load capacity due to, among other things, two additional side doors with various storage compartments
- 7 drawers (5× 75 mm, 2× 150 mm) **with full extension**
- smooth-running, long-lasting and ball-bearing drawer slides with a load capacity of 40 kg
- due to the central safety stop system, only one drawer can be pulled out at the most.
- with central locking via cylinder lock
- castors with roller brake and rotary brake
- **carrying capacity 500 kg**



N° article	600901 unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0100	○ +	7	990	910	475	72

Accessories for workshop trolleys

PRETEC

Design:
- for workshop trolleys 600901 0018|0070|0075|0077

N° article	600901	Design:
0500	●	**Screwdriver holder** for 7 screwdrivers
0502	●	**Hook rail** for 7 pieces
0504	○	**Can holder** for 4 cans
0506	●	**Wrench holder** for 7 wrenches
0510	●	**Tool tray, flat**
0512	●	**Tool tray, deep**
0514	●	**Waste bin**



0504

Workshop trolleys Load capacity 450 kg

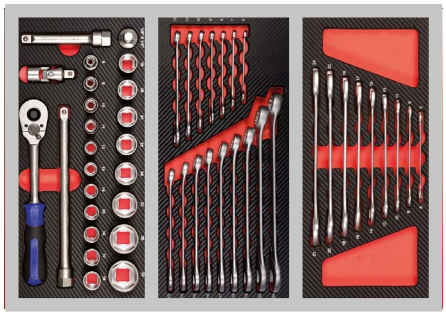
PRETEC

Design:
- high stability and torsional rigidity
- easy-moving, durable drawers **with ball-bearing mounted full extension** (5× 75 mm / 2× 150 mm front height)
- load capacity per drawer 40 kg
- central locking via cylinder lock
- sturdy, oil- and acid-resistant castors
- castors with roller brake and rotary brake
- lateral perforated panels with square hole perforation
- drawer pull-out stop
- **carrying capacity 450 kg**





Equipment 1 (67 pieces)



Content see cat. no. 519320 5999-131 | Content see cat. no. 519000 5999-011 | Content see cat. no. 519020 5999-021



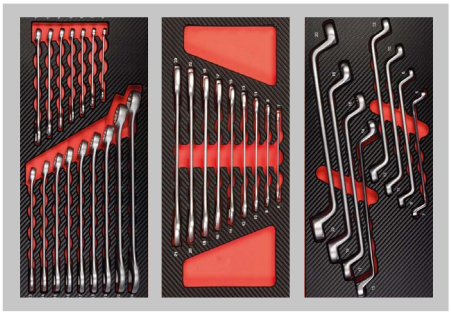
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N° article	600901 including equipment 1 (67-piece)	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0070	● +	7	970	680	459	58

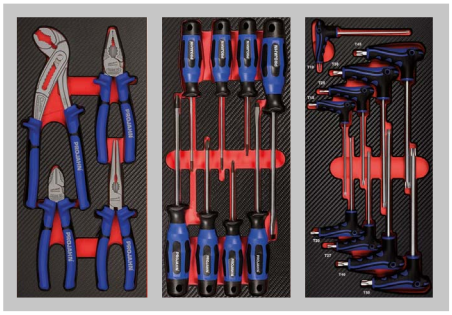
Equipment 2 (142 pieces)



Content see cat. no. 519300 5999-111 | Content see cat. no. 519320 5999-131 | Content see cat. no. 519270 5999-101



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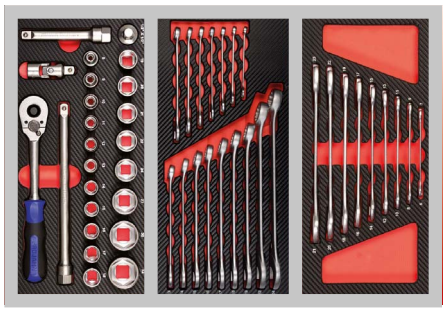


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N° article	600901 including equipment 2 (142-piece)	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0075	● +	7	970	680	459	58

Workshop trolley equipping

Design:
Insert system for tool trolleys



Content see cat. no. 519320 5999-131 Content see cat. no. 519000 5999-011 Content see cat. no. 519020 5999-021

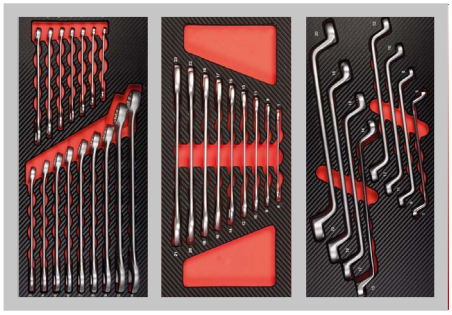


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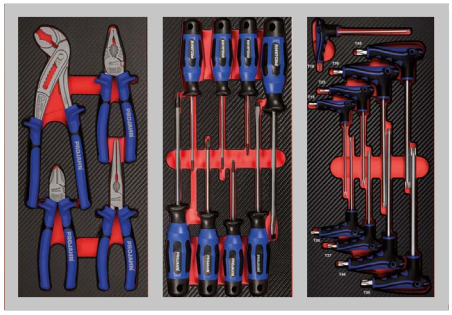
N° article	519515 Equipment 1, 67-piece
0010	○



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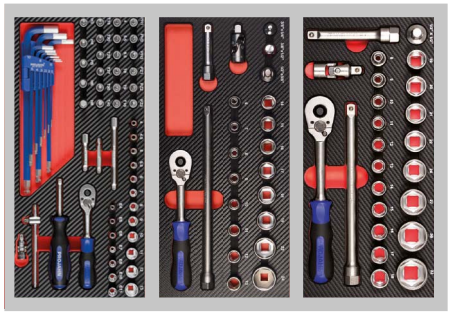


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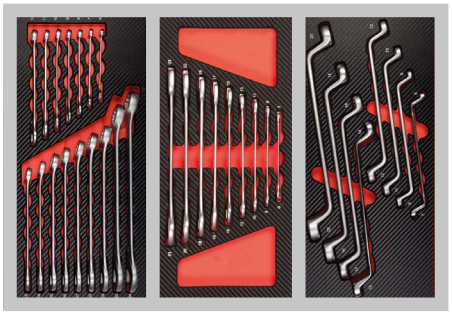


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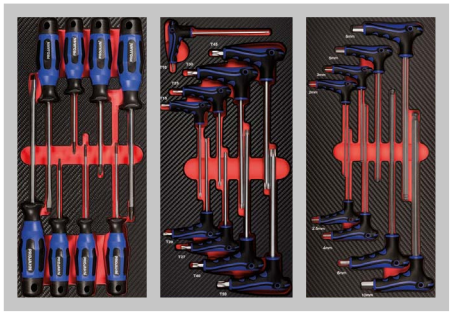
N° article	519515 Equipment 2, 142-piece
0020	○



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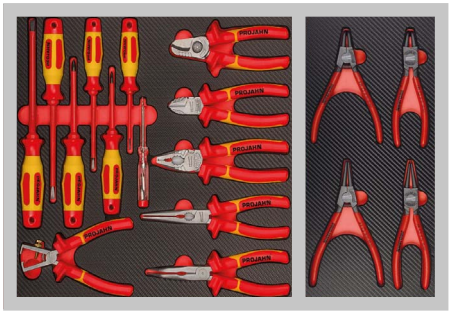
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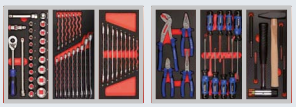
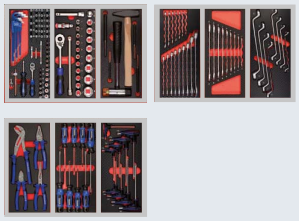
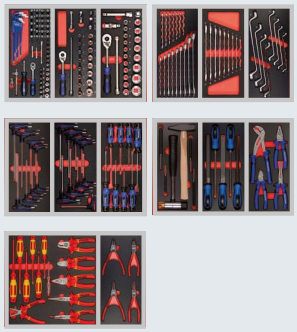
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Content see cat. no. 519420 5999-451 Content see cat. no. 519250 5999-092

N° article	519515 Equipment 3, 195-piece
0030	○

Workshop trolley equipping

Workshop trolley + Equipment 1, 2 or 3	 **Equipment 1** for 2 drawers	 **Equipment 2** for 3 drawers	 **Equipment 3** for 5 drawers
1  +	N° article 600901 0060 ○ +	+ N° article 600901 0065 ○ +	N° article 600901 0067 ○ +
2  +	N° article 600901 0070 ● +	N° article 600901 0075 ● +	N° article 600901 0077 ● +
3  +	N° article 600901 0030 ● +	N° article 600901 0035 ● +	N° article 600901 0037 ● +
4  +	N° article 600901 0080 ○ +	N° article 600901 0085 ○ +	N° article 600901 0087 ○ +



1

Design:
- 0.8 mm sheet steel, single-wall construction, powder-coated
- drawer load capacity 35 kg , with full extension
- anti-tilt device, max. 1 drawer can be pulled out
- 6 drawers: 3× 75 | 3× 150 mm
- load capacity 300 kg
- H 1010 × W 678 × D 459 mm



2

Design:
- 0.8 mm sheet steel, double-walled construction, powder-coated
- drawer load capacity 40 kg , with full extension
- anti-tilt device, max. 1 drawer can be pulled out
- 7 drawers: 5× 75 | 2× 150 mm
- load capacity 450 kg
- H 970 × W 680 × D 459 mm



3

Design:
- 0.9 mm sheet steel, double-walled construction, powder-coated
- drawer load capacity 40 kg , with full extension
- anti-tilt device, max. 1 drawer can be pulled out
- 7 drawers: 5× 75 | 2× 150 mm
- load capacity 600 kg
- H 1000 × W 676 × D 459 mm



4

Design:
- 0.8 - 0.9 mm sheet steel, double-wall construction, powder-coated
- drawer load capacity 40 kg , with full extension
- anti-tilt device, max. 1 drawer can be pulled out
- 7 drawers: 5× 75 | 2× 150 mm
- load capacity 500 kg
- H 990 × W 910 × D 475 mm

Workshop trolleys Load capacity 500 kg

PROJAHN WERKZEUGE WIE DU



Design:
- made of sheet steel, powder coated
- large load capacity due to, among other things, two additional side doors with various storage compartments
- 7 drawers (5× 75 mm / 2× 154 mm) **with full extension**
- smooth-running, long-lasting and ball-bearing drawer slides with a load capacity of 40 kg
- due to the central safety stop system, only one drawer can be pulled out at the most.
- with central locking via cylinder lock
- castors with roller brake and rotary brake
- **carrying capacity 500 kg**



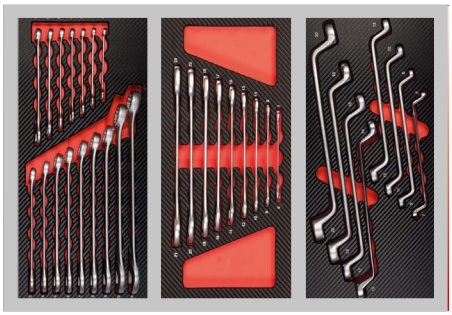
Doors with gas-pressure cylinder



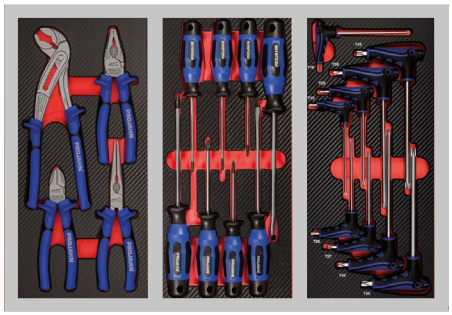
Equipment 2 (142 pieces)



Content see cat. no. 519300 5999-111
Content see cat. no. 519320 5999-131
Content see cat. no. 519270 5999-101



Content see cat. no. 519000 5999-011
Content see cat. no. 519020 5999-021
Content see cat. no. 519030 5999-031



Content see cat. no. 519242 5999-082
Content see cat. no. 519200 5999-065
Content see cat. no. 519510 5999-351

N° article	600901 including equipment 2 (142-piece)	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0085	○ +	7	990	910	475	72

Workshop trolley insert

Design:
ProForm modular inserts for tool trolleys

1/3



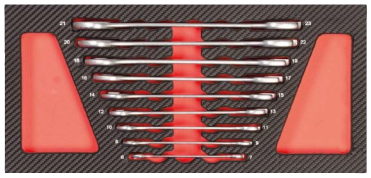
N° article	519000 Combination wrenches, 16-piece	Hight mm	Width mm	Depth mm	Contents
5999-011	●	35	186	395	6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 22 | 24 mm

1/3



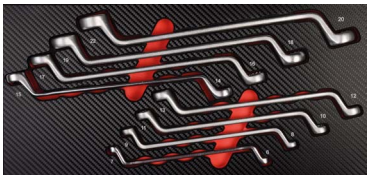
N° article	519001 Combination wrenches, 8-piece	Hight mm	Width mm	Depth mm	Contents
5999-321	●	35	186	395	20 | 21 | 23 | 25 | 26 | 27 | 30 | 32 mm

1/3



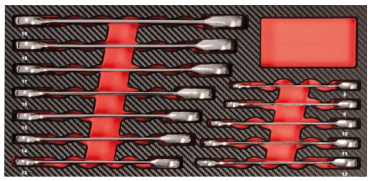
N° article	519020 Double open-end wrenches, 9-piece	Hight mm	Width mm	Depth mm	Contents
5999-021	●	35	186	395	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 | 21×23 mm

1/3



N° article	519030 Double-ended ring wrenches, 8-piece	Hight mm	Width mm	Depth mm	Contents
5999-031	●	35	186	395	6×7 | 8×9 | 10×11 | 12×13 | 14×15 | 16×17 | 18×19 | 20×22 mm

1/3



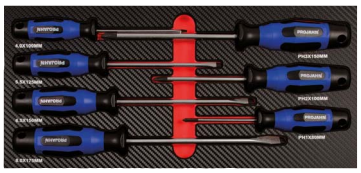
N° article	519050 Ratchet ring wrenches, 12-piece	Hight mm	Width mm	Depth mm	Contents
5999-051	●	35	186	395	8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm

1/3



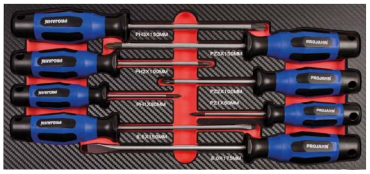
N° article	519040 Ratchet ring wrenches, switchable, 12-piece	Hight mm	Width mm	Depth mm	Contents
5999-041	●	35	186	395	8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 mm

1/3



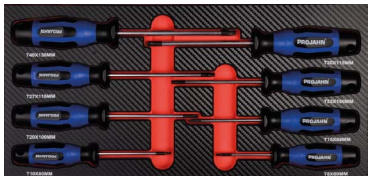
N° article	519201 Screwdrivers, 7-piece	Hight mm	Width mm	Depth mm	Contents
5999-064	●	35	186	395	**4 screwdrivers slot** 4.0 | 5.5 | 6.5 | 8.0 mm **3 screwdrivers PH** 1 | 2 | 3

1/3



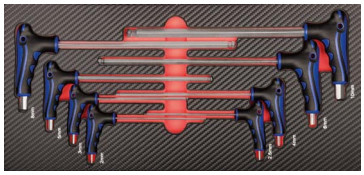
N° article	519200 Screwdrivers, 8-piece	Hight mm	Width mm	Depth mm	Contents
5999-065	●	35	186	395	**2 screwdrivers slot** 6.5 | 8.0 mm **3 screwdrivers PH** 1 | 2 | 3 **3 screwdriver PZ** 1 | 2 | 3

1/3



N° article	519210 Screwdrivers, 8-piece	Hight mm	Width mm	Depth mm	Contents
5999-062	●	35	186	395	**8 screwdrivers TORX®** T8 | T10 | T15 | T20 | T25 | T27 | T30 | T40

1/3



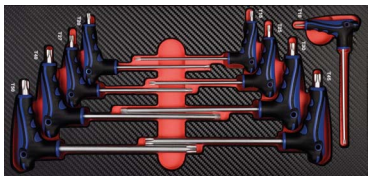
N° article	519500 Cross-handle screwdrivers, 8-piece	Hight mm	Width mm	Depth mm	Contents
5999-341	●	35	186	395	**8 T-handle screwdrivers outer hexagon with ball head** 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm

Workshop trolley insert

PROJAHN WERKZEUGE WIE DU

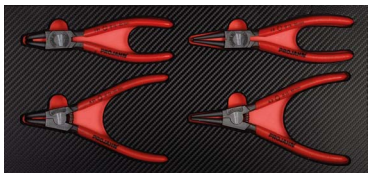
Design:
ProForm modular inserts for tool trolleys

1/3



N° article	519510 Cross-handle screw-drivers, 9-piece	Hight mm	Width mm	Depth mm	Contents
5999-351	●	35	186	395	**9 T-handle screwdrivers TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 | T45 | T50

1/3



N° article	519250 Circlip pliers, 4-piece	Hight mm	Width mm	Depth mm	Contents
5999-092	●	35	186	395	**4 circlip pliers** A2 | A21 | J2 | J21

1/3



N° article	519270 Impact tools, 6-piece	Hight mm	Width mm	Depth mm	Contents
5999-101	●	35	186	395	**1 engineer's hammer** 500 g **1 soft-face hammer** **4 pin punches**

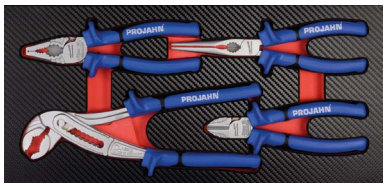
Following DIN EN 60900, IEC 900 individual testing in water with test voltage of 10,000 volt

3/3



N° article	519430 Cutting and measu-ring tools, 27-piece	Hight mm	Width mm	Depth mm	Contents
5999-181	●	35	560	395	**1 hacksaw** with 5 spare blades **1 safety cutter** with 10 spare blades **3 tin snips** **1 power side cutter** 180 mm **1 concrete pliers** 200 mm **1 vernier calliper** **1 ruler** 1 m **1 measuring tape** 3 m **1 magnetic pick-up tool** **1 LED torch**

1/3



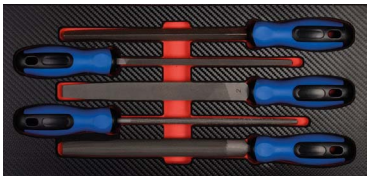
N° article	519242 Pliers. 4-piece	Hight mm	Width mm	Depth mm	Contents
5999-082	●	35	186	395	**1 combination pliers** 180 mm **1 side cutter** 160 mm **1 telephone pliers** 205 mm **1 waterpump pliers** 250 mm

1/3



N° article	519260 Locking pliers and adjustable end wrench, 4-piece	Hight mm	Width mm	Depth mm	Contents
5999-171	●	35	186	395	**2 adjustable end wrenches** 8"/200 | 12"/300 mm **1 locking pliers** 10"/250 mm **1 Langbeck long nose locking pliers** 150 mm

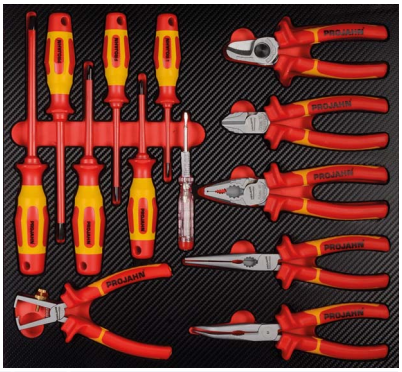
1/3



N° article	519410 Set of files, 5-piece	Hight mm	Width mm	Depth mm	Contents
5999-331	●	35	186	395	**Flat file** Cut 2/200 mm **Half round file** Cut 2/200 mm **Round file** Cut 2/200 mm **Square file** Cut 2/200 mm **Three square file** Cut 2/200 mm

Following DIN EN 60900, IEC 900 individual testing in water with test voltage of 10,000 volt

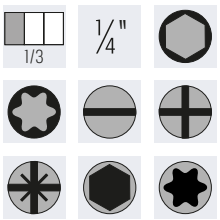
2/3

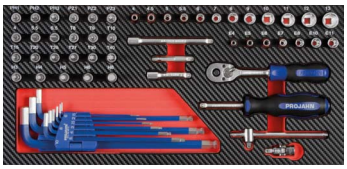


N° article	519420 VDE tools, 13-piece	Hight mm	Width mm	Depth mm	Contents
5999-451	●	35	375	395	**1 VDE combination pliers** 180 mm **1 VDE diagonal cutter** 160 mm **1 VDE cable cutter** 160 mm **1 VDE wire stripper** 160 mm **1 VDE telephone pliers 45°,** 200 mm **1 VDE telephone pliers** 200 mm **1 voltage tester** 3.5 × 90 mm **3 VDE screwdrivers** PH 0 | 1 | 2 **3 VDE screwdrivers slot** 2.5 | 4.0 | 5.5 | 6.5 mm

Workshop trolley insert

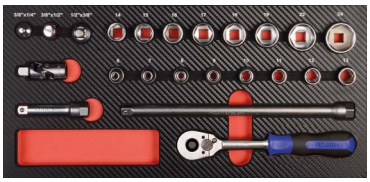
Design:
ProForm modular inserts for tool trolleys





N° article	519300 Socket wrench set 1/4", 58-piece	Hight mm	Width mm	Depth mm	Contents
5999-111	●	35	186	395	**12 socket wrench bits hexagonal** 4 | 4.5 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 mm **7 socket wrench bits TORX®** E4 | E5 | E6 | E7 | E8 | E10 | E11 **3 bits slot** 4 | 5.5 | 6.5 mm **3 bits PH** 1 | 2 | 3 **3 bits PZ** 1 | 2 | 3 **5 bits male hex** 3 | 4 | 5 | 6 | 8 mm **9 PZ bits®** T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 **1 reversible ratchet** **2 extensions** 50 | 100 mm **1 spinner handle** **1 T-handle** **1 cardan joint** **1 adapter** 1/4" male hex to 1/4" male square **1 Allen key set male hex** 1.5 × 10 mm





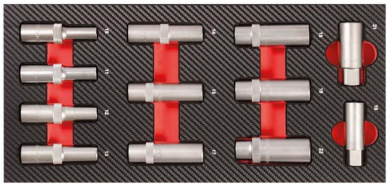
N° article	519310 Socket wrench set 3/8", 23-piece	Hight mm	Width mm	Depth mm	Contents
5999-121	●	35	186	395	**16 socket wrench bits hexagonal** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 22 | 24 mm **1 reversible ratchet** **2 extensions** 75|250 mm **1 Kardangelenk** **1 cardan joint** **1 adapter** 3/8" Innenvierkant auf 1/4" Außenvierkant **1 adapter** 3/8" Innenvierkant auf 1/2" Außenvierkant



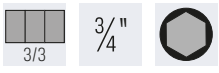


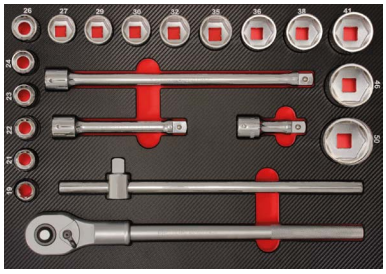
N° article	519320 Socket wrench set 1/2", 24-piece	Hight mm	Width mm	Depth mm	Contents
5999-131	●	35	186	395	**19 socket wrench bits hexagonal** 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 | 27 | 30 | 32 mm **1 reversible ratchet** **2 extensions** 125 | 250 mm **1 T-handle** **1 cardan joint**



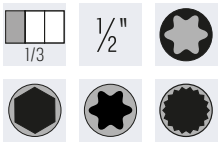


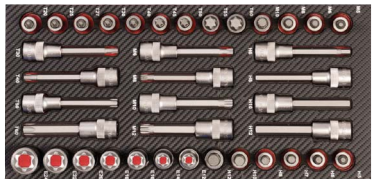
N° article	519325 Socket wrench set 1/2", 12-piece	Hight mm	Width mm	Depth mm	Contents
5999-431	●	35	186	395	**10 socket wrench bits hexagonal, long** 10 | 11 | 12 | 13 | 14 | 15 | 17 | 18 | 19 | 22 mm **2 spark plug sockets** 16 | 21 mm





N° article	519325 Socket wrench set 3/4", 21-piece	Hight mm	Width mm	Depth mm	Contents
5999-441	○	35	560	395	**16 socket wrench bits hexagonal** 19 | 21 | 22 | 23 | 24 | 26 | 27 | 29 | 30 | 32 | 35 | 36 | 38 | 41 | 46 | 50 mm **1 reversible ratchet** **3 extensions** 100 | 200 | 400 mm **1 T-handle**





N° article	519340 Special car repair 1/2", 38-piece	Hight mm	Width mm	Depth mm	Contents
5999-191	●	35	186	395	**7 socket wrench bits TORX®** E12 | E14 | E16 | E18 | E20 | E22 | E24 **6 screwdriver bits 60 mm male hex** 5 | 6 | 7 | 8 | 10 | 12 mm **4 screwdriver bits 100 mm male hex** 6 | 8 | 10 | 12 mm **9 screwdriver bits 60 mm TORX®** T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 | T60 **4 screwdriver bits 100 mm TORX®** T30 | T40 | T50 | T60 **4 screwdriver bits 60 mm multi-point** M5 | M6 | M8 | M10 **4 screwdriver bits 100 mm multi-point** M6 | M8 | M10 | M12

Workshop trolley insert

Design:
ProForm modular inserts for tool trolleys

1/3 | 1/2" |



N° article	519330 Impact socket set 1/2", 30-piece	Hight mm	Width mm	Depth mm	Contents
5999-151	309,40	35	186	395	**15 socket wrench bits hexagonal** 8 | 9 | 10 | 11 | 12| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 mm **5 socket wrench bits hexagonal, long** 17 | 19 | 21 | 22 | 24 mm **3 hex bits, long, for aluminium rims** 17 | 19 | 21 mm **1 extension 125 mm** **1 cardan joint** **1 adapter 3/4" female square to 1/2" male square** **2 circlips** **2 lock pins**

Design:
- ideal for storing screws, nuts, washers, small electrical parts (cable connectors, etc.), bits and drills
- suitable for all PROJAHN tool trolleys
- ideal for supplementing existing trolleys or for new equipment
- **with new, high-quality surface in carbon look**
- less prone to dirt, easier to clean and sturdier

1/3


5999-391


5999-392


5999-393

N° article	519511 empty, for small parts	Hight mm	Width mm	Depth mm	Contents
5999-391	●	35	186	395	6 compartments
5999-392	●	35	186	395	5 compartments
5999-393	●	35	186	395	7 compartments

Workshop trolleys V4481- XL

Design:
- **8 drawers** 7 flat (753×398×75 mm) and 1 high (753×398×154 mm)
- opposite drawer locking for minimum tilting risk
- load capacity per drawer 25 kg
- central locking
- 100% extension of the drawers
- 2 swivel castors with brake, 2 fixed castors, Ø 125 mm
- body powder coated, colour RAL 9005 deep black
- drawers powder coated, colour RAL 7005 / signal grey
- **carrying capacity 500 kg**

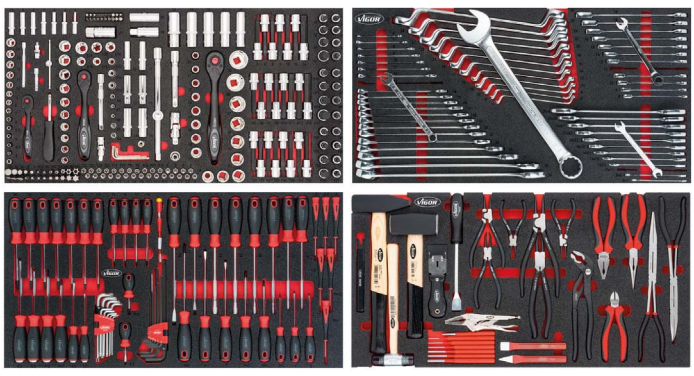
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|  |  | 



N° article	600901 1000 XL unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0022	○ +	8	1002	919	481	93

N° article	600904 1000 XL equipped, 375-piece	Design:
0910	○ +	**1 socket wrench set**, 219-piece, V4586 **1 combination wrench, double ring wrench, double open-end wrench set**, 58-piece,V6650 **1 screwdriver set**, 60-piece, V5170 **1 set of pliers, hammers and chisels**, 29-piece,V5638N

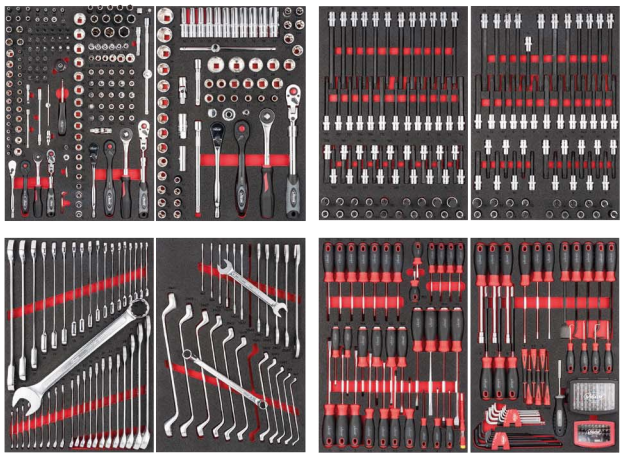


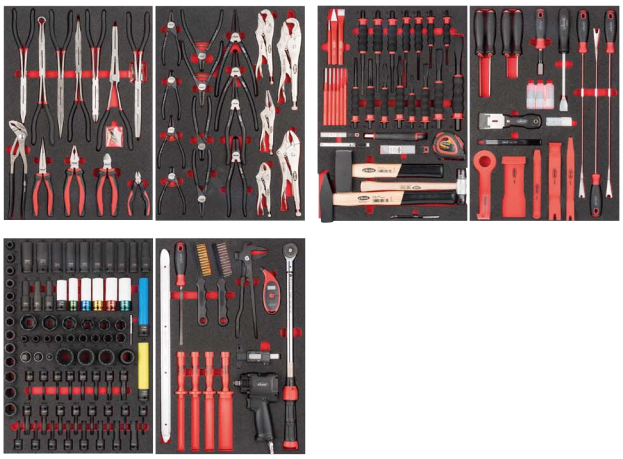
Workshop trolleys V4481-XD

Design:
- **8 drawers** 7× 75 mm front height and 1× 154 mm front height
- insert dimension XD 790×570 mm
- opposite drawer locking for minimum tilting risk
- load per drawer 30 kg
- **extra-deep workshop trolley with stainless steel worktop**
- central locking via cylinder lock
- 100% extension of the drawers
- 2 swivel castors with brake, 2 fixed castors
- body powder coated, colour RAL 9005 deep black
- drawers powder coated, colour RAL 7005 / signal grey
- with drive handle, stainless steel worktop and small parts tray
- edge protection on all corners for more safety
- **carrying capacity 500 kg**









N° article	600904 equipped, 775-piece	Quantity of drawers	Hight mm	Width mm	Depth mm	Contents	Weight approx. kg
0932	○ +	8	1017	986	695	1 workshop trolley 2 socket wrench sets 1 ratchet combination wrench set 1 scraper and release lever set 1 screwdriver bit set 2 screwdriver socket sets 1 wheels/tyres tool set 1 hammer/chisel and pin punch set 2 pliers sets 1 double ring and open-end spanner set 1 screwdriver set 1 impact bit socket set	114

Laptop holder

Design:
- suitable for all series YOC 07/2019 (with four threaded sleeves)
- can be swivelled and locked
- 360° pivotable
- front and side bevelling protects the unit from falls
- shelf can be adjusted to the desired inclination
- four additional holes for routing cables through



N° article	600904 V6398
0940	○

Workshop trolleys Assistant 177

Design:
- more mounting options for accessories, e.g. for waste bin, can holder etc. through rectangular hole pattern in the side walls
- robust, solvent-resistant plastic worktop with 2 integrated storage compartments
- drawers with full extension
- internal drawer dimensions W 527 × D 348 mm
- 20 kg load per drawer
- as standard with one partition plate per compartment
- with roller guide
- central locking via cylinder lock
- individual locking per drawer prevents unintentional opening
- recessed side walls protect additionally mounted parts
- 2 fixed and 2 swivel castors (1 lockable) Ø 100 mm
- **carrying capacity 300 kg**

Note:
HAZET tool trolley inserts from page 60/1078.





N° article	600904 unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0060	○ +	6	915	780	498	62.8
0070	○ +	7	915	780	498	64.8

Workshop trolleys Assistant type 179N-6/7

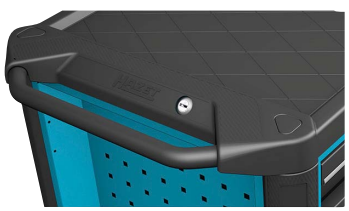
Design:
- with 6 or 7 drawers
- 2-level locking concept for increased safety
- central locking / individual locking
- opposite drawer locking for minimum tilting risk
- vertical, continuous edge protection on all four corners of the trolley
- drawers in ball bearings
- 25 kg load per drawer
- drawer interior dimensions W 522 mm × D 398 mm
- drawer with self-closing mechanism
- 100% extension of the drawers
- 2 fixed and 2 swivel castors with double stop Ø 125 mm
- **carrying capacity 1,000 kg**

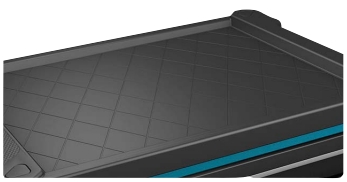
Note:
HAZET workshop trolley inserts from page 60/1078.



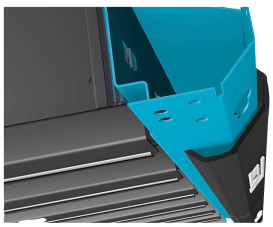

0111


0121





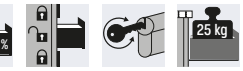




N° article	600904 unequipped	Quantity of drawers	Hight mm	Width mm	Depth mm	Weight approx. kg
0111	○ +	6	1020	785	518	90
0121	○ +	7	1020	785	518	90

Workshop trolleys Assistant type 179N-7

Design:
- worktop with integrated interfaces for accessories such as laptop holder and add-on modules
- enlarged storage and work surface
- completely sealed work surface protects the interior of the trolley
- extremely robust design due to double-walled construction
- 2-stage locking (central locking with cylinder lock and individual locking per drawer)
- 100% extension of the drawers
- self-closing drawers, 5 flat (81 × 522 × 398 mm) and 2 high (166 × 522 × 398 mm)
- ball-bearing telescopic rails
- mutual locking prevents unintentional opening
- vertical edge protection on all four corners of the trolley
- 25 kg load per drawer
- **carrying capacity 1,000 kg**















N° article	600904 equipped, 220-piece	Quantity of drawers	Hight mm	Width mm	Depth mm	Contents	Weight approx. kg
0907	○ +	7	1020	785	518	**Socket wrench set** 163 - 138, 77-piece **Wrench set** 163 - 140, 33-piece **Screwdriver set** 163 - 141, 31-piece **Universal set** 163 - 143, 18-piece **Twist drill cassette** 2128N-1 **Bit set** 2240N/36	90

Workshop trolleys Assistant type 179N XL-8

Design:
- extremely robust, double-walled welded construction
- optimised, flexible edge protection at all four corners with real impact protection through internal damping concept
- with stainless steel worktop, completely sealed, solvent-resistant
- worktop with integrated interfaces for accessories such as laptop holder and add-on modules
- ergonomic handle made of stainless steel
- central locking with cylinder lock incl. 2 hinged keys
- 100% extension of the drawers
- self-closing drawers, 7 flat (81 × 696 × 398 mm) and 1 high (166 × 696 × 398 mm)
- ball-bearing telescopic rails, mutual locking prevents unintentional opening
- high-performance chassis, wheels with Ø 125 mm, precision ball bearings
- 2 fixed and 2 swivel castors with double stop function
- tool range in Safety-Insert-System soft foam insert
- 40 kg load per drawer
- **carrying capacity 1,000 kg**















N° article	600904 equipped, 317-piece	Quantity of drawers	Hight mm	Width mm	Depth mm	Contents	Weight approx. kg
0916	○ +	8	1020	959	518	**Socket wrench set** 163 - 481, 194-piece **Wrench set** 163 - 478, 40-piece **Universal set** 163 - 479, 26-piece **Screwdriver set** 163 - 480, 57-piece **Can holder** 179 - 35	125

Workshop trolleys Assistant type 179N XXL-7

Design:
- extremely robust, double-walled welded construction
- optimised, flexible edge protection at all four corners with real impact protection through internal damping concept
- with stainless steel worktop, completely sealed, solvent-resistant
- worktop with integrated interfaces for accessories such as laptop holder and add-on modules
- ergonomic handle made of stainless steel
- central locking with cylinder lock incl. 2 hinged keys
- 100% extension of the drawer
- self-closing drawers, 5 flat (81×870×398 mm) and 2 high (166×870×398 mm)
- ball-bearing telescopic rails, mutual locking prevents unintentional opening
- drawer effective dimension W×D = 870×398 mm
- high-performance chassis, wheels with Ø 125 mm, precision ball bearings
- 2 fixed and 2 swivel castors with double stop function
- tool range in Safety-Insert-System soft foam insert
- 40 kg load per drawer
- **carrying capacity 1,000 kg**





example













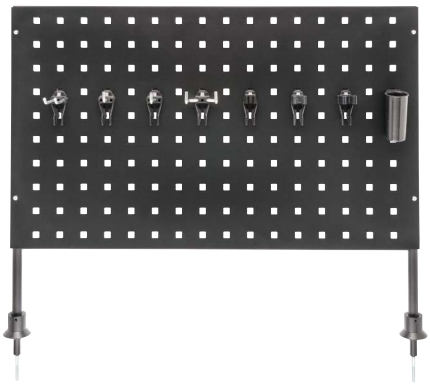




N° article	600904 equipped, 340-piece	Quantity of drawers	Hight mm	Width mm	Depth mm	Contents	Weight approx. kg
0921	○ +	7	1020	1133	518	**Socket wrench set** 163-481, 194-piece **Pliers set** 163-511, 4-piece **Screwdriver set** 163-480, 57-piece **Pin punch set** 163-510, 8-piece **Wrench set** 163-478, 40-piece **Ratchet combination wrench set** 163-509, 12-piece **Twist drill box** 2128N-1	145

Workshop trolley accessories

Design:
- matching accessories for the Assistent workshop trolley series
- constructed of robust sheet metal
- painted black



179N-26



179N-33



179N-35



179N-45

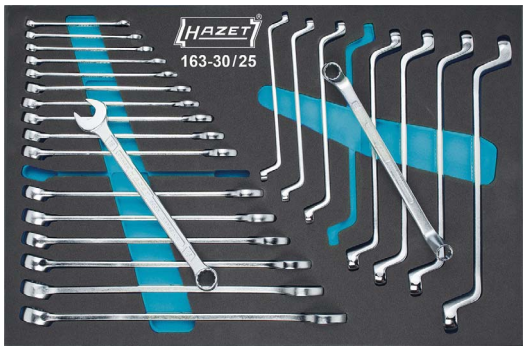


N° article	600912 Accessories	Design	fit for
179N-26	○	**Vertical punched tool panel** - attachable to workshop trolley Assistant - including 8-piece holder assortment	**Assistant** 179N | 179 X
179N-33	○	**Waste bin** - suitable for the hole pattern of the side panels Assistant	**Assistant** 167-3S | 177 | 178N | 179N | 179NX | 179NXL | 179NXXL | 179NXXL-8D and workbench Assistant 177W | 179W | 179NW
179N-35	○	**Can holder** - for 4 cans - suitable for the hole pattern of the side panels Assistant - additional square perforation to accommodate hooks	**Assistant** 167-3S | 167T (in conjunction with 167T26) | 177 | 178N | 179 | 179XL | 179XXL | 179BIG | 179N | 179NX | 179NXL | 179NXXL | 179NXXL-8D and workbench Assistant 177W | 179W | 179NW. Fits behind door 179N-21
179N-45	○	**Tablet holder** - suitable for all common tablet / PC models with a size between 120 and 222 mm - quick tablet change between portrait and landscape format - clamping jaws individually adjustable - fixing the holder with a clamping screw	**Assistant** 177 | 178N | 179N | 179NX | 179NXL | 179NXXL | 179NXXL-8D and workbench Assistant 177W

Workshop trolley insert

Design:
- tool assortment in module
- safety-insert-system, all tools shakeproof embedded
- fitting for all HAZET tool trolleys Assistant with drawers

3/3



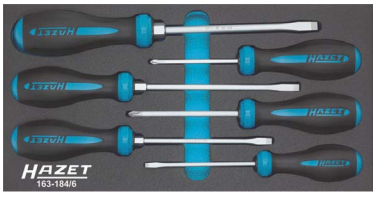
N° article	519530 Combination/double-ended ring wrench, 25-piece	Width mm	Depth mm	Contents
163-30/25	●	519	342	**17 combination wrenches** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 mm **8 double-ended ring wrenches** 6 × 7 | 8 × 9 | 10 × 11 | 12 × 13 | 14 × 15 | 16 × 17 | 18 × 19 | 21 × 22 mm

3/3 | 1/4" | 3/8" | 1/2" | TiN

N° article	519550 TORX®socket wrench set, 75-piece	Width mm	Depth mm	Contents
163-53/75	○	519	342	**Content 1/4"** **5 socket wrench bits TORX®** E4 | E5 | E6 | E7 | E8 **1 bit TORX® T6** **10 bits TORX® with hole** T7 | T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 **1 bit 63 mm TORX®** T25 **1 bit reversible ratchet** 2264 **1 adapter 1/4" female square to 1/4" female hex** **Content 3/8"** **12 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 mm **4 socket wrench bits TORX®** E10 | E11 | E12 | E14 **2 screwdriver bits TORX®** T40 | T45 **1 reversible ratchet 8816P** **3 extensions** 74 | 150 | 254 mm **1 cardan joint** **1 adapter** 3/8" female square to 1/4" female hex **Content 1/2"** **4 socket wrench bits TORX®** E16 | E18 | E20 | E24 **3 screwdriver sockets, TiN coated, TORX®** T50 | T55 | T60 **4 TORX® double-ended ring wrenches** E6 × E8 | E10 × E12 | E14 × E18 | E20 × E24 **10 TORX® screwdriver** T6 | T7 | T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 **11 TORX® Hexagon key wrench** T6 | T7 | T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40



1/3



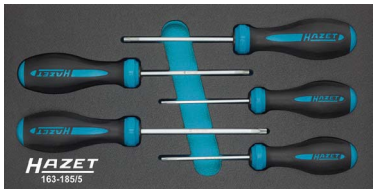
N° article	519552 Screwdrivers, 6-piece	Width mm	Depth mm	Contents
163-184/6	○	342	172	**4 screwdrivers HEXAnamic®, slot** 4 | 5,5 | 6,5 | 8 mm **2 screwdrivers HEXAnamic®, cross recess PH** 1 | 2

Workshop trolley insert

Design:
- tool assortment in module
- safety-insert-system, all tools shakeproof embedded
- fitting for all HAZET tool trolleys Assistant with drawers

1/3

N° article	519553 TORX®screwdrivers, 5-piece	Width mm	Depth mm	Contents
163-185/5	○	342	172	**5 screwdrivers TORX® with hole** T10 | T15 | T20 | T25 | T30



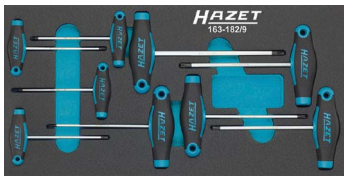
2/3

N° article	519553 Screwdrivers, 26-piece	Width mm	Depth mm	Contents
163-297/26	○	344	342	**3 screwdrivers, slot** 4.5 | 5.5 | 7 mm **2 screwdrivers, cross-recess** PH 1 | 2 **4 screwdrivers, slot** 3 | 4 | 5.5 | 6.5 mm **2 screwdrivers, cross-recess** PH 1 | 2 **6 screwdrivers TORX®** T10 | T15 | T20 | T25 | T27 | T30 **9 hex Allen wrenches with spherical head** 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 mm



1/3

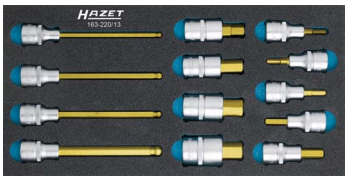
N° article	519554 TORX® T-handle screwdriver, 9-piece	Width mm	Depth mm	Contents
163-182/9	○	342	172	**9 T-handle screwdrivers TORX®** T6 | T8 | T9 | T10 | T15 | T20 | T25 | T30



Design:
- for female hex screws
- knurled for better grip
- safety insert system (SIS), all tools shakeproof embedded
- inserts can be cleaned
- fitting for all HAZET tool trolleys Assistant with drawers

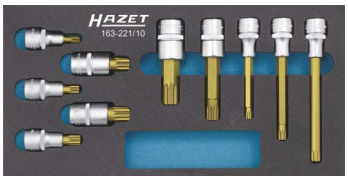
1/3 | 1/2" | TiN

N° article	519570 Hexagon socket screwdriver bit set, 13-piece	Width mm	Depth mm	Contents
163-220/13	○	342	172	**9 hexagon socket screwdriver bits, coated** 5 | 6 | 7 | 8 | 10 | 12 | 14 | 17 | 19 mm **4 screwdriver sockets male hex, long with spherical head** 6 | 7 | 8 | 10 mm



1/3 | 1/2" | TiN

N° article	519572 Hexagon socket screwdriver bit set, 10-piece	Width mm	Depth mm	Contents
163-221/10	○	342	172	**6 screwdriver bits multipoint** 8 | 10 | 12 | 14 | 16 | 18 mm **2 screwdriver bits multipoint, long version** 8 | 14 mm **2 screwdriver bits multipoint, extra long version** 10 | 12 mm



Workshop trolley insert

Design:
- knurled for better grip
- safety insert system (SIS), all tools shakeproof embedded
- inserts can be cleaned
- fitting for all HAZET tool trolleys Assistant with drawers

1/3 | 1/4" | 1/2" | TiN

N° article	519574 TORX® Socket wrench set 1/4" and 1/2", 24-piece	Width mm	Depth mm	Contents
163-192/24	○	342	172	**Content 1/4"** **5 socket wrench bits TORX®** E5 | E6 | E7 | E8 | E10 **7 screwdriver sockets, TiN coated, TORX®** T10 | T15 | T20 | T25 | T27 | T30 | T40 **Content 1/2"** **6 socket wrench bits TORX®** E10 | E12 | E14 | E16 | E18 | E20 **5 screwdriver sockets, TiN coated, TORX®** T30 | T40 | T45 | T50 | T55 **1 Allen key set TORX®** T8 | T10 | T15 | T20 | T25 | T27 | T30 | T40



1/3 | 1/4" | 1/2" | TiN

N° article	519575 TORX® Socket wrench set insert 1/4" and 1/2", 35-piece	Width mm	Depth mm	Contents
163-587/35	○	342	172	**Content 1/4"** **7 socket wrench bits TORX®** E5 | E6 | E7 | E8 | E10 | E11 | E12 **9 screwdriver sockets, TiN coated, TORX®** T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 **Content 1/2"** **6 socket wrench bits TORX®** E12 | E14 | E16 | E18 | E20 | E24 **4 screwdriver bits TORX®** T30 | T40 | T45 | T50 **9 screwdriver bits TORX®** T20 | T25 | T27 | T30 | T40 | T45 | T50 | T55 | T60



1/3 | 1/2" | TR

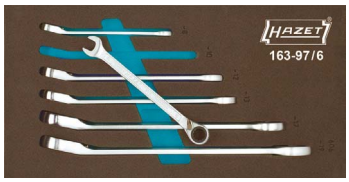
N° article	519580 Socket wrench set 1/2", 18-piece	Width mm	Depth mm	Contents
163-191/18	○	342	172	**14 socket wrench bits hexagonal** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 | 27 mm **1 reversible ratchet** 916SP **2 extensions** 123 | 248 mm **1 cardan joint**



Design:
- safety insert system (SIS), all tools shakeproof embedded
- inserts can be cleaned
- fitting for all HAZET tool trolleys Assistant with drawers

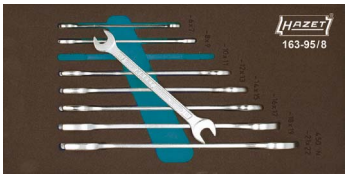
1/3

N° article	519600 Ratcheting combination wrenches, 6-piece	Width mm	Depth mm	Contents
163-97/6	○	344	342	**6 ratcheting combination wrenches** 8 | 10 | 12 | 13 | 17 | 19 mm



1/3

N° article	519670 Double open-end wrenches, 8-piece	Width mm	Depth mm	Contents
163-95/8	○	342	172	**8 double open-end wrenches** 6 × 7 | 8 × 9 | 10 × 11 | 12 × 13 | 14 × 15 | 16 × 17 | 18 × 19 | 21 × 22 mm



Workshop trolley insert

Design:
- safety insert system (SIS), all tools shakeproof embedded
- inserts can be cleaned
- fitting for all HAZET tool trolleys Assistant with drawers

2/3



N° article	519680 Combination wrench, 17-piece	Width mm	Depth mm	Contents
163-98/17	○	344	342	**17 combination wrenches** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 24 mm

1/9 | 1/2" | TiN



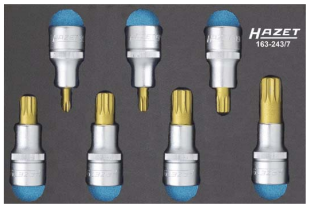
N° article	519592 Hexagon socket screwdriver bit set, 5-piece	Width mm	Depth mm	Contents
163-215/5	○	172	114	**5 screwdriver bits set 1/2" external hex** 5 | 6 | 7 | 8 | 10 mm

1/9 | 1/4" | 3/8" | 1/2" | 3/4"



N° article	519592 Adapter set, 6-piece	Width mm	Depth mm	Contents
163-217/6	○	172	114	**1 adapter** 1/2" female square to 3/4" male square, length 50 mm **1 adapter 1/2"** female square to 3/8" male square, length 36 mm **1 adapter 3/8"** female square to 1/4" male square, length 26 mm **1 adapter 3/8"** female square to 1/2" male square, length 36 mm **1 adapter 1/4"** female square to 3/8" male square, length 26.5 mm **1 adapter 3/4"** female square to 1/2" male square, length 52.3 mm

1/9 | 1/2" | TiN



N° article	519592 Hexagon socket screwdriver bit set, 7-piece	Width mm	Depth mm	Contents
163-243/7	○	172	114	**7 screwdriver bits multipoint** 6 | 8 | 10 | 12 | 14 | 16 | 18 mm

1/9 | 1/2" | TiN



N° article	519592 TORX®Screwdriver bit set, 12-piece	Width mm	Depth mm	Contents
163-245/12	○	172	114	**6 screwdriver bits 1/2" TORX®** T30 | T40 | T45 | T50 | T55 | 60 **6 screwdriver bits 1/2" TORX ®** E10 | E12 | E14 | E16 | E18 | E20

Workshop trolleys Tool Rebel

Design:
- enlarged storage and work surface made of solvent-resistant plastic
- interfaces for accessories integrated in the work surface, e.g. laptop holder and add-on modules
- completely sealed work surface protects the interior of the trolley
- extremely robust design due to double-walled construction
- 2-stage locking (central locking with cylinder lock and individual locking per drawer)
- 100% extension of the drawers
- self-closing drawers, 5 flat (81 × 522 × 398 mm) and 2 high (166 × 522 × 398 mm)
- ball-bearing telescopic rails
- all drawers are individually and elaborately laminated
- mutual locking prevents unintentional opening
- vertical edge protection on all four corners of the trolley
- 25 kg load per drawer
- **carrying capacity 540 kg**



NEW

















Nº article	600900 equipped, 94-piece	Quantity of drawers	Hight mm	Width mm	Depth mm	Contents	Weight approx. kg
0010	○	7	1020	785	518	**Screwdriver set** 9710, 18-piece **Combination wrench set** 9731, 19-piece **Socket wrench set** 9720, 37-piece **Hexagon key wrench set** 9740, 20-piece	94

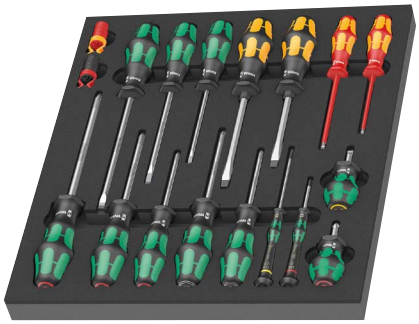
Workshop trolley insert

Design:
- high-quality, durable foam insert without chemical vapours
- optimal fit for best possible removal of tools
- 2-coloured for quick identification of missing parts
- water and oil repellent
- easy to clean and maintain

NEW

2/3

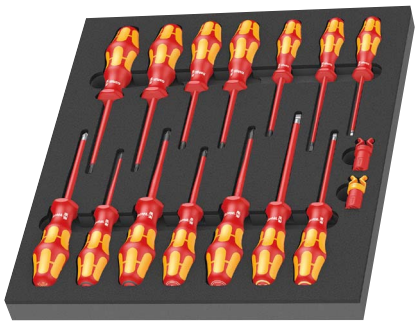
N° article	519595 Screwdriver set 1, 18-piece	Hight mm	Width mm	Depth mm	Contents
0010	○	47	344	392	**2 screwdrivers, slotted with impact cap** 5.5 | 7 mm **2 screwdrivers, slotted** 4 | 5.5 mm **1 screwdriver, slotted** 6.5 mm **1 electronic screwdriver, slotted** 2.5 mm **1 Stubby, slotted** 5.5 mm **2 VDE screwdrivers, slotted** 2.5 mm | 3.5 mm **3 screwdrivers, Phillips** PH1 | PH2 | PH4 **1 Stubby, Phillips** PH2 **1 electronic screwdriver, Phillips** PH0 **2 screwdriver, Phillips** PZ1 | PZ2 **2 screw claws** 4.5-6 | 6-8.5 mm



NEW

2/3

N° article	519595 VDE screwdriver set 1, 16 pieces	Hight mm	Width mm	Depth mm	Contents
0015	○	46	344	392	**4 VDE screwdrivers, slotted** 2,5 | 3,5 | 4 | 5,5 mm **2 VDE screwdrivers, Phillips** PH1 | PH2 **2 VDE screwdrivers, Phillips** PZ1 | PZ2 **1 VDE screwdrivers, Phillips** PZ/S 2 **5 screwdrivers, TORX® screwdrivers** T10 | T15 | T20 | T25 | T30 mm **2 screw claws** 4,5-6 | 6-8,5 mm



2/3

NEW

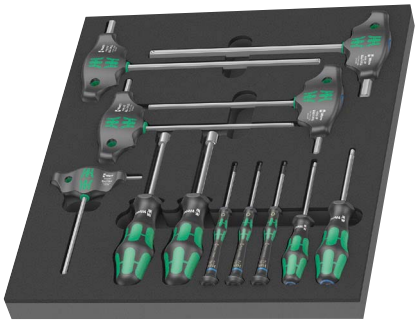
N° article	519595 TORX® HF screwdriver set 1, 14 pieces	Hight mm	Width mm	Depth mm	Contents
0020	○	45	344	392	**6 screwdrivers, TORX®** T8 | T9 | T10 | T15 | T20 | T25 mm **4 electronic screwdrivers, TORX®** T4 | T5 | T6 | T7 mm **4 T-handle screwdrivers, TORX®** T20 | T25 | T30 | T40 mm



2/3

NEW

N° article	519595 Hex screwdriver set 1, 12 pieces	Hight mm	Width mm	Depth mm	Contents
0025	○	45	344	392	**2 hexagon screwdrivers, Hex-Plus** 3 | 4 mm **3 electronic hexagon screwdrivers** 1,5 | 2 | 2,50 mm **5 T-handle hexagon screwdrivers,** **Hex-Plus** 4 | 5 | 6 | 8 | 10 mm **2 socket screwdrivers** 10 | 13 mm



Workshop trolley insert

Design:
- high-quality, durable foam insert without chemical vapours
- optimal fit for best possible removal of tools
- 2-coloured for quick identification of missing parts
- water and oil repellent
- easy to clean and maintain

1/3 | 1/4" | ⬡ | ⬢ | ✶

N° article	519595 8000 A Zyklop ratchet 1/4" set 1, 37 pieces	Hight mm	Width mm	Depth mm	Contents
0030	○	40	172	392	**14 hexagon socket wrench inserts** 4 | 4,5 | 5 | 5,5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 mm **9 bits TORX®, with holding function, long** T8 | T9 | T10 | T15 | T20 | T25 | T27 | T30 | T40 mm **1 Zyklop speed ratchet** 1/4" **1 extension with quick-turn sleeve, short** 75 mm **1 extension with quick-turn sleeve, long** 150 mm **1 universal joint** 1/4" **1 wobble extension** 56 mm

NEW



1/3 | 3/8" | ⬢

N° article	519595 S8000 B Zyklop ratchet 3/8" set 1, 23 pieces	Hight mm	Width mm	Depth mm	Contents
0035	○	45	172	392	**18 hexagon socket wrench inserts** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 mm **1 Zyklop speed ratchet** 3/8" **1 extension with quick-turn sleeve, short** 125 mm **1 extension with quick-turn sleeve, long** 200 mm **1 universal joint** 3/8" **1 wobble extension** 76 mm

NEW



2/3 | 1/2" | ⬢ | ⬢

N° article	519595 8000 C Zyklop 1/2" ratchet set 1, 31 pieces	Hight mm	Width mm	Depth mm	Contents
0040	○	51	344	392	**17 hexagon socket wrench inserts** 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 | 27 | 30 | 32 mm **1 Zyklop speed ratchet** 1/2" **1 extension with quick-turn sleeve, short** 125 mm **1 extension with quick-turn sleeve, long** 250 mm **9 hexagon socket wrench inserts, with holding function** 2×4 | 2×5 | 2×6 | 7 | 8 | 10 mm **1 universal joint** 1/2" **1 wobble extension** 52 mm

NEW



1/3 | 1/4" | 3/8" | ⬡ | ⬢ | ✶

N° article	519595 Zyklop B 3/8" bit socket 1, 22 pieces	Hight mm	Width mm	Depth mm	Contents
0045	○	39	172	392	**6 TORX® bits, with holding function** TX15 | TX20 | TX25 | TX27 | TX30 | TX40×35 mm **4 TORX® bits, with holding function**TX25 | TX27 | TX30 | TX40×107 mm **3 hexagon bits, with holding function** 4 | 5 | 6×35 mm **3 hexagon bits, with holding function** 7 | 8 | 10×38,5 mm **2 hexagon bits, with holding function** 8 | 10×100 mm **3 hexagon bits, with holding function** 4 | 5 | 6×107 mm **1 adapter** 1/4" hexagon to 3/8" square 44 mm

NEW



Workshop trolley insert

Design:
- high-quality, durable foam insert without chemical vapours
- optimal fit for best possible removal of tools
- 2-coloured for quick identification of missing parts
- water and oil repellent
- easy to clean and maintain

1/3

NEW



N° article	519595 6000 Joker set 1, 11 pieces	Hight mm	Width mm	Depth mm	Contents
0050	○	30	172	392	**11 Combination ratchet wrenches** 8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

2/3

NEW



N° article	519595 6003 Joker set 1, 19 pieces	Hight mm	Width mm	Depth mm	Contents
0055	○	58	344	392	**18 combination wrenches** 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 **1 bottle opener**

1/3

NEW



N° article	519595 6004 Joker set 1, 5 pieces	Hight mm	Width mm	Depth mm	Contents
0060	○	35	172	392	**1 XS self-adjusting open-end wrench** 1/4"- 3/8" **1 S self-adjusting open-end wrench** 7/16"- 1/2" **1 M self-adjusting open-end wrench** 1/2" - 5/8" **1 L self-adjusting open-end wrench** 5/8" - 3/4" **1 XL self-adjusting open-end wrench** 3/4" - 15/16"

1/3

NEW



N° article	519595 L-key set 1, 20-piece	Hight mm	Width mm	Depth mm	Contents
0065	○	44	172	392	**1 L-key set, metric, Hex-Plus** 9-piece, 1,5 | 2 | 2,5 | 3 | 4 | 5 | 6 | 8 | 10 mm **1 L-key set, TORX®** 9-piece, TX8 | TX9 | TX10 | TX15 | TX20 | TX25 | TX27 | TX30 | TX40 **1 magnetizer** **1 pocket tape measure** 3 m

Workshop trolley insert

Design:
- high-quality, durable foam insert without chemical vapours
- optimal fit for best possible removal of tools
- 2-coloured for quick identification of missing parts
- water and oil repellent
- easy to clean and maintain

N° article	519595 Kraftform Kompakt and Tool-Check PLUS Set 1, 57 pieces	Hight mm	Width mm	Depth mm	Contents
0070	○	59	172	392	**1 Tool-Check PLUS** 39-piece **1 Kraftform Kompakt 60** 17-piece **1 Bits hand holder, flexible** ¼"

1/3 ¼"

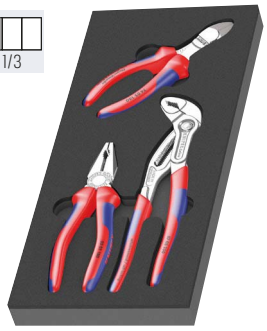
NEW



N° article	519595 KNIPEX pliers set 1, 3 pieces	Hight mm	Width mm	Depth mm	Contents
0075	○	38	172	392	**1 combination pliers** 180 mm **1 Cobra® water pump pliers** 250 mm **1 Kraft-Seitenschneider** 160 mm

1/3

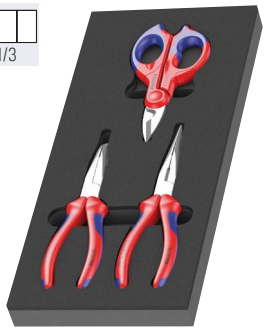
NEW



N° article	519595 KNIPEX pliers set 2, 3 pieces	Hight mm	Width mm	Depth mm	Contents
0080	○	38	172	392	**1 pair of flat-nose pliers with cutting edge** 200 mm **1 pair of mechanic's pliers** 200 mm **1 pair of electrician's scissors** 155 mm

1/3

NEW



N° article	519595 Hammer set 1, 6 pieces	Hight mm	Width mm	Depth mm	Contents
0085	○	30	172	392	**1 machinist's hammer** 500 g **4 pin reamers** 3|4|6|8 × 150 mm **1 flat chisel** 25×13×23 mm

1/3

NEW

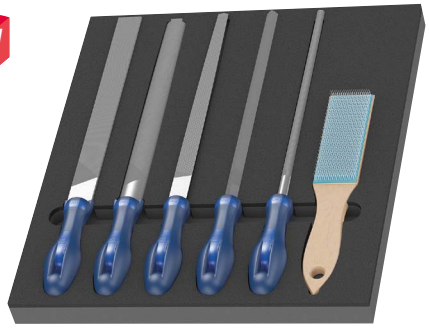


Design:
- high-quality, durable foam insert without chemical vapours
- optimal fit for best possible removal of tools
- 2-coloured for quick identification of missing parts
- water and oil repellent
- easy to clean and maintain

N° article	519595 PFERD files set 1, 6 pieces	Hight mm	Width mm	Depth mm	Contents
0090	○	42	344	392	**1 workshop file** square 250 H2 **1 workshop file** half-round-pointed 250 H2 **1 workshop file** round 250 H2 **1 workshop file** flat blunt 250 H2 **1 workshop file** triangular 250 H2 **1 file brush** HBF steel wire ∅ 0,15 mm

2/3

NEW



LED pen lamp

Design:
0012:
- made of aluminium with clip
- can be switched on or off via rubberised push button at the end of the lamp
- light beam focusable by sliding the lamp head
- incl. battery
- colour black/dark blue

3,7 V Li-Ion | USB

0014:
- 3 light modes selectable via push button
- strong holding magnet at the switch
- micro USB contact protected with cover and sealed by rubber gasket
- charge status display via small LED
- including USB charging cable and 3.7 V / 320 mAh Li-Ion battery (operating time 1.5 h)



0012



0014

N° article	611790	Luminosity lumen	Luminous range m	Burn time h	Protection class	Weight g	Power supply	Total length mm
0012	○	100	30	2,3	IP20	66	battery (2× AAA)	140
0014	○	110	35	16	IP20	52	Rechargeable battery	128

LED inspection light

Design:
- with 2 LED, rotating head and shirt clip
- LED's separately controlled by 2 switches
- strong magnet at the end of the lamp
- separate switch for CRI 95 LED with colourfast light
- additional UV-LED to detect scratches, dirt particles or oil leaks
- incl. battery (0020 2×AA; 0022: 3×AAA

IP54





0020





0022

N° article	611790	Luminosity lumen	Light colour	Luminous range m	Burn time h	Protection class	Weight g	Power supply	Total length mm
0020	○	90	Daylight white	24,5	1,33	IP54	82	battery (1× AA)	111,8
0022	○	200	Daylight white	55	20	IP54	160	battery (3× AAA)	149

LED torch Q series

Design:
- with the latest CREE power chip LED technology
- made of high-strength double-anodised aluminium
- excellent light in all positions due to special, sliding HyperFocus™
- splashproof
- On/Off via pressure switch
- delivery incl. battery and belt pouch (Q3/Q3R)

IP20 | IP68 | USB-C

Q1R and Q3R Rechargeable (with battery), including USB-C cable





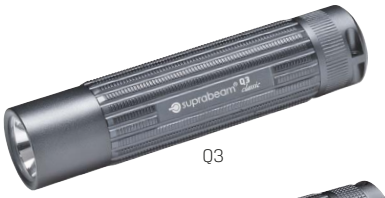
Q1 MINI



Q1



Q1R



Q3



Q3R (with rechargeable battery)

N° article	611792	Luminosity lumen	Luminous range m	Burn time h	Protection class	Power supply	Weight g	Total length mm
Q1MINI	●	30 - 120	60	5	IPx4	battery (1× AAA)	38	98
Q1	●	40 - 160	70	10	IPx4	battery (2× AAA)	56	144
Q1R	○	6 - 550	100	50	IP20	Li-Po 720 mAh (2,66 Wh)	48	141,5
Q3	NEW ●	10 - 380	50	75	IPx4	battery (3× AAA)	99	115
Q3R	●	6 - 1.100	200	300	IP68	Li-Ion Akku 3,000 mAh (10,8 Wh)	130	122

LED high-power torch with explosion protection

Design:
- powerful LED torch with ATEX approval
- made of ABS and polycarbonate (depending on model)
- in signal colour

IPX8 IP67 IP68



0005



0010



0015





0020

N° article	611812	Luminosity lumen	Luminous range m	Burn time h	Protection class	for ATEX zone	ATEX certification code	Power supply	Weight g	Total length mm	Design
0005	NEW ○	115	75	6	IPX8	0 (Category 1)	II 1 G Ex ia op is IIC T4 Ga	battery (2× AA)	79	158	**Torch** 1 light mode, with fastening clip
0010	●	117	24	2,25	IP68	0 (Category 1)	II 1 G Ex ia op is IIC T4 Ga	battery (2× AAA)	54	146	**Pen lamp** 1 light mode, with fastening clip
0015	●	138	146	19	IP67	0 (Category 1)	II 1G Ex ia IIC T4 Ga, II 1 D Ex ia IIIC T130°C Da	battery (3× AA)	180	156	**Torch** 1 light mode,
0020	●	329	134	15	IPx8	0 (Category 1)	II 1 G Ex ia op is IIC T4 Ga	battery (3× AA)	272	189	**Torch** 3 light modes: Spotlight | floodlight | both, swivelling lamp head, fastening clip with magnet

Battery VARTA industrial

Design:
- high power and long service life
- powerful drive for devices with high power requirements due to constant alkaline power

PU

Note:
Price per PU



0020 0022 0024 0026 0028

N° article	611803	Design	PU pieces
0020	●	AAA Micro 1.5 V	4
0022	●	AA Mignon 1.5 V	4
0024	●	C Baby 1.5 V	1
0026	●	D Mono 1.5 V	1
0028	●	Block 9 V	1

Battery RED Alkaline

Design:
- high power and long service life
- powerful drive for devices with high power requirements due to constant alkaline power
- price per PU



0010



0015

N° article	611802	Design	PU pieces
0010	●	RED Alkaline Micro AAA 1.5 V	40
0015	●	RED Alkaline Mignon AA 1.5 V	40

Button cell

Design:
- button cells for e.g. callipers, calculators, car keys etc.



0100



0105



0110

N° article	611802	Design
0100	●	Lithium button cell, size CR2025, voltage 3 V
0105	●	Lithium button cell, size CR2032, voltage 3 V
0110	●	Silver oxide battery, size SR44 / SR1154 / 3572, voltage 1.55 V

LED head lamp

Design:
- headlamp made of ABS plastic
- pressure switch on the lamphead for switching on and off
- replaceable head strap

IP65

Delivery:
Includes 3× AAA batteries and two head straps.



N° article	611811	Luminosity lumen	Luminous range m	Burn time h	Protection class	Power supply	Weight g	Total length mm
0010	○	180	60	60	IP65	battery (3× AAA)	83	60

Rechargeable LED head lamp

Design:
- COB LED surface at the front for homogeneous illumination of the surroundings
- spotlight at the side for selective distance illumination
- ultra-light and flexibly adjustable to any size
- gesture control with 4 different lighting modes
- 230° wide-angle illumination
- dust and splash-proof- dust and splashproof (IP 54)

IPX4

MADE IN GERMANY

NEW



N° article	611810 Spacelight	Luminosity lumen	Burn time h	Protection class	Power supply	Weight g
0320	●	350	8	IPx4	Li-Ion Akku 3,7 V, 1.200 mAh	100

Rechargeable LED head lamp

Design:
- modern, streamlined and compact styling
- powerful with up to 220 lumens, adjustable in 3 levels
- beam angle continuously settable from 10° - 70°
- lighting range 30 - 80 m
- low weight

Scope of delivery:
Includes 1 m USB to USB Type-C charging cable.

NEW





N° article	611807 ZOOM	Luminosity lumen	Burn time h	Charging time h	Protection class	Power supply	Weight g
0100	●	10 | 80 | 220	19 - 4.5 -	2.5	IP54	Li-Ion Akku 3,7 V, 2000 mAh	110

Design:
- illuminates your entire field of vision
- with three light settings, including reading mode
- compact and user-friendly layout
- improved rechargeable battery technology
- up to 22 hours operating time

IP54

USB-C

Scope of delivery:
Includes 1 m USB to USB Type-C charging cable.

NEW





N° article	611807 ZONE 2	Luminosity lumen	Burn time h	Charging time h	Protection class	Power supply	Weight g
0110	●	20 | 100 | 200	22 - 2 -	2.5	IP54	Li-Ion Akku 3,7 V, 1200 mAh	75

LED head lamp

PELI

Design:
- head lamp made of impact-resistant polycarbonate
- chemical-resistant anti-static impact modified PC/PBT

Delivery:
Incl. 3× AAA.batteries



N° article	611801	Luminosity lumen	Luminous range m	Burn time h	Protection class	for ATEX zone	ATEX certification code	Power supply	Total length mm	Weight g
0102	●	74	92	11	IPx7	0 (Category 1)	I M1 Ex ia I Ma, II 1 G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T65°C Da	battery (3× AAA)	71	120

Rechargeable LED head lamp

PRETEC

Design:
- rechargeable aluminium headlight
- pressure switch on the lamp head to control 4 lighting modes (High, Medium, Low, Strobe)
- with battery level indicator via LED and overcharge protection

Delivery:
Includes 1 rechargeable battery, USB charging cable.



N° article	611811	Luminosity lumen	Luminous range m	Burn time h	Protection class	Power supply	Total length mm	Weight g
0020	○	350	85	55	IP64	Li-Ion Akku 3,7 V, 2.600 mAh	71	195

Rechargeable LED head lamp

suprabeam

Design:
- made from high-strength aluminium
- packed with incredible power of **2,000 lumen**
- an additional fuse protects the lamp from strong heat generation in case of accidental operation
- usable as a temporary floodlight
- also usable as a headlamp thanks to the headband
- with integrated magnetic base

Delivery:
Includes 1 battery, headband (50-70 cm) with holder, USB cable and self-adhesive helmet holder.



N° article	611793 M6xr	Luminosity lumen	Luminous range m	Burn time h	Protection class	Power supply	Total length mm	Weight g
0010	●	6 - 2,000 -	165	2.25 - 260	IP68	Li-Ion Akku 3.000 mAh (10,8 Wh)	110	111

Battery-powered LED inspection light

PRETEC

Design:
- robust, splash-proof plastic housing with rubberised grip area
- slim aluminium housing on the lamp head
- ball joint ±45° tiltable, 360° rotatable, with strong holding magnet at the underside
- hook can be folded out 210°, rotatable via the ball joint

Delivery:
Incl. 1.5 m micro USB charging cable



N° article	611809 SLIM	Luminosity lumen	max. burn time h	Charging time h	Total length mm
0020	○	600 | 225 Spot: 120	2 | 10	4	384

LED hand lamp with COB LED

PRETEC

Design:
- ABS housing
- polycarbonate lens
- with magnetic pocket clip

Delivery:
Incl. 3 AAA batteries



N° article	611808	Luminosity lumen	Luminous range m	Burn time h	Protection class	Power supply	Weight g	Total length mm
0010	○	150	30	3,5	IP20	battery (3× AAA)	70	158

Battery-powered LED inspection light

SCANGRIP

IP30

Design:
- 3-in-1: Inspection light, work light and torch
- very bright illumination with up to 200 lumens and a powerful torch function
- very slim and compact make
- strong, built-in magnet and hook for flexible positioning
- two light levels (50 or 100 %) for maximum operating time

Delivery:
Includes 1 m USB to mini DC charging cable.

NEW



N° article	611805 MINI SLIM	Luminosity lumen	max. burn time h	Charging time h	Protection class	Power supply	Weight g	Dimension mm
0060	●	Spot: 100 Surface: 100 - 200	5/2.5	3	IP30	Li-Ion Akku 3,7 V, 1.200 mAh	101	L132 × H30 × B41

Design:
- 3-in-1: Inspection light, work light and torch
- very bright illumination with up to 500 lumens and a powerful torch function
- very slim and compact make
- strong, built-in magnet and hook for flexible positioning
- two light levels (50 or 100 %) for maximum operating time

Delivery:
Includes 1 m USB to mini DC charging cable.

IP30

NEW



N° article	611805 SLIM	Luminosity lumen	max. burn time h	Charging time h	Protection class	Power supply	Weight g	Dimension mm
0065	●	Spot: 100 Surface: 250 - 500	5/2.5	4.5	IP30	Li-Ion Akku 3,6 V, 3.000 mAh	224	L165 × H28 × B44

Rechargeable LED hand lamp

SCANGRIP

Design:
- COB-LED technology
- powerful and absolutely even illumination
- two light levels with 50 % and 100 % plus spotlight
- flexible use, exactly where you want it: In your breast pocket or trouser pocket with the built-in clip, on your baseball cap with the special fastening device or as a headlamp on your headband with the FLEX WEAR KIT
- thanks to the built-in magnet, the lamp can be flexibly positioned on all magnetic things

Delivery:
Incl. 1 m USB charging cable

IP20 USB-C

NEW



0015





0010



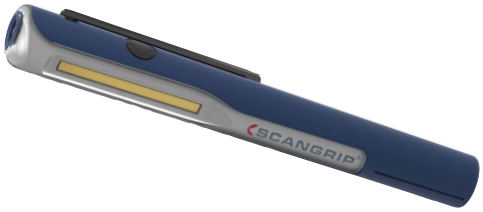
N° article	611815 FLEX WEAR	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Dimension mm	Design
0010	●	Spot: 75 Area: 75 | 150	4	IP20	3,7 V, 800 mAh Li-Ion	42	L89,5 × H26,5 × B21	FLEX WEAR
0015	●	Spot: 75 Area: 75 | 150	4	IP20	3,7 V, 800 mAh Li-Ion	42	L89,5 × H26,5 × B21	FLEX WEAR KIT incl. headband and fastening device for baseball cap

Rechargeable LED pen lamp

Design:
- Brightness continuously adjustable (main light)
- Small and handy shape with pocket clip
- very powerful light on both the lamp head and the spotlight
- side-mounted button switch for one-handed operation
- hard-wearing, with robust rubber surface for a secure grip
- built-in magnets in the clip and on the lamp base
- easy charging via USB cable

IP54 | Micro-USB

Included in delivery:
Including micro USB charging cable 1 m.



N° article	611805 MAG PEN 3	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Total length mm
0006	●	Spot: 80 Surface: 15 - 150	20/2	IP20	Li-Ion Akku 3,7 V, 750 mAh	80	174

Rechargeable LED hand lamp

Design:
- COB-LED technology
- powerful and absolutely even illumination
- **two light levels with 50 % and 100 % plus spotlight**
- 180° swivelling
- with strong magnet and hook for fastening

IP65 | USB

Delivery:
USB charging cable Mini DC included



N° article	611805 MINIFORM	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Total length mm
0012	●	Spot: 75 Surface: 100/200	6/3	IP65	Li-Ion Akku 3,7 V, 1.600 mAh	130	212

Rechargeable LED hand lamp

Design:
- bright, homogeneous surface light and absolutely even illumination
- **two light levels with 50 and 100 % intensity plus spotlight**
- especially suited as working light
- flexible head swivellable up to 180°
- with strong, rotatable hook and strong built-in magnet
- charge level indicator

IP65 | USB

Delivery:
Including USB charging cable Mini DC, charging station
(for wall and table mounting).



N° article	611805 UNIFORM	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Total length mm
0018	●	Spot: 175 Surface: 250/500	4.5/2	IP65	Li-Ion Akku 3,6 V, 3.000 mAh	260	190

Torch LED Profi

Design:
- professional hand light with electronic ballast
- swivelling hook made of break-resistant special plastic
- switch in handle
- with protective contact plug
- can be used up to temperatures of -20 °C
- 5 m rubber hose line H05RN-F 2×1.0
- tested to DIN EN 60598-1

IP54

NEW



N° article	611806	Output Watt	Luminosity lumen	Light colour Kelvin	Protection class
670	○	10	670	6400	IP54

Rechargeable LED hand lamp

Design:
- slim LED battery-operated portable luminaire with main and spot light for illumination even in confined spaces
- smooth-running rotary knob for stepless dimming from 10 to 100 %
- with strong, rotatable hook and strong built-in magnet
- flexible head swivellable up to 180°

IP54 | USB

Delivery:
USB charging cable Mini DC included

NEW



N° article	611805 MINI MAG PRO	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Total length mm
0048	●	Spot: 80 Surface: 20 - 200	20/2	IP54	Li-Ion Akku 3,7 V, 1.200 mAh	157	200

Rechargeable LED hand lamp

Design:
- slim LED battery-operated portable luminaire with main and spot light for illumination even in confined spaces
- smooth-running rotary knob for stepless dimming from 10 to 100 %
- with strong, rotatable hook and strong built-in magnet
- flexible head swivellable up to 180°

IP54 | USB

Delivery:
USB charging cable Mini DC included



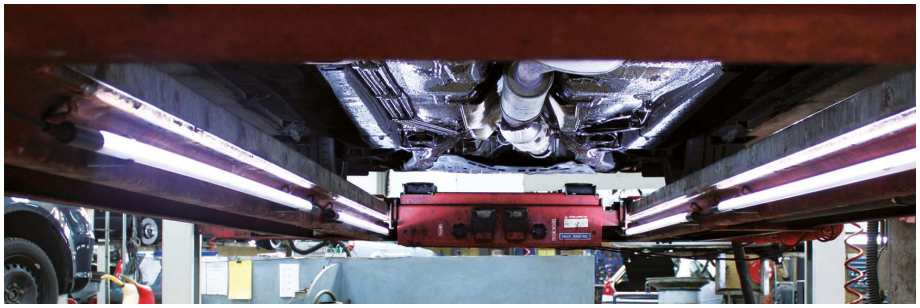
N° article	611805 MAG PRO	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Total length mm
0052	●	Spot: 150 Surface: 60 - 600	15/1.5	IP54	Li-Ion Akku 3,7 V, 2600 mAh	340	261

LED machine and workplace light

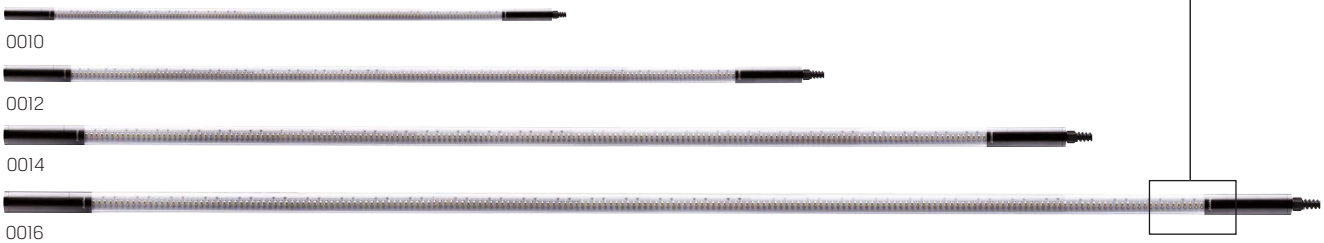
Design:
- innovative and powerful working light
- unique, extruded, closed profile made of acrylic (PMMA)
- with built-in prism and terminations made of black anodised aluminium
- for use in production and workshop
- almost twice as intense as a 36W fluorescent tube
- no flickering or stroboscopic effects
- **extremely robust, shock-resistant and maintenance-free**
- **waterproof, suitable for wet and dirty work areas**
- LEDs with a lifespan of at least 100,000 hours
- **75° illuminating angle**
- low-voltage 24V DC

Note:
The LINE LIGHT illuminating units can be connected in series according to your requirements Please add up the power consumptions of all illuminating units to order the required **power supply unit** separately

IP67







N° article	611904 LINE LIGHT	Output Watt	Luminosity lumen	Light colour Kelvin	Number of LEDs	Protection class	∅ mm	Length mm
0010	●	10	1250	6000	96	IP67	25	838
0012	●	16	2000	6000	156	IP67	25	1234
0014	●	22	2750	6000	216	IP67	25	1630
0016	○	28	3500	6000	276	IP67	25	2027

IP67



0021

N° article	611904 Power supply with 5 m cable	Design
0021	●	80 W power supply, **IP67** - for lighting unit(s) with power consumption not exceeding 60 W



0022

N° article	611904 Power cable, 8 m	Design
0022	●	Power cable for connecting 2 or more lighting units, can be cut to a suitable length

N° article	611904 Attachments for LINE LIGHT	Design
0030	●	**Mounting clip** with mounting material
0032	●	**Neodymium magnetic base** (Ø 66 mm) for use with mounting clip; a rubber protection cover prevents scratches
0034	●	**Clip holder** with hook and magnet, mainly for smaller lighting units
0036	●	**flexible arm** (20 cm) with extremely strong neodymium magnetic base (Ø 66 mm), a rubber protection cover prevents scratches



0030 0032 0034 0036

LED work lamp with magnetic base

Design:
- high-quality, robust and powerful working light with a flex shaft in aluminium housing
- SMD high-power chip
- even, homogeneous illumination
- daylight white (approx. 5,500 Kelvin)
- non-glare and flicker-free
- rubber coated magnetic base

Delivery:
Incl.power supply unit



N° article	611810 Spotlight 90°	Output Watt	Luminosity lumen	Dimension light head mm	Total length mm	Design
0108	●	2,5	200	∅ 28	580	120° even illumination
0109	●	2,5	200	∅ 28	580	120° even illumination **with dimmer**

LED work lamp with magnetic base

Design:
- high-quality, robust and powerful working light with a flex shaft in aluminium housing
- SMD high-power chip
- even, homogeneous illumination
- daylight white (approx. 5,500 Kelvin)
- non-glare and flicker-free
- rubber coated magnetic base

Delivery:
Incl.power supply unit





N° article	611810 LED workplace lamp "Gloss light"	Output Watt	Luminosity lumen	Dimension light head mm	Total length mm	Design
0100	●	3	300	90×30×15	640	160° even illumination
0101	●	3	300	90×30×15	640	160° even illumination **with dimmer**

LED work lamp with magnetic base

Design:
- high-quality, robust and powerful working light with a flex shaft in aluminium housing
- SMD high-power chip
- even, homogeneous illumination
- daylight white (approx. 5,500 Kelvin)
- non-glare and flicker-free
- rubber coated magnetic base

Delivery:
Incl.power supply unit





N° article	611810 Flexi 90°	Output Watt	Luminosity lumen	Dimension light head mm	Total length mm	Design
0114	●	4,5	450	∅ 60	600	120° even illumination
0115	●	4,5	450	∅ 60	600	120° even illumination **with dimmer**

LED work lamp with magnetic base

Bauer Böcker

IP65 MADE IN GERMANY

Design:
- high-quality, robust and powerful working light with a flex shaft in aluminium housing
- SMD high-power chip
- even, homogeneous illumination daylight white
- non-glare and flicker-free
- rubber-coated magnetic base ∅ 88 mm

Delivery:
Incl. power supply unit





N° article	611810 Floodlight	Output Watt	Luminosity lumen	Dimension light head mm	Total length mm	Design
0110	●	10	950	220 × 40 × 20	850	160° even illumination
0111	●	10	950	220 × 40 × 20	850	160° even illumination **with dimmer**

Accessories for LED lamps

Bauer Böcker



0205



0211

N° article	611810	Design
0205	●	**Table clamp** chrome plated metal plates ∅ 73 mm and 90 mm
0211	●	**Metal base** for all work lights, 210 mm, lacquered

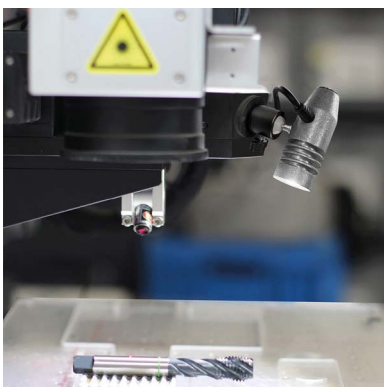
LED work lamp with magnetic base

Bauer Böcker

IP65 MADE IN GERMANY

Design:
- high-quality, robust and powerful working light with a flex shaft in aluminium housing
- SMD high-power chip
- even, homogeneous illumination
- daylight white (approx. 5,500 Kelvin)
- non-glare and flicker-free
- rubber coated magnetic base

Delivery:
Incl.power supply unit





N° article	611810 "Lichtblick"	Output Watt	Luminosity lumen	Dimension light head mm	Design
0118	●	2,5	200	∅ 28	120° even illumination
0119	●	2,5	200	∅ 28	120° even illumination **with dimmer**

LED machine lamp with magnetic base

Bauer Böcker

Design:
- robust, durable lamp, waterproof
- even, homogeneous illumination
- anti-glare and flicker-free, low-reflection, daylight white (approx. 5500 Kelvin)
- flexible attachment
- rotatable, 160° illumination

IP67 MADE IN GERMANY

Delivery:
Incl.power supply unit


0120


0122


0124

N° article	611810 Night guard	Output Watt	Luminosity lumen	Light colour Kelvin	Dimension light head Ø mm	Length mm
0120	●	3	300	5500	40	140
0122	●	6	600	5500	40	200
0124	●	9	900	5500	40	250

Design:
- high-performance LED aluminium housing
- uniform and low-reflection illumination
- non-glare and flicker-free, daylight white
- dimmable and swivelling, 120° illumination

IP67 MADE IN GERMANY

Delivery:
Incl.power supply unit





N° article	611810 dimmable and swivelling, 120° illumination	Output Watt	Luminosity lumen	Light colour Kelvin	Dimension light head mm
0140	●	6	600	5500	202 × 40 × 40
0142	●	12	1200	5500	323 × 40 × 40
0144	●	24	2400	5500	568 × 40 × 40

LED ring light with magnetic base

Bauer Böcker

Design:
- high-quality, robust and powerful working light in aluminium housing
- even, homogeneous illumination
- non-glare and flicker-free
- rubber covered, swivelling magnetic feet
- as machine illumination **for shadow-free illumination of rotating spindle heads** on e.g. drilling and milling machines
- large beam angle
- even 105° illumination

IP67 MADE IN GERMANY

Delivery
Incl.power supply unit





N° article	611810 Ring light	Output Watt	Luminosity lumen	Light colour Kelvin	Ø external mm	Ø inside mm	hight mm
0304	●	7,5	460	5.500	160	100	42

LED machine lamp Prolyx

Design:
- with magnetic base, Ø 88 mm
- **for direct mounting on the machine**
- on/off switch directly on the luminaire head
- luminaire head made of aluminium, with protective glass
- protection class IP63
- efficiency class E
- 100° illumination
- operating temperature from -25 °C to +25 °C



IP63

N° article	611801	Output Watt	Operating voltage V	Luminosity lumen	Light colour Kelvin	Total length mm	Design
0162	●	10	230	1000	4000	650	Magnetic base

LED floodlight VEGA

SCANGRIP

Design:
- strong, diffuse, glare-free lighting
- lightweight and robust housing made of impact-resistant plastic
- use indoors and outdoors
- 230 VAC operating voltage

IP54

Type 0055
VEGA LITE C+R - operation either with rechargeable battery or direct connection to power supply.

Type 0060
very robust and with 2 SCHUKO sockets on the back







0060

N° article	611905	Output Watt	Luminosity lumen	Max. lighting time (battery operation) h	Light colour Kelvin	Number of LEDs	Power supply	Length mm	Width mm	Depth mm
0050	○	32	4000	–	6000	83	3 connection cable 230 V	280	288	103
0055	○	9 | 18	1,250 | 2,500	3/1,5	6500	66	5 m connection cable 230 , Li-Ion battery 11.1 V, 2,600 mAh	280	288	103
0060	○	48	6000	–	6000	123	5 m connection cable 230 V	310	318	117

LED work lamp NOVA

SCANGRIP

Design/Use:
- robust LED work light with shock-resistant aluminium housing and rubber protective edge
- highly efficient COB-LED technology
- smooth, low-shadow, glare-free light
- 5-step dimming function
- integrated handle
- 5 m power cable
- also for use outdoors and in humid rooms

Type 0090
With Bluetooth light control app

UP TO 12,000 LUMENS

IP67 Bluetooth®





N° article	611905 NOVA	Output Watt	Luminosity lumen	Length mm	Width mm	Depth mm
0070	●	26	400 - 4,000	233	235	88
0080	●	42	600 - 6,000	262	267	87
0090	●	86	1,200 - 12,000	298	302	102

A Lighting Solution

for All Battery Packs

SCANGRIP®

One lighting solution for all battery packs

JUST CONNECT

Compatible with BERNER - BOSCH - BOSCH GREEN - DEWALT - EINHELL - FEIN - FESTOOL

FLEX - HAZET - HIKOKI - INGERSOLL - MAKITA - METABO - MILWAUKEE - RIDGID - SNAP-ON - WÜRTH



61/1098

Rechargeable battery connector

Design:
- SMART CONNECTOR for use with 18 V battery packs on SCANGRIP CONNECT work lights, regardless of which power tool brand you prefer
- SCANGRIP has developed a tailor-made CONNECTOR for each individual brand
- simply mount the CONNECTOR on the work light, connect your battery pack and you're ready to go
- a BATTERY SAFETY SYSTEM protects the battery and ensures safe use
- the safety system has automatic discharge protection, overload protection and temperature monitoring
- the SCANGRIP CONNECTORS have been tested by TÜV Rhineland

NEW





N° article	611905 SCANNGRIP CONNECT	Design	fit for
0270	○	BERNER	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0272	○	BOSCH	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0274	○	BOSCH GRÜN	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0276	○	DEWALT	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0278	○	EINHELL	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0280	○	FEIN	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0282	○	FESTOOL	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0284	○	FLEX	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0286	○	HAZET	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0288	○	HIKOKI	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0290	○	INGERSOLL	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0292	○	MAKITA	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0294	○	MILWAUKEE	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0296	○	RIDGID	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0298	○	SNAP-ON	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165
0300	○	WÜRTH	611905 0220 | 611905 0225 | 611905 0230 | 611905 0250 | 611905 0255 | 611905 0165

Rechargeable LED spotlight NOVA CONNECT

Design:
- highly efficient and powerful COB LED floodlight
- robust spotlight with elegant look
- compatible with the Metabo CAS battery system 12 V, 4.0 Ah - 18 V, 5.2 Ah and all other 18 V battery packs of leading power tool brands by using the SCANGRIP CONNECTOR connector
- for unlimited light availability, the POWER SUPPLY can also be connected directly

12 V Li-Ion | 18 V Li-Ion | IP30 | Bluetooth® | CAS CORDLESS ALLIANCE SYSTEM



N° article	611905 without rechargeable battery and charger	Output Watt	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Dimension mm
0220	○	16	200 - 2.000	2,5 h @ 12 V 4,0 Ah Akku | 5,75 h @ 18 V 5,2 Ah Akku	IP30	Rechargeable battery	720	161 × 164 × 78

Rechargeable LED spotlight NOVA CONNECT

Design:
- highly efficient and powerful COB LED floodlight
- robust spotlight with high IP protection class
- elegant design with integrated carrying handle and new adjustable foot for flexible alignment and direct mounting on the SCANGRIP stand
- the following functions can be controlled via Bluetooth light control app:
- dimming function with 5 light levels 10 % - 100 %.
- switch on/off, check battery status
- control up to 4 luminaires simultaneously as one group
- set PIN code
- NOVA 4 CONNECT and NOVA 10 CONNECT are compatible with the Metabo CAS battery system 12 V, 4.0 Ah - 18 V, 5.2 Ah and all other 18 V battery packs of leading power tool brands by using the SCANGRIP CONNECTOR connector
- for unlimited light availability, the POWER SUPPLY can also be connected directly

12 V Li-Ion | 18 V Li-Ion | IP65 | Bluetooth® | USB | CAS CORDLESS ALLIANCE SYSTEM



NEW





0225



0230

N° article	611905 without rechargeable battery and charger	Output Watt	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Dimension mm
0225	○	30	400 - 4,000	1,5 h @ 12 V 4,0 Ah Akku | 3 h @ 18 V 5,2 Ah Akku	IP65, IP54 mit Akkudeckel	Rechargeable battery	2350	263 × 230 × 119
0230	○	75	1,000 - 10,000	0,5 h @ 12 V 4,0 Ah Akku | 1,25 h @ 18 V 5,2 Ah Akku	IP65, IP54 mit Akkudeckel	Rechargeable battery	3720	304 × 292 × 131

Rechargeable LED spotlight VEGA CONNECT

Design:
- powerful and robust COB LED floodlight
- versatile universal light for the demanding professional
- creates a diffuse, glare-free and pleasant working light with uniform light intensity and wide light diffusion
- two light levels with 50 % or 100 %
- compatible with the Metabo CAS battery system 18 V, 5.2 Ah and all other 18 V battery packs of leading power tool brands by using the SCANGRIP CONNECTOR connector
- for unlimited light availability, the POWER SUPPLY can also be connected directly

18 V Li-Ion | IP54 | CAS CORDLESS ALLIANCE SYSTEM

NEW





Use the POWER SUPPLY power supply for direct connection



N° article	611905 without rechargeable battery and charger	Output Watt	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Dimension mm
0250	○	20	1,000 | 2,000	4.5 - 9 h @ 18 V 5,2 Ah Akku	IP54 mit Stromversorgung; IP30 mit Akku	Rechargeable battery	850	200 × 208 × 78
0255	○	40	2,000 | 4,000	2.25 - 4.5 h @ 18 V 5,2 Ah Akku	IP54 mit Stromversorgung; IP30 mit Akku	Rechargeable battery	2020	280 × 289 × 103

Rechargeable LED spotlight TOWER 5 CONNECT

Design:
- powerful and robust COB LED floodlight
- TOWER 5 CONNECT is a tripod (height adjustable up to 2 m) with two built-in floodlights
- the flexible floodlights can be rotated 360° for the optimum lighting angle
- two light levels with 50 % or 100 %
- compatible with the Metabo CAS battery system 18 V, 5.2 Ah and all other 18 V battery packs of leading power tool brands by using the SCANGRIP CONNECTOR connector
- for unlimited light availability, the POWER SUPPLY can also be connected directly



N° article	611905 without rechargeable battery and charger	Output Watt	Luminosity lumen	max. burn time h	Protection class	Power supply	Weight g	Dimension mm
0165	○	45	2,500 | 5,000	2 - 4,5 h @ 18 V 5,2 Ah Akku	IP30	Rechargeable battery	5200	121 × 153 × 892

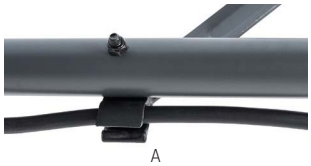
Telescopic stand for LED spotlight

Design:
- made of robust, powder-coated steel
- for direct mounting of NOVA or VEGA work lights without additional bracket
- there are the two height variants
  TRIPOD 1.35 - 3 m
  WHEEL STAND 0.7 - 1.9 m
- safety clips to fix the cable to the tripod (A)

N° article	611905	Design
0100	●	TRIPOD max. load 10 kg, weight 6 kg
0102	●	WHEEL stand max. load 10 kg, weight 6 kg
0105	○	Double holder for two lamps of the NOVA or VEGA series


0100

0102


A


0105

LED spotlight Slimline, with CHIP LED

Design:
- 20 W original **SAMSUNG-SMD LED**
- reinforced aluminium die-casting housing
- protective grating, interchangeable safety glass
- solid frame with plastic handle
- very low heat generation
- suitable for permanent outdoor use
- operating time ⟩ 50,000 hrs.
- 2 m rubber-sheathed cable with protective contact plug

IP65



N° article	611908	Output Watt	Luminosity lumen	Light colour	Cable length mm	Cable type
0024	●	20	1700	4,000 (neutral white)	2	H05RN-F 3G1.0

LED spotlight Slimline, with stand

Design:
- with original **SAMSUNG SMD LED**
- reinforced, flat housing made of die-cast aluminium
- interchangeable safety glass
- very low heat generation
- operating time ⟩ 50,000 hours
- maximum height on tripod 1.60 m
- 230 V/16 A/50 Hz

IP65



N° article	611908	Output Watt	Luminosity lumen	Light colour	Cable length mm	Cable type
0040	●	30	2550	4,000 (neutral white)	5	H07RN-F 3G1.5 / neoprene

LED spotlight Slimline, with CHIP LED

Design:
- with original **SAMSUNG SMD LED**
- housing made of reinforced die-cast aluminium
- stable frame with ergonomic plastic handle
- interchangeable safety glass
- over 90 % less energy consumption than halogen lamps
- very low heat generation
- with robust protective grating
- 2 safety socket outlets with self-closing hinged lid
- operating time ⟩ 50,000 hours
- tested to EN 60598-1
- 230 V/160 A/50 Hz

IP44



with two Schuko sockets



N° article	611908	Output Watt	Luminosity lumen	Light colour	Cable length mm	Cable type
0052	●	50	4250	4000 (neutral white)	3	H07RN-F 3G1.5 / neoprene

LED spotlight with chip LED

Design:
- with original **SAMSUNG SMD LED**
- extremely narrow, reinforced die-cast aluminium housing
- 230 V/50-60 Hz
- spotlight can be swivelled and locked in place
- beam angle 120°
- interchangeable safety glass
- very low heat generation
- operating time ⟩ 50,000 hours
- tested to EN 60598-1

IP65



0061+0065



0063

N° article	611908	Output Watt	Luminosity lumen	Light colour	Cable length mm	Cable type
0061	●	20	1700	4000 (neutral white)	2	H07RN-F 3G1,5, rubber
0063	●	50	4250	4000 (neutral white)	2	H07RN-F 3G1,5, rubber
0065	○	80	6800	4000 (neutral white)	2	H07RN-F 3G1,5, rubber

Cable reel

Design:
- shock-absorbing, stable, galvanised base frame with parking brake
- ergonomic shaped handle
- protective contact sockets with protective flaps
- VDE thermal protection switch
- with patented cable routing
- tested to En 61242, DIN VDE 0620-1, IEC 60309, DIN VDE0281-5, DIN VDE 0282-4

IP20

MADE IN GERMANY

INDOOR



N° article	611910 Metal, for interior use	Cable length mm	Cable type	Number of sockets	Protection class
0010	●	25	H05VV-F 3G1,5 / plastic	4× 230 V	IP20
0012	●	50	H05RR-F 3G1,5 / rubber	4× 230 V	IP20

Cable reel IronCoat

Design:
- reel body made of hot-dip galvanised steel sheet with special protective insulation
- shock-absorbing, stable, galvanised base frame with parking brake
- ergonomic shaped handle
- protective contact sockets with safety flap covers
- VDE thermal protection switch
- with patented cable routing
- tested to EN 61242, DIN VDE 0620-1, DIN VDE 0282-4, IEC 60309

DGUV Test ET 14040 Sicherheit geprüft tested safety

IP44

MADE IN GERMANY

Konform mit BGI 608

CONSTRUCTION SITE



N° article	611910 Metal with protective insulation	Cable length mm	Cable type	Number of sockets	Protection class
0020	●	25	H07RN-F 3G1.5 / neoprene	3× 230 V	IP44
0022	○	33	H07RN-F 3G2,5 / neoprene	3× 230 V	IP44
0024	●	40	H07RN-F 3G1.5 / neoprene	3× 230 V	IP44

Cable reel Plastic

Design:
- made of robust, highly break-resistant special plastic
- heavy rubber-sheathed cable
- tested to EN 61242, DIN VDE 0620-1, IEC 60309, DIN VDE 0282-4
- shock-absorbing, stable, galvanised base frame with parking brake
- ergonomic shaped handle
- VDE thermal protection switch
- sockets with hinged safety lids

IP44

MADE IN GERMANY

Konform mit BGI 608

CONSTRUCTION SITE



N° article	611910 Plastic	Cable length mm	Cable type	Number of sockets	Protection class
0040	●	25	H07RN-F 3G1.5 / neoprene	3× 230 V	IP44
0042	●	33	H07RN-F 3G2,5 / neoprene	3× 230 V	IP44
0044	●	40	H07RN-F 3G1.5 / neoprene	3× 230 V	IP44

CONSTRUCTION SITE



N° article	611910 Plastic	Cable length mm	Cable type	Number of sockets	Protection class
0070	●	20	H07RN-F 5G2,5 / 16 A / neoprene	2× 230 V / 1× 400 V	IP44
0072	●	25	H07RN-F 5G1,5 / 16 A / neoprene	2× 230 V / 1× 400 V	IP44

Extension cable

Design:
- with protective contact plug
- protective contact coupling with protective cap
- tested to DIN VDE 0620-1, DIN VDE 0282-4

IP44 | Konform mit BGI 608

OUTDOOR



N° article	611910 Rubber, light version	Cable length mm	Cable type	Protection class
0100	●	10	H05RR-F 3G1,5 / rubber	IP44
0105	●	25	H05RR-F 3G1,5 / rubber	IP44

Extension cable

Design:
- heavy rubber-sheathed cable
- approved for construction sites and farms
- with CEE plug and CEE coupling
- tested to IEC 60309, DIN VDE 0282-4
- 400 V, 16 A / 32 A, 5-pole, 6h

IP44 | MADE IN GERMANY

CONSTRUCTION SITE



N° article	611910 CEE heavy current extension	Cable length mm	Cable type	Protection class	Design:
0130	●	10	H07RN-F 5G1,5 / neoprene	IP44	16 A, approx. 11 kW
0134	●	25	H07RN-F 5G1,5 / neoprene	IP44	16 A, approx. 11 kW
0136	○	25	H07RN-F 5G2,5 / neoprene	IP44	16 A, approx. 11 kW
0140	○	25	H07RN-F 5G4 / neoprene	IP44	32 A, approx. 22 kW

IP44 | Konform mit BGI 608

CONSTRUCTION SITE



N° article	611910 Rubber, heavy version	Cable length mm	Cable type	Protection class
0110	●	10	H07RN-F 3G1.5 / neoprene	IP44
0114	●	25	H07RN-F 3G1.5 / neoprene	IP44
0116	●	25	H07RN-F 3G2,5 / neoprene	IP44

Multiple distributor/Socket strip

Design:
- heavy rubber-sheathed cable
- splashproof
- tested to DIN VDE 0620-1, DIN VDE 0282-4
- 230 V / 16 A
- self-closing socket lids

IP44



0150

CONSTRUCTION SITE



0155 / 0160

N° article	611910 Neoprene distribution socket outlet, 3-way	611910 Power strip with switch, 5-way	Cable length mm	Cable type	Protection class
0150	●	–	4,5	H07RN-F 3G1.5 / neoprene	IP44
0155	–	●	1,5	H07RN-F 3G1.5 / neoprene	IP44
0160	–	●	4,5	H07RN-F 3G1.5 / neoprene	IP44

Schuko plug/coupling

Design:
- heavy solid rubber execution
- impact and splash-water protected
- coupling with safety cap
- cross-section 3× 1.5 mm²
- tested to DIN VDE 0620-1
- 230 V / 16 A

IP44



0200



0205

N° article	611910	Design
0200	●	Plug
0205	●	Coupling

Cable winder automatic, for outdoor use

Design:
- with heavy rubber hose line
- with earthing contact plug and coupling with cover cap
- can be swivelled 180° on the wall attachment
- with EASY TO GO function
- suitable for use in the workshop
- **with 18 m coupling cable**
- 2 m connector cable
- 230 V / 16 A, max. 2,000 W

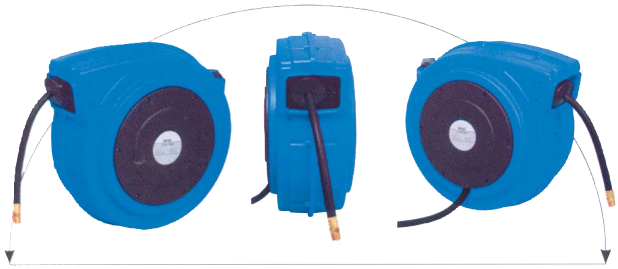
IP44



N° article	612300	Cable type	Protection class
0020	●	H07RN-F 3G1.5	IP44

Hose reel Compressed air/water

Design:
- closed housing made of impact-resistant plastic
- equipped with extremely robust hybrid hose
- **for compressed air and water**
- with locking device against unwanted release of the brake
- encapsulated, permanently lubricated drive spring
- including swivel bracket for wall and ceiling mounting





N° article	612301	Hose length m	Connection inch	Hose nominal width DN	Max. operating pressure bar	medium	Weight kg
1062	●	8	1/4*	6	12	Air, Water	3
1072	●	15	1/4*	6	20	Air, Water	5

Hose reel Compressed air/water

Design:
- hose reel with closed sheet steel housing
- for indoor and outdoor use
- four guide rollers at the hose outlet minimise hose abrasion
- **several locking options per revolution**
- also suitable for hot water applications
- hose length 10 or 20 m (depending on model)



N° article	612301	Hose length m	Connection inch	Hose nominal width DN	Max. operating pressure bar	medium	Weight kg
1085	○	10	3/8*	9	20	Air, Water	12,8
1095	○	20	3/8*	9	20	Air, Water	27,5

Spring balancer

Design:
- sturdy aluminium pressure die cast housing with a flexible and resistant stainless steel wire rope
- low-friction sleeves, precise rope guide, safety hooks and a longevity spring
- an included rope serves as an additional falling protection
- load capacity 0.4 - 6 kg (depending on the model)
- precise adjustment via setscrew
- for electric and pneumatic tools, grinders, polishing machines, impact wrenches, riveting machines etc.

Types 0010 - 0030 light weight version
Type 0060 medium weight version



N° article	612301 Type TCN	Load-bearing capacity kg	Payload max. 40 kg	Cord length m	Cord ∅ mm	Weight kg
0010	●	0,4	1	1,6	2	0,6
0020	●	1	2	1,6	2	0,6
0030	●	2	3	1,6	2	0,7
0060	●	4	6	2	2	2,3

Hand Brushes / Brooms

Design:
Wooden body unpainted with rounded edges.



N° article	612501 Hand Brushes / Brooms	Total length mm	Design
0005	●	280	quality mix
0010	●	280	Poly-Kokos® (polypropylene replacement for coconut fibre bristles)
0020	●	450	Poly-Kokos® (polypropylene replacement for coconut fibre bristles)
0022	●	280	Arenga

Design:
- saddle wood with handle hole Ø 24 mm
- smooth
- 6 × 18 rows



N° article	612501 Street broom, Elaston	Width mm
0085	●	400

Design:
- particularly sturdy sweeper for coarse dirt
- smooth
- long material cut
- saddle wood with handle hole, handle Ø 28 mm with cone
- **wet-strength**



N° article	612501 Workshop broom, Elaston	Width mm
0065	●	400
0066	●	500
0067	●	600

Design:
- wooden body with heavy metal broomstick holder Ø 24 mm
- very durable trimming
- **wet-strength**



N° article	612501 Workshop broom, Elaston	Width mm
0069	●	400
0070	●	500
0080	●	600

Design:
- for particularly strong contaminations in outdoor areas
- with steel scraper edge
- **Arenga / Elaston / steel wire mix**
- metal handle holder Ø 24 mm



N° article	612501 Outdoor broom	Width mm
0095	●	400

Design:
- saddle wood
- for fine flooring
- **quality mix**
- metal handle holder Ø 24 mm



N° article	612501 Platform broom	Width mm
0025	●	400
0026	●	500
0027	●	600

Design:
- wooden body with heavy metal broomstick holder Ø 24 mm
- for coarse, dry dirt



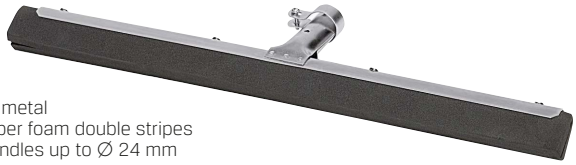
N° article	612501 Workshop broom, Poly-Kokos (polypropylene coconut fibre bristles)	Width mm
0029	●	400
0030	●	500
0040	●	600

Design:
- wooden body with heavy metal broomstick holder Ø 24 mm
- for coarse dirt
- **wet-strength**



N° article	612501 Workshop broom, Arenga	Width mm
0049	●	400
0050	●	500
0060	●	600

Squeegee



Design:
- made of metal
- with rubber foam double stripes
- for all handles up to ∅ 24 mm

N° article	612501 Metal	Width mm
0115	●	450



Design:
- bent
- metal frame galvanised
- fitting for broomstick ∅ 28 mm
- 5 mm hard rubber lip for water, mud, sludge, snow, shards, dust binding sweeping compound or similar

N° article	612501 bent, galvanised	Width mm
0116	●	600

Handle holder

Design:
- made of metal or plastic
- for self-assembly



0097



0098

N° article	612501 Metal handle holder	∅ mm
0097	●	24
0098	●	28

Lubricating brushes (Lube brush)

Design:
- pure bristle with twisted wire handle, nickel plated
- for oil, petrol, drilling water or diluted soluble oil



N° article	612501	Total length mm
0120	●	150
0130	●	200
0140	●	240

Flat brush

Design:
In top quality, pure black bristles with metal fitting.



N° article	612501	Width inch	Bristle length mm
0220	●	1	40
0230	●	2	43

Broomstick

Design:
Made of sanded hardwood, appropriate for aforementioned brooms and water squeegees



N° article	612501 Broomstick	∅ mm	Total length mm
0100	●	23,5	1400
0102	●	28	1400

Dustpan

Design:
0105:
- made of metal
- painted black
- with wooden handle

0110:
- made of specially galvanised steel sheet
- with wooden handle

0111:
- galvanised metal with folded hollow metal socket handle
- without lip

0112:
- galvanised metal with folded hollow metal socket handle
- with rubber lip



0105 0110 0111 0112

N° article	612501	Length mm	Width mm
0105	●	380	110
0110	●	440	220
0111	●	380	240
0112	●	380	240

Dustpan set

Design:
Sweeping set with folding dustpan and brush, each with long handle



N° article	612501	Length mm	Width mm
0113	●	1100	320

Ring brush

Nölle PROFI BRUSH BÜRSTEN- & PINSELTECHNIK

Design:
Industrial version with pure, bright Chinese bristles.



N° article	612501	∅ mm	Bristle length mm
0150	●	20	51
0160	●	25	54
0170	●	30	57
0180	●	35	60
0190	●	40	63
0200	●	45	65
0210	●	50	70

Radiator brushes

Nölle PROFI BRUSH BÜRSTEN- & PINSELTECHNIK

Design:
- universal version, curved shape
- with pure bright bristles
- with curved metal holder
- easy-to-hold handle with suspension hole



N° article	612501	Width inch	Bristle length mm
0240	●	1	42
0250	●	1 1/2	42
0260	●	2	42
0270	●	2 1/2	48

Cleaning cloth WYPALL

Kimberly-Clark PROFESSIONAL

Design:
WYPALL wipes made of highly absorbent Airflex material with double suction power. Perforated, blue.

0610:
WYPALL L10 EXTRA+
- for cleaning lightly soiled surfaces

0622:
WYPALL L20 EXTRA+
- ideal for moderate cleaning jobs such as polishing glass or cleaning tools
- sufficient absorbing capacity to wipe up most liquids with ease

0630:
WYPALL L30 ULTRA+
- particularly absorbent wipes with high tear resistance in wet condition
- for ambitious cleaning operations



0610



0622



0630

N° article	612701 Rolls, blue	Number of layers	Number of cloths	Cloth size W × L cm	Castor ∅ cm	Roll length m	Rolls per PU
0610	●	1× 35 g/m²	1000	33 × 38	32	380	1
0622	●	2× 35 g/m²	500	32.5 × 38	33	190	1
0630	●	3× 20 g/m²	670	37 × 38	37,5	255	1

Paper towel roll

Kimberly-Clark PROFESSIONAL

Design:
- high-quality wipe, perforated
- particularly suitable for cleaning and for absorbing dirt, oils and greases
- very absorptive and tear resistant
- price per PUv



0010



0012

N° article	612700 Rolls, blue	Number of layers	Number of cloths	Cloth size W × L cm	Castor ∅ cm	Roll length m	Rolls per PU
0010	●	2× 18 g/m²	1000	38 × 36	29	360	2
0012	●	3× 18 g/m²	1000	38 × 36	39	360	1

Wall mount and floor stand for cleaning paper and non woven cleaning rolls

Design:
- ideal for the economical dispensing of up to 40 cm wide cleaning paper and non-woven rolls
- very robust, practical and easy to handle
- metal, galvanised
- colour blue

Delivery:
Without paper rolls and waste bag



0030



0035



0040

N° article	612700	Design
0030	●	**Wall mount roll holder**, H × W × D 312 × 500 × 230 mm
0035	●	**Roll stand**, H × W × D 900 × 460 × 440 mm
0040	●	**Mobile roll stand**, H × W × D 900 × 500 × 440 mm, with waste bag holder

Paper cleaning tissue

Design:
- high-quality and versatile tissue wipes made of pulp and waste paper, perforated
- particularly suitable for cleaning and for absorbing dirt, oils and greases
- very absorptive and tear resistant
- price per PU



PU

N° article	612700 white	Number of layers	Number of cloths	Cloth size W × L cm	Castor ∅ cm	Roll length m	Rolls per PU
0020	●	2× 18.5 g/m²	1000	22×38	39	570	2

Non-woven wipe

Design:
- high quality and soft polishing fleece with high abrasion resistance
- **lint-free and scratch-free**, therefore perfect for sensitive surfaces
- efficient in wiping up oils, greases, emulsions and other lubricants
- price per PU

0050:
WYPALL L40



0050



0055

PU

N° article	612700 white	Number of layers	Number of cloths	Cloth size W × L cm	Castor ∅ cm	Roll length m	PU
0050	●	1× 80 g/m²	1008	31.7×30.4	–	–	18 packs of 56 wipes
0055	●	1× 76 g/m²	750	31.5×33	37,5	262	1 roll

Paper towel

Design:
- cost-effective and powerful towel paper
- clean and hygienic; suitable for every lavatory
- made from recycled material
- natural white with V fold
- price per PU

PU



N° article	612700 ecru	Number of layers	Number of cloths	Cloth size W × L cm	PU
0105	●	1× 38 g/m²	5000	23×25	1 carton = 2× 250 sheets

Toilet paper

Design:
- 250 sheets per roll
- price per PU

PU



N° article	612700 Basic / Plus	Cloth size W × L cm	Design	Rolls per PU
0110	●	9.8×12	2-ply, ecru	8×8
0115	●	9.8×12	3-ply, white	6×8

Cleaning cloth

Design:
0710:
WYPALL X60
- versatile and durable wipes
- economical in use
- embossed, light blue

0714:
WYPALL X80
- extra robust and voluminous
- ideal for difficult tasks
- embossed, steel blue

N° article	612701 Single wipe	Number of layers	Wipe size cm	Contents
0710	●	1× 68 g/m²	42×42.5	1 pack = 150 wipes
0714	●	1× 120 g/m²	42.7×21.2	1 pack = 80 wipes



0710



0714

Moist cleaning cloth

PREMUS

Design:
- fast-acting, surface-active cleaning cloths
- effortless removal of dirt, oil and grease from tools, surfaces and hands
- low linting, good skin tolerance
- **free of hazard labelling** (CHC- and aromatics-free)
- food approval according to NSF C1 and A1



N° article	612703	Contents
0010	●	90 wipes

High performance wipe Scotch-Brite™

3M

PU
5 pieces

Design:
- suited for cleaning of all surfaces
- up to 100 times higher grease and dirt absorption compared to conventional cleaning cloths
- ideal for cleaning optical devices and ground surfaces
- washable up to 300 times

Delivery:
In packaging units only!



N° article	612702	Dimension mm	Colour
BLAU	○	320 × 360	blue

Microfibre polishing cloth Scotch-Brite™

3M

PU
5 pieces

Design:
- for dry or wet cleaning of all surfaces, especially for painted and sensitive materials such as chrome, stainless steel, plastic or glass
- removes grease, dust and liquids lint-free and without micro scratches
- washable up to 50 times

Delivery:
In packaging units only!
Price per piece



N° article	612704	Dimension mm	Colour
GELB	○	320 × 360	yellow

Machine cleaning cloth Fleece

Design:
- fleece cloths in plastic bag
- approx. 350 wipes
- neatly laid

Use:
For the removal of coarse dirt, oil, greases and lubricants



0010 0020

N° article	612705	Cloth size W × L cm	Design	Weight kg
0010	●	380 × 380	light multicoloured	10
0020	●	380 × 380	dark multicoloured	10

Tricot cleaning cloth lightly coloured/white

Design:
- industrial cleaned goods without zippers, buttons, eyelets, according to DIN 61650
- lint-free and well-absorbing



0020



0030

N° article	612710	Design	Weight kg
0020	●	Cotton light multicoloured (variety HT)	10
0030	●	Cotton predominantly white (variety WT)	10

Assortment box

Design:
- made of sheet steel in heavy duty version
- powder coated
- universally applicable
- also for vehicle interiors
- lid with foam padding to protect contents
- central locking prevents unintentional opening even when the latches are not engaged
- with carrying handle and plastic feet at the back for secure placing

NEW



(Similar image)

0012



(Similar image)

0022



(Similar image)

0032

N° article	640101 including plastic boxes	Equipping	Box height mm	Height mm	Width mm	Depth mm
0012	●	12× red | 6× yellow | 3× blue | 2× green	63	66	440	330
0022	●	12× red | 30× yellow | 3× blue | 2× green	45	100	440	330
0032	●	24× red | 12× yellow | 6× blue | 4× green	63	130	440	330

Plastic box

Design:
- made of high impact resistant polystyrene
- for subdividing assortment cases or drawers
- colours blue, green, red, yellow

Volume:
Boxes with height 66 mm have one layer with box height 63 mm
Boxes with height 100 mm have two layers with box height 45 mm
Boxes with height 130 mm have two layers with box height 63 mm



0040



0050



0100



0110

N° article	640101 made of polystyrene	Width mm	Depth mm	Height mm	Colour
0040	●	54	54	45	red
0050	●	108	54	45	yellow
0060	●	108	108	45	blue
0070	●	162	108	45	green
0080	●	54	54	63	red
0090	●	108	54	63	yellow
0100	●	108	108	63	blue
0110	●	162	108	63	green

Assortment box

Design:
- mobile and well-organised storage with minimum space requirement
- transparent lid, with stable slide closure
- U-profiles in the lid prevent the contents from getting muddled up (except 0200-0204)
- resistant to most solvents, stackable and dimensionally stable
- ergonomic carrying handle (0220-0224)

0200-0208:
- with fixed subdivision
- colour blue / grey / transparent


0200


0202


0204


0206


0208

N° article	641602 made of polypropylene (fixed subdivision)	Equipment Inserts (H × W × D mm)	Height mm	Width mm	Depth mm
0200	●	12 pieces 24 × 39 × 36	32	175	143
0202	●	18 pieces 33 × 52.2 × 35.9	43	240	195
0204	●	4 pieces, 33 × 36 × 52 | 2 pieces, 33 × 73 × 52 | 2 pieces, 33 × 36 × 105 | 1 piece, 33 × 223 × 52	43	240	195
0206	●	8 pieces, 46 × 38 × 54 | 3 pieces, 46 × 78 × 54 | 2 pieces, 46 × 118 × 54 | 1 piece, 46 × 78 × 166 | 1 piece, 46 × 238 × 54	57	338	260
0208	●	32 pieces 46 × 38 × 54	57	338	260

Design:
- mobile and well-organised storage with minimum space requirement
- transparent lid, with stable slide closure
- U-profiles in the lid prevent the contents from getting muddled up (except type 0200-0204)
- resistant to most solvents, stackable and dimensionally stable
- ergonomic handle (type 0220-0224)

Item no. 0200-0208:
- with fixed subdivision
- colour blue / grey / transparent

Item no. 0220
- mobile transport box, black, with 4 assortment boxes
- boxes securely held by lateral profile


0220


0224

N° article	641602 made of polypropylene (flexible subdivision)	Equipment Inserts (H × W × D mm)	Height mm	Width mm	Depth mm
0220	●	**2 assortment cases with removable inserts in 7 sizes**: 5 pieces, 47 × 39 × 55 | 2 pieces, 47 × 39 × 109 | 1 piece, 47 × 39 × 163 | 1 piece, 47 × 39 × 218 | 4 pieces, 47 × 55 × 79 | 1 piece, 47 × 55 × 157 | 1 piece, 47 × 79 × 109 **2 assortment cases with removable inserts in 4 sizes** 4 pieces, 47 × 39 × 55 | 4 pieces, 47 × 39 × 109 | 8 pieces, 47 × 55 × 79 | 1 piece, 47 × 79 × 109	310	376	265
0224	●	4 pieces, 47 × 39 × 55 | 4 pieces, 47 × 39 × 109 | 8 pieces, 47 × 55 × 79 | 1 piece, 47 × 79 × 109	57	338	261

Assortment case

Design:
- with removable compartment inserts
- very robust due to double-walled case housing (PP) and lid made of polycarbonate
- one-hand operation due to comfortable locking mechanism
- handle with safety lock
- profile grid in lid and base secure content during transportation
- incl. 3 exchangeable labels (yellow, green, grey) for identification



0003



0008



0010



0012

N° article	641602 BOXXSER	Equipment Inserts (H × W × D mm)	Height mm	Width mm	Depth mm
0003	●	**9 inserts:** 4 pieces, 47×39×55 | 2 pieces, 47×39×109 | 2 pieces, 47×55×79 | 1 piece, 47×79×109	55	241	225
0004	●	**15 inserts:** 8 pieces, 47×9×55 | 1 piece, 47×39×109 | 1 piece, 47×39×163 | 4 pieces, 47×55×79 | 1 piece, 47×79×109	55	298	284
0008	●	**25 inserts:** 25 pieces 47×55×79	55	421	361
0010	●	**14 inserts:** 6 pieces, 69×55×79 | 2 pieces, 69×55×157 | 1 piece, 69×55×235 | 4 pieces, 69×79×109 | 1 piece, 69×79×218	78	421	361
0012	●	**18 inserts:** 8 pieces, 69×55×79 | 2 pieces, 69×55×157 | 2 pieces, 69×55×235 | 5 pieces, 69×79×109 | 1 piece, 69×79×218	78	465	401

Accessories Insert sets for assortment cases

Design:
- insert sets for tool cases or drawers (641602 0100-0110), for assortment cases (641602 0002-0008) and assortment boxes with moveable partitions (641602 0220-0224)
- colour transparent



0120



0122



0124



0126

N° article	641602	Number of inserts	Height mm	Width mm	Depth mm
0120	●	16	47	39	55
0122	●	8	47	39	109
0124	●	8	47	55	79
0126	●	4	47	79	109

Assortment case

Design:
- lightweight case
- made of impact-resistant polycarbonate
- robust multi-point hinges
- with two sliding catches and handle
- grid systems in lid and base prevent the interchangeable inserts from slipping around and the contents from getting messed up
- colour blue















N° article	641602 CarryLite	Equipment Inserts (H × W × D mm)	Height mm	Width mm	Depth mm
0300	●	**16 inserts:** 8 pieces, 47 × 39 × 55 | 4 pieces, 47 × 55 × 79 | 2 pieces 47 × 55 × 157 | 2 pieces 47 × 79 × 109	57	337	278
0302	●	**10 inserts:** 1 piece, 47 × 39 × 55 | 2 pieces, 47 × 39 × 109 | 1 piece, 47 × 39 × 163 | 1 piece, 47 × 39 × 218 | 2 pieces, 47 × 55 × 79 | 1 piece, 47 × 55 × 157 | 1 piece, 47 × 79 × 109 | 1 piece, 47 × 79 × 218	57	337	278
0310	●	**9 inserts:** 4 pieces, 69 × 55 × 79 | 1 piece, 69 × 55 × 157 | 2 pieces 69 × 79 × 109 | 2 pieces 69 × 79 × 163	79	337	278
0312	●	**12 inserts:** 8 pieces, 69 55 × 79 | 4 pieces, 69 × 79 × 109	79	337	278

Assembly tool case

Design:
- sturdy sheet steel construction
- hammertone enamelled (blue)
- 3- or 5-part division
- lockable with padlock



N° article	641701 Steel sheet	Number of compartments	External dimensions L × W × H mm
0020	○	5	430 × 200 × 200
0030	●	5	530 × 200 × 200
0040	●	5	600 × 200 × 200

Assembly case

Design:
- stable sheet steel construction with durable stove-enamel finish
- interior lined with special beaverboard
- with removable insert for small parts
- inner compartment in the lid for construction plans or similar
- at the front wide fold-down handles
- lockable with padlock



N° article	641701 Steel sheet	External dimensions L × W × H mm	Internal dimensions L × W × H mm	Weight kg
0050	○	690 × 360 × 310	678 × 350 × 247	15
0070	○	910 × 532 × 430	900 × 520 × 368	25

Transport box with castors

Design:
- made of extremely resistant polypropylene for robust use
- ideal for heavy transports
- low dead weight
- impact resistant, corrosion protected and water repellent
- extremely heat and cold resistant
- lateral fold-up handle for transport on rolls
- handle at front
- stackable

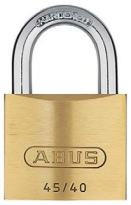




N° article	641905	Length mm	Width mm	Height mm	Weight kg
0010	○	780	410	330	6,3

Padlock

Design:
- solid brass body
- pure brass pin cylinder
- steel shackle
- inner parts made of rustproof material
- the shackle locks into place without the use of a
- double locking
- steel shackle nickel-plated and case-hardened
- with 2 keys per each lock
- different locking
- individually adjustable numerical code





N° article	641702 Type 45	Width mm	Shackle ∅ mm	Clear bracket height/width mm
0040	●	29	5	13 / 14.5
0050	●	39	6.5	21 / 20.5
0060	●	48	7.5	24.5 / 25

0070-0080:
Personal code number individually selectable



N° article	641702 Combination lock, type 165	Width mm	Combination code digits	Shackle ∅ mm	Clear bracket height/width mm
0070	●	30	3	5	25 / 14
0080	●	40	4	6	26 / 21.5



N° article	641702 Type 85, high shackle	Width mm	Shackle ∅ mm	Clear bracket height/width mm
0090	●	30	5	65.5 / 16
0100	●	40	6.5	62.5 / 22

0085:
- incl. an indicator, which reports whether the lock has been opened by TSA master key
- for travels to the United States = opening/closing of the secured baggage by US security authorities without damaging the lock
- personal code individually selectable



N° article	641702 Combination lock, TSA	Width mm	Combination code digits	Shackle ∅ mm	Clear bracket height/width mm
0085	●	33	3	3	20 / 13

Tool bag

PARAT

Design:
- made of extra thick leather
- side walls made of polypropylene
- Con-Pearl®, black
- bag body reinforced with aluminium profiles

Equipment:
- front, back and middle wall with 17 push-in compartments
- transparent clamping compartment in lid
- bottom gliders and carrying strap (adjustable)
- with PARALOCK® magnetic catch

Delivery:
Without depicted tools



N° article	641902	Internal dimensions H × W × D mm	Weight kg	External dimensions H × W × D mm
0052	●	300 × 230 × 140	1,5	325 × 260 × 162

Design:
- made of cowhide
- Con-Pearl®, black

Equipment:
- front and rear wall each with 8 push-in compartments
- fixed centre wall with 2 CP-7 push-in rails for tools up to 11 mm and 26 mm diameter
- padded handle
- Parat ratchet locks
- floor glides and finger hole

Delivery:
Without depicted tools



N° article	641902	Internal dimensions H × W × D mm	Weight kg	External dimensions H × W × D mm
0060	●	315 × 420 × 185	3,1	370 × 460 × 200

Tool case

PARAT

Design:
- material made of ABS plastic Con-Pearl®
- case loadable up to 20 kg
- volume 26 litres
- airworthy
- colour black

Equipment:
- 1 tool panel with 21 push-in compartments
- 1 clamp compartment for documents
- 1 cover lid with 6 large insert compartments
- 1 bottom tray with cover, height 58 mm, freely subdividable

Delivery:
Without depicted tools



N° article	64190	External dimensions H × W × D mm	Internal dimensions H × W × D mm	Weight kg
0124	●	360 × 480 × 190	310 × 460 × 180	3,7

Design:
- case shells made of X-ABS plastic (extremely shockproof, crush-proof and airworthy)
- tool panels made of Con-Pearl®
- double aluminium frame, ergonomic handle, bottom glides
- tilt locks, ratchet hinges with lid lock
- volume 27 litres

Equipment:
- 1 tool panel with 25 compartments, 1 clamping compartment 400 mm
- 1 tool panel with 10 push-in compartments
- 1 cover plate with 15 compartments, 1 clamping compartment 400 mm
- 1 bottom tray with cover, height 58 mm, freely subdividable
- 1 document compartment in the lid

Delivery:
Without depicted tools



N° article	641902	External dimensions H × W × D mm	Internal dimensions H × W × D mm	Weight kg
0130	●	360 × 480 × 210	310 × 460 × 190	4,6

Roller case

PARAT

Design:
- 4-stage telescopic handle (up to 1050 mm) extra wide
- rubberised large castors in bearings
- case shells made of X-ABS plastic (extremely shockproof, crushproof and airworthy)
- tool panels made of Con-Pearl®
- double aluminium frame
- ergonomic handle, bottom glides
- tilt locks, ratchet hinges with lid lock
- volume 35 litres
- airworthy

Equipment:
- 1 tool panel with 25 push-in compartments
- 1 clamping compartment 400 mm
- 1 tool panel with 10 push-in compartments
- 1 cover lid with 15 insert compartments
- 1 clamping compartment 400 mm
- 1 bottom tray with cover, height 88 mm, freely subdividable
- 1 document compartment in the lid

Delivery:
Without depicted tools





N° article	641902	External dimensions H × W × D mm	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0170	●	460 × 490 × 250	360 × 470 × 200	30	7,4

Tool case Basic

Design:
- hard-wearing design made of ABS material
- all-round aluminium frame with metal hinges
- two metal tilt locks with three-digit numerical code lock
- 27 litres capacity
- sturdy, ergonomic carrying handle
- document compartment in the lid
- two removable tool panels with 21 equipable tool pockets
- bottom tray can be fixed at the touch of a button, height 50 mm, can be further subdivided by inserts, cover panel with twelve large tool pockets and one flat compartment
- **a total of 41 plug-in options**



N° article	641908 unequipped	External dimensions H × W × D mm	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0010	●	200 × 465 × 410	180 × 440 × 350	15	4,5

Tool case BIG Basic Move

Design:
- hard-wearing execution made of ABS material, with all-round aluminium frame
- sturdy, ergonomic carrying handle
- two removable tool panels made of dirt-repellent PP
- twin wall PP sheet profiles with 21 equippable tool pockets
- first tool panel with ten tool pockets plus eleven narrow and one large tool pockets on the bottom side
- second tool panel with ten narrow tool pockets and a document compartment on the lid side
- cover panel with 13 large tool pockets and one flat compartment
- telescopic handle and two easy-running skate wheels
- two metal tilt locks with three-digit numerical code lock
- labelling field for individual marking
- **a total of 54 plug-in options**



N° article	641908	External dimensions H × W × D mm	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0020	●	280 × 430 × 515	200 × 350 × 480	20	6,2

Tool trolley BIG Twin Move

Design:
- hard-wearing design made of ABS material
- all-round aluminium frame with firmly mounted, stable centre panel that can be fitted on both sides
- can be opened on one or both sides, free-standing in all opening positions
- 38 litres capacity
- telescopic handle and two easy-running skate wheels
- two metal tilt locks with three-digit numerical code lock
- **a total of 95 plug-in options**



N° article	641908	External dimensions H × W × D mm	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0030	●	435 × 520 × 290	370 × 490 × 100/110	30	8,6

Tool case Robust45 MOVE

Design:
- airworthy, made of impact-proof polypropylene
- gas pressure damper in the hinge
- 45 litres capacity
- dust, water and temperature resistant
- several tool boards with numerous plug-in possibilities
- bottom tray with aluminium dividers
- telescopic handle
- large smooth-running castors
- automatic pressure compensation valve
- **a total of 147 plug-in options**



N° article	641908	External dimensions H × W × D mm	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0050	●	263 × 609 × 428	229 × 540 × 364	35	9,9

Tool case

Design:
- plastic trays made of polypropylene, impact-resistant, temperature- and acid-resistant
- tool panels removable
- the case can be locked
- **0105:** with easy-rolling wheels and telescopic handle

Equipment:
- 24 compartments, 12 rubber straps and 1 large pocket on the double-sided tool panel
- 6 compartments and 9 rubber straps on the cover lid
- 1 freely dividable bottom tray
- with cover lid 160 mm high

Delivery:
Without depicted tools



0102



0105

N° article	641902	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0102	○	352 × 465 × 215	25	5,2
0105	○	352 × 465 × 255	25	6,4

Tool case

Design:
- case made of polypropylene
- with smooth-running castors
- impact-resistant even with temperature fluctuations, temperature- and acid-resistant
- telescopic handle on rear side extendable to max. 990 mm
- drawers secured by front flap, lid closes upper compartment
- lid and front flap secured with flap locks
- lockable by integrated central lock
- attachment of additional padlock possible
- colour black

Equipment:
- 1 drawer 30 mm, with pre-cut foam
- 2 drawers à 60 mm, 1× with pre-cut foam and 1× with removable small parts box
- 1 drawer 95 mm, empty

Delivery:v
Without depicted tools





N° article	641903 made of polypropylene	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0150	○	381 × 581 × 455	40	14,1

Tool case

Design:
- case made of HDPE plastic, double-walled **with TSA lock**
- impact-resistant, temperature and acid- proof
- large smooth-running castors
- telescopic handle (self-locking)

Equipment:
- 2 tool panels with insert compartments
- of the two panels one is equippable on one side and one on both sides
- with 1 document compartment
- 2 boxes for small parts
- 2 locks incl. keys
- bottom space with adjustable divisions

Delivery:
Without depicted tools





N° article	641903	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0110	●	345 × 453 × 185	30	8

Tool case

Design:
- case made of HDPE plastic, double-walled **with TSA lock**
- impact-resistant, temperature and acid- proof
- with telescopic handle (self-locking)
- large smooth-running castors
- with rubber feet (easy stackable)
- airworthy

Equipment:
- 2 tool panels with insert pockets, 24 compartments, 12 loops
- with 1 document compartment
- 3 boxes for small parts
- 2 locks incl. keys
- 1 inlying bottom tray with precut foam insert

Delivery:
Without depicted tools





N° article	641903	Internal dimensions H × W × D mm	max. payload kg	Weight kg
0120	●	340 × 470 × 390	40	8,5

Tool bag

Design:
- made of durable 600 × 600 denier nylon
- double-layered at all relevant points
- comfortable, with cotton equipped handles
- 8 inner and 2 outer pockets
- attached mesh pocket for small parts
- reinforced bottom



N° article	641904 Essential 12"	External dimensions H × W × D mm
0033	○	130 × 300 × 250

Tool bag

Design:
- open design, content easily visible and accessible
- 8 outer and 10 inner pockets
- interior organiser for small parts
- rubberised handle
- polypropylene bottom, water-repellent
- made from 600D polyester
- **loading capacity 20 kg**



N° article	641904 Essential 12", open	External dimensions H × W × D mm
0035	●	260 × 310 × 200

Tool bag FATMA®

Design:
- quick access to all tools
- clear arrangement
- lockable side parts for safe transport
- sturdy and non-slip steel handle
- padded shoulder straps
- water repellent bottom

Delivery:
Without depicted tools





N° article	641904 Quick Access tool tray	External dimensions H × W × D mm
0037	○	360 × 500 × 300

Tool backpack FATMA®

Design:
- robust backpack for tools, accessories or laptop
- made of 600 × 600 denier nylon; easy to clean and durable
- waterproof plastic bottom
- portable inner divider with numerous pockets
- opens completely, front is held by 2 straps
- high rigidity
- stuffed, breathable back and shoulder strap padding
- extra compartment for power tools or laptop
- easily accessible front mesh pocket
- versatile mounting options on the outside
- zip fastener closing from both ends

Delivery:
Without depicted tools





N° article	641904	External dimensions H × W × D mm
0045	○	270 × 360 × 460

Tool backpack

Design:
- telescopic handle and wheels for easy transport of heavy tools
- the telescopic handle can be stowed in the backpack
- raised base with plastic feet for protection on wet floors
- with carry handle
- **15 kg loading capacity**
- material 600 denier for long life and tear resistance
- a removable organiser for storing small hand tools also serves as a divider
- padded shoulder straps for increased comfort

Delivery:
Without depicted tools





N° article	641904 Essential, with telescopic handle	External dimensions H × W × D mm
0047	○	510 × 325 × 215

Tool case

Design:
- compact, practical design
- made of impact-proof plastic (polypropylene)
- comfortable bow-type handle
- removable tool tray with inserts for small parts
- resistant to oil, acids and bases
- high load capacity
- low dead weight
- colour blue/grey

N° article	641602	External dimensions H × W × D mm	Number of inserts	Quantity of drawers	Weight kg
0100	●	190 × 474 × 239	6	–	1,9
0102	●	248 × 474 × 239	6	2	2,6
0104	○	230 × 540 × 296	7	–	3,7
0106	●	292 × 540 × 296	7	2	4,6



0102



0104

Tool case

Design:
- robust telescopic handle
- smooth running rollers
- made of durable 600 denier nylon
- large opening for easy finding
- adjustable divider in the interior
- many practical inside pockets
- functional compartments for optimal storage
- lockable compartment for personal items



N° article	641904	External dimensions H × W × D mm
0014	●	410 × 500 × 360

Tool box 3-piece

Design:
- 1 flat toolbox module
- 1 deep tool box with carrier
- 1 spacious, easily accessible tool carrier
- large rubberised wheels
- 35 cm wide telescopic handle for easy and comfortable transportation
- **total capacity 45 kg (80 l)**
- durable closures with metal clasps
- with auto-lock front closure for easy stacking and separating of modules



N° article	641904 Quiklink Rolling Workshop
0015	○

Tool case Rolling workshop "Profi" (meaning pro or professional)

Design:
- removable toolbox with detachable tray
- large, stainless clasps (which can be secured by a padlock)
- a rail in ball bearings
- large storage compartment for power tools
- innovative opening mechanism
- top part can be moved backwards
- full access to the bottom storage compartment



N° article	641904	External dimensions H × W × D mm
0020	●	579 × 367 × 759

Tool box Pro Cantilever

Design:
- versatile, sliding tray with removable compartments for small parts and longer tools
- with long carrying handle made of aluminium and stainless metal clasps
- cantilever sliding tray creates a two level work station
- full visibility of content without opening the lid
- water and dust resistant

IP54



0054


0056

N° article	641904	Volume litres	External dimensions H × W × D mm	Design:
0054	●	29,7	241 × 502 × 275	with cantilever sliding tray, 5 removable cup compartments 3× large, 2× small, 2 bit holders
0056	●	39	245 × 610 × 248	with cantilever sliding tray, 6 removable cup compartments 4× large, 2× small, 2 bit holders

Tool box FATMA®

Storage:
- 3-in-1 design: Storage, step and elevated tool tray in one
- stainless aluminium legs with non-slip feet for optimum stability
- ergonomic, retractable carrying handle on both the tool tray and the step
- 45 cm standing height
- with safety lock buttons
- **filling capacity 30 kg**
- **standing load capacity 150 kg**



N° article	641904 with step	Internal dimensions H × W × D mm	External dimensions H × W × D mm	Weight kg
0025	○	200 × 560 × 265	287 × 640 × 296	6,2

Tool belt bag

Design:
- made of nylon
- black/red

Equipment:
- 7 push-in compartments
- spacious compartment for screws or nails
- belt loop with carabiner for hammer or insulating tape
- large loop for attaching to the belt

Delivery:
Without depicted tools



N° article	641902 PARABELT S	External dimensions H × W × D mm	Weight kg
0185	●	290 × 160 × 30	0,1

Tool belt bag

Design:
- made of reinforced polyester
- with snap ring for adhesive tape roll or key
- metal clip suitable for any belt type
- with wide Velcro fastener
- 3 pockets in different sizes

Delivery:
Without depicted tools



N° article	641903	External dimensions H × W × D mm	Weight kg
0015	●	170 × 100 × 50	0,086

Tool bag

Design:
- with adjustable belt and handle
- reinforced polyester material
- lockable document compartment
- inner and outer pockets in different sizes

Delivery:
Without depicted tools



N° article	641903	External dimensions H × W × D mm	Weight kg
0025	○	200 × 300 × 180	0,437

Tool roll

Design:
- plastic push-in fastener for one-handed opening and quick closure
- from nylon material

Delivery:
Without depicted tools



N° article	641902	Weight kg	Number of compartments	External dimensions H × W × D mm
0192	●	0,2	8	330 × 410 × 50
0196	●	0,32	15	330 × 670 × 50
0198	●	0,36	20	330 × 740 × 50

Tool Holder

Design:
- plastic terminal strip
- body made of anodised light alloy
- with two elongated slots for variable screwing, e.g. to perforated boards
- clamping lugs made of oil- and cold-resistant plastic
- two springy plastic lugs hold gently each article

Use:
Easy and quick pushing-in of the tools,
for removal simply pull off



0100



0110



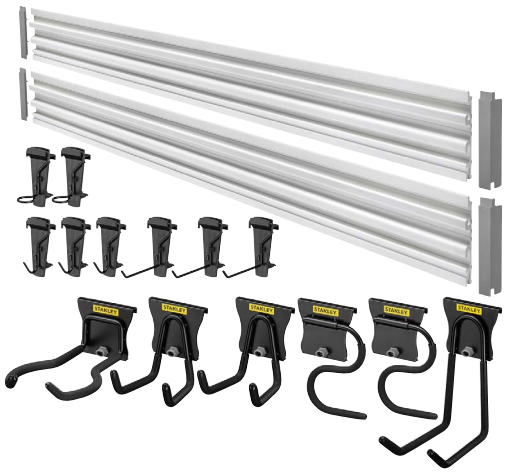
Nº article	641904	Length mm
0100	●	440
0110	●	150

Tool rail set Track Walls Set

Design:
- robust plastic rail, rust- and distortion-free
- rail can be individually cut to size
- can be plugged together as a wall system and limited laterally with end caps
- accessories are attached with patented HOOKTITE™system, that prevents them from falling out
- load capacity per rail 35 kg

Set content:
- 2 Track Wall system rails
- 4 end caps
- 2 short double hooks
- 2 hooks S-shape
- 1 long double hook
- 1 hook for electrical/gardening equipment
- 8-piece hook set

Note:
Dimensions and weights per rail! Fixing material (screws) not included in the scope of delivery.





Nº article	641904 20-piece	Dimensions L × W × D mm	Weight kg
0115	○	1210 × 25 × 140	1,6

Packaging adhesive tape

Design:
- made of polypropylene (PP)
- transparent
- with acrylic adhesive
- quiet unrolling

Note:
- price per roll
- delivery only in PU

PU
6 pieces



N° article	650100 PP	Width mm	Length m	Thickness mμ
0010	●	50	66	35

Masking tape

Design:
- smooth and extra thin paper tape with special impregnation
- particularly high-quality acrylic adhesive with medium bonding power
- up to 5 months UV and weather resistant
- temperature resistant up to +100°C
- suitable for indoor and outdoor use
- especially suitable for lacquer technology and putty knife painting, water-based colours and delicate surfaces



N° article	650110 Type 244	Width mm	Length m	Thickness mμ
0060	●	18	50	80
0062	●	24	50	80
0064	●	48	50	80

Double-sided tape Carpet tape

Design:
- versatile applicable
- as assembly aid and for holding and securing
- temperature resistant up to 60°C
- dimensions (W × L) 50 mm x 25 m

0020:
- versatile carpet tape with excellent adhesion
- especially suitable for fixing carpets and carpet tiles

0022:
- tape with different degrees of adhesion on either side
- especially suited for trade fair construction
- easily removable without residues from all solid surfaces



0020 0022

N° article	650110 Carpet tape	Width mm	Length m	Thickness mμ	Colour
0020	●	50	25	260	white
0022	●	50	25	130	yellow

Duct tape

Design:
- with natural rubber adhesive



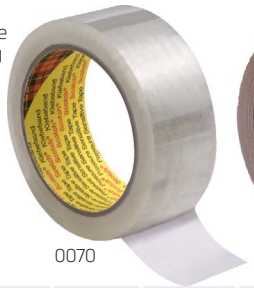
N° article	650100 silver	Width mm	Length m	Thickness mμ
0100	○	48	50	230

Packaging adhesive tape

Design:
- PVC packaging tape
- quiet unrolling, limited UV resistance
- suitable for applying at low temperatures
- high tensile strength

Note:
- price per roll
- delivery only in PU

PU
6 pieces



0070



0072

N° article	650110 Type 309	Width mm	Length m	Thickness mμ	Colour
0070	●	50	66	50	transparent
0072	●	50	66	50	brown

Crepe tape

Design and use:
- **for secure coverings and holding functions in the interior**
- good adhesion on many surfaces
- controlled dispensing behaviour
- paper backing with rubber resin adhesive
- supple and hand-tearable
- for painting work with low requirements and low temperature loads
- for bundling, packing, marking or fixing
- temperature resistance long-term up to +30 °C



N° article	650110 Type 101E	Width mm	Length m	Thickness mμ
0080	●	18	50	125
0082	●	24	50	125
0084	●	48	50	125

Design and use:
- for masking work with clean colour edges up to 100 °C
- no bleeding through of the paint
- good paint adhesion
- **residue-free removal**
- resistant to solvents and moisture
- paper backing with rubber resin adhesive
- supple and hand-tearable
- **for painting work in the industrial sector**
- can be used for infrared/UV drying
- temperature resistance short-term up to +100 °C



N° article	650110 Type 301E	Width mm	Length m	Thickness mμ
0090	●	18	50	125
0092	●	24	50	125
0094	●	48	50	125

Duct tape

Design:
- universally applicable duct tape with good immediate adhesion and a very good long-term holding power
- high tensile strength, ideal for bundling



0010



0012

N° article	650110 Type 2903	Width mm	Length m	Colour
0010	●	48	50	silver
0012	●	48	50	black

Duct tape

Design:
- UV resistant and up to 12 months usable for outdoor applications
- temperature resistant up to 90°C
- excellent initial bonding - even on difficult surfaces
- suitable for various outdoor applications, such as reinforcement, bundling, protection against humidity, sealing, splicing, insulating and marking
- adhesive is gum rein
- base is a polyethylene-coated fabric



N° article	650110 Type 8979	Width mm	Length m	Thickness mµ	Colour
0018	●	48	55	330	blue

Metal tape

Design:
- universal application, easy unrolling soft aluminium tape
- with transparent adhesive
- temperature resistant from -55 °C to +155 °C
- suitable for masking, sealing, for heat and light reflection, for covering when anodizing of aluminium and as moisture barrier



N° article	650110 Type 431	Width mm	Length m	Thickness mµ	Colour
0030	●	38	50	90	silver

Repair tape self-welding

Design:
- self-sealing insulating and repair tape for application in the automotive and industrial sector
- protects metals against corrosion
- damages at electrical cables and other repair points can be permanently protected against moisture and oxidation
- small repairs can be carried out immediately
- colour black

Technical data:
- pulling force 2.2 N/mm²
- elongation at break 750 %
- temperature resistant from -40 °C to +130 °C
- processing temperature between 0 °C and +35 °C
- breakdown voltage 35 KV/mm



N° article	650115 Repair tape	Width mm	Length m	Thickness mµ	Colour
0010	●	19	5	500	black

Masking/Marking tape

Design:
- abrasion resistant and highly elastic carrier material
- easy to process
- supple, even on uneven surfaces
- useful for many applications such as marking, bundling, holding and locking



N° article	650110 PVC	Width mm	Length m	Thickness mµ	Colour
0040	●	50,8	25	125	white
0042	●	50,8	25	125	red
0044	●	50,8	25	125	blue
0050	●	50,8	25	125	black/yellow
0052	●	50,8	25	125	red/white

High-performance tape VHB Power mounting tape

Design:
- double-sided high-performance adhesive tape of pure acrylate adhesive (VHB™)
- for permanently strong connections, high immediate adhesion
- high resistance to temperature, weather, UV and solvents
- very good sealing function, vibration-damping
- suitable for metals, lacquered surfaces, wood, glass, ceramics and plastics
- for indoor and outdoor use

Use:
VHB™ high-performance bonding systems can be used in constructions which until now have been reserved for purely traditional joining techniques such as screwing, riveting, welding etc. They are suitable for joining the same or different high-energy materials.





N° article	650112	3M type	Thickness mm	Width mm	Length m	Colour	Adhesion on steel N/cm	Temperature resistance long term/short term °C	Design
0002	●	VHB™ 4611F	1,1	19	3	grey	32	150/230	**For metals, high temperatures and before powder coating.** For the connection of metals such as steel, stainless steel and aluminium and other high-energy materials such as lacquered surfaces, lacquered wood, glass, ceramics and many plastics
0003	●	VHB™ 4910F	1	19	3	transparent	–	–	**For transparent materials.** For the connection of materials such as glass, polycarbonate, acrylic glass and other high-energy materials such as, e.g. metals, lacquered surfaces, lacquered wood, ceramics and many plastics.
0005	●	VHB™ 4941P	1,1	19	3	grey	35	90/150	**For demanding material combinations.** For the connection of high-energy materials like, say, metals (steel, stainless steel and aluminium), painted surfaces, lacquered wood, glass, ceramics, many plastics (hard PVC, ABS, acrylic glass/PMMA, polycarbonate) and soft PVC
0008	●	VHB™ 5952F	1,1	19	3	black	–	–	**For difficult to bond surfaces.** For the connection of high-energy materials like, e.g., powder lacquers or for high-energy materials such as metals, lacquered surfaces, lacquered wood, glass, ceramics and many plastics.

Packaging tape hand dispenser

Design:
- extra sturdy metal version
- with metal blade



N° article	650101	mmax. roll width mm	max. roll outer ∅ mm
0150	●	50	140

Squirt oiler made of PE

PRESSOL

Design:
- translucent white polyethylene container
- with aluminium spray tube
- optional with single or double acting pump
- pump enables dosed drop delivery
- ball bearing mounted and gravity-controlled suction lance enables almost complete emptying of the container



N° article	658050 with single acting pumping station	658052 with double acting pumping station	Contents ml	Spray pipe mm	Height mm
200	●	●	200	135	270
300	●	●	300	165	320
500	●	●	500	165	350

Squirt oiler made of zinc die-cast

PRESSOL

Design:
- container made of die-cast, grey metallic
- with aluminium spray tube
- optional with single or double acting pump
- pump enables dosed drop delivery
- ball bearing mounted and gravity-controlled suction lance enables almost complete emptying of the container



N° article	658054 with single acting pumping station	658056 with double acting pumping station	Contents ml	Spray pipe mm	Height mm
200	●	●	200	135	270
300	●	●	300	165	320
500	●	●	500	165	350

Plastic oiler made of PE

PRESSOL

Design:
- container made of polyethylene, transparent white
- **oil-, fuel- and acid-resistant**
- brass spray pipe with screw cap at the tip (from 125 ml extendable)
- with scale



N° article	658058 with brass spray nozzle	Contents ml	Spray pipe mm	Height mm
50	●	50	48	130
125	●	125	36 - 115	160
250	●	250	35 - 145	185
500	●	500	36 - 180	230

Measuring beakers

PRESSOL

NEW

Design:
- made of propylene, transparent
- application range from -20°C to max. 100°C
- on both sides printed scales for litres and gallons
- processing of type-approved plastics without the addition of additives
- closed grooved handle, thus highest stability and safe grip
- very smooth surface
- high dimensional stability, unbreakable
- **resistant to neutral media, oils, acids and alcohol**
- free of BPA (Bisphenol A)
- suitable for microwave and freezer
- safe pouring



N° article	658063 PP, transparent	Content litres	Scale division 1	Scale division 2	Height mm
0,5	●	0,5	10 ml | 1/4 and 1/2 l	1/8 US gal | 7/64 UK gal	135
1	●	1	10 ml | 1/4, 1/2, 3/4 und 1 l	1/4 US gal | 7/32 UK gal	170
2	●	2	20 ml | 1/2, 1, 1 1/2, and 2 l	1/2 US gal | 7/16 UK gal	215
3	●	3	50 ml | 1/2 to 5 litres	3/8 US gal | 1/8 UK gal	240
5	●	5	50 ml | 1/2 to 5 litres	1 3/8 US gal | 1 1/8 UK gal	270

Measuring beakers made of PP

PRESSOL

Design:
- made of propylene, transparent
- application range from -10°C to max. 120°C
- **food-safe, oil- and acid-resistant**
- dyed and embossed scale
- unbreakable and stable
- safe pouring
- stackable



N° article	658061	Content litres	Scale graduation ml	Height mm
0,5	●	0,5	10	135
1	●	1	10	170
2	●	2	20	215
3	●	3	50	240
5	●	5	100	270

Measuring beakers

PRESSOL

Design:
- container made of tinplate, stable
- safety spout made of LDPE
- surface preserved
- handmade



N° article	658062	Content litres	Height mm
1	●	1	270
2	●	2	320

Industrial atomisers made of HDPE

PRESSOL

Design:
- made of HDPE (high-density polyethylene)
- high-quality, screwed-on pumping mechanism
- atomising nozzle adjustable and closable
- suited for diverse chemicals as, say, detergents, solvents and cleaning agents
- not suited for e.g. acetone, dilutions, brake cleaner and acids



N° article	658060	Height mm	Contents ml
KUNSTSTOFFDUESE	●	290	750
MESSINGDUESE	●	290	750

Measuring beakers made of HDPE

PRESSOL

Design:
- made of HDPE (high-density polyethylene), transparent white
- **oil-, acid- and fuel-resistant**
- German, English and American scale division



658064



658065

N° article	658064 without spout and lid	658065 with flexible outlet and lid	Content litres	Scale division litres	Height mm
1	●	●	1	0.25	230
2	●	●	2	0.5	290
3	●	●	3	0.5	335
5	●	●	5	0.5	380

Funnels made of HDPE

PRESSOL

Design:
- made of HDPE (high-density polyethylene)
- oil-, petrol- and acid-resistant
- with high overflow edge
- shatterproof
- with interchangeable brass fine-sieve

658071:
With two-stage flex outlet, removable



658069



658070



658071

N° article	658069 straight spout	658070 rigid angled outlet pipe	658071 flexible outlet pipe	Diameter mm	Height mm
160	–	●	●	160	470
200	●	–	–	200	220
250	●	–	–	250	255

Petrol can

PRESSOL

Design:
- suitable for liquid fuels
- with visual strips on both sides and scale for immediate recognition of the filling quantity
- effort-saving use due to recessed grip
- **spout integrated in the canister with patented canister closure including ventilation**
- no soiling of the spout due to stowage inside the canister
- lower temperature conductivity compared to steel version
- robust and resistant against impact
- UN certification

Note:
All fuel canisters (UN) must be labelled by the end user according to the GHS/CLP regulation from 1.6.2015



Illustration with integrated spout

NEW



20 l

10 l

5 l

N° article	658075 PE, with flexible outlet	Content litres	UN certification	Material	∅ outlet mm	Height mm	Length mm	Width mm
5	●	5	un 3H1 / Y /100/ CZ / PRES - IMET 18100	HDPE	20	251	329	152
10	●	10	un 3H1 / Y /100/ CZ / PRES - IMET 18100	HDPE	20	341	329	172
20	○	20	un 3H1 / Y /100/ CZ / PRES - IMET 18100	HDPE	20	433	381	201

High-pressure grease gun

PRESSOL

Design:
- housing made of steel, galvanised
- with pointed, hollow and universal mouthpiece
- suitable for greases, but not for oil
- pressure 60 - 80 bar



N° article	658072 made of steel	Contents ml	Length mm
80	●	80	155
150	●	150	220
300	●	300	265

Hand-lever grease gun

PRESSOL

Design:
- grease gun head made of zinc die-cast
- piston with high fit accuracy to the cylinder (no dummy lubrication)
- connection M10 × 1 for greases up to NLGI 2 (400 g grease cartridges DIN 1284 or bulk grease)
- injection volume 1.2 cm³ at 400 bar counter pressure
- wall thickness of the grease gun tube 1.0 mm
- filling volume 500 cm³
- moulded cuff for tight fit
- quick release by half a turn of the pressure tube

658076: Incl. reinforced hose M10 × 1 (8 × 300 mm) and precision nosepiece (4BA)



N° article	658074 Standard version	658076 Standard version with accessories
12638	●	–
12633	–	●

Design:
- industrial grease gun to DIN 1283
- fully dismantleable, thus easy cleaning
- with the three filling possibilities bulk grease, 400g cartridges or grease gun filling system
- **VARIABLE-STROKE system** allows even with tough grease or against strong counterpressure a grease supply to the lubrication point, i.e. no dummy lubrication
- grease gun tube 1.0 mm, connection M10 × 1 for greases up to NLGI 2
- feed pressure max. 400 bar
- filling volume 500 cm³

DIN 1283

Delivery:
Incl. armoured hose (11 × 300 mm) and precision mouthpiece (4BA)



N° article	658078 Industrial version, with accessories
12636101	●

Hand-lever grease gun PRELIxx

PRESSOL

Design:
- grease gun head made of zinc die-cast
- piston with high fit accuracy (6 µ) to the cylinder (no dummy lubrication)
- connection M10 × 1 for greases up NLGI 3 (400 g grease cartridges DIN 1284 or bulk grease)
- delivery volume 0.1-1.6 cm³ per stroke at 600 bar back pressure
- wall thickness of the grease gun tube 1.0 mm
- filling volume 500 cm³
- hand lever, pull strap, latch and cover galvanised
- removable and movable push rod system
- push rod optimised for grip and pressure
- ergonomic handle, non-slip, improved power transmission



0030

Scope of delivery:
Including armoured hose (M10 × 1) and precision mouthpiece (4 BA).

DIN 1283



0022 0024

N° article	658079	Colour
0030	NEW ○	black
0032	NEW ○	red
0034	NEW ○	blue

N° article	658079 PRELIxx Pro, with vent valve (ETV)	Colour
0020	●	black
0022	●	red
0024	●	blue

Hand-lever grease gun

PRESSOL

Design:
- with hose holder, armoured hose (M 10 x 1 a, 11 x 300 mm) and precision mouthpiece (4 BA, M 10 x 1 i)
- grease gun head made of zinc die-cast Z 410
- galvanised ball seat valve
- ergonomic handle, non-slip, very good power transmission and handling
- the unit processes greases NLGI 2, grease delivery rate at 200 bar counterpressure after 40,000 working cycles almost unchanged
- pump piston and cylinder with 6 µ fitting accuracy (no dummy lubrication)
- optimal lever ratios for operating the hand lever, thus the force required to operate the hand lever is as low as possible
- easy cleaning due to the fact that the grease gun can be easily dismantled
- rolled thread on the grease gun tube is insensitive to damage from impacts and enables quick and easy screwing in with 1.5 turns
- quick venting by half a turn of the grease gun tube
- designed for rough use

DIN 1284

NEW



N° article	658077 easyFILL	Filling volume cm³	Delivery volume/stroke cm³	Delivery pressure up to bar	Length mm	Width mm	Height mm	Filling options
0010	○	400	2.2	400	380	185	66	400 g grease cartridge, DIN 1284

Accessories for hand-lever grease guns, to DIN 1283

Design:
- with connection thread M10 × 1
- with hydraulic nosepiece for H nipples
- burst pressure 850 bar



N° article	658080 Armoured hose	∅ mm	Length mm
8×300	●	8	300
8×500	●	8	500
11×300	●	11	300
11×500	●	11	500



1



2



3

N° article	658082 Nozzle tube with mouthpiece	∅ mm	Length mm	Design
1	●	12	155	**Hollow/universal nosepiece**, steel galvanised, connection thread M10 × 1
2	●	12	155	**Hydraulic nosepiece**, steel galvanised, with connection thread M10 × 1
3	●	15	180	**Pointed nosepiece**, steel galvanised, connection thread M10 × 1



1



2



3



4|5



6



7

N° article	658084 Mouthpieces	Design
1	●	**Hollow/universal nosepiece** for H and K nipples
2	●	**Hydraulic nosepiece** for D nipples
3	●	**Hydraulic nosepiece**for H nipples
4	●	**Sliding coupling** for flat grease nipple 16 mm
5	●	**Sliding coupling** for flat grease nipple 22 mm
6	●	**Precision mouthpiece** M10×1, for H-nipples, M10×1; A/F 13, Ø 15 mm, made of galvanised steel
7	●	**G-coupling grease gun mouthpiece**, for grease nipples, A/F 13 mm, Ø 15 mm, made of galvanised steel

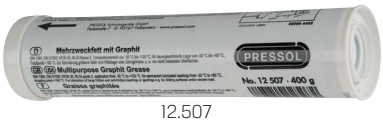
Grease cartridge for hand-lever grease guns

Safety data sheet

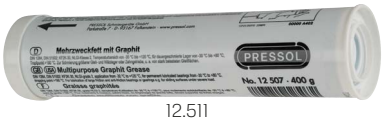
Design:
12507:
- multi-purpose grease G20 with graphite DIN 1284 NLGI class 2
- temperature range from -30 °C to +120 °C
- for greasing of large-scale plain or rolling bearings or gear boxes of, among others, heavily loaded sliding surfaces

12.511:
- multi-purpose grease DIN 1284 NLGI class 2
- temperature range from -30 °C to +120 °C
- for greasing of plain and rolling bearings at high load
- water-resistant and free of acid

12516:
- high-temperature grease DIN 1284 NLGI class 2
- temperature range from -35°C to +150°C, dropping point › 220°C
- for lubrication of rolling and plain bearings at generators and electric motors etc.



12.507



12.511



12.516

N° article	658086	Contents g	∅ mm	Length mm
12.507	●	400	52	240
12.511	●	400	52	240
12.516	●	400	52	240

Hand-lever grease gun Lube-Shuttle®

mato

Design:
- **for Lube-Shuttle®system cartridges**
- high-quality version with galvanised grease container
- ergonomic shaped handle
- working pressure 400 bar
- maximum pressure up to approx. 800 bar
- TÜV, DLG, BLT tested

Advantages:
Clean & easy
- unscrew cover
- screw in the cartridge

Economical & environmentally friendly
- optimal complete emptying
- no ventilation necessary
- empty cartridges can be refilled
- permanent control of grease type and filling level



N° article	658088 Lube-Shuttle® without accessories
400LS	●

Design:
- like 658088

Accessories included in delivery:
- with 300 mm safety rubber armoured hose RH-30C, steel braiding inserts, bursting pressure 1,650 bar, Ø 13 mm
- with 4-jaw hydraulic gripper mouthpiece



N° article	658089 Lube-Shuttle® with accessories
400LS	●

Design:
- mineral-oil-based lithium multi-purpose grease
- **for universal applications**
- contains antioxidants, corrosion inhibitors and small amounts of polymers to improve adhesion
- good corrosion protection and good oxidation resistance
- high rolling stability, high pressure absorption capacity
- base oil viscosity 100 mm²/s (40 °C)
- operating temperature range from -30 °C to +120 °C, short term up to +130 °C
- conforming to DIN 51502 K2K-30 and NLGI grade 2

Safety data sheet



N° article	658090 Lube-Shuttle® MULTI basic	Contents g
2M	●	400

Design:
- mineral-oil-based lithium multi-purpose grease
- with EP additives, antioxidants, corrosion inhibitors and small quantities of polymers to improve adhesion
- good corrosion protection and good oxidation resistance
- very high rolling stability and high pressure absorption capacity
- base oil viscosity 180 mm²/s (40 °C)
- operating temperature range from -30 °C to +130 °C, short term up to +150 °C
- conforming to DIN 51502 KP2K-30 and NLGI grade 2

Safety data sheet



N° article	658090 Lube-Shuttle® MULTI Plus	Contents g
EP-2M	●	400

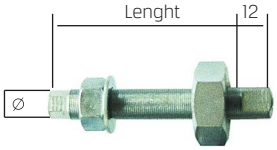
Levelling screw

ISOLOC

Design:
Ready-to-install delivery with support nut, locknut (DIN 934) and washers (DIN 125). Screws galvanised

Use:
For levelling disc 659405

N° article	659410 Standard thread	659415 Fine thread	Ø for standard threads	Ø for fine threads	Length mm
1	●	○	M12	M12× 1	100
2	●	○	M16	M16×1.5	100
3	○	○	M20	M20×1.5	150

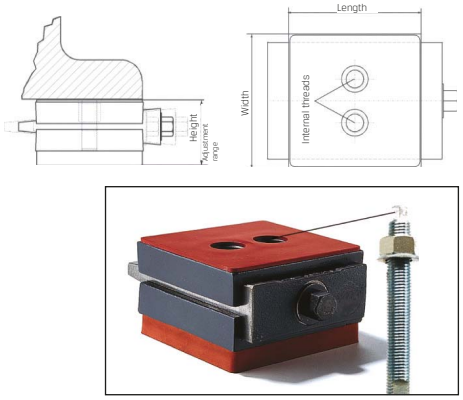


Precision machine shoe

ISOLOC

Design and use:
- patented construction
- machine shoe free-standing or bolted to the machine or anchored to the floor
- these machine shoes replace five conventional levelling shoes
- reduction of incommoding vibrations, percussions and sound
- adjustment in 0.01 mm increments
- **significantly better support of the machine through a large contact surface** compared to items with setscrews
- insulation pads due to special fibre linking of outstanding level stability (increased production accuracy)
- material resistant to oils, greases, coolants and lubricants
- further sizes on request

Application at:
Production machines in all areas such as machine tools, grinding, turning, milling machines, transfer lines or MCs



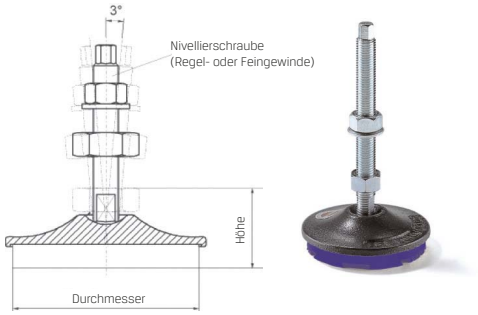
N° article	659400 UMS	max. load per shoe kN	Length mm	Height mm	Width mm	Adjustment range mm	Support face A cm²	female threads
UMS5	● +	50	110	67	110	±5	121	M16
UMS8	○ +	80	150	73	144	+6/-3	216	M16
UMS18	○ +	180	200	90	190	+6/-4	380	M20

Levelling disc

ISOLOC

Design and use:
- easy assembly
- spherical screw receptacle in the levelling disc to compensate for uneven floors and to avoid tensions
- levelling optional by fine or standard pitch thread
- stainless versions on request

Application at:
Machine tools like drilling, milling, grinding, printing and paper making machines, saws, conveyor belts, boxing machines, miscellaneous small production machines



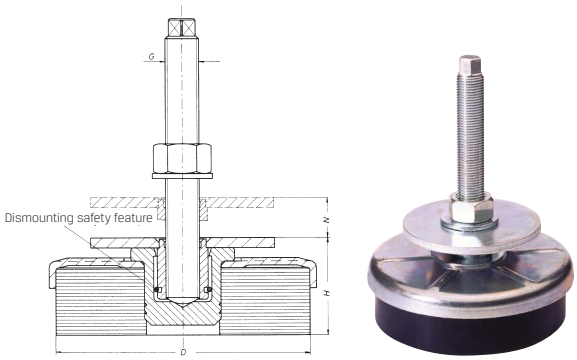
N° article	659405 NT	Max. load per element kN	d_1 mm	d_2 mm	Height mm	t_1 mm	t_2 mm
NT80/20	●	4	80	84	80	6	1.5
NT100/20	○	6	100	106	100	6	1.5
NT120/20	○	9	120	126	120	6	1.5

Machine shoe galvanised version

ALBRECHT
Präzisions Spannfutter

Use:
Machine shoes give secure hold to apparatuses and absorb vibrations in two respects:
1: They keep machine borne vibrations from surroundings
2nd They insulate precision machines against external vibrations

How to purchase the right shoe:
1: Determine the weight of your machine
2. Divide the total weight by the number of anchor points. You will get the maximal load per shoe; in case the weight is unevenly allotted, you will have to make a guess for the single shoe



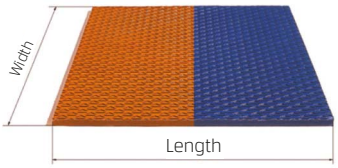
N° article	659420	∅ mm	Height incl. levelling plate H mm	Level compensation N mm	Threaded bolt G	Load per machine shoe kg	Load per machine shoe kg for presses at stroke/min 160-200	Load per machine shoe kg for presses with stroke rate/min 125-160	Load per machine shoe kg for presses with stroke rate/ min <125	Load per machine shoe kg for injection moulding machines
1	●	80	41	16	M12×125×120	50 - 500	50 - 120	60 - 140	70 - 200	max. 180
2	●	120	49	16	M16×1.5×120	400 - 1,000	120 - 250	120 - 350	200 - 400	max. 360
3	●	160	59	23	M20×1.5×170	800 - 2,500	250 - 900	350 - 1,100	400 - 1,400	max. 900

Vibration isolating plate profiled

ISOLOC

Design and use:
- very simple application directly during assembly
- easily cut on-site (according to the dimensions of the machine foot)
- due to excellent antiskid effect no anchoring necessary
- effective vibration and thermal insulation
- oil- and coolant-resistant
- heavy-duty universal quality for small production machines





IPL 17:
A highly resilient, very elastic vibration insulation panel version with low natural frequencies. Advantageous vibration behaviour, because the natural frequencies do not change due to the non-linear properties under varying pressures. The high load capacity allows even the mounting of heaviest equipment. Very high coefficients of static friction allow a free and floating machine installation.

IPL 20:
An especially stable level vibration insulation panel for universal use with high attenuation. Good slipping protection for safe machine standing. IPL20 is available with profile on both sides or unprofiled (IPL20-2). **The IPL 20-2 version is ideal for the installation of highly dynamic machine tools.**Very high coefficients of static friction allow a free and floating machine installation.

N° article	659425 IPL 20 (blue)	Length mm	Width mm	max. load per panel kN	Height mm
100×100	● +	100	100	5	15
150×150	○ +	150	150	12	15
200×200	○ +	200	200	20	15
250×250	○ +	250	250	30	15
500×500	○ +	500	500	120	15

N° article	659430 IPL 17 (orange)	Length mm	Width mm	max. load per panel kN	Height mm
100×100	○ +	100	100	5	15
150×150	○ +	150	150	12	15
200×200	○ +	200	200	20	15
250×250	○ +	250	250	30	15
500×500	○ +	500	500	120	15

Dressing paste / Marking ink

EMIL OTTO

Safety data sheet





N° article	659750 Dressing paste red	659752 Dressing paste blue	659755 Marking ink red	659756 Marking ink blue	Design
80	●	●	–	–	**Tube** 80 ml
250	●	●	–	–	**Can** 250 ml
500	–	–	●	●	**Bottle** 500 ml

Metal etching pen

EMIL OTTO

Safety data sheet

Design and use:
- for simple and fast labelling, tagging or marking of heavy metals or aluminium
- time-consuming engraving or the punching in of marks or characters is no longer required
- for marking of hardened and thin-walled metals, e.g. in toolmaking



N° article	659785	Contents
0002	●	2 leads NIGRIT VA green, strong, for all heavy metals incl. stainless steels
0004	●	2 leads NIGRIT K-extra blue, mild, for construction and tool steels and non-ferrous metals
0006	●	1 lead NIGRIT VA green, strong, for all heavy metals incl. stainless steels 1 lead NIGRIT K-extra blue, mild, for construction and tool steels and non-ferrous metals

Solvent

EMIL OTTO

Safety data sheet

Design:
- density approx. 0.93 g/ml
- colourless/clear
- smells slightly like solvent, alcoholic
- flashpoint approx. 64 °C

Use:
- cleaning agent for cleaning metallic workpieces
- for fast and residue-free removal of marking paints and spotting pastes
- not suitable for cleaning plastics or for removing labels on plastic surfaces



N° article	659760 EOSOL solvent A	Design
300	●	**Spray can** 400 ml

Oil marking chalk

MARKAL

Design:
- hexagonal, sharpened
- length 120 mm, ∅ 11 mm
- application temperature from -20 °C up to +50 °C
- only suitable for dry substrates
- for markings on almost all materials (even with rough surfaces), including metal (cold and hot), stone, paper, leather, plastic, wood
- price per PU



N° article	659788 PU = 12 pieces	Colour
WEISS	●	white
GELB	●	yellow
ROT	●	red

Chalk

MARKAL

Use:
- for all dry and rough surfaces
- price per PU



N° article	659790 PU = 12 pieces	Colour	Dimension mm
WEISS	●	white	90×13×13

Alu tube marker with ball point

Design:
- opaque colour without heavy metals or low-toxic solvents
- for indelible **markings on each surface** (wet, oily, rough, greasy, rusty, galvanised)
- durable and weather-resistant
- water- and weather-proof
- very good adhesion, extremely economical
- **fast drying**
- acid and temperature resistant up to 200 °C
- working temperature -20 °C to +70 °C





N° article	659795 Font width 3 mm	Colour
WEISS	●	white
GELB	●	yellow
ROT	●	red

Permanent marker DURA-INK DUAL TIP

Design:
- marker with two font widths: 0.7 mm | 1.0 mm
- for both fine and larger markings
- industrial-suited permanent ink dries quickly and is resistant to wear and weathering
- xylene-free ink for a safer marking tool
- writes on metal, plastic, glass, ceramics, wood, textiles, paper and cardboard

NEW





N° article	659823 Font width 0.7 mm	1.0 mm	Colour	Contents
ROT	●		red	–
SCHWARZ	●		black	–
SET	●		red | black	2× red | 2× black

Wax pencil

Design:
- inexpensive all-purpose marker for smooth writing on most surfaces
- no sharpening required: simply pull the string and another part of the writing tip is exposed
- moisture-resistant marker with highly visible colours for instant identification
- writes on glass, metal, ceramic, cardboard, plastic, wood, paper and carton

PU
12 pieces

Note:
Delivery only in specified PU
Price per piece

NEW



N° article	659833 CHINA MARKER	Colour
WEISS	●	white
GELB	●	yellow
ROT	●	red
BLAU	●	blue
GRUEN	●	green
SCHWARZ	●	black

Wax pencil

Design:
- ideal for many surfaces including: smooth, rough, rusty or dirty surfaces
- markings are rub and weather resistant and leave a bold, permanent trace
- durable plastic holder prevents breakage and keeps hands and clothes clean
- push-button feed allows easy, one-handed operation
- writes on steel, iron, stone, tiles, ceramics, wood, textiles, glass and plastic

NEW



N° article	659837 TRADES MARKER ALL-PURPOSE	Colour	Contents
WEISS	●	white	1 marker and 12 refills
GELB	●	yellow	1 marker and 12 refills
ROT	●	red	1 marker and 12 refills
SCHWARZ	●	black	1 marker and 12 refills
ORANGE	●	orange	1 marker and 12 refills

Wax pencil

Design:
- ideal for many surfaces including: smooth, rough, rusty or dirty surfaces
- markings are rub and weather resistant and leave a bold, permanent trace
- durable plastic holder prevents breakage and keeps hands and clothes clean
- push-button feed allows easy, one-handed operation
- writes on steel, iron, stone, tiles, ceramics, wood, textiles, glass and plastic

NEW



N° article	659838 TRADES MARKER ALL-PURPOSE	Contents
SET	●	1 marker and 5 refills (2× white | 2× orange | 1× black)

Paint marker Permanent for INOX

Design:
- lacquer marker especially for marking on stainless steel
- highly pigmented varnish ink prevents corrosion
- use on all special alloys/stainless steels
- approved for nuclear power plants and aircraft construction
- UV- and weather-resistant
- with protective cap



N° article	659811 Font width 2 - 4 mm	Colour
WEISS	●	white
GELB	●	yellow
ROT	●	red

Paint marker Permanent

Design:
- ideal for **marking on oily and greasy surfaces**
- the high-quality lacquer permeates oils and greases, dries quickly and leaves powerful, lasting markings that are abrasion-resistant, weather-resistant and lightfast
- sturdy metal housing and robust tip increase the service life
- with protective cap





N° article	659816 Font width 3 mm	Colour
BLAU	●	blue
GELB	●	yellow
GRUEN	●	green
ROT	●	red
SCHWARZ	●	black
WEISS	●	white

Paint marker Permanent

Design:
- marking on almost all clean surfaces
- the colour is odourless and does not contain solvents
- opaque and perfectly legible, even on dark surfaces
- UV and water resistant
- with protective cap



659814



659815

N° article	659814 Font width 1 - 2 mm	659815 Font width 2 - 4 mm	659813 Font width 5 - 14 mm	Colour
GELB	●	●	●	yellow
WEISS	●	●	●	white
GRUEN	–	●	–	green
ROT	–	●	●	red
BLAU	–	●	–	blue
SCHWARZ	–	●	–	black



SET

N° article	659815 Set (font width 2 - 4 mm)	Colour
SET	●	black | blue | green | red | white | yellow

Deep hole marker Permanent

Design:
- integrated clip cap
- extended micro tip for precision applications
- ideal for marking in areas that are difficult to access
- xylene-free ink for industrial applications, dries fast on virtually any surface and is abrasion and weather resistant



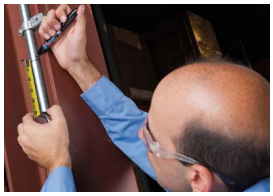


N° article	659819 Round tip 1mm	Colour
SCHWARZ	●	black
ROT	●	red
BLAU	●	blue

Permanent marker

Design:
- smudge-proof and water resistant
- for permanent marking of various materials like, say, metal, plastic, wood, glass etc.

659817 (DURA-INK® 15) with round tip
659820 (DURA-INK® 20) round tip retractable via push-button
659822 (DURA-INK® 55) with wedge tip







659817



659820

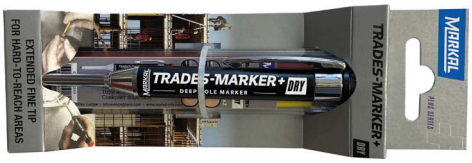


659822

N° article	659817 Font width 1.5 mm	659820 Line width 1.5 mm, retractable	659822 Font width 1.5 - 4.5 mm	Colour
ROT	●	●	●	red
SCHWARZ	●	●	●	black
BLAU	●	–	●	blue

Borehole marker/Deep hole marker

N° article	659812 Holder single, incl. graphite refill
0010	●



0010



N° article	659812 Starter kit	Colour	Contents
SET	●	yellow | red | graphite	1 holder with graphite refill 1 refill set with 2 refills each graphite, red and yellow

N° article	659812 Refills	Colour	Contents
0020	●	graphite	Pack of 6 graphite refills
0022	●	yellow | red	Refill pack with 2 refills each graphite, red, yellow

Paint marker water soluble

Design:
- chalk-based paint marker, **easily removable with water**
- bright colours for highly visible temporary markings
- the medium size round tip is abrasion resistant and therefore very durable
- the valve tip doses the ink and allows for even marking





N° article	659824 Font width 3 mm	Colour
BLAU	●	blue
GELB	●	yellow
GRUEN	●	green
ROT	●	red
SCHWARZ	●	black
WEISS	●	white

Metal marker

VPE 6 Stück

Design:
- for heat-resistant marking of metal
- precise markings by fine soapstone refill
- e.g. during welding (the marking is clearly visible despite eye protection)
- 659827: Prices per PU



659826



659827

N° article	659826 Holder	659827 Soapstone refills (6 pieces)
6	●	●

Soapstone chalk

Design:
- for heat-resistant marking of metal
- e.g. during welding (the marking is clearly visible despite eye protection)
- prices per PU

PU 50 pieces



N° article	659828 Steatite
FM.400	●

Carpenter's pencil

Delivery:
Box of 12 pieces

Prices per PU

PU 12 pieces



N° article	659829	Length mm
240	●	240

Solid paint marker

Design:
- real colour in pencil form
- for marking on any kind of surface
- **also for oily, rough, rusty or dirty materials**
- UV and water resistant
- temperature resistant from -46 °C to +66 °C

PU 12 pieces

Note:
Delivery only in specified PU
Price per piece





N° article	659830 B Paintstik	Length mm	Diameter mm	Colour
ROT	●	121	17	red
WEISS	●	121	17	white
GELB	●	121	17	yellow
SCHWARZ	●	121	17	black

Industrial paint marker
for high temperatures

Design:
- Quik Stik® Mini is a compact solid colour crayon
- odourless and solvent-free paint
- convenient twist-up holder made of plastic
- ideal for fine line markings on rough and smooth surfaces
- **quick-drying, high-quality colour paint**
- permanent marks on virtually any surface
- resistant to UV radiation, weather and wear
- temperature range from - 18 °C to +200 °C







N° article	659832	Colour
SET	●	2× white | 1× yellow | 1× red | 1× black
GELB	●	yellow
WEISS	●	white

Indelible marker
PRO-LINE® HT, heat-resistant

Design:
- fast drying, with high temperature resistance
- with **PrismaLock™**technology **for durable colours up to 982 °C**
- maximum readability of the marking (no colour): white/yellow 1,148 °C, black 1,204 °C
- marking width 3 mm
- temperature range from -46 °C to +66 °C

Use:
- for surfaces of metal, glass or ceramics
- for application in the manufacture of glasses, metal processing/production, welding technology or during hardening or heat treatment



N° article	659834	Colour
GELB	●	yellow
SCHWARZ	●	black
WEISS	●	white

Oil marker

Design:
- penetrating oil, lubricant and cleaner in one as marking pen, silicone-free
- ideal for loosening rusty screws, protecting electronic contacts and removing adhesive residues
- wedge tip for exact dosing
- no dripping, smearing or smudging
- leaves a film to protect against oxidation and corrosion



N° article	659835 Lubricant stick
0010	●

Ring clip for tool tags

Design:
Made of spring steel, nickel-plated



N° article	659850	∅ mm
32	●	32

Cable tie

SapiSelco

PU
100 pieces

Design:
- high flexibility even under severe temperature fluctuations
- made of halogen- and silicone-free polyamide 6.6
- within max. 30 sec. self-extinguishing (Standard UL94 V2 Polyamide)
- extremely colour-fast
- price per PU



N° article	659860 ecru	659862 black	Length mm	Width mm	Bundle ∅ mm
100	●	–	100	2,5	24
140	●	●	140	3,5	36
200	●	●	200	4,5	51
280	●	●	280	4,5	76
360	●	●	360	7,5	101

Tool tag with hole

Design:
- either of aluminium or brass
- with beaded rim and suspension hole
- **for self-coining of the required numbers**
- already numbered tags or special shapes as well as tags made of anodised aluminium are available at short notice



N° article	659840 Aluminium	659845 Brass	∅ mm
30	●	●	30

Cable tie loosenable

SapiSelco

PU
100 pieces

Design:
- removable or openable again
- high flexibility even under severe temperature fluctuations
- extremely colour-fast, even in direct sunlight
- largely resistant to chemicals
- made of polyamide
- price per PU





N° article	659864	Length mm	Width mm	Colour
240	●	240	3,8	red
320	●	320	4,4	red

Cable tie

PRETEC

PU
100 pieces

Design:
- innovative cable tie with **Twist-To-Break function**, quick, tool-free shortening of the cable tie to the desired length by means of a twisting movement
- there is no sharp edge, as is the case when conventional cable ties are snapped off
- high flexibility even at low temperatures

Note:
Prices per PU

NEW





N° article	659870 Twist-To-Break, ecru	659872 Twist-To-Break, black	Length mm	Width mm	PU pieces
102	●	●	102	2,8	100
150	●	●	150	2,8	100
200	●	●	200	4,6	100
300	●	●	300	4,6	100
360	●	●	360	8	100
504	●	●	504	8	100

Cable tie set

SapiSelco

Design:
- made of halogen- and silicone-free polyamide 6.6
- high flexibility even under severe temperature fluctuations
- largely resistant to chemicals
- delivered in a 10.8-litre plastic bucket



N° article	659865 1000-piece	Contents
		Size 4.5 × 200 mm: 2× 100 pieces ecru 2× 100 pieces black
1	●	**Size 4.5 × 280 mm:** 1× 100 piece red 1× 100 piece green 2× 100 pieces ecru 2× 100 pieces black

Design:
- made of halogen- and silicone-free polyamide 6.6
- high flexibility even under severe temperature fluctuations
- above-average colourfast, even in direct sunlight
- largely resistant to chemicals
- within max. 30 sec. self-extinguishing (Standard UL94 V2 Polyamide)
- delivered in a 3.8-litre plastic bucket



N° article	659866 1500-piece	Contents
		Size 2.5 × 100 mm: 2× 100 pieces ecru 2× 100 pieces black
1	○	**Size 3.5 × 140 mm:** 2× 100 pieces red 2× 100 pieces blue 2× 100 pieces yellow 3× 100 pieces ecru 2× 100 pieces black

Cable tie pliers

Weidmüller

Design:
- for tensioning and cutting cable ties



N° article	557810	Tensile force	Max. cable tie width mm	Max. cable tie thickness mm
RT-1	●	adjustable	4,8	1,5

Cable tie pliers

HellermannTyton

Design and use:
- robust, universally applicable processing tool
- for tensioning and automatic cutting of internally or externally toothed cable ties
- fast and easy regulation of the desired traction force
- narrow front design for tight installation conditions
- extremely low-maintenance
- with TLC technology (clamping/tension retention/cutting)
- plastic material
- suitable for plastic cable ties



EVO7



EVO9

N° article	557814	Tensile force N	Max. cable tie width mm	Max. cable tie thickness mm
EVO7	○	18 - 165	4,8	1,5
EVO9	○	53 - 307	13,5	2,0

Oil absorbing hose

Design and use:
- universal absorbent
- **binds oil, water or chemicals**
- easy to position, e.g. to curb leaks
- the flexible texture adapts itself to uneven floors
- even after reaching saturation the liquid is kept drip-free
- binds oil and chemicals up to a disposal site pressure of 35 kg/cm²
- absorbs about 4 l oil per hose



N° article	680101 SH-DT	Diameter mm	Length mm
0020	●	76	1220

Oil binders

Design:
- aerated concrete with reliable absorption power
- absorbs oils, used oils, greases, lubricants, alkalis, paint, varnish, solvents and hydrocarbons
- **the contents of one bag absorbs approx. 11 litres of EL heating oil**
- grit 0.5–4 mm

Note:
Avoid contact with strong acids and oxidising agents



N° article	680101 Type IIIR, coarse	Contents kg
0032	● +	12.6

Design:
- aerated concrete with reliable absorption power
- absorbs oils, used oils, greases, lubricants, alkalis, paint, varnish, solvents and hydrocarbons
- **the contents of one bag absorbs approx. 13 litres of EL heating oil**
- grit 0.125–1 mm
- meets the requirements of the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

Note:
Avoid contact with strong acids and oxidising agents



N° article	690145 Type III R pure	Contents kg
20	● +	20

Absorbent mat

Design:
- mats 100 % polypropylene
- absorbs oil, water, coolants and solvents
- high suction volume

Use:
- for clean and safe workplaces around machines or on floors
- thanks to practical perforation no cutting to size necessary

Note:
Prices per PU





0002





0004

N° article	680103 Universal	Absorption capacity	Design:	PU
0002	●	83.6 litres/PU	extra strong, mat, 38 × 51 cm	100 single mats in a box
0004	●	152.4 litre/roll	extra strong, roll, 76 cm × 46 m	46 m roll, perforated

Absorbent mat

Design:
- mat made of 100 % polypropylene absorbs oil, water, coolant and solvent
- high suction capacity, fine-fibred structure
- tear-resistant and hard-wearing
- special dimple structure increases the wicking effect of the mat on liquids throughout
- ideal for removing small stains and for cleaning operations
- perforated every 25 cm
- 25 % from recycled material
- the mat is grey coloured

Note:
Prices per PU

NEW



0036



0038

N° article	680103 Universal absorbent fleece	Absorption capacity	Design	PU
0036	●	12.5 litre/roll	Roll, 38 cm × 15 m	15 m Roll, perforated
0038	●	150 litre/carton	Carton, 50 × 33 × 77 cm	12 rolls in carton

Magnetic roll holder

Design:
- holds a 38 cm × 15 m **Universal binding fleece roll**
- strong magnets hold the roll holder in place during removal
- made of powder-coated steel
- resistant to splintering, rusting and corrosion
- ideal for attaching to toolboxes, lifting platforms or other metal objects
- colour black

NEW



N° article	680103	L × W × H cm	Weight kg
0039	●	45.7 × 15.2 × 8.1	1

Absorbent mat

Design:
- mat made of 100 % polypropylene absorbs oil, water, coolant and solvent
- four products in one: **Absorbent mat, roll, sock, wipe**
- packed in a handy dispensing box

a) **as a mat** with strong wicking, eliminates fluids quickly and easily
b) **as absorbent roll** with a resistant upper layer and a soft lower layer that lies firmly on the ground
c) **as absorbent sock** folded like a hose ideal for leaks and drip points on machines
d) **as wipe** through perforation (25.5 cm) suitable for wiping and cleaning

Note:
Prices per PU

4 IN 1



a



b



c



d

N° article	680103 4-in-1® Universal	Absorption capacity	Design	PU
0022	●	34.8 litre/roll	Roll, strength medium, 41 cm × 24 m	24 m Roll, perforated

Barrel top absorbent mat

Design:
- absorbs oil, water, coolants and solvents
- **to be placed on 210-litre barrels**
- with cut-outs for 3/4 "and 2" bungholes
- material 100 % polypropylene
- the mat is grey coloured

Use:
Barrel top mats keep the environment and the lid of steel barrels clean and dry

Note:
Prices per PU





N° article	680103 Universal	Absorption capacity	Design:	PU
0032	●	1 litre/mat	extra strong, mat, ∅ 56 cm 56 cm, in dispenser box	25 mats in carton

Absorbent mat

Design:
- absorbs petroleum, hydrocarbons and oily fluids
- **water repellent**
- extremely resistant
- 8 layers thermally bonded ultra-absorbent polypropylene
- perforated
- colour white

Use:
- for absorbing oil and oily liquids
- in saturated state there are no fibre residues
- in cavities strong wick effect and fast liquid absorption

Note:
Prices per PU





0006



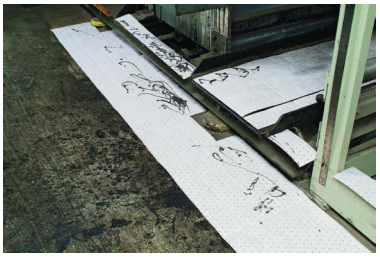


0008

N° article	680103 Oil-Only	Absorption capacity	Design	PU
0006	○	83.6 litres/PU	extra strong, mat, 38×51 cm, in dispenser box	100 single mats in cardboard box
0008	○	152.4 litre/roll	extra strong, roll, 76 cm×46 m	46 m roll, perforated

Design:
- perforated at intervals of 9.5 cm (width) and 25.5 cm (length)
- tear-off mat with multiple perforations, thus the size or shape can be individually determined
- very durable and absorbent, therefore suitable for demanding tasks and extensive cleanings

Note:
Prices per PU







N° article	680103 Oil-Only	Absorption capacity	Design	PU
0010	○	29.7 litre/roll	extra strong, roll, 38 cm×18 m	18 m roll, perforated

Absorbent mat

Design:
- mat made of 100% polypropylene, extra thick and very absorbent
- durable top layer, absorbs oil, water and coolant (not recommended for solvents)
- base layer retains liquids
- special grey/black camouflage pattern conceals dirt

Use:
- with practical perforation, no cutting to size necessary

Note:
Prices per PU



0012





0014

N° article	680103 HAM-0® Universal	Absorption capacity	Design	PU
0012	○	1 litre/mat	extra strong, mat, 41×51 cm	100 single mats in cardboard box
0014	●	179.5 litre/roll	extra strong, roll, 81 cm×46 m	46 m roll, perforated

Absorbent mat Grippy®

Design:
- **with self-adhesive coating**
- stable, safe, absorbent
- absorbs oil, water, coolants and solvents
- adheres without adhesive tape
- special adhesive for secure hold and residue-free resolution
- reusable
- surface made of spun-bonded fabric with heavy duty seam
- poly back prevents leakage of liquid

Type 0215
- propylene material
- heat welded and needled
- tearproof and non fraying
- **for high load** e.g. by forklift trucks

Note:
Prices per PU



0202



0212/0214

N° article	680103 Universal	Absorption capacity	Design	PU
0202	○	3.8 litres/PU	Mat, 41 × 61 cm	10 single mats
0212	○	19.9 litre/roll	Roll, 81 cm × 15 m	15 m roll
0214	○	39.7 litre/roll	Roll, 81 cm × 30 m	30 m roll

Floor mat Grippy®

Design:
- absorbs oils, coolants, solvents and water
- due to adhesive backing **no slipping, easy to remove** from the floor
- does not wrinkle, does not fold over
- prevents the spread of dirt, salt and moisture on the floor
- **extremely hard-wearing, allows crossing with forklift trucks**
- highly efficient top layer, even liquid distribution, quick-drying
- easy cleaning by sweeping, wiping, vacuuming even with a wet vacuum cleaner or floor cleaning device
- cutting underlay to prevent floor damage, for straight, clean cuts, perfect corners and 45° angles
- colour grey













0259

also available
in black or brown



0260





0270

N° article	680103 Universal 15.3 m roll	680103 Universal Starter set	680103 With safety strips	Absorption capacity	Design
0259	–	●	–	7.6 litre/roll	**Starter set** 7.6 m roll with installation tool, cutting guide and safety cutting knife
0260	●	–	–	15.0 litre/roll	15.3 m roll
0270	–	NEW –	○	15 litre/roll	15 m × 910 mm

Absorbent sock

Design:
- heavy and tightly packed
- finely ground vermiculite filler
- absorbs oil, water, coolants and solvents

Use:
- to contain spills or to absorb leaks and drops
- no complicated cleaning, simply replace saturated suction socks
- the stocking automatically absorbs the liquids from the floor
- versatile, adapts to the shape of the ground

Note:
Prices per PU



N° article	680103 Universal	Absorption capacity	Diameter mm	Length mm	PU pieces
0502	●	34 litres/PU	80	1220	12

Design:
- absorbs oils, solvents and hydrocarbons
- 95 % recycled material (recyclate)
- dirt-concealing colour
- water-repellent

Use:
- for daily use
- environmentally friendly application
- for outdoor use - absorbs oil from waterways or during rain
- not suitable for permanent outdoor use

Note:
Prices per PU





N° article	680103 Oil-Only	Absorption capacity	Diameter mm	Length mm	PU pieces
0506	○	113.6 litres/PU	80	1220	30

Design:
- absorbs oil, water, coolants and solvents
- compact absorbent without the cumbersome need for removal of granules
- resistant outer layer of polypropylene
- 100 % recycled material (recyclate)

Use:
- flexible for tight interspaces
- adapts to the shape of the ground
- powerful suction effect
- stops leaks at their source

Note:
Prices per PU





N° article	680103 Universal	Absorption capacity	Diameter mm	Length mm	PU pieces
0512	●	38 litres/PU	80	1070	20

Flood barrier

Design:
- swells on contact with water and transforms into a highly absorbent, long barrier with large coverage that quickly and easily protects against flooding
- place a 1.5 m sandbag substitute in front of a single-door entrance to prevent flood water from entering
- to achieve even better protection, place several of them next to each other
- low weight, compact and easy to handle before activation, unlike regular sandbags which are heavy, messy and labour intensive
- the wedge shape prevents barriers from rolling away

Note:
Prices per PU





N° article	680103 WTR	Absorption capacity	Length mm	Width mm	Height mm	PU
0521	○	11.75 litres/bag	216	1520	64	4 bags
0523	○	23.5 litres/bag	216	3050	64	2 bags
0525	○	39.75 litres/bag	216	5180	64	1 bag

Drip pan foldable

Design:
- the collapsible leakage and drip pans are designed for compact storage, yet can be used immediately at any time
- the green signal colour is easy to recognise
- the easy-to-clean PVC folding basins are ideally suited for small fluid transfers, maintenance, constantly changing work areas and the degreasing and cleaning of engine parts
- they fold up and can be secured with a Velcro strap for easy transport and compact storage
- the rigid corner supports hold their form when the basins are in use



NEW

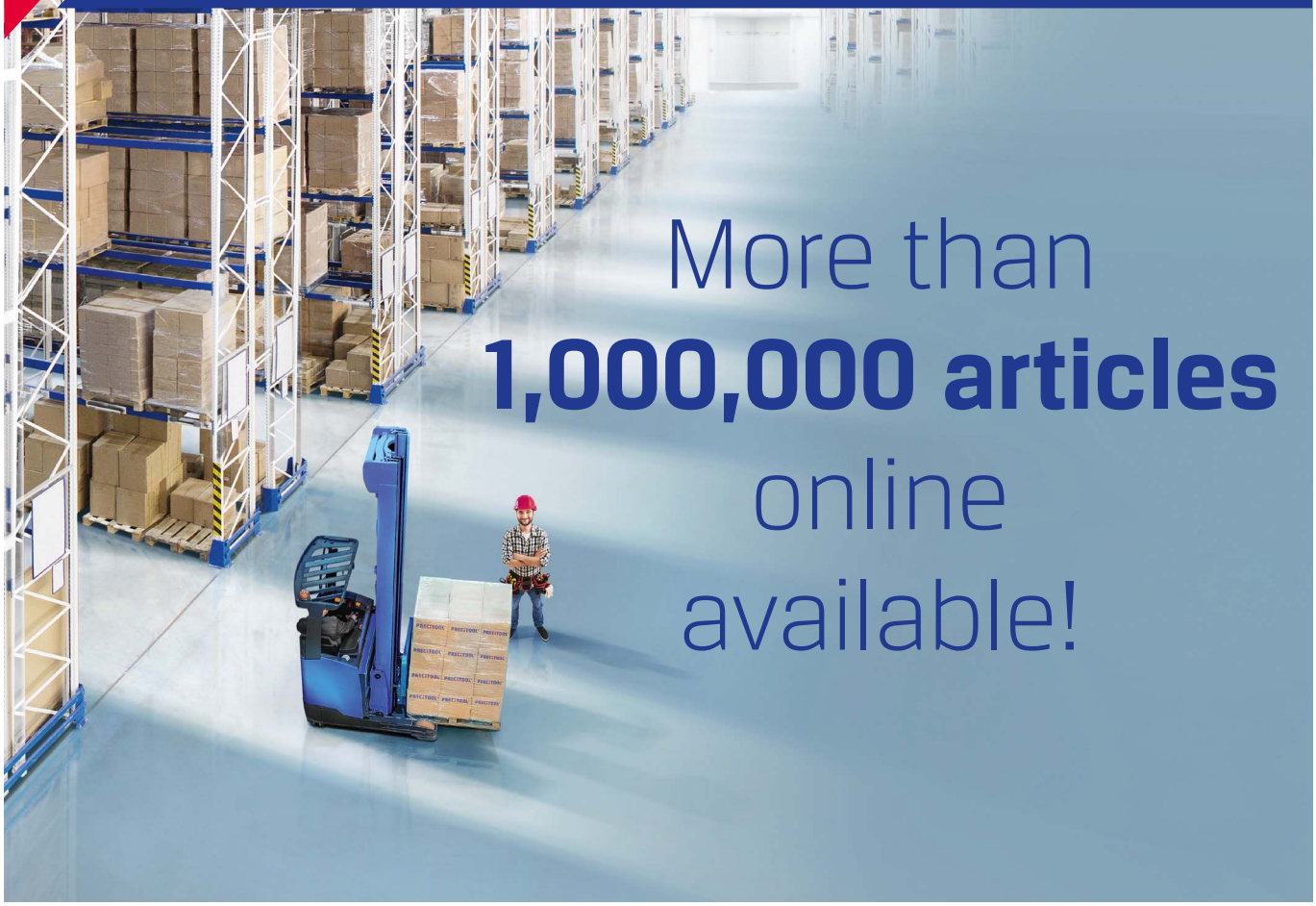


N° article	680103 PAH	Sump volume L	Width mm	Height mm	Length mm
0020	○	25	460	120	460
0023	○	70	760	120	760
0024	○	178	1220	120	1220

Your full-range provider

For every application the proper tool!

PRECITOOL®



Blowtorch

Technical specifications:	
Flame temperature °C	1750
Gas consumption g/hrs.	120
Weight approx. kg	0.38

Safety data sheet

Design:
X2000:
- robust multi-purpose blowtorch with powerful burner for soft and hard soldering
- cartridge protected by steel bell (C206)
- one-hand operation possible due to gas supply integrated in handle
- after 1 minute preheating suitable for overhead work
- brazing torch type X1550

X2000PZ:
- like type X2000, but with piezo ignition integrated in handle
- brazing torch type X1700

C206:
- gas cartridge
- cartridge change simplified by Campingaz Clip & Go mounting system
- contains a butane/propane mixture in a ratio of 80/20
- for Campingaz equipment of line 206
- contents 314 ml/190 g
- Ø × height = 9 × 9 cm



X2000PZ



X2000



C206

N° article	910095	Design
X2000	○	Blowtorch
X2000PZ	○	Blowtorch
C206	●	Replacement cartridge 190 g

Soldering iron

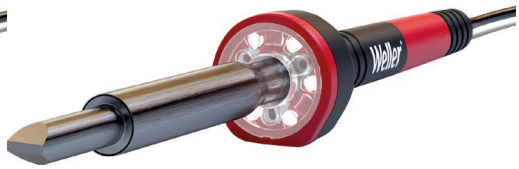
Weller

NEW

Design:
- LED ring light for perfect illumination
- 360-degree lighting provides bright illumination
- ergonomically shaped pen grip ensures comfort, precision and controlled positioning
- quick replacement of the soldering tips
- operating voltage 230 V/ 50 Hz



WLIRK3023C



WLIR6023C

N° article	911202 with LED illumination	Output Watt	Temperature °C	Temperature °F	Scope of delivery
WLIR3023C	●	30	400	750	Chisel tip 4 mm, safety rest
WLIRK3023C	●	30	400	750	Soldering iron 30 W, , lead-free solder
WLIR6023C	●	60	425	800	Chisel tip 6.4 mm, safety rest
WLIRK6023C	●	60	425	800	Lead-free solder
WLIR8023C	●	80	485	900	Chisel tip 10 mm, safety rest

Soldering station

Weller

230 V

Technical specifications:	
Operating voltage V	230
Output Watt	30
Number of ducts	1
Operating temperature, max. °C	400
Temperature accuracy °F	750
Voltage	230 V / 50 Hz
Tip size mm	0,8
Form of tip	conical
Poids kg	0,789

NEW



Design:
- soldering station with variable power output from 5 to 30 watts and precision handle
- integrated safety rest
- easy access to tips, e.g. for replacement or cleaning
- adjustable wattage
- LED ring light for perfect illumination
- compact design

N° article	911130 WLSK3023C
WLSK3023C	○

Soldering tips

Weller

NEW

PU
3 pieces

Design:
- replacement tips for Weller soldering iron WLIR and soldering station WLSK3023C
- delivers concentrated heat for pinpoint soldering
- can be used for general soldering work

Note:
Price per piece
Delivery only in packaging units



Conical | Chisel shape | Screwdriver shape

N° article	911133	Form of tip	Tip size mm	Length mm	fit for
WLTCH4IR30	●	Chisel shape	4	31,75	WLIR3023C | WLIRK3023C | WLSK3023C
WLTCH6IR60	●	Chisel shape	6,4	57	WLIR6023C | WLIRK6023C
WLTCH10IR80	●	Chisel shape	10	76,2	WLIR8023C
WLTS24IR60	●	Screwdriver shape	2,4	52,3	WLIR6023C | WLIRK6023C
WLTSL10IR80	●	Screwdriver shape	10	76,2	WLIR8023C
WLTC08IR30	●	Conical	0,8	36,8	WLIR3023C | WLIRK3023C | WLSK3023C
WLTC04IR60	●	Conical	0,4	52,3	WLIR6023C | WLIRK6023C

ESD table soldering mat set

Weller

ESD

Design:
- heat and solder resistant
- two-layer ESD table mat (dissipative/conductive)
- chemical and oil resistant
- typical leakage resistance 106 - 108 ohm
- anti-reflective surface simplifies work
- RoHS compliant (Restriction of (the use of certain) Hazardous Substances in electrical and electronic equipment)
- including two 10 mm push-button connections
- permanently elastic and abrasion resistant

Scope of delivery:
Soldering mat 900 × 600 mm and antistatic earthing strap including 2.4 m spiral cable.



NEW





N° article	911240 Premium	Width mm	Depth mm
900×600	○	900	600

Soldering station

230 V

Technical specifications:	
Operating voltage V	230
Output Watt	95
Number of ducts	1
Operating temperature, min. °C	150
Operating temperature, max. °C	450
Temperature accuracy	±9 °C / ±16 °F
Temperature stability	tbd
Length mm	170
Width mm	118
Hauteur mm	102
Poids kg	1,89

Design:
- analogue electronic control for soldering tools up to 80 W
- continuously variable temperature control by means of rotary potentiometer
- antistatic supply unit and soldering iron (ETUC compliant)
- potential equalisation (delivery state hard grounded)
- optimal tool setting through automatic tool identification

Scope of delivery:
Supply unit (230V) PU 81, soldering iron WSP 80, tray WPH-80 and soldering tip LTB 2.4 mm (chisel shape)



N° article	911110 WS 81, analog
WS81	●

Soldering station

Weller

230 V

Technical specifications:	
Operating voltage V	230
Output Watt	85
Heating-up time	approx. 28 sec.
Number of ducts	1
Operating temperature, min. °C	100
Operating temperature, max. °C	450
Temperature accuracy	± 5 °C / ± 9 °F
Temperature stability	± 6 °C / ± 10 °F
Length mm	150
Width mm	120
Hauteur mm	98
Poids kg	1,4

Design:
- 1-channel supply unit with WEP 70 soldering iron and PH 70 safety rest
- rapid heat-up and recovery time
- ESD safe soldering station, soldering iron and heat-resistant silicone cable
- automatic standby mode protects tools and the environment
- password protection secures all settings
- soldering tip can be easily replaced without tools even when hot

Scope of delivery:
WEP 70 soldering iron, PH 70 safety rest, TC205 cleaning sponge and ET A chisel-shaped soldering tip (1.6×0.7 mm)



N° article	911111 WE 1010, digital
WE1010	●

Soldering station

Weller

230 V

Technical specifications:	
Operating voltage V	230
Output Watt	95
Number of ducts	1
Operating temperature, min. °C	50
Operating temperature, max. °C	450
Temperature accuracy	± 9 °C / ± 17 °F
Temperature stability	± 2 °C / ± 4 °F
Length mm	149
Width mm	138
Hauteur mm	101
Poids kg	1,9

Design:
- 1-channel supply unit with WP 80 soldering iron and WSR 201 safety rest
- with locking function
- LCD display with backlit
- equipotential bonding via 3.5 mm jack socket at the front of the unit
- WSP 80 soldering iron for all standard soldering applications
- tip family LT

Scope of delivery:
Supply unit WT 1H, soldering iron WSP 80 WSP80N, 2-in-1 safety rest WSR 201, soldering tip LT B, chisel shape (Oslash 2.4 × 0.8 mm)



N° article	911113 WT 1012, digital
WT1012	●

230 V

Technical specifications:	
Operating voltage V	230
Output Watt	150
Number of ducts	1
Operating temperature, min. °C	50
Operating temperature, max. °C	550
Temperature accuracy	± 9 °C / ± 17 °F
Temperature stability	± 2 °C / ± 4 °F
Length mm	149
Width mm	138
Hauteur mm	101
Poids kg	3

Design:
- 1-channel supply unit with WP 120 soldering iron and WSR 201 safety rest
- with locking function
- LCD display with backlit
- equipotential bonding via 3.5 mm jack socket at the front of the unit
- including soldering tip XTB chisel shape (2.4 mm)

Scope of delivery:
Supply unit WT 1H, soldering iron WP 120, 2-in-1 safety rest WSR 201, soldering tip XT B, chisel shape (Ø 2.4 mm)



N° article	911114 WT 1010H, digital
WT1010H	●

Soldering station Supply unit WX 2

Weller

230 V

Technical specifications:	
Operating voltage V	230
Output Watt	200
Number of ducts	2
Operating temperature, min. °C	100
Operating temperature, max. °C	550
Temperature accuracy	±9 °C / ±17 °F
Temperature stability	±2 °C / ±4 °F
Length mm	174
Width mm	154
Hauteur mm	135
Poids kg	3,45

Design:
- intuitive operation (turn-click wheel, 6 sensor buttons)
- **powerful 2-channel soldering station**
- short heating-up time
- robust touchscreen (genuine glass, antistatic coating)
- USB interface (parametrisation and recording via USB stick)
- clear tool recognition via WX tool connection
- interference-free digital data transmission
- **more precise working due to digital sensor evaluation in the iron**
- use as benchtop controller (2 ports for connection and control of solder fume extractors)
- automatic standby mode, no stop-and-go storage required
- visual process control by blue LED ring light
- parameter storage in the iron
- **EPA safe**



N° article	911170 Supply unit WX 2
WX2	○

Soldering iron set
for WX soldering stations

Weller

Technical specifications:	
Operating voltage V	24
Output Watt	120|200
Heating-up time	WXP120 14 sec WXP200 19 sec
Operating temperature, min. °C	100
Operating temperature, max. °C	450

Design:

WXP 120:
- all-round soldering iron
- with safety rest WDH 10
- **for solder works at small and large components with high heat requirements**

WXP 200:
- the most powerful soldering iron among the WX tools
- with safety rest WDH 31 and soldering tip XNT D
- **for solder works with increased heat consumption**, e.g. for LED backplanes



WXP 120



WXP 200

N° article	911174 for WX soldering stations
WXP120	○
WXP200	○

Gas soldering iron

Weller

Technical specifications:	
Output Watt	25 - 75
Operating temperature max. °C	454
Temperature accuracy °F	850
Poids kg	0,2

Design:
- butane gas powered soldering iron set with power from 25 W to 75 W for continuous soldering
- soldering iron can be refilled and used anywhere; with piezo ignition
- up to 60 minutes continuous operation with one butane gas filling possible
- several tips for different applications
- easy tip change without tools
- can be converted into a hot air shrinking torch tool
- automatic deactivation
- butane gas not included in delivery

Scope of delivery:
Gas soldering iron, 3 soldering tips, cutting tip, reflector attachment, spanner and storage box.



NEW



N° article	911205 WLBUK75
WLBUK75	○

Gas refill bottle

Design:
Suitable for all Pyropen gas soldering irons



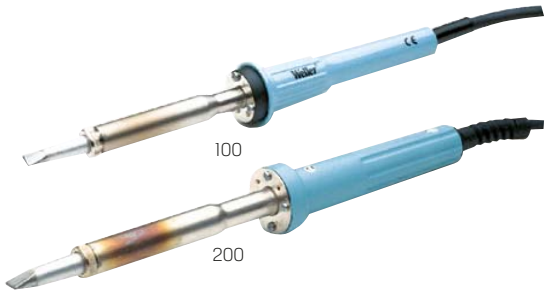
N° article	911454 for gas soldering iron	Contents ml
RB-TS	●	75

Soldering iron

Design:
- mains voltage soldering iron
- Magnastat system with permanent magnet and ferromagnetic temperature sensor
- selection of the working temperature by changing the soldering tip
- long-life soldering tips in chisel shape

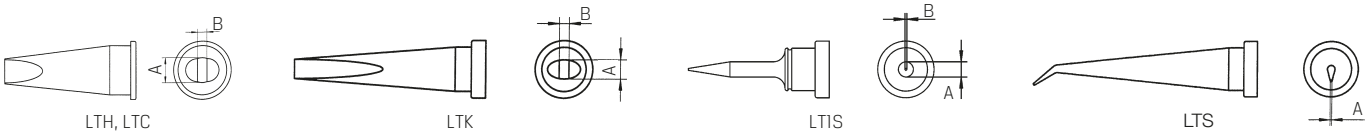
230 V

Scope of delivery:
Soldering iron complete with soldering tip and safety rest



N° article	911220 Magnastat regulated	Output Watt	Temperature °C	Temperature °F	Design
60	●	60	370	698	with soldering tip CT5 B7 / 2,4 mm
100	●	100	370	698	with soldering tip CT6 E7 / 7 mm
200	●	200	370	698	with soldering tip CT2 F7 / 10 mm

Soldering tip



N° article	911302 for WP 80, WSP 80, MPR 80 and FE 75	Length mm	Width (A) mm	Thickness (B) mm	Design
LTH	●	13,5	0,8	0,4	Chisel tip (LTH)
LTA	●	13,5	1,6	0,7	Chisel shape (LTA)
LTB	●	13,5	2,4	0,8	Chisel tip (LTB)
LTC	●	13,5	3,2	0,8	Chisel tip (LTC)
LTK	●	21	1,2	0,4	Chisel tip long (LTK)
LT1S	●	15	0,2	–	Round tip slim (LT1S)
LTS	●	21	0,4	–	Conical long (LTS)

Solder dispenser

Design:
Suitable for rolls to 1 kg with
- length 95 mm, interior Ø › 17 mm
- length 70 mm, interior Ø › 12 mm
- length 84 mm, interior Ø › 12 mm

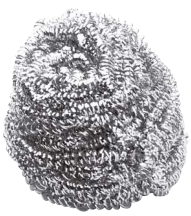
Note:
Delivered without solder!



N° article	911450
SD1000	●

Metal wool

Design:
- cleaning wool made of steel
- for WDC dry cleaner
- package contents 2 pieces



N° article	911452 Steel
0010	●

Soldering wire

Design:
- with halogen-activated natural resin flux
- non corrosive to non-ferrous metals, fast flowing (to DIN 8516)
- **type of flux** ROM 1 (IEC 61190-1-3) / 1.1.2.B (DIN EN 29454-1) / F-SW26
- **flux content** standard 2.5 by weight % ± 0.3 %
- **halogen content** 0.9 %

250BF: lead-free solder wire (according to EU directive 200/95/EG R.HS)



500 g

250 g

100 g

N° article	912000 Wire ∅ 1 mm	912010 Wire ∅ 1.5 mm	Weight g
100	●	●	100
250	●	●	250
250BF	●	●	250
500	●	–	500

Soldering fluid / Solder paste

Design 912060:
- soldering fluid to DIN EN 29454-13.1.1.A
- flux for soft-soldering of iron, steel, copper, brass as well as for general soldering works

Design 912070:
- solder paste DIN 8511 F-SW 21 DVGW GW 4,3.4
- acid-free for soft-soldering of tinplate and leaded sheet metal
- for galvanising copper and brass



N° article	912060 Soldering fluid DIN EN 29454-13.1.1.A	912070 Soldering grease, acid-free DIN 8511 F-SW 21 DVGW GW 4,3,4	Contents ml
50	●	●	50

Flux agent dosing stick

Design:
- easy handling
- no leakage and no spillage of the flux possible
- fast and inexpensive repairs
- low solids flux agent

Safety data sheet

Use:
Remove the sealing cap and push the dispensing pin downwards with the tip. The valve opens, the flux flows into the felt tip, which becomes soaked and turns darker in colour



N° article	912072 with felt tip	Contents ml
0010	●	8

Sal ammoniac solder stone

Use:
For cleaning of soldering irons.

N° article	912050 Sal ammoniac solder stone for soldering equipment and soldering irons	Length mm	Width mm	Height mm
65×45×40	●	65	40	45

Soldering fluid brush

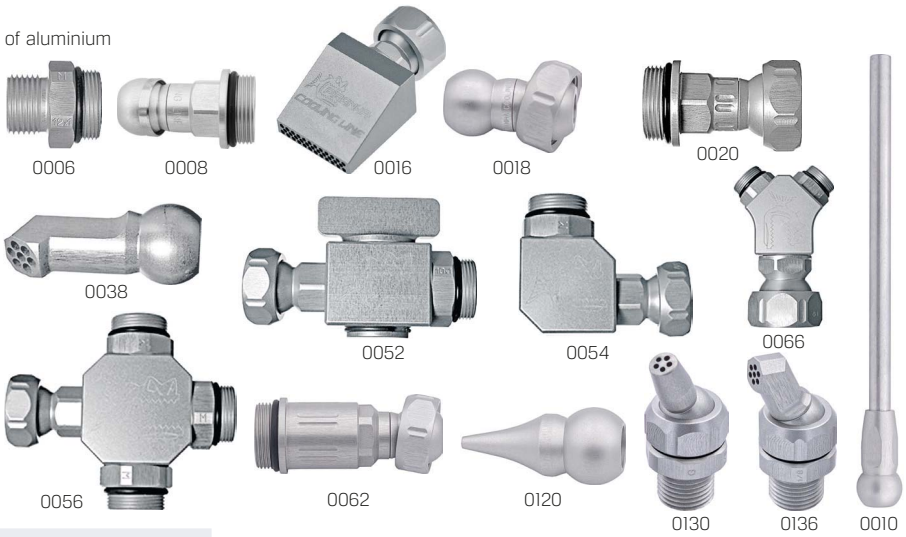
Design:
Pure bristles set in aluminium sleeve



N° article	912062 Width 10 mm	Length mm	Width mm
120	●	120	10

High-pressure coolant ducting system PIRANHA COOLING-LINE

Design:
- high-pressure coolant-lubricant ducting system made of aluminium
- suitable for all common tool carriers
- versatile (coolant supply, blowing out, suction)
- flexible and variable use (1/2 to 1/4 inch)
- can be used up to 80 bar high pressure
- inexpensive to purchase
- robust and durable due to anodised coating
- low weight
- 100 % Swiss Made Quality

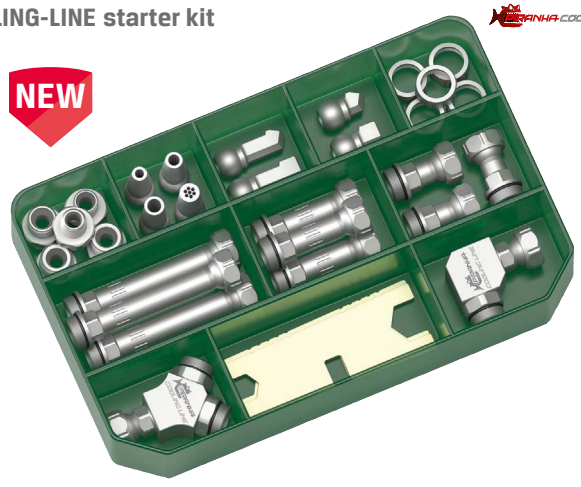


N° article	924030 1/4" system	Design
0002	○	Threaded connection M10×1
0004	○	Threaded connection with ball socket on one side M10
0006	○	Threaded connection M12×1 1/4"
0008	○	Ball head adapter ∅ 12 mm
0010	○	Round pipe nozzle 110 mm
0012	○	Round pipe nozzle 135 mm
0014	○	Round nozzle ∅ 12.5 mm outlet ∅ 1.5 mm
0016	○	Flat nozzle with ball connection and nut
0018	○	Double ball spacer 23 mm / ball ∅ 12.5 mm
0020	○	Spacer 28 mm
0022	○	Ball head adapter ∅ 12.5 mm
0024	○	Round nozzle ∅ 3.5 mm
0026	○	Spacer 43 mm
0028	○	Round nozzle ∅ 4.5 mm
0030	○	Round nozzle short ∅ 4 mm
0032	○	Round nozzle ∅ 5.5 mm
0034	○	Round pipe nozzle 60 mm
0036	○	Special nozzle ∅ 1.8 mm / 60° short
0038	○	Special nozzle ∅ 1.8 mm / 60° long
0040	○	Spacer 74 mm
0042	○	Round nozzle multi-hole short ∅ 12.5 mm
0044	○	Round nozzle multi-hole ∅ 12.5 outlet 7× ∅ 1.5 mm, prec. jet
0046	○	Round pipe nozzle 85 mm
0048	○	Special nozzle ∅ 1.8 mm / 90° short
0050	○	Special nozzle ∅ 1.8 mm / 90° long
0052	○	Ball valve 1/4"
0054	○	90° elbow
0056	○	Quatro manifold block 1/4"
0058	○	Clamping ring ∅ 12.5 mm
0060	○	O-ring 1/ 4"
0062	○	Check valve 1/4:"
0064	○	T-manifold 1/4"
0066	○	Y-manifold 1/4"
0068	○	Special nozzle 60° short / ball ∅ 12 mm

N° article	924030 1/4" system	Design
0070	○	Special nozzle 60° long / ball ∅ 12 mm
0072	○	Bore adapter D12 mm - 1/4"
0074	○	Clamping ring ∅ 12 mm
0076	○	Bore adapter D13 mm - 1/4"
0078	○	Ball head adapter ∅ 14 mm
0080	○	Special nozzle 60° short / ball ∅ 14 mm
0082	○	Special nozzle 60° long / ball ∅ 14 mm
0084	○	Round nozzle multi-hole / ball ∅ 14 mm
0086	○	Bore adapter D14 mm - 1/4"
0088	○	Threaded connection 1/4"
0090	○	Threaded connection 1/4" NPT
0092	○	Threaded connection 1/4" R
0094	○	Threaded connection with ball socket on one side 1/ 4"
0096	○	Clamping ring ∅ 14 mm
0098	○	Ball head adapter ∅ 15 mm
0100	○	Special nozzle 60° short / ball ∅ 15 mm
0102	○	Special nozzle 60° long / ball ∅ 15 mm
0104	○	Round nozzle multi-hole / ball ∅ 15 mm
0106	○	Bore adapter D15 mm - 1/4"
0108	○	Clamping ring ∅ 15 mm
0110	○	Sealing plug 1/4"
0112	○	Nut AF16 1/4"
0114	○	Threaded connection 1/8"
0116	○	Threaded connection 1/8" NPT
0118	○	Threaded connection with ball socket on one side 1/8"
0120	○	Round nozzle ∅ 1.5 mm
0122	○	Threaded connection 3/4" G reduction to 1/4"
0124	○	Threaded connection M8
0126	○	Threaded connection with ball socket on one side M8 - 3
0128	○	Threaded connection with ball socket on one side with blank
0130	○	Straight round nozzle, G1/ 8 multi-hole version 5× ∅ 1 mm
0132	○	Straight round nozzle, M10×1 multi-hole version 5× ∅ 1 mm
0134	○	Straight round nozzle, M8×1 multi-hole version 5× ∅ 1 mm
0136	○	60° angled nozzle, G1/ 8 multi-hole version 7× ∅ 1 mm
0138	○	60° angled nozzle, M10×1 multi-hole version 7× ∅ 1 mm
0140	○	60° angled nozzle, M8×1 multi-hole version 7× ∅ 1 mm
0142	○	Hex key AF 11/ AF 16

High-pressure coolant ducting system PIRANHA COOLING-LINE starter kit

N° article	924031 1/4" system	Design:
0010	●	3 spacers each 28 | 43 | 70 mm 1 threaded connection piece 1/4" 1 threaded connection piece 1/4" NPT 1 threaded connection piece 1/8" NPT 1 threaded connection piece M10 × 1 1 threaded connection piece M12 × 1 1 round nozzle ∅ 3.5 | ∅ 4.5 | ∅ 5.5 mm each 1 special nozzle ∅ 1.8 / 60° short 1 special nozzle ∅ 1.8 / 60° long 1 special nozzle ∅ 1.8 / 90° short 1 special nozzle ∅ 1.8 / 90° long 5 nuts AF16 × 7 mm 1 flat nozzle 22 mm 1 Y-distributor piece compl. 2 hexagon spanners AF11 / AF16



Coolant hose system Capital letters

Design:
- segments made of high-quality plastic (acetal copolymer)
- **chemically resistant**to paraffin products, coolants and the most common chemicals
- flexibly and quickly to adjust to any desired position
- insensitive to vibrations and therefore **100 % positionally stable**
- can be extended and reduced ad libitum, difficult to access places can be reached without difficulty
- recommended operating pressure max. 4 bar
- flow rate 950 l/h (1/4") or 1800 l/h (1/2")

Use:
Primarily for cooling and lubrication on machine tools. Also suitable for blowing out workpieces and for suctioning off liquids



N° article	924000 1/4" system	924005 1/2" system	Design:
SET1	●	–	2× hose à 140 mm, 1 NPT connection each 1/4 "and 1/8" 1 round nozzle each 1.5 mm, 3 mm and 6 mm
SET2	–	●	2× hose à 140 mm, 1 NPT connection each 3/8 "and 1/2" 1 nozzle each 6 mm, 9 mm and 12 mm
GS	●	●	Jointed hose 140 mm (10×1/4" or 6×1/2" elements)
BLAU	●	●	Jointed hose 1.5 m
GRAU	●	●	Jointed hose 1.5 m
SCHWARZ	●	●	Jointed hose 1.5 m
D1,5	●	–	Round nozzle ∅ 1.5 mm
D3	●	–	Round nozzle ∅ 3 mm
D6	●	●	Round nozzle ∅ 6 mm
D9	–	●	Round nozzle ∅ 9 mm
D12	–	●	Nozzle ∅ 12 mm
DD	●	●	90° shower nozzle
FD0,8	●	–	Flat nozzle 25×0.8 mm
FD1,5	●	–	Flat nozzle 12×1.5 mm
FD2	–	●	Flat nozzle 18×2 mm
FD2,8	–	●	Flat nozzle 63×2.8 mm
FD3,2	–	●	Flat nozzle 18×3.2 mm
FD4	–	●	Flat nozzle 32×4 mm
GD40	●	–	Joint nozzle 40 mm / 16×∅ 1 mm
GD60	●	–	Joint nozzle 40 mm / 16×∅ 1.5 mm
LD1	●	–	7-hole nozzle ∅ 1 mm
LD2	–	●	7-hole nozzle ∅ 2 mm
LD3,2	–	●	5-hole nozzle ∅ 3.2 mm
RDS	●	●	Ring system with flushing holes
1/8	●	–	NPT connection R1/8"
1/4	●	–	NPT connection R1/4"
3/8	–	●	NPT connection 3/8"
1/2	–	●	NPT connection R1/2"
Y	●	●	Y connection
R	–	●	Reducer 1/2" to 1/4"
AS-S	●	●	Stopcock with segment socket
AS-IG	●	●	Stopcock with female thread
AS-AG	●	●	Stopcock with male thread
MZ	●	●	Assembly pliers
RV	●	●	Check valve
SD25	●	–	Grinding nozzle 25 mm
SD32	–	●	Grinding nozzle 32 mm
SD42	–	●	Grinding nozzle 42 mm
BOX	●	●	Flexi box 1/4" 27-piece LOC-LINE® 1/4"-Set in Tayg box 8× hose segments each 90 mm, 2× NPT connector 1/8" 2× NPT connector 1/4" 2× round nozzles each 1.5 mm, 3 mm and 6 mm 1× flat slot nozzle each 12×1 mm and 12×1.5 mm 1× flat 5-hole nozzle 1.5 mm 1× flat 7-hole nozzle 1 mm 1× wide angle nozzle 25 mm 1× swivel shower nozzle 16×1 mm 1× Y connection 1× element clamp with screw 1× in-line check valve 1× stop valve with segment connection 1× assembly pliers 1/4"


SET1


BLACK | GREY | BLUE


GS


D1,5-D9


FD0,8-FD4


DD


GD40 | GD60


RDS



1/8-1/2


Y


R


AS-S | AS-IG | AS-AG


MZ


924000 BOX

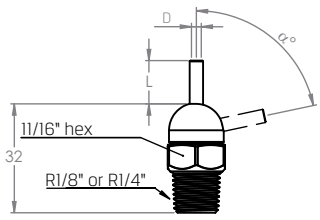

924005 BOX

High-pressure nozzle

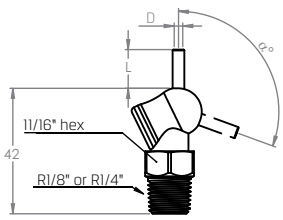
LOC-LINE DAS ORIGINAL Modulares Schlauchsystem

Design and use:
- loadable up to 70 bar, ideal for machining at high speeds
- no locking necessary
- up to 72° / 110° swivelling (depending on model)
- 360° pivotable
- for targeted supply with coolant or air flow

UP TO 70 BAR









N° article	924001 Compact nozzle, (CD type) R 1/8"	Diameter mm	L mm	α°
2,2/0-CD	○	2,2	0	72°
2,2/6,4-CD	○	2,2	6.4	72°
2,2/12,7-CD	○	2,2	12.7	72°
2,2/31,8-CD	○	2,2	31.8	72°
3,0/0-CD	○	3	0	72°
3,0/6,4-CD	○	3	6.4	72°
3,0/12,7-CD	○	3	12.7	72°
3,0/31,8-CD	●	3	31.8	72°
4,1/0-CD	○	4,1	0	70°
4,1/6,4-CD	○	4,1	6.4	70°
4,1/12,7-CD	●	4,1	12.7	70°
4,1/31,8-CD	●	4,1	31.8	70°

N° article	924001 Extra angle range, (XW) R 1/8"	Diameter mm	L mm	α°
2,2/0-XW	○	2,2	0	110°
2,2/6,4-XW	○	2,2	6.4	110°
2,2/12,7-XW	●	2,2	12.7	110°
2,2/31,8-XW	○	2,2	31.8	110°
3,0/0-XW	○	3	0	110°
3,0/6,4-XW	○	3	6.4	110°
3,0/12,7-XW	●	3	12.7	110°
3,0/31,8-XW	●	3	31.8	110°
4,1/0-XW	○	4,1	0	102°
4,1/6,4-XW	○	4,1	6.4	102°
4,1/12,7-XW	●	4,1	12.7	102°
4,1/31,8-XW	●	4,1	31.8	102°

N° article	924002 Compact nozzle, (CD type) R 1/4"	Diameter mm	L mm	α°
3,0/0-CD	○	3	0	72°
3,0/6,4-CD	○	3	6.4	72°
3,0/12,7-CD	○	3	12.7	72°
3,0/31,8-CD	○	3	31.8	72°
4,1/0-CD	○	4,1	0	70°
4,1/6,4-CD	○	4,1	6.4	70°
4,1/12,7-CD	●	4,1	12.7	70°
4,1/31,8-CD	●	4,1	31.8	70°

N° article	924002 Extra angle range, (XW) R 1/4"	Diameter mm	L mm	α°
3,0/0-XW	○	3	0	110°
3,0/6,4-XW	○	3	6.4	110°
3,0/12,7-XW	●	3	12.7	110°
3,0/31,8-XW	●	3	31.8	110°
4,1/0-XW	○	4,1	0	102°
4,1/6,4-XW	○	4,1	6.4	102°
4,1/12,7-XW	●	4,1	12.7	102°
4,1/31,8-XW	●	4,1	31.8	102°



N° article	924003 Adjustment tool HP nozzle	Design:
0010	●	Mounting element

MQL spray system with switching magnet

ARIANA

Design:
- precise MQL due to exact spraying effect
- as 1-nozzle variant (SINGLE) or 2-nozzle variant (DUO)
- extends tool life
- compact construction for space-saving connection
- separate adjustment of lubricant quantity and air supply
- the system works without pump

NEW



Comprising the following basic elements:
- spray nozzle valve
- spray unit including high-quality Cool-Line® articulated hose (length 203 mm) closed, length 203 mm
- compressed air connection
- suction line for the MQL cooling lubricant
- switching magnet with prismatic sole (this also allows attachment to round surfaces or uneven places)



Use:
Suitable for all machines such as milling, turning, drilling or sawing machines.

N° article	924007 1-nozzle variant (SINGLE)	924009 2-nozzle variant (SINGLE)
0010	○	○

Cold and hot air nozzle

ARIANA

Design and use:
- for spot heating and cooling of metal and plastic parts at machine tools
- with the dual function of generating both hot and cold air
- hot air for fast drying or heat treatment
- cold air is primarily used where lubricants and coolants are not desired, especially in laboratories
- is connected to and operated with compressed air (3 - 8 bar)
- the operation is based on the principle of the vortex pipe, where two opposed rotating air streams are generated
- via a needle valve volume flow and proportion of cold air can be adjusted



N° article	924012 Temperature range from -48 °C to +100 °C	Connection inch
3/8	●	3/8

High-performance thread-cutting paste

PREMUS®

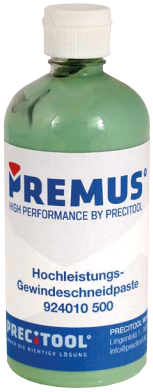
Design:
- high-quality, viscous high-performance water/soap-based thread-cutting paste
- results in a significant increase in tool life
- semi-pasty grease
- suitable for all materials, especially for machining high-temperature, rust- and acid-resistant steels as well as Cr-Ni alloys
- does not contain mineral oil, chlorine and sulphur and **free of hazard labelling**
- light bluish, odourless, flash point 〉225°C, melting point 32 °C
- environmentally friendly
- water soluble and easy to remove with warm water

Use:
- ideally suited for thread cutting, tapping, drilling, countersinking, centring, broaching and milling
- does not cause rust damages on the machined metals

Advantages:
- prolonged conservation of the cutting power of tools
- clean surfaces of the machined workpieces
- excellent spreading and covering properties
- economical in use, completely odourless
- innoxious to health (does not cause skin irritations)

Safety data sheet

Use:
- by brush, end brush, roller, atomiser etc.
- does not leave an oily surface
- according to the machining task, the tool (drill, tap etc.) is dipped into the lubricant
- dilution with water (up to max. 1:1) possible
- for machine operations usable with an atomiser
- due to its viscosity not suitable for use in coolant pumps



N° article	924010	Contents ml	Containers
100G	●	100	Dash bottle
250G	●	250	Dash bottle
500G	●	500	Dash bottle
1000G	●	1000	Dash bottle
5000G	●	5000	Canister

Cool-Line® MQL spray system

ARIANA

The all-in-one solution for perfect minimum quantity lubrication.





NEW

Thread-cutting paste
Lube stick solid

Design and use:
- metalworking wax in cardboard roll
- the paste is based on wax and mineral oil
- chlorine-, silicone- and solvent-free, no hazardous material
- for use at sawing with circular saws, band saws and at thread-cutting



N° article	924051	Contents g
400	●	400

Thread-cutting paste soft

Design and use:
- for targeted use, for dipping or application
- adheres to the cutting edge and only becomes liquid during use
- good lubricating properties
- highest pressure absorption capacity
- enhances tool life
- universally applicable
- for tapping, milling, reaming etc.
- ideally suited for the machining of difficult to chip materials like titanium, manganese, cast steel, chromium-nickel steel, molybdenum steel and for drawing operations



N° article	924052	Contents g
120	●	120
750	●	750

High-performance cutting oil foam
UNIVERSAL

Design and use:
- highly additive-enhanced, high-quality cutting oil foam spray
- universal for machining (drilling, tapping, reaming, milling, turning, countersinking, broaching, sawing)
- the **highly adhesive** cutting oil foam is used for targeted application to the machining area
- to achieve clean thread cuts
- improves service life and increases cutting performance by reducing heat generation
- very good wetting force and rinsing properties
- free of silicone, resin and PTFE



N° article	924054	Contents ml
400	●	400

High-performance cutting oil
UNIVERSAL

Design and use:
- high-quality universal cutting oil on mineral oil basis
- universal for machining (drilling, tapping, reaming, milling, turning, countersinking, broaching, sawing)
- for all materials such as alloyed and unalloyed steels, cast iron, non-ferrous metals and aluminium
- for medium chip removal
- for fine dosing
- enhances tool life
- chlorine-free



N° article	924057 UNIVERSAL	Contents ml	Design
250	●	250	Dash bottle
400	●	400	Spray can
500	●	500	Dash bottle
1000	●	1000	Dash bottle
5000	●	5000	Canister
10000	○	10000	Canister
25000	○	25000	Canister

High-performance cutting oil
X-treme

Design and use:
- high quality ester-based **cutting oil**
- for supreme demands
- for processing difficult-to-machine materials such as chrome, nickel, titanium, manganese, copper as well as high-alloy and stainless steels
- for medium and heaviest cutting
- for fine dosing
- also suited for MQL/MQCL
- excellent for drilling, tapping, reaming, milling, turning, countersinking, broaching, sawing
- enhances tool life
- chlorine and mineral oil free



N° article	924058	Contents ml	Design
250	●	250	Dash bottle
400	●	400	Spray can
500	●	500	Dash bottle
1000	●	1000	Dash bottle
5000	○	5000	Canister
10000	○	10000	Canister
25000	○	25000	Canister

High-performance cutting oil
UNI VISCO

Design and use:
- viscous, high-quality universal cutting oil on mineral oil basis
- excellently suitable for thread cutting
- very good adhesion
- universal for all materials
- can be applied by dipping, spraying, rolling or by hand
- enhances tool life
- chlorine-free



N° article	924059	Contents ml	Design
250	●	250	Dash bottle
400	●	400	Spray can
500	●	500	Dash bottle
1000	●	1000	Dash bottle
5000	○	5000	Canister
10000	○	10000	Canister
25000	○	25000	Canister

Cooling lubricant ECOLINE

PRETEC

Design and use:
- water-miscible cooling lubricant
- low-foaming, boron- and formaldehyde-free
- cost-effective alternative for machining steel, cast iron and aluminium materials

Application concentration:
- design of the concentration range: 4-10 %
- light duty 4.0-6.5 %
- moderate duty 6.5-8.5 %
- heavy duty 8.5-10.0 %

Factor:
- pH value (typical operating range): 8.7 - 9.7
- refractometer factor: 2.1



N° article	924061	Content litres	Design
5	○	5	Canister
10	○	10	Canister
25	○	25	Canister
200	○	200	Barrel

High-performance adhesive lubricant UNIVERSAL

PREMUS

Design and use:
- water-miscible high-performance cooling lubricant
- chlorine- and formaldehyde-free
- universal cooling lubricant for machining steel and cast materials- suited for machining of steel and stainless steel

Application concentration:
- design of the concentration range: 3-10 %
- light duty 3.0-6.5 %
- moderate duty 6.5-8.5 %
- heavy duty 8.5-10.0 %

Technical data:
- pH value (typical operating range): 9.0 - 9.5
- refractometer factor: 1.6



N° article	924063	Content litres	Design
5	○	5	Canister
10	●	10	Canister
25	○	25	Canister
200	○	200	Barrel

High-performance adhesive lubricant X-treme

PREMUS

Design and use:
- water-miscible high-performance cooling lubricant
- free of boric acid and formaldehyde
- especially for aluminium alloys, difficult-to-machine and high-strength steels, stainless steel, titanium as well as cast iron

Application concentration:
- design of the concentration range: 5-10 %
- light duty 5.0-7.0 %
- moderate duty 7.0-9.0 %
- heavy duty 9.0-10.0 %

Technical data:
- pH value (typical operating range): 9.0 - 10.0
- refractometer factor: 2.0



N° article	924066	Content litres	Design
5	○	5	Canister
10	○	10	Canister
25	○	25	Canister
200	○	200	Barrel

High-performance adhesive lubricant HPC

PREMUS

Design and use:
- water-miscible high-performance ester-based cooling lubricant
- free of boric acid and formaldehyde
- especially for high-performance cutting (HPC)
- suitable for internal coolant supply (ICS) and high pressure

Application concentration:
- design of the concentration range: 5-10 %
- light duty 5.0-7.0 %
- moderate duty 7.0-9.0 %
- heavy duty 9.0-10.0 %

Technical data:
- pH value (typical operating range): 9.0 - 10.0
- refractometer factor: 1.3



N° article	924067	Content litres	Design
5	○	5	Canister
10	○	10	Canister
25	○	25	Canister
200	○	200	Barrel

High-performance sanding concentrate Top-Grind

PREMUS

Design and use:
- synthetic, water-miscible high-performance abrasive concentrate
- water clear (transparent)
- free of boric acid and formaldehyde
- excellent flushing characteristics prevent the smearing of the tool surface
- suitable for grinding a wide range of materials, especially steel, nickel alloys and cast iron

Mixing ratio:
- grinding Application concentration: 2-3 %
- chipping Application concentration: 5-15 %

Technical data:
- pH value (typical operating range): 8.8 - 9.4
- refractometer factor: 3.0



N° article	924069	Content litres	Design
5	○	5	Canister
10	○	10	Canister
25	○	25	Canister
200	○	200	Barrel

Glass and window cleaner Top-Clean

PREMUS

Design and use:
- for clear viewing windows on the machine tool
- cleaning without foaming on contact with cooling lubricants
- not subject to the VOC regulations
- **free of hazard labelling**
- fast and residue-free drying
- does not contain corrosion inhibitors
- removes resinified cooling lubricants (synthetic, semi-synthetic) from windows and panels
- counteracts renewed contamination
- miscible with cooling lubricants, no negative side effects
- for internal and external cleaning of machines
- does not corrode paint, sealings, glass, metal and plastic
- 100 % tenside-free



N° article	924072	Contents ml	Design
500	●	500	Spray bottle
1000	●	1000	Spray bottle
5000	○	5000	Canister
10000	○	10000	Canister

Cooling lubricant system cleaner

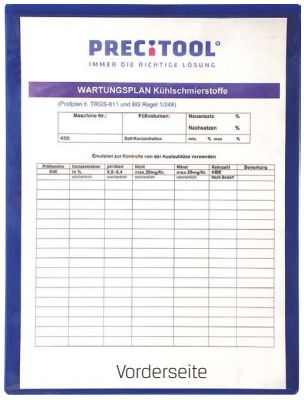
Design and use:
- system cleaner for water-miscible cooling lubricants
- clear, water-soluble, alkaline liquid for simple, problem-free addition to the cooling lubricant circuit and cleaning of the machine
- suitable for a wide range of materials
- dissolves oily residues and adhesions
- disinfects the cooling lubricant circuit and all wetted machine parts



N° article	924073	Content litres	Design
10	●	10	Canister

Magnetic transparent cover
for cooling lubricant maintenance plans

Design and use:
- ideal for storing and documenting the coolant maintenance plans with the machine
- with magnetic tape on the back
- colour blue/transparent
- with insertion sleeve on the front



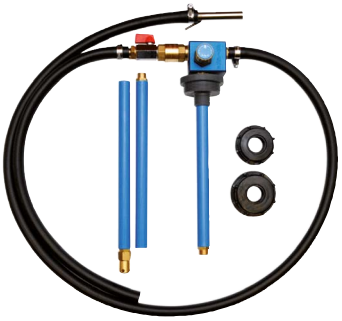
Vorderseite

N° article	924075 blue/transparent	Design
MT	●	DIN-A4 portrait format

Canister or drum mixer

Design:
- mixing unit for emulsions and grinding solutions
- rapid and precise adjustment of the emulsion concentration of the coolants and lubricants
- the unit has separate inlets for water and the concentrate
- the determined mixing ratio is reproducible at any time
- the mixing ratio can be changed at any time
- check valve on the water inlet side to prevent suction into the drinking water
- with barrel lid screw connection set





N° article	924074 for emulsions	Connection water inlet inch	Connection concentrate inlet inch	Connection mixing liquid outlet inch	Output per hour
0010	●	1/2"	3/8"	1/2"	270

Emulsion care kit

Use:
Enables all measurements according to TRGS611.




0010 0015


0020 0025

N° article	924076 without handheld refractometer	Contents
PK	●	Thermometer for determining the sample temperature Nitrite test sticks (100 pcs.) Nitrate test sticks (100 pcs.) pH test sticks (100 pcs.) Water hardness test sticks (100 pcs.) Measuring cup (for sampling) 3× plastic spray bottles (empty)

N° article	924077 Replacement test strips (PU = 100 pcs)	Design
0010	●	pH 7.0-14.0
0015	●	Nitrite 0-25 mg/l
0020	●	Nitrate 0-500 mg/l
0025	●	0 - 28° dH

Pneumatic barrel pump

Design:
- for filling and emptying lubricant and coolant containers (60 l/min)
- quick and easy installation on standard barrels
- the pump requires approx. 8 bar of compressed air
- with inlet and outlet control via automatic closing valve, no overflow
- can also be used for ex-protected areas

Use:
- the pump generates a vacuum in the tank, which can be used to suck up spent coolants, mud, metal residues etc. from machine tanks, but also excess liquids from chemical containers
- by turning the button, a function reversal is achieved, which creates an overpressure with which lubricant and cooling fluids or liquid chemicals can be pumped into the machine

Delivery:
Power-ac pump, threaded barrel plug 2", quick-release fastener, riser pipe, delivery hose 3 m, suction pipe



N° article	924078 incl. accessories	medium
0002	●	28-500 cST.

Hand refractometer

Design:
For quick and accurate identification of the concentration of cooling lube emulsion.

924080 analogue:
- measuring range 0 - 32 %, adjustable eyepiece and range

924081 digital:
- measuring range 0 - 95 %
- resolution/accuracy 0.1 °Brix
- calibratable
- reading of concentration on display
- batteries included

Delivery:
Incl. protective bag, pipette and user manual



924080 924081

N° article	924080 analogue 0 - 32 %	924081 digital 0 - 95 %
HRM	●	–
0012	–	●

Level indicator

Design:
- for non-corrosive liquids such as cooling lubricants, emulsions, engine oils, industrial and used oils, antifreeze, diesel fuel, heating oil and other liquid media
- float rests on top of the liquid and monitors permanently the filling level
- mounting to 3/4" opening



N° article	924082 for barrels 60/210 litres
60/210	●

Barrel key

Design:
- made of steel
- safe and easy opening with the right tool
- suitable for all standard bung lids



N° article	924084 for barrels 60/210 litres
60/210	●

Overflow protection siren

Design and use:
- for checking the maximum or minimum fill level
- overflow protection siren **indicates acoustically and by light signal** an imminent overflow
- the level in the basin can be determined by adjusting the movable articulated hose
- an overflow is signalled by the acoustic warning siren
- the dual function can be used by turning the float switch over
- the instrument signals if there is not enough filling volume left in the machine basin
- before the feed pump runs dry, a signal sounds to indicate the minimum fill level

Advantages:
- checks directly at the level control of your machine tool
- no unnecessary hall cleaning due to overflowing of the container
- very good control of the maximum or minimum fill level
- easy mounting due to magnetic plate
- operation by 9V block battery



N° article	924090 with magnetic attachment
0050	●

Belt skimmer

Design:
- belt skimmer can be used with either timer or in continuous operation
- with permanent magnet for attachment to the machine
- with AC adapter
- foreign oil separation approx. 3 litres/hour

Use:
Removes foreign oils and bed track oils as well as chip particles from cooling lubricants. Hereby reduction of bacterial activity, odour control and service life extension of the cooling lubricants



N° article	924090 Belt skimmer	924091 Replacement belt	Strap width mm	Belt length mm	Delivery rate l/h	Immersion depth, max. mm
0010	●	●	50	600	3	150

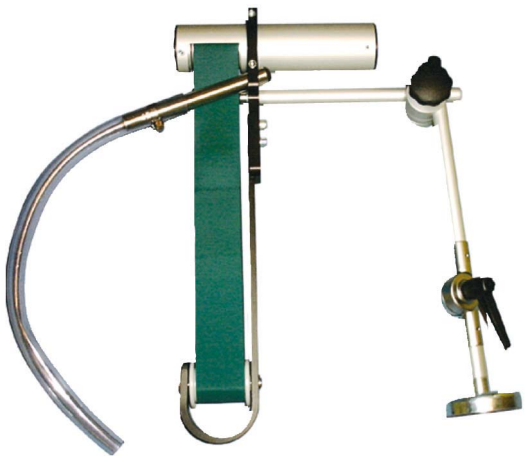
Belt skimmer

Design:
- with 12 Volt low voltage
- flexible adjustment by two joints
- the speed is Voltage-dependent adjustable
- with permanent magnet for attachment to the machine
- with power supply unit (operating voltage 3-12 V)

Use:
For removing foreign oils from cooling lubricants. This largely prevents the formation of bacteria and considerably increases the service life of the cooling lubricants. The exposure to odour and steam generation is significantly reduced.



Configuration example



N° article	924090 Immersion depth 10 - 180 mm	Strap width mm	Belt length mm	Delivery rate l/h	Immersion depth, min. mm	Immersion depth, max. mm
BS	●	50	850	4	10	180

Ventilation pump for cooling lubricant

Use:
- for oxygen enrichment of cooling lubricants
- simultaneously increased buoyancy of oil and dirt particles
- prevents the oil film from being closed, thus preventing the growth of bacteria and fungi
- remove suspended foreign matter by band skimmer (924090)



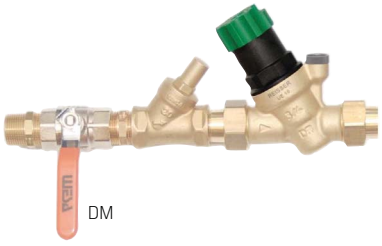
N° article	924092 for cooling lubricant	Operating voltage V	Power input A	Ventilation capacity l/h	Dimensions L × W × H mm
180	●	12	0,38	180	153×75×82

Piston mixing unit

Design and use:
- for optimal mixing of emulsions and grinding solutions
- the device is operated by water pressure as the driving force, in this way the concentrate is sucked in
- a dosing screw enables adjustment of the desired emulsion concentration of the cooling and lubricating liquids
- the user can always start from an optimum mixing ratio once it has been determined
- the mixing ratio can be changed at any time via the dosing screw

Technical information:
The piston mixer has a water inlet, a concentrate inlet and an outlet hose for the mixed emulsion or grinding solution. This can be extended indefinitely without creating a vacuum in the system.

Note:
For safety reasons, we recommend the installation of a system separator in front of the water inlet to protect against water contamination and excessive water pressure.
The piston mixer is mounted by means of a wall bracket.



DM



0010

N° article	924094	Design
0010	●	Mixing volume up to 600 l/h
DM	●	Pressure reducer

Emulsion aerator

Design:
- easy handling and operation
- with timer for automatic operation
- flexible positioning of the ventilation panels

Use:
By supply of oxygen and the ascending air bubbles, a circulation is generated in the cooling lubricant emulsion, and the impurities such as foreign oils and suspended particles, are moved apart on the surface to counteract the risk of bacterial contamination. A band skimmer (924090) can be used here to remove the impurities.

Advantages of optimal ventilation:
- preservation of the bio balance of the cooling lubricant
- thereby efficient cooling lubricant
- highest cutting speeds
- long service life of tools and machines

Delivery:
Ventilation unit, 3 m connection cable, 2×3 m air conduction and timer







N° article	924085 with aeration plate/s	Design
350	○	1 ventilating plate for containers up to 350 litres
500	○	2 ventilating plates for containers up to 500 litres
1000	○	4 ventilating plates for containers up to 1000 litres

Cooling lubricant maintenance system R-1000

Design and use:
- stationary/mobile cooling lubricant maintenance system for removing tramp oils from the cooling lubricant
- cooling lubricant maintenance system works independently in bypass mode (without personnel deployment and without machine standstill times)
- 97 % of floating and swirling tramp oils are separated out
- emulsion and oil separation takes place in a purely physical way
- reduction of allergy risks, skin diseases as well as unpleasant odours
- cost reduction through service life extension of the cooling lubricant
- reduction of disposal costs
- fluid temperature max. 40 °C

Delivery:
Including float, suction and return hose



N° article	924093	Delivery rate l/h	Dimensions L × W × H mm	Weight kg
0010	○ +	80 - 350 -	270×152×440	15

Cooling lubricant maintenance system R-2000

Design and use:
- mobile maintenance unit for removing foreign oils from the cooling lubricant
- cooling lubricant maintenance system works independently in bypass mode (without personnel deployment and without machine standstill times)
- 97 % of floating and swirling foreign oils are separated out
- emulsion and oil separation takes place in a purely physical way
- reduction of allergy risks, skin diseases as well as unpleasant odours
- cost reduction through service life extension of the cooling lubricant
- reduction of disposal costs
- fluid temperature max. 40 °C
- maintenance-free three-phase motor 0.37 kW, connection 230 V
- robust, fully welded stainless steel housing with oil-resistant outer coating

Delivery:
Including float, suction and return hose as well as 100 µm filter insert.

NEW



N° article	924093	Delivery rate l/h	Dimensions L × W × H mm	Weight kg
0015	○	350	830×440×860	65

Cooling lubricant maintenance system R-3000

ARIANA

Design and use:
- mobile emergency vehicle for the removal of large quantities of foreign oil with 3-chamber system
- cooling lubricant maintenance system works independently in bypass mode (without personnel deployment and without machine standstill times)
- 97 % of floating and swirling foreign oils are separated out
- emulsion and oil separation takes place in a purely physical way
- reduction of allergy risks, skin diseases as well as unpleasant odours
- cost reduction through service life extension of the cooling lubricant
- reduction of disposal costs
- fluid temperature max. 40 °C
- overfill protection for safe automatic operation
- durable high-performance eccentric worm pump
- maintenance-free three-phase motor 0.37 kW, connection 230 V
- robust, fully welded stainless steel housing with oil-resistant outer coating

Delivery:
Including float, suction and return hose as well as 100 µm filter insert.



N° article	924093 for oils and solids	Delivery rate l/h	Dimensions L × W × H mm	Weight kg
0020	○	550	1,200×470×860	86

Blow gun

PRETEC

Design:
Aluminium, forged
- air volume doseable by means of operating lever
- can be used for delicate blow-out operations
- nozzle thread M12 × 1.25



N° article	925832 forged	Nozzle bore mm	Connection
0010	○	1,5	G 1/4" internal thread, without nozzle
0012	○	1,5	coupling plug NW 7.2
0014	○	1,5	6 mm hose connection
0016	○	1,5	9 mm hose connection
0030	○	–	G 1/4" internal thread, **without nozzle**

Blow gun

PREMUS

Design:
Aluminium, forged
- air volume doseable by means of operating lever
- can be used for delicate blow-out operations
- nozzle thread M12 × 1.25

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N° article	925831	Nozzle bore mm	Connection
0010	●	2	Coupling plug NW 7.2

Accessories for blowguns

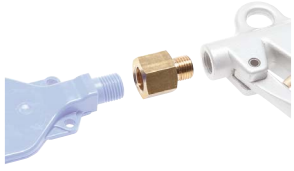
Design:
- pressure range up to max. 6 bar
- temperature range from POM max. +50 °C, aluminium max. +200 °C
- multi-channel fan nozzles are particularly quiet and economical
- especially suitable for wide-scale blowing off of water or dust as well as blowing out and further transport of stampings, plastic and elastomer moulded parts



0071 + 0073 0074

N° article	925832 Multi-channel fan nozzle	External thread	Nozzle width mm	Air consumption at 4 bar, l/min	Design
0071	●	R 1/4"	47	550	Eco-Line, ABS, blue
0073	●	G 1/4"	51	416	POM, blue
0074	●	G 1/4"	51	416	Aluminium

Design:
For nozzle mounting in aluminium blowguns



N° article	925832 Adapter for nozzle mounting	External thread	female threads
0079	●	M12 × 1.25	G 1/4"

Accessories for blowguns

Design:
0032:
- spare nozzle for air gun 925832 0010-0016
- nozzle bore 1.5 mm

0034:
- safety nozzle with centre bore and lateral annular gap or side hole
- **shield formation against rebounding chips**
- air venting through the annular gap or side hole when closing the nozzle bore

0035:
- noise protection nozzle with sintered metal insert
- low noise level of about 63 - 73 dB (A)
- good blowing effect with up to 380 l/min

0037:
- noise protection nozzle
- nozzle insert made of hard PVC
- temperature range up to max. 90 °C
- air consumption 150 l/min. at 4 bar
- powerful point-impinging air jet, low noise level
- up to 12 dB(A) quieter than conventional **Single-hole nozzle**



0032 0034 0035 0037

N° article	925832 Nozzle	External thread
0032	●	M12 × 1.25
0034	●	M12 × 1.25
0035	●	M12 × 1.25
0037	●	M12 × 1.25

Design:
- for mounting behind the nozzle
- rebounding chips are held back
- please order matching nozzle separately (925832 0034)



N° article	925832 Protective shield	External thread
0050	○	M12 × 1.25



0036-0040



0042-0048

N° article	925832 Extension pipe	External thread	Pipe length mm	Design
0036	●	M12 × 1.25	110	curved
0038	●	M12 × 1.25	160	curved
0040	●	M12 × 1.25	260	curved
0042	●	M12 × 1.25	115	straight
0044	●	M12 × 1.25	165	straight
0046	●	M12 × 1.25	265	straight
0048	●	M12 × 1.25	415	straight

Blow gun

PRETEC

Plastic, with safety nozzle, doseable

Design:
- **air volume doseable by means of operating lever**
- can be used for delicate blow-out operations
- as soon as the distance between the nozzle and the surface is too small, the air escapes laterally
- plastic handle, low weight

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N° article	925832	Connection
0060	○	G 1/4" internal thread, without nozzle
0062	●	coupling plug NW 7.2

Magnetic holder

PREMUS

Design:
- made of plastic
- high retaining power due to 6 neodymium magnets in the pot magnet, Ø 65 mm
- the rubberised contact surface is oil-resistant and avoids scratching of the holding surface
- the special shaping allows 2 separately usable zones and prevents the attached articles from slipping or falling down

Use:
For hanging up or lightly fastening blowguns, cables, clothes, barrier tape etc.







N° article	925833 PREMUS®, Ø 65 mm	Colour	Weight kg
0010	●	blue	0,25

Blow gun Plastic

Design:
- with fixed mounted pipe
- plastic body
- for superfine dosing
- due to a special nozzle structure, the gun produces a particularly quiet, soft jet




0022


0024


0026

N° article	925834 Blow gun	Connection	Noise level dB	Air flow l/min	Max. operating pressure bar	Design
v0010	●	G 1/4" internal thread	96	500	16	without noise protection nozzle
0012	●	G 1/4" internal thread	79	190	16	with noise protection nozzle

N° article	925834 Mouthpiece	Design
0022	●	**Protective shield** (protects against flying fragments)
0024	●	**Rubber nozzles** (e.g. for sensitive surfaces, for leak testing)
0026	●	**Muffler** (reduces noise emission, 82 dB(a) noise level)

High-performance blow gun

TYPHOON®

Design:
- aluminium, chrome-plated
- handle PVC
- stable construction with low weight
- **high blowing capacity with simultaneous good dosability**
- with safety nozzle

NEW


925832 0160


925837 0160

N° article	925832 Standard	925837 TYPHOON® Multijet	Connection	Max. operating pressure bar
0150	●	●	Coupling plug NW 7.2	10
0160	●	●	G 1/4" internal thread	10

Extension pipe

TYPHOON®

Design:
- sturdy extensions for TYPHOON blow guns
- with single nozzle or MultiJet version (depending on model)
- material aluminium, chrome-plated

NEW



N° article	925832 for TYPHOON® blow gun	Length mm	External thread	Max. operating pressure bar	Design	Nozzle type	fit for
0200	○	300	1/2"-27 UNS (AG)	10	straight	Standard	925832 0150, 925832 0160, 925837 0150, 925837 0160
0205	○	600	1/2"-27 UNS (AG)	10	straight	Standard	925832 0150, 925832 0160, 925837 0150, 925837 0160
0210	○	900	1/2"-27 UNS (AG)	10	straight	Standard	925832 0150, 925832 0160, 925837 0150, 925837 0160
0215	○	300	1/2"-27 UNS (AG)	10	straight	Multijet	925832 0150, 925832 0160, 925837 0150, 925837 0160
0220	○	600	1/2"-27 UNS (AG)	10	straight	Multijet	925832 0150, 925832 0160, 925837 0150, 925837 0160
0225	○	900	1/2"-27 UNS (AG)	10	straight	Multijet	925832 0150, 925832 0160, 925837 0150, 925837 0160

Manual tyre filler

Design:
uncalibrated, for tyre valves VG 8 (7.7 mm)

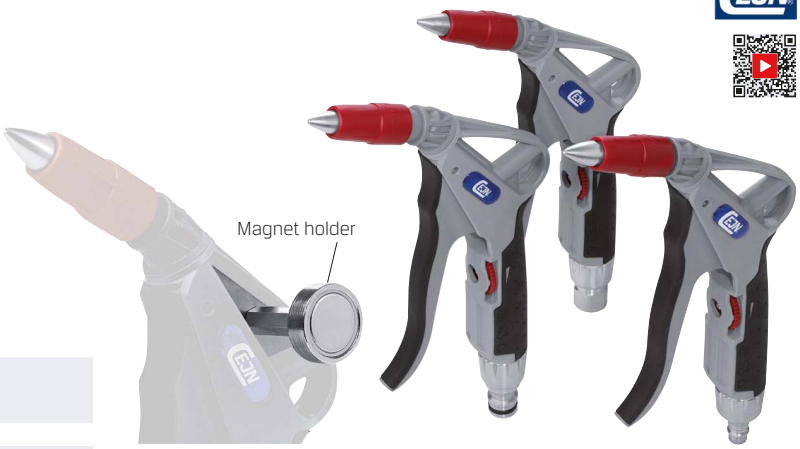

0080


0083

N° article	925832	Pressure gauge display bar	Connection	Design
0080	●	0 - 10	Coupling plug NW 7,2	**Standard** with clip connector
0083	●	0 - 12	Coupling plug NW 7,2	**Industrial version** with clip connector

Blow and fluid gun

Design:
- very high blowing force
- simple flow control
- finely adjustable jet
- for air and non-explosive water-based fluids
- warm to the touch through plastic body
- safety nozzle according to OSHA standard
- sealing material NBR





N° article	925834 MultiFLOW	Connection
0030	●	G 1/4" internal thread, without nozzle
0032	●	Coupling plug NW 7,2
0034	●	Gardena®-Nippel

N° article	925834 Accessories for MultiFLOW	Design
0050	●	Magnet holder for MultiFLOW blow guns

Spray gun

Design:
- lightweight, compact construction
- nozzle geometry for a full and dense spray mist
- for optimum detergent application
- **spray volume easily adjustable**

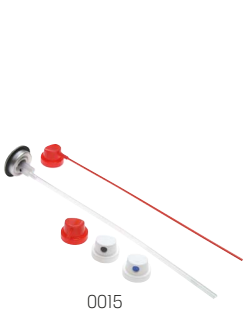
NEW



N° article	925110	Max. operating pressure bar	Container volume ml	Connection
0010	○	16	1200	G 1/4" (IG)

Pressurised-air spray can

Design:
- suitable for all fluids which can be processed with compressed air (except alkaline or acidic liquids attacking plastics)
- e.g. cutting oil, rust remover, leak detection spray, lubricant and release agents
- the spray can is internally coated and can be filled with any commercially available tyre inflator or directly with the optional filling nozzle with air
- maximum filling pressure 10 bar, maximum temperature +40 °C


0015


0020



0010

N° article	925120	Design:
0010	●	**refillable compressed air spray can** with 500 ml of liquid filling quantity, including a finely atomising, pinpoint spraying spray head
0015	●	**Spare parts package** for 925120 0010 Valve, point-spraying spray head, point-spraying spray head with tip extension pipe, fine atomising spray head, ultra fine atomising spray head
0020	●	**Filling spout** for refilling the spray can 925120 0010, suitable for workshop coupling NW 7.2. For filling with compressed air, the spray can is simply pressed onto the spout

IQS Plug Connectors

Product Information

IQS standard plug connectors

Materials: Body brass nickel-plated/PA 66,
Release ring: PA 66, **Sealing:** NBR, **Retaining claws:** stainless steel,
Cartridge: ZnDC (zinc die casting) galvanised
Temperature range: -20 °C to +80 °C
Operating pressure: -0.95 to 20 bar
Media: compressed air, neutral gases, water
(water up to max. 60 °C may only be used in
accordance with release of the framework data by us)

Hoses: **4 - 16 mm**
Thread: **M 5-G 1/2"**



Advantages:
- large product variety
- high tightness
- available with conical, Teflon-coated thread
- available with cylindrical thread with chambered O-ring

IQS Big plug connectors

Materials: Body POM (Ø 28mm: brass/POM),
Sealing: NBR
Temperature range: -20 °C up to max. +70 °C
Operating pressure: -0.95 to 10 bar (70 °C: max. 7 bar)
Media: compressed air, neutral gases, water

Hoses/tubes: **15 - 28 mm**
Thread: **G 3/8" - G 1"**



Advantages:
- ideal for compressed air distribution
- in halls, buildings etc.
- numerous approvals (not screw-in connections Ø 28): FDA, DVGW W 270, KTW, NSF 51 & 61

Permissible hose tolerances (in mm) for IQS connectors

Hose-Ø metric	Hose-Ø imperial	PU Hose	PA Hose
3	1/8"	±0.10	±0.08
4	5/32"	±0.10	±0.08
6	3/16"	±0.12	±0.10
8	1/4"	±0.12	±0.10
10	5/16"	±0.15	±0.12
12	3/8"	±0.15	±0.12
14	---	±0.15	±0.12
16	1/2"	±0.15	±0.15
15		±0.05	±0.10
18		+ 0.05/– 0.10	+ 0.05/– 0.10
22		+ 0.05/– 0.10	+ 0.05/– 0.10
28		+ 0.05/– 0.10	+ 0.05/– 0.10

Maximum tightening torques for IQS connectors

Connection thread **metric**	tightening torque (Nm)	Connection thread **R-thread**	tightening torque (Nm)	Connection thread **G-thread**	tightening torque (Nm)	Connection thread **UNF**	tightening torque (Nm)	Connection thread **NPT**	tightening torque (Nm)
---	---	---	---	---	---	---	---	1/16"	7.0
M 3	0.7	1/8"	7.0	1/8"	10.0	10-32	1.5	1/8"	7.0
M 5	1.5	1/4"	12.0	1/4"	15.0	---	---	1/4"	12.0
M 6	2.0	3/8"	22.0	3/8"	25.0 (3.0)*	---	---	3/8"	22.0
---	---	1/2"	28.0	1/2"	30.0 (3.0)*	---	---	1/2"	28.0
---	---	---	---	3/4"	6.0 (4.0)*	---	---	---	---
---	---	---	---	1"	5.0	---	---		

*Figures in brackets apply to plastic threads

Mounting instructions for IQS connectors

As a general rule:
Never use for fluids other than water or air. Water (up to +60 °C) may only be used after our release of the frame data.
If slewing motions of the hose are possible during operation, please use special swivel joints to avoid leaks.
Avoid vibrations as well as tensile or torsional forces at the plug connections.
Never use the fittings on installations to safe or maintain human life.
After assembly we recommend to carry out a tightness test in order to avoid mounting errors or the like.

Installation of the hose:
Use a sharp hose cutter to cut the hose at right angles without any ridges or burrs.
Make sure that the outer surface of the hose does not have any scratches or scoring marks.
Ensure that the hose is within permissible tolerances. Bear in mind that soft hoses will only withstand low pressures.
When inserting the hose, be aware that the plug connections have two pressure points through which the hose must be pushed:
1. through the retaining claw and 2. through the sealing. Only with both pressure points overcome, the hose is correctly inserted.

Disassembly of the hose:
Before disassembling the hose, make sure that there is no more pressure inside the hose.
For removal of the hose, press the release ring on both sides evenly strong to unlock the retention claws evenly.
Otherwise, scratches can occur which may cause later leakages!
Finally, pull the hose vertically out of the connector.

Plug connector IQS

For product information
see page 92/1057



0010-0030



0032-0036

N° article	925800 Push-in fitting with male thread	Thread	Ø D mm
0010	●	M5	4
0012	●	G 1/8"	4
0014	●	G 1/8"	6
0016	●	G 1/8"	8
0018	●	G 1/4"	6
0020	●	G 1/4"	8
0022	●	G 1/4"	10
0024	●	G 3/8"	8
0026	●	G 3/8"	10
0028	●	G 3/8"	12
0030	●	G 1/2"	12
0032	●	G 1/2"	15
0034	●	G 1/2"	22
0036	●	G 3/4"	22

N° article	925800 Push-in fitting with internal thread	Thread	Ø D mm
0050	●	G 1/8"	4
0052	●	G 1/4"	8
0054	●	G 3/8"	10
0056	●	G 1/2"	12





0140-0148



0150-0152

N° article	925800 Plug connection	Ø D mm
0140	●	4
0142	●	6
0144	●	8
0146	●	10
0148	●	12
0150	●	15
0152	●	22



0200-0208



0210-0212

N° article	925800 T-plug connection	Ø D mm
0200	●	4
0202	●	6
0204	●	8
0206	●	10
0208	●	12
0210	●	15
0212	●	22

N° article	925800 Sealing plug for plug-in connections	Ø D mm
0260	●	4
0262	●	6
0264	●	8
0266	●	10
0268	●	12
0270	○	15
0272	○	22



0260-0272

Further plug-in connections, e.g. imperial or made of stainless steel, available on request!



0070-0086

positionable



0088-0092

N° article	925800 L push-in fitting, short	Thread	Ø D mm
0070	●	M5	4
0072	●	G 1/8"	4
0074	●	G 1/8"	6
0076	●	G 1/8"	8
0078	●	G 1/4"	6
0080	●	G 1/4"	8
0082	●	G 1/4"	10
0084	●	G 3/8"	10
0086	●	G 1/2"	12
0088	○	G 1/2"	15
0090	○	G 1/2"	22
0092	○	G 3/4"	22

N° article	925800 Push-in T-fitting	Thread	Ø D mm
0120	○	M5	4
0122	●	G 1/8"	6
0124	●	G 1/4"	8
0126	●	G 3/8"	10
0128	●	G 1/2"	12



positionable



0180-0188



0190-0192

N° article	925800 Angle plug connection	Ø D mm
0180	●	4
0182	●	6
0184	●	8
0186	●	10
0188	●	12
0190	●	15
0192	●	22

N° article	925800 Reducing plug connection	Ø D mm	Ø D_1 mm
0230	●	6	4
0232	●	8	4
0234	●	8	6
0236	●	10	6
0238	●	10	8
0240	●	12	8
0242	●	12	10



0230-0242



0320-0336

N° article	925800 Reducing plug connection with plug nipple	Ø D mm	Ø D_1 mm
0320	●	6	4
0322	●	8	4
0324	●	8	6
0326	●	10	6
0328	●	10	8
0330	●	12	8
0332	○	12	10
0334	○	15	12
0336	○	22	15

Plug connector assortment IQS

Design:
- 160-piece assortment case with straight screw-in connections
- angle screw-in connections, straight plug connectors
- T push-in connectors, straight push-in reducers
- including a hose cutter



N° article	925801 160-piece	Contents
0010	●	**70 straight screw-in connections** (M 5 - R 1/8" - R 1/4", 4 - 6 - 8 mm hose) **37 elbow screw-in connections** (M 5 - R 1/8" - R 1/4", 4|6|8 mm hose) **21 straight plug connectors** (4|6|8 mm hose) **21 T connectors** (4|6|8 mm hose) **10 straight plug-in reducers** (4|6|8 mm hose) **1 hose cutter**

Muffler made of sintered bronze

Design:
- with sintered thread and slot



N° article	925800	Thread	Diameter mm	Length mm
0300	●	M5	8,5	15
0302	●	G 1/8"	11	16
0304	●	G 1/4"	14	19
0306	●	G 3/8"	18	25
0308	●	G 1/2"	24	32

T-piece hose connector PN 16

Design:
- brass
- up to 16 bar (PN 16)



N° article	925805	Spout Ø1 mm
0020	●	6
0022	●	9
0024	●	13

Threaded sleeve PN 16

Design:
- brass
- with internal cone (except types 0066 and 0074)
- up to 16 bar (PN 16)



N° article	925805	External thread	Spout Ø1 mm	AF1 mm
0040	●	G 1/8"	4	14
0042	●	G 1/8"	6	14
0044	●	G 1/8"	9	14
0046	●	G 1/4"	4	17
0048	●	G 1/4"	6	17
0050	●	G 1/4"	9	17
0052	●	G 1/4"	13	17
0054	●	G 3/8"	6	19
0056	●	G 3/8"	9	19
0058	●	G 3/8"	13	19
0060	●	G 1/2"	6	24
0062	●	G 1/2"	9	24
0064	●	G 1/2"	13	24
0066	●	G 1/2"	19	24
0068	●	G 3/4"	13	30
0070	●	G 3/4"	19	30
0072	●	G 3/4"	25	30
0074	●	G1"	25	38

Hose connection pipe PN 16

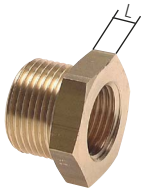
Design:
- brass
- up to 16 bar (PN 16)
- type 0012 reducing



N° article	925805	Spout Ø1 mm	Spout Ø2 mm
0010	●	6	6
0012	●	9	6
0014	●	9	9
0016	●	13	13
0018	●	19	19

Reducing nipple PN 16

Design:
- brass
- up to 16 bar (PN 16)



N° article	925805	External thread	female threads	AF1 mm	L mm
0100	○	G 1/8"	M5	14	4
0102	●	G 1/4"	G 1/8"	17	4
0104	●	G 3/8"	G 1/8"	19	4
0106	●	G 3/8"	G 1/4"	19	5
0108	●	G 1/2"	G 1/4"	24	6
0110	●	G 1/2"	G 3/8"	24	6
0112	●	G 3/4"	G 3/8"	32	6
0114	●	G 3/4"	G 1/2"	32	8
0116	●	G1"	G 1/2"	36	6
0118	●	G1"	G 3/4"	36	6

PTFE sealing tape

Design and use:
- PTFE sealing tape
- unsintered and degreased
- **DVGW approval to DIN EN 751-3**
- for gas and water installations
- applicable from -197 °C up to 255 °C
- for sealing screw connections



N° article	925945	Tape width mm	Tape thickness mm	Tape length m
12	●	12	0,01	12

Double nipple PN 16

Design:
- brass
- up to 16 bar (PN 16)



N° article	925805	Male thread 1	Male thread 2	AF1 mm
0130	●	G 1/8"	G 1/8"	14
0132	●	G 1/8"	G 1/4"	17
0134	●	G 1/4"	G 1/4"	17
0136	●	G 1/4"	G 3/8"	19
0138	●	G 3/8"	G 3/8"	19
0140	●	G 3/8"	G 1/2"	24
0142	●	G 1/2"	G 1/2"	24
0144	●	G 1/2"	G 3/4"	32
0146	●	G 3/4"	G 3/4"	32
0148	●	G 3/4"	G1"	36
0150	●	G1"	G1"	34

Sleeve PN 16

Design:
- brass
- hexagon
- up to 16 bar (PN 16)



N° article	925805	female threads	Length mm	AF1 mm
0200	●	G 1/8"	18	14
0202	●	G 1/4"	26	17
0204	●	G 3/8"	26	22
0206	●	G 1/2"	30	27
0208	●	G 3/4"	36	32
0210	●	G1"	40	41

Angle 90° PN 16

Design:
- brass
- up to 16 bar (PN 16)



N° article	925805	female threads
0230	●	G 1/8"
0232	●	G 1/4"
0234	●	G 3/8"
0236	●	G 1/2"
0238	●	G 3/4"
0240	●	G1"

T-piece PN 16

Design:
- brass
- up to 16 bar (PN 16)



N° article	925805	female threads
0260	○	G 1/8"
0262	●	G 1/4"
0264	●	G 3/8"
0266	●	G 1/2"
0268	●	G 3/4"
0270	○	G1"

Sealing plug PN 16

Design:
- nickel-plated brass
- with internal hex
- up to 16 bar (PN 16)
- type 0350-0358 with O-ring sealing



N° article	925805	External thread
0350	●	M5
0352	●	G 1/8"
0354	●	G 1/4"
0356	●	G 3/8"
0358	●	G 1/2"
0360	●	G 3/4"
0362	○	G1"

Closure cap PN 16

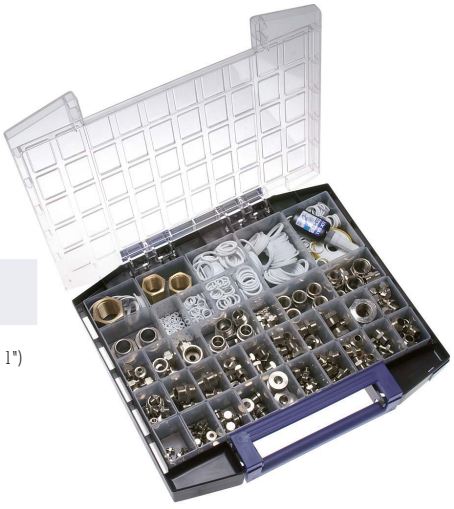
Design:
- brass
- up to 16 bar (PN 16)



N° article	925805	female threads
0370	○	G 1/8"
0372	○	G 1/4"
0374	●	G 3/8"
0376	●	G 1/2"
0378	●	G 3/4"
0379	○	G1"

Fitting assortment

- 744-piece assortment case with 182 sealing plugs
- reducing nipples, double nipples and sockets M 5 to G 1"
- made of brass, nickel-plated
- including suitable sealing material



N° article	925806 744-piece	Contents
0010	●	**32 sealing plugs,** brass nickel-plated (M 5 - G 1/8" - G 1/4" - G 3/8" - G 1/2") **58 reducing nipples / extension nipples,** brass nickel-plated (M 5 - G 1/8" - G 1/4" - G 3/8" - G 1/2" - G 3/4" - G 1") **66 double nipples,** brass nickel-plated (M 5 - G 1/8" - G 1/4" - G 3/8" - G 1/2" - G 3/4" - G 1") **23 sleeves,** brass nickel-plated (M 5 - G 1/8" - G 1/4" - G 3/8" - G 1/2") **3 sleeves,** brass (G 3/4" - G 1") **560 PVC sealing rings** (M 5 - G 1/8" - G 1/4" - G 3/8" - G 1/2" - G 3/4" - G 1") **1 PTFE sealing tape** (sanitary version) DB 121 **10 ml anaerobic sealant** (liquid seal) 53.14/10

Manifold/Wall box PN 16/PN 15

Design:
- brass
- air switch, 2- / 3-fold
- with internal thread
- up to 16 bar (PN 16)


0300 + 0302


0304 + 0306

N° article	925805	female threads
0300	●	3×G 3/8"
0302	●	3×G 1/2"
0304	●	4×G 3/8"
0306	●	4×G 1/2"

Design:
- brass
- with internal thread
- up to 16 bar (PN 16)
- wall socket



N° article	925805 Wall socket	female threads
0320	●	G 3/8"
0322	●	G 1/2"
0324	○	G 3/4"

Design:
- made of plastic
- with internal thread
- up to 15 bar (PN 15)


0330


0332

N° article	925805	Outlets (internal thread)
0330	●	top 1×G 1/2" / front 2×G 1/2"
0332	●	top 1×G 1/2" / front 3×G 1/2"

Coupling NW 7.2

Design:
- brass
- sealing NBR
- temperature range from -20 °C up to max. +100 °C
- operating pressure 0 - 35 bar and rough vacuum

MADE IN GERMANY


925810


925811

N° article	925810 with external thread	925811 with internal thread	DN mm	Thread
0010	●	●	7.2	G 1/4"
0012	●	●	7.2	G 3/8"
0014	●	●	7.2	G 1/2"

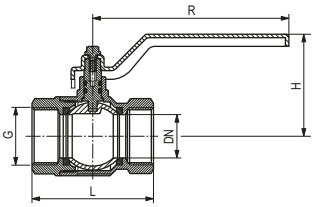

$\varnothing_1$ 925812

N° article	925812 with hose sleeve	DN mm	Spout $\varnothing_1$ mm
0010	●	7.2	6
0012	●	7.2	9
0014	●	7.2	13

Ball valve up to PN 50

Design:
- housing made of brass, nickel-plated
- sphere made of brass, hard chrome-plated
- sealing made of Teflon™/NBR
- temperature range from -20 °C up to max. +150 °C
- **with full through hole**
- for water (no steam), neutral, gaseous and non-aggressive liquid media, mineral oils, compressed air or vacuum (max -0.9 bar)
- two-piece, short construction

ALSO IN STAINLESS STEEL ON REQUEST

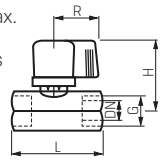




N° article	925825	Thread	DN mm	L mm	H mm	R mm	PN bar
0800	●	G 1/4"	10	44.4	37.0	80	50
0802	●	G 3/8"	10	44.4	37.0	80	50
0804	●	G 1/2"	15	50.5	41.0	80	50
0806	●	G 3/4"	20	57.5	55.0	113	40
0808	●	G1"	25	70.0	59.0	113	40
0810	○	G 1-1/4"	32	80.5	74.5	138	30
0812	○	G 1 1/2"	40	94.0	80.5	138	30
0814	○	G 2"	50	112.5	96.5	157	25

Mini ball valve up to PN 12

Design:
- housing made of brass, chrome-plated
- sphere made of brass, hard chrome-plated
- sealing made of Teflon™/NBR
- temperature range from 0 °C up to max. +90 °C
- for water (no steam), neutral, gaseous and non-aggressive liquid media, mineral oils, compressed air or vacuum (max -0.9 bar)
- mini ball valve with T-handle





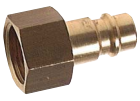
N° article	925825	Thread	DN mm	L mm	H mm	R mm	PN bar
0820	●	G 1/8"	6	39	27.5	22	15
0822	●	G 1/4"	8	39	27.5	22	15
0824	●	G 3/8"	8	40	27.5	22	15
0826	●	G 1/2"	10	45	29.5	22	15
0828	○	G 3/4"	12	51	33.0	22	15

Coupling plug NW 7.2

Design:
- brass
- sealing NBR
- temperature range from -20 °C up to max. +100 °C
- operating pressure 0 - 35 bar and rough vacuum

MADE IN GERMANY


925810


925811

N° article	925810 with external thread	925811 with internal thread	DN mm	Thread
0020	●	●	7.2	G 1/4"
0022	●	●	7.2	G 3/8"
0024	●	●	7.2	G 1/2"


$\varnothing_1$ 925812

N° article	925812 with hose sleeve	DN mm	Spout $\varnothing_1$ mm
0020	●	7.2	6
0022	●	7.2	9
0024	●	7.2	13

Safety coupling
with push button, NW 7.2

Design:
- body hardened and galvanised steel / aluminium / nickel-plated brass
- sealing NBR
- **push-button release** prevents so-called whip effect during uncoupling
- temperature range from -20 °C up to max. +70 °C
- operating pressure 0 - 12 bar
- flow rate (at 6 bar and 0.6 bar pressure difference) 1.500 l/min

Functions:
Coupling is carried out as with standard couplings by inserting the plug nipple into the coupling socket. Uncoupling is carried out by pressing the uncoupling button. The coupling socket then closes and vents the coupling plug while it is still held in the coupling socket. This reliably prevents the dangerous whiplash effect. The plug is released again by pressing the button a second time.

Note:
We recommend using a steel coupling plug.

NEW



925840



925841

N° article	925840 with external thread	925841 with internal thread	Thread
0030	○	○	G 1/4"
0035	○	○	G 3/8"
0040	○	○	G 1/2"

NEW



925842

N° article	925842 with hose sleeve	Spout $\varnothing_1$ mm
0030	○	6
0035	○	9
0040	○	13

Coupling plug steel NW 7.2

Design:
- made of hardened steel
- for safety couplings NW 7.2



925810



925811

N° article	925810 with external thread	925811 with internal thread	DN mm	Thread
0110	●	●	7.2	G 1/4"
0112	●	●	7.2	G 3/8"
0114	●	●	7.2	G 1/2"



$\varnothing_1$

N° article	925812 with hose sleeve	DN mm	Spout $\varnothing_1$ mm
0110	●	7.2	6
0112	●	7.2	9
0114	●	7.2	13

Safety coupling
Series 320 eSafe, NW 7.2

Design:
- housing steel/brass galvanised
- sealing NBR
- temperature range from -20 °C up to max. +80 °C
- operating pressure 0 - 16 bar
- flow rate 2,250 l/min (inlet pressure 6 bar, pressure drop 0.5 bar)
- nominal width 7.6 mm (flow rate extrapolated to NW)

The 5 most important functions:
- highest flow of comparable nominal values on the coupling market
- compact design
- extreme durability
- safety through pressure relief
- easy handling



925815



925816

N° article	925815 with external thread	925816 with internal thread	Thread
0030	●	●	R 1/4"
0032	●	●	R 3/8"
0034	●	●	R 1/2"



$\varnothing_1$

925817

N° article	925817 with hose sleeve	Spout $\varnothing_1$ mm
0030	●	6
0032	●	9
0034	○	13

Garden hose quick coupling

Design:
- body brass / sealing NBR
- 40 mm claw width
- temperature range from 0 °C up to max. +80 °C
- up to max. 25 bar operating pressure and rough vacuum



925820



925821

N° article	925820 with external thread	925821 with internal thread	Thread
0010	○	○	G 3/8"
0012	●	●	G 1/2"
0014	●	●	G 3/4"
0016	●	●	G 1"

N° article	925822 with hose sleeve	Spout $\varnothing_1$ mm
0010	●	6
0012	○	10
0014	●	13
0016	●	19
0018	●	25

$\varnothing_1$



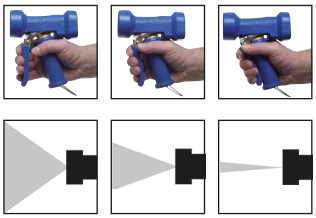
925822



N° article	925823 Replacement seal	Inner diameter mm	Outer diameter mm	Hauteur mm	Colour	Design:
0030	●	24	35	12	black	for all rigid couplings

Water-saving gun

Design:
- cleans gently and environmentally friendly
- combination of stainless steel and brass, rubber coated
- temperature range up to max. +95 °C
- operating pressure from 0 to 24 bar
- flow max. 100 l/min
- continuous regulation of the water jet, from a fine mist to a concentrated jet of water
- catch for continuous operation





N° article	925824	Operating pressure bar	max. flow rate l/min	Connection thread
0010	●	0-24	100	G 1/2"

Hose reel automatic

Design:
- hose can be pulled out and locked in several positions
- by briefly tugging, the reel winds up the entire hose
- body and reel made of plastic
- frame steel, lacquered
- polyurethane hose, fabric-reinforced
- temperature range from -20 °C to +60 °C
- 300° swivel range



N° article	925815 for compressed air	Hose ∅ outside mm	Hose ∅ inside mm	Hose length m	External thread	Operating pressure bar	Diameter mm
0500	●	12	8	7	R 1/4"	16	330
0502	●	10	6,5	9	R 1/4"	16	330
0504	○	16	11	10	R 1/2"	12	430
0506	○	13,5	9,5	14	R 1/4"	12	430
0508	●	12	8	16	R 1/4"	16	430

Polyurethane hose

PU
50 meters

Design:
- small bending radius due to special flexibility
- very good low temperature flexibility and reset characteristics
- kink and abrasion resistant
- resistant to aliphatic hydrocarbons and most lubricants
- ageing resistant in oxygen and ozone
- temperature range from -35 °C to +60 °C
- Shore hardness 97A
- externally tolerated

HIGHLY FLEXIBLE

Note:
applies per metre
Hose sections The price for catalogue no. 925826 (plus 5,- € costs for partial packaging units)





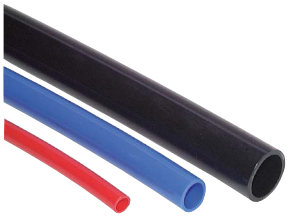
N° article	925825 50 m roll	925826 Section	Hose ∅ outside mm	Hose ∅ inside mm	Bend radius mm	Operating pressure bar	Colour
0010	●	○	4	2,5	10	13	blue
0012	●	○	4	2,5	10	13	black
0014	●	○	6	4	15	14	blue
0016	●	○	6	4	15	14	black
0018	●	○	8	5	23	16	blue
0020	●	○	8	5	23	16	black
0022	●	○	10	6,5	30	11	blue
0024	○	○	10	6,5	30	11	black
0026	○	○	12	8	40	11	blue
0028	○	○	12	8	40	11	black

Polyamide hose

PU
50 meters

Design:
- semi-rigid, well-deployable and kink-resistant
- constant strength
- good chemical resistance
- temperature range from -50 °C to +100 °C
- externally tolerated

Note:
applies per metre
Hose sections The price for catalogue no. 925826 (plus 5,- € costs for partial packaging units)





N° article	925825 50 m roll	925826 Section	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure bar	Colour
0050	●	○	4	2,7	23	blue
0052	●	○	4	2,7	23	black
0054	●	○	6	4	27	blue
0056	●	○	6	4	27	black
0058	●	○	8	6	19	blue
0060	●	○	8	6	19	black
0062	●	○	10	8	15	blue
0064	●	○	10	8	15	black
0066	●	○	12	9	19	blue
0068	○	○	12	9	19	black
0070	○	○	15	12	15	black
0072	○	○	22	18	13	black

Hose cutter

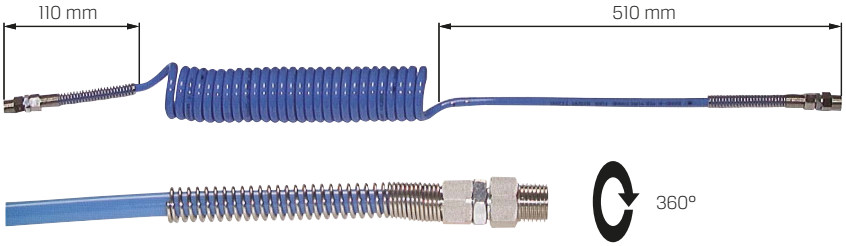
Use:
- for exact cutting of the hose at a right angle without burrs
- ideal for cutting to size hoses when using plug connectors



N° article	925825	Cutting range, min. mm	Cutting range, max. mm
0700	●	0	14
0710	●	0	28

Polyurethane spiral hose

Design:
- high abrasion resistance, pressure resistance and wear resistance
- permanent return force with at the same time very good buckling strength and elasticity
- temperature range from -20 °C to +60 °C
- operating pressure 10 bar
- with rotary connections for slow rotations to avoid twisting of the hoses

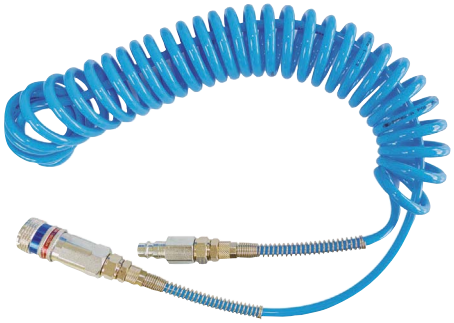


N° article	925825 Working length 3 m	Hose ∅ outside mm	Hose ∅ inside mm	External thread inch	Winding ∅ mm	Operating pressure bar
0200	●	6	4	1/4*	30	10
0202	●	8	5	1/4*	34	10
0204	●	10	6,5	1/4*	42	10
0206	●	12	8	3/8"	60	10

N° article	925825 Working length 6 m	Hose ∅ outside mm	Hose ∅ inside mm	External thread inch	Winding ∅ mm	Operating pressure bar
0208	●	6	4	1/4*	30	10
0210	●	8	5	1/4*	34	10
0212	●	10	6,5	1/4*	42	10
0214	●	12	8	3/8"	60	10

Polyurethane spiral hose

Design:
- high abrasion resistance, pressure resistance and wear resistance
- permanent return force with at the same time very good buckling strength and elasticity
- temperature range from -20 °C to +60 °C
- operating pressure 10 bar
- with rotary connections for slow rotations to avoid twisting of the hoses
- **with eSafe safety coupling**, can be used immediately at the workplace



N° article	925825 Working length 3 m	Hose ∅ outside mm	Hose ∅ inside mm	Winding ∅ mm	Operating pressure bar
0224	●	6	4	30	10
0226	●	8	5	34	10
0228	●	10	6,5	42	10
0230	●	12	8	60	10

N° article	925825 Working length 6 m	Hose ∅ outside mm	Hose ∅ inside mm	Winding ∅ mm	Operating pressure bar
0232	●	6	4	30	10
0234	●	8	5	34	10
0236	●	10	6,5	42	10
0238	●	12	8	60	10

eSafe Safety Coupling

Product Information

eSafe

The 5 most important functions:

- highest flow on the coupling market
- compact design
- extreme durability
- safety through pressure relief
- easy handling



Hose clamp

Design:
- made of galvanised special steel
- with large clamping range
- with worm thread





N° article	925825 with worm thread	Strap width mm	Clamping range, min. mm	Clamping range, max. mm
0600	●	9	8	12
0602	●	9	10	16
0604	●	9	12	22
0606	●	9	16	25
0608	●	9	20	32
0610	●	9	25	40
0612	●	9	32	50
0614	●	9	40	60
0616	●	9	50	70
0618	●	9	60	80
0620	●	9	70	90
0622	●	9	90	110

Hanger bolt

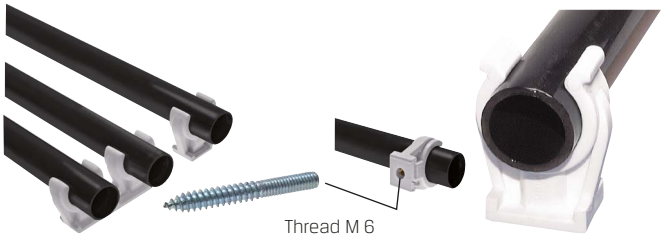
Note:
Price per piece
Delivery only in specified PU

PU
10 pieces



N° article	925825	Thread	Length mm	for dowels ∅ mm
0590	●	M6	50	8

Fastening clip for pipes



N° article	925825 for pipes	Thread	Tube ∅, min. mm	Tube ∅, max. mm
0570	●	M6	14	15
0572	●	M6	20	22

Hose clamp assortment Steel, galvanised

Design:
- worm drive clamps from ∅ 10 - 50 mm
- clamping jaw clamps from ∅ 6 - 13 mm
- in practical assortment case
- steel galvanised

NEW



N° article	925829	Parts	Contents
0100	○	205	**Worm Screw Clamps** 10-16 | 12-22 | 16-27 | 20-32 | 25-40 | 35-50 mm **Jaw clamps** 6-8 | 7-9 | 8-10 | 9-11 | 10-12 | 11-13 mm

Hose clamp assortment Stainless steel

Design:
- worm drive clamps from ∅ 8 - 50 mm
- in practical assortment case
- stainless steel

NEW



N° article	925829	Parts	Contents
0110	○	105	**Worm Screw Clamps** 8-12 | 8-16 | 12-22 | 16-27 | 20-32 | 25-40 | 35-50 mm

PVC hose with textile insert

PU

Design:
- inner core and outer cover PVC, textile fabric inlay
- food quality, tested according to the requirements of Regulation (EC) 1935/2004 and Regulation (EU) 10/2011 (simulants A, B and C), type transparent additionally KTW-C and FDA 175.300
- TÜV tested
- PWIS-free (free of paint-wetting impairment substances like silicone)
- temperature range from -20 °C up to max. +60 °C

Use:
- for water, drinking water (max 3 hrs) and compressed air, argon, wine, fruit juice, lemonade, mineral water, cider and spirits up to 15 % alcohol content by volume (not for beer in dispensing systems and fatty liquids like milk etc.)
- the flow-through foodstuff should not exceed +40 °C
- a taste test is advisable
- before first use for food and drinking water the hose must be cleaned carefully



N° article	925827 Price per roll	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure at 20 °C bar	Operating pressure at 40 °C bar	Roll length m
0010	●	12	6	22	16	10
0012	●	12	6	22	16	25
0016	●	15	9	19	13	10
0018	●	15	9	19	13	25

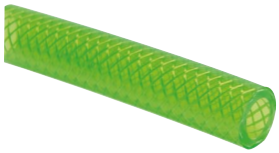
N° article	925827 Price per roll	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure at 20 °C bar	Operating pressure at 40 °C bar	Roll length m
0022	●	20	13	13	9	10
0024	●	20	13	13	9	25
0028	○	26	19	11	8	10
0030	●	26	19	11	8	25



N° article	925827 Price per roll	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure at 20 °C bar	Roll length m
0040	●	11	6	20	10
0042	●	11	6	20	20
0046	●	14	9	16	10
0048	●	14	9	16	20

Note:
Price per meter
(plus 5,- € costs for partial packaging units)





N° article	925828 Price per meter	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure at 20 °C bar	Operating pressure at 40 °C bar	Roll length m
0014	○	12	6	22	16	50
0020	○	15	9	19	13	50
0026	○	20	13	13	9	50
0032	○	26	19	11	8	50

N° article	925828 Section (Price per meter), bright green	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure at 20 °C bar	Operating pressure at 40 °C bar	Roll length m
0014LG	○	12	6	27	21	50
0020LG	○	15	9	21	17	50
0026LG	○	19,8	13,2	16	12	50

Hose

Design:
- inner core PVC black
- outer cover PVC blue
- fabric insert made of polyester thread
- **produced silicone-free**
- temperature range from -20 °C to +60 °C
- burst pressure approx. 60 bar
- suitable for industry, workshop or filling stations
- extremely flexible in all weather conditions
- UV-resistant

PU
50 meters

Note:
applies per metre
For sections please order cat. no. 925826 (plus 5,- € costs for partial packaging units)



N° article	925825 PVC pneumatic hose 50 m	925826 PVC pneumatic hose Section	Hose ∅ outside mm	Hose ∅ inside mm	Bend radius mm	Operating pressure bar
0250	●	○	11	6,3	23	15
0252	●	○	14,5	9	32	15
0254	○	○	19	12,7	45	15

Design:
- to DIN 20018
- temperature range from -30 °C to +50 °C
- operating pressure air/water 10/16 bar
- burst pressure approx. 54 bar (20 °C)
- **- for lubricated compressed air and process water for medium heavy duty applications**

PU
40 meters

Note:
applies per metre
For sections please order cat. no. 925826 (plus 5,- € costs for partial packaging units)



N° article	925825 Rubber hose for compressed air or water 40 m	925826 Section	Hose ∅ outside mm	Hose ∅ inside mm
0260	●	○	13	6
0262	●	○	16	9
0264	○	○	23	13
0266	○	○	31	19
0268	○	○	39	25

Design:
- cover and core made of PVC
- reinforcement with synthetic fibre, diagonally reinforced
- temperature range from -10 °C to +60 °C
- extremely pressure-resistant and cold-flexible
- no twisting or distortion due to diagonal reinforcement
- free of cadmium, barium and lead
- for industry, crafts and hobby sector
- no algae formation

Note:
Price per roll



N° article	925825 Water hose Quattroflex Plus	Hose ∅ outside mm	Hose ∅ inside mm	Operating pressure bar	Roll length m
0280	●	17,2	12,2	16	25
0282	○	17,2	12,2	16	50
0284	●	24,8	18,6	12	25
0286	○	33	25	10	25

Hose hanger



0550



0555 | 0560

N° article	925825	Width mm	Depth mm	Hauteur mm	Design
0550	●	260	120	165	Plastic
0555	●	188	70	147	Aluminium
0560	●	348	144	257	Aluminium

Hose reel automatic

Design:
- body and cover made of plastic
- connection made of brass
- the hose can be pulled out and locked in any position of each revolution of the drum
- after a short tug the reel winds up the entire hose
- for compressed air

Delivery:
Automatic hose reel complete with fabric-reinforced polyurethane hose



N° article	925825 for compressed air	Hose ∅ outside mm	Hose ∅ inside mm	Hose length m	Inlet	Output	Operating pressure bar
0500	●	12	8	7,5	R 1/4" AG	R 1/4" AG	0-14

Hose reel automatic

Design:
- body made of aluminium cast
- connection made of brass
- **the hose can be pulled out and locked in any position at each revolution of the drum**
- after a short tug the reel winds up the entire hose
- for compressed air and water

Delivery:
Automatic hose reel complete with special PVC hose, stopper and outlet window

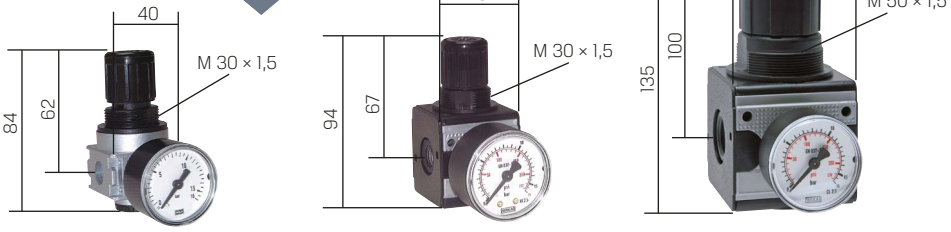


N° article	925825 for compressed air/water	DN mm	Hose length m	Inlet	Output	Operating pressure bar
0522	○	10	10	3/8" IG	3/8" AG	15
0526	○	10	20	3/8" IG	3/8" AG	15

Pressure regulator Multifix

ALL DEVICES OF THE SAME SERIES CAN BE CONNECTED VIA COUPLING PACKAGES!

Design:
- relieving (with secondary vent)
- body of die-cast zinc Z410
- spring hood POM
- membranes and sealings NBR
- **input pressure max. 16 bar**
- temperature range from -10 °C up to max. +60 °C
- manometer connection G 1/4" (series 0 G 1/8")
- no internal air consumption
- for oiled and oil-free pressurised air or neutral gases
- ATEX: II 2GD IIA/IIB/IIC T4 0 °C ≤ Ta ≤ 60 °C
- **automatic ventilation in case of overpressure on the secondary stage**
- hand wheel can be locked by pressing it down

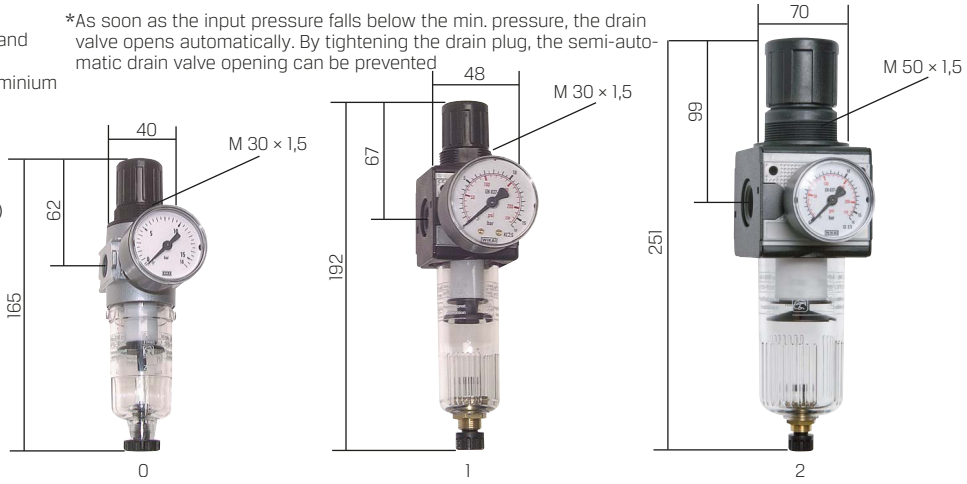


N° article	925830 Multifix	Thread	Pressure control range bar	Pressure gauge display bar	Manometer Ø mm	Series
0100	○	G 1/8"	0.5 - 10	0 - 16	40	0
0110	●	G 1/4"	0.5 - 10	0 - 16	50	1
0115	○	G 1/4"	0.5 - 16	0 - 25	50	1
0116	○	G 3/8"	0.5 - 10	0 - 16	50	1
0118	○	G 3/8"	0.5 - 16	0 - 25	50	1
0120	○	G 1/2"	0.5 - 10	0 - 16	50	2
0125	○	G 1/2"	0.5 - 16	0 - 25	50	2

Filter regulator Multifix

Design:
- relieving (with secondary vent)
- with additional filtering by centrifuge principle and sintered filter
- body made of zinc die-cast Z410 (series 5 aluminium
- spring hood POM
- membranes and sealings NBR
- condensate container made of polycarbonate
- **inlet pressure from1.5 to max. 16 bar**
- temperature range up to max. +60 °C
- manometer connection G 1/4" (series 0 G 1/8")
- no internal air consumption
- pore width in filter 5 µm
- **- semi-automatic condensate drain***
- for compressed air or neutral gases
- ATEX: II 2GD IIA/IIB/IIC T4 0 °C ≤ Ta ≤ 60 °C
- automatic ventilation in case of overpressure on the secondary circuit
- hand wheel can be locked by pressing it down

*As soon as the input pressure falls below the min. pressure, the drain valve opens automatically. By tightening the drain plug, the semi-automatic drain valve opening can be prevented



N° article	925830 Multifix	Thread	Pressure control range bar	Pressure gauge display bar	Manometer Ø mm	Series
0150	○	G 1/8"	0.5 - 10	0 - 16	40	0
0160	●	G 1/4"	0.5 - 10	0 - 16	50	1
0165	○	G 1/4"	0.5 - 16	0 - 25	50	1
0166	○	G 3/8"	0.5 - 10	0 - 16	50	1
0168	○	G 3/8"	0.5 - 16	0 - 25	50	1
0170	●	G 1/2"	0.5 - 10	0 - 16	50	2
0175	●	G 1/2"	0.5 - 16	0 - 25	50	2

Filter Multifix

Design:
- filtration by centrifuge principle and sinter filter
- body of die-cast zinc Z410
- sealings NBR
- condensate container made of polycarbonate
- **inlet pressure from1.5 to max. 16 bar**
- temperature range up to max. +60 °C
- filter pores size 5 µm
- **semi-automatic condensate drain***
- for compressed air or neutral gases
- ATEX: II 2GD IIA/IIB/IIC T4 0 °C ≤ Ta ≤ 60 °C
  1.5 to max. 16 bar

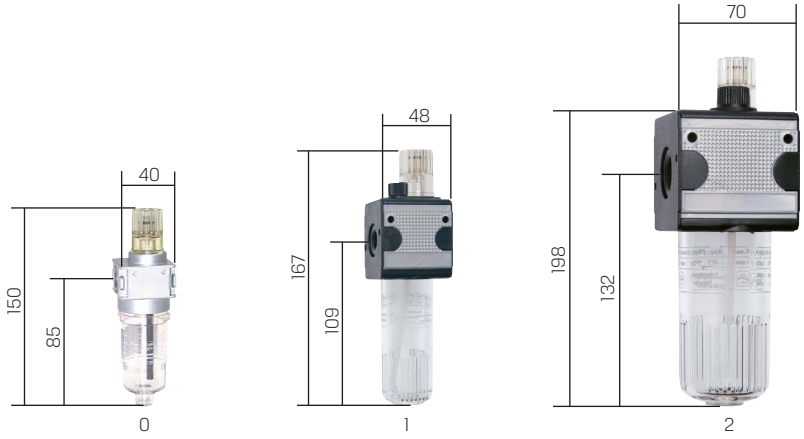
*As soon as the input pressure falls below the min. pressure, the drain valve opens automatically. By tightening the drain plug, the semi-automatic drain valve opening can be prevented



N° article	925830 Multifix	Thread	max. condensate volume cm³	max. flow rate l/min	Series
0190	○	G 1/8"	16	1000	0
0192	●	G 1/4"	25	2000	1
0194	●	G 1/2"	50	5850	2

Oiler Multifix

Design:
- body of die-cast zinc Z410
- sealings NBR
- oil reservoir polycarbonate
- **input pressure max. 16 bar**
- temperature range up to max. +50 °C
- for compressed air or neutral gases
- ATEX: II "GD IIA/IIB/IIC T4 0 °C ≤ Ta ≤ 60 °C



N° article	925830 Multifix	Thread	Oil supply cm³	Oil dosing at 1000 l/min	Oiler response limit bar	Oiler response margin l/min	Series
0200	○	G 1/8"	35	approx. 10 - 20 drops/min	6	26	0
0202	●	G 1/4"	50	approx. 10 - 20 drops/min	6	26	1
0204	●	G 1/2"	125	approx. 1 - 2 drops/min.	6	140	2

Special pneumatic oil



Safety data sheet

N° article	925830 Special oil for pneumatic oilers	Content litres	Design:
0210	●	1	for **hall area/summer,**, temperature range from +5 °C to +50 °C

Manometer

Design:
- housing made of plastic, black
- measuring system, connection and pointer mechanism made of brass
- viewing window made of plastic, crystal clear
- temperature range from ambient temperature -40 °C to max. +60 °C, measuring medium max. +60 °C
- 1st scale outside (black) => display in bar
- 2nd scale inside (red) => display in PSI

Note:
∅ 50 or 63 with centring pin for profile sealing

N° article	925830 vertical	Thread	Manometer ∅ mm	Scale division bar	Display range bar
0400	○	G 1/8"	40	0,5	0 - 10
0402	○	G 1/8"	40	0,5	0 - 16
0404	○	G 1/8"	40	1	0 - 25
0406	●	G 1/4"	50	0,5	0 - 10
0408	●	G 1/4"	50	0,5	0 - 16
0410	○	G 1/4"	50	1	0 - 25
0412	●	G 1/4"	63	0,5	0 - 10
0414	○	G 1/4"	63	0,5	0 - 16
0416	○	G 1/4"	63	1	0 - 25



senkrecht

N° article	925830 horizontal	Thread	Manometer ∅ mm	Scale division bar	Display range bar
0418	●	G 1/8"	40	0,5	0 - 10
0420	●	G 1/8"	40	0,5	0 - 16
0422	○	G 1/8"	40	1	0 - 25
0424	●	G 1/4"	50	0,5	0 - 10
0426	●	G 1/4"	50	0,5	0 - 16
0428	○	G 1/4"	50	1	0 - 25
0430	○	G 1/4"	63	0,5	0 - 10
0432	●	G 1/4"	63	0,5	0 - 16
0434	○	G 1/4"	63	1	0 - 25



waagerecht

Design:
- for inner centring by centring spigot
- attach the (disposable) seal ring to the manometer centring pin and screw in the manometer (max. 1 1/2 turns)

N° article	925830 Copper	Thread
0440	●	G 1/8"
0442	●	G 1/4"
0444	●	G 1/2"

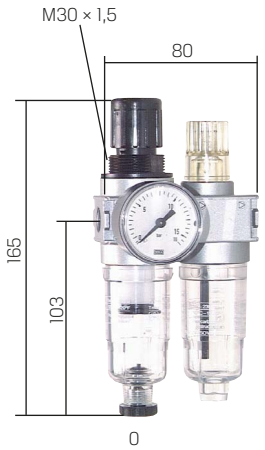


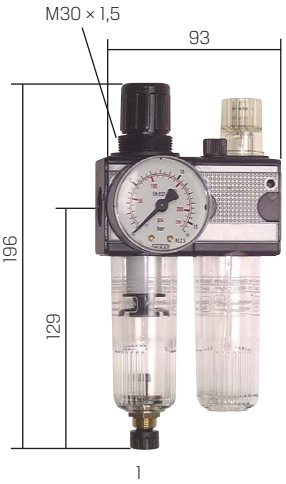
Maintenance unit Multifix

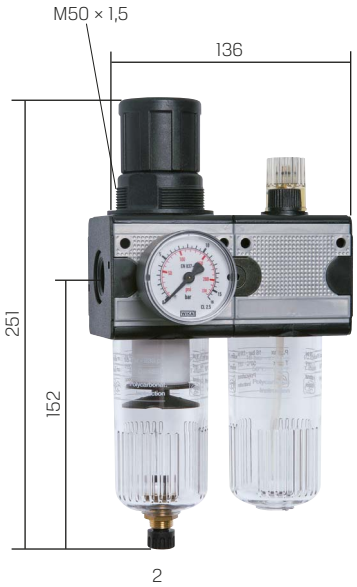
Design:
- filter regulator self-relieving, with attached oiler
- body of die-cast zinc Z410
- spring hood POM
- membranes and sealings NBR
- container polycarbonate
- **inlet pressure series 0 from 1.5 to max. 12 bar, series 1 and 2 from1.5 to max. 16 bar**
- temperature range up to max. +60 °C
- manometer connection G 1/4" (series 0 G 1/8")
- no internal air consumption
- pore width in filter 5 µm
- **semi-automatic condensate drain*****
- for compressed air or neutral gases
- ATEX: II 2GD IIA/IIB/IIC T4 0 °C ≤ Ta ≤ 60 °C
- automatic ventilation in case of overpressure on the secondary circuit
- hand wheel can be locked by pressing it down
- inlet pressure from 1.5 to max. 12 bar

*Oil dosing at 500 l/min
**Oil dosing at 1,000 l/min

***As soon as the input pressure falls below the min. pressure, the drain valve opens automatically.
By tightening the drain plug, the semi-automatic drain valve opening can be prevented







N° article	925830 2-piece	Thread	Pressure control range bar	Pressure gauge display bar	Manometer ∅ mm	max. condensate volume cm³	Oiler response limit bar	Oiler response margin l/min	Oil supply cm³	Oil dosage approx. drops/min	Series
0220	○	G 1/8"	0.5 - 10	0 - 16	40	16	6	26	35	5-10	0
0230	●	G 1/4"	0.5 - 10	0 - 16	50	25	6	60	50	1-2	1
0235	●	G 1/4"	0.5 - 16	0 - 25	50	25	6	60	50	1-2	1
0240	●	G 1/2"	0.5 - 10	0 - 16	50	50	6	140	125	1-2	2
0245	○	G 1/2"	0.5 - 16	0 - 25	50	50	6	140	125	1-2	2

Accessories Multifix

N° article	925830 Mounting bracket, galvanised steel	Design:	Series
0300	●	with ring and control panel nut (M30 × 1.5)	0+1
0302	●	with ring and control panel nut (M50 × 1.5)	2
0304	○	Mounting bracket kit	0
0306	●	with two long screws	1
0308	●	with two long screws	2


0300


0306


0310

Design:
Coupling packages for connecting individual components of the respective Multifix series

Note:
Only identical series and thread sizes can be connected by coupling packages


0320


0322 | 0324

N° article	925830 Panel nut	Thread	Series
0310	●	M30 × 1.5	0+1
0312	○	M50 × 1.5	2

N° article	925830 Coupling kit Multifix	Series
0320	○	0
0322	○	1
0324	○	2

Note

Delivery

- Articles of this product line cannot be delivered to all countries and are also excluded from express delivery

WD-40 multi-purpose product

Design:
- free of silicone, resin and PTFE
- loosens rusted parts
- loosens stuck parts
- cleans and protects
- displaces moisture
- prevents leak currents
- forms a thin protective film

400F: with flexible spray head (bendable metal spray tube for hard-to-reach places)

400S: with Smart-Straw™ spray head (for pinpoint or area spraying)

Smart-Straw™ spray head





N° article	954050 Atomiser	Design	PU
1	●	600 ml atomiser, empty	1

N° article	954050 Multi-purpose spray	Design	PU
100C	●	100 ml spray can Classic	24
400F	●	400 ml spray can Flexible	6
400S	●	400 ml spray can Smart Straw	24
5000	●	5 l canister	1
25000	● +	25 l canister	1

Ballistol universal oil

Design and use:
- ideal for **care, maintenance and preservation** of all kinds of tools, including stainless steel and aluminium
- **cares, protects and lubricates** tool shanks, clamping devices, measuring tools, vices
- also for the corrosion-resistant storage of moulded parts
- neutralises weak acids and hand perspiration
- **disinfects**
- food-safe and skin-friendly
- biodegradable
- resin-free and very versatile



N° article	954060 200 ml spray	Design	PU
200	●	200 ml spray can	20

Multifunction spray Super

Design:
- rust dissolver, lubricant, contact spray, corrosion protection and cleaning agent
- very good lubricating properties
- high moisture displacement
- temperature resistant from -40 °C to +180 °C
- without solids, silicone-free, no resinification
- efficient protection against problems caused by moisture and corrosion
- good flow properties

500-DUO
With dual spray head for pinpoint and extensive spraying



500-DUO



N° article	955350	Design	PU
500	●	500 ml spray can	6
500-DUO	●	500 ml can with duo spray head	6
5000	●	5 l Canister	1

Intensive rust remover MoS_2

Design:
- rust remover, lubricating and penetrating oil
- particularly wear-protecting
- good lubricity
- temperature resistant from -40 °C to +450 °C
- suitable for ultra-high vacuum
- silicone-free



N° article	955360	Design	PU
500	●	500 ml spray can	6

Rust dissolver Rasant

Design:
- extremely fast rust-dissolving
- very good flow properties
- dissolves heavily rusted connections
- effective against adhesive residues, dirt crusts and resinification
- silicone-free

Note:
Only allow to act briefly on painted surfaces and rubber parts



N° article	955362	Design	PU
500	●	500 ml spray can	6

Ice rust solvent

Design:
- cold shock icing down to -35 °C
- the cold shock causes microcracks in the rust structure allowing the active agent to penetrate faster and deeper
- effectively eliminates encrusted dirt, oil residues, resinous materials etc.
- with PTFE, therefore more protective to materials
- free of silicone and acid



N° article	955366	Design	PU
500	●	500 ml spray can	6

Drilling and cutting oil

Design:
- high-quality cutting oil for general to medium-heavy chipping operations in metal processing
- for the neatest thread cuttings
- gentle to the tooling
- for cooling and lubricating during drilling, cutting, turning, milling, sawing and forming
- for alloyed and unalloyed steel, cast iron, chrome-nickel compounds, copper, titanium, manganese, aluminium and their alloys
- free of mineral oil and chlorine
- easily biodegradable



N° article	955390	Design	PU
500	●	500 ml spray can	6

Drilling and cutting oil foam

Design:
- adhesion-stable foam for drilling, cutting and milling
- mixable with all water-based cooling lubricants
- free from volatile chlorinated hydrocarbons as well as mineral oil and sulphur
- gentle to the tooling
- washable with water
- for cooling and lubricating at drilling, cutting and milling
- for alloyed and unalloyed steel, cast, chrome-nickel compounds, copper and their alloys
- particularly environmentally friendly



N° article	955392	Design	PU
500	●	500 ml spray can	6

Graphite oil

Design:
- rust dissolver, lubricant, corrosion protection and cleaning agent
- acts from -30°C to +450°C
- pressure and heat resistant
- good lubricity at high pressure (VKA value 1200 N)
- increased lubrication performance with temperature increase
- ideal lubricating effect for humid surroundings
- electroconductive, silicone-free
- no resinfication



N° article	955372	Design	PU
500	●	500 ml spray can	6

PTFE spray

Design:
- universal synthetic lubricant and preservative
- acts from -30 °C to +250 °C
- chemically stable
- perfect emergency running properties
- very good lubricity at high pressure (VKA value 1600 N)
- not electroconductive, silicone-free
- suitable for all atmospheres (including vacuum)
- high water resistance prevents unwanted icing



N° article	955374	Design	PU
500	●	500 ml spray can	6

Silicone spray

Design:
- multifunctional lubricant and care product for metal, plastic and rubber
- **approval for food processing industries** (NSF certified)
- lubricates and cares
- temperature resistant from -30 °C to +200 °C
- colourless and odourless, no staining
- high water resistance prevents unwanted icing

Type 500-DUO:
With dual spray head for pinpoint and extensive spraying


500-DUO

Note:
Please avoid direct food contact!



N° article	955376	Design	PU
500	●	500 ml spray can	6
500-DUO	●	500 ml spray can with duo spray head	6

Adhesive lubricant

Design:
- well-adhering lubricant for pieces subjected to high pressure, shocks etc. (FBT value 1800 N)
- eliminates creaking and squeaking noises
- excellent penetrating and creeping properties



N° article	955465	Design	PU
500	●	500 ml spray can	6

Spray grease

Design:
- corrosion protection
- for high demands (VKA value 1400 N)
- excellent creep capability
- temperature resistant from -40 °C to +250 °C
- extremely centrifuge-proof and water-resistant
- optimal lubrication at difficult to access places
- ideal visual control due to white colouring **(silicone-free)**



N° article	955506 white	Design	PU
500	●	500 ml spray can	6

Chain spray

Design:
- protection against wear, elongation and corrosion
- extreme lubricating property (FBT value 1900 N)
- **centrifuge-resistant and splashproof**
- fully synthetic, colourless grease
- temperature resistant from -40 °C to +200 °C
- excellent creep capability
- suited for O-, X- and Z-rings



N° article	955490	Design	PU
500	●	500 ml spray can	6

Grease

Design:
- for highest strains (FBT value 2,400N) with excellent dry-running properties
- approval for food processing industries **(NSF certified)**
- temperature resistant from -30 °C to +250 °C
- with PTFE
- odourless



N° article	955460	Design	PU
500	●	500 ml spray can	6

Copper spray

Design:
- acts from -30 °C to +1100 °C
- protects against corrosion, seizure and cold welding
- against noise and vibrations
- facilitates installation and dismantling
- ideal for use as assembly lubrication for pipe, flange, exhaust or combustion chamber fittings
- high pressure resistant
- highly adhesive and abrasion-resistant
- resistant to salt water and most acids and alkalis



N° article	955494	Design	PU
500	●	500 ml spray can	6

Copper paste

Design:
- prevents fretting, seizing, wear and frictional corrosion
- highly adhesive and abrasion-resistant
- facilitates installation and dismantling
- corrosion protection for screw connections indoors and outdoors
- protective and sliding layer for high mechanical requirements and temperatures
- temperature resistant from -35 °C to +1,100 °C
- resistant to water, salt, weak acids and alkalis



N° article	955456	Design	PU
100	●	100 g tube	10

Copper paste

Use:
- temperature resistant from -30 °C to +1,100 °C
- protects against corrosion, seizure and cold welding
- ideal for use as an assembly lubrication
- high-pressure resistant, abrasion-proof and resistant to salt water, acids and alkalis



N° article	955455	Design	PU
200	●	200 ml cartridge	6

Ceramic paste

Use:
- temperature resistant from -20 °C to +1,500 °C
- prevents cold welding, seizure, corrosion and wear
- suitable for metallic components made of stainless steel, zinc, aluminium, copper etc.



N° article	955450	Design	PU
200	●	200 ml cartridge	6

Welding protection spray

Design:
- non-flammable
- protection against weld splatters
- to prevent damage to workpieces
- optimal application for electric welding and gas-shielded arc welding on steel, aluminium and stainless steel
- certified to DIN 8572

Safety data sheet



N° article	955395	Design	PU
400	●	400 ml spray can	6

Cold spray

Design:
- rapid cooling down to -40 °C
- facilitates the fitting of bearings, bushings etc. into the tightest fits
- combustible

Safety data sheet



N° article	955486	Design	PU
500	●	500 ml spray can	6

Leak detection spray DVGW tested

Design:
- for detecting leaks in gas and compressed air systems
- reliable in diagnosis
- non-flammable
- safe for sealings
- application in all gas installation businesses and testing facilities
- for detecting the finest hairline fractures in plastic and metal lines
- temperature resistant from -15°C to +50°C
- DVGW approval to DIN EN 14291

Note:
Apply evenly. Clearly visible bubbles form at leaks, cracks or porous spots. Afterwards rinse plastic ducts with water

Safety data sheet



N° article	955496	Design	PU
400	●	500 ml spray can	6

Contact spray

Design:
- optimal creep capability
- moisture-deflecting
- persistently cleaning
- removal of moisture contingent interferences
- temperature resistant from -50 °C to +180 °C
- free of AOX (absorbable organic halogens)

Note:
Spray the ignition distributor, cables, connectors and spark plugs well. No application on hot materials! Disconnect electronic components from power supply beforehand

Safety data sheet



N° article	955492	Design	PU
500	●	500 ml spray can	6

Cleaner spray

Design and use:
- for pretreating, cleaning and degreasing the surfaces to be bonded
- optimal cleaning properties
- quick and residue-free airing out due to active formula

Note:
Price per piece

Safety data sheet



500 ml



5000 ml

N° article	955025	Contents ml	PU
WS2000	●	500	12
WS2000-5	●	5000	1

Pressure pump atomiser

Design and use:
- professional pressure pump atomiser made of polyamide
- **with Viton®sealing**
- solvent resistant (not suitable for acetone)



N° article	955210
WS8	●

Brake cleaner

caramba

Design:
- for cleaning brakes and other vehicle parts
- fast cleaning, dissolves even resinified residues
- absolutely residue-free
- completely degreasing
- fast drying
- **free of silicone and acetone**
  - neutral against rubber, plastic and painted surfaces
- free from CFC, butanol and ethyl acetate



Safety data sheet

N° article	955420	Design	PU
0,5	●	500 ml spray can	15
5	●	5 l Canister	1
25	● +	210 l barrel	1

Industrial cleaner

caramba

Design:
- cleans and degreases machine parts and surfaces of all kinds, for example gears, cogs, heavy-duty chains, steel cables etc.
- fast drying
- residue-free result
- dissolves oily dirt
- removes crusted and resinous dirt and debris
- free of AOX and halogenated hydrocarbons (CHC, CFC)
- ideal for maintenance and pretreatment of installations
- acetone-containing

Safety data sheet



N° article	955400	Design	PU
500	●	500 ml spray can	6

Electronic cleaner

caramba

Design:
- cleans and protects components
- evaporates without leaving any residues
- ensures optimum contact, prevents leakage current, eliminates contact and voltage resistances
- effective against resinous contact greases, resin dissolving
- suitable for switches, connectors, relays, circuit boards etc.

Safety data sheet



N° article	955429	Design	PU
500	●	500 ml spray can	6

Compressed-air spray

caramba

Design:
- removes the finest dust particles on sensitive surfaces
- pure and dry compressed gas
- for cleaning electronic components/equipment
- with 360° valve
- increased blowing intensity
- stable gas pressure until complete emptying
- flammable, CFC-free, colourless, odourless, solvent-free

Safety data sheet



N° article	955427	Design	PU
270	●	270 ml spray can	6

Stainless steel cleaner

caramba

Design:
- cleaning and protection for all metal surfaces indoors and outdoors
- protects against dirt and tarnishing
- **approval for food processing industries** (NSF certified)
- antistatic and conditioning
- removes dirt, lime, cement residues, rust films, grease, oil and resins
- effective on stainless steel, aluminium, copper and brass
- optimal tarnish protection

Note:
Spray economically onto the surface to be cleaned. Then wipe with a clean, dry cloth. **Do not use on high-gloss polished surfaces!**

Sicherheits-datenblatt



N° article	955410	Design	PU
500	●	500 ml spray can	6

Glass cleaner foam

caramba

Design:
- for interior and exterior cleaning of glass and all smooth surfaces
- immediately and effortless streak-free
- against insects, streaks and films
- removes dirt and organic residues
- reduces fogging of panes

Safety data sheet



N° article	955421	Design	PU
500	●	500 ml spray can	6

Foam cleaner

caramba

Design:
- highly effective cleaning foam for the interior
- for plastic, upholstery or smooth leather
- fresh fragrance
- application on all washable surfaces
- removes even the most stubborn dirt, yet gentle on the material
- stable foam facilitates cleaning

Safety data sheet



N° article	955423	Design	PU
500	●	500 ml spray can	6

Cold cleaner

caramba

Design:
- for cleaning of motors and metal parts
- intensive cleaning
- dirt-repellent
- dissolves oil, resin and encrustation
- fast separating
- sewage relieving and free of AOX
- perfectly compatible with rubber and sealing materials
- efficient use in mobile and stationary cleaning equipment

Safety data sheet



N° article	955426	Design	PU
0,5	●	500 ml spray can	6
25	○	25 l Canister	1

Industrial cleaner

IBS Scherer GmbH

Design and use:
- multifunctional applicable
- ready-to-use multigrade cleaner
- for effective cleaning of small and large machines, tools or operating equipment
- removes oils of all kinds, soot and gummings
- compatible with aluminium
- **no labelling obligation**
- spray cleaning
- wiping process
- high-pressure cleaning devices
- very suitable for pre-spraying



N° article	955020	Design	PU
WAS50	●	500 ml spray bottle	6
WAS50-20	○ +	20 l Canister	1

Industrial combination cleaner

caramba

Design:
- highly alkaline, powerful cleaner for machines
- suitable for workshops, industrial plants and food processing industry
- grease solvent for manual cleaning, use in high-pressure and spray devices or for immersion bath cleaning or ultrasonic bath cleaning
- biodegradable
- one or two per cent solution for manual and high pressure cleaning
- 10 to 20 per cent solution in spray cleaning for heavy oil and grease dirt
- in an immersion bath and in an ultrasonic bath mix 1:1 to 1:5 (depending on the contamination) with water
- rinse parts and surfaces with water after a short exposure time
- pH value (conc.) = 13.8

Safety data sheet



N° article	955418	Design	PU
10	○	10 l Canister	1
25	○	25 l Canister	1
210	○	210 l barrel	1

Workshop and machinery cleaner

WEKEM®

Design:
- the economic power cleaner with a broad application range
- a special combination of active ingredients for the removal of oil and grease contamination on all alkaline-resistant surfaces
- for the thorough cleaning of workshops, machines, machine parts, assembly and production sites
- **also fit for use in high-pressure cleaning devices and in machine cleaning**



N° article	955210	Design
WS2500	●	10 l Canister

Machine and parts cleaner

caramba

Use:
- liquid cleaner suitable for spray and high pressure cleaning
- for cleaning of machines, engines, tarpaulins, chassis, underbodies etc.
- economical in consumption because of its high concentration
- strong dirt dissolving properties
- removes oil, fat and other stubborn soiling
- NTA-, phosphate-, CFC-, formaldehyde- and solvent-free
- frost-resistant

Safety data sheet



N° article	955415	Design	PU
10	●	10 l Canister	1

Floor cleaner

Design:
- floor cleaner concentrate
- machine cleaner for floors
- for medium to heavy industrial soiling
- for use on surfaces of hardened and unhardened hall floors (e.g. concrete floors, epoxy resin-coated floors) as well as tiles
- dissolves all kinds of soiling, e.g. oil, grease, metal, plastic and rubber abrasion as well as wax residues
- biodegradable
- pH value (conc.) = 13.2

Safety data sheet



N° article	955416 Cleanmat	Design	PU
10	○	10 l Canister	1
25	○	25 l Canister	1
210	○	210 l barrel	1
1000	○	1000 l IBC	1

Ultrasonic cleaner

Design:
- contains temporary corrosion inhibitors
- mild alkaline
- suitable for ultrasonic application
- for gentle cleaning of oils, fats and particulate soiling or stubborn encrustations
- this unique surfactant mixture of fast wetting and degreasing components is particularly suitable for ultrasonic cleaning

Safety data sheet



N° article	955419 AE-60	Design	PU
25	○	25 l Canister	1

Glass cleaner

Design:
- ready for use
- spray directly onto the surfaces to be cleaned or apply with a cloth.
- by wiping them over, they are cleaned without leaving any residue (suitable are not soft-rinsed cotton or cellulose cloths)
- no rinsing with water required
- blue, transparent liquid with the specific scent of ammonia and alcohol
- mild alkaline glass cleaner for streak-free shine
- also for chrome and plastic
- pH value (conc.) = 11.5

Safety data sheet



N° article	955417 ready for use	Design	PU
1	●	1 l bottle	10
10	○	10 l Canister	1
25	○	25 l Canister	1
210	○	210 l barrel	1

Pressure pump atomiser

Design and use:
- professional pressure pump atomiser made of polyamide
- **with Viton®sealing**
- solvent resistant (not suitable for acetone)



N° article	955210
WS8	●

Anti-rust primer

Design:
- special product for repair painting in workshops and maintenance
- good adhesion, fast drying
- excellent protection against corrosion
- isolates transition zones of ground and filled areas
- can be combined with PU and MS polymer sealing compounds

Sicherheits-datenblatt



N° article	955517 red-brown	Design	PU
ROTBRAUN	●	500 ml spray can	6

Zinc spray

Design:
- galvanic rust protection, weld-thru
- overpaintable after 12 hours
- more than 144 hours protective effect in salt spray test according to DIN EN ISO 9227

Aluminium
- temperature resistant up to +200 °C
- adapted to the colour of the hot-dip galvanising

Grey
- temperature resistant up to +600 °C
- the dried coating contains 98 % pure zinc

Safety data sheet



Alu-hell mattgrau

N° article	955516	Design	PU
ALU	●	500 ml spray can	6
GRAU	●	500 ml spray can	6

Industrial atomisers PE

PRESSOL

Technical specifications:	
Material container	HDPE
Colour container	black
Height	313 mm
Base area Ø mm	100 mm
Seals	Viton® (FPM) Fluoro rubber
Weight	0.163 kg

- the atomiser head with double stroke is freely positionable
- for low-viscosity media such as lubricants, brake cleaners and cleaners from industry or motor vehicles (according to resistance list)
- with Viton®seals



N° article	690286	Contents ml
750	●	750

Foam spraying device with Viton®seals

HAZET

- for cleaning/disinfecting surfaces, workpieces, vehicles, sanitary facilities
- suitable for neutral cleaners as well as diluted acid and alkaline cleaners
- transparent, durable container with level indicator
- integrated safety valve (2.5 bar)
- with Viton®seals
- by using different nozzles, wet and dry foams can be produced in order to achieve different reaction times





N° article	690283	Content litres
1	●	1

Pump dispenser

PRESSOL

Technical specifications:	
Max. operating pressure	2,5 bar
Material container	HDPE
Colour container	white/transparent
Height	325 mm
Seals	Viton ® (FKM)
Weight	0,45 kg

Design and use:
- various applications for cars, industry, household, sanitary, garden and agriculture
- HDPE container with level indicator in ml
- powerful pump mechanism with long service life
- safety valve
- with colour coding on container and pump head
- UV-resistant

Solvent: for solvents/brake cleaner (acetone free), rust protection, impregnation and mould oil/release agents
Classic: for low-viscosity mineral oils, corrosion protection, impregnation, contact spray and mould oil/release agents
Acid: for diluted acids and cleaners (pH value 1 - 7) and water
Alkali: for diluted alkalis and cleaners (pH value 7 - 14), disinfection and water
Garden: for herbicides, biological agents, pesticides and water



N° article	690293 SPRAYFIxx 1.5 l	Colour code	Nozzle type	Content litres
SOLVENT	●	black	Control nozzle	1,5
CLASSIC	●	grey	Flat spray nozzle 110°	1,5
ACID	●	red	Flat spray nozzle 110°	1,5
ALKALI	●	blue	Flat spray nozzle 110°	1,5
GARDEN	●	yellow	Control nozzle	1,5

Cold metal 2C epoxy metal

WEKEM®

Design and use:
- on 2C epoxy resin basis
- steel-filled adhesive with very high adhesive strength
- fast curing, thus also for vertical surfaces
- well suited for sealing and filling cracks, holes and leaks

Safety data sheet



N° article	955260	Type	Contents g
WS3602K	●	WS3602K	56

Liquid metal 2C epoxy metal

WEKEM®

Design and use:
- on 2C epoxy resin basis
- fast curing, after a short time mechanically machinable
- for the repair of steel and cast parts
- fills cracks, holes and shrinkage cavities

Safety data sheet



N° article	955260	Type	Contents ml
WS3622K	●	WS3622K	25

Screw lock Anaerobic adhesive

LOXEAL ENGINEERING ADHESIVES

Design and use:
- for securing and mounting of screws, nuts, bolts, etc.
- releasing by shock and vibration is excluded
- prevents fretting corrosion and seizure






N° article	955010	Contents ml	Gap filling capacity mm	Breakaway torque Nm	Temperature range	Design
24.18	●	50	0.20	2 - 4	from -55 °C to +150 °C	**low strength**, up to M24
55.03	●	50	0.25	17 - 22	from -55 °C to +150 °C	**medium strength**, up to M36, also for oily surfaces, DVGW/KTW approval
83.54	●	50	0.15	28 - 35	from -55 °C to +150 °C	**high strength**, up to M20, recommended for non-detachable connections



Pipe and thread sealing

LOXEAL ENGINEERING ADHESIVES

Design and use:
- for securing and sealing threaded connections against pressure of water, gas, oil etc.
- resistant to many chemical fluids
- replaces hemp and Teflon™ tape
- temperature and vibration resistant
- after hardening thread sealings are resistant to most gases and fluids






N° article	955012	Contents ml	Gap filling capacity mm	Breakaway torque Nm	Temperature range	Design
53.14	●	50	0.15	12 - 16	-55 - +150	elastic pipe sealing until 3/4" medium for hydraulic and pneumatic connections, DVGW approval for gas
18.10	●	50	0.30	6 - 11	-55 - +150	Conduit seal up to 2 "with PTFE (DVGW/KTW approved for gas and water)



Surface sealing

Design and use:
- for sealing flat and flange connections on pumps, motors, gears and housing parts
- replaces solid gaskets, allows greater manufacturing tolerances
- creates a secure grip without loss of strength
- forms a flexible, elastic seal that is resistant to high temperatures, vibration, oils and other chemical media
- demountable with standard tools






N° article	955014	Contents ml	Gap filling capacity mm	Breakaway torque Nm	Temperature range	Design
28.10	●	75	0.20	2 - 4	-55 - +150	elastic seal (more than 100 % expandable) for reliable sealing in all areas
58.31	●	75	0.50	7 - 10	-55 - +200	fast curing sealing with high vibration resistance and large gap bridging capacity



Joint connection

LOXEAL ENGINEERING ADHESIVES

Design and use:
- for sticking to or pasting into bearings, shafts, bushings, hubs, bolts etc.
- creates high-strength joints, prevents twisting, protects against loosening and fretting corrosion
- seals and prevents the escape of liquids
- for repairing worn out fits






N° article	955016	Contents ml	Gap filling capacity mm	Breakaway torque Nm	Temperature range	Design
53.11	●	50	0.12	8 - 12	-55 - +150	normal detachable, for fixing, as an assembly aid
83.05	●	50	0.50	20 - 30	-55 - +200	screw and thread lock **for stainless steel** and passive materials without activator
83.21	●	50	0.12	25 - 35	-55 - +175	high strength, fast curing, mechanical and temperature resistant, non-detachable
85.21	●	50	0.20	55 - 70	-55 - +150	high strength, fast curing, mechanically resistant, non-detachable



Instant glue

WEKEM®

Safety data sheet

N° article	955030 Content 20 ml	Design:
WK20	●	**Ideal for the production of O-rings.** Low viscosity and super fast curing, high strength, resilient, for EPDM elastomers, solid rubber, foam rubber and difficult to bond plastics.
WK45	●	**Odourless** and non-blooming, no impurities on electrical contacts. Alkoxy-based, ideal for indoor use
WK110	●	**Suitable for plastics and metallic compounds.** Universally applicable, quick, for absorbing and porous materials such as rubber, wood, leather and cork. Simple, safe, high-strength and precise
WK-GEL	●	**For plastics, rubber and metal, high gap filling capacity, high viscosity**, suitable for use on vertical surfaces. Special dosing tip allows pinpoint application. Product stability through new active agent component



WK20



WK-GEL

Thread-locking fluid

MARKAL

Design:
- the clearly visible colour marking hardens to a film, which breaks easily
- safe on most surfaces, adheres perfectly to metal
- does not contain xylenes
- free of heavy metals

Safety data sheet

Use:
- visual method for identifying vibration, looseness or tampering on nuts, bolts, screws and assemblies
- ideal for quality control and warranty work
- suitable for surfaces made of steel/iron, stainless steel, aluminium, plastic, rusty metal, concrete/stone, asphalt, masonry, rubber/tires, cloth/fabrics (textiles), pipes/tubes, plates, alloys/superalloys or non-ferrous metals





N° article	955028 Security Check	Colour	Temperature range	Temperature resistance °C	Contents ml
ROT	●	red	-20 - +70	200	50
GELB	●	yellow	-20 - +70	200	50
BLAU	●	blue	-20 - +70	200	50
GRÜN	●	green	-20 - +70	200	50

N° article	955028 Spare tip	PU pieces
SP	●	12

Instant glue

3M

Design:
- high viscosity cyanoacrylate adhesive
- fast curing
- improved thixotropic behaviour and regular appearance
- colour clear

Safety data sheet

Use:
- especially for high-strength universal bonding of most metals, wood, cardboard, plastics, elastomers, leather, textiles and other common materials
- also suitable for use in difficult to bond material pairings and porous materials such as porcelain or ceramic
- for vertical surfaces or overhead applications



N° article	955032 Scotch Weld™ SI gel	Type	Contents g
GEL	●	GEL	20

Activator for anaerobic adhesives

WEKEM®

Design and use:
- accelerates the curing of anaerobic adhesives, such as screw locks or thread seals
- fixture time 30 - 60 seconds
- ideal for passive materials (e. g. aluminium, galvanised surfaces, chromium etc.)
- even at low temperatures (< 15 °C)
- price per piece

PU 12 pieces

Safety data sheet



N° article	955018	Contents ml	PU
WK11	●	200	12

Teflon™ tape

WEKEM®



N° article	955080	Design
FRP	●	Teflon sealing tape for **Fine thread**. DVGW approval for gas and water supply
GRP	●	Teflon sealing tape for **coarse threads**. DVGW approval for gas and water supply
GT	●	high-quality, elastic Teflon™ tape. Extra strong, dense, can be loosened by a turn without losing its tightness. Suited for propane, butane, natural gas, benzene, fuels. **For all threaded connections** in the temperature range from -240 °C to +260 °C

Structural adhesive 2-component 5-minute epoxy

WEKEM

Safety data sheet

Design:
- high-speed adhesive with high tensile and shear strength
- very fast curing
- does not shrink and is resistant to many chemicals
- cures reliably even at low temperatures
- transparent bonding, does not go yellow
- ideal for quick repair and assembly
- connects metal, glass, ceramics, wood and concrete with and among each other
- processing time 3 to 8 minutes
- direct dosing through attached mixing nozzle

NEW



24 ml 50 ml

Nº article	956006 WK 5	Type	Colour	Temperature application range from-to °C	Peel strength	Tensile shear strength	Functional strength	Contents ml
WK5-025	●	WK 5-025	transparent	-40 - +80	4 - 20 N/25 mm (ISO 4578)	12 - 14 N/ mm² (ISO 4587)	20 to 30 minutes/+25 °C	24
WK5-050	●	WK 5-050	transparent	-40 - +80	4 - 20 N/25 mm (ISO 4578)	12 - 14 N/ mm² (ISO 4587)	20 to 30 minutes/+25 °C	50

Hand grease gun
for 2-component adhesives

WEKEM

Design:
- for 2-component structural adhesives
- solid execution made of a metal/plastic composite
- for double cartridges 50 ml
- increased ejection pressure due to double feed piston

NEW



Nº article	956009 WS 25
WS-25	●

Mixing nozzle set
Quadro mixing nozzle QMB

WEKEM

PU
10 pieces

Design:
- suitable for 2-component cartridges with B-system
- special helix for even and excellent mixing of the adhesives
- outlet diameter 1.8 mm
- easy handling

Delivery:
Only in packaging units!
Prices per PU

NEW



Nº article	956007 WS 17-B	Design:	PU
WS17-B	●	Mixing nozzle for WK 5-025 and WK 5-050	10

Structural adhesive for EPX system, 2-component epoxy adhesive

3M

Safety data sheet

Design and use:
DP110:
- short processing time (8 - 10 minutes)
- after a short time the first load on the joined parts is possible
- viscoplastic
- high shear strength (18 MPa)
- good peel strength (35 N/cm), impact resistance and ageing properties
- made of epoxy resin
- low flow rate
- hand-proof after approx. 20 minutes
- application temperature -55 °C up to +80 °C
- for bonding metals, plastics like ABS, GRP, PC etc. and other materials
- suitable mixing nozzle: 9560150021

DP490:
- very long processing time (more than 90 minutes)
- thixotropic = does not flow on vertical surfaces
- viscoplastic
- high shear strength (30 MPa)
- good peel strength (92 N/cm) and impact resistance
- based on epoxy resin
- hand-proof after approx. 4 hours
- application temperature from -55 °C up to +120 °C
- temperature resistance 120 °C
- for bonding metals like aluminium, steel or brass, plastics like ABS, PA, PC, rigid PVC etc. as well as fibre composite materials
- suitable mixing nozzle: 9560150021

DP8005:
- very short processing time (2 - 3 minutes)
- fast accumulation of strength
- bonding of low-energy plastics without pretreatment of surfaces
- after a very short time the first load on the joined parts is possible
- viscoplastic
- high shear strength (6 MPa)
- good peel strength (28 N/cm) and impact resistance
- made of acrylate
- low flow rate
- hand-proof after approx. 30 minutes
- application temperature from -55 °C up to +80 °C
- for bonding PE, PP and TPE as well as ABS, hard PVC, PMMA, fibre composites, lacquered and primed metals, glass, wood etc.
- suitable mixing nozzle: 9560150022

Nº article	956010 Two-component epoxy adhesive	Type	Colour	Design
0010	●	DP110:	translucent	48.5 ml cartridge
0020	●	DP490	black	50 ml cartridge
0040	●	DP8005	translucent	45 ml cartridge



0010 0020 0040

Hand grease gun EPX

Design and use:
- device complete with feed piston 1:1/2:1
- for 45 / 48.5 and 50 ml cartridges
- for 2-component structural adhesives
- for applying EPX structural adhesives



N° article	956015 Hand-held applicator EPX
0010	●

Design and use:
- for 45 / 48.5 and 50 ml cartridges
- for 2-component structural adhesives
- easy handling
- exact mixing of the two adhesive components

PU

Delivery:
Only in packaging units!
Price per piece



0021



0023

N° article	956015 Mixing nozzle	Design	PU
0023	●	Mixing nozzle for DP8005	72
0021	●	Mixing nozzle for DP110 and DP490	36

Design and use:
- uniform pressure on both chambers of the cartridge in the applicator
- simple pressing out of the adhesive components from the cartridge
- for 2-component structural adhesives
- for 45, 48.5 or 50 ml cartridges

PU

Delivery:
Only in packaging units!
Price per piece



0025



0027

N° article	956015 Feed piston	Design	PU
0025	●	Feed piston 1:1 / 2:1 for 50 ml cartridges	5
0027	●	Feed piston 10:1 for 38 ml and 45 ml cartridges (DP8005)	10

Silicone WK-Flex

Design:
- ready-to-use adhesive and sealant based on silicone, acetate crosslinked
- highly adhesive, fungicide
- permanently elastic and weather resistant
- wet room stable and ageing resistant
- no hazard label
- temperature resistance from -50 °C to +120 °C
- processing temperature from +5 °C to +40 °C

Use:
- for elastic and universal bonding
- in interior construction, window construction, sanitary and kitchen areas as well as for glass, industrial and vehicle construction
- **not** suited for concrete, natural stone, PP, PE, PTFE or bituminous substrates
- bonding surfaces must be clean, dry and free of grease

Note:
Price per piece

Safety data sheet

N° article	955900 300 ml cartridge	Colour	PU
WEISS	●	white	12
GRAU	●	grey	12
TRANSPARENT	●	transparent	12



white grey transparent

Adhesive and sealant compound Single-component adhesive

WEKEM

Design:
- especially for bonding and sealing different materials
- very high initial adhesion, overpaintable
- for indoor and outdoor use in all weather conditions
- good adhesion on most, even damp, surfaces
- rapid curing even at low temperatures
- almost odourless, colour-fast, weather- and UV-resistant
- after curing, permanently elastic and age-resistant
- isocyanate-, silicone- and solvent-free

black:
- one-component MS polymer adhesive and sealing compound
- for steel, stainless steel, aluminium, zinc, most plastics, Styrofoam, wood, parquet floors, chipboard, gypsum, marble and natural stone
- ideal for car body work or for sealing and protecting sheet metal connections against rust and corrosion

white:
- one-component adhesive and sealant based on MS polymer
- for the bonding of most materials, also Styrofoam
- for indoor and outdoor use

Safety data sheet

grey
- highly adhesive single-component glue based on MS polymer
- cures almost shrink-free
- overpaintable (wet-on-wet)
- resistant to ageing

clear:
- especially for different materials
- for steel, stainless steel, aluminium, zinc, most plastics, Styrofoam, wood, parquet floors, chipboard, gypsum, marble and natural stone
- adheres under extreme conditions even on damp substrates
- wet-on-wet overpaintable

Note:
Price per piece

N° article	956000 290 ml cartridge	Colour	PU
SCHWARZ	●	black	12
WEISS	●	white	12
GRAU	●	grey	12
KLAR	●	transparent	12



black white grey transparent

Design:
- like 956000, but with
- highest initial adhesion on almost all surfaces
- flexible, safe, quick
- colour white

Note:
Price per piece



Safety data sheet

N° article	956002 290 ml cartridge	Colour	PU
WEISS	●	white	12

Cartridge gun Half-shell

Design:
- made of steel
- with trigger
- without gear rack
- for cartridges up to 310 ml



N° article	956105
0010	●

Cartridge gun
with automatic material flow stop

TAJIMA

Design:
- metal/plastic cartridge gun
- 360° rotation drum
- powerful TWIN THRUST system
- automatic interruption of the material flow by AUTO FLOW STOP
- extra long cartridge gun for optimal performance
- for 300 or 400 ml cartridges
- colour yellow/black

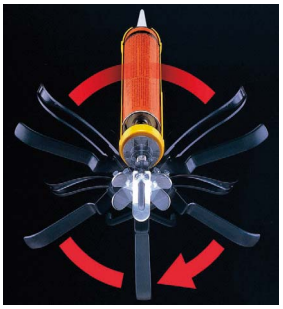


N° article	956100 Convoy® Just
0015	●

Cartridge gun
for 310 ml metal cartridges

TAJIMA

Design:
- robust metal cartridge gun
- the Enhanced SST™ optimised feed system offers better power transmission
- rotating handle for works at hard-to-reach locations
- with automatic material flow stop
- for 310 ml metal cartridges





N° article	956100 Convoy® Super™ 26
0030	○

Pointed nozzle set

Design:
- for closed cartridge presses
- for use of sealing compound in hoses



N° article	956105 5-piece
0025	●

Hand cleansing tissue in dispenser

WEKEM®

Design and use:
- especially for industry, crafts and assembly
- 2-phase cleaning cloth, removes e.g. greases, oils, lubricants, paints and adhesives from hands and water-compatible surfaces
- saves detergents and can be used without water
- impregnated with special cleaning liquid
- dispenser with 75 cloths
- size 200×230 mm per cloth

Safety data sheet



N° article	954010 in dispenser	Contents parts
75	●	75

Cartridge gun

Design:
- closed form
- rotatable aluminium tube
- for cartridges up to 310 ml or bags up to 400 ml



N° article	956105
0020	●

Hand cleaner

WEKEM®

Sicherheits-datenblatt

Design:
- natural and biodegradable cleaning and protection paste
- with lemon based formula plus solvent made of orange extracts
- removes all dirt, oil, fats, soot, metal dust, etc.
- perfect cleaning by using pumice particles
- quick, practical, efficient and **applicable without the use of water**



Apply



Rub and brush



Wipe



N° article	954030 FAST ORANGE®	Design
440	●	100 ml bottle
3800	●	3.8 l pump bottle

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