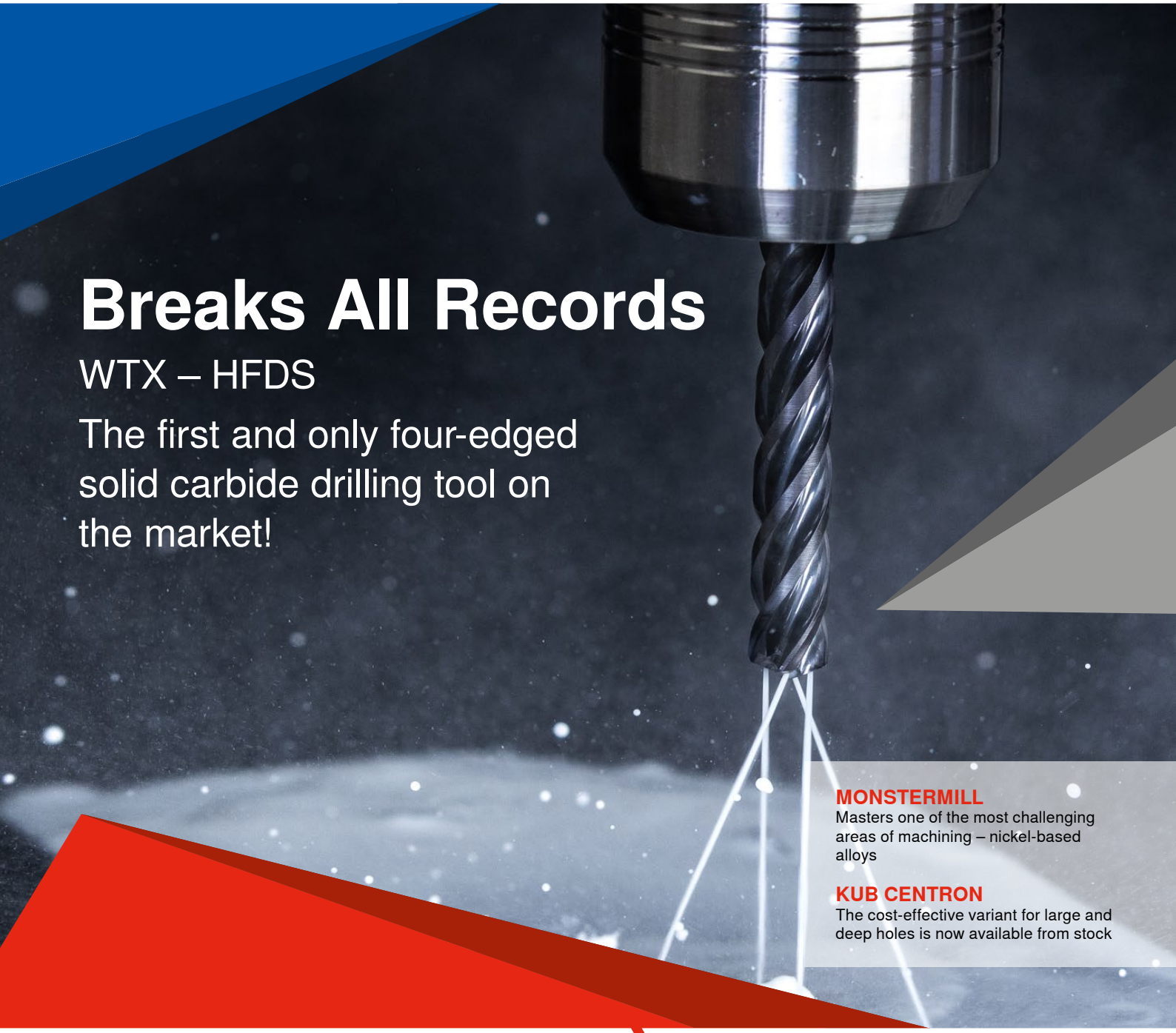
CERATIZIT GROUP

05\2020

NEW DEVELOPMENTS AND PRODUCT ENHANCEMENTS

UP2DATE



Breaks All Records

WTX – HFDS

The first and only four-edged solid carbide drilling tool on the market!

MONSTERMILL
Masters one of the most challenging areas of machining – nickel-based alloys

KUB CENTRON
The cost-effective variant for large and deep holes is now available from stock

TEAM CUTTING TOOLS

CUTTING SOLUTIONS BY CERATIZIT · KOMET · WNT · KLENK

CERATIZIT is a high-technology engineering group specialised in cutting tools and hard material solutions.

Tooling the Future

www.ceratizit.com

Welcome!

It couldn’t be easier

Ordering via the Online Shop

http://cuttingtools.ceratizit.com

On-site technical support

Your Local Technical Sales Engineer

Your customer number

WTX – HFDS

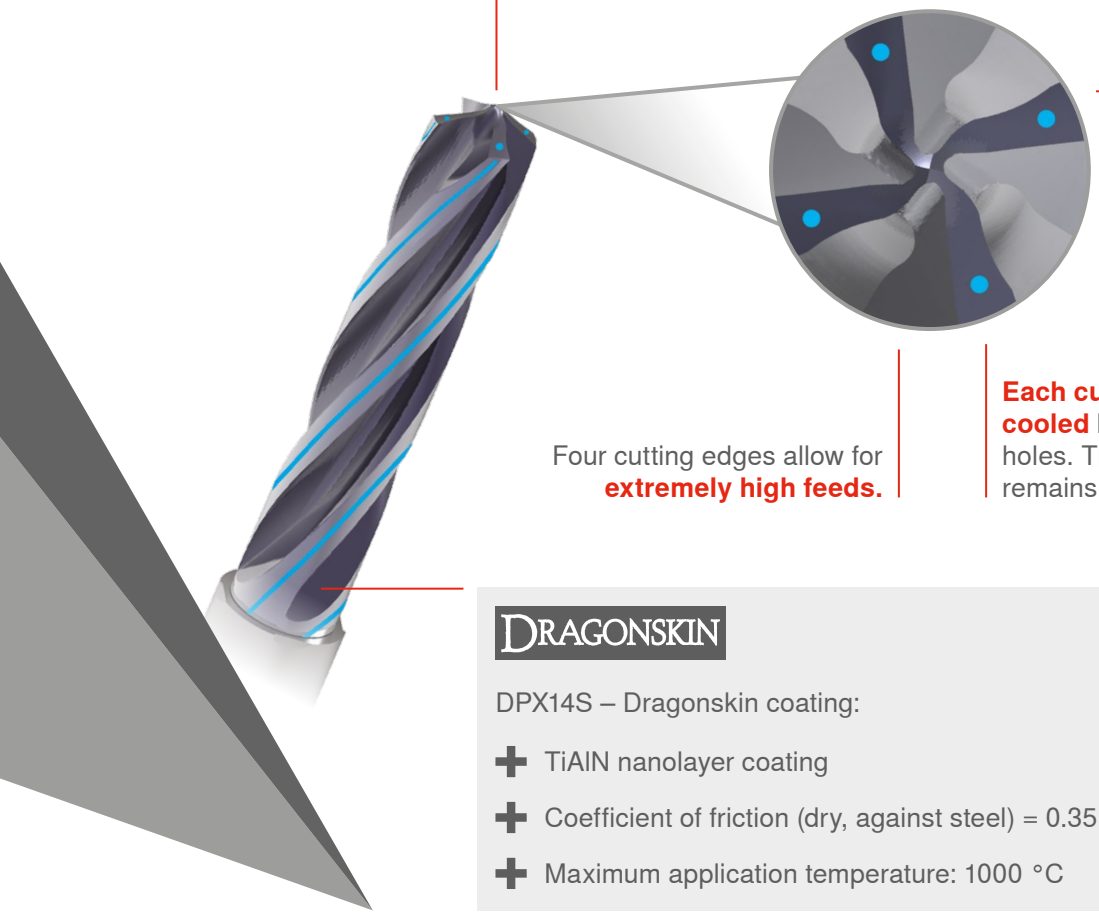
The first four-edged drilling tool on the market!

The innovative, pyramid geometry of the WTX – HFDS ensures extremely aggressive and precise drilling performance. In this case, the cutting force is distributed to four cutting edges, meaning that longer service lives are possible. The core stability of the drill is retained due to the optimum cooling via four internal spiral coolant holes and makes the drilling process particularly safe and effective.

Further information on the product can be found on → Page 16–19

Reduce your machining time with **four effective cutting edges**!

The innovative, pyramid point thinning guarantees **ultimate positioning accuracy of ~ 0.03 mm, aggressive drilling performance and excellent centring properties**.



Four chip flutes **ensure secure and quick chip removal.**

Four cutting edges allow for **extremely high feeds.**

Each cutting edge is **optimally cooled** by the four spiral coolant holes. The tool core nonetheless remains very stable.

DRAGONSKIN

DPX14S – Dragonskin coating:

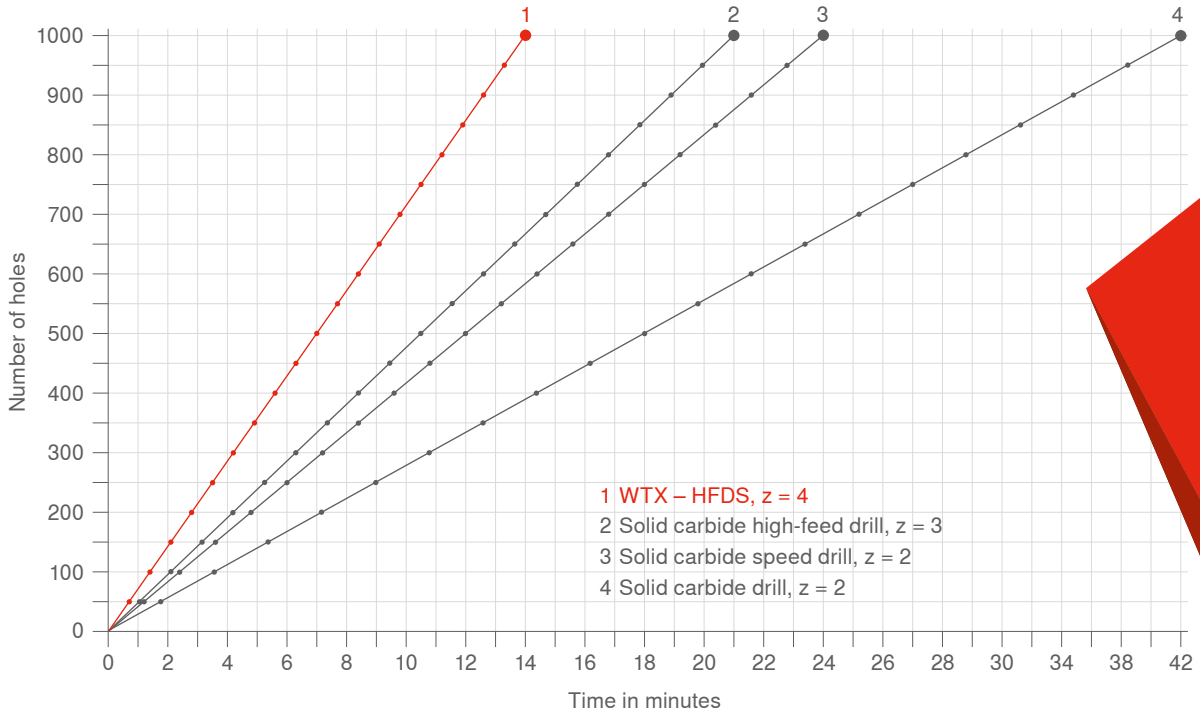
- TiAlN nanolayer coating
- Coefficient of friction (dry, against steel) = 0.35
- Maximum application temperature: 1000 °C

Features

- The WTX – HFDS achieves new levels of drilling quality, hole tolerance and positioning accuracy. This means that component quality is increased to the extent that there is no need for potential reworking.
- Four continuous spiral thro' coolant holes guarantee optimum cooling of each cutting edge, meaning that considerably higher tool service lives can be achieved. This also results in a noticeable reduction in tool costs.
- Low burr formation when entering and exiting the hole. This means that there is no need for time-consuming subsequent deburring.

Drilling test in 1.7225/42CroMoV4, hole depth 30 mm:

Tools:	Ø (mm)	V_c (m/min.)	F (mm/U)	V_f (mm/min.)
WTX – HFDS, z = 4	10	100	0,7	2228,17
Solid carbide high-feed drill, z = 3	10	110	0,44	1540,62
Solid carbide speed drill, z = 2	10	160	0,26	1324,17
Solid carbide drill, z = 2	10	100	0,24	763,94



Result

1 **WTX – HFDS**
(for 1000 holes)
= 14 Minutes

up to 66 % Time savings

3 **Solid carbide speed drill**
(for 1000 holes)
= 24 Minutes

2 **Solid carbide high-feed drill**
(for 1000 holes)
= 21 Minutes

4 **Solid carbide drill**
(for 1000 holes)
= 42 Minutes

cuttingtools.ceratizit.com/ie/en/wtx-hfds

24 Stock around the clock!
Tool Supply 24/7

If you install a Tool-O-Mat it means that we take on all the procurement and stocking costs for you. You have 100 % availability of all tools at all times and without expenditure.

MonsterMill NCR

Masters one of the most challenging areas of machining – nickel-based alloys

The special properties of nickel-based alloys often push machine operators and tools to their limits. Manufacturing facilities that use state-of-the-art machining processes can only remain process-secure and efficient by using tools that have been specially designed for this application.

With the MonsterMill NCR, we have developed a milling cutter that takes the fear out of working with nickel-based alloys. The perfect combination of carbide, coating and geometry makes the difficulties associated with machining nickel-based alloys a thing of the past.

See for yourself!

- ▲ Specially designed tool geometry for nickel-based alloys
  Guarantees stable and reliable processes
- ▲ Reinforced core diameter and increasing tapered core
  Counteracts tool wear
- ▲ Specially adapted carbide and coating
  Exhibits excellent wear properties with regard to scale layers and roll skin

= 13.2 m tool life

You can find more information on the product tests on our homepage:

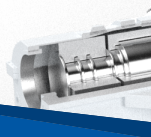
cuttingtools.ceratizit.com/ie/en/ncr

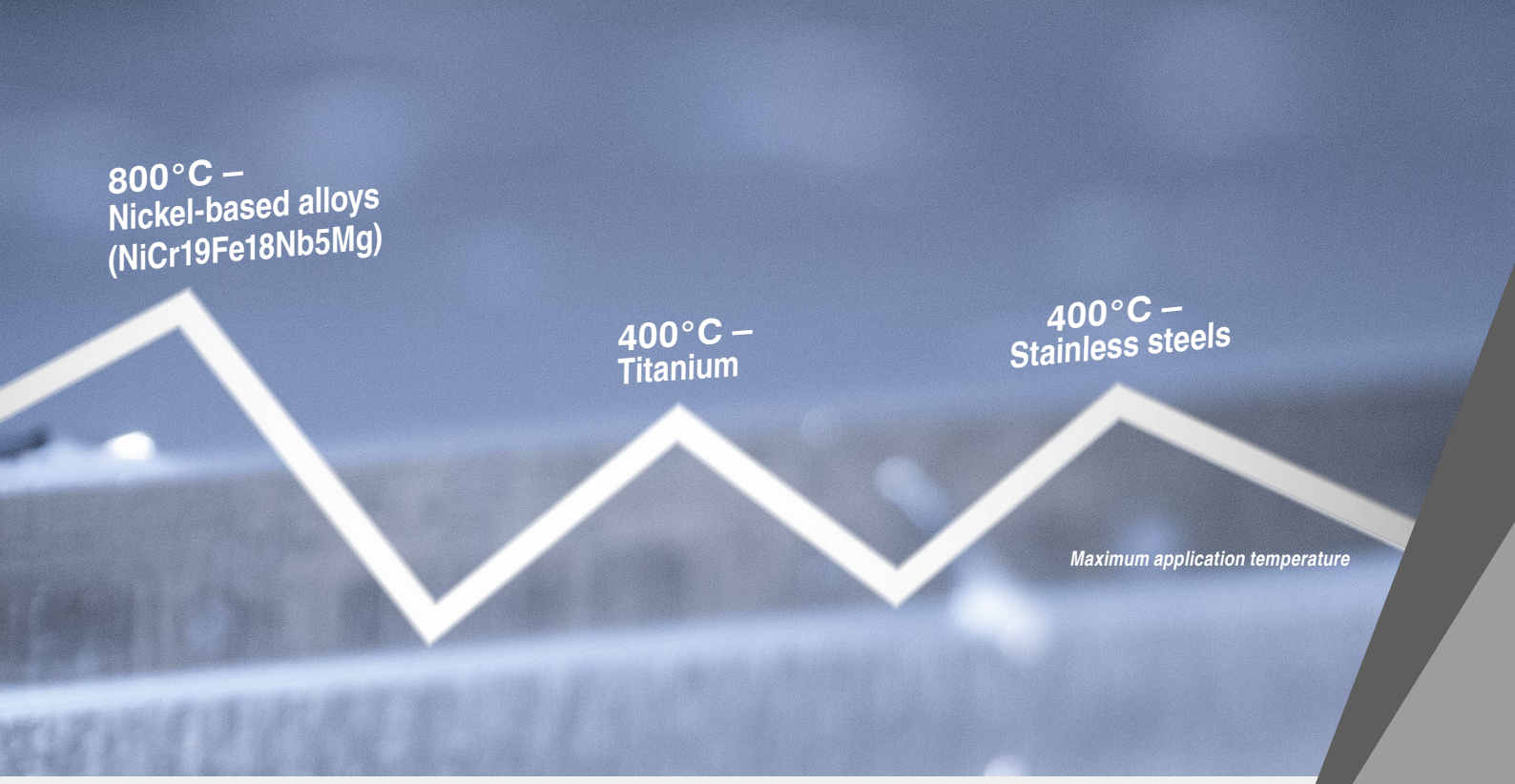
DRAGONSKIN

The new Dragonskin coating, which has been adapted for the MonsterMill NCR, was specially developed for use on nickel-based alloys.

- ✚ High heat resistance
- ✚ High tool wear resistance

Products can be found on Page 104–108



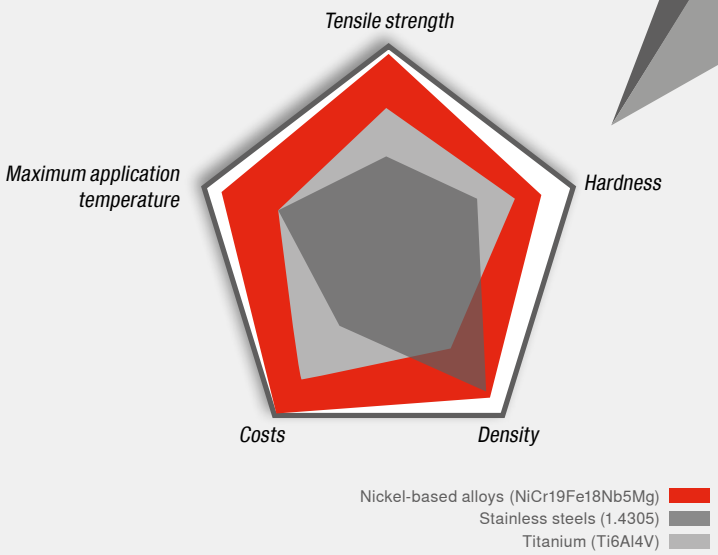


Nickel-based alloys

The machining of nickel-based alloys is considerably more demanding than conventional materials.

The high tensile strength of the material, combined with its extreme hardness, causes tools to wear much more quickly. It is therefore essential to choose the right tool.

Only tools designed specifically for this material can minimise wear, maximise tool life and guarantee reliable processes.



Typical application ranges

Due to their special properties, nickel-based alloys are used in applications with high thermal and mechanical loads. Its high corrosion resistance makes the metal extremely versatile.

- Chemical industry
- Furnace construction and combustion chambers
- Aerospace industry
- Automotive industry
- Power generation

KUB Centron

The cost-effective variant for large and deep holes is now available from stock

KOMET

The KUB Centron is the ideal tool for holes with a large length to diameter ratio. Cost-effective and process-secure drilling in hole depths of up to 9xD and virtually all materials is no problem at all with the modular drill.

The best thing of all: The indexable insert drill with exchangeable head is now available from stock in our standard range.

Application

- For large and deep holes from 4xD to 9xD.
- Suitable for rotating and stationary as well as for vertical and horizontal applications.
- The drill bits of the KUB Centron are available with a diameter from Ø 20.00 to Ø 81.00 mm. From a diameter of Ø 65.00 mm and above, the drill head is available with 4 indexable inserts and therefore a slightly different design.
- Suitable, for example, to transverse holes in housings, cylinder blocks and forged parts.
- The KUB Centron is designed for use with WOEX indexable inserts and is therefore universal, powerful and process-secure.

Drill bit

STABILITY THROUGHOUT THE MACHINING PROCESS

Carbide guide pads give the modular drill stability when drilling and exiting the hole. This counteracts deflection.

Centring tip

EXACT POSITIONING

HSS or solid carbide centring tips ensure exact positioning. The KUB Centron cutting data is also selected using the centring tips.

Inserts

UNIVERSAL APPLICATION

The tried-and-tested, specialised high-performance grades of the WOEX indexable inserts enable use in virtually all materials. They can also be used for all KUB Trigon drilling systems.

Tool holder

TRIED-AND-TESTED ABS CONNECTION

An ABS connection is particularly advantageous when drilling large, deep holes. The improved force transmission produces optimised machining results.

HIGH FLEXIBILITY

Thanks to its modular design, the holder covers multiple diameter ranges.

COST REDUCTION

Tool costs can be reduced by combining drill bits, indexable inserts and holders.

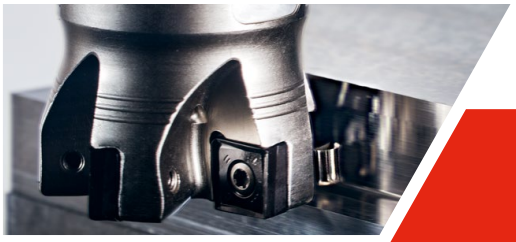
Interface

PRECISE, CENTRICAL POSITIONING

Interface with custom-fit centring pins on the drill bit.

Further information on the product can be found on → Page 20–33

cuttingtools.ceratizit.com/ie/en/kub-centron



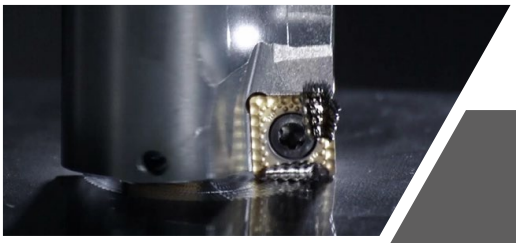
CUTTING SOLUTIONS BY CERATIZIT

SPECIALIST FOR INDEXABLE INSERT TOOLS FOR TURNING, MILLING AND GROOVING

Product Range:

- Turning Tools
- EcoCut Multifunction Tools
- Grooving Tools
- Milling Tools with Indexable Inserts
- Tools made from ultra-hard cutting materials

The product brand CERATIZIT stands for high-quality indexable insert tools. The products are characterized by their high quality and contain the DNA of many years of experience in the development and production of carbide tools.



KOMET

THE QUALITY LABEL FOR EFFICIENT BORE PRODUCTION

Product Range:

- Indexable Insert Drilling
- Reaming and Countersinking
- Spindle Tooling
- Actuating Tools

High-precision drilling, reaming, countersinking and boring is a matter of expertise: efficient tooling solutions for drilling and mechatronic tools are therefore part of the KOMET brand name.

EXPERTS FOR ROTATING TOOLS, TOOL HOLDERS AND CLAMPING SOLUTIONS

Product Range:

- HSS Drilling
- Solid Carbide Drilling
- Taps and Thread Formers
- Circular and Thread Milling
- Thread Turning
- Miniature Turning Tools
- HSS Milling Cutters
- Solid Carbide Milling Cutters
- Adapters
- Workpiece Clamping

WNT is synonymous with product diversity: solid carbide and HSS rotating tools, tool holders and efficient workholding solutions are all part of this brand.

CUTTING TOOLS FOR THE AEROSPACE INDUSTRY

Product Range:

- Solid Carbide Drilling for the Aerospace Industry

Solid carbide drills specially developed for the aerospace industry bear the product name KLENK. The highly specialized products are specifically designed for machining lightweight materials.

DRAGONSKIN

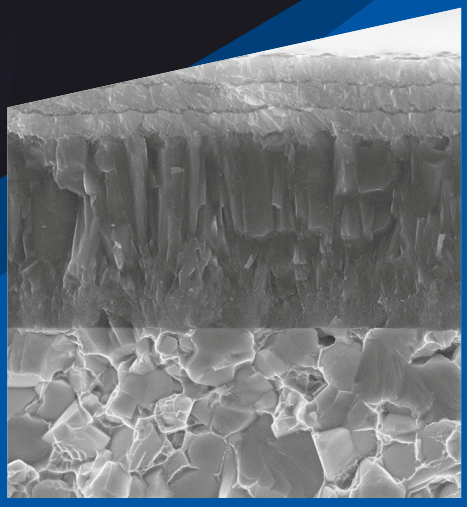
by CERATIZIT

The latest generation of coating technology

Decades of experience coupled to consistent and constant development are in the unique Dragonskin coating technology. Thanks to our innovative design and expertise in powder metallurgy, we – and above all you – achieve an unmatched level of performance in machining.

Like the Dragon's invulnerability, Dragonskin Coating Technology offers the highest levels of protection against wear and is designed with its impermeable layer for the most adverse requirements. The result is an extremely hard and durable surface with a satin finish.

The perfect combination of state-of-the-art high-performance substrates and new coating structures enable high cutting speeds and increased process reliability. **A proven – up to 80 % – increased performance** through the latest Dragonskin coating technology offers you a significant competitive advantage.



Dragonskin Coating

Dragonskin – The coatings for the highest performance

The product category Dragonskin is intended to help make tools easily recognizable and quick to find using CERATIZIT's high-performance coating technology. All products that are marked with the Dragonskin icon represent unmatchable performance, maximum tool life and maximum process reliability.

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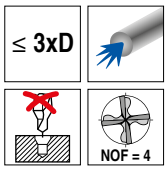
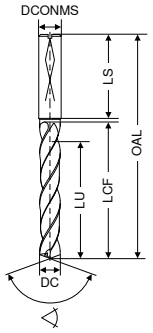
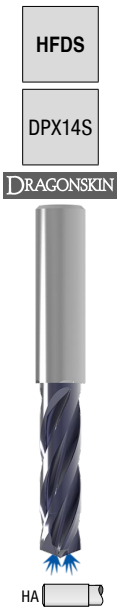
WTX – High Speed Drill, DIN 6537

- ▲ Four fluted high-feed drill
- ▲ Specialises in steel processing
- ▲ Has four spiral coolant holes
- ▲ Innovative cutting edge geometry guarantees high positioning accuracy
- ▲ Outstanding drilling quality in terms of tolerance, surface finish and position





WTX – HFDS = four cutting edges



Solid carbide

DC m7	DCONMS h6	OAL	LCF	LU	LS	NEW T4 Article no. 10 797 ...	
mm	mm	mm	mm	mm	mm	EUR	
6,0	8	79	41	29	36	73,87	06000
6,1	10	89	47	35	40	100,70	06100
6,2	10	89	47	35	40	100,70	06200
6,3	10	89	47	35	40	100,70	06300
6,4	10	89	47	35	40	100,70	06400
6,5	10	89	47	35	40	100,70	06500
6,6	10	89	47	35	40	100,70	06600
6,7	10	89	47	35	40	100,70	06700
6,8	10	89	47	35	40	100,70	06800
6,9	10	89	47	35	40	100,70	06900
7,0	10	89	47	35	40	100,70	07000
7,1	10	89	47	35	40	100,70	07100
7,2	10	89	47	35	40	100,70	07200
7,3	10	89	47	35	40	100,70	07300
7,4	10	89	47	35	40	100,70	07400
7,5	10	89	47	35	40	100,70	07500
7,6	10	89	47	35	40	100,70	07600
7,7	10	89	47	35	40	100,70	07700
7,8	10	89	47	35	40	100,70	07800
7,9	10	89	47	35	40	100,70	07900
8,0	10	89	47	35	40	100,70	08000
8,1	12	102	55	40	45	136,60	08100
8,2	12	102	55	40	45	136,60	08200
8,3	12	102	55	40	45	136,60	08300
8,4	12	102	55	40	45	136,60	08400
8,5	12	102	55	40	45	136,60	08500
8,6	12	102	55	40	45	136,60	08600
8,7	12	102	55	40	45	136,60	08700
8,8	12	102	55	40	45	136,60	08800
8,9	12	102	55	40	45	136,60	08900
9,0	12	102	55	40	45	136,60	09000
9,1	12	102	55	40	45	136,60	09100
9,2	12	102	55	40	45	136,60	09200
9,3	12	102	55	40	45	136,60	09300
9,4	12	102	55	40	45	136,60	09400
9,5	12	102	55	40	45	136,60	09500
9,6	12	102	55	40	45	136,60	09600
9,7	12	102	55	40	45	136,60	09700
9,8	12	102	55	40	45	136,60	09800
9,9	12	102	55	40	45	136,60	09900
10,0	12	102	55	40	45	136,60	10000
10,2	14	107	60	43	45	181,30	10200
10,5	14	107	60	43	45	181,30	10500
11,0	14	107	60	43	45	181,30	11000
11,5	14	107	60	43	45	181,30	11500
12,0	14	107	60	43	45	181,30	12000
12,5	16	115	65	45	48	246,20	12500
13,0	16	115	65	45	48	246,20	13000

DC m7	DCONMS h6	OAL	LCF	LU	LS	NEW T4 Article no. 10 797 ...	
mm	mm	mm	mm	mm	mm	EUR	
14,0	16	115	65	45	48	246,20	14000
14,3	18	123	73	51	48	306,70	14300
14,5	18	123	73	51	48	306,70	14500
15,0	18	123	73	51	48	306,70	15000
16,0	18	123	73	51	48	306,70	16000

Steel	●
Stainless steel	○
Cast iron	●
Non ferrous metals	○
Heat resistant alloys	○
Hardened materials	○

WTX – High Speed Drill, DIN 6537

- ▲ Four fluted high-feed drill
- ▲ Specialises in steel processing
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- ▲ Innovative cutting edge geometry guarantees high positioning accuracy
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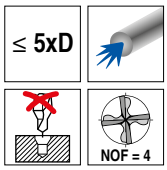
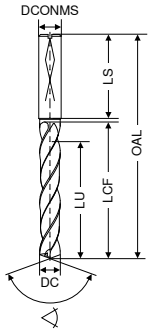




WTX – HFDS = four cutting edges

HFDS

DPX14S

DRAGONSKIN

130°

Solid carbide

DC m7	DCONMS h6	OAL	LCF	LU	LS	NEW T4 Article no. 10 798 ...
mm	mm	mm	mm	mm	mm	EUR
6,0	8	89	51	40	36	87,30 06000
6,1	10	102	59	47	40	116,40 06100
6,2	10	102	59	47	40	116,40 06200
6,3	10	102	59	47	40	116,40 06300
6,4	10	102	59	47	40	116,40 06400
6,5	10	102	59	47	40	116,40 06500
6,6	10	102	59	47	40	116,40 06600
6,7	10	102	59	47	40	116,40 06700
6,8	10	102	59	47	40	116,40 06800
6,9	10	102	59	47	40	116,40 06900
7,0	10	102	59	47	40	116,40 07000
7,1	10	102	59	47	40	116,40 07100
7,2	10	102	59	47	40	116,40 07200
7,3	10	102	59	47	40	116,40 07300
7,4	10	102	59	47	40	116,40 07400
7,5	10	102	59	47	40	116,40 07500
7,6	10	102	59	47	40	116,40 07600
7,7	10	102	59	47	40	116,40 07700
7,8	10	102	59	47	40	116,40 07800
7,9	10	102	59	47	40	116,40 07900
8,0	10	102	59	47	40	116,40 08000
8,1	12	118	70	55	45	179,10 08100
8,2	12	118	70	55	45	179,10 08200
8,3	12	118	70	55	45	179,10 08300
8,4	12	118	70	55	45	179,10 08400
8,5	12	118	70	55	45	179,10 08500
8,6	12	118	70	55	45	179,10 08600
8,7	12	118	70	55	45	179,10 08700
8,8	12	118	70	55	45	179,10 08800
8,9	12	118	70	55	45	179,10 08900
9,0	12	118	70	55	45	179,10 09000
9,1	12	118	70	55	45	179,10 09100
9,2	12	118	70	55	45	179,10 09200
9,3	12	118	70	55	45	179,10 09300
9,4	12	118	70	55	45	179,10 09400
9,5	12	118	70	55	45	179,10 09500
9,6	12	118	70	55	45	179,10 09600
9,7	12	118	70	55	45	179,10 09700
9,8	12	118	70	55	45	179,10 09800
9,9	12	118	70	55	45	179,10 09900
10,0	12	118	70	55	45	179,10 10000
10,2	14	124	76	60	45	212,70 10200
10,5	14	124	76	60	45	212,70 10500
11,0	14	124	76	60	45	212,70 11000
11,5	14	124	76	60	45	212,70 11500
12,0	14	124	76	60	45	212,70 12000
12,5	16	142	91	73	48	329,10 12500
13,0	16	142	91	73	48	329,10 13000
14,0	16	142	91	73	48	329,10 14000
14,3	16	142	91	73	48	411,90 14300
14,5	16	142	91	73	48	411,90 14500
15,0	18	142	91	73	48	411,90 15000
16,0	18	142	91	73	48	411,90 16000

Steel	●
Stainless steel	○
Cast iron	●
Non ferrous metals	○
Heat resistant alloys	○
Hardened materials	○

Cutting data standard values – WTX – HFDS – high-feed drill

	Index	Material	Strength N/mm² / HB / HRC	Drilling depth 3xD WTX – HFDS 10 797 ... v_c m/min with through coolant	Ø 6–8 f mm/rev.	Ø 8–10 f mm/rev.	Ø 10–12 f mm/rev.	Ø 12–14 f mm/rev.	Ø 14–16 f mm/rev.
P	1.1	General construction steel	< 800 N/mm²	**80–120**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
	1.2	Free cutting steel	< 800 N/mm²	**100–120**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
	1.3	Hardened steel, non alloyed	< 800 N/mm²	**100–120**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
	1.4	Alloyed hardened steel	< 1000 N/mm²	**80–110**	0,3–0,4	0,45–0,5	0,5–0,6	0,65–0,7	0,75–0,8
	1.5	Tempering steel, unalloyed	< 850 N/mm²	**80–110**	0,3–0,4	0,45–0,5	0,5–0,6	0,65–0,7	0,75–0,8
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	**70–90**	0,3–0,4	0,4–0,45	0,5–0,55	0,6–0,65	0,7–0,75
	1.7	Tempering steel, alloyed	< 800 N/mm²	**80–100**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,85	0,8–0,9
	1.8	Tempering steel, alloyed	< 1300 N/mm²	**70–90**	0,4–0,4	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,8
	1.9	Steel castings	< 850 N/mm²	**80–100**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
	1.10	Nitriding steel	< 1000 N/mm²	**70–90**	0,25–0,35	0,4–0,45	0,5–0,55	0,55–0,6	0,6–0,65
	1.11	Nitriding steel	< 1200 N/mm²	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
	1.12	Roller bearing steel	< 1200 N/mm²	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
	1.13	Spring steel	< 1200 N/mm²	**60–70**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
	1.14	High-speed steel	< 1300 N/mm²	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
	1.15	Cold working tool steel	< 1300 N/mm²	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
	1.16	Hot working tool steel	< 1300 N/mm²	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	80–100	0,25–0,3	0,3–0,35	0,4–0,45	0,5–0,55	0,55–0,6
	2.2	Stainless steel, ferritic	< 750 N/mm²	60–70	0,25–0,3	0,3–0,35	0,4–0,45	0,5–0,55	0,55–0,6
	2.3	Stainless steel, martensitic	< 900 N/mm²	60–70	0,25–0,3	0,3–0,35	0,4–0,45	0,5–0,55	0,55–0,6
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	50–60	0,2–0,25	0,3–0,35	0,4–0,45	0,5–0,45	0,5–0,6
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	60–70	0,2–0,3	0,35–0,4	0,45–0,5	0,45–0,5	0,6–0,7
	2.6	Stainless steel, austenitic	< 750 N/mm²	60–70	0,2–0,25	0,3–0,35	0,4–0,4	0,5–0,5	0,6–0,6
	2.7	Heat resistant steel	< 1100 N/mm²	50–60	0,2–0,25	0,3–0,35	0,4–0,4	0,5–0,5	0,6–0,6
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	**120–140**	0,4–0,6	0,5–0,8	0,6–0,8	0,7–0,9	0,8–1
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	**120–140**	0,4–0,6	0,5–0,8	0,6–0,8	0,7–0,9	0,8–1
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	**120–140**	0,4–0,6	0,5–0,8	0,6–0,8	0,7–0,9	0,8–1
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	**100–120**	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,8–1
	3.5	White malleable cast iron	270–450 N/mm²	**120–140**	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,85	0,85–0,95
	3.6	White malleable cast iron	500–650 N/mm²	**120–140**	0,4–0,6	0,5–0,6	0,65–0,7	0,7–0,8	0,7–0,85
	3.7	Black malleable cast iron	300–450 N/mm²	**120–140**	0,4–0,6	0,5–0,6	0,6–0,8	0,7–0,9	0,8–1
	3.8	Black malleable cast iron	500–800 N/mm²	**120–140**	0,4–0,5	0,5–0,6	0,6–0,8	0,7–0,9	0,8–1
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²						
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²						
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²						
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²						
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²						
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²						
	4.7	Copper wrought alloys	< 700 N/mm²						
	4.8	Special copper alloys	< 200 HB						
	4.9	Special copper alloys	< 300 HB						
	4.10	Special copper alloys	> 300 HB						
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	120–140	0,4–0,6	0,5–0,6	0,7–0,9	0,9–1,01	1,01–1,2
	4.12	Long-chipping brass	< 600 N/mm²						
	4.13	Thermoplastics							
	4.14	Duroplastics							
	4.15	Fibre-reinforced plastics							
	4.16	Magnesium and magnesium alloys	< 850 N/mm²						
	4.17	Graphite		100–120	0,6–0,6	0,8–1,01	0,9–1,1	1,01–1,2	1,1–1,4
	4.18	Tungsten and tungsten alloys							
	4.19	Molybdenum and molybdenum alloys							
S	5.1	Pure nickel							
	5.2	Nickel alloys							
	5.3	Nickel alloys	< 850 N/mm²						
	5.4	Nickel molybdenum alloys							
	5.5	Nickel-chromium alloys	< 1300 N/mm²						
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²						
	5.7	Heat resistant alloys	< 1300 N/mm²						
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²						
	5.9	Pure titanium	< 900 N/mm²						
	5.10	Titanium alloys	< 700 N/mm²	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
	5.11	Titanium alloys	< 1200 N/mm²	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
H	6.1		< 45 HRC	50–70	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
	6.2		46–55 HRC	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
	6.3	Tempered steel	56–60 HRC	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
	6.4		61–65 HRC						
	6.5		65–70 HRC						

The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

		Drilling depth 5xD WTX – HFDS 10 798 ...				
Index	v_c m/min with through coolant	Ø 6–8 f mm/rev.	Ø 8–10 f mm/rev.	Ø 10–12 f mm/rev.	Ø 12–14 f mm/rev.	Ø 14–16 f mm/rev.
1.1	**80–120**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
1.2	**100–120**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
1.3	**100–120**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
1.4	**80–110**	0,3–0,4	0,45–0,5	0,5–0,6	0,65–0,7	0,75–0,8
1.5	**80–110**	0,3–0,4	0,45–0,5	0,5–0,6	0,65–0,7	0,75–0,8
1.6	**70–90**	0,3–0,4	0,4–0,45	0,5–0,55	0,6–0,65	0,7–0,75
1.7	**80–100**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,85	0,8–0,9
1.8	**70–90**	0,4–0,4	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,8
1.9	**80–100**	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
1.10	**70–90**	0,25–0,35	0,4–0,45	0,5–0,55	0,55–0,6	0,6–0,65
1.11	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
1.12	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
1.13	**60–70**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
1.14	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
1.15	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
1.16	**60–80**	0,2–0,3	0,35–0,4	0,45–0,6	0,6–0,6	0,65–0,7
2.1	80–100	0,25–0,3	0,3–0,35	0,4–0,45	0,5–0,55	0,55–0,6
2.2	60–70	0,25–0,3	0,3–0,35	0,4–0,45	0,5–0,55	0,55–0,6
2.3	60–70	0,25–0,3	0,3–0,35	0,4–0,45	0,5–0,55	0,55–0,6
2.4	50–60	0,2–0,25	0,3–0,35	0,4–0,45	0,5–0,45	0,5–0,6
2.5	60–70	0,2–0,3	0,35–0,4	0,45–0,5	0,45–0,5	0,6–0,7
2.6	60–70	0,2–0,25	0,3–0,35	0,4–0,4	0,5–0,5	0,6–0,6
2.7	50–60	0,2–0,25	0,3–0,35	0,4–0,4	0,5–0,5	0,6–0,6
3.1	**120–140**	0,4–0,6	0,5–0,8	0,6–0,8	0,7–0,9	0,8–1
3.2	**120–140**	0,4–0,6	0,5–0,8	0,6–0,8	0,7–0,9	0,8–1
3.3	**120–140**	0,4–0,6	0,5–0,8	0,6–0,8	0,7–0,9	0,8–1
3.4	**100–120**	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,8–1
3.5	**120–140**	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,85	0,85–0,95
3.6	**120–140**	0,4–0,6	0,5–0,6	0,65–0,7	0,7–0,8	0,7–0,85
3.7	**120–140**	0,4–0,6	0,5–0,6	0,6–0,8	0,7–0,9	0,8–1
3.8	**120–140**	0,4–0,5	0,5–0,6	0,6–0,8	0,7–0,9	0,8–1
4.1						
4.2						
4.3						
4.4						
4.5						
4.6						
4.7						
4.8						
4.9						
4.10						
4.11	120–140	0,4–0,6	0,5–0,6	0,7–0,9	0,9–1,01	1,01–1,2
4.12						
4.13						
4.14						
4.15						
4.16						
4.17	100–120	0,6–0,6	0,8–1,01	0,9–1,1	1,01–1,2	1,1–1,4
4.18						
4.19						
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
5.10	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
5.11	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
6.1	50–70	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
6.2	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
6.3	40–60	0,1–0,2	0,15–0,25	0,2–0,25	0,25–0,3	0,3–0,4
6.4						
6.5						

Toolfinder

● = **Main Application** ○ = Extended application - = Not possible

KUB Centron

The specialist for holes with a large length to diameter ratio

- ▲ Cost-effective and process-secure drilling
- ▲ Hole depths up to 9xD in virtually all materials
- ▲ HSS or solid carbide centring tip for optimum positioning accuracy
- ▲ Suitable for rotating and stationary as well as for vertical and horizontal applications

Boring depth	Drilling through a transverse hole	Stack plate drilling	Drilling on uneven surfaces	Drilling	Spot drilling an edge	Spot drilling on convex surfaces	Spot drilling angled surfaces	Spot drilling a pointed contour	Chain drilling	Spot drilling through a centre in the pre-op
4xD	○	-	●	-	-	○	○	-	○	●
6xD	○	-	●	-	-	○	○	-	○	●
9xD	○	-	●	-	-	○	○	-	○	●

Drill bits

- ▲ Drill head with interchangeable indexable insert for universal application

- ▲ Drill head with interchangeable indexable insert for universal application

KUB Pentron

The specialist for large hole depths

- ▲ The all-rounder for process-secure drilling under a wide variety of conditions
- ▲ Ideal for extreme machining situations

2xD	●	●	●	○	●	●	●	●	●	●
3xD	●	●	●	○	●	●	●	●	●	●
4xD	●	○	○	-	●	●	●	●	○	●
5xD	●	○	○	-	●	○	●	○	-	○
2xD	●	●	●	○	●	●	●	●	●	●
3xD	●	●	●	○	●	●	●	●	●	●
4xD	●	○	○	-	●	●	●	●	○	●
5xD	●	○	○	-	●	○	●	○	-	○

KUB Trigon

The solution for unstable conditions and high accuracy

- ▲ Ideal for machining under unstable conditions
- ▲ Well-suited to machining on less powerful machines
- ▲ The first choice for creating dimensionally accurate holes
- ▲ Left-hand version

2xD	●	-	●	○	○	●	●	○	●	○
3xD	○	-	○	○	○	○	○	○	○	○

Shank	Pages	Insert type		No. of cutting edges	Grade	Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Pages
ABS	28		WOEX	3	-01 BK8425	●	●	●				
ABS	28		WOEX	3	-03 BK8425	●	●	●				
ABS	28		WOEX	3	-13 BK8425	●	●	●				
			WOEX	3	-01 BK7935	●	●	○	○	●		
			WOEX	3	-01 BK6115	●		●			○	27
			WOEX	3	-01 BK7615			●			○	
			WOEX	3	-01 BK62			●			○	
			WOEX	3	-11 BK77				●	●		
			WOEX	3	-13 BK79	●	●			●		

Ø DC	Pages	Centring tip	Ø DC	Coating	Pages
20–64	22+23		5–12	TiAlN	
			5–12	TiN	26
65–81	24+25		5–12	TiAlN/ TiN	

Shank	Ø DC	Pages	Insert type		No. of cutting edges	Grade	Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Pages
C	**30,5–45,5**	34		SOGX	4	-01 BK8425	●	●	●				
C	**30,5–45,5**	35		SOGX	4	-03 BK8430	●	●	●				
C	**30,5–45,5**	36		SOGX	4	-01 BK7935	●	●	○	○	●		
C	**30,5–45,5**	37		SOGX	4	-01 BK6115	●		●			○	43
ABS	**14–46**	38+39		SOGX	4	-01 BK6425	●	●	○				
ABS	**30,5–46**	40		SOGX	4	-01 BK7710				●	○		
ABS	**30,5–46**	41											
ABS	**30,5–46**	42											

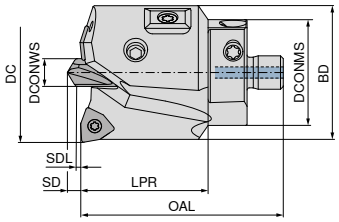
Shank	Ø DC	Pages	Insert type		No. of cutting edges	Grade	Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Pages
ABS	**14–44**	48		WOEX	3	-01 BK8425	●	●	●				
ABS	**14–44**	49		WOEX	3	-03 BK8425	●	●	●				
				WOEX	3	-13 BK8425	●	●	●				
				WOEX	3	-01 BK7935	●	●	○	○	●		
				WOEX	3	-01 BK6115	●		●			○	50
				WOEX	3	-01 BK7615			●			○	
				WOEX	3	-01 BK62			●			○	
				WOEX	3	-11 BK77				●	●		
				WOEX	3	-13 BK79	●	●			●		

KUB Centron – drill bit Ø 20–64 mm

- The pre-assembled drill bit is ready to use
- The indexable inserts and centring tip must be professionally assembled
- KLG = Coupling size

Scope of supply:

- Drill bit incl. screws, guide pads and shim set
- Order centring tip and indexable inserts separately

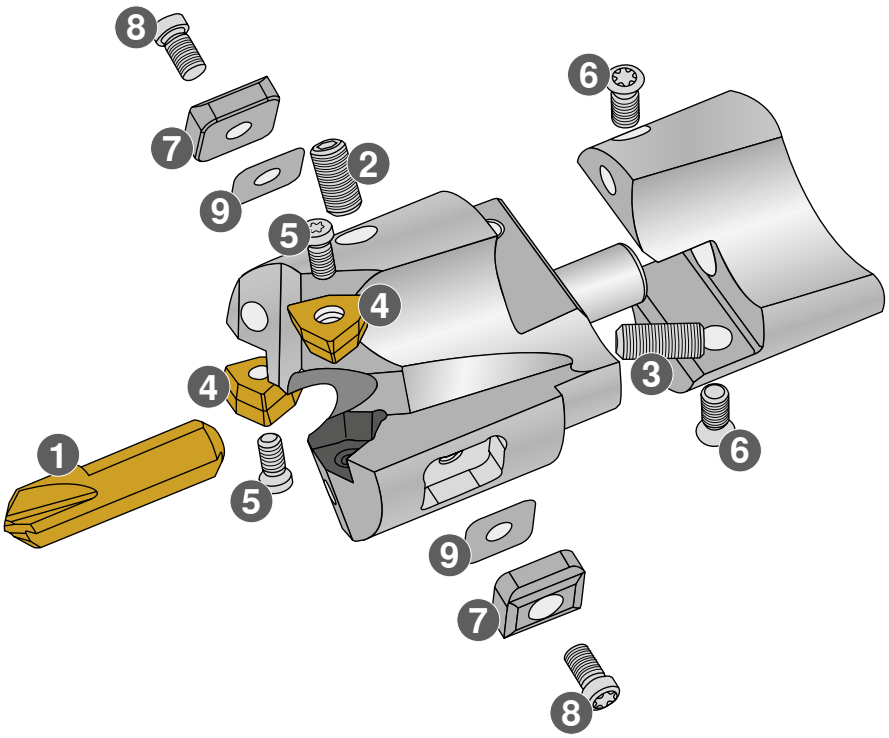


Designation	KOMET no.	DC	OAL	LPR	SD	BD	SDL	DCONMS	DCONWS	KLG	torque moment	Insert	NEW 2B/6# Article no. 10 860 ... EUR	
		mm	mm	mm	mm	mm	mm	mm	mm		Nm			
KUB-C.BK.200.R.03-19	V46 50201	20	36,5	23	2,25	19,0	1,00	19,0	5	19	0,62	WOEX 030204	353,80	**20000**
KUB-C.BK.210.R.03-19	V46 50211	21	36,5	23	2,25	20,0	1,00	19,0	5	19	0,62	WOEX 030204	353,80	**21000**
KUB-C.BK.220.R.03-19	V46 50221	22	36,5	23	2,25	21,0	1,00	19,0	5	19	0,62	WOEX 030204	353,80	**22000**
KUB-C.BK.230.R.03-19	V46 50231	23	36,5	23	2,25	22,0	1,00	19,0	5	19	0,62	WOEX 030204	353,80	**23000**
KUB-C.BK.240.R.03-19	V46 50241	24	36,5	23	2,25	23,0	1,00	19,0	5	19	0,62	WOEX 030204	353,80	**24000**
KUB-C.BK.250.R.03-19	V46 50251	25	36,5	23	2,25	24,0	1,00	19,0	5	19	0,62	WOEX 030204	353,80	**25000**
KUB-C.BK.260.R.04-25	V46 50260	26	38,0	23	2,65	25,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**26000**
KUB-C.BK.270.R.04-25	V46 50270	27	38,0	23	2,65	26,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**27000**
KUB-C.BK.280.R.04-25	V46 50280	28	38,0	23	2,65	27,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**28000**
KUB-C.BK.290.R.04-25	V46 50290	29	38,0	23	2,65	28,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**29000**
KUB-C.BK.300.R.04-25	V46 50300	30	38,0	23	2,65	29,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**30000**
KUB-C.BK.310.R.04-25	V46 50310	31	38,0	23	2,65	30,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**31000**
KUB-C.BK.320.R.04-25	V46 50320	32	38,0	23	2,65	31,0	1,10	25,0	6	25	1,01	WOEX 040304	404,60	**32000**
KUB-C.BK.330.R.05-32	V46 50330	33	39,2	23	2,65	32,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**33000**
KUB-C.BK.340.R.05-32	V46 50340	34	39,2	23	2,65	33,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**34000**
KUB-C.BK.350.R.05-32	V46 50350	35	39,2	23	2,65	34,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**35000**
KUB-C.BK.360.R.05-32	V46 50360	36	39,2	23	2,65	35,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**36000**
KUB-C.BK.370.R.05-32	V46 50370	37	39,2	23	2,65	36,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**37000**
KUB-C.BK.380.R.05-32	V46 50380	38	39,2	23	2,65	37,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**38000**
KUB-C.BK.390.R.05-32	V46 50390	39	39,2	23	2,65	38,0	1,10	32,0	6	32	1,28	WOEX 05T304	524,20	**39000**
KUB-C.BK.400.R.05-38,5	V46 50400	40	43,1	25	3,38	38,5	1,25	38,5	8	38,5	1,28	WOEX 05T304	538,70	**40000**
KUB-C.BK.410.R.05-38,5	V46 50410	41	43,1	25	3,38	39,5	1,25	38,5	8	38,5	1,28	WOEX 05T304	538,70	**41000**
KUB-C.BK.420.R.05-38,5	V46 50420	42	43,1	25	3,38	40,5	1,25	38,5	8	38,5	1,28	WOEX 05T304	538,70	**42000**
KUB-C.BK.430.R.05-38,5	V46 50430	43	43,1	25	3,38	41,5	1,25	38,5	8	38,5	1,28	WOEX 05T304	538,70	**43000**
KUB-C.BK.440.R.05-38,5	V46 50440	44	43,1	25	3,38	42,5	1,25	38,5	8	38,5	1,28	WOEX 05T304	538,70	**44000**
KUB-C.BK.450.R.05-38,5	V46 50450	45	43,1	25	3,38	43,5	1,25	38,5	8	38,5	1,28	WOEX 05T304	538,70	**45000**
KUB-C.BK.460.R.06-44,5	V46 50460	46	47,0	25	3,86	44,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**46000**
KUB-C.BK.470.R.06-44,5	V46 50470	47	47,0	25	3,86	45,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**47000**
KUB-C.BK.480.R.06-44,5	V46 50480	48	47,0	25	3,86	46,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**48000**
KUB-C.BK.490.R.06-44,5	V46 50490	49	47,0	25	3,86	47,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**49000**
KUB-C.BK.500.R.06-44,5	V46 50500	50	47,0	25	3,86	48,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**50000**
KUB-C.BK.510.R.06-44,5	V46 50510	51	47,0	25	3,86	49,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**51000**
KUB-C.BK.520.R.06-44,5	V46 50520	52	47,0	25	3,86	50,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	577,20	**52000**
KUB-C.BK.530.R.06-44,5	V46 50530	53	47,0	25	3,86	51,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	598,00	**53000**
KUB-C.BK.540.R.06-44,5	V46 50540	54	47,0	25	3,86	52,5	1,25	44,5	10	44,5	2,8	WOEX 06T304	598,00	**54000**
KUB-C.BK.550.R.08-53,5	V46 50550	55	52,0	30	3,86	53,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**55000**
KUB-C.BK.560.R.08-53,5	V46 50560	56	52,0	30	3,86	54,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**56000**
KUB-C.BK.570.R.08-53,5	V46 50570	57	52,0	30	3,86	55,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**57000**
KUB-C.BK.580.R.08-53,5	V46 50580	58	52,0	30	3,86	56,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**58000**
KUB-C.BK.590.R.08-53,5	V46 50590	59	52,0	30	3,86	57,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**59000**
KUB-C.BK.600.R.08-53,5	V46 50600	60	52,0	30	3,86	58,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**60000**
KUB-C.BK.610.R.08-53,5	V46 50610	61	52,0	30	3,86	59,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**61000**
KUB-C.BK.620.R.08-53,5	V46 50620	62	52,0	30	3,86	60,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**62000**
KUB-C.BK.630.R.08-53,5	V46 50630	63	52,0	30	3,86	61,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**63000**
KUB-C.BK.640.R.08-53,5	V46 50640	64	52,0	30	3,86	62,5	1,25	53,5	10	53,5	6,25	WOEX 080404	618,80	**64000**

Spare parts DC		W7 Guide pad clamping screw Article no. 10 950 ... EUR			W7 Indexable insert clamping screw Article no. 10 950 ... EUR		W7 Guide pad Article no. 10 950 ... EUR		W7 Shim set Article no. 10 950 ... EUR	
20	M2,5x4,2 - 8IP - 1,28Nm	2,36	11900	M2,0x4,3 - 06IP	2,36	10000	59,49	14600	18,41	15200
21 - 22	M2,5x4,2 - 8IP - 1,28Nm	2,36	11900	M2,0x4,3 - 06IP	2,36	10000	59,49	14600	18,41	15200
23 - 25	M2,5x4,5 - 8IP - 1,28Nm	2,71	11700	M2,0x4,3 - 06IP	2,36	10000	50,75	14700	18,41	15200
26 - 29	M2,5x4,5 - 8IP - 1,28Nm	2,71	11700	M2,2x5,5 - 06IP	2,36	10700	50,75	14700	18,41	15200
30 - 32	M2,5x4,5 - 8IP - 1,28Nm	2,71	11700	M2,2x5,5 - 06IP	2,36	10700	50,75	14800	18,41	15200
33 - 36	M2,5x4,5 - 8IP - 1,28Nm	2,71	11700	M2,5x7,2 - 08IP	2,36	10500	50,75	14800	18,41	15200
37 - 39	M2,5x4,5 - 8IP - 1,28Nm	2,71	11700	M2,5x7,2 - 08IP	2,36	10500	50,75	14900	18,41	15200
40 - 45	M2,5x4,5 - 8IP - 1,28Nm	2,71	11700	M2,5x7,2 - 08IP	2,36	10500	50,75	14900	18,41	15200
46 - 54	M3,5x5,0 - 8IP - 2,25Nm	2,36	11800	M3,5x7,3 - 10IP	2,36	10600	62,09	15000	18,41	15300
55 - 64	M3,5x5,0 - 8IP - 2,25Nm	2,36	11800	M4,5x9 - 15IP	2,10	12700	62,09	15100	18,41	15300

Spare parts DC		W7 Basic element clamping screw Article no. 10 950 ... EUR			W7 Centring tip clamping screw Article no. 10 950 ... EUR	
20	M2,5x6,4 - 08IP - 1,28Nm	2,36	12400	M4x6 - SW2 - 1,5Nm	2,71	12800
21 - 22	M2,5x6,4 - 08IP - 1,28Nm	2,36	12400	M4x8 - SW2 - 1,5Nm	2,71	12900
23 - 25	M2,5x6,4 - 08IP - 1,28Nm	2,36	12400	M4x8 - SW2 - 1,5Nm	2,71	12900
26 - 29	M3x7,4 - 08IP - 2,25Nm	2,36	12500	M5x10 - SW2,5 - 2,5Nm	2,71	13000
30 - 32	M3x7,4 - 08IP - 2,25Nm	2,36	12500	M5x10 - SW2,5 - 2,5Nm	2,71	13000
33 - 36	M4x8,9 - 15IP - 4,3Nm	2,36	12000	M5x12 - SW2,5 - 2,5Nm	2,71	13100
37 - 39	M4x8,9 - 15IP - 4,3Nm	2,36	12000	M5x12 - SW2,5 - 2,5Nm	2,71	13100
40 - 45	M4,5x10,5 - 20IP - 6,25Nm	2,36	12600	M6x12 - SW3 - 5Nm	2,71	13200
46 - 54	M5x11,5 - 20IP - 6,25Nm	2,36	12100	M8x16 - SW4 - 8Nm	2,71	13300
55 - 64	M5,5x14 - 20IP - 6,25Nm	2,36	12200	M8x16 - SW4 - 8Nm	2,71	13300

Exploded drawing of the drill head Ø 20–64 mm



1. Centring tip
2. Clamping screw for centring tip
3. Adjusting screw for centring tip
4. Indexable Insert
5. Clamping screw for indexable insert
6. Clamping screw for basic element
7. Guide pad
8. Clamping screw for guide pad
9. Shim set for aligning the guide pads

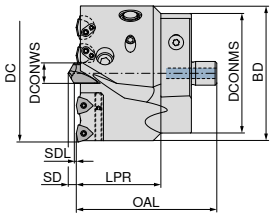
For correct assembly, please observe the operating instructions provided.

KUB Centron – drill bit Ø 65-81 mm

- The pre-assembled drill bit is ready to use
- The indexable inserts and centring tip must be professionally assembled
- KLG = Coupling size

Scope of supply:

- Drill bit incl. screws, indexable insert, carbide bolt, key, grub screw and copper disc
- Order centring tip and indexable inserts separately



Designation	KOMET no.	DC	OAL	LPR	SD	BD	SDL	DCONMS	DCONWS	KLG	torque moment	Insert	NEW 2B/6# Article no. 10 860 ...
		mm	mm	mm	mm	mm	mm	mm	mm		Nm		EUR
KUB-C.BK.650.R.08-63,5	V46 50650	65	63,0	35	4,67	63,5	1,45	63,5	12	63,5	6,25	WOEX 05T304	732,20 **65000**
KUB-C.BK.660.R.08-63,5	V46 50660	66	63,0	35	4,67	64,5	1,45	63,5	12	63,5	6,25	WOEX 05T304	732,20 **66000**
KUB-C.BK.670.R.08-63,5	V46 50670	67	63,0	35	4,67	65,5	1,45	63,5	12	63,5	6,25	WOEX 05T304	732,20 **67000**
KUB-C.BK.680.R.08-63,5	V46 50680	68	63,0	35	4,67	66,5	1,45	63,5	12	63,5	6,25	WOEX 05T304	732,20 **68000**
KUB-C.BK.690.R.08-63,5	V46 50690	69	63,0	35	4,67	67,5	1,45	63,5	12	63,5	6,25	WOEX 05T304	732,20 **69000**
KUB-C.BK.700.R.08-63,5	V46 50700	70	63,0	35	4,67	68,5	1,45	63,5	12	63,5	6,25	WOEX 05T304	732,20 **70000**
KUB-C.BK.710.R.08-70,5	V46 50710	71	63,0	35	4,67	69,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	732,20 **71000**
KUB-C.BK.720.R.08-70,5	V46 50720	72	80,5	50	4,67	70,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **72000**
KUB-C.BK.730.R.08-70,5	V46 50730	73	80,5	50	4,67	71,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **73000**
KUB-C.BK.740.R.08-70,5	V46 50740	74	80,5	50	4,67	72,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **74000**
KUB-C.BK.750.R.08-70,5	V46 50750	75	80,5	50	4,67	73,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **75000**
KUB-C.BK.760.R.08-70,5	V46 50760	76	80,5	50	4,67	74,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **76000**
KUB-C.BK.770.R.08-70,5	V46 50770	77	80,5	50	4,67	75,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **77000**
KUB-C.BK.780.R.08-70,5	V46 50780	78	80,5	50	4,67	76,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **78000**
KUB-C.BK.790.R.08-70,5	V46 50790	79	80,5	50	4,67	77,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **79000**
KUB-C.BK.800.R.08-70,5	V46 50800	80	80,5	50	4,67	78,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **80000**
KUB-C.BK.810.R.08-70,5	V46 50810	81	80,5	50	4,67	79,5	1,45	70,5	12	70,5	6,25	WOEX 05T304	859,00 **81000**

W7

Grub screw

W7

Copper disc

W7

Indexable insert fixing screw

W7

Indexable insert fixing screw

Spare parts DC		Article no. 10 950 ... EUR			Article no. 10 950 ... EUR			Article no. 10 950 ... EUR			Article no. 10 950 ... EUR	
65 - 71	M6x8 - SW3	0,87	**11300**	Ø4,5x1,5	1,75	**11400**	M4,5x11,5 - T15	2,36	**13500**			
72 - 75	M6x8 - SW3	0,87	**11300**	Ø4,5x1,5	1,75	**11400**	M5x12 - SW2,5	0,87	**11000**	M2,5x6 - 08IP - 1,28Nm	2,36	**11600**
76 - 78	M6x8 - SW3	0,87	**11300**	Ø4,5x1,5	1,75	**11400**	M5x12 - SW2,5	0,87	**11000**	M2,5x6 - 08IP - 1,28Nm	2,36	**11600**
79 - 81	M6x8 - SW3	0,87	**11300**	Ø4,5x1,5	1,75	**11400**	M5x12 - SW2,5	0,87	**11000**	M2,5x6 - 08IP - 1,28Nm	2,36	**11600**

2B/6#

Indexable insert seat

2B/6#

Indexable insert seat

W7

Indexable insert adjusting screw

W7

Basic element clamping screw

Spare parts DC		Article no. 10 950 ... EUR			Article no. 10 950 ... EUR			Article no. 10 950 ... EUR			Article no. 10 950 ... EUR	
65 - 71							M4x8 - SW2	0,87	**11100**	M6x16 - 20IP - 6,25Nm	2,44	**12300**
72 - 75		73,11	**13700**		73,11	**13600**	M4x10 - SW2	0,87	**11200**	M6x16 - 20IP - 6,25Nm	2,44	**12300**
76 - 78		73,11	**13700**		73,11	**13600**	M4x10 - SW2	0,87	**11200**	M6x16 - 20IP - 6,25Nm	2,44	**12300**
79 - 81		73,11	**13700**		73,11	**13600**	M4x10 - SW2	0,87	**11200**	M6x16 - 20IP - 6,25Nm	2,44	**12300**

W7

Carbide bolt key

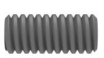
W7

Carbide bolt

W7

Indexable insert clamping screw

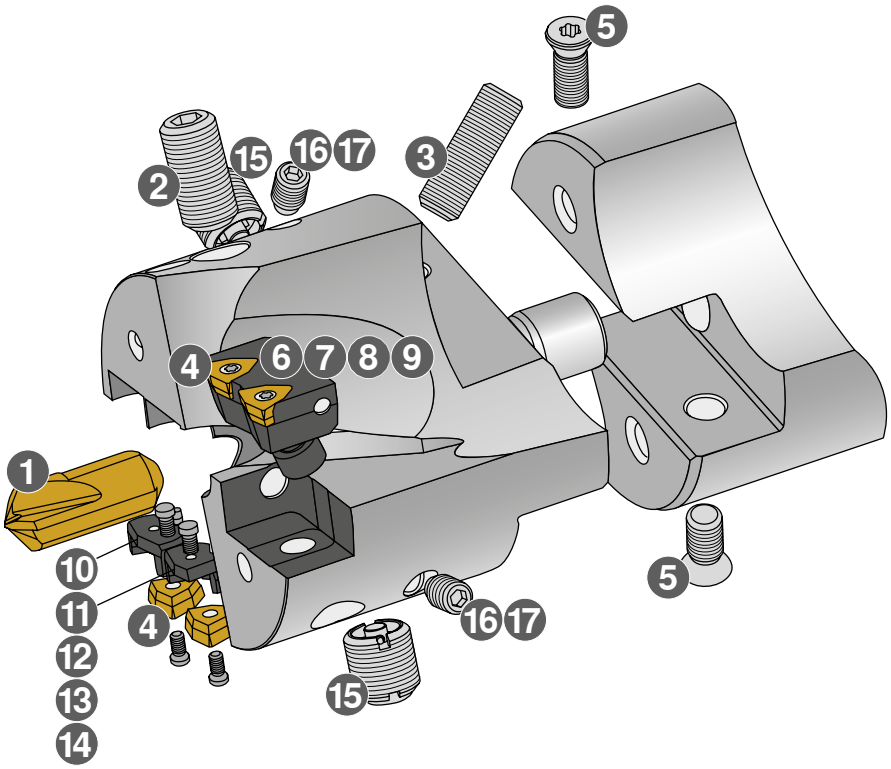
W7



Centring tip clamping screw

Spare parts DC		Article no. 10 950 ... EUR			Article no. 10 950 ... EUR			Article no. 10 950 ... EUR			Article no. 10 950 ... EUR	
65 - 71		25,37	**15500**	M12x1	116,50	**15400**	M2,5x7,2 - 08IP	2,36	**10500**	M10x20 - SW5 - 16Nm	2,71	**13400**
72 - 75		25,37	**15500**	M12x1	116,50	**15400**	M2,5x7,2 - 08IP	2,36	**10500**	M10x20 - SW5 - 16Nm	2,71	**13400**
76 - 78		25,37	**15500**	M12x1	116,50	**15400**	M2,5x7,2 - 08IP	2,36	**10500**	M10x20 - SW5 - 16Nm	2,71	**13400**
79 - 81		25,37	**15500**	M12x1	116,50	**15400**	M2,5x7,2 - 08IP	2,36	**10500**	M10x20 - SW5 - 16Nm	2,71	**13400**

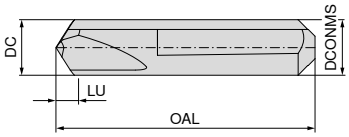
Exploded drawing of the drill head Ø 65–81 mm



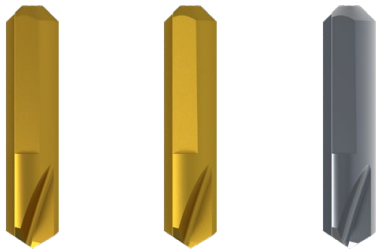
1. Centring tip
2. Clamping screw for centring tip
3. Adjusting screw for centring tip
4. Indexable Insert
5. Clamping screw for basic element
6. Indexable insert seat
7. Fixing screw for indexable insert
8. Adjusting screw for indexable insert
9. Clamping screw for indexable insert
10. Indexable insert seat
11. Indexable insert seat
12. Fixing screw for indexable insert
13. Cylindrical pin for indexable insert
14. Clamping screw for indexable insert
15. Carbide bolt
16. Grub screw
17. Copper disc

For correct assembly, please observe the operating instructions provided.

KUB Centron – centring tip



ZP	ZP	ZP
TiAlN/ TiN	TiN	TiAlN



					120° Solid carbide		120° HSS		120° HSS	
					NEW T2		NEW T2		NEW T2	
DC	KOMET no.	OAL	LU	DCONMS	Article no. 10 863 ...		Article no. 10 862 ...		Article no. 10 862 ...	
mm		mm	mm	mm	EUR		EUR		EUR	
5	V95 10012.0089	21,5	2,25	5			30,78	00500		
5	V95 10012.0090	21,5	2,25	5					30,78	10500
5	V95 10310.8450	21,5	2,25	5	60,53	20500				
6	V95 10022.0089	23,0	2,65	6			30,78	00600		
6	V95 10022.0090	23,0	2,65	6					30,78	10600
6	V95 10320.8450	23,0	2,65	6	60,53	20600				
8	V95 10032.0089	27,0	3,38	8			33,59	00800		
8	V95 10032.0090	27,0	3,38	8					33,59	10800
8	V95 10330.8450	27,0	3,38	8	74,67	20800				
10	V95 10042.0089	28,0	3,86	10			37,86	01000		
10	V95 10042.0090	28,0	3,86	10					37,86	11000
10	V95 10340.8450	28,0	3,86	10	81,12	21000				
12	V95 10050.0089	30,8	4,67	12			47,94	01200		
12	V95 10050.0090	30,8	4,67	12					47,94	11200

Steel	●	●	
Stainless steel	●		●
Cast iron	●		●
Non ferrous metals	●	●	●
Heat resistant alloys		○	
Hardened materials			

→ v_c/fz Page 30+31

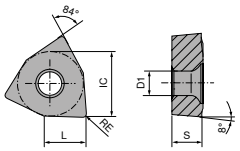
The cutting data of the KUB Centron depends on the centring tip and not on the indexable inserts. Please select the cutting data of the centring tip.

For correct assembly, please observe the operating instructions provided.

Article No. 10 863 ... is only suitable up to drilling depth 6xD.

WOEX

Designation	L	IC	S	D1
	mm	mm	mm	mm
WOEX 0302..	3,2	5,00	2,30	2,30
WOEX 0403..	4,1	6,35	3,18	2,55
WOEX 05T3..	5,3	8,00	3,80	2,85
WOEX 06T3..	6,6	10,00	3,80	4,05



ISO	KOMET no.	RE	-01 BK8425		-03 BK8425		-13 BK8425		-01 BK7935		-01 BK6115	
												
			WOEX		WOEX		WOEX		WOEX		WOEX	
			1A/3#		1A/3#		1A/3#		1A/3#		1A/3#	
			Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...	
		mm	EUR		EUR		EUR		EUR		EUR	
030204	W29 10130.048425	0,4					13,73	30313				
030204	W29 10030.048425	0,4			11,65	30303						
030204	W29 10010.047935	0,4							11,98	50301		
030204	W29 10010.048425	0,4	11,34	30301								
030204	W29 10010.046115	0,4									16,43	40301
040304	W29 18130.048425	0,4					13,83	30413				
040304	W29 18030.048425	0,4			12,38	30403						
040304	W29 18010.047935	0,4							12,71	50401		
040304	W29 18010..048425	0,4	12,06	30401								
040304	W29 18010.046115	0,4									16,54	40401
05T304	W29 24130.048425	0,4					14,14	30513				
05T304	W29 24030.048425	0,4			17,47	30503						
05T304	W29 24010.047935	0,4							12,89	50501		
05T304	W29 24010.048425	0,4	12,38	30501								
05T304	W29 24010.046115	0,4									15,91	40501
06T304	W29 34130.048425	0,4					15,60	30613				
06T304	W29 34030.048425	0,4			18,30	30603						
06T304	W29 34010.047935	0,4							14,64	50601		
06T304	W29 34010.048425	0,4	13,83	30601								
06T304	W29 34010.046115	0,4									17,68	40601
080404	W29 42130.048425	0,4					19,76	30813				
Steel			●		●		●		●		●	
Stainless steel			●		●		●		●			
Cast iron			●		●		●		○		●	
Non ferrous metals									○			
Heat resistant alloys									●			
Hardened materials											○	

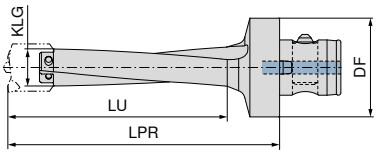
ISO	KOMET no.	RE	-01 BK7615		-01 BK62		-11 BK77		-13 BK79	
										
			WOEX		WOEX		WOEX		WOEX	
			NEW 1A/3#		1A/3#		1A/3#		NEW 1A/3#	
			Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...	
		mm	EUR		EUR		EUR		EUR	
030204	W29 10010.0462	0,4			11,80	20301				
030204	W29 10110.0477	0,4					11,80	80311		
030204	W29 10010.047615	0,4	18,93	05301						
030204	W29 10130.0479	0,4							13,73	15313
040304	W29 18110.0477	0,4					12,41	80411		
040304	W29 18010.0462	0,4			12,41	20401				
040304	W29 18010.047615	0,4	19,03	05401						
040304	W29 18130.0479	0,4							13,83	15413
05T304	W29 24110.0477	0,4					12,53	80511		
05T304	W29 24010.0462	0,4			12,53	20501				
05T304	W29 24010.047615	0,4	19,86	05501						
05T304	W29 24130.0479	0,4							14,14	15513
06T304	W29 34110.0477	0,4					14,04	80611		
06T304	W29 34010.0462	0,4			14,16	20601				
06T304	W29 34010.047615	0,4	21,32	05601						
06T304	W29 34130.0479	0,4							15,60	15613
080404	W29 42110.0477	0,4					17,99	80811		
080404	W29 42010.047615	0,4	26,00	05801						
080404	W29 42130.0479	0,4							19,97	15813
Steel									●	
Stainless steel									●	
Cast iron			●		●					
Non ferrous metals							●			
Heat resistant alloys							●		●	
Hardened materials			○		○					

KUB Centron – basic element

▲ KLG = Coupling Size

≤ 4xD

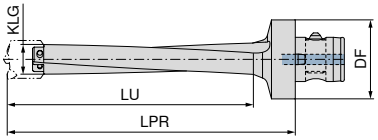
ABS



Designation	KOMET no.	DF	LU	LPR	KLG	NEW 2B/6# Article no. 10 864 ... EUR	
		mm	mm	mm			
KUB-C.GH.4D.190-ABS50	V47 20201	50	113	145	19	402,50	19095
KUB-C.GH.4D.250-ABS50	V47 20261	50	130	160	25	402,50	25095
KUB-C.GH.4D.320-ABS50	V47 20331	50	160	195	32	402,50	32095
KUB-C.GH.4D.385-ABS63	V47 20401	63	185	235	38,5	602,20	38596
KUB-C.GH.4D.445-ABS80	V47 20461	80	215	280	44,5	602,20	44598
KUB-C.GH.4D.535-ABS80	V47 20551	80	260	325	53,5	747,80	53598
KUB-C.GH.4D.635-ABS80	V47 20651	80	295	375	63,5	837,20	63598
KUB-C.GH.4D.705-ABS100	V47 20721	100	325	405	70,5	892,30	70591

≤ 6xD

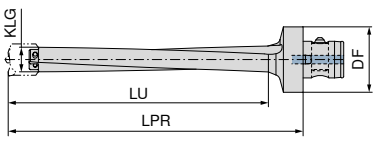
ABS



Designation	KOMET no.	DF	LU	LPR	KLG	NEW 2B/6# Article no. 10 866 ... EUR	
		mm	mm	mm			
KUB-C.GH.6D.190-ABS50	V47 40201	50	150	185	19	479,40	19095
KUB-C.GH.6D.250-ABS50	V47 40261	50	175	210	25	479,40	25095
KUB-C.GH.6D.320-ABS50	V47 40331	50	215	255	32	479,40	32095
KUB-C.GH.6D.385-ABS63	V47 40401	63	260	310	38,5	658,30	38596
KUB-C.GH.6D.445-ABS80	V47 40461	80	310	375	44,5	658,30	44598
KUB-C.GH.6D.535-ABS80	V47 40551	80	370	435	53,5	892,30	53598
KUB-C.GH.6D.635-ABS80	V47 40651	80	420	500	63,5	940,20	63598
KUB-C.GH.6D.705-ABS100	V47 40721	100	460	540	70,5	1.000,00	70591

≤ 9xD

ABS



Designation	KOMET no.	DF	LU	LPR	KLG	NEW 2B/6# Article no. 10 869 ... EUR	
		mm	mm	mm			
KUB-C.GH.9D.190-ABS50	V47 60201	50	200	235	19	529,40	19095
KUB-C.GH.9D.250-ABS50	V47 60261	50	230	260	25	529,40	25095
KUB-C.GH.9D.320-ABS50	V47 60331	50	290	330	32	529,40	32095
KUB-C.GH.9D.385-ABS63	V47 60401	63	340	390	38,5	716,60	38596
KUB-C.GH.9D.445-ABS80	V47 60461	80	415	480	44,5	716,60	44598
KUB-C.GH.9D.535-ABS80	V47 60551	80	495	560	53,5	993,20	53598
KUB-C.GH.9D.635-ABS80	V47 60651	80	560	640	63,5	1.073,00	63598
KUB-C.GH.9D.705-ABS100	V47 60721	100	610	690	70,5	1.126,00	70591

For correct assembly, please observe the operating instructions provided.

Material examples referring to the cutting data tables

	Index	Material	Strength N/mm² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²	3.2315	A- G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm²	2.1247	Cub2 (Berylium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-Al11 Fe5 Ni5)		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe -Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

Cutting data standard values – KUB Centron

		Drill bit diameter										
		Ø 20–25 mm				Ø 26–32 mm				Ø 33–45 mm			
		f	Centring tip v_c			f	Centring tip v_c			f	Centring tip v_c		
	Index	mm/rev.	10 863 ...	10 862 ... (TiN)	10 862 ... (TiAlN)	mm/rev.	10 863 ...	10 862 ... (TiN)	10 862 ... (TiAlN)	mm/rev.	10 863 ...	10 862 ... (TiN)	10 862 ... (TiAlN)
P	1.1	0,06–0,09	250	160		0,06–0,09	250	170		0,06–0,10	250	200	
	1.2	0,08–0,12	250	160		0,08–0,14	250	170		0,08–0,14	250	200	
	1.3	0,08–0,12	180	140		0,10–0,14	180	170		0,10–0,14	180	180	
	1.4	0,08–0,12	180	140		0,10–0,14	180	170		0,10–0,14	180	180	
	1.5	0,06–0,10	200	160		0,06–0,12	200	170		0,06–0,12	200	200	
	1.6	0,08–0,12	180	140		0,10–0,14	180	170		0,10–0,14	180	180	
	1.7	0,08–0,12	180	140		0,10–0,14	180	170		0,10–0,14	180	180	
	1.8	0,08–0,12	180	140		0,10–0,14	180	160		0,10–0,14	180	180	
	1.9	0,08–0,12	180	140		0,10–0,14	180	160		0,10–0,14	180	180	
	1.10	0,08–0,10	180	140		0,08–0,10	180	140		0,08–0,10	180	140	
	1.11	0,06–0,10	160	120		0,06–0,10	160	120		0,06–0,10	160	120	
	1.12	0,06–0,10	160	120		0,06–0,10	160	120		0,06–0,10	160	120	
	1.13	0,06–0,08	160	120		0,06–0,08	160	120		0,06–0,08	160	120	
	1.14	0,05–0,07	80	80		0,05–0,07	80	80		0,05–0,07	80	80	
	1.15	0,04–0,08	160	120		0,06–0,10	160	160		0,06–0,10	160	160	
	1.16	0,04–0,08	160	120		0,06–0,10	160	160		0,06–0,10	160	160	
M	2.1	0,05–0,07	180		70	0,06–0,10	180		70	0,06–0,10	180		90
	2.2	0,05–0,07	180		70	0,06–0,10	180		70	0,06–0,10	180		90
	2.3	0,05–0,07	160		70	0,06–0,10	160		70	0,06–0,10	160		90
	2.4	0,05–0,07	160		70	0,06–0,10	160		70	0,06–0,10	160		90
	2.5	0,06–0,10	160		70	0,08–0,12	160		70	0,08–0,12	160		90
	2.6	0,06–0,10	160		70	0,08–0,12	160		70	0,08–0,12	160		90
	2.7	0,05–0,08	120		70	0,06–0,10	120		70	0,06–0,10	120		90
K	3.1	0,08–0,14	200		100	0,10–0,16	200		110	0,10–0,16	200		120
	3.2	0,06–0,12	160		100	0,08–0,14	160		110	0,08–0,14	160		120
	3.3	0,06–0,12	160		100	0,08–0,14	160		110	0,08–0,14	160		120
	3.4	0,06–0,12	140		100	0,08–0,14	140		110	0,08–0,14	140		110
	3.5	0,06–0,12	120		100	0,08–0,14	120		110	0,08–0,14	120		120
	3.6	0,06–0,10	100		100	0,08–0,12	100		100	0,08–0,12	100		100
	3.7	0,06–0,12	120		100	0,08–0,14	120		110	0,08–0,14	120		120
	3.8	0,06–0,10	100		100	0,08–0,12	100		100	0,08–0,12	100		100
N	4.1	0,05–0,07	450	350	350	0,05–0,07	450	350	350	0,05–0,07	450	350	350
	4.2	0,05–0,07	350	350	350	0,05–0,07	350	350	350	0,05–0,07	350	350	350
	4.3	0,05–0,07	350	350	350	0,05–0,07	350	350	350	0,05–0,07	350	350	350
	4.4	0,06–0,10	250	250	250	0,08–0,12	250	250	250	0,10–0,14	250	250	250
	4.5	0,08–0,12	200	200	200	0,08–0,14	200	200	200	0,08–0,14	200	200	200
	4.6	0,08–0,14	250	200	200	0,10–0,16	250	200	200	0,10–0,16	250	200	200
	4.7	0,08–0,14	250	200	200	0,10–0,16	250	200	200	0,10–0,16	250	200	200
	4.8	0,08–0,14	250	200	200	0,10–0,16	250	200	200	0,10–0,16	250	200	200
	4.9	0,08–0,12	250	200	200	0,08–0,14	250	200	200	0,08–0,14	250	200	200
	4.10	0,08–0,12	250	200	200	0,08–0,14	250	200	200	0,08–0,14	250	200	200
	4.11	0,08–0,14	250	200	200	0,10–0,16	250	200	200	0,10–0,16	250	200	200
	4.12	0,08–0,14	250	200	200	0,10–0,16	250	200	200	0,10–0,16	250	200	200
	4.13												
	4.14												
	4.15	0,02–0,06	50	25	25	0,02–0,06	50	25	25	0,02–0,06	50	25	25
	4.16												
	4.17												
	4.18												
	4.19												
S	5.1												
	5.2	0,02–0,06		25		0,02–0,06		25		0,02–0,06		25	
	5.3	0,02–0,06		25		0,02–0,06		25		0,02–0,06		25	
	5.4	0,02–0,06		25		0,02–0,06		25		0,02–0,06		25	
	5.5	0,02–0,06		25		0,02–0,06		25		0,02–0,06		25	
	5.6	0,02–0,06		25		0,02–0,06		25		0,02–0,06		25	
	5.7	0,02–0,05		25		0,02–0,05		25		0,02–0,05		25	
	5.8	0,02–0,05		25		0,02–0,05		25		0,02–0,05		25	
	5.9	0,03–0,07		50		0,03–0,07		50		0,03–0,07		50	
	5.10	0,03–0,07		40		0,03–0,07		40		0,03–0,07		40	
	5.11	0,03–0,07		40		0,03–0,07		40		0,03–0,07		40	
H	6.1												
	6.2												
	6.3												
	6.4												
	6.5												

During the drilling operation on through holes a sharp disk will be produced.
Safety precautions must be observed.
A safety guard has to be provided as protection.

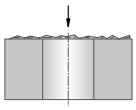
The cutting data of the KUB Centron depends on the centring tip and not on the indexable inserts. Please select the cutting data of the centring tip.

Drill bit diameter													
Ø 46–54 mm				Ø 55–64 mm				Ø 65–71 mm			Ø 72–81 mm		
f	Centring tip v_c			f	Centring tip v_c			f	Centring tip v_c		f	Centring tip v_c	
mm/rev.	10 863 ...	10 862 ... (TiN)	10 862 ... (TiAlN)	mm/rev.	10 863 ...	10 862 ... (TiN)	10 862 ... (TiAlN)	mm/rev.	10 862 ... (TiN)	10 862 ... (TiAlN)	mm/rev.	10 862 ... (TiN)	10 862 ... (TiAlN)
0,06–0,12	250	180		0,06–0,12	250	180		0,06–0,10	210		0,06–0,12	210	
0,08–0,14	250	180		0,10–0,16	250	180		0,08–0,14	210		0,10–0,16	210	
0,10–0,14	180	180		0,10–0,16	180	180		0,08–0,14	180		0,10–0,16	180	
0,10–0,14	180	180		0,10–0,16	180	180		0,08–0,14	180		0,10–0,16	180	
0,06–0,14	200	180		0,08–0,16	200	180		0,08–0,12	210		0,08–0,14	210	
0,10–0,14	180	180		0,10–0,16	180	180		0,08–0,14	180		0,10–0,16	180	
0,10–0,14	180	180		0,10–0,16	180	180		0,08–0,14	180		0,10–0,16	180	
0,10–0,14	180	180		0,10–0,16	180	180		0,08–0,14	180		0,10–0,16	180	
0,10–0,14	180	180		0,10–0,16	180	180		0,08–0,14	180		0,10–0,16	180	
0,08–0,10	180	140		0,08–0,10	180	140		0,08–0,10	140		0,08–0,10	140	
0,06–0,10	160	120		0,06–0,10	160	120		0,06–0,10	120		0,06–0,10	120	
0,06–0,10	160	120		0,06–0,10	160	120		0,06–0,10	120		0,06–0,10	120	
0,06–0,08	160	120		0,06–0,08	160	120		0,06–0,08	120		0,06–0,08	120	
0,05–0,07	80	80		0,05–0,08	80	80		0,05–0,08	80		0,05–0,08	80	
0,08–0,12	160	160		0,08–0,12	160	160		0,06–0,10	160		0,06–0,12	160	
0,08–0,12	160	160		0,08–0,12	160	160		0,06–0,10	160		0,06–0,12	160	
0,06–0,10	180		90	0,06–0,12	180		90	0,06–0,10		100	0,06–0,12		100
0,06–0,10	180		90	0,06–0,12	180		90	0,06–0,10		100	0,06–0,12		100
0,06–0,10	160		90	0,06–0,12	160		90	0,06–0,10		100	0,06–0,12		100
0,06–0,10	160		90	0,06–0,12	160		90	0,06–0,10		100	0,06–0,12		100
0,08–0,12	160		90	0,08–0,14	160		90	0,08–0,14		100	0,08–0,14		100
0,08–0,12	160		90	0,08–0,14	160		90	0,08–0,14		100	0,08–0,14		100
0,06–0,10	120		90	0,06–0,12	120		90	0,06–0,10		100	0,06–0,12		100
0,12–0,18	200		120	0,15–0,25	200		120	0,10–0,16		140	0,15–0,20		140
0,10–0,15	160		120	0,12–0,20	160		120	0,10–0,16		140	0,12–0,20		140
0,10–0,18	160		120	0,12–0,25	160		120	0,10–0,16		140	0,15–0,20		140
0,10–0,18	140		110	0,12–0,25	140		110	0,10–0,16		140	0,15–0,20		140
0,10–0,18	120		120	0,12–0,25	120		120	0,10–0,14		120	0,12–0,16		120
0,10–0,15	100		100	0,12–0,20	100		100	0,10–0,14		100	0,10–0,14		120
0,10–0,18	120		120	0,12–0,25	120		120	0,10–0,14		120	0,12–0,16		120
0,10–0,15	100		100	0,12–0,20	100		100	0,10–0,14		100	0,10–0,14		120
0,06–0,10	450	350	350	0,06–0,12	450	350	350	0,06–0,08	350	350	0,06–0,10	350	350
0,06–0,10	350	350	350	0,06–0,12	350	350	350	0,06–0,08	350	350	0,06–0,10	350	350
0,06–0,10	350	350	350	0,06–0,12	350	350	350	0,06–0,08	350	350	0,06–0,10	350	350
0,12–0,18	250	250	250	0,15–0,25	250	250	250	0,08–0,14	250	250	0,10–0,16	250	250
0,09–0,15	200	200	200	0,14–0,20	200	200	200	0,06–0,12	200	200	0,08–0,14	200	200
0,12–0,20	250	200	200	0,12–0,20	250	200	200	0,10–0,16	200	200	0,12–0,20	200	200
0,12–0,20	250	200	200	0,12–0,20	250	200	200	0,10–0,16	200	200	0,12–0,20	200	200
0,12–0,20	250	200	200	0,12–0,20	250	200	200	0,10–0,16	200	200	0,12–0,20	200	200
0,10–0,16	250	200	200	0,10–0,16	250	200	200	0,10–0,16	200	200	0,10–0,16	200	200
0,10–0,16	250	200	200	0,10–0,16	250	200	200	0,10–0,16	200	200	0,10–0,16	200	200
0,12–0,20	250	200	200	0,12–0,20	250	200	200	0,10–0,16	200	200	0,12–0,20	200	200
0,12–0,20	250	200	200	0,12–0,20	250	200	200	0,10–0,16	200	200	0,12–0,20	200	200
0,02–0,06	50	25	25	0,02–0,06	50	25	25	0,02–0,06	25	25	0,02–0,06	25	25
0,02–0,06		25		0,02–0,06		25		0,02–0,06	25		0,02–0,06	25	
0,02–0,06		25		0,02–0,06		25		0,02–0,06	25		0,02–0,06	25	
0,02–0,06		25		0,02–0,06		25		0,02–0,06	25		0,02–0,06	25	
0,02–0,06		25		0,02–0,06		25		0,02–0,06	25		0,02–0,06	25	
0,02–0,06		25		0,02–0,06		25		0,02–0,06	25		0,02–0,06	25	
0,02–0,05		25		0,02–0,05		25		0,02–0,06	25		0,02–0,06	25	
0,02–0,05		25		0,02–0,05		25		0,02–0,06	25		0,02–0,06	25	
0,03–0,07		50		0,03–0,07		50		0,02–0,06	25		0,02–0,06	25	
0,03–0,07		40		0,03–0,07		40		0,02–0,06	25		0,02–0,06	25	
0,03–0,07		40		0,03–0,07		40		0,02–0,06	25		0,02–0,06	25	

In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

Notes on drilling technology

1.



Spot drilling on uneven surfaces (casting surfaces)

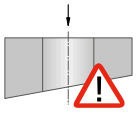
- Generally possible
- Reduce feed when spot drilling

2.

Spot drilling on angled surfaces

- The spot drilling location must be spot faced in advance
- Avoid chips jamming on the drill shank

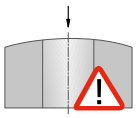
3.



Angled drill exit

- Possible under certain conditions
- If necessary, reduce feed
- Drilling angle max. 3°

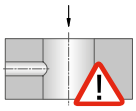
4.



Spot drilling on convex surfaces

- Central spot drilling possible with reduced feed
- If the spot drilling location is outside the centre of the radius, spot facing is required

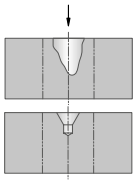
5.



Drilling through a transverse hole

- Halve the feed for interrupted cut
- Transverse hole max. 1/3 of the bore diameter
- Eccentric transverse hole not possible

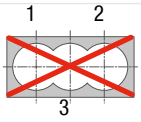
6.



Spot drilling in a pre-op or large centring hole

- Possible under certain conditions
- If necessary, reduce feed
- In the case of a large centre, face turning is required in advance
- If necessary, optimise the basic setting of the centring tip

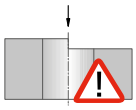
7.



Drilling a cavity

- Not possible

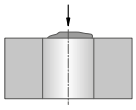
8.



Spot drilling on an edge

- Not possible with 4xD tools
- Preparation required due to undefined spot drilling location (spot facing, face milling)
- Then continue as described under Point 1

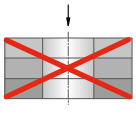
9.



Spot drilling on a forging/welding/casting seam

- Reduce feed when spot drilling
- If necessary, carry out facing in advance

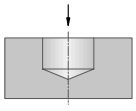
10.



Drilling through stacks

- Not possible

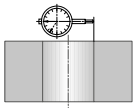
11.



Blind hole

- Possible
- Set guide rails 0.5 mm below actual x

12.



Adjustable

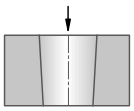
- Adjustable from a diameter of 65 mm

Problems / possible causes / solutions

Rotating and stationary application

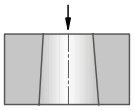
Short service life / types of wear of indexable inserts

- Cutting speed too high → select the correct cutting speed
- Grade has too little wear resistance → select a wear-resistant grade
- Tool overhang too large → if possible, use a shorter tool
- Damaged insert seat → check tool, replace if necessary
- Clamping device stability too low → increase stability



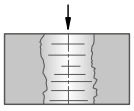
Hole tapers in

- Chip jam on the outer cutting edge → use a different chip breakage geometry, increase the feed if necessary
- Material very soft → increase the cutting speed, reduce the feed
- Use positive cutting edge geometry
- Axial adjustment of the centring tip not optimal → adjust according to the setting sheet in the operating instructions



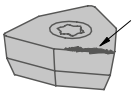
Hole tapers out

- Chip jam on the inner cutting edge → use a different chip breakage geometry, increase the feed if necessary



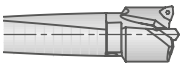
Poor surface quality

- Poor chip evacuation → optimise the cutting parameters: Increase the cutting speed, reduce the feed



Built-up edge

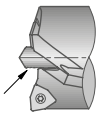
- Cutting speed too low → increase cutting speed
- Indexable insert too negative → use positive geometry
- Unsuitable coating → select the correct coating



Friction marks on the tool shank

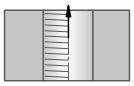
- Bore diameter too small → check the setting
- Chip evacuation problems → optimise the cutting parameters, check the geometry of the indexable insert
- Cutting radius too large → use the correct cutting radius
- Chips stuck on the supporting element, broken supporting elements, the supporting element does not have to be used for base elements of < 6xD

Stationary application



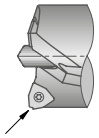
Significant wear on one side of the centring tip

- Tool not centred → tool turret/adapter may have moved → recalibrate the machine



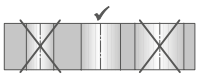
Single-sided retraction scoring

- Tool not centred → tool turret/adapter may have moved → recalibrate the machine



Edge breakage on the outer cutting edge

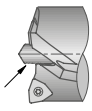
- Feed too high → reduce feed
- Interrupted cut → switch to a tougher grade of indexable insert
- Cutting radius too small → use an indexable insert with a larger cutting radius



Hole too small / too large

- Machine is not in the X-0 position → move axis to correct position
- Machine axis has been moved → recalibrate the machine

Rotating application

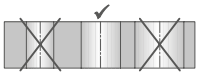


Significant wear on one side of the centring tip

- Guidance insufficient → check length adjustment of the centring tip

Edge breakage on the outer cutting edge

- Feed too high → reduce feed
- Interrupted cut → switch to a tougher grade of indexable insert
- Cutting radius too small → use an indexable insert with a larger cutting radius



Hole too small / too large

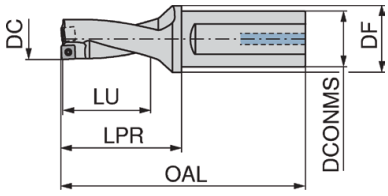
- Incorrect cutting radius used → use the correct cutting radius
- Incorrect setting → use the correct tool setting

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 2xD

C



NEW 2B/6#

Designation	KOMET no.	DC mm	DCONMS mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	Article no. 10 872 ... EUR	
KUB-P.2D.305.R.10-C40	U42 33050	30,5	40	50	154	62	86	2.8	SOGX 100408	442,00	30504
KUB-P.2D.315.R.10-C40	U42 33150	31,5	40	50	156	64	88	2.8	SOGX 100408	442,00	31504
KUB-P.2D.325.R.10-C40	U42 33250	32,5	40	50	159	66	91	2.8	SOGX 100408	442,00	32504
KUB-P.2D.335.R.11-C40	U42 33350	33,5	40	50	161	68	93	2.8	SOGX 110408	462,80	33504
KUB-P.2D.345.R.11-C40	U42 33450	34,5	40	50	164	70	96	2.8	SOGX 110408	462,80	34504
KUB-P.2D.355.R.11-C40	U42 33550	35,5	40	50	166	72	98	2.8	SOGX 110408	462,80	35504
KUB-P.2D.365.R.11-C40	U42 33650	36,5	40	50	169	74	101	2.8	SOGX 110408	462,80	36504
KUB-P.2D.375.R.12-C40	U42 33750	37,5	40	50	171	76	103	6.25	SOGX 120408	476,30	37504
KUB-P.2D.385.R.12-C40	U42 33850	38,5	40	50	174	78	106	6.25	SOGX 120408	476,30	38504
KUB-P.2D.395.R.12-C40	U42 33950	39,5	40	50	176	80	108	6.25	SOGX 120408	476,30	39504
KUB-P.2D.405.R.12-C40	U42 34050	40,5	40	50	179	82	111	6.25	SOGX 120408	476,30	40504
KUB-P.2D.415.R.12-C40	U42 34150	41,5	40	50	181	84	113	6.25	SOGX 120408	476,30	41504
KUB-P.2D.425.R.13-C40	U42 34250	42,5	40	50	184	86	116	6.25	SOGX 130508	476,30	42504
KUB-P.2D.435.R.13-C40	U42 34350	43,5	40	50	186	88	118	6.25	SOGX 130508	476,30	43504
KUB-P.2D.445.R.13-C40	U42 34450	44,5	40	50	189	90	121	6.25	SOGX 130508	476,30	44504
KUB-P.2D.455.R.13-C40	U42 34550	45,5	40	50	191	92	123	6.25	SOGX 130508	476,30	45504

Spare parts DC		Y7  Key D Article no. 80 950 ... EUR		W7  Clamping screw Article no. 10 950 ... EUR	
30,5 - 36,5	T15 - IP	11,89	128	M3,5x7,5 - 15IP	2,36 10300
37,5 - 45,5	T20 - IP	12,54	129	M4,5x10 - 20IP	2,36 10400

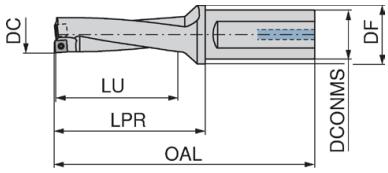
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 3xD

C



NEW 2B/6#

Designation	KOMET no.	DC mm	DCONMS mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	Article no. 10 873 ... EUR	
KUB-P.3D.305.R.10-C40	U43 33050	30,5	40	50	185	93	117	2.8	SOGX 100408	463,80	30504
KUB-P.3D.315.R.10-C40	U43 33150	31,5	40	50	188	96	120	2.8	SOGX 100408	463,80	31504
KUB-P.3D.325.R.10-C40	U43 33250	32,5	40	50	192	99	124	2.8	SOGX 100408	463,80	32504
KUB-P.3D.335.R.11-C40	U43 33350	33,5	40	50	195	102	127	2.8	SOGX 110408	485,70	33504
KUB-P.3D.345.R.11-C40	U43 33450	34,5	40	50	199	105	131	2.8	SOGX 110408	485,70	34504
KUB-P.3D.355.R.11-C40	U43 33550	35,5	40	50	202	108	134	2.8	SOGX 110408	485,70	35504
KUB-P.3D.365.R.11-C40	U43 33650	36,5	40	50	206	111	138	2.8	SOGX 110408	485,70	36504
KUB-P.3D.375.R.12-C40	U43 33750	37,5	40	50	209	114	141	6.25	SOGX 120408	500,20	37504
KUB-P.3D.385.R.12-C40	U43 33850	38,5	40	50	213	117	145	6.25	SOGX 120408	500,20	38504
KUB-P.3D.395.R.12-C40	U43 33950	39,5	40	50	216	120	148	6.25	SOGX 120408	500,20	39504
KUB-P.3D.405.R.12-C40	U43 34050	40,5	40	50	220	123	152	6.25	SOGX 120408	500,20	40504
KUB-P.3D.415.R.12-C40	U43 34150	41,5	40	50	223	126	155	6.25	SOGX 120408	500,20	41504
KUB-P.3D.425.R.13-C40	U43 34250	42,5	40	50	227	129	159	6.25	SOGX 130508	500,20	42504
KUB-P.3D.435.R.13-C40	U43 34350	43,5	40	50	230	132	162	6.25	SOGX 130508	500,20	43504
KUB-P.3D.445.R.13-C40	U43 34450	44,5	40	50	234	135	166	6.25	SOGX 130508	500,20	44504
KUB-P.3D.455.R.13-C40	U43 34550	45,5	40	50	237	138	169	6.25	SOGX 130508	500,20	45504

Y7

Key D

W7

Clamping screw

Spare parts DC		Article no. 80 950 ... EUR			Article no. 10 950 ... EUR	
30,5 - 36,5	T15 - IP	11,89	128	M3,5x7,5 - 15IP	2,36	10300
37,5 - 45,5	T20 - IP	12,54	129	M4,5x10 - 20IP	2,36	10400

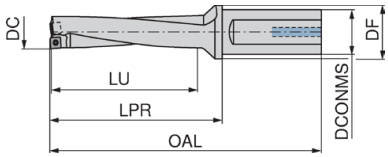
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 4xD

C



Designation	KOMET no.	DC mm	DCONMS mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 10 874 ... EUR	
KUB-P.4D.305.R.10-C40	U44 33050	30,5	40	50	216	124	148	2.8	SOGX 100408	576,20	**30504**
KUB-P.4D.315.R.10-C40	U44 33150	31,5	40	50	220	128	152	2.8	SOGX 100408	576,20	**31504**
KUB-P.4D.325.R.10-C40	U44 33250	32,5	40	50	225	132	157	2.8	SOGX 100408	576,20	**32504**
KUB-P.4D.335.R.11-C40	U44 33350	33,5	40	50	229	136	161	2.8	SOGX 110408	592,80	**33504**
KUB-P.4D.345.R.11-C40	U44 33450	34,5	40	50	234	140	166	2.8	SOGX 110408	592,80	**34504**
KUB-P.4D.355.R.11-C40	U44 33550	35,5	40	50	238	144	170	2.8	SOGX 110408	592,80	**35504**
KUB-P.4D.365.R.11-C40	U44 33650	36,5	40	50	243	148	175	2.8	SOGX 110408	592,80	**36504**
KUB-P.4D.375.R.12-C40	U44 33750	37,5	40	50	247	152	179	6.25	SOGX 120408	611,50	**37504**
KUB-P.4D.385.R.12-C40	U44 33850	38,5	40	50	252	156	184	6.25	SOGX 120408	611,50	**38504**
KUB-P.4D.395.R.12-C40	U44 33950	39,5	40	50	256	160	188	6.25	SOGX 120408	611,50	**39504**
KUB-P.4D.405.R.12-C40	U44 34050	40,5	40	50	261	164	193	6.25	SOGX 120408	611,50	**40504**
KUB-P.4D.415.R.12-C40	U44 34150	41,5	40	50	265	166	197	6.25	SOGX 120408	611,50	**41504**
KUB-P.4D.425.R.13-C40	U44 34250	42,5	40	50	270	172	202	6.25	SOGX 130508	657,30	**42504**
KUB-P.4D.435.R.13-C40	U44 34350	43,5	40	50	274	176	206	6.25	SOGX 130508	657,30	**43504**
KUB-P.4D.445.R.13-C40	U44 34450	44,5	40	50	279	180	211	6.25	SOGX 130508	657,30	**44504**
KUB-P.4D.455.R.13-C40	U44 34550	45,5	40	50	283	184	215	6.25	SOGX 130508	657,30	**45504**

Spare parts DC		Y7  Key D Article no. 80 950 ... EUR		W7  Clamping screw Article no. 10 950 ... EUR	
30,5 - 36,5	T15 - IP	11,89	**128**	M3,5x7,5 - 15IP	2,36 **10300**
37,5 - 45,5	T20 - IP	12,54	**129**	M4,5x10 - 20IP	2,36 **10400**

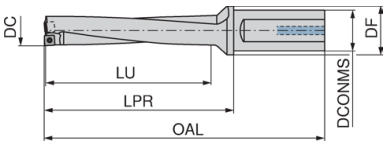
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 5xD

C



Designation	KOMET no.	DC mm	DCONMS mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 10 875 ... EUR	
KUB-P.5D.305.R.10-C40	U45 33050	30,5	40	50	247	155	179	2.8	SOGX 100408	621,90	**30504**
KUB-P.5D.315.R.10-C40	U45 33150	31,5	40	50	252	160	184	2.8	SOGX 100408	621,90	**31504**
KUB-P.5D.325.R.10-C40	U45 33250	32,5	40	50	258	165	190	2.8	SOGX 100408	621,90	**32504**
KUB-P.5D.335.R.11-C40	U45 33350	33,5	40	50	263	170	195	2.8	SOGX 110408	639,60	**33504**
KUB-P.5D.345.R.11-C40	U45 33450	34,5	40	50	269	175	201	2.8	SOGX 110408	639,60	**34504**
KUB-P.5D.355.R.11-C40	U45 33550	35,5	40	50	274	180	206	2.8	SOGX 110408	639,60	**35504**
KUB-P.5D.365.R.11-C40	U45 33650	36,5	40	50	280	185	212	2.8	SOGX 110408	639,60	**36504**
KUB-P.5D.375.R.12-C40	U45 33750	37,5	40	50	285	190	217	6.25	SOGX 120408	657,30	**37504**
KUB-P.5D.385.R.12-C40	U45 33850	38,5	40	50	291	195	223	6.25	SOGX 120408	657,30	**38504**
KUB-P.5D.395.R.12-C40	U45 33950	39,5	40	50	296	200	228	6.25	SOGX 120408	657,30	**39504**
KUB-P.5D.405.R.12-C40	U45 34050	40,5	40	50	302	205	234	6.25	SOGX 120408	657,30	**40504**
KUB-P.5D.415.R.12-C40	U45 34150	41,5	40	50	307	210	239	6.25	SOGX 120408	657,30	**41504**
KUB-P.5D.425.R.13-C40	U45 34250	42,5	40	50	313	215	245	6.25	SOGX 130508	716,60	**42504**
KUB-P.5D.435.R.13-C40	U45 34350	43,5	40	50	318	220	250	6.25	SOGX 130508	716,60	**43504**
KUB-P.5D.445.R.13-C40	U45 34450	44,5	40	50	324	225	256	6.25	SOGX 130508	716,60	**44504**
KUB-P.5D.455.R.13-C40	U45 34550	45,5	40	50	329	230	261	6.25	SOGX 130508	716,60	**45504**

Spare parts DC		Y7  Key D Article no. 80 950 ... EUR		W7  Clamping screw Article no. 10 950 ... EUR	
30,5 - 36,5	T15 - IP	11,89	**128**	M3,5x7,5 - 15IP	2,36 **10300**
37,5 - 45,5	T20 - IP	12,54	**129**	M4,5x10 - 20IP	2,36 **10400**

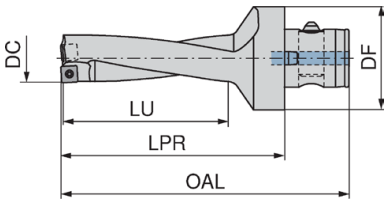
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 2xD

ABS



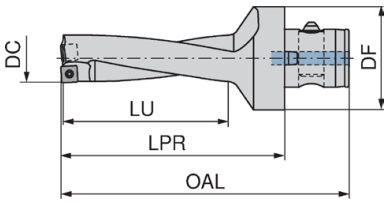
Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 10 872 ... EUR	
KUB-P.2D.140.R.04-ABS50	U42 51400	14,0	50	86	26	55	0.38	SOGX 040204	379,60	14095
KUB-P.2D.145.R.04-ABS50	U42 51450	14,5	50	89	28	58	0.38	SOGX 040204	379,60	14595
KUB-P.2D.150.R.04-ABS50	U42 51500	15,0	50	89	28	58	0.38	SOGX 040204	379,60	15095
KUB-P.2D.155.R.04-ABS50	U42 51550	15,5	50	93	32	62	0.38	SOGX 040204	379,60	15595
KUB-P.2D.160.R.04-ABS50	U42 51600	16,0	50	93	32	62	0.38	SOGX 040204	379,60	16095
KUB-P.2D.165.R.05-ABS50	U42 51650	16,5	50	96	34	65	0.62	SOGX 050204	379,60	16595
KUB-P.2D.170.R.05-ABS50	U42 51700	17,0	50	96	34	65	0.62	SOGX 050204	386,90	17095
KUB-P.2D.175.R.05-ABS50	U42 51750	17,5	50	98	36	67	0.62	SOGX 050204	386,90	17595
KUB-P.2D.180.R.05-ABS50	U42 51800	18,0	50	98	36	67	0.62	SOGX 050204	386,90	18095
KUB-P.2D.185.R.06-ABS50	U42 51850	18,5	50	101	38	70	1.01	SOGX 060206	386,90	18595
KUB-P.2D.190.R.06-ABS50	U42 51900	19,0	50	101	38	70	1.01	SOGX 060206	398,30	19095
KUB-P.2D.195.R.06-ABS50	U42 51950	19,5	50	103	40	72	1.01	SOGX 060206	398,30	19595
KUB-P.2D.200.R.06-ABS50	U42 52000	20,0	50	103	40	72	1.01	SOGX 060206	398,30	20095
KUB-P.2D.205.R.07-ABS50	U42 52050	20,5	50	105	42	74	1.01	SOGX 07T208	411,80	20595
KUB-P.2D.210.R.07-ABS50	U42 52100	21,0	50	105	42	74	1.01	SOGX 07T208	411,80	21095
KUB-P.2D.215.R.07-ABS50	U42 52150	21,5	50	107	44	76	1.01	SOGX 07T208	411,80	21595
KUB-P.2D.220.R.07-ABS50	U42 52200	22,0	50	107	44	76	1.01	SOGX 07T208	411,80	22095
KUB-P.2D.225.R.07-ABS50	U42 52250	22,5	50	109	46	78	1.01	SOGX 07T208	411,80	22595
KUB-P.2D.230.R.07-ABS50	U42 52300	23,0	50	109	46	78	1.01	SOGX 07T208	411,80	23095
KUB-P.2D.235.R.08-ABS50	U42 52350	23,5	50	111	48	80	1.28	SOGX 080308	424,30	23595
KUB-P.2D.240.R.08-ABS50	U42 52400	24,0	50	111	48	80	1.28	SOGX 080308	424,30	24095
KUB-P.2D.245.R.08-ABS50	U42 52450	24,5	50	114	50	83	1.28	SOGX 080308	424,30	24595
KUB-P.2D.250.R.08-ABS50	U42 52500	25,0	50	114	50	83	1.28	SOGX 080308	424,30	25095
KUB-P.2D.255.R.08-ABS50	U42 52550	25,5	50	116	52	85	1.28	SOGX 080308	424,30	25595
KUB-P.2D.260.R.08-ABS50	U42 52600	26,0	50	116	52	85	1.28	SOGX 080308	424,30	26095
KUB-P.2D.265.R.09-ABS50	U42 52650	26,5	50	119	54	88	2.25	SOGX 09T308	471,10	26595
KUB-P.2D.270.R.09-ABS50	U42 52700	27,0	50	119	54	88	2.25	SOGX 09T308	471,10	27095
KUB-P.2D.275.R.09-ABS50	U42 52750	27,5	50	121	56	90	2.25	SOGX 09T308	471,10	27595
KUB-P.2D.280.R.09-ABS50	U42 52800	28,0	50	121	56	90	2.25	SOGX 09T308	471,10	28095
KUB-P.2D.285.R.09-ABS50	U42 52850	28,5	50	124	58	93	2.25	SOGX 09T308	471,10	28595
KUB-P.2D.290.R.09-ABS50	U42 52900	29,0	50	124	58	93	2.25	SOGX 09T308	471,10	29095
KUB-P.2D.295.R.09-ABS50	U42 52950	29,5	50	126	60	95	2.25	SOGX 09T308	471,10	29595
KUB-P.2D.300.R.09-ABS50	U42 53000	30,0	50	126	60	95	2.25	SOGX 09T308	471,10	30095
KUB-P.2D.305.R.10-ABS63	U42 63050	30,5	63	139	62	101	2.8	SOGX 100408	496,10	30596
KUB-P.2D.310.R.10-ABS63	U42 63100	31,0	63	139	62	101	2.8	SOGX 100408	496,10	31096
KUB-P.2D.315.R.10-ABS63	U42 63150	31,5	63	141	64	103	2.8	SOGX 100408	496,10	31596
KUB-P.2D.320.R.10-ABS63	U42 63200	32,0	63	141	64	103	2.8	SOGX 100408	496,10	32096
KUB-P.2D.325.R.10-ABS63	U42 63250	32,5	63	144	66	106	2.8	SOGX 100408	496,10	32596
KUB-P.2D.330.R.10-ABS63	U42 63300	33,0	63	144	66	106	2.8	SOGX 100408	496,10	33096
KUB-P.2D.335.R.11-ABS63	U42 63350	33,5	63	146	68	108	2.8	SOGX 110408	529,40	33596
KUB-P.2D.340.R.11-ABS63	U42 63400	34,0	63	146	68	108	2.8	SOGX 110408	529,40	34096
KUB-P.2D.345.R.11-ABS63	U42 63450	34,5	63	149	70	111	2.8	SOGX 110408	529,40	34596
KUB-P.2D.350.R.11-ABS63	U42 63500	35,0	63	149	70	111	2.8	SOGX 110408	529,40	35096
KUB-P.2D.355.R.11-ABS63	U42 63550	35,5	63	152	72	113	2.8	SOGX 110408	529,40	35596
KUB-P.2D.360.R.11-ABS63	U42 63600	36,0	63	152	72	113	2.8	SOGX 110408	529,40	36096

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 2xD

ABS



NEW 2B/6#

Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	Article no. 10 872 ... EUR	
KUB-P.2D.365.R.11-ABS63	U42 63650	36,5	63	154	74	116	2.8	SOGX 110408	529,40	36596
KUB-P.2D.370.R.11-ABS63	U42 63700	37,0	63	154	74	116	2.8	SOGX 110408	529,40	37096
KUB-P.2D.375.R.12-ABS63	U42 63750	37,5	63	156	76	118	6.25	SOGX 120408	554,30	37596
KUB-P.2D.380.R.12-ABS63	U42 63800	38,0	63	156	76	118	6.25	SOGX 120408	554,30	38096
KUB-P.2D.385.R.12-ABS63	U42 63850	38,5	63	159	78	121	6.25	SOGX 120408	554,30	38596
KUB-P.2D.390.R.12-ABS63	U42 63900	39,0	63	159	78	121	6.25	SOGX 120408	554,30	39096
KUB-P.2D.395.R.12-ABS63	U42 63950	39,5	63	161	80	123	6.25	SOGX 120408	554,30	39596
KUB-P.2D.400.R.12-ABS63	U42 64000	40,0	63	161	80	123	6.25	SOGX 120408	554,30	40096
KUB-P.2D.405.R.12-ABS63	U42 64050	40,5	63	164	82	126	6.25	SOGX 120408	554,30	40596
KUB-P.2D.410.R.12-ABS63	U42 64100	41,0	63	164	82	126	6.25	SOGX 120408	554,30	41096
KUB-P.2D.415.R.12-ABS63	U42 64150	41,5	63	166	84	128	6.25	SOGX 120408	554,30	41596
KUB-P.2D.420.R.12-ABS63	U42 64200	42,0	63	166	84	128	6.25	SOGX 120408	554,30	42096
KUB-P.2D.425.R.13-ABS63	U42 64250	42,5	63	169	86	131	6.25	SOGX 130508	554,30	42596
KUB-P.2D.430.R.13-ABS63	U42 64300	43,0	63	169	86	131	6.25	SOGX 130508	554,30	43096
KUB-P.2D.435.R.13-ABS63	U42 64350	43,5	63	171	88	133	6.25	SOGX 130508	554,30	43596
KUB-P.2D.440.R.13-ABS63	U42 64400	44,0	63	171	88	133	6.25	SOGX 130508	554,30	44096
KUB-P.2D.445.R.13-ABS63	U42 64450	44,5	63	174	90	136	6.25	SOGX 130508	554,30	44596
KUB-P.2D.450.R.13-ABS63	U42 64500	45,0	63	174	90	136	6.25	SOGX 130508	554,30	45096
KUB-P.2D.455.R.13-ABS63	U42 64550	45,5	63	173	92	135	6.25	SOGX 130508	554,30	45596
KUB-P.2D.460.R.13-ABS63	U42 64600	46,0	63	173	92	135	6.25	SOGX 130508	554,30	46096

Y7

Screwdriver

Y7

Key D

W7

Clamping screw

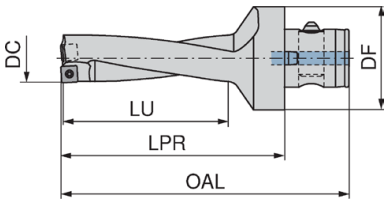
Spare parts DC		Article no. 80 950 ... EUR			Article no. 80 950 ... EUR			Article no. 10 950 ... EUR	
14 - 16	T05 - IP	6,06	057				M1,8x3,8 - 05IP	2,36	10100
16,5 - 18				T06 - IP	10,39	123	M2,0x4,3 - 06IP	2,36	10000
18,5 - 23				T06 - IP	10,39	123	M2,2x5,5 - 06IP	2,36	10700
23,5 - 26				T08 - IP	10,20	125	M2,5x6,3 - 08IP	2,36	10800
26,5 - 30				T08 - IP	10,20	125	M3,0x7,6 - 08IP	2,36	10200
30,5 - 37				T15 - IP	11,89	128	M3,5x7,5 - 15IP	2,36	10300
37,5 - 46				T20 - IP	12,54	129	M4,5x10 - 20IP	2,36	10400

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 3xD

ABS



Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 10 873 ... EUR	
KUB-P.3D.305.R.10-ABS63	U43 63050	30,5	63	170	93	132	2.8	SOGX 100408	527,30	30596
KUB-P.3D.310.R.10-ABS63	U43 63100	31,0	63	170	93	132	2.8	SOGX 100408	527,30	31096
KUB-P.3D.315.R.10-ABS63	U43 63150	31,5	63	173	96	135	2.8	SOGX 100408	527,30	31596
KUB-P.3D.320.R.10-ABS63	U43 63200	32,0	63	173	96	135	2.8	SOGX 100408	527,30	32096
KUB-P.3D.325.R.10-ABS63	U43 63250	32,5	63	177	99	139	2.8	SOGX 100408	527,30	32596
KUB-P.3D.330.R.10-ABS63	U43 63300	33,0	63	177	99	139	2.8	SOGX 100408	527,30	33096
KUB-P.3D.335.R.11-ABS63	U43 63350	33,5	63	180	102	142	2.8	SOGX 110408	561,60	33596
KUB-P.3D.340.R.11-ABS63	U43 63400	34,0	63	180	102	142	2.8	SOGX 110408	561,60	34096
KUB-P.3D.345.R.11-ABS63	U43 63450	34,5	63	184	105	146	2.8	SOGX 110408	561,60	34596
KUB-P.3D.350.R.11-ABS63	U43 63500	35,0	63	184	105	146	2.8	SOGX 110408	561,60	35096
KUB-P.3D.355.R.11-ABS63	U43 63550	35,5	63	187	108	149	2.8	SOGX 110408	561,60	35596
KUB-P.3D.360.R.11-ABS63	U43 63600	36,0	63	187	108	149	2.8	SOGX 110408	561,60	36096
KUB-P.3D.365.R.11-ABS63	U43 63650	36,5	63	191	111	153	2.8	SOGX 110408	561,60	36596
KUB-P.3D.370.R.11-ABS63	U43 63700	37,0	63	191	111	153	2.8	SOGX 110408	561,60	37096
KUB-P.3D.375.R.12-ABS63	U43 63750	37,5	63	194	114	156	6.25	SOGX 120408	588,60	37596
KUB-P.3D.380.R.12-ABS63	U43 63800	38,0	63	194	114	156	6.25	SOGX 120408	588,60	38096
KUB-P.3D.385.R.12-ABS63	U43 63850	38,5	63	198	117	160	6.25	SOGX 120408	588,60	38596
KUB-P.3D.390.R.12-ABS63	U43 63900	39,0	63	198	117	160	6.25	SOGX 120408	588,60	39096
KUB-P.3D.395.R.12-ABS63	U43 63950	39,5	63	201	120	163	6.25	SOGX 120408	588,60	39596
KUB-P.3D.400.R.12-ABS63	U43 64000	40,0	63	201	120	163	6.25	SOGX 120408	588,60	40096
KUB-P.3D.405.R.12-ABS63	U43 64050	40,5	63	205	123	167	6.25	SOGX 120408	588,60	40596
KUB-P.3D.410.R.12-ABS63	U43 64100	41,0	63	205	123	167	6.25	SOGX 120408	588,60	41096
KUB-P.3D.415.R.12-ABS63	U43 64150	41,5	63	208	126	170	6.25	SOGX 120408	588,60	41596
KUB-P.3D.420.R.12-ABS63	U43 64200	42,0	63	208	126	170	6.25	SOGX 120408	588,60	42096
KUB-P.3D.425.R.13-ABS63	U43 64250	42,5	63	212	129	174	6.25	SOGX 130508	588,60	42596
KUB-P.3D.430.R.13-ABS63	U43 64300	43,0	63	212	129	174	6.25	SOGX 130508	588,60	43096
KUB-P.3D.435.R.13-ABS63	U43 64350	43,5	63	215	132	177	6.25	SOGX 130508	588,60	43596
KUB-P.3D.440.R.13-ABS63	U43 64400	44,0	63	215	132	177	6.25	SOGX 130508	588,60	44096
KUB-P.3D.445.R.13-ABS63	U43 64450	44,5	63	219	135	181	6.25	SOGX 130508	588,60	44596
KUB-P.3D.450.R.13-ABS63	U43 64500	45,0	63	219	135	181	6.25	SOGX 130508	588,60	45096
KUB-P.3D.455.R.13-ABS63	U43 64550	45,5	63	219	138	181	6.25	SOGX 130508	588,60	45596
KUB-P.3D.460.R.13-ABS63	U43 64600	46,0	63	219	138	181	6.25	SOGX 130508	588,60	46096

Y7

Key D

W7

Clamping screw

Spare parts DC		Article no. 80 950 ... EUR		Article no. 10 950 ... EUR	
30,5 - 37	T15 - IP	11,89	128	M3,5x7,5 - 15IP	2,36 10300
37,5 - 46	T20 - IP	12,54	129	M4,5x10 - 20IP	2,36 10400

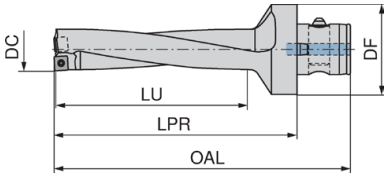
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 4xD

ABS



Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 10 874 ... EUR	
KUB-P.4D.305.R.10-ABS63	U44 63050	30,5	63	201	124	163	2.8	SOGX 100408	635,40	30596
KUB-P.4D.310.R.10-ABS63	U44 63100	31,0	63	201	124	163	2.8	SOGX 100408	635,40	31096
KUB-P.4D.315.R.10-ABS63	U44 63150	31,5	63	205	128	167	2.8	SOGX 100408	635,40	31596
KUB-P.4D.320.R.10-ABS63	U44 63200	32,0	63	205	128	167	2.8	SOGX 100408	635,40	32096
KUB-P.4D.325.R.10-ABS63	U44 63250	32,5	63	210	132	172	2.8	SOGX 100408	635,40	32596
KUB-P.4D.330.R.10-ABS63	U44 63300	33,0	63	210	132	172	2.8	SOGX 100408	635,40	33096
KUB-P.4D.335.R.11-ABS63	U44 63350	33,5	63	214	136	176	2.8	SOGX 110408	650,00	33596
KUB-P.4D.340.R.11-ABS63	U44 63400	34,0	63	214	136	176	2.8	SOGX 110408	650,00	34096
KUB-P.4D.345.R.11-ABS63	U44 63450	34,5	63	219	140	181	2.8	SOGX 110408	650,00	34596
KUB-P.4D.350.R.11-ABS63	U44 63500	35,0	63	219	140	181	2.8	SOGX 110408	650,00	35096
KUB-P.4D.355.R.11-ABS63	U44 63550	35,5	63	223	144	185	2.8	SOGX 110408	650,00	35596
KUB-P.4D.360.R.11-ABS63	U44 63600	36,0	63	223	144	185	2.8	SOGX 110408	650,00	36096
KUB-P.4D.365.R.11-ABS63	U44 63650	36,5	63	228	148	190	2.8	SOGX 110408	650,00	36596
KUB-P.4D.370.R.11-ABS63	U44 63700	37,0	63	228	148	190	2.8	SOGX 110408	650,00	37096
KUB-P.4D.375.R.12-ABS63	U44 63750	37,5	63	232	152	194	6.25	SOGX 120408	668,70	37596
KUB-P.4D.380.R.12-ABS63	U44 63800	38,0	63	232	152	194	6.25	SOGX 120408	668,70	38096
KUB-P.4D.385.R.12-ABS63	U44 63850	38,5	63	237	156	199	6.25	SOGX 120408	668,70	38596
KUB-P.4D.390.R.12-ABS63	U44 63900	39,0	63	237	156	199	6.25	SOGX 120408	668,70	39096
KUB-P.4D.395.R.12-ABS63	U44 63950	39,5	63	241	160	203	6.25	SOGX 120408	668,70	39596
KUB-P.4D.400.R.12-ABS63	U44 64000	40,0	63	241	160	203	6.25	SOGX 120408	668,70	40096
KUB-P.4D.405.R.12-ABS63	U44 64050	40,5	63	246	164	208	6.25	SOGX 120408	668,70	40596
KUB-P.4D.410.R.12-ABS63	U44 64100	41,0	63	246	164	208	6.25	SOGX 120408	668,70	41096
KUB-P.4D.415.R.12-ABS63	U44 64150	41,5	63	250	168	212	6.25	SOGX 120408	668,70	41596
KUB-P.4D.420.R.12-ABS63	U44 64200	42,0	63	250	168	212	6.25	SOGX 120408	668,70	42096
KUB-P.4D.425.R.13-ABS63	U44 64250	42,5	63	255	172	217	6.25	SOGX 130508	716,60	42596
KUB-P.4D.430.R.13-ABS63	U44 64300	43,0	63	255	172	217	6.25	SOGX 130508	716,60	43096
KUB-P.4D.435.R.13-ABS63	U44 64350	43,5	63	259	176	221	6.25	SOGX 130508	716,60	43596
KUB-P.4D.440.R.13-ABS63	U44 64400	44,0	63	259	176	221	6.25	SOGX 130508	716,60	44096
KUB-P.4D.445.R.13-ABS63	U44 64450	44,5	63	264	180	226	6.25	SOGX 130508	716,60	44596
KUB-P.4D.450.R.13-ABS63	U44 64500	45,0	63	264	180	226	6.25	SOGX 130508	716,60	45096
KUB-P.4D.455.R.13-ABS63	U44 64550	45,5	63	268	184	230	6.25	SOGX 130508	716,60	45596
KUB-P.4D.460.R.13-ABS63	U44 64600	46,0	63	268	184	230	6.25	SOGX 130508	716,60	46096

Y7

Key D

W7

Clamping screw

Spare parts DC		Article no. 80 950 ... EUR		Article no. 10 950 ... EUR	
30,5 - 37	T15 - IP	11,89	128	M3,5x7,5 - 15IP	2,36	10300
37,5 - 46	T20 - IP	12,54	129	M4,5x10 - 20IP	2,36	10400

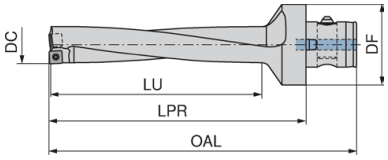
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Pentron

Scope of supply:
Indexable Insert Drill incl. clamping screws

≤ 5xD

ABS



Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 10 875 ... EUR	
KUB-P.5D.305.R.10-ABS63	U45 63050	30,5	63	232	155	194	2.8	SOGX 100408	681,20	30596
KUB-P.5D.310.R.10-ABS63	U45 63100	31,0	63	232	155	194	2.8	SOGX 100408	681,20	31096
KUB-P.5D.315.R.10-ABS63	U45 63150	31,5	63	237	160	199	2.8	SOGX 100408	681,20	31596
KUB-P.5D.320.R.10-ABS63	U45 63200	32,0	63	237	160	199	2.8	SOGX 100408	681,20	32096
KUB-P.5D.325.R.10-ABS63	U45 63250	32,5	63	243	165	205	2.8	SOGX 100408	681,20	32596
KUB-P.5D.330.R.10-ABS63	U45 63300	33,0	63	243	165	205	2.8	SOGX 100408	681,20	33096
KUB-P.5D.335.R.11-ABS63	U45 63350	33,5	63	248	170	210	2.8	SOGX 110408	697,80	33596
KUB-P.5D.340.R.11-ABS63	U45 63400	34,0	63	248	170	210	2.8	SOGX 110408	697,80	34096
KUB-P.5D.345.R.11-ABS63	U45 63450	34,5	63	254	175	216	2.8	SOGX 110408	697,80	34596
KUB-P.5D.350.R.11-ABS63	U45 63500	35,0	63	254	175	216	2.8	SOGX 110408	697,80	35096
KUB-P.5D.355.R.11-ABS63	U45 63550	35,5	63	259	180	221	2.8	SOGX 110408	697,80	35596
KUB-P.5D.360.R.11-ABS63	U45 63600	36,0	63	259	180	221	2.8	SOGX 110408	697,80	36096
KUB-P.5D.365.R.11-ABS63	U45 63650	36,5	63	265	185	227	2.8	SOGX 110408	697,80	36596
KUB-P.5D.370.R.11-ABS63	U45 63700	37,0	63	265	185	227	2.8	SOGX 110408	697,80	37096
KUB-P.5D.375.R.12-ABS63	U45 63750	37,5	63	270	190	232	6.25	SOGX 120408	716,60	37596
KUB-P.5D.380.R.12-ABS63	U45 63800	38,0	63	270	190	232	6.25	SOGX 120408	716,60	38096
KUB-P.5D.385.R.12-ABS63	U45 63850	38,5	63	276	195	238	6.25	SOGX 120408	716,60	38596
KUB-P.5D.390.R.12-ABS63	U45 63900	39,0	63	276	195	238	6.25	SOGX 120408	716,60	39096
KUB-P.5D.395.R.12-ABS63	U45 63950	39,5	63	281	200	243	6.25	SOGX 120408	716,60	39596
KUB-P.5D.400.R.12-ABS63	U45 64000	40,0	63	281	200	243	6.25	SOGX 120408	716,60	40096
KUB-P.5D.405.R.12-ABS63	U45 64050	40,5	63	287	205	249	6.25	SOGX 120408	716,60	40596
KUB-P.5D.410.R.12-ABS63	U45 64100	41,0	63	287	205	249	6.25	SOGX 120408	716,60	41096
KUB-P.5D.415.R.12-ABS63	U45 64150	41,5	63	292	210	254	6.25	SOGX 120408	716,60	41596
KUB-P.5D.420.R.12-ABS63	U45 64200	42,0	63	292	210	254	6.25	SOGX 120408	716,60	42096
KUB-P.5D.425.R.13-ABS63	U45 64250	42,5	63	298	215	260	6.25	SOGX 130508	774,80	42596
KUB-P.5D.430.R.13-ABS63	U45 64300	43,0	63	298	215	260	6.25	SOGX 130508	774,80	43096
KUB-P.5D.435.R.13-ABS63	U45 64350	43,5	63	303	220	265	6.25	SOGX 130508	774,80	43596
KUB-P.5D.440.R.13-ABS63	U45 64400	44,0	63	303	220	265	6.25	SOGX 130508	774,80	44096
KUB-P.5D.445.R.13-ABS63	U45 64450	44,5	63	309	225	271	6.25	SOGX 130508	774,80	44596
KUB-P.5D.450.R.13-ABS63	U45 64500	45,0	63	309	225	271	6.25	SOGX 130508	774,80	45096
KUB-P.5D.455.R.13-ABS63	U45 64550	45,5	63	314	230	276	6.25	SOGX 130508	774,80	45596
KUB-P.5D.460.R.13-ABS63	U45 64600	46,0	63	314	230	276	6.25	SOGX 130508	774,80	46096

Y7

Key D

W7

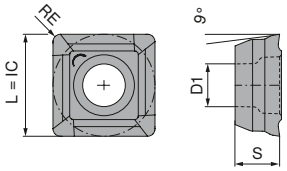
Clamping screw

Spare parts DC		Article no. 80 950 ... EUR			Article no. 10 950 ... EUR	
30,5 - 37	T15 - IP	11,89	128	M3,5x7,5 - 15IP	2,36	10300
37,5 - 46	T20 - IP	12,54	129	M4,5x10 - 20IP	2,36	10400

Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

SOGX

Designation	L	IC	D1	S
	mm	mm	mm	mm
SOGX 0402..	4,8	4,8	2,05	2,20
SOGX 0502..	5,5	5,5	2,30	2,40
SOGX 0602..	6,2	6,2	2,60	2,75
SOGX 07T2..	7,1	7,1	2,60	2,97
SOGX 0803..	8,0	8,0	2,85	3,40
SOGX 09T3..	8,9	8,9	3,40	3,90
SOGX 1004..	9,8	9,8	4,10	4,20
SOGX 1104..	10,9	10,9	4,10	4,50
SOGX 1204..	12,0	12,0	5,20	4,80
SOGX 1305..	13,2	13,2	5,20	5,20



SOGX

ISO	KOMET no.	RE	-01 BK8425	-03 BK8430	-01 BK7935	-01 BK6115	-01 BK6425	-01 BK7710
								
			SOGX	SOGX	SOGX	SOGX	SOGX	SOGX
			NEW 1A/3#	NEW 1A/3#	NEW 1A/3#	NEW 1A/3#	NEW 1A/3#	NEW 1A/3#
			Article no. 10 820 ...	Article no. 10 820 ...	Article no. 10 820 ...	Article no. 10 820 ...	Article no. 10 820 ...	Article no. 10 820 ...
		mm	EUR	EUR	EUR	EUR	EUR	EUR
040204	W80 10010.047935	0,4			16,13 50401			
040204	W80 10010.046115	0,4				16,12 40401		
040204	W80 10030.048430	0,4		16,12 00403				
040204	W80 10010.046425	0,4					16,13 60401	
040204	W80 10010.048425	0,4	16,12 30401					
040204	W80 10010.047710	0,4						16,13 90401
050204	W80 12010.046115	0,4				16,22 40501		
050204	W80 12010.047935	0,4			16,24 50501			
050204	W80 12030.048430	0,4		16,22 00503				
050204	W80 12010.046425	0,4					16,24 60501	
050204	W80 12010.048425	0,4	16,22 30501					
050204	W80 12010.047710	0,4						16,24 90501
060206	W80 18010.066115	0,6				16,33 40601		
060206	W80 18010.067935	0,6			16,36 50601			
060206	W80 18030.068430	0,6		16,33 00603				
060206	W80 18010.066425	0,6					16,36 60601	
060206	W80 18010.068425	0,6	16,33 30601					
060206	W80 18010.067710	0,6						16,36 90601
07T208	W80 20010.086115	0,8				16,43 40701		
07T208	W80 20010.087935	0,8			16,47 50701			
07T208	W80 20030.088430	0,8		16,43 00703				
07T208	W80 20010.086425	0,8					16,47 60701	
07T208	W80 20010.088425	0,8	16,43 30701					
07T208	W80 20010.087710	0,8						16,47 90701
080308	W80 24010.086115	0,8				16,54 40801		
080308	W80 24010.087935	0,8			16,53 50801			
080308	W80 24030.088430	0,8		16,54 00803				
080308	W80 24010.086425	0,8					16,53 60801	
080308	W80 24010.088425	0,8	16,54 30801					
080308	W80 24010.087710	0,8						16,53 90801
09T308	W80 28010.086115	0,8				17,16 40901		
09T308	W80 28010.087935	0,8			17,15 50901			
09T308	W80 28030.088430	0,8		17,16 00903				
09T308	W80 28010.086425	0,8					17,15 60901	
09T308	W80 28010.088425	0,8	17,16 30901					
09T308	W80 28010.087710	0,8						17,15 90901
100408	W80 32010.087935	0,8			17,71 51001			
100408	W80 32010.086425	0,8					17,71 61001	
100408	W80 32030.088430	0,8		17,68 01003				
100408	W80 32010.087710	0,8						17,71 91001
110408	W80 38010.086425	0,8					18,21 61101	
110408	W80 38010.087935	0,8			18,21 51101			
110408	W80 38030.088430	0,8		18,20 01103				
110408	W80 38010.087710	0,8						18,21 91101
120408	W80 42010.086425	0,8					19,12 61201	
120408	W80 42010.087935	0,8			19,12 51201			
120408	W80 42030.088430	0,8		19,14 01203				
120408	W80 42010.087710	0,8						19,12 91201
130508	W80 46010.087935	0,8			22,32 51301			
130508	W80 46010.086425	0,8					22,32 61301	
130508	W80 46030.088430	0,8		22,26 01303				
130508	W80 46010.087710	0,8						22,32 91301

Steel	●	●	●	●	●		
Stainless steel	●	●	●		●		
Cast iron	●	●	○	●	○		
Non ferrous metals			○				●
Heat resistant alloys			●				○
Hardened materials				○			

→ v_c/f_z Page 45–47

Material examples referring to the cutting data tables

	Index	Material	Strength N/mm² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²	3.2315	A- G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm²	2.1247	Cub2 (Berylium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-Al11 Fe5 Ni5)		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe -Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

Cutting data standard values – KUB Pentron – SOGX indexable inserts

		BK8425	BK8430	BK7935	BK6115	BK6425	BK7710
	Index	v_c m/min	v_c m/min	v_c m/min	v_c m/min	v_c m/min	v_c m/min
P	1.1	200–320	200-300	200–300	250–350	270–370	
	1.2	200–320	200-320	200–300	250–350	270–370	
	1.3	250–300	250-300	250–300	250–300	250–320	
	1.4	250–300	250-300	250–300	250–300	250–320	
	1.5	250–300	250-300	250–300	250–300	250–320	
	1.6	140–220	140-220	120–200	200–280	220–300	
	1.7	140–220	140-220	120–200	200–280	220–300	
	1.8	140–220	140-220	120–200	200–280	220–300	
	1.9	250–300	250-300	250–300	250–300	250–320	
	1.10	140–220	140-220	120–200	200–280	220–300	
	1.11	140–220	140-220	120–200	200–280	220–300	
	1.12	140–220	140-220	120–200	200–280	220–300	
	1.13	140–220	140-220	120–200	200–280	220–300	
	1.14	50–90	140-220	120–200	70–110	220–300	
	1.15	120–200	120-200	100–180	170–230	190–250	
	1.16	120–200	120-200	100–180	170–230	190–250	
M	2.1	150–210	150-210	140–220		190–250	
	2.2	150–210	150-210	140–220		190–250	
	2.3	150–210	150-210	140–220		190–250	
	2.4	120–200	120-200	120–200		170–230	
	2.5	110–190	110-190	120–200		170–230	
	2.6	120–200	120-200	120–200		170–230	
	2.7	110–190	110-190	120–200		170–230	
K	3.1	140–220	140-220	110-190	160–320	150-250	
	3.2	140–220	140-220	110-190	160–320	150-250	
	3.3	140–220	140-220	110-190	120–200	120-200	
	3.4	120–180	120-180	80-140	100–180	90-150	
	3.5	110–170	110-170	80-140	90–150	90-150	
	3.6	110–170	110-170	80-140	90–150	90-150	
	3.7	110–170	110-170	80-140	90–150	90-150	
	3.8	110–170	110-170	80-140	90–150	90-150	
N	4.1			300-500			300–700
	4.2			300-500			300–700
	4.3			180-320			210–350
	4.4			150-250			140–300
	4.5			150-250			140–300
	4.6			200-400			250–450
	4.7			200-400			250–450
	4.8			200-400			250–450
	4.9			200-400			250–450
	4.10			200-400			250–450
	4.11			200-400			250–450
	4.12			200-400			250–450
	4.13						
	4.14						
	4.15						
	4.16						
	4.17						
	4.18						
	4.19						
S	5.1			20–80			
	5.2			20–80			
	5.3			20–80			
	5.4			20–80			
	5.5			20–80			
	5.6			20–80			
	5.7			20–80			
	5.8			20–80			
	5.9			40–100			
	5.10			40–80			40-80
	5.11			40–80			40-80
H	6.1				50-90		
	6.2				30-50		
	6.3						
	6.4						
	6.5						

During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed.
A safety guard has to be provided as protection.

In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

Cutting data standard values – KUB Pentron

		2xD / 3xD – C and ABS											
	Index	Ø 14–15,5 mm	Ø 16–17,5 mm	Ø 18–19,5 mm	Ø 20–21,5 mm	Ø 22–23,5 mm	Ø 24–25,5 mm	Ø 26–27,5 mm	Ø 28–30 mm	Ø 31–33 mm	Ø 34–37 mm	Ø 38–42 mm	Ø 43–46 mm
		f in mm/rev.											
P	1.1	0,04–0,10	0,04–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12
	1.2	0,04–0,10	0,04–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12
	1.3	0,04–0,10	0,04–0,14	0,10–0,15	0,10–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16
	1.4	0,04–0,10	0,04–0,14	0,10–0,15	0,10–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16
	1.5	0,04–0,10	0,04–0,14	0,10–0,15	0,10–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16
	1.6	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.7	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.8	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.9	0,04–0,10	0,04–0,14	0,10–0,15	0,10–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16
	1.10	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.11	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.12	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.13	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.14	0,08–0,16	0,08–0,20	0,11–0,20	0,11–0,20	0,13–0,22	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,24	0,14–0,25	0,14–0,25	0,14–0,25
	1.15	0,06–0,12	0,06–0,15	0,10–0,15	0,09–0,20	0,12–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22
	1.16	0,06–0,12	0,06–0,15	0,10–0,15	0,09–0,20	0,12–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22
M	2.1	0,06–0,14	0,08–0,14	0,08–0,14	0,08–0,16	0,10–0,18	0,12–0,18	0,12–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18
	2.2	0,06–0,14	0,08–0,14	0,08–0,14	0,08–0,16	0,10–0,18	0,12–0,18	0,12–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18
	2.3	0,06–0,14	0,08–0,14	0,08–0,14	0,08–0,16	0,10–0,18	0,12–0,18	0,12–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18
	2.4	0,06–0,14	0,08–0,14	0,08–0,14	0,08–0,16	0,10–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18
	2.5	0,06–0,11	0,06–0,10	0,06–0,10	0,06–0,13	0,09–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	2.6	0,06–0,14	0,08–0,14	0,08–0,14	0,08–0,16	0,10–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18
	2.7	0,06–0,11	0,06–0,10	0,06–0,10	0,06–0,13	0,09–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
K	3.1	0,08–0,18	0,10–0,18	0,10–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.2	0,08–0,18	0,10–0,18	0,10–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.3	0,08–0,18	0,12–0,18	0,12–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.4	0,08–0,18	0,12–0,18	0,12–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.5	0,08–0,18	0,12–0,18	0,12–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.6	0,08–0,18	0,12–0,18	0,12–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.7	0,08–0,18	0,12–0,18	0,12–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
	3.8	0,08–0,18	0,12–0,18	0,12–0,18	0,12–0,22	0,14–0,205	0,16–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30
N	4.1	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18
	4.2	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.3	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.4	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.5	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.6	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.7	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.8	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.9	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.10	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.11	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,25
	4.12	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,25
	4.13	0,06–0,12	0,07–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.14	0,04–0,09	0,04–0,09	0,04–0,09	0,04–0,10	0,04–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12
	4.15	0,06–0,14	0,06–0,14	0,06–0,14	0,06–0,14	0,06–0,14	0,10–0,17	0,10–0,17	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
	4.16												
	4.17												
	4.18												
	4.19												
S	5.1	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.2	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.3	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.4	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.5	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.6	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.7	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.8	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.9	0,03–0,07	0,04–0,08	0,04–0,08	0,05–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,15
	5.10	0,04–0,10	0,04–0,10	0,07–0,10	0,05–0,12	0,06–0,12	0,06–0,12	0,07–0,15	0,07–0,15	0,07–0,15	0,08–0,16	0,08–0,16	0,08–0,18
	5.11	0,04–0,10	0,04–0,10	0,07–0,10	0,05–0,12	0,06–0,12	0,06–0,12	0,07–0,15	0,07–0,15	0,07–0,15	0,08–0,16	0,08–0,16	0,08–0,18
H	6.1	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06	0,02–0,06
	6.2	0,01–0,03	0,01–0,03	0,01–0,03	0,01–0,03	0,01–0,02	0,01–0,02	0,01–0,02	0,01–0,02	0,01–0,02	0,01–0,02	0,01–0,02	0,01–0,02
	6.3												
	6.4												
	6.5												

During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed.
A safety guard has to be provided as protection.

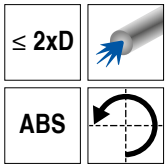
4xD – C and ABS				5xD – C and ABS			
Ø 30,5–33 mm	Ø 34–37 mm	Ø 38–42 mm	Ø 43–46 mm	Ø 31–33 mm	Ø 34–37 mm	Ø 38–42 mm	Ø 43–46 mm
f in mm/rev.				f in mm/rev.			
0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,12
0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,12
0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,09–0,14	0,09–0,14	0,09–0,14	0,09–0,14
0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,09–0,14	0,09–0,14	0,09–0,14	0,09–0,14
0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,09–0,14	0,09–0,14	0,09–0,14	0,09–0,14
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,11–0,16	0,11–0,16	0,11–0,16	0,11–0,16	0,09–0,14	0,09–0,14	0,09–0,14	0,09–0,14
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,20	0,14–0,20	0,14–0,20	0,14–0,20
0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,22	0,14–0,20	0,14–0,20	0,14–0,20	0,14–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,14	0,10–0,14	0,10–0,14	0,10–0,14
0,12–0,18	0,12–0,18	0,12–0,18	0,12–0,18	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,14	0,10–0,14	0,10–0,14	0,10–0,14
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,20–0,30	0,20–0,30	0,20–0,30	0,20–0,30	0,18–0,28	0,18–0,28	0,18–0,28	0,18–0,28
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,18
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,25	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,25
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,25	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,25
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12
0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20	0,10–0,18	0,10–0,18	0,10–0,18	0,10–0,20
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,05–0,12	0,05–0,12	0,05–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10

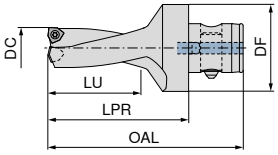
In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

KUB Trigon

▲ left-hand cutting

Scope of supply:
Indexable Insert Drill incl. clamping screws





Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 11 892 ...	EUR	
KUB-T.2D.140.L.03-ABS50	V30 21402	14	50	94	28	63	0,62	WOEX 030204		356,70	14095
KUB-T.2D.150.L.03-ABS50	V30 21502	15	50	96	30	65	0,62	WOEX 030204		356,70	15095
KUB-T.2D.160.L.03-ABS50	V30 21600	16	50	98	32	67	0,62	WOEX 030204		356,70	16095
KUB-T.2D.170.L.03-ABS50	V30 21700	17	50	100	34	69	0,62	WOEX 030204		356,70	17095
KUB-T.2D.180.L.03-ABS50	V30 21800	18	50	102	36	71	0,62	WOEX 030204		356,70	18095
KUB-T.2D.190.L.03-ABS50	V30 21900	19	50	104	38	73	0,62	WOEX 030204		356,70	19095
KUB-T.2D.200.L.04-ABS50	V30 22000	20	50	106	40	75	1,01	WOEX 040304		358,80	20095
KUB-T.2D.210.L.04-ABS50	V30 22100	21	50	108	42	77	1,01	WOEX 040304		358,80	21095
KUB-T.2D.220.L.04-ABS50	V30 22200	22	50	110	44	79	1,01	WOEX 040304		358,80	22095
KUB-T.2D.230.L.04-ABS50	V30 22300	23	50	112	46	81	1,01	WOEX 040304		358,80	23095
KUB-T.2D.240.L.04-ABS50	V30 22400	24	50	114	48	83	1,01	WOEX 040304		358,80	24095
KUB-T.2D.250.L.05-ABS50	V30 22500	25	50	116	50	85	1,28	WOEX 05T304		364,00	25095
KUB-T.2D.260.L.05-ABS50	V30 22600	26	50	118	52	87	1,28	WOEX 05T304		364,00	26095
KUB-T.2D.270.L.05-ABS50	V30 22700	27	50	120	54	89	1,28	WOEX 05T304		364,00	27095
KUB-T.2D.280.L.05-ABS50	V30 22800	28	50	122	56	91	1,28	WOEX 05T304		364,00	28095
KUB-T.2D.290.L.05-ABS50	V30 22900	29	50	124	58	93	1,28	WOEX 05T304		364,00	29095
KUB-T.2D.300.L.05-ABS50	V30 23000	30	50	131	60	100	1,28	WOEX 05T304		364,00	30095
KUB-T.2D.310.L.05-ABS50	V30 23100	31	50	133	62	102	1,28	WOEX 05T304		364,00	31095
KUB-T.2D.320.L.05-ABS50	V30 23200	32	50	135	64	104	1,28	WOEX 05T304		364,00	32095
KUB-T.2D.330.L.05-ABS50	V30 23300	33	50	137	66	106	1,28	WOEX 05T304		364,00	33095
KUB-T.2D.340.L.05-ABS50	V30 23400	34	50	139	68	108	1,28	WOEX 05T304		364,00	34095
KUB-T.2D.350.L.05-ABS50	V30 23500	35	50	141	70	110	1,28	WOEX 05T304		364,00	35095
KUB-T.2D.360.L.05-ABS50	V30 23600	36	50	143	72	112	1,28	WOEX 05T304		364,00	36095
KUB-T.2D.370.L.06-ABS50	V30 23700	37	50	155	74	124	2,8	WOEX 06T304		382,70	37095
KUB-T.2D.380.L.06-ABS50	V30 23800	38	50	157	76	126	2,8	WOEX 06T304		382,70	38095
KUB-T.2D.390.L.06-ABS50	V30 23900	39	50	159	78	128	2,8	WOEX 06T304		382,70	39095
KUB-T.2D.400.L.06-ABS50	V30 24000	40	50	161	80	130	2,8	WOEX 06T304		382,70	40095
KUB-T.2D.410.L.06-ABS50	V30 24100	41	50	163	82	132	2,8	WOEX 06T304		382,70	41095
KUB-T.2D.420.L.06-ABS50	V30 24200	42	50	165	84	134	2,8	WOEX 06T304		382,70	42095
KUB-T.2D.430.L.06-ABS50	V30 24300	43	50	167	86	136	2,8	WOEX 06T304		382,70	43095
KUB-T.2D.440.L.06-ABS50	V30 24400	44	50	169	88	138	2,8	WOEX 06T304		382,70	44095

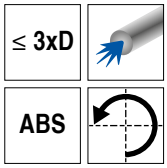
DC	Y7 Key D Article no. 80 950 ...	EUR		W7 Clamping screw Article no. 10 950 ...	EUR	
14 - 19				M2,0x4,3 - 06IP	2,36	10000
20 - 24				M2,2x5,5 - 06IP	2,36	10700
25 - 36	T08 - IP	10,20	125	M2,5x7,2 - 08IP	2,36	10500
37 - 44				M3,5x7,3 - 10IP	2,36	10600

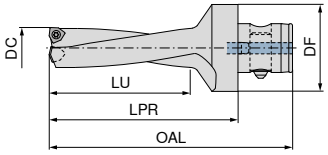
Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

KUB Trigon

▲ left-hand cutting

Scope of supply:
Indexable Insert Drill incl. clamping screws





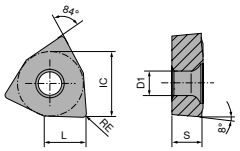
Designation	KOMET no.	DC mm	DF mm	OAL mm	LU mm	LPR mm	torque moment Nm	Insert	NEW 2B/6# Article no. 11 893 ... EUR	
KUB-T.3D.140.L.03-ABS50	V30 61402	14	50	108	42	77	0,62	WOEX 030204	392,10	14095
KUB-T.2D.430.L.06-ABS50	V30 61502	15	50	111	45	80	0,62	WOEX 030204	392,10	15095
KUB-T.3D.160.L.03-ABS50	V30 61600	16	50	114	48	83	0,62	WOEX 030204	392,10	16095
KUB-T.3D.170.L.03-ABS50	V30 61700	17	50	117	51	86	0,62	WOEX 030204	392,10	17095
KUB-T.3D.180.L.03-ABS50	V30 61800	18	50	120	54	89	0,62	WOEX 030204	392,10	18095
KUB-T.3D.190.L.03-ABS50	V30 61900	19	50	123	57	92	0,62	WOEX 030204	392,10	19095
KUB-T.3D.200.L.04-ABS50	V30 62000	20	50	126	60	95	1,01	WOEX 040304	399,40	20095
KUB-T.3D.210.L.04-ABS50	V30 62100	21	50	129	63	98	1,01	WOEX 040304	399,40	21095
KUB-T.3D.220.L.04-ABS50	V30 62200	22	50	132	66	101	1,01	WOEX 040304	399,40	22095
KUB-T.3D.230.L.04-ABS50	V30 62300	23	50	135	69	104	1,01	WOEX 040304	399,40	23095
KUB-T.3D.240.L.04-ABS50	V30 62400	24	50	138	72	107	1,01	WOEX 040304	399,40	24095
KUB-T.3D.250.L.05-ABS50	V30 62500	25	50	141	75	110	1,28	WOEX 05T304	408,70	25095
KUB-T.3D.260.L.05-ABS50	V30 62600	26	50	144	78	113	1,28	WOEX 05T304	408,70	26095
KUB-T.3D.270.L.05-ABS50	V30 62700	27	50	147	81	116	1,28	WOEX 05T304	408,70	27095
KUB-T.3D.280.L.05-ABS50	V30 62800	28	50	150	84	119	1,28	WOEX 05T304	408,70	28095
KUB-T.3D.290.L.05-ABS50	V30 62900	29	50	153	87	122	1,28	WOEX 05T304	408,70	29095
KUB-T.3D.300.L.05-ABS50	V30 63000	30	50	161	90	130	1,28	WOEX 05T304	408,70	30095
KUB-T.3D.310.L.05-ABS50	V30 63100	31	50	164	93	133	1,28	WOEX 05T304	408,70	31095
KUB-T.3D.320.L.05-ABS50	V30 63200	32	50	167	96	136	1,28	WOEX 05T304	408,70	32095
KUB-T.3D.330.L.05-ABS50	V30 63300	33	50	170	99	139	1,28	WOEX 05T304	408,70	33095
KUB-T.3D.340.L.05-ABS50	V30 63400	34	50	173	102	142	1,28	WOEX 05T304	408,70	34095
KUB-T.3D.350.L.05-ABS50	V30 63500	35	50	176	105	145	1,28	WOEX 05T304	408,70	35095
KUB-T.3D.360.L.05-ABS50	V30 63600	36	50	179	108	148	1,28	WOEX 05T304	408,70	36095
KUB-T.3D.370.L.06-ABS50	V30 63700	37	50	192	111	161	2,8	WOEX 06T304	444,10	37095
KUB-T.3D.380.L.06-ABS50	V30 63800	38	50	195	114	164	2,8	WOEX 06T304	444,10	38095
KUB-T.3D.390.L.06-ABS50	V30 63900	39	50	198	117	167	2,8	WOEX 06T304	444,10	39095
KUB-T.3D.400.L.06-ABS50	V30 64000	40	50	201	120	170	2,8	WOEX 06T304	444,10	40095
KUB-T.3D.410.L.06-ABS50	V30 64100	41	50	204	123	173	2,8	WOEX 06T304	444,10	41095
KUB-T.3D.420.L.06-ABS50	V30 64200	42	50	207	126	176	2,8	WOEX 06T304	444,10	42095
KUB-T.3D.430.L.06-ABS50	V30 64300	43	50	210	129	179	2,8	WOEX 06T304	444,10	43095
KUB-T.3D.440.L.06-ABS50	V30 64400	44	50	213	132	182	2,8	WOEX 06T304	444,10	44095

Spare parts DC	Y7 Key D Article no. 80 950 ...	EUR		W7 Clamping screw Article no. 10 950 ...	EUR	
14 - 19	T06 - IP	10,39	123	M2,0x4,3 - 06IP	2,36	10000
20 - 24	T06 - IP	10,39	123	M2,2x5,5 - 06IP	2,36	10700
25 - 36	T08 - IP	10,20	125	M2,5x7,2 - 08IP	2,36	10500
37 - 44				M3,5x7,3 - 10IP	2,36	10600

Further diameters can be found in the main catalogue → **Section 3, Indexable insert drilling**

WOEX

Designation	L	IC	S	D1
	mm	mm	mm	mm
WOEX 0302..	3,2	5,00	2,30	2,30
WOEX 0403..	4,1	6,35	3,18	2,55
WOEX 05T3..	5,3	8,00	3,80	2,85
WOEX 06T3..	6,6	10,00	3,80	4,05



ISO	KOMET no.	RE	-01 BK8425		-03 BK8425		-13 BK8425		-01 BK7935		-01 BK6115	
												
			WOEX		WOEX		WOEX		WOEX		WOEX	
			1A/3#		1A/3#		1A/3#		1A/3#		1A/3#	
			Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...	
		mm	EUR		EUR		EUR		EUR		EUR	
030204	W29 10130.048425	0,4					13,73	30313				
030204	W29 10030.048425	0,4			11,65	30303						
030204	W29 10010.047935	0,4							11,98	50301		
030204	W29 10010.048425	0,4	11,34	30301								
030204	W29 10010.046115	0,4									16,43	40301
040304	W29 18130.048425	0,4					13,83	30413				
040304	W29 18030.048425	0,4			12,38	30403						
040304	W29 18010.047935	0,4							12,71	50401		
040304	W29 18010..048425	0,4	12,06	30401								
040304	W29 18010.046115	0,4									16,54	40401
05T304	W29 24130.048425	0,4					14,14	30513				
05T304	W29 24030.048425	0,4			17,47	30503						
05T304	W29 24010.047935	0,4							12,89	50501		
05T304	W29 24010.048425	0,4	12,38	30501								
05T304	W29 24010.046115	0,4									15,91	40501
06T304	W29 34130.048425	0,4					15,60	30613				
06T304	W29 34030.048425	0,4			18,30	30603						
06T304	W29 34010.047935	0,4							14,64	50601		
06T304	W29 34010.048425	0,4	13,83	30601								
06T304	W29 34010.046115	0,4									17,68	40601
080404	W29 42130.048425	0,4					19,76	30813				
Steel			●		●		●		●		●	
Stainless steel			●		●		●		●			
Cast iron			●		●		●		○		●	
Non ferrous metals									○			
Heat resistant alloys									●			
Hardened materials											○	

ISO	KOMET no.	RE	-01 BK7615		-01 BK62		-11 BK77		-13 BK79	
										
			WOEX		WOEX		WOEX		WOEX	
			NEW 1A/3#		1A/3#		1A/3#		NEW 1A/3#	
			Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...		Article no. 10 821 ...	
		mm	EUR		EUR		EUR		EUR	
030204	W29 10010.0462	0,4			11,80	20301				
030204	W29 10110.0477	0,4					11,80	80311		
030204	W29 10010.047615	0,4	18,93	05301						
030204	W29 10130.0479	0,4							13,73	15313
040304	W29 18110.0477	0,4					12,41	80411		
040304	W29 18010.0462	0,4			12,41	20401				
040304	W29 18010.047615	0,4	19,03	05401						
040304	W29 18130.0479	0,4							13,83	15413
05T304	W29 24110.0477	0,4					12,53	80511		
05T304	W29 24010.0462	0,4			12,53	20501				
05T304	W29 24010.047615	0,4	19,86	05501						
05T304	W29 24130.0479	0,4							14,14	15513
06T304	W29 34110.0477	0,4					14,04	80611		
06T304	W29 34010.0462	0,4			14,16	20601				
06T304	W29 34010.047615	0,4	21,32	05601						
06T304	W29 34130.0479	0,4							15,60	15613
080404	W29 42110.0477	0,4					17,99	80811		
080404	W29 42010.047615	0,4	26,00	05801						
080404	W29 42130.0479	0,4							19,97	15813
Steel									●	
Stainless steel									●	
Cast iron			●		●					
Non ferrous metals							●			
Heat resistant alloys							●		●	
Hardened materials			○		○					

BK8425 -03 and BK6115 -01 are exclusively recommended for use on the peripheral cutting edge!

Cutting data standard values – KUB Trigon – WOEX indexable inserts

	Index	Material	Strength N/mm² / HB / HRC	BK8425 v_c m/min	BK79 v_c m/min	BK77 v_c m/min	BK7935 v_c m/min	BK7615 v_c m/min	BK62 v_c m/min
P	1.1	General construction steel	< 800 N/mm²	200–320	160–280		200–300		
	1.2	Free cutting steel	< 800 N/mm²	200–320	160–280		200–300		
	1.3	Hardened steel, non alloyed	< 800 N/mm²	250–300	210–260		250–300		
	1.4	Alloyed hardened steel	< 1000 N/mm²	250–300	210–260		250–300		
	1.5	Tempering steel, unalloyed	< 850 N/mm²	250–300	210–260		250–300		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	140–220	100–180		120–200		
	1.7	Tempering steel, alloyed	< 800 N/mm²	140–220	100–180		120–200		
	1.8	Tempering steel, alloyed	< 1300 N/mm²	140–220	100–180		120–200		
	1.9	Steel castings	< 850 N/mm²	250–300	210–260		250–300		
	1.10	Nitriding steel	< 1000 N/mm²	140–220	100–180		120–200		
	1.11	Nitriding steel	< 1200 N/mm²	140–220	100–180		120–200		
	1.12	Roller bearing steel	< 1200 N/mm²	140–220	100–180		120–200		
	1.13	Spring steel	< 1200 N/mm²	140–220	100–180		120–200		
	1.14	High-speed steel	< 1300 N/mm²	50–90	30–70		120–200		
	1.15	Cold working tool steel	< 1300 N/mm²	120–200	80–160		100–180		
	1.16	Hot working tool steel	< 1300 N/mm²	120–200	80–160		100–180		
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	150–210	120–190		140–220		
	2.2	Stainless steel, ferritic	< 750 N/mm²	150–210	120–190		140–220		
	2.3	Stainless steel, martensitic	< 900 N/mm²	150–210	120–190		140–220		
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	120–200	100–170		120–200		
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	110–190	80–160		120–200		
	2.6	Stainless steel, austenitic	< 750 N/mm²	120–200	100–170		120–200		
	2.7	Heat resistant steel	< 1100 N/mm²	110–190	80–160		120–200		
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	140–220			110–190	180–350	140–220
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	140–220			110–190	180–350	140–220
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	140–220			110–190	140–240	140–220
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	120–180			80–140	120–200	120–180
	3.5	White malleable cast iron	270–450 N/mm²	110–170			80–140	100–180	110–170
	3.6	White malleable cast iron	500–650 N/mm²	110–170			80–140	100–180	110–170
	3.7	Black malleable cast iron	300–450 N/mm²	110–170			80–140	100–180	110–170
	3.8	Black malleable cast iron	500–800 N/mm²	110–170			80–140	100–180	110–170
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²			300–700	300–500		
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²			300–700	300–500		
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²			210–350	180–320		
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²			140–300	150–250		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²			140–300	150–250		
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²			250–450	200–400		
	4.7	Copper wrought alloys	< 700 N/mm²			250–450	200–400		
	4.8	Special copper alloys	< 200 HB			250–450	200–400		
	4.9	Special copper alloys	< 300 HB			250–450	200–400		
	4.10	Special copper alloys	> 300 HB			250–450	200–400		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²			250–450	200–400		
	4.12	Long-chipping brass	< 600 N/mm²			250–450	200–400		
	4.13	Thermoplastics							
	4.14	Duroplastics							
	4.15	Fibre-reinforced plastics							
	4.16	Magnesium and magnesium alloys	< 850 N/mm²						
	4.17	Graphite							
	4.18	Tungsten and tungsten alloys							
	4.19	Molybdenum and molybdenum alloys							
S	5.1	Pure nickel			25–50	20–80	20–80		
	5.2	Nickel alloys			25–50	20–80	20–80		
	5.3	Nickel alloys	< 850 N/mm²		25–50	20–80	20–80		
	5.4	Nickel molybdenum alloys			25–50	20–80	20–80		
	5.5	Nickel-chromium alloys	< 1300 N/mm²		25–50	20–80	20–80		
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²		25–50	20–80	20–80		
	5.7	Heat resistant alloys	< 1300 N/mm²		25–50	20–80	20–80		
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²		25–50	20–80	20–80		
	5.9	Pure titanium	< 900 N/mm²		35–100	40–100	40–100		
	5.10	Titanium alloys	< 700 N/mm²		35–80	40–80	40–80		
	5.11	Titanium alloys	< 1200 N/mm²		35–80	40–80	40–80		
H	6.1		< 45 HRC					50-90	50-90
	6.2		46–55 HRC					30-50	30-50
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

Cutting data standard values – KUB Trigon

		2xD – ABS						
	Index	Ø 14–16 mm	Ø 17–19 mm	Ø 20–24 mm	Ø 25–29 mm	Ø 30–36 mm	Ø 37–40 mm	Ø 41–44 mm
		f in mm/rev.						
P	1.1	0,04–0,08	0,04–0,10	0,04–0,10	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12
	1.2	0,04–0,08	0,04–0,10	0,04–0,10	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12
	1.3	0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
	1.4	0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
	1.5	0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
	1.6	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.7	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.8	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.9	0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
	1.10	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.11	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.12	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.13	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
	1.14	0,03–0,05	0,03–0,06	0,04–0,08	0,06–0,10	0,07–0,10	0,08–0,12	0,08–0,12
	1.15	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,12	0,08–0,12	0,08–0,12	0,08–0,14
	1.16	0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,12	0,08–0,12	0,08–0,12	0,08–0,14
M	2.1	0,04–0,06	0,04–0,08	0,06–0,10	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
	2.2	0,04–0,06	0,04–0,08	0,06–0,10	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
	2.3	0,04–0,06	0,04–0,08	0,06–0,10	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
	2.4	0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,14
	2.5	0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,12
	2.6	0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,14
	2.7	0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,12
K	3.1	0,06–0,10	0,06–0,12	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
	3.2	0,06–0,10	0,06–0,12	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
	3.3	0,06–0,08	0,06–0,10	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
	3.4	0,06–0,08	0,06–0,10	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
	3.5	0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
	3.6	0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
	3.7	0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
	3.8	0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
N	4.1	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.2	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.3	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.4	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.5	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.6	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.7	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.8	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.9	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.10	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.11	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.12	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.13	0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
	4.14	0,04–0,09	0,04–0,09	0,04–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12
	4.15	0,06–0,14	0,06–0,14	0,06–0,14	0,10–0,17	0,10–0,18	0,10–0,18	0,10–020
	4.16							
	4.17							
	4.18							
	4.19							
S	5.1	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.2	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.3	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.4	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.5	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.6	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.7	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.8	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.9	0,03–0,07	0,04 –0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.10	0,04 –0,10	0,04 –0,10	0,04 –0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
	5.11	0,04 –0,10	0,04 –0,10	0,04 –0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
H	6.1	0,03–0,05	0,03–0,05	0,04–0,08	0,06–0,10	0,06–0,10	0,08–0,12	0,08–0,12
	6.2	0,03–0,05	0,03–0,05	0,04–0,08	0,06–0,10	0,06–0,10	0,06–0,10	0,06–0,10
	6.3							
	6.4							
	6.5							

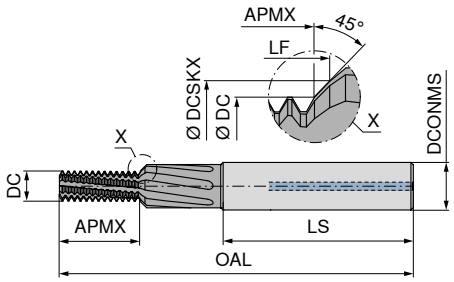
During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed.
A safety guard has to be provided as protection.

3xD – ABS						
Ø 14–16 mm	Ø 17–19 mm	Ø 20–24 mm	Ø 25–29 mm	Ø 30–36 mm	Ø 37–40 mm	Ø 41–44 mm
f in mm/rev.						
0,04–0,08	0,04–0,10	0,04–0,10	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12
0,04–0,08	0,04–0,10	0,04–0,10	0,06–0,12	0,06–0,12	0,06–0,12	0,06–0,12
0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,12	0,07–0,14	0,07–0,14	0,07–0,14	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,14	0,08–0,16	0,08–0,16	0,08–0,16
0,03–0,05	0,03–0,06	0,04–0,08	0,06–0,1	0,07–0,1	0,08–0,12	0,08–0,12
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,12	0,08–0,12	0,08–0,12	0,08–0,14
0,04–0,06	0,04–0,08	0,06–0,10	0,07–0,12	0,08–0,12	0,08–0,12	0,08–0,14
0,04–0,06	0,04–0,08	0,06–0,10	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
0,04–0,06	0,04–0,08	0,06–0,10	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
0,04–0,06	0,04–0,08	0,06–0,10	0,08–0,14	0,08–0,14	0,08–0,14	0,08–0,14
0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,14
0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,12
0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,14
0,04–0,06	0,04–0,06	0,06–0,08	0,08–0,12	0,08–0,12	0,08–0,12	0,08–0,12
0,06–0,10	0,06–0,12	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
0,06–0,10	0,06–0,12	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
0,06–0,08	0,06–0,10	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
0,06–0,08	0,06–0,10	0,08–0,14	0,10–0,20	0,10–0,20	0,10–0,20	0,10–0,25
0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
0,06–0,10	0,06–0,12	0,08–0,16	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,06–0,14	0,08–0,15	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16	0,10–0,16
0,04–0,09	0,04–0,09	0,04–0,10	0,05–0,12	0,05–0,12	0,05–0,12	0,05–0,12
0,06–0,14	0,06–0,14	0,06–0,14	0,10–0,17	0,10–0,18	0,10–0,18	0,10–0,20
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,07	0,04 -0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,04 -0,10	0,04 -0,10	0,04 -0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,04 -0,10	0,04 -0,10	0,04 -0,10	0,05–0,10	0,05–0,10	0,05–0,10	0,05–0,10
0,03–0,05	0,03–0,05	0,04–0,08	0,06–0,10	0,06–0,10	0,08–0,12	0,08–0,12
0,03–0,05	0,03–0,05	0,04–0,08	0,06–0,10	0,06–0,10	0,06–0,10	0,06–0,10

In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

Thread Milling Cutter with Chamfer Facet

SFSE | IR/IL | ≤ 2xD | 60° | M



AlCrN

Solid carbide

NEW W1

DC mm	Thread	KOMET no.	TP mm	OAL mm	APMX mm	LS mm	DCONMS h6 mm	DCSKX mm	LF mm	ZEFP	Article no. 50 806 ... EUR	
3,14	M4	88296001000015	0,70	49	8,0	36	6	4,3	8,6	5	143,10	**04000**
3,95	M5	88296001000017	0,80	55	9,9	36	6	5,3	10,6	5	143,10	**05000**
4,68	M6	88296001000018	1,00	62	12,3	36	8	6,3	13,2	6	153,40	**06000**
6,22	M8	88296001000020	1,25	74	16,6	40	10	8,3	17,8	7	179,30	**08000**
7,79	M10	88296001000022	1,50	79	19,9	45	12	10,3	21,3	7	200,00	**10000**
9,38	M12	88296001000024	1,75	89	24,9	45	14	12,3	26,6	7	250,00	**12000**
10,92	M14	88296001000025	2,00	102	28,5	48	16	14,3	30,4	7	282,80	**14000**
12,83	M16	88296001000026	2,00	102	32,4	48	18	16,3	34,4	8	319,00	**16000**

60° | MF

NEW W1

DC mm	Thread	KOMET no.	TP mm	OAL mm	APMX mm	LS mm	DCONMS h6 mm	DCSKX mm	LF mm	ZEFP	Article no. 50 807 ... EUR	
3,95	M5x0,5	88296002000037	0,50	55	10,2	36	6	5,3	10,8	5	165,60	**05100**
4,68	M6x0,75	88296002000048	0,75	62	12,2	36	8	6,3	13,0	5	169,00	**06200**
6,22	M8x1	88296002000070	1,00	74	16,2	40	10	8,3	17,3	6	191,40	**08300**
7,79	M10x1	88296002000094	1,00	79	20,1	45	12	10,3	21,5	7	213,80	**10300**
9,38	M12x1	88296002000111	1,00	89	24,0	45	14	12,3	25,6	7	262,10	**12300**
9,38	M12x1,5	88296002000113	1,50	89	24,3	45	14	12,3	25,9	7	262,10	**12500**
10,92	M14x1,5	88296002000131	1,50	102	28,7	48	16	14,3	30,6	7	307,00	**14500**
12,82	M16X1,5	88296002000147	1,50	102	31,7	48	18	16,3	33,6	8	360,40	**16500**

Steel	●
Stainless steel	●
Cast iron	●
Non ferrous metals	
Heat resistant alloys	●
Hardened materials	

When calculating the feedrate for circular milling it is important to know whether contour feed v_f or feed on the center path v_{fm} is used.
Details on → **Main catalogue Page 07/72+73.**

Cutting data approximate values

	Index	Material	Strength N/mm² / HB / HRC	v_c m/min with through coolant	HPC solid carbide thread milling cutters 50 806..., 50 807... Ø 3–5 fz mm/tooth	Ø 6–10 fz mm/tooth	Ø 10–13 fz mm/tooth
P	1.1	General construction steel	< 800 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.2	Free cutting steel	< 800 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.3	Hardened steel, non alloyed	< 800 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.4	Alloyed hardened steel	< 1000 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.5	Tempering steel, unalloyed	< 850 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.7	Tempering steel, alloyed	< 800 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.8	Tempering steel, alloyed	< 1300 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.9	Steel castings	< 850 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.10	Nitriding steel	< 1000 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.11	Nitriding steel	< 1200 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.12	Roller bearing steel	< 1200 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.13	Spring steel	< 1200 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.14	High-speed steel	< 1300 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.15	Cold working tool steel	< 1300 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
	1.16	Hot working tool steel	< 1300 N/mm²	**80-100**	0,015-0,02	0,02-0,03	0,03-0,04
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	**60-80**	0,015-0,03	0,04-0,06	0,06-0,10
	2.2	Stainless steel, ferritic	< 750 N/mm²	**60-80**	0,015-0,03	0,04-0,06	0,06-0,10
	2.3	Stainless steel, martensitic	< 900 N/mm²	**60-80**	0,015-0,03	0,04-0,06	0,06-0,10
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	**60-80**	0,015-0,03	0,04-0,06	0,06-0,10
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	**60-80**	0,015-0,03	0,04-0,06	0,06-0,10
	2.6	Stainless steel, austenitic	< 750 N/mm²	**60-80**	0,015-0,03	0,04-0,06	0,06-0,10
	2.7	Heat resistant steel	< 1100 N/mm²				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	**100-120**	0,02-0,04	0,04-0,08	0,06-0,10
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	**100-120**	0,02-0,04	0,04-0,08	0,06-0,08
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	**100-120**	0,02-0,04	0,04-0,08	0,06-0,08
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	**80-100**	0,02-0,04	0,04-0,08	0,06-0,08
	3.5	White malleable cast iron	270–450 N/mm²	**80-100**	0,02-0,04	0,04-0,08	0,06-0,08
	3.6	White malleable cast iron	500–650 N/mm²	**80-100**	0,02-0,04	0,04-0,08	0,06-0,08
	3.7	Black malleable cast iron	300–450 N/mm²	**80-100**	0,02-0,04	0,04-0,08	0,06-0,08
	3.8	Black malleable cast iron	500–800 N/mm²	**80-100**	0,02-0,04	0,04-0,08	0,06-0,08
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²				
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²				
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²				
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²				
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²				
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²				
	4.7	Copper wrought alloys	< 700 N/mm²				
	4.8	Special copper alloys	< 200 HB				
	4.9	Special copper alloys	< 300 HB				
	4.10	Special copper alloys	> 300 HB				
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²				
	4.12	Long-chipping brass	< 600 N/mm²				
	4.13	Thermoplastics					
	4.14	Duroplastics					
	4.15	Fibre-reinforced plastics					
	4.16	Magnesium and magnesium alloys	< 850 N/mm²				
	4.17	Graphite					
	4.18	Tungsten and tungsten alloys					
	4.19	Molybdenum and molybdenum alloys					
S	5.1	Pure nickel					
	5.2	Nickel alloys					
	5.3	Nickel alloys	< 850 N/mm²				
	5.4	Nickel molybdenum alloys					
	5.5	Nickel-chromium alloys	< 1300 N/mm²				
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²				
	5.7	Heat resistant alloys	< 1300 N/mm²				
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²				
	5.9	Pure titanium	< 900 N/mm²	**60-80**	0,015-0,02	0,02-0,03	0,03-0,04
	5.10	Titanium alloys	< 700 N/mm²	**60-80**	0,015-0,02	0,02-0,03	0,03-0,04
	5.11	Titanium alloys	< 1200 N/mm²	**60-80**	0,01-0,015	0,015-0,02	0,025-0,035
H	6.1		< 45 HRC				
	6.2		46–55 HRC				
	6.3	Tempered steel	56–60 HRC				
	6.4		61–65 HRC				
	6.5		65–70 HRC				

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CERATIZIT \ Performance

Premium quality tools for high performance.

The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

Application areas of the cutting materials

Cutting material grade	Cutting material designation	Properties		Application range	Interrupted cut	Material suitability/ ISO hardness				
						Cast iron	Sintered steels	Heat resistant	hardened	Non ferrous metals
		PcBN content / diamond content	Main binder			K	P	S	H	N
High PcBN content	**CTB S05U**	90 %		Chilled iron (NiHard), grey cast iron	Smooth to strongly interrupted cut	05		05		
	CTB S10C	95 %		Grey cast iron (GG252), sintered steels, super alloys	Smooth to medium interrupted cut	10	10	10		
	CTB S10U	95 %		Grey cast iron, sintered steels, super alloys		10	10	10		
	CTB S20C	90 %		Spheroidal graphite cast iron, sintered steels, super alloys		20	20	20		
Low PcBN content	**CTB H15C**	40 %	TiN	Tempered steels from 32 HRC	Smooth cut				15	
	CTB H15U	40 %	TiN		Smooth to slightly interrupted cut				15	
	CTB H20C	65 %	TiCN	48–62 HRC					20	
	CTB H21C	65 %	TiCN	52–65 HRC					20	
	CTB H21U	65 %	TiCN	52–65 HRC					20	
	CTB H40C	55 %	TiN	48–65 HRC	Interrupted cut				40	
	CTB H40U	65 %	TiN	54–65 HRC					40	
	CTB H41C	65 %	TiN	48–65 HRC	Strongly interrupted cut				40	
	CTB H41U	65 %	TiN	54–65 HRC					40	
PDC	**CTD PD20**	Medium	Co	Aluminium up to max. 12% Si content with smooth cut, plastics	Medium to strongly interrupted					20
	CTD PS30	Medium	Co	Aluminium up to max. 12% Si content with interrupted cut, plastics						30
	CTD PU20	high	WC	For roughing extremely abrasive materials, fibre-reinforced plastics	Smooth to slightly interrupted cut					20
CVD-D	**CTD CD10**			Non-ferrous metals with abrasive reinforcement, aluminium from 8% Si content, fibre-reinforced plastics	Smooth cut, interrupted cuts possible to a limited extent					10
MDC	**CTD MD05**			Superfinish machining, polishing	Smooth cut					05

Toolfinder

Indexable inserts, negative

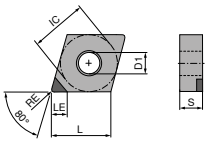
		Cast iron K	Sintered steels P	Heat resistant S	hardened H	Non ferrous metals N	Geometry CN..	DN..	KN..	SN..	TN..	VN..	WN..
CTBS05U		●											67
CTBS10U CTBS10C		●	●	●			59+60						
CTBS20C		●	●	●			58+59	62+63					
CTBH21U	52–65 HRC				●		59	63					
CTBH20C	48–62 HRC				●		58+59	62			65	66	67
CTBH40U	54–65 HRC				●		59	63			65	66	
CTBH40C	48–65 HRC				●		58+59	62				66	67
CTBH41U	48–65 HRC				●		60						
CTD PD20						●	61	64					
CTD PS30				○		●	64						
Matching tool holders can be found in the main catalogue in Section 09 on the following pages:							16–19	28+29			46+47	51	56
Matching boring bars can be found in the main catalogue in Section 09 on the following pages:							20+21	30+31			48		57+58

Indexable inserts, positive

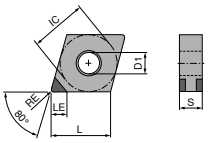
		K	P	S	H	N	Geometry CC..	DC..	RC..	SC..	SP..	TC..	TP..	VC..	WC..
CTBS10U		●	●	●			68–70		80	82					
CTBS10C		●	●	●				76							
CTBS20C		●	●	●			69	74+76				84		89	
CTBH21U	52–65 HRC				●		68+70	74+75				84		88+89	
CTBH21C	52–65 HRC				●			75							
CTBH20C	48–62 HRC				●									88	
CTBH40U	54–65 HRC				●		68+70	74				84		88	93
CTBH40C	48–65 HRC				●		68								
CTBH41U	48–65 HRC				●									89	
CTBH41C	48–65 HRC				●			75							
CTD PD20						●	71–73	77+79	81	83		85–87		90+92	
CTD PS30				○		●	71–73	77–79	81	83		86		91+92	
CTD PU20				○		●	73	78+79				87		91	
CTD CD10						●	72+73	79				86		91+92	
CTD MD05				○		●	71	77						90	
Matching tool holders can be found in the main catalogue in Section 09 on the following pages:							71–74	91–93	102–104	108–110		120+121		134–137	
Matching boring bars can be found in the main catalogue in Section 09 on the following pages:							75–79	94–98		111+112		122		138–140	143

CNGA

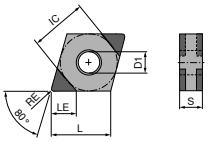
Designation	L	S	D1	IC
	mm	mm	mm	mm
CNGA 1204..	12,9	4,76	5,13	12,7



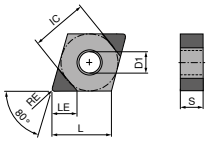
CNGA A



CNGA K



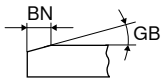
CNGA L



CNGA U

CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners



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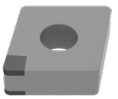
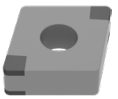
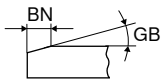
										
						F	F	F	F	F
						CBN CNGA Y0	CBN CNGA Y0	CBN CNGA Y0	CBN CNGA Y0	CBN CNGA Y0
	mm	mm	°		mm	Article no. 71 401 ... EUR	Article no. 71 400 ... EUR	Article no. 71 401 ... EUR	Article no. 71 400 ... EUR	Article no. 71 401 ... EUR
120404TN	0,4	0,09	15	L (4)	2,8			57,23 21200		
120404SN	0,4	0,11	15	L (4)	2,8	57,23 16200				
120404SN	0,4	0,11	20	K (2)	2,8		34,98 25800			
120404SN	0,4	0,11	20	L (4)	2,8					57,23 34200
120404SN	0,4	0,14	20	L (4)	2,8	57,23 17100				
120404TN	0,4	0,11	25	L (4)	2,8			57,23 25200		
120404FN	0,4			L (4)	2,8			57,23 20200		
120404SN	0,4	0,14	35	L (4)	2,8					57,23 38000
120408FN	0,8			L (4)	2,5			57,23 20300		
120408SN	0,8	0,09	15	L (4)	2,5					57,23 31200
120408SN	0,8	0,11	15	L (4)	2,5	57,23 16300				
120408SN	0,8	0,11	20	K (2)	2,5		34,98 26000		34,98 35800	
120408SN	0,8	0,11	20	L (4)	2,5					57,23 34300
120408SN	0,8	0,14	20	L (4)	2,5	57,23 17200				
120408TN	0,8	0,11	25	L (4)	2,5			57,23 25300		
120408SN	0,8	0,13	25	K (2)	2,5				34,98 36200	
120408SN	0,8	0,14	25	K (2)	2,5				34,98 38800	
120408SN	0,8	0,16	25	L (4)	2,5	57,23 18000				
120408SN	0,8	0,14	35	L (4)	2,5					57,23 38100
120408EN	0,8			L (4)	2,5					57,23 30200
120412SN	1,2	0,11	15	L (4)	2,2	57,23 16400				
120412SN	1,2	0,11	20	K (2)	2,2		34,98 26200			
120412SN	1,2	0,14	20	L (4)	2,2	57,23 17300				
120412TN	1,2	0,11	25	L (4)	2,2			57,23 25400		

Cast iron	●				
Sintered steels	●				
Heat resistant alloys	●				
hardened < 45 HRC					
hardened 46–55 HRC		●	●	●	●
hardened 56–60 HRC		●	●	●	●
hardened 61–65 HRC				●	●

CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

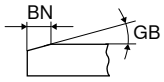


ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBS10U F CBN CNGA NEW Y0 Article no. 71 406 ... EUR		CTBS20C F CBN CNGA NEW Y0 Article no. 71 406 ... EUR		CTBH21U F CBN CNGA NEW Y0 Article no. 71 406 ... EUR		CTBH40U F CBN CNGA NEW Y0 Article no. 71 406 ... EUR		-Q CTBH20C F CBN CNGA NEW Y0 Article no. 71 407 ... EUR		-Q CTBH40C F CBN CNGA NEW Y0 Article no. 71 407 ... EUR	
120402TN	0,2	0,14	20	A (1)	3,4	38,21	10100			38,21	40100						
120402TN	0,2	0,12	25	A (1)	3,4							38,21	50100				
120402EN	0,2			A (1)	3,4	38,21	10000										
120402FN	0,2			A (1)	3,4					38,21	40000	38,21	50000				
120404EN	0,4			A (1)	3,1	38,21	10200			38,21	40200						
120404SN	0,4	0,09	15	A (1)	3,1			38,21	20000								
120404TN	0,4	0,14	20	A (1)	3,1	38,21	10300			38,21	40300						
120404TN	0,4	0,12	25	A (1)	3,1							38,21	50300				
120404FN	0,4			A (1)	3,1							38,21	50200				
120408TN	0,8	0,14	20	A (1)	2,8	38,21	10500			38,21	40500						
120408TN	0,8	0,12	25	A (1)	2,8							38,21	50500				
120408FN	0,8			A (1)	2,8							38,21	50400				
120408FN	0,8			K (2)	2,5									38,60	30000		
120408EN	0,8			A (1)	2,8	38,21	10400			38,21	40400						
120408SN	0,8	0,14	30	K (2)	2,5											38,60	60000
120408SN	0,8	0,14	35	K (2)	2,5											69,49	60100
120412TN	1,2	0,14	20	A (1)	2,5	38,21	10700										
120412TN	1,2	0,12	25	A (1)	2,5							38,21	50700				
120412EN	1,2			A (1)	2,5	38,21	10600	38,21	20100								
120412FN	1,2			A (1)	2,5							38,21	50600				

Cast iron						●		●									
Sintered steels						●		●									
Heat resistant alloys						●		●									
hardened < 45 HRC																	
hardened 46–55 HRC										●		●		●		●	
hardened 56–60 HRC										●		●		●		●	
hardened 61–65 HRC												●				●	

CNGA

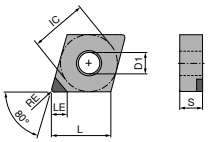
▲ TCE(NOI) = Design and number of equipped cutting edge corners



ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBS10C F CBN CNGA NEW Y0 Article no. 71 408 ... EUR		CTBH41U F CBN CNGA NEW Y0 Article no. 71 409 ... EUR	
120404TN	0,4	0,09	15	**L (4)**	2,8	69,49	**80000**		
120404TN	0,4	0,15	25	**L (4)**	2,8	69,49	**80100**		
120404TN	0,4	0,10	30	**U (2)**	2,8			126,00	**70000**
120408TN	0,8	0,09	10	**L (4)**	2,5	69,49	**80200**		
120408TN	0,8	0,09	15	**L (4)**	2,5	69,49	**80300**		
120408TN	0,8	0,11	15	**L (4)**	2,5	69,49	**80400**		
120408TN	0,8	0,11	25	**L (4)**	2,5	69,49	**80500**		
120408TN	0,8	0,10	30	**U (2)**	2,6			126,00	**70100**
120412TN	1,2	0,09	15	**L (4)**	2,2	69,49	**80600**		
120412TN	1,2	0,11	25	**L (4)**	2,2	69,49	**80700**		
120412TN	1,2	0,10	30	**U (2)**	2,4			126,00	**70200**
Cast iron						●			
Sintered steels						●			
Heat resistant alloys						●			
hardened < 45 HRC									
hardened 46–55 HRC								●	
hardened 56–60 HRC								●	
hardened 61–65 HRC								●	

CNGA

Designation	L	S	D1	IC
	mm	mm	mm	mm
CNGA 1204..	12,9	4,76	5,13	12,7



CNGA A

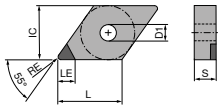
CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

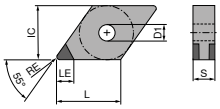
ISO	RE mm	TCE (NOI)	LE mm	F DIAMOND CNGA NEW Y0 Article no. 71 127 ... EUR		F DIAMOND CNGA NEW Y0 Article no. 71 127 ... EUR	
120404FN	0,4	A (1)	6,3	66,91	10001	66,91	20001
120408FN	0,8	A (1)	6,0	66,91	10101	66,91	20101
120412FN	1,2	A (1)	5,7	75,93	10201	75,93	20201
Steel							
Stainless steel							
Cast iron							
Non ferrous metals					●		●
Heat resistant alloys							○

DNGA

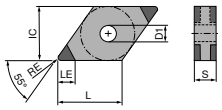
Designation	L	S	D1	IC
	mm	mm	mm	mm
DNGA 1504..	15,5	4,76	5,13	12,7
DNGA 1506..	15,5	6,35	5,13	12,7



DNGA A



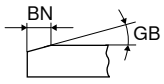
DNGA K

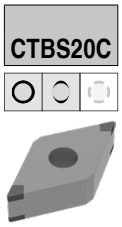


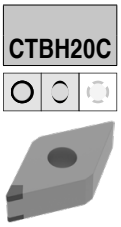
DNGA L

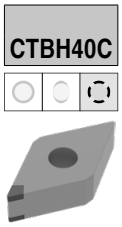
DNGA

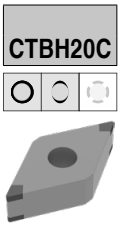
▲ TCE(NOI) = Design and number of equipped cutting edge corners









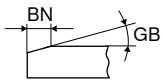


ISO	RE	BN	GB	TCE (NOI)	LE	CTBS20C		CTBH20C		CTBH40C		CTBH20C		CTBH40C	
						F		F		F		F		F	
						CBN DNGA Y0		CBN DNGA Y0		CBN DNGA Y0		CBN DNGA Y0		CBN DNGA Y0	
						Article no. 71 403 ...		Article no. 71 402 ...		Article no. 71 402 ...		Article no. 71 403 ...		Article no. 71 403 ...	
	mm	mm	°		mm	EUR		EUR		EUR		EUR		EUR	
150404SN	0,4	0,09	20	**L (4)**	2,8	57,23	**10200**							57,23	**30200**
150404SN	0,4	0,11	20	**L (4)**	2,8									57,23	**30300**
150404SN	0,4	0,11	25	**L (4)**	2,8									57,23	**30400**
150404TN	0,4	0,11	25	**L (4)**	2,8							57,23	**20200**		
150404SN	0,4	0,13	25	**L (4)**	2,8							57,23	**20300**		
150408FN	0,8			**L (4)**	2,6							57,23	**20400**		
150408SN	0,8	0,09	20	**L (4)**	2,6	57,23	**10300**								
150408SN	0,8	0,11	20	**L (4)**	2,6									57,23	**30500**
150408TN	0,8	0,11	25	**L (4)**	2,6							57,23	**20500**		
150408SN	0,8	0,11	25	**L (4)**	2,6									57,23	**30600**
150408SN	0,8	0,14	30	**L (4)**	2,6									57,23	**30700**
150604SN	0,4	0,09	20	**K (2)**	2,8					34,98	**32600**				
150604SN	0,4	0,11	20	**K (2)**	2,8			34,98	**24200**						
150604TN	0,4	0,11	25	**L (4)**	2,8							57,23	**24800**		
150604FN	0,4			**L (4)**	2,8							57,23	**29300**		
150604SN	0,4	0,14	35	**L (4)**	2,8									57,23	**37500**
150608FN	0,8			**L (4)**	2,6							57,23	**29400**		
150608SN	0,8	0,11	20	**K (2)**	2,6			34,98	**24300**	34,98	**34200**				
150608SN	0,8	0,11	20	**L (4)**	2,6									57,23	**34400**
150608TN	0,8	0,11	25	**L (4)**	2,6							57,23	**24900**		
150608SN	0,8	0,13	25	**K (2)**	2,6			34,98	**26000**						
150608SN	0,8	0,14	35	**L (4)**	2,6									57,23	**37600**

Cast iron						●									
Sintered steels						●									
Heat resistant alloys						●									
hardened < 45 HRC															
hardened 46–55 HRC								●		●		●		●	
hardened 56–60 HRC								●		●		●		●	
hardened 61–65 HRC										●				●	

DNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

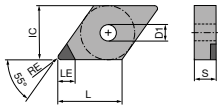


ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBS20C F CBN DNGA NEW Y0 Article no. 71 410 ... EUR		CTBS20C F CBN DNGA NEW Y0 Article no. 71 411 ... EUR		CTBH21U F CBN DNGA NEW Y0 Article no. 71 410 ... EUR		CTBH40U F CBN DNGA NEW Y0 Article no. 71 410 ... EUR	
150404TN	0,4	0,14	20	A (1)	3,5					38,21	40100		
150404TN	0,4	0,12	25	A (1)	3,5							38,21	50100
150404FN	0,4			A (1)	3,5					38,21	40000	38,21	50000
150408TN	0,8	0,14	20	A (1)	3,0					38,21	40300		
150408TN	0,8	0,12	25	A (1)	3,0							38,21	50300
150408FN	0,8			A (1)	3,0					38,21	40200	38,21	50200
150604EN	0,4			A (1)	3,5					38,21	40400		
150604SN	0,4	0,09	15	A (1)	3,5	38,21	20000						
150604SN	0,4	0,09	20	K (2)	2,8			38,60	20000				
150604TN	0,4	0,14	20	A (1)	3,5					38,21	40500		
150604TN	0,4	0,12	25	A (1)	3,5							38,21	50500
150604FN	0,4			A (1)	3,5							38,21	50400
150608SN	0,8	0,09	15	A (1)	3,0	38,21	20100						
150608SN	0,8	0,09	15	A (1)	5,0	67,94	20200						
150608SN	0,8	0,11	15	K (2)	2,6			38,60	20100				
150608TN	0,8	0,14	20	A (1)	3,0					38,21	40700		
150608EN	0,8			A (1)	3,0					38,21	40600		
150608TN	0,8	0,12	25	A (1)	3,0							38,21	50700
150608SN	0,8	0,16	25	K (2)	2,6			38,60	20200				
150608FN	0,8			A (1)	3,0							38,21	50600

Cast iron	●		●		
Sintered steels	●		●		
Heat resistant alloys	●		●		
hardened < 45 HRC					
hardened 46–55 HRC				●	●
hardened 56–60 HRC				●	●
hardened 61–65 HRC					●

DNGA

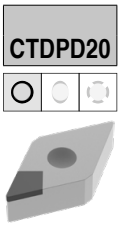
Designation	L	S	D1	IC
	mm	mm	mm	mm
DNGA 1504..	15,5	4,76	5,13	12,7
DNGA 1506..	15,5	6,35	5,13	12,7



DNGA A

DNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners



F
DIAMOND
DNGA

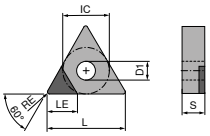
NEW Y0

ISO	RE	TCE (NOI)	LE	Article no. 71 128 ...	
	mm		mm	EUR	
150404FN	0,4	A (1)	6,4	66,91	10001
150408FN	0,8	A (1)	6,0	66,91	10101
150412FN	1,2	A (1)	5,6	78,50	10201
150604FN	0,4	A (1)	6,4	66,91	10301
150608FN	0,8	A (1)	6,0	66,91	10401
150612FN	1,2	A (1)	5,6	78,50	10501

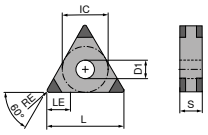
Steel	
Stainless steel	
Cast iron	
Non ferrous metals	●
Heat resistant alloys	

TNGA

Designation	L	S	D1	IC
	mm	mm	mm	mm
TNGA 1604..	16,5	4,76	3,81	9,52



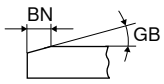
TNGA A

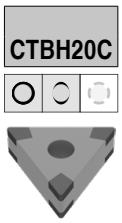


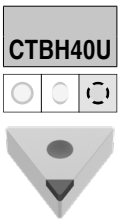
TNGA M

TNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners



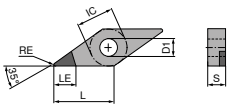




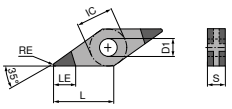
ISO	RE	BN	GB	TCE (NOI)	LE	F CBN TNGA Y0 Article no. 71 404 ... EUR		F CBN TNGA Y0 Article no. 71 108 ... EUR	
	mm	mm	°		mm				
160408SN	0,8	0,14	30	M (6)	2,5	93,26	27200		
160408FN	0,8			A (1)	3,0			32,43	80500
Cast iron									
Sintered steels									
Heat resistant alloys									
hardened < 45 HRC									
hardened 46-55 HRC							●		●
hardened 56-60 HRC							●		●
hardened 61-65 HRC									●

VNGA

Designation	L	S	D1	IC
	mm	mm	mm	mm
VNGA 1604..	16,6	4,76	3,81	9,52



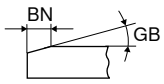
VNGA A



VNGA L

VNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners



F
CBN
VNGA
NEW Y0
Article no.
71 413 ...
EUR

F
CBN
VNGA
NEW Y0
Article no.
71 412 ...
EUR

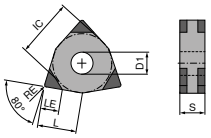
F
CBN
VNGA
NEW Y0
Article no.
71 413 ...
EUR

ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	EUR		EUR		EUR	
160404FN	0,4			A (1)	5,0			55,20	50000		
160404SN	0,4	0,09	20	L (4)	2,8					69,49	60000
160404SN	0,4	0,11	20	L (4)	2,8	69,49	30100				
160404TN	0,4	0,11	25	L (4)	2,8	69,49	30200				
160404SN	0,4	0,11	25	L (4)	2,8					69,49	60100
160404TN	0,4	0,12	25	A (1)	5,0			55,20	50100		
160404SN	0,4	0,13	25	L (4)	2,8					69,49	60200
160404SN	0,4	0,14	30	L (4)	2,8					69,49	60300
160404SN	0,4	0,14	35	L (4)	2,8					69,49	60400
160404FN	0,4			L (4)	2,8	69,49	30000				
160408SN	0,8	0,09	15	L (4)	2,2					69,49	60500
160408SN	0,8	0,11	20	L (4)	2,2	69,49	30400			69,49	60600
160408SN	0,8	0,11	25	L (4)	2,2					69,49	60700
160408TN	0,8	0,11	25	L (4)	2,2	69,49	30500				
160408TN	0,8	0,12	25	A (1)	4,4			55,20	50300		
160408SN	0,8	0,13	25	L (4)	2,2	69,49	30600			69,49	60800
160408SN	0,8	0,14	30	L (4)	2,2					69,49	60900
160408SN	0,8	0,14	35	L (4)	2,2					69,49	61000
160408FN	0,8			L (4)	2,2	69,49	30300				
160408FN	0,8			A (1)	4,4			55,20	50200		

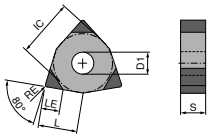
Cast iron			
Sintered steels			
Heat resistant alloys			
hardened < 45 HRC			
hardened 46–55 HRC	●	●	●
hardened 56–60 HRC	●	●	●
hardened 61–65 HRC		●	●

WNGA

Designation	L	S	D1	IC
	mm	mm	mm	mm
WNGA 0804..	8,5	4,76	5,13	12,7



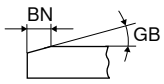
WNGA M



WNGA V

WNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

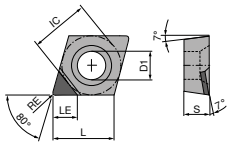


ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBS05U F CBN WNGA NEW Y0 Article no. 71 415 ... EUR		CTBH20C F CBN WNGA Y0 Article no. 71 405 ... EUR		CTBH40C F CBN WNGA Y0 Article no. 71 405 ... EUR		-Q CTBH40C F CBN WNGA NEW Y0 Article no. 71 414 ... EUR	
080404TN	0,4	0,09	15	M (6)	2,8			81,39	23200				
080404TN	0,4	0,11	25	M (6)	2,8			81,39	25200				
080404TN	0,4	0,20	30	V (3)	2,8	140,10	00100						
080404TN	0,4	0,20	30	V (3)	4,5	162,80	00200						
080404FN	0,4			M (6)	2,8			81,39	20200				
080408TN	0,8	0,09	15	M (6)	2,5			81,39	23300				
080408TN	0,8	0,11	25	M (6)	2,5			81,39	25300				
080408SN	0,8	0,11	25	M (6)	2,5							102,90	60100
080408TN	0,8	0,20	30	V (3)	2,6	140,10	00300						
080408TN	0,8	0,20	30	V (3)	4,2	162,80	00400						
080408SN	0,8	0,14	35	M (6)	2,5					81,39	38200		
080408EN	0,8			M (6)	2,5							102,90	60000
080412SN	1,2	0,11	20	M (6)	2,2					81,39	34200		
080412SN	1,2	0,11	25	M (6)	2,2					81,39	35100		
080412SN	1,2	0,14	30	M (6)	2,2					81,39	36100		
080412TN	1,2	0,20	30	V (3)	4,0	162,80	00600						
080412TN	1,2	0,20	30	V (3)	2,4	140,10	00500						
080412SN	1,2	0,14	35	M (6)	2,2					81,39	38300		

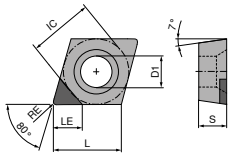
Cast iron	●			
Sintered steels				
Heat resistant alloys				
hardened < 45 HRC				
hardened 46–55 HRC		●	●	●
hardened 56–60 HRC		●	●	●
hardened 61–65 HRC			●	●

CCGW / CCGT

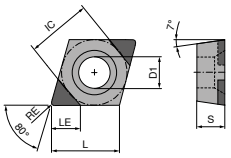
Designation	L	S	D1	IC
	mm	mm	mm	mm
CCGW 0602..	6,45	2,38	2,8	6,35
CCG. 09T3..	9,70	3,97	4,4	9,52
CCGW 1204..	12,90	4,76	5,5	12,70



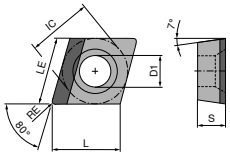
CCGT A



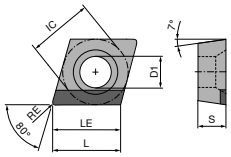
CCGW A



CCGW B



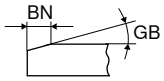
CCGW A LL



CCGW A RR

CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

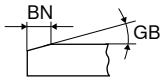


ISO	RE	BN	GB	TCE (NOI)	LE	CTBS10U	CTBH21U	CTBH40U	CTBH21U	CTBH40U	CTBH40C
	mm	mm	°		mm	F	F	F	F	F	F
						CBN CCGW Y0	CBN CCGW Y0	CBN CCGW Y0	CBN CCGW Y0	CBN CCGW Y0	CBN CCGW Y0
						Article no. 71 120 ...	Article no. 71 120 ...	Article no. 71 120 ...	Article no. 71 121 ...	Article no. 71 121 ...	Article no. 71 161 ...
						EUR	EUR	EUR	EUR	EUR	EUR
060204TN	0,4	0,09	20	B (2)	3,1						55,21 32100
060208TN	0,8	0,14	20	A (1)	2,8	34,55 30300					
060208TN	0,8	0,12	25	A (1)	2,8			34,55 90300			
09T302TN	0,2	0,14	20	B (2)	3,4				54,36 50100		
09T302FN	0,2			B (2)	3,4					54,36 80100	
09T304EN	0,4			A (1)	3,1		34,55 40500				

Cast iron						●					
Sintered steels						●					
Heat resistant alloys						●					
hardened < 45 HRC											
hardened 46-55 HRC							●	●	●	●	●
hardened 56-60 HRC							●	●	●	●	●
hardened 61-65 HRC								●		●	●

CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

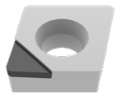
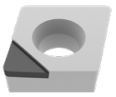
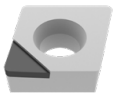


ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBS10U F CBN CCGW NEW Y0 Article no. 71 419 ... EUR		CTBS20C F CBN CCGW NEW Y0 Article no. 71 418 ... EUR		CTBS10U F CBN CCGW NEW Y0 Article no. 71 420 ... EUR		CTBS10U F CBN CCGW NEW Y0 Article no. 71 420 ... EUR		CTBS20C F CBN CCGW NEW Y0 Article no. 71 420 ... EUR	
060202SN	0,2	0,11	15	**A (1)**	3,4			38,21	**20000**						
060204EN	0,4			**A (1)**	3,1			38,21	**20100**						
060204SN	0,4	0,11	15	**A (1)**	3,1			38,21	**20200**						
09T304EN	0,4			**A (1)**	2,8			38,21	**20300**						
09T304SN	0,4	0,11	15	**A (1)**	2,8			38,21	**20400**						
09T304EN	0,4			**B (2)**	3,1	63,70	**10000**								
09T304TLL	0,4	0,14	20	**A (1)**	9,7					89,17	**10000**				
09T304TN	0,4	0,14	20	**B (2)**	3,1	63,70	**10100**								
09T304TRR	0,4	0,14	20	**A (1)**	9,7							89,17	**10100**		
09T308EN	0,8			**A (1)**	2,5			38,21	**20500**						
09T308SN	0,8	0,11	15	**A (1)**	2,5			38,21	**20600**						
09T308SLL	0,8	0,11	15	**A (1)**	9,7									89,17	**20000**
09T308TRR	0,8	0,14	20	**A (1)**	9,7							89,17	**10300**		
09T308TLL	0,8	0,14	20	**A (1)**	9,7					89,17	**10200**				
120404EN	0,4			**A (1)**	3,1			38,21	**20700**						
120404SN	0,4	0,11	15	**A (1)**	3,1			38,21	**20800**						
120408SN	0,8	0,11	15	**A (1)**	2,8			38,21	**20900**						

Cast iron	●	●	●	●	●
Sintered steels	●	●	●	●	●
Heat resistant alloys	●	●	●	●	●
hardened < 45 HRC					
hardened 46–55 HRC					
hardened 56–60 HRC					
hardened 61–65 HRC					

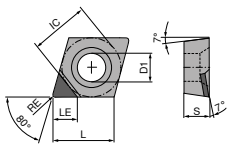
CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

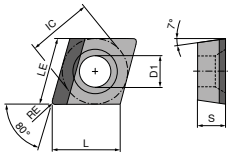
ISO	RE mm	TCE (NOI)	LE mm	CTBS10U		CTBH21U		CTBH40U	
									
				F		F		F	
				CBN CCGT Y0		CBN CCGT Y0		CBN CCGT Y0	
				Article no. 71 124 ...		Article no. 71 124 ...		Article no. 71 124 ...	
				EUR		EUR		EUR	
09T302EN	0,2	**A (1)**	3,4	41,23	**25000**				
09T304EN	0,4	**A (1)**	3,1	41,23	**25200**	41,23	**45000**		
09T304FN	0,4	**A (1)**	3,1					41,23	**85000**
09T308EN	0,8	**A (1)**	2,8			41,23	**45200**		
Cast iron				●					
Sintered steels				●					
Heat resistant alloys				●					
hardened < 45 HRC									
hardened 46–55 HRC						●		●	
hardened 56–60 HRC						●		●	
hardened 61–65 HRC								●	

CCGW / CCGT

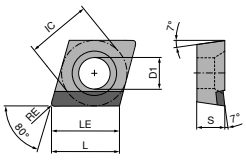
Designation	L	S	D1	IC
	mm	mm	mm	mm
CCG. 0602..	6,5	2,38	2,8	6,35
CCG. 09T3..	9,7	3,97	4,4	9,52
CCG. 1204..	12,9	4,76	5,5	12,70



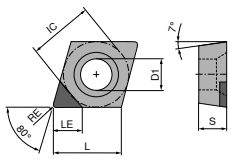
CCGT A



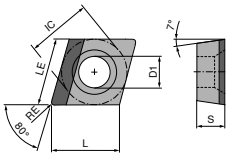
CCGT A LL



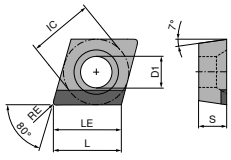
CCGT A RR



CCGW A



CCGW A LL



CCGW A RR

CCGW / CCGT

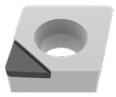
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE	TCE (NOI)	LE	CTDMD05		CTDPD20		CTDPD20		-Q CTDPS30	
	mm		mm	F		F		F		F	
				DIAMOND CCGW		DIAMOND CCGW		DIAMOND CCGT		DIAMOND CCGW	
				Y0		Y0		Y0		Y0	
				Article no. 71 120 ...		Article no. 71 120 ...		Article no. 71 124 ...		Article no. 71 125 ...	
				EUR		EUR		EUR		EUR	
060201FN	0,1	A (1)	3,5					48,64	10100		
060208FN	0,8	A (1)	2,5	261,80	05300						
060208FN	0,8	A (1)	3,0			48,64	10300	48,64	10300		
09T301FN	0,1	A (1)	4,5							62,85	16300
09T302FN	0,2	A (1)	4,5			49,70	10500	49,70	10500		

Steel				
Stainless steel				
Cast iron				
Non ferrous metals	●	●	●	●
Heat resistant alloys	○			○

CCGT

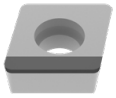
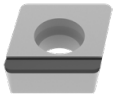
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-CB2 CTDPD20		-Q-CB2 CTDPD20		CTDPS30		-Q-CB1 CTDCD10	
											
				M		M		F		F	
				DIAMOND CCGT		DIAMOND CCGT		DIAMOND CCGT		DIAMOND CCGT	
				NEW Y0		NEW Y0		NEW Y0		NEW Y0	
				Article no. 71 168 ...		Article no. 71 169 ...		Article no. 71 166 ...		Article no. 71 167 ...	
				EUR		EUR		EUR		EUR	
060201FN	0,1	A (1)	3,5					55,34	20001		
060202FN	0,2	A (1)	2,3							84,93	40001
060202FN	0,2	A (1)	3,4					55,34	20101		
060204FN	0,4	A (1)	2,1							84,93	40101
060204EN	0,4	A (1)	3,2	60,49	10001						
09T302EN	0,2	A (1)	4,4			70,78	10001				
09T302FN	0,2	A (1)	4,5					56,62	20201		
09T304FN	0,4	A (1)	2,1							86,23	40201
09T304EN	0,4	A (1)	4,2			70,78	10101				
120404FN	0,4	A (1)	2,1							87,50	40301
120404EN	0,4	A (1)	4,2			72,06	10201				
120404FN	0,4	A (1)	4,3					56,62	20301		

Steel				
Stainless steel				
Cast iron				
Non ferrous metals	●	●	●	●
Heat resistant alloys			○	

CCGW / CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	CTDPD20		CTDPD20		CTDPS30		CTDPS30	
											
				F		F		F		F	
				DIAMOND CCGW		DIAMOND CCGW		DIAMOND CCGT		DIAMOND CCGT	
				NEW Y0		NEW Y0		NEW Y0		NEW Y0	
				Article no. 71 172 ...		Article no. 71 172 ...		Article no. 71 170 ...		Article no. 71 170 ...	
				EUR		EUR		EUR		EUR	
060204FLL	0,4	A (1)	6,45	79,78	10001			79,78	20001		
060204FRR	0,4	A (1)	6,45			79,78	10101			79,78	20101
060208FLL	0,8	A (1)	6,45					79,78	20201		
060208FRR	0,8	A (1)	6,45							79,78	20301
09T308FLL	0,8	A (1)	9,70	84,93	10201			84,93	20401		
09T308FRR	0,8	A (1)	9,70			84,93	10301			84,93	20501
09T312FLL	1,2	A (1)	9,70	84,93	10401						
120412FLL	1,2	A (1)	12,90	93,95	10501			93,95	20601		
120412FRR	1,2	A (1)	12,90			93,95	10601			93,95	20701

Steel				
Stainless steel				
Cast iron				
Non ferrous metals	●	●	●	●
Heat resistant alloys			○	○

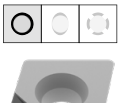
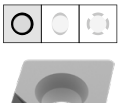
CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	CTDPS30		CTDPU20		CTDCD10	
									
				F DIAMOND CCGW NEW Y0		F DIAMOND CCGW NEW Y0		F DIAMOND CCGW NEW Y0	
				Article no. 71 171 ... EUR		Article no. 71 171 ... EUR		Article no. 71 171 ... EUR	
060201FN	0,1	A (1)	3,5	54,04	20001				
060202FN	0,2	A (1)	2,4					61,76	40001
060202FN	0,2	A (1)	3,4	54,04	20101				
060204FN	0,4	A (1)	2,2					63,06	40101
060204FN	0,4	A (1)	3,2	54,04	20201				
09T302FN	0,2	A (1)	2,4					65,64	40201
09T302FN	0,2	A (1)	4,5	56,62	20301				
09T304FN	0,4	A (1)	2,2					68,21	40301
09T304FN	0,4	A (1)	4,3	56,62	20401	57,92	30001		
09T308FN	0,8	A (1)	2,0					72,06	40401
09T308FN	0,8	A (1)	4,1			57,92	30101		
120404FN	0,4	A (1)	4,3	57,92	20501				
120408FN	0,8	A (1)	2,0					73,36	40501
Steel									
Stainless steel									
Cast iron									
Non ferrous metals				●		●		●	
Heat resistant alloys				○		○			

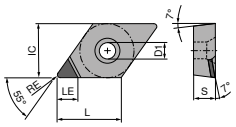
CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

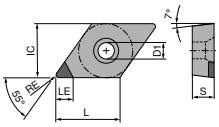
ISO	RE mm	TCE (NOI)	LE mm	-CB1 CTDPD20		-CB1 CTDCD10		-CB2 CTDCD10		-Q-CB2 CTDCD10	
											
				F DIAMOND CCGT Y0		F DIAMOND CCGT Y0		M DIAMOND CCGT Y0		M DIAMOND CCGT Y0	
				Article no. 71 300 ... EUR		Article no. 71 300 ... EUR		Article no. 71 301 ... EUR		Article no. 71 306 ... EUR	
060202EN	0,2	A (1)	2,4					76,20	30200		
060208FN	0,8	A (1)	2,0			76,20	30600				
060208FN	0,8	A (1)	3,0	57,76	10600						
09T302EN	0,2	A (1)	2,3							81,70	31200
09T302EN	0,2	A (1)	2,4					78,63	31200		
09T308EN	0,8	A (1)	2,0					78,63	31600		
120404EN	0,4	A (1)	2,2					88,38	32600		
Steel											
Stainless steel											
Cast iron											
Non ferrous metals				●		●		●		●	
Heat resistant alloys											

DCGW / DCGT

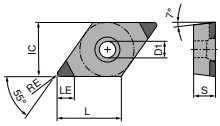
Designation	L	S	D1	IC
	mm	mm	mm	mm
DCGW 0702..	7,75	2,38	2,38	6,35
DCGW 0702..	7,75	2,38	2,80	6,35
DCG. 11T3..	11,60	3,97	4,40	9,52



DCGT A



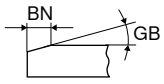
DCGW A



DCGW B

DCGW

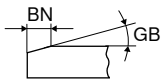
▲ TCE(NOI) = Design and number of equipped cutting edge corners



ISO	RE	BN	GB	TCE (NOI)	LE	CTBS20C		CTBH21U		CTBH40U	
	mm	mm	°		mm	F CBN DCGW Y0 Article no. 71 163 ... EUR		F CBN DCGW Y0 Article no. 71 131 ... EUR		F CBN DCGW Y0 Article no. 71 131 ... EUR	
070202TN	0,2	0,14	20	B (2)	3,9			54,36	53000		
070202TN	0,2	0,12	25	B (2)	3,9					54,36	93000
070204TN	0,4	0,14	20	B (2)	3,5			54,36	53200		
070204TN	0,4	0,12	25	B (2)	3,5					54,36	93200
070208TN	0,8	0,12	25	B (2)	3,0					54,36	93400
11T304SN	0,4	0,11	15	B (2)	3,5	55,21	13400				
Cast iron						●					
Sintered steels						●					
Heat resistant alloys						●					
hardened < 45 HRC											
hardened 46–55 HRC								●		●	
hardened 56–60 HRC								●		●	
hardened 61–65 HRC										●	

DCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

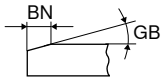


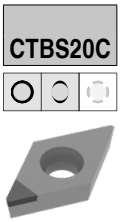
ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBH21U F CBN DCGW NEW Y0 Article no. 71 422 ... EUR		-Q CTBH21U F CBN DCGW NEW Y0 Article no. 71 423 ... EUR		CTBH21C F CBN DCGW NEW Y0 Article no. 71 424 ... EUR		CTBH41C F CBN DCGW NEW Y0 Article no. 71 424 ... EUR	
070201ER	0,1			A (1)	3,0			53,80	40100				
070201EL	0,1			A (1)	3,0			53,80	40000				
070202EN	0,2			B (2)	3,4					64,34	90000		
070202SN	0,2	0,09	10	B (2)	3,4							64,34	00201
070202TN	0,2	0,11	20	B (2)	3,4					64,34	90100		
070202TN	0,2	0,15	25	A (1)	3,9	43,87	40000						
070202FN	0,2			B (2)	3,4							64,34	00101
070204EN	0,4			B (2)	3,0					64,34	90200		
070204SN	0,4	0,09	10	B (2)	3,0					64,34	90300	64,34	00401
070204TN	0,4	0,11	20	B (2)	3,0					64,34	90400		
070204SN	0,4	0,13	25	B (2)	3,0							64,34	00501
070204TN	0,4	0,15	25	A (1)	3,5	43,87	40100						
070204SN	0,4	0,14	35	B (2)	3,0							64,34	00601
070204FN	0,4			B (2)	3,0							64,34	00301
070208EN	0,8			B (2)	2,6					64,34	90500		
070208TN	0,8	0,11	20	B (2)	2,6					64,34	90600		
070208SN	0,8	0,13	20	B (2)	2,6							64,34	00701
070208TN	0,8	0,14	35	B (2)	2,6					64,34	90700		
070208SN	0,8	0,14	35	B (2)	2,6							64,34	00801
11T302EN	0,2			B (2)	3,4					64,34	90800		
11T302TN	0,2	0,11	20	B (2)	3,4					64,34	90900		
11T302SN	0,2	0,13	20	B (2)	3,4							64,34	01001
11T302FN	0,2			B (2)	3,4							64,34	00901
11T304TN	0,4	0,09	10	B (2)	3,0					64,34	91000		
11T304TN	0,4	0,09	15	B (2)	3,0					64,34	91100		
11T304SN	0,4	0,09	15	B (2)	3,0							64,34	01201
11T304TN	0,4	0,11	20	B (2)	3,0					64,34	91200		
11T304SN	0,4	0,13	20	B (2)	3,0							64,34	01301
11T304SN	0,4	0,13	25	B (2)	3,0					64,34	91300	64,34	01401
11T304SN	0,4	0,14	30	B (2)	3,0							64,34	01501
11T304TN	0,4	0,14	30	B (2)	3,0					64,34	91400		
11T304FN	0,4			B (2)	3,0							64,34	01101
11T308SN	0,8	0,09	10	B (2)	2,6							64,34	01701
11T308TN	0,8	0,11	20	B (2)	2,6					64,34	91600		
11T308SN	0,8	0,13	25	B (2)	2,6							64,34	01801
11T308SN	0,8	0,14	30	B (2)	2,6							64,34	01901
11T308EN	0,8			B (2)	2,6					64,34	91500		
11T308TN	0,8	0,14	30	B (2)	2,6					64,34	91700		
11T308FN	0,8			B (2)	2,6							64,34	01601

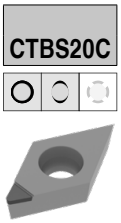
Cast iron				
Sintered steels				
Heat resistant alloys				
hardened < 45 HRC				
hardened 46–55 HRC	●	●	●	●
hardened 56–60 HRC	●	●	●	●
hardened 61–65 HRC				●

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



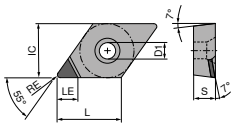




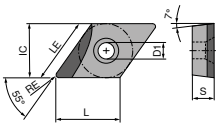
ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	F CBN DCGW NEW Y0 Article no. 71 424 ... EUR		F CBN DCGW NEW Y0 Article no. 71 422 ... EUR		F CBN DCGT NEW Y0 Article no. 71 421 ... EUR	
070202FN	0,2			**B (2)**	3,9	60,49	**80000**				
070202SN	0,2	0,09	10	**B (2)**	3,9	60,49	**80100**				
070202SN	0,2	0,11	15	**A (1)**	3,9			38,21	**20100**		
070202FN	0,2			**A (1)**	3,9			38,21	**20000**		
070204FN	0,4			**B (2)**	3,5	60,49	**80200**				
070204TN	0,4	0,09	15	**B (2)**	3,5	60,49	**80300**				
070204SN	0,4	0,11	15	**A (1)**	3,5			38,21	**20200**		
070204SN	0,4	0,14	15	**B (2)**	3,5	60,49	**80400**				
11T302SN	0,2	0,11	15	**A (1)**	3,9			38,21	**20400**		
11T302FN	0,2			**A (1)**	3,9			38,21	**20300**		
11T304FN	0,4			**B (2)**	3,5	60,49	**80500**				
11T304TN	0,4	0,09	15	**B (2)**	3,5	60,49	**80600**				
11T304SN	0,4	0,11	15	**A (1)**	3,5			38,21	**20500**		
11T304SN	0,4	0,14	15	**B (2)**	3,5	60,49	**80700**				
11T304SN	0,4	0,14	20	**B (2)**	3,5	60,49	**80800**				
11T304EN	0,4			**A (1)**	3,5					46,72	**20000**
11T308SN	0,8	0,09	10	**B (2)**	3,0	60,49	**81000**				
11T308TN	0,8	0,09	15	**B (2)**	3,0	60,49	**81100**				
11T308EN	0,8			**B (2)**	3,0	60,49	**80900**				
11T308SN	0,8	0,11	15	**A (1)**	3,0			38,21	**20600**		
11T308SN	0,8	0,14	15	**B (2)**	3,0	60,49	**81200**				
11T308SN	0,8	0,14	20	**B (2)**	3,0	60,49	**81300**				
11T308EN	0,8			**A (1)**	3,0					46,72	**20100**
Cast iron						●		●		●	
Sintered steels						●		●		●	
Heat resistant alloys						●		●		●	
hardened < 45 HRC											
hardened 46–55 HRC											
hardened 56–60 HRC											
hardened 61–65 HRC											

DCGW / DCGT

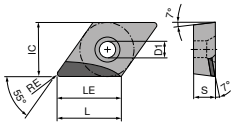
Designation	L	S	D1	IC
	mm	mm	mm	mm
DCG. 0702..	7,75	2,38	2,8	6,35
DCG. 11T3..	11,60	3,97	4,4	9,52



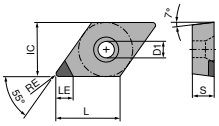
DCGT A



DCGT A LL



DCGT A RR



DCGW A

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE	TCE (NOI)	LE	CTDMD05		CTDPD20		CTDPD20		-Q CTDPS30	
	mm		mm	F		F		F		F	
				DIAMOND DCGW		DIAMOND DCGW		DIAMOND DCGT		DIAMOND DCGT	
				Y0		Y0		Y0		Y0	
				Article no. 71 130 ...		Article no. 71 130 ...		Article no. 71 134 ...		Article no. 71 144 ...	
				EUR		EUR		EUR		EUR	
070201FR	0,1	A (1)	3,0							60,51	15000
070202FN	0,2	A (1)	2,5	260,70	00200						
070204FN	0,4	A (1)	2,5	260,70	00400						
070208FN	0,8	A (1)	2,5	260,70	00600						
11T312FN	1,2	A (1)	3,5					52,14	11200		
11T312FN	1,2	A (1)	3,6			52,14	11200				
Steel											
Stainless steel											
Cast iron											
Non ferrous metals				●		●		●		●	
Heat resistant alloys				○						○	

DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	CTDPS30 F DIAMOND DCGT NEW Y0 Article no. 71 173 ... EUR		CTDPS30 F DIAMOND DCGT NEW Y0 Article no. 71 173 ... EUR		CTDPS30 F DIAMOND DCGT NEW Y0 Article no. 71 173 ... EUR	
070201FN	0,1	A (1)	3,8	56,62	20001				
070202FN	0,2	A (1)	3,7	56,62	20101				
070204FLL	0,4	A (1)	5,5			79,78	20201		
11T301FN	0,1	A (1)	4,8	59,19	20301				
11T302FN	0,2	A (1)	4,7	59,19	20401				
11T304FLL	0,4	A (1)	7,5			87,50	20501		
11T308FLL	0,8	A (1)	7,0			87,50	20601		
11T308FRR	0,8	A (1)	7,0					87,50	20701
11T312FLL	1,2	A (1)	6,5			87,50	20801		
11T312FRR	1,2	A (1)	6,5					87,50	20901
Steel									
Stainless steel									
Cast iron									
Non ferrous metals				●		●		●	
Heat resistant alloys				○		○		○	

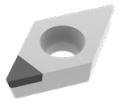
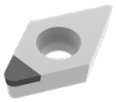
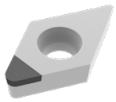
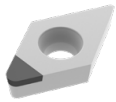
DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-Q CTDMD05 F DIAMOND DCGT NEW Y0 Article no. 71 176 ... EUR		-CB1 CTDPU20 F DIAMOND DCGT NEW Y0 Article no. 71 174 ... EUR		-CB2 CTDPU20 M DIAMOND DCGT NEW Y0 Article no. 71 175 ... EUR	
070202FN	0,2	A (1)	3,7			60,49	30001		
070204FR	0,4	A (1)	2,5	436,50	50001				
070204FN	0,4	A (1)	3,4			60,49	30101		
070204EN	0,4	A (1)	3,4					60,49	30001
11T304FN	0,4	A (1)	4,3			63,06	30201		
11T304EN	0,4	A (1)	4,3					63,06	30101
11T308FN	0,8	A (1)	4,0			63,06	30301		
Steel									
Stainless steel									
Cast iron									
Non ferrous metals				●		●		●	
Heat resistant alloys				○		○		○	

DCGW

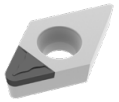
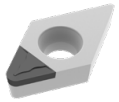
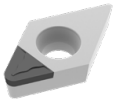
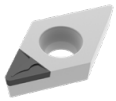
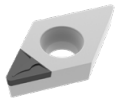
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-Q CTDMD05		CTDPS30		CTDPU20		CTDCD10	
											
				F DIAMOND DCGW NEW Y0		F DIAMOND DCGW NEW Y0		F DIAMOND DCGW NEW Y0		F DIAMOND DCGW NEW Y0	
				Article no. 71 178 ...		Article no. 71 177 ...		Article no. 71 177 ...		Article no. 71 177 ...	
				EUR		EUR		EUR		EUR	
070201FN	0,1	A (1)	3,8			55,34	20001				
070202FN	0,2	A (1)	2,6							57,92	40001
070202FN	0,2	A (1)	3,7			55,34	20101				
070204FN	0,4	A (1)	2,3							59,19	40101
070204FN	0,4	A (1)	3,4			55,34	20201	55,34	30001		
070208FN	0,8	A (1)	2,0							63,06	40201
070208FN	0,8	A (1)	3,0			55,34	20301	55,34	30101		
11T301FN	0,1	A (1)	4,8			57,92	20401				
11T302FN	0,2	A (1)	2,6							60,49	40301
11T302FN	0,2	A (1)	4,7			57,92	20501				
11T304FN	0,4	A (1)	2,3							61,76	40401
11T304FL	0,4	A (1)	3,0	413,80	50001						
11T304FN	0,4	A (1)	4,3			57,92	20601	56,62	30201		
11T308FN	0,8	A (1)	2,0							65,64	40501
11T308FN	0,8	A (1)	4,0			57,92	20701	56,62	30301		
11T312FN	1,2	A (1)	3,6			57,92	20801				

Steel				
Stainless steel				
Cast iron				
Non ferrous metals	●	●	●	●
Heat resistant alloys	○	○	○	

DCGT

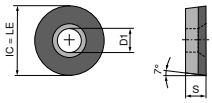
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-CB1 CTDPD20		-CB1 CTDPS30		-CB1 CTDCD10		-CB2 CTDPS30		-CB2 CTDCD10	
													
				F DIAMOND DCGT Y0		F DIAMOND DCGT Y0		F DIAMOND DCGT Y0		M DIAMOND DCGT Y0		M DIAMOND DCGT Y0	
				Article no. 71 310 ...		Article no. 71 310 ...		Article no. 71 310 ...		Article no. 71 311 ...		Article no. 71 311 ...	
				EUR		EUR		EUR		EUR		EUR	
070201FN	0,1	A (1)	3,8	60,09	10100	60,09	20100						
070202EN	0,2	A (1)	2,6									77,37	30200
11T301EN	0,1	A (1)	4,8							63,91	21100		
11T301FN	0,1	A (1)	4,8	63,91	11100	63,91	21100						
11T302FN	0,2	A (1)	2,6					78,63	31200				
11T302EN	0,2	A (1)	2,6									78,63	31200

Steel					
Stainless steel					
Cast iron					
Non ferrous metals	●	●	●	●	●
Heat resistant alloys		○		○	

RCGW

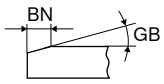
Designation	S	D1	IC
	mm	mm	mm
RCGW 1204..	4,76	4,4	12

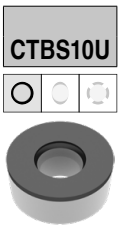


RCGW F

RCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners





F

CBN
RCGW

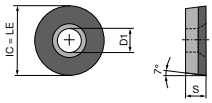
NEW Y0

ISO	RE	BN	GB	TCE (NOI)	LE	Article no. 71 425 ...	EUR	
	mm	mm	°		mm			
1204M0TN	6	0,14	20	**F**	12		219,40	**10000**

Cast iron	●
Sintered steels	●
Heat resistant alloys	●
hardened < 45 HRC	
hardened 46–55 HRC	
hardened 56–60 HRC	
hardened 61–65 HRC	

RCGW

Designation	S	D1	IC
	mm	mm	mm
RCGW 0602..	2,38	2,8	6
RCGW 0803..	3,18	3,4	8
RCGW 1003..	3,97	4,4	10
RCGW 1204..	4,76	4,4	12



RCGW F

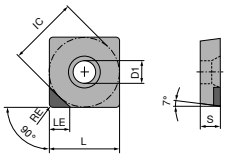
RCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE	TCE (NOI)	LE	CTDPD20		CTDPS30	
	mm		mm	F		F	
				DIAMOND RCGW		DIAMOND RCGW	
				NEW Y0		NEW Y0	
				Article no. 71 179 ...		Article no. 71 179 ...	
				EUR		EUR	
0602M0FN	3	F	6	104,80	10001	104,80	20001
0803M0FN	4	F	8	135,90	10101	135,90	20101
1003M0FN	6	F	10	175,50	10201		
1204M0FN	6	F	12	222,20	10301		
Steel							
Stainless steel							
Cast iron							
Non ferrous metals					●		●
Heat resistant alloys							○

SCGW

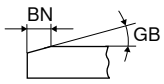
Designation	L	S	D1	IC
	mm	mm	mm	mm
SCGW 09T3..	9,52	3,97	4,4	9,52
SCGW 1204..	12,70	4,76	5,5	12,70

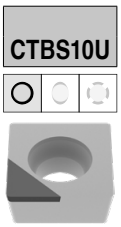


SCGW A

SCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners





F
CBN
SCGW

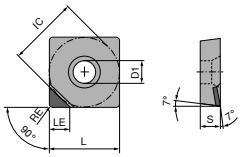
NEW Y0

ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	EUR	Article no. 71 426 ...
09T304TN	0,4	0,14	20	A (1)	3,5	38,21	10100
09T304FN	0,4			A (1)	3,5	38,21	10000
09T308FN	0,8			A (1)	3,4	38,21	10200
09T308TN	0,8	0,14	20	A (1)	3,4	38,21	10300
120404FN	0,4			A (1)	3,5	38,21	10400
120404TN	0,4	0,14	20	A (1)	3,5	38,21	10500
120408FN	0,8			A (1)	3,4	38,21	10600
120408TN	0,8	0,14	20	A (1)	3,4	38,21	10700

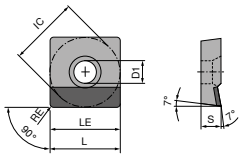
Cast iron	●
Sintered steels	●
Heat resistant alloys	●
hardened < 45 HRC	
hardened 46–55 HRC	
hardened 56–60 HRC	
hardened 61–65 HRC	

SCGW / SCGT

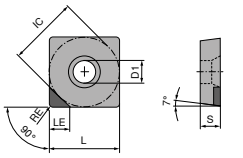
Designation	L	S	D1	IC
	mm	mm	mm	mm
SCG. 09T3..	9,52	3,97	4,4	9,52
SCG. 1204..	12,70	4,76	5,5	12,70



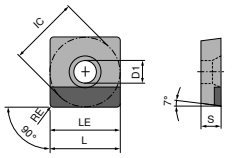
SCGT A



SCGT A



SCGW A

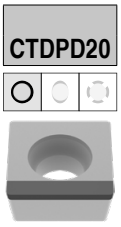


SCGW A

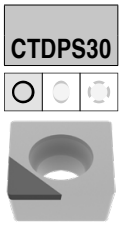
SCGW / SCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

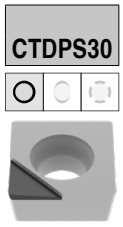
F
DIAMOND
SCGW
NEW Y0
Article no. 71 182 ...
EUR



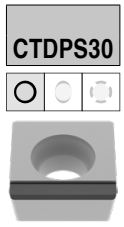
F
DIAMOND
SCGW
NEW Y0
Article no. 71 183 ...
EUR



F
DIAMOND
SCGW
NEW Y0
Article no. 71 182 ...
EUR



F
DIAMOND
SCGT
NEW Y0
Article no. 71 180 ...
EUR



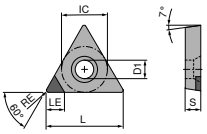
F
DIAMOND
SCGT
NEW Y0
Article no. 71 181 ...
EUR

ISO	RE mm	TCE (NOI)	LE mm	EUR		EUR		EUR		EUR		EUR	
09T304FN	0,4	A (1)	4,40	56,62	10001			56,62	20601	56,62	20001		
09T304FN	0,4	A (1)	9,52			84,93	10001						
09T308FN	0,8	A (1)	4,30	56,62	10101					56,62	20101		
09T308FN	0,8	A (1)	9,50									84,93	20001
09T308FN	0,8	A (1)	9,52			84,93	10101						
09T312FN	1,2	A (1)	4,20	56,62	10201					56,62	20201		
120404FN	0,4	A (1)	4,40	57,92	10301								
120404FN	0,4	A (1)	12,70			93,95	10201						
120408FN	0,8	A (1)	4,30	57,92	10401								
120408FN	0,8	A (1)	12,70			93,95	10301					93,95	20101
120412FN	1,2	A (1)	4,20	57,92	10501								
120412FN	1,2	A (1)	12,00									93,95	20201
120412FN	1,2	A (1)	12,70			93,95	10401						

Steel											
Stainless steel											
Cast iron											
Non ferrous metals			●		●		●		●		●
Heat resistant alloys							○		○		○

TCGW

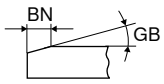
Designation	L	S	D1	IC
	mm	mm	mm	mm
TCGW 0902..	9,6	2,38	2,5	5,56
TCGW 1102..	11,0	2,38	2,8	6,35



TCGW A

TCGW

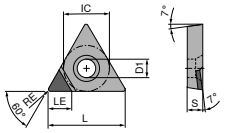
▲ TCE(NOI) = Design and number of equipped cutting edge corners



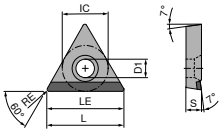
ISO	RE	BN	GB	TCE (NOI)	LE	CTBS20C		CTBH21U		CTBH40U	
	mm	mm	°		mm	F		F		F	
						CBN TCGW		CBN TCGW		CBN TCGW	
						NEW Y0		Y0		Y0	
						Article no. 71 427 ...		Article no. 71 140 ...		Article no. 71 140 ...	
						EUR		EUR		EUR	
090202FN	0,2			A (1)	3,8					34,55	80100
090204SN	0,4	0,11	15	A (1)	3,5	38,21	20000				
110204EN	0,4			A (1)	3,5			34,55	40700		
Cast iron						●					
Sintered steels						●					
Heat resistant alloys						●					
hardened < 45 HRC											
hardened 46–55 HRC								●		●	
hardened 56–60 HRC								●		●	
hardened 61–65 HRC										●	

TCGW / TCGT

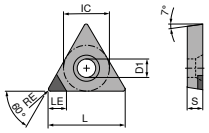
Designation	L	S	D1	IC
	mm	mm	mm	mm
TCG. 0902..	9,6	2,38	2,5	5,56
TCG. 1102..	11,0	2,38	2,8	6,35
TCG. 16T3..	16,5	3,97	4,4	9,52



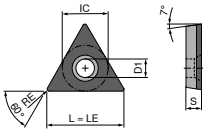
TCGT A



TCGT A



TCGW A



TCGW F

TCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

CTDPD20

F
DIAMOND
TCGW
Y0

ISO	RE mm	TCE (NOI)	LE mm	Article no. 71 140 ...	EUR	
16T312FN	1,2	**A (1)**	3,8		52,14	**11600**

Steel	
Stainless steel	
Cast iron	
Non ferrous metals	●
Heat resistant alloys	

TCGT / TCGW

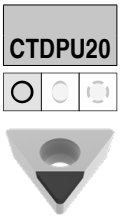
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	CTDPD20 F DIAMOND TCGT NEW Y0 Article no. 71 184 ... EUR		CTDPS30 F DIAMOND TCGT NEW Y0 Article no. 71 184 ... EUR		CTDPS30 F DIAMOND TCGT NEW Y0 Article no. 71 185 ... EUR		CTDPS30 F DIAMOND TCGW NEW Y0 Article no. 71 186 ... EUR		CTDCD10 F DIAMOND TCGW NEW Y0 Article no. 71 186 ... EUR		CTDPD20 F DIAMOND TCGW NEW Y0 Article no. 71 187 ... EUR	
090202FN	0,2	A (1)	3,7			50,20	20001			50,20	20001				
090204FN	0,4	A (1)	3,4			50,20	20101								
090204FN	0,4	A (1)	9,6					75,93	20001						
090208FN	0,8	A (1)	3,0	50,20	10001										
110202FN	0,2	A (1)	2,6									66,91	40001		
110202FN	0,2	A (1)	3,7	52,77	10101					52,77	20101				
110202FN	0,2	F	11,0											171,30	10001
110204FN	0,4	A (1)	2,3									66,91	40101		
110204FN	0,4	A (1)	3,4	52,77	10201	52,77	20201			52,77	20201				
110204FN	0,4	A (1)	11,0					79,78	20101						
110204FN	0,4	F	11,0											171,30	10101
110208FN	0,8	A (1)	2,0									66,91	40201		
110208FN	0,8	A (1)	3,0	52,77	10301										
110208FN	0,8	A (1)	11,0					79,78	20201						
16T304FN	0,4	A (1)	2,3									72,06	40301		
16T304FN	0,4	A (1)	4,6	57,92	10401	57,92	20301								
16T304FN	0,4	A (1)	16,5					105,50	20301						
16T308FN	0,8	A (1)	2,0									72,06	40401		
16T308FN	0,8	A (1)	4,2	57,92	10501										
16T308FN	0,8	A (1)	16,5					105,50	20401						

Steel						
Stainless steel						
Cast iron						
Non ferrous metals	●	●	●	●	●	●
Heat resistant alloys		○	○	○		

TCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



ISO	RE mm	TCE (NOI)	LE mm	CTDPD20 F DIAMOND TCGW NEW Y0 Article no. 71 188 ... EUR		CTDPU20 F DIAMOND TCGW NEW Y0 Article no. 71 188 ... EUR	
090208FN	0,8	**A (1)**	9,6	75,93	**10001**		
110204FN	0,4	**A (1)**	11,0	79,78	**10101**	74,63	**30001**
110208FN	0,8	**A (1)**	11,0	79,78	**10201**		
16T304FN	0,4	**A (1)**	16,5	105,50	**10301**		
16T308FN	0,8	**A (1)**	16,5	105,50	**10401**		

Steel		
Stainless steel		
Cast iron		
Non ferrous metals	●	●
Heat resistant alloys		○

TCGT

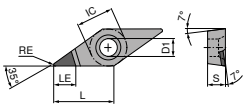
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-CB1 CTDPD20 F DIAMOND TCGT Y0 Article no. 71 325 ... EUR	
16T308FN	0,8	**A (1)**	4,2	62,63	**13600**

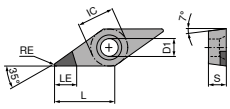
Steel	
Stainless steel	
Cast iron	
Non ferrous metals	●
Heat resistant alloys	

VCGW / VCGT

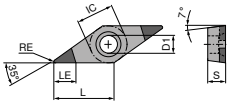
Designation	L	S	D1	IC
	mm	mm	mm	mm
VCGW 0702..	6,9	2,38	2,2	3,97
VCG. 1103..	11,1	3,18	2,9	6,35
VCG. 1604..	16,6	4,76	4,4	9,52



VCGT A



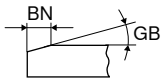
VCGW A

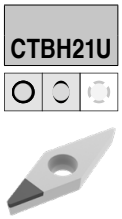


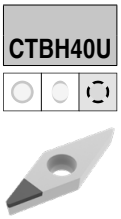
VCGW B

VCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



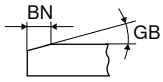




ISO	RE	BN	GB	TCE (NOI)	LE	CTBH20C		CTBH21U		CTBH40U	
	mm	mm	°		mm	F		F		F	
						CBN VCGW		CBN VCGW		CBN VCGW	
						Y0		Y0		Y0	
						Article no. 71 165 ...		Article no. 71 160 ...		Article no. 71 160 ...	
						EUR		EUR		EUR	
070202TN	0,2	0,15	25	A (1)	3,5			40,80	55000		
070204EN	0,4			A (1)	3,2			40,80	45000		
160402TN	0,2	0,15	25	A (1)	3,5			45,78	52000		
160402EN	0,2			A (1)	3,5			45,78	43000		
160404EN	0,4			A (1)	3,2			45,78	41200		
160404SN	0,4	0,11	15	B (2)	3,1	55,21	24400				
160404TN	0,4	0,15	25	A (1)	3,2			45,78	52200		
160412TN	1,2	0,12	25	A (1)	3,9					45,78	90900
Cast iron											
Sintered steels											
Heat resistant alloys											
hardened < 45 HRC											
hardened 46-55 HRC						●		●		●	
hardened 56-60 HRC						●		●		●	
hardened 61-65 HRC										●	

VCGW / VCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

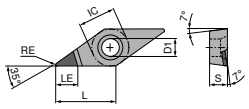


ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	CTBS20C F CBN VCGW NEW Y0 Article no. 71 429 ... EUR		CTBH21U F CBN VCGW NEW Y0 Article no. 71 430 ... EUR		CTBH21U F CBN VCGT NEW Y0 Article no. 71 428 ... EUR		CTBH41U F CBN VCGW NEW Y0 Article no. 71 429 ... EUR		CTBH41U F CBN VCGW NEW Y0 Article no. 71 430 ... EUR	
070202FN	0,2			A (1)	3,5							42,48	70000		
070204FN	0,4			A (1)	3,2							42,48	70100		
110302EN	0,2			B (2)	3,5			66,52	40000						
110302SN	0,2	0,11	15	A (1)	4,7	50,96	20000								
110302TN	0,2	0,15	25	B (2)	3,5			66,52	40100						
110302FN	0,2			B (2)	3,5									66,52	70000
110304EN	0,4			A (1)	3,2					50,96	40000				
110304EN	0,4			B (2)	3,2			66,52	40200						
110304TN	0,4	0,15	25	B (2)	3,2			66,52	40300						
110304FN	0,4			B (2)	3,2									66,52	70100
160402EN	0,2			A (1)	3,5					50,96	40100				
160402TN	0,2	0,15	25	B (2)	3,5			66,52	40400						
160402FN	0,2			A (1)	3,5							42,48	70200		
160402FN	0,2			B (2)	3,5									66,52	70200
160404SN	0,4	0,11	15	A (1)	5,0	55,20	20100								
160404TN	0,4	0,15	25	B (2)	3,2			66,52	40600						
160404TN	0,4	0,10	30	A (1)	3,2							42,48	70400		
160404FN	0,4			A (1)	3,2							42,48	70300		
160404EN	0,4			B (2)	3,2			66,52	40500						
160404FN	0,4			B (2)	3,2									66,52	70300
160408FN	0,8			A (1)	2,8							42,48	70500		
160408SN	0,8	0,11	15	A (1)	4,4	55,20	20200								
160408TN	0,8	0,15	25	B (2)	2,8			66,52	40800						
160408EN	0,8			B (2)	2,8			66,52	40700						
160408FN	0,8			B (2)	2,8									66,52	70400

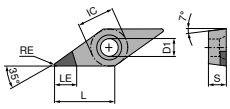
Cast iron	●				
Sintered steels	●				
Heat resistant alloys	●				
hardened < 45 HRC					
hardened 46–55 HRC		●	●	●	●
hardened 56–60 HRC		●	●	●	●
hardened 61–65 HRC				●	●

VCGW / VCGT

Designation	L	S	D1	IC
	mm	mm	mm	mm
VCG. 0702..	6,9	2,38	2,2	3,97
VCG. 1103..	11,1	3,18	2,8	6,35
VCG. 1303..	13,3	3,18	3,4	7,94
VCG. 1604..	16,6	4,76	4,4	9,52



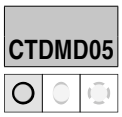
VCGT A



VCGW A

VCGW / VCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners


CTDMD05


F
DIAMOND
VCGW
Y0
Article no.
71 160 ...
EUR


CTDPD20


F
DIAMOND
VCGT
Y0
Article no.
71 062 ...
EUR

ISO	RE mm	TCE (NOI)	LE mm	EUR		EUR	
110301FN	0,1	A (1)	5,4			57,01	10100
160401FN	0,1	A (1)	6,0			62,42	10700
160408FN	0,8	A (1)	5,0	480,70	07800		

Steel		
Stainless steel		
Cast iron		
Non ferrous metals	●	●
Heat resistant alloys	○	

VCGT / VCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				CTDMD05		CTDPS30		CTDPS30		CTDPU20		-CB2 CTDPU20		CTDCD10	
															
				F		F		F		F		M		F	
				DIAMOND VCGT		DIAMOND VCGW		DIAMOND VCGT		DIAMOND VCGW		DIAMOND VCGT		DIAMOND VCGW	
				NEW Y0		NEW Y0		NEW Y0		NEW Y0		NEW Y0		NEW Y0	
ISO	RE mm	TCE (NOI)	LE mm	Article no. 71 189 ... EUR		Article no. 71 191 ... EUR		Article no. 71 189 ... EUR		Article no. 71 191 ... EUR		Article no. 71 190 ... EUR		Article no. 71 191 ... EUR	
070201FN	0,1	A (1)	3,8					59,19	20001						
070202FN	0,2	A (1)	3,6			59,19	20001								
070202FN	0,2	A (1)		496,20	50001										
070204FN	0,4	A (1)	3,2			59,19	20101								
070204FN	0,4	A (1)		496,20	50101										
110301FN	0,1	A (1)	5,4			66,91	20201	66,91	20101						
110302FN	0,2	A (1)	3,0											70,78	40001
110302FN	0,2	A (1)	4,6	514,70	50201	66,91	20301	66,91	20201						
110304FN	0,4	A (1)	3,0											70,78	40101
110304FN	0,4	A (1)	3,9	514,70	50301	66,91	20401	66,91	20301						
110308FN	0,8	A (1)	3,0											79,78	40201
130302FN	0,2	A (1)	5,9			69,49	20501	69,49	20401						
160401FN	0,1	A (1)	6,0			69,49	20601	69,49	20501						
160402FN	0,2	A (1)	3,0											73,36	40301
160402FN	0,2	A (1)	5,9					69,49	20601						
160402FN	0,2	A (1)		514,70	50401										
160404FN	0,4	A (1)	3,0											78,50	40401
160404FN	0,4	A (1)	5,5			69,49	20701	69,49	20701	72,06	30001				
160404EN	0,4	A (1)	5,5									92,65	30001		
160404FN	0,4	A (1)		514,70	50501										
160408FN	0,8	A (1)	3,0											88,80	40501
160408FN	0,8	A (1)	5,0			69,49	20801								
160408FN	0,8	A (1)		584,70	50601										
160412FN	1,2	A (1)	4,5			77,21	20901								
Steel															
Stainless steel															
Cast iron															
Non ferrous metals				●		●		●		●		●		●	
Heat resistant alloys				○		○		○		○		○			

VCGT

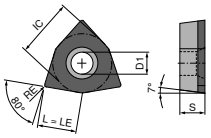
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ISO	RE mm	TCE (NOI)	LE mm	-CB1 CTDPD20	-CB1 CTDPS30	-CB2 CTDPS30	-CB1 CTDCD10	-CB2 CTDCD10
								
				F DIAMOND VCGT Y0	F DIAMOND VCGT Y0	M DIAMOND VCGT Y0	F DIAMOND VCGT Y0	M DIAMOND VCGT Y0
				Article no. 71 330 ...	Article no. 71 330 ...	Article no. 71 331 ...	Article no. 71 330 ...	Article no. 71 331 ...
				EUR	EUR	EUR	EUR	EUR
110301FN	0,1	A (1)	3,0				93,26 31000	
110301FN	0,1	A (1)	5,4	81,07 11000				
110302FN	0,2	A (1)	4,6		81,07 21200			
110308EN	0,8	A (1)	3,3			81,07 21800		
160402FN	0,2	A (1)	3,0				96,97 32200	
160402EN	0,2	A (1)	3,0					96,97 33200
160402EN	0,2	A (1)	5,9			84,78 23200		
160402FN	0,2	A (1)	5,9	84,78 13200				
160404FN	0,4	A (1)	3,0				96,97 32400	
160408FN	0,8	A (1)	3,0				108,10 32600	
160412FN	1,2	A (1)	3,0				108,10 32800	
160412EN	1,2	A (1)	3,0					108,10 34000
160412FN	1,2	A (1)	4,5	93,26 14000	93,26 24000			

Steel								
Stainless steel								
Cast iron								
Non ferrous metals				●	●	●	●	●
Heat resistant alloys					○	○		

WCGW

Designation	L	S	D1	IC
	mm	mm	mm	mm
WCGW 0201..	2,7	1,59	2,3	3,97



WCGW F

WCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

F
CBN
WCGW
Y0

ISO	RE	TCE (NOI)	LE	Article no. 71 154 ...
	mm		mm	EUR
020104FN	0,4	F	2,7	127,20 80100

Cast iron	
Sintered steels	
Heat resistant alloys	
hardened < 45 HRC	
hardened 46–55 HRC	●
hardened 56–60 HRC	●
hardened 61–65 HRC	●

Cutting data values for CBN inserts

			CTB S05U					
	Cutting edges code negative insert*		EN			F		
	Cutting edges code positive insert*		EN			TN–D		
Index	Material	Strength	v_c	f	a_p	v_c	f	a_p
	general sintered steel (> HV300)							
	high density sintered steel (> HV600)							
	Sintered steels (< HV300)							
3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	900–1600	0,02–0,25	0,15–10	900–1600	0,02–0,25	0,15–10
3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	900–1600	0,02–0,25	0,15–10	900–1600	0,02–0,25	0,15–10
3.3	Cast iron with spheroidal graphite	300–500 N/mm²	1000–1750	0,02–0,25	0,15–10	1000–1750	0,02–0,25	0,15–10
3.4	Cast iron with spheroidal graphite	500–900 N/mm²	1000–1750	0,02–0,25	0,15–10	1000–1750	0,02–0,25	0,15–10
3.5	White malleable cast iron	270–450 N/mm²						
3.6	White malleable cast iron	500–650 N/mm²						
3.7	Black malleable cast iron	300–450 N/mm²						
3.8	Black malleable cast iron	500–800 N/mm²						
5.1	Pure nickel							
5.2	Nickel alloys							
5.3	Nickel alloys	< 850 N/mm²						
5.4	Nickel molybdenum alloys							
5.5	Nickel-chromium alloys	< 1300 N/mm²						
5.6	Cobalt Chrome Alloys	< 1300 N/mm²						
5.7	Heat resistant alloys	< 1300 N/mm²						
5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²						
5.9	Pure titanium	< 900 N/mm²						
5.10	Titanium alloys	< 700 N/mm²						
5.11	Titanium alloys	< 1200 N/mm²						

			CTB S10U / CTB S10C					
	Cutting edges code negative insert*		EN			F		
	Cutting edges code positive insert*		EN			TN–D		
Index	Material	Strength	v_c	f	a_p	v_c	f	a_p
	general sintered steel (> HV300)		250–750	0,02–0,25	0,02–0,4	210–550	0,08–0,35	0,1–0,4
	high density sintered steel (> HV600)		200–700	0,02–0,25	0,02–0,4	150–400	0,08–0,35	0,1–0,4
	Sintered steels (< HV300)		150–350	0,02–0,25	0,02–0,4	100–220	0,08–0,35	0,1–0,4
3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	900–1600	0,02–0,25	0,05–0,25	700–1200	0,08–0,35	0,08–0,4
3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	900–1600	0,02–0,25	0,05–0,25	700–1200	0,08–0,35	0,08–0,4
3.3	Cast iron with spheroidal graphite	300–500 N/mm²	1000–1750	0,02–0,25	0,02–0,25	800–1250	0,08–0,35	0,08–0,4
3.4	Cast iron with spheroidal graphite	500–900 N/mm²	1000–1750	0,02–0,25	0,02–0,25	800–1250	0,08–0,35	0,08–0,4
3.5	White malleable cast iron	270–450 N/mm²						
3.6	White malleable cast iron	500–650 N/mm²						
3.7	Black malleable cast iron	300–450 N/mm²						
3.8	Black malleable cast iron	500–800 N/mm²						
5.1	Pure nickel							
5.2	Nickel alloys							
5.3	Nickel alloys	< 850 N/mm²						
5.4	Nickel molybdenum alloys		300–700	0,02–0,25	0,02–0,4	250–400	0,08–0,35	0,08–0,4
5.5	Nickel-chromium alloys	< 1300 N/mm²	300–700	0,02–0,25	0,02–0,4	250–400	0,08–0,35	0,08–0,4
5.6	Cobalt Chrome Alloys	< 1300 N/mm²	300–700	0,02–0,25	0,02–0,4	250–400	0,08–0,35	0,08–0,4
5.7	Heat resistant alloys	< 1300 N/mm²	300–700	0,02–0,25	0,02–0,4	250–400	0,08–0,35	0,08–0,4
5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	300–700	0,02–0,25	0,02–0,4	250–400	0,08–0,35	0,08–0,4
5.9	Pure titanium	< 900 N/mm²						
5.10	Titanium alloys	< 700 N/mm²						
5.11	Titanium alloys	< 1200 N/mm²						

* Note chamfer width: The wider the chamfer, the more stable the cutting edge.

The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Cutting data values for CBN inserts

	CTB S10C								
	TN-B			TN-C			TN-E		
	SN-B			SN-C / TN-C					
	v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
	200–400	0,05–0,4	0,06–0,4	150–350	0,06–0,5	0,08–0,5	150–300	0,1–0,35	0,1–0,4
	350–550	0,05–0,4	0,06–0,4	300–500	0,06–0,5	0,08–0,5	250–450	0,1–0,35	0,1–0,4
	300–500	0,05–0,4	0,06–0,4	200–400	0,06–0,5	0,08–0,5	200–400	0,1–0,35	0,1–0,4
	750–1200	0,05–0,4	0,06–0,4	800–1300	0,06–0,5	0,08–0,5	600–1100	0,1–0,35	0,1–0,4
	750–1200	0,05–0,4	0,06–0,4	800–1300	0,06–0,5	0,08–0,5	600–1100	0,1–0,35	0,1–0,4
	750–1200	0,05–0,4	0,06–0,4	800–1300	0,06–0,5	0,08–0,5	600–1100	0,1–0,35	0,1–0,4
	750–1200	0,05–0,4	0,06–0,4	800–1300	0,06–0,5	0,08–0,5	600–1100	0,1–0,35	0,1–0,4
	400–600	0,05–0,4	0,06–0,4	300–500	0,06–0,5	0,08–0,5	250–450	0,1–0,35	0,1–0,4
	400–600	0,05–0,4	0,06–0,4	300–500	0,06–0,5	0,08–0,5	250–450	0,1–0,35	0,1–0,4
	400–600	0,05–0,4	0,06–0,4	300–500	0,06–0,5	0,08–0,5	250–450	0,1–0,35	0,1–0,4
	400–600	0,05–0,4	0,06–0,4	300–500	0,06–0,5	0,08–0,5	250–450	0,1–0,35	0,1–0,4
	400–600	0,05–0,4	0,06–0,4	300–500	0,06–0,5	0,08–0,5	250–450	0,1–0,35	0,1–0,4

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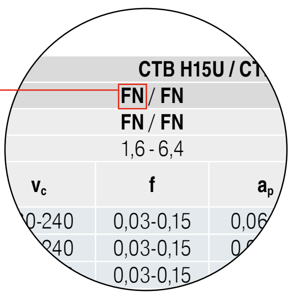


Cutting data values for CBN inserts

			CTB S20C					
	Cutting edges code negative insert*		EN			SN–B		
	Cutting edges code positive insert*		EN			SN–B		
Index	Material	Strength	v_c	f	a_p	v_c	f	a_p
	general sintered steel (> HV300)		250–750	0,02–0,25	0,02–0,4	250–700	0,04–0,25	0,03–0,4
	high density sintered steel (> HV600)		200–700	0,02–0,25	0,02–0,4	200–700	0,04–0,25	0,03–0,4
	Sintered steels (< HV300)		150–350	0,02–0,25	0,02–0,4	150–350	0,04–0,25	0,03–0,4
3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	800–1450	0,02–0,25	0,05–0,25	700–1400	0,04–0,25	0,05–0,25
3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	800–1450	0,02–0,25	0,05–0,25	700–1400	0,04–0,25	0,05–0,25
3.3	Cast iron with spheroidal graphite	300–500 N/mm²	900–1600	0,02–0,25	0,05–0,25	800–1600	0,04–0,25	0,05–0,25
3.4	Cast iron with spheroidal graphite	500–900 N/mm²	900–1600	0,02–0,25	0,05–0,25	800–1600	0,04–0,25	0,05–0,25
3.5	White malleable cast iron	270–450 N/mm²						
3.6	White malleable cast iron	500–650 N/mm²						
3.7	Black malleable cast iron	300–450 N/mm²						
3.8	Black malleable cast iron	500–800 N/mm²						
5.1	Pure nickel							
5.2	Nickel alloys							
5.3	Nickel alloys	< 850 N/mm²						
5.4	Nickel molybdenum alloys		200–600	0,02–0,25	0,02–0,4	200–550	0,04–0,25	0,03–0,4
5.5	Nickel-chromium alloys	< 1300 N/mm²	200–600	0,02–0,25	0,02–0,4	200–550	0,04–0,25	0,03–0,4
5.6	Cobalt Chrome Alloys	< 1300 N/mm²	200–600	0,02–0,25	0,02–0,4	200–550	0,04–0,25	0,03–0,4
5.7	Heat resistant alloys	< 1300 N/mm²	200–600	0,02–0,25	0,02–0,4	200–550	0,04–0,25	0,03–0,4
5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	200–600	0,02–0,25	0,02–0,4	200–550	0,04–0,25	0,03–0,4
5.9	Pure titanium	< 900 N/mm²						
5.10	Titanium alloys	< 700 N/mm²						
5.11	Titanium alloys	< 1200 N/mm²						

			CTB S20C					
	Cutting edges code negative insert*					SN–E		
	Cutting edges code positive insert*		TN–E			SN–E		
Index	Material	Strength	v_c	f	a_p	v_c	f	a_p
	general sintered steel (> HV300)		210–550	0,08–0,35	0,1–0,4	200–520	0,1–0,35	0,1–0,4
	high density sintered steel (> HV600)		150–400	0,08–0,35	0,1–0,4	130–350	0,1–0,35	0,1–0,4
	Sintered steels (< HV300)		100–220	0,08–0,35	0,1–0,4	100–200	0,1–0,35	0,1–0,4
3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	550–1000	0,08–0,35	0,08–0,4	550–950	0,1–0,35	0,1–0,4
3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	550–1000	0,08–0,35	0,08–0,4	550–950	0,1–0,35	0,1–0,4
3.3	Cast iron with spheroidal graphite	300–500 N/mm²	700–1200	0,08–0,35	0,08–0,4	700–1100	0,1–0,35	0,1–0,4
3.4	Cast iron with spheroidal graphite	500–900 N/mm²	700–1200	0,08–0,35	0,08–0,4	700–1100	0,1–0,35	0,1–0,4
3.5	White malleable cast iron	270–450 N/mm²						
3.6	White malleable cast iron	500–650 N/mm²						
3.7	Black malleable cast iron	300–450 N/mm²						
3.8	Black malleable cast iron	500–800 N/mm²						
5.1	Pure nickel							
5.2	Nickel alloys							
5.3	Nickel alloys	< 850 N/mm²						
5.4	Nickel molybdenum alloys		150–350	0,08–0,35	0,08–0,4	150–320	0,1–0,35	0,1–0,4
5.5	Nickel-chromium alloys	< 1300 N/mm²	150–350	0,08–0,35	0,08–0,4	150–320	0,1–0,35	0,1–0,4
5.6	Cobalt Chrome Alloys	< 1300 N/mm²	150–350	0,08–0,35	0,08–0,4	150–320	0,1–0,35	0,1–0,4
5.7	Heat resistant alloys	< 1300 N/mm²	150–350	0,08–0,35	0,08–0,4	150–320	0,1–0,35	0,1–0,4
5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	150–350	0,08–0,35	0,08–0,4	150–320	0,1–0,35	0,1–0,4
5.9	Pure titanium	< 900 N/mm²						
5.10	Titanium alloys	< 700 N/mm²						
5.11	Titanium alloys	< 1200 N/mm²						

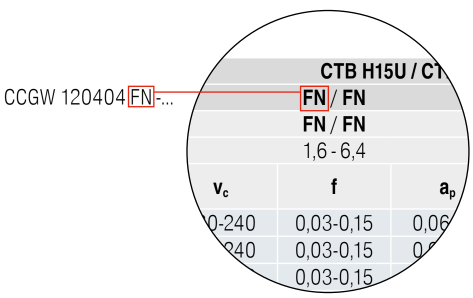
* Note chamfer width: The wider the chamfer, the more stable the cutting edge.

The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Cutting data values for CBN inserts

CTB S20C								
			SN–C			SN–D		
SN–C			TN–D			SN–D		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
250–650	0,05–0,25	0,06–0,4	250–600	0,05–0,35	0,06–0,4	220–580	0,06–0,35	0,08–0,4
200–600	0,05–0,25	0,06–0,4	180–550	0,05–0,35	0,06–0,4	170–510	0,06–0,35	0,08–0,4
150–350	0,05–0,25	0,06–0,4	130–300	0,05–0,35	0,06–0,4	120–250	0,06–0,35	0,08–0,4
650–1300	0,05–0,25	0,06–0,4	650–1100	0,05–0,35	0,06–0,4	600–1000	0,06–0,35	0,08–0,5
650–1300	0,05–0,25	0,06–0,4	650–1100	0,05–0,35	0,06–0,4	600–1000	0,06–0,35	0,08–0,5
780–1400	0,05–0,25	0,06–0,4	750–1300	0,05–0,35	0,06–0,4	700–1250	0,06–0,35	0,08–0,5
780–1400	0,05–0,25	0,06–0,4	750–1300	0,05–0,35	0,06–0,4	700–1250	0,06–0,35	0,08–0,5
200–550	0,05–0,25	0,06–0,4	180–500	0,05–0,4	0,06–0,4	180–450	0,06–0,5	0,08–0,5
200–550	0,05–0,25	0,06–0,4	180–500	0,05–0,4	0,06–0,4	180–450	0,06–0,5	0,08–0,5
200–550	0,05–0,25	0,06–0,4	180–500	0,05–0,4	0,06–0,4	180–450	0,06–0,5	0,08–0,5
200–550	0,05–0,25	0,06–0,4	180–500	0,05–0,4	0,06–0,4	180–450	0,06–0,5	0,08–0,5
200–550	0,05–0,25	0,06–0,4	180–500	0,05–0,4	0,06–0,4	180–450	0,06–0,5	0,08–0,5

CTB S20C		
SN–F		
SN–F		
v_c	f	a_p
180–480	0,12–0,35	0,12–0,4
80–250	0,12–0,35	0,12–0,4
80–150	0,12–0,35	0,12–0,4
500–850	0,12–0,35	0,12–0,4
500–850	0,12–0,35	0,12–0,4
650–1000	0,12–0,35	0,12–0,4
650–1000	0,12–0,35	0,12–0,4
130–300	0,12–0,35	0,12–0,4
130–300	0,12–0,35	0,12–0,4
130–300	0,12–0,35	0,12–0,4
130–300	0,12–0,35	0,12–0,4
130–300	0,12–0,35	0,12–0,4



Cutting data values for CBN inserts

					CTB H15U / CTB H15C					
		Cutting edges code negative insert*			FN			EN		
		Cutting edges code positive insert*			FN			EN		
			Ra (theo.)		1,6–6,4			1,0–3,2		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
6.1		< 45 HRC	x		160–240	0,03–0,15	0,06–0,3	160–240	0,03–0,15	0,06–0,3
6.2		46–55 HRC	x		160–240	0,03–0,15	0,06–0,3	160–240	0,03–0,15	0,06–0,3
6.3	hardened materials	56–60 HRC	x		160–240	0,03–0,15	0,06–0,3	160–240	0,03–0,15	0,06–0,3
6.4		61–65 HRC								
6.5		65–70 HRC								

					CTB H21U / CTB H20C / CTB H21C					
		Cutting edges code negative insert*			FN			TN-C		
		Cutting edges code positive insert*			EN / FN			EN		
			Ra (theo.)		1,6–6,4			1,0–4,5		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
6.1		< 45 HRC								
6.2		46–55 HRC	x		300–380	0,04–0,25	0,05–0,5	280–350	0,04–0,15	0,05–0,5
6.3	hardened materials	56–60 HRC	x		300–380	0,04–0,25	0,05–0,5	280–350	0,04–0,15	0,05–0,5
6.4		61–65 HRC								
6.5		65–70 HRC								

					CTB H21U / CTB H20C / CTB H21C					
		Cutting edges code negative insert*			TN-E / SN-E			SN-F		
		Cutting edges code positive insert*			TN-E			SN-E		
			Ra (theo.)		0,35–1,6			0,2–0,8		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
6.1		< 45 HRC								
6.2		46–55 HRC	x		210–260	0,05–0,15	0,1–0,5	180–230	0,06–0,20	0,1–0,5
6.3	hardened materials	56–60 HRC	x		210–260	0,05–0,15	0,1–0,5	180–230	0,06–0,20	0,1–0,5
6.4		61–65 HRC								
6.5		65–70 HRC								

					CTB H40U / CTB H40C / CTB H41U / CTB H41C					
		Cutting edges code negative insert*			FN / EN					
		Cutting edges code positive insert*			FN / EN			SN-B		
			Ra (theo.)		1,0–3,2			1,6–3,2		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
6.1		< 45 HRC								
6.2		46–55 HRC	x		190–250	0,03–0,15	0,03–0,5	180–250	0,03–0,2	0,05–0,7
6.3	hardened materials	56–60 HRC	x		190–250	0,03–0,15	0,03–0,5	180–250	0,03–0,2	0,05–0,7
6.4		61–65 HRC	x		190–250	0,03–0,15	0,03–0,5	180–250	0,03–0,2	0,05–0,7
6.5		65–70 HRC								

					CTB H40U / CTB H40C / CTB H41U / CTB H41C					
		Cutting edges code negative insert*			EN-T / SN-E			SN-E		
		Cutting edges code positive insert*			EN-T / SN-E			TN-F		
			Ra (theo.)		0,5–1,6			0,4–1,0		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
6.1		< 45 HRC								
6.2		46–55 HRC	x		140–200	0,05–0,15	0,08–0,5	180–230	0,05–0,25	0,1–0,5
6.3	hardened materials	56–60 HRC	x		140–200	0,05–0,15	0,08–0,5	180–230	0,05–0,25	0,1–0,5
6.4		61–65 HRC	x		140–200	0,05–0,15	0,08–0,5	180–230	0,05–0,25	0,1–0,5
6.5		65–70 HRC								

* Note chamfer width: The wider the chamfer, the more stable the cutting edge.

The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Cutting data values for CBN inserts

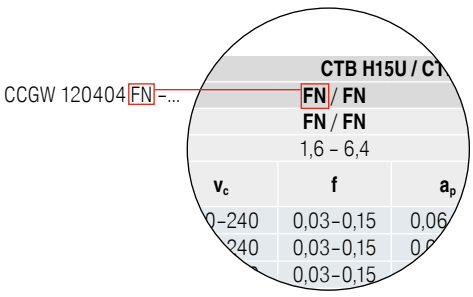
CTB H15U / CTB H15C								
SN-C			**SN-E**			**RN** (Rounded chamfer)		
SN-C			**SN-E**			**RN** (Rounded chamfer)		
0,5–1,6			0,1–0,8			0,1–0,8		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
140–200	0,06–0,2	0,08–0,3	120–180	0,06–0,25	0,1–0,4	130–210	0,06–0,2	0,08–0,3
140–200	0,06–0,2	0,08–0,3	120–180	0,06–0,25	0,1–0,4	130–210	0,06–0,2	0,08–0,3
140–200	0,06–0,2	0,08–0,3	120–180	0,06–0,25	0,1–0,4	130–210	0,06–0,2	0,08–0,3

CTB H21U / CTB H20C / CTB H21C								
TN-D			**TN-D / SN-D**			**TN-E**		
SN-B			**TN-D / SN-C**			**SN-D**		
0,8–3,0			0,5–2,0			0,35–2,5		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
270–330	0,06–0,25	0,05–0,5	250–320	0,06–0,25	0,08–1,0	220–290	0,05–0,15	0,08–0,5
270–330	0,06–0,25	0,05–0,5	250–320	0,06–0,25	0,08–1,0	220–290	0,05–0,15	0,08–0,5

CTB H21U / CTB H20C / CTB H21C		
SN-G		
SN-F		
0,1–0,5		
v_c	f	a_p
160–200	0,05–0,12	0,1–0,5
160–200	0,05–0,12	0,1–0,5

CTB H40U / CTB H40C / CTB H41U / CTB H41C								
SN-C			**SN-D**					
TN-D			**SN-D**			**TN-D**		
0,8–3,0			0,8–2,0			0,5–1,6		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
180–240	0,04–0,15	0,03–0,5	160–220	0,04–0,15	0,03–0,5	150–210	0,04–0,25	0,08–0,5
180–240	0,04–0,15	0,03–0,5	160–220	0,04–0,15	0,03–0,5	150–210	0,04–0,25	0,08–0,5
180–240	0,04–0,15	0,03–0,5	160–220	0,04–0,15	0,03–0,5	150–210	0,04–0,25	0,08–0,5

CTB H40U / CTB H40C / CTB H41U / CTB H41C					
SN-F			**SN-G**		
SN-F			**SN-G**		
0,2–0,8			0,1–0,5		
v_c	f	a_p	v_c	f	a_p
130–200	0,04–0,15	0,1–0,5	120–190	0,04–0,12	0,1–0,5
130–200	0,04–0,15	0,1–0,5	120–190	0,04–0,12	0,1–0,5
130–200	0,04–0,15	0,1–0,5	120–190	0,04–0,12	0,1–0,5



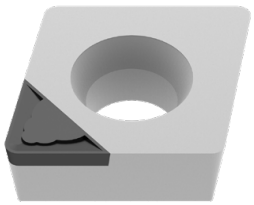
Cutting data standard values for diamond cutting materials CTD PD20 / PS30 / PU20 / CD10

Material group			a_p = 0,04–0,4 mm Surface roughness R_z in µm		a_p = 0,4–1,0 mm Surface roughness R_z in µm		a_p = 0,4–2,5 mm Surface roughness R_z in µm	
			2,5–5,0	5,0–10	2,5–5,0	5,0–10	2,5–5,0	5,0–10
			CTD ...	CTD ...	CTD ...	CTD ...	CTD ...	CTD ...
Aluminium wrought alloys without Si f=0.05–0.5 mm/rev.	○	Tool Material	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10
		v_c in m/min	**400–2500**	**400–2500**	**400–2000**	**400–2000**	**400–1600**	**400–1600**
	◐	Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
		v_c in m/min		**400–2500**		**400–2000**		**400–1600**
	◌	Tool Material	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20
		v_c in m/min	**400–2500**	**400–2500**	**400–2000**	**400–2000**	**400–1600**	**400–1600**
Aluminium cast alloys Si=2–12 % f=0.05–0.5 mm/rev.	○	Tool Material	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
		v_c in m/min	**600–2000**	**600–2200**	**600–1800**	**600–2000**	**600–1500**	**600–1800**
	◐	Tool Material	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
		v_c in m/min	**400–2000**	**400–2200**	**400–1800**	**600–2000**	**400–1500**	**400–1800**
	◌	Tool Material	PS30	PS30	PS30	PS30	PS30	
		v_c in m/min	**600–2000**	**600–2200**	**600–1800**	**600–2000**	**600–1500**	
Aluminium cast alloys Si=12–20 % f=0.05–0.5 mm/rev.	○	Tool Material	PU20 / CD10	PU20 / CD10	PU20 / CD10	PU20 / CD10	PU20 / CD10	PU20 / CD10
		v_c in m/min	**800-1200**	**400–1800**	**700–1000**	**400–1500**	**600–900**	**400–1200**
	◐	Tool Material		PU20 / CD10		PU20 / CD10		PU20 / CD10
		v_c in m/min		**600–1800**		**600–1500**		**600–1200**
	◌	Tool Material		PU20		PU20		
		v_c in m/min		**600–1800**		**600–1500**		
Copper and copper wrought alloys f=0.05–0.5 mm/rev.	○	Tool Material	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10
		v_c in m/min	**400–1800**	**300–1600**	**400–1600**	**300–1600**	**400–1400**	**400–1500**
	◐	Tool Material	PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10
		v_c in m/min	**300–1500**	**300–1500**	**400–1600**	**300–1500**	**400–1500**	**300–1400**
	◌	Tool Material		PD20 / PU20		PS30 / PU20	PD20 / PU20	PS30 / PU20
		v_c in m/min		**300–1800**		**300–1700**	**300–1600**	**200–1300**
Plastic materials without reinforcement (acrylic glass) f=0.05–0.7 mm/rev.	○	Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
		v_c in m/min		**400–1200**		**300–1000**		**200–1000**
	◐	Tool Material		PD20 / CD10		PD20 / CD10		PS30 / CD10
		v_c in m/min		**300–1200**		**200–1000**		**200–900**
	◌	Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
		v_c in m/min		**400–1200**		**300–1000**		**200–1000**
Plastic materials with reinforcement (glass-fibre, carbon-fibre reinforced) f=0.05–0.7 mm/rev.	○	Tool Material	PS30 / PU20 / CD10		PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
		v_c in m/min	**500–1000**		**400–900**	**300–900**	**300–800**	**200–1200**
	◐	Tool Material	PS30 / PU20 / CD10		PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
		v_c in m/min	**400–900**		**300–800**	**200–900**	**200–800**	**200–1400**
	◌	Tool Material	PU20		PU20	PU20	PU20	
		v_c in m/min	**500–1000**		**400–800**	**300–1000**	**300–800**	

○ Smooth cut	◐ Irregular cutting depth	◌ Interrupted cut

Cutting data standard values for the CB chip breaker geometries

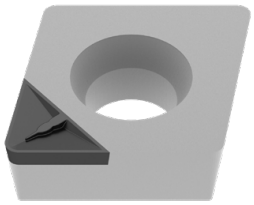
-CB1



3D-Chip Breaker -CB1				
Corner Radius	a_p in mm		f_z in mm/rev.	
	min.	max.	min.	max.
0,1 mm	0,05	0,30	0,02	0,05
0,2 mm	0,06	0,40	0,03	0,08
0,4 mm	0,10	0,80	0,04	0,15
0,8 mm	0,15	1,00	0,08	0,20
1,2 mm	0,30	1,50	0,12	0,25

- Finish and Superfinish
- Extremely sharp cutting edge geometry
- Depth of Cut a_p: 0.05–1.5 mm
- Smallest cutting pressure for highest accuracies
- For machining of thin-walled and unstable workpieces

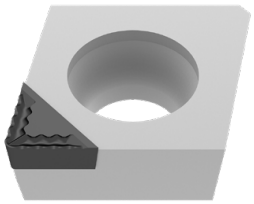
-CB2



3D-Chip Breaker -CB2				
Corner Radius	a_p in mm		f_z in mm/rev.	
	min.	max.	min.	max.
0,2 mm	0,50	0,80	0,08	0,12
0,4 mm	0,60	1,50	0,08	0,20
0,8 mm	0,70	1,50	0,15	0,30
1,2 mm	0,80	2,00	0,20	0,40

- Semi-finish and Finish machining
- Negative edge preperation
- Cutting Depth a_p: 0,5–2,0 mm
- High surface quality and tight tolerances
- Machining of solid workpieces under stable conditions

-CB3



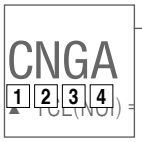
3D-Chip Breaker -CB3				
Corner Radius	a_p in mm		f_z in mm/rev.	
	min.	max.	min.	max.
0,4 mm	1,00	3,00	0,10	0,20
0,8 mm	1,00	3,00	0,15	0,35

- Medium and rough machining
- Highly aggressive chip breaker
- Cutting depth a_p: 1,0 - 3,0 mm
- Stable component conditions necessary
- Cooling must be ensured

ISO designation system for inserts

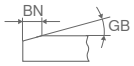
Indexable inserts, CBN, ceramic – metric

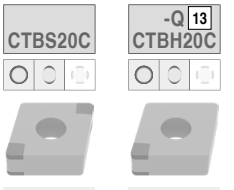
C	N	G	A	12	04	04	T	N	-	009C	_	L	3	-	Q
1	2	3	4	5	6	7	8	9		10		11	12		13



CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners





ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm
120404TN	0,4	0,09	15	L (4)	2,8
5 6 7 8 9	0,4	10		11	12

ISO	RE mm	BN mm	GB °	TCE (NOI)	LE mm	F CBN CNGA Article no. 71 401 ...	F CBN CNGA Article no. 71 400 ...
120404TN	0,4	0,09	15	L (4)	2,8		
120404SN	0,4	0,11	15	L (4)	2,8	16200	
120404SN	0,4	0,11	20	K (2)	2,8		25800

1 Insert shape

V	35°	Included angle
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	Included angle
B	82°	
A	85°	
L	90°	Other shapes
P	108°	
H	120°	
O	135°	
R	-	
S	90°	
T	60°	
W	80°	

2 Clearance angle

	α		α
A	3°	F	25°
B	5°	G	30°
C	7°	N	0°
D	15°	P	11°
E	20°		

O Clearance angles not included within the standard for which particular information is necessary.

3 Tolerances

	IC± mm	IC± inch	BS mm	BS inch	S mm	S inch
A	0,025	.0010	0,005	.0002	0,025	.001
F	0,013	.0005	0,005	.0002	0,025	.001
C	0,025	.0010	0,013	.0005	0,025	.001
H	0,013	.0005	0,013	.0005	0,025	.001
E	0,025	.0010	0,025	.0010	0,025	.001
G	0,025	.0010	0,025	.0010	0,13	.005
J	0,05-0,15*	.002-.006*	0,005	.0002	0,025	.001
K	0,05-0,15*	.002-.006*	0,013	.0005	0,025	.001
L	0,05-0,15*	.002-.006*	0,025	.0010	0,025	.001
M	0,05-0,15*	.002-.006*	0,05-0,20*	.003-.008*	0,13	.005
N	0,05-0,15*	.002-.006*	0,05-0,20*	.003-.008*	0,025	.001
U	0,08-0,25*	.003-.010*	0,13-0,38*	.005-.015*	0,13	.005

* Depends on insert size

6 Insert thickness

mm	inch	Code mm	Code inch
1,59	1/16	01	1
2,38	3/32	02	
3,18	1/8	03	2
3,97	5/32	T3	
4,76	3/16	04	3
5,56	7/32	05	
6,35	1/4	06	4
7,94	5/16	07	5
9,52	3/8	09	6

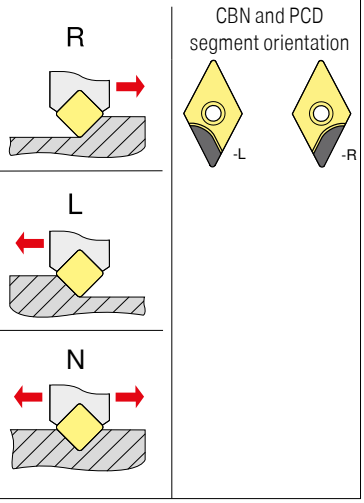
7 Corner radius

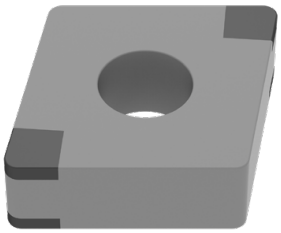
mm	inch	Code mm	Code inch	RN 00 RC MO
≤ 0,05	.0015	00	X0	
0,1	.004	01	0	
0,2	.008	02	.5	
0,4	1/64	04	1	
0,8	1/32	08	2	
1,2	3/64	12	3	
1,6	1/16	16	4	
2,0	5/64	20	5	
2,4	3/32	24	6	
2,8	7/64	28	7	
3,2	1/8	32	8	

8 Cutting edge

F	Sharp
E	rounded
T	chamfered
S	Chamfered and honed
K	Double-chamfered
P	Double-chamfered and honed
R	Round chamfer

9 Direction of cut





4 Characteristics

N	
R	
F	
A	
M, P	
G, P	
W	
T	
Q	
U	
B	
H	
C	
J	
X	Special version

inch

Change at inscribed circle IK < 1/4"

IK > 1/4“	IK < 1/4“
N / R / F	E
A / M / G	D
X	X

5 Cutting length

Type	ISO	ANSI	L mm	L inch	d mm	d inch
C	06	2	6,4	.250	6,35	.250
	09	3	9,7	.382	9,525	.375
	12	4	12,9	.508	12,70	.500
	16	5	16,1	.634	15,875	.625
	19	6	19,3	.760	19,05	.750
	25	8	25,8	1.016	25,4	1.000
	32	12	35,24	1.269	31,75	1.250
S	06	2	6,35	.250	6,35	.250
	09	3	9,525	.375	9,525	.375
	12	4	12,7	.500	12,7	.500
	15	5	15,875	.625	15,875	.625
	19	6	19,05	.750	19,05	.750
	25	8	25,4	1.000	25,4	1.000
	31	10	31,75	1.250	31,75	1.250
D	07	2	7,7	.303	6,35	.250
	11	3	11,6	.457	9,525	.375
	15	4	15,5	.610	12,70	.500
V	11	2	11,1	.437	6,35	.250
	16	3	16,6	.653	9,525	.375
	22	4	22,10	.870	12,70	.500

Type	ISO	ANSI	L mm	L inch	d mm	d inch
T	06	1.2	6,9	.272	3,97	.156
	09	1.8	9,6	.378	5,56	.219
	11	2	11,0	.433	6,35	.250
	16	3	16,5	.650	9,525	.375
	22	4	22,	.079	12,70	.039
	27	5	27,5	1.083	15,875	.625
	33	6	33,0	1.299	19,05	.750
W	06	3	6,5	.256	9,525	.375
	08	4	8,7	.331	12,70	.039
	10	5	10,9	.429	15,875	.625
R	06	2	6,35	.250	6,35	.250
	08	-	8,0	.315	8,0	.315
	09	3	9,52	.375	9,52	.375
	10	-	10,0	.394	10,0	.394
	12*	-	12,0	.472	12,0	.472
	12	4	12,7	.488	12,70	.488
	15	5	15,875	.625	15,875	.625
	16	-	16,0	.630	16,0	.630
	19	6	19,05	.750	19,05	.750
	25	8	25,0	.984	25,0	.984
	25*	-	25,4	1.000	25,4	1.000
	31	10	31,75	1.250	31,75	1.250
	32	-	32,0	1.260	32,0	1.260

* inch version

10 Chamfer type

T / S K / P 1)

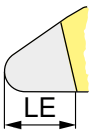
	mm	inch		
015	0,15	.006	A	05°
020	0,20	.008	B	10°
025	0,25	.010	C	15°
050	0,50	.020	D	20°
075	0,75	.030	E	25°
100	1,00	.040	F	30°
			G	35°

1) Two letters are assigned for double-chamfered cutting edges
e.g. BE =
chamfer angle 1 (y_1) = 10°
chamfer angle 2 (y_2) = 25°

11 Number of cutting edges

Single sided		Complete insert thickness	
A		T	
B		U	
C		V	
D		W	
G		X	
H		Y	
Double sided		**Entire clamping flat**	
K		S	
L		F	
M		E	
N			
P			
Q			

12 Segment length



Approx. specification in mm

13 Chip breaker designation

-CB1 

-CB2 

-CB3 

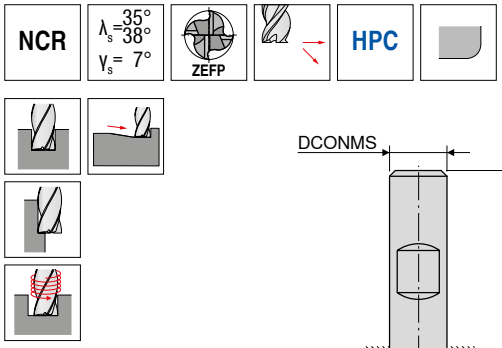
neutral 

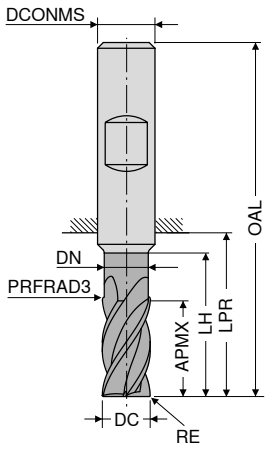
Masterfinish

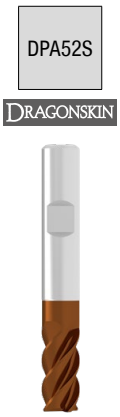
Inserts with wiper technology are coded with -Q

MonsterMill – End milling cutter with corner radius

▲ PRFRAD3 = 1 mm







Factory standard

HB

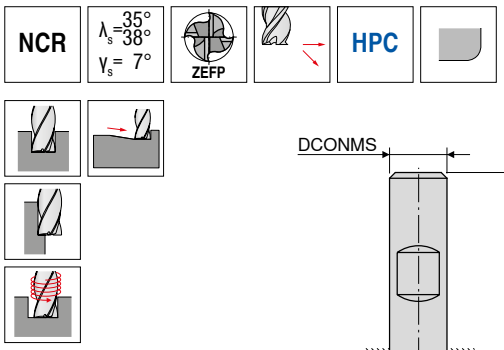
DC f8	RE	APMX	DN	LH	LPR	OAL	DCONMS h5	ZEFP	NEW V1 Article no. 53 030 ...
mm	mm	mm	mm	mm	mm	mm	mm		EUR
4	0,1	11	3,8	17	21	57	6	4	41,73 04201
4	0,2	11	3,8	17	21	57	6	4	42,66 04202
4	0,4	11	3,8	17	21	57	6	4	43,36 04204
4	0,5	11	3,8	17	21	57	6	4	43,36 04205
5	0,1	13	4,8	19	21	57	6	4	44,27 05201
5	0,5	13	4,8	19	21	57	6	4	43,89 05205
5	1,0	13	4,8	19	21	57	6	4	43,89 05210
6	0,1	13	5,8	19	21	57	6	4	43,00 06201
6	0,4	13	5,8	19	21	57	6	4	44,80 06204
6	0,5	13	5,8	19	21	57	6	4	42,66 06205
6	0,6	13	5,8	19	21	57	6	4	42,84 06206
6	0,8	13	5,8	19	21	57	6	4	43,16 06208
6	1,0	13	5,8	19	21	57	6	4	42,66 06210
6	1,5	13	5,8	19	21	57	6	4	42,84 06215
8	0,2	19	7,7	25	27	63	8	4	55,34 08202
8	0,5	21	7,7	25	27	63	8	4	54,82 08205
8	0,8	21	7,7	25	27	63	8	4	55,34 08208
8	1,0	21	7,7	25	27	63	8	4	54,61 08210
8	1,2	21	7,7	25	27	63	8	4	54,82 08212
8	1,5	21	7,7	25	27	63	8	4	55,00 08215
8	2,0	21	7,7	25	27	63	8	4	54,61 08220
10	0,2	22	9,7	30	32	72	10	4	71,64 10202
10	0,5	22	9,7	30	32	72	10	4	71,09 10205
10	1,0	22	9,7	30	32	72	10	4	70,93 10210
10	1,2	22	9,7	30	32	72	10	4	71,30 10212
10	1,5	22	9,7	30	32	72	10	4	70,93 10215
10	1,6	22	9,7	30	32	72	10	4	70,93 10216
10	2,0	22	9,7	30	32	72	10	4	71,09 10220
12	0,2	26	11,6	36	38	83	12	4	110,70 12202
12	0,5	26	11,6	36	38	83	12	4	110,50 12205
12	1,0	26	11,6	36	38	83	12	4	110,30 12210
12	1,2	26	11,6	36	38	83	12	4	110,80 12212
12	1,5	26	11,6	36	38	83	12	4	110,30 12215
12	1,6	26	11,6	36	38	83	12	4	110,30 12216
12	2,0	26	11,6	36	38	83	12	4	110,30 12220
12	2,5	26	11,6	36	38	83	12	4	110,70 12225
12	3,0	26	11,6	36	38	83	12	4	110,80 12230
16	0,3	36	15,5	42	44	92	16	4	172,20 16203
16	1,0	36	15,5	42	44	92	16	4	171,90 16210

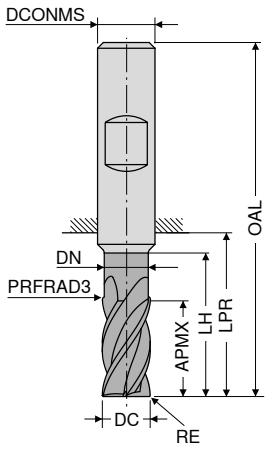
Steel	
Stainless steel	○
Cast iron	
Non ferrous metals	
Heat resistant alloys	●
Hardened materials	

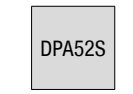
→ v_c/f_z Page 110+111

MonsterMill – End milling cutter with corner radius

▲ PRFRAD3 = 1 mm







DRAGONSKIN

Factory standard

HB 

NEW V1

DC f8	RE	APMX	DN	LH	LPR	OAL	DCONMS h5	ZEFP	Article no. 53 030 ...
mm	mm	mm	mm	mm	mm	mm	mm		EUR	
16	1,6	36	15,5	42	44	92	16	4	173,50	**16216**
16	2,0	36	15,5	42	44	92	16	4	171,70	**16220**
16	2,5	36	15,5	42	44	92	16	4	172,20	**16225**
16	3,0	36	15,5	42	44	92	16	4	172,80	**16230**
16	3,2	36	15,5	42	44	92	16	4	172,80	**16232**
16	4,0	36	15,5	42	44	92	16	4	171,70	**16240**
20	0,3	41	19,5	52	54	104	20	4	271,10	**20203**
20	1,0	41	19,5	52	54	104	20	4	270,50	**20210**
20	2,0	41	19,5	52	54	104	20	4	270,50	**20220**
20	3,0	41	19,5	52	54	104	20	4	271,80	**20230**
20	4,0	41	19,5	52	54	104	20	4	273,00	**20240**
20	5,0	41	19,5	52	54	104	20	4	273,40	**20250**
20	6,3	41	19,5	52	54	104	20	4	273,90	**20263**

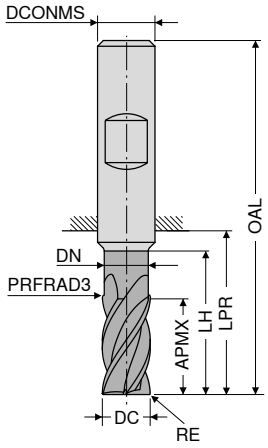
Steel	
Stainless steel	○
Cast iron	
Non ferrous metals	
Heat resistant alloys	●
Hardened materials	

→ v_c/f_z Page 110+111

MonsterMill – End milling cutter with corner radius

▲ PRFRAD3 = 1 mm

NCR | λ_s=35° 38° γ_s= 7° | ZEFP | HPC



DPA52S

DRAGONSKIN

Factory standard

HB 

NEW V1

DC f8	RE	APMX	DN	LH	LPR	OAL	DCONMS h5	ZEFP	Article no. 53 030 ...
mm	mm	mm	mm	mm	mm	mm	mm		EUR
4	0,1	8,5	3,8	20	26	62	6	4	41,02 04401
4	0,2	8,5	3,8	20	26	62	6	4	41,95 04402
4	0,4	8,5	3,8	20	26	62	6	4	42,66 04404
4	0,5	8,5	3,8	20	26	62	6	4	42,66 04405
5	0,1	10,5	4,8	25	34	70	6	4	44,59 05401
5	0,5	10,5	4,8	25	34	70	6	4	44,27 05405
5	1,0	10,5	4,8	25	34	70	6	4	44,27 05410
6	0,1	13,0	5,8	30	34	70	6	4	43,89 06401
6	0,4	13,0	5,8	30	34	70	6	4	45,68 06404
6	0,5	13,0	5,8	30	34	70	6	4	43,55 06405
6	0,6	13,0	5,8	30	34	70	6	4	43,73 06406
6	0,8	13,0	5,8	30	34	70	6	4	44,07 06408
6	1,0	13,0	5,8	30	34	70	6	4	43,36 06410
6	1,5	13,0	5,8	30	34	70	6	4	43,73 06415
8	0,2	17,0	7,7	40	44	80	8	4	57,48 08402
8	0,5	17,0	7,7	40	44	80	8	4	56,77 08405
8	0,8	17,0	7,7	40	44	80	8	4	57,34 08408
8	1,0	17,0	7,7	40	44	80	8	4	56,64 08410
8	1,2	17,0	7,7	40	44	80	8	4	56,77 08412
8	1,5	17,0	7,7	40	44	80	8	4	56,95 08415
8	2,0	17,0	7,7	40	44	80	8	4	56,64 08420
10	0,2	21,0	9,7	50	54	94	10	4	74,50 10402
10	0,5	21,0	9,7	50	54	94	10	4	76,09 10405
10	1,0	21,0	9,7	50	54	94	10	4	75,75 10410
10	1,2	21,0	9,7	50	54	94	10	4	76,09 10412
10	1,5	21,0	9,7	50	54	94	10	4	75,57 10415
10	1,6	21,0	9,7	50	54	94	10	4	75,57 10416
10	2,0	21,0	9,7	50	54	94	10	4	75,57 10420
12	0,2	25,0	11,6	60	65	110	12	4	122,30 12402
12	0,5	25,0	11,6	60	65	110	12	4	121,80 12405
12	1,0	25,0	11,6	60	65	110	12	4	121,40 12410
12	1,2	25,0	11,6	60	65	110	12	4	121,80 12412
12	1,5	25,0	11,6	60	65	110	12	4	121,20 12415
12	1,6	25,0	11,6	60	65	110	12	4	121,40 12416
12	2,0	25,0	11,6	60	65	110	12	4	121,00 12420
12	2,5	25,0	11,6	60	65	110	12	4	121,40 12425
12	3,0	25,0	11,6	60	65	110	12	4	121,60 12430
16	0,3	33,0	15,5	80	84	132	16	4	201,90 16403
16	1,0	33,0	15,5	80	84	132	16	4	200,90 16410

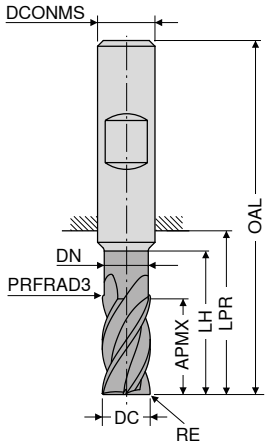
Steel	
Stainless steel	○
Cast iron	
Non ferrous metals	
Heat resistant alloys	●
Hardened materials	

→ v_c/f_z Page 110+111

MonsterMill – End milling cutter with corner radius

▲ PRFRAD3 = 1 mm

NCR | λ_s=35° 38° γ_s= 7° | ZEFP | HPC



DPA52S

DRAGONSKIN

Factory standard

HB 

NEW V1

DC f8	RE	APMX	DN	LH	LPR	OAL	DCONMS h5	ZEFP	Article no. 53 030 ... EUR	
mm	mm	mm	mm	mm	mm	mm	mm			
16	1,6	33,0	15,5	80	84	132	16	4	202,30	**16416**
16	2,0	33,0	15,5	80	84	132	16	4	200,20	**16420**
16	2,5	33,0	15,5	80	84	132	16	4	200,70	**16425**
16	3,0	33,0	15,5	80	84	132	16	4	201,00	**16430**
16	3,2	33,0	15,5	80	84	132	16	4	201,20	**16432**
16	4,0	33,0	15,5	80	84	132	16	4	199,60	**16440**
20	0,3	42,0	19,5	100	104	154	20	4	333,40	**20403**
20	1,0	42,0	19,5	100	104	154	20	4	331,40	**20410**
20	2,0	42,0	19,5	100	104	154	20	4	330,50	**20420**
20	3,0	42,0	19,5	100	104	154	20	4	332,00	**20430**
20	4,0	42,0	19,5	100	104	154	20	4	333,00	**20440**
20	5,0	42,0	19,5	100	104	154	20	4	333,60	**20450**
20	6,3	42,0	19,5	100	104	154	20	4	334,10	**20463**

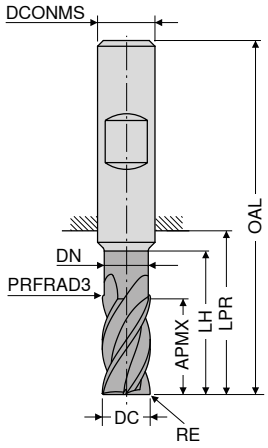
Steel	
Stainless steel	○
Cast iron	
Non ferrous metals	
Heat resistant alloys	●
Hardened materials	

→ v_c/f_z Page 110+111

MonsterMill – End milling cutter with corner radius

▲ PRFRAD3 = 1 mm

NCR | λ_s=35° 38° γ_s= 7° | ZEFP | HPC



DPA52S

DRAGONSKIN

Factory standard

HB

NEW V1

DC f8	RE	APMX	DN	LH	LPR	OAL	DCONMS h5	ZEFP	Article no. 53 031 ...	
mm	mm	mm	mm	mm	mm	mm	mm		EUR	
6	0,1	13	5,8	19	21	57	6	5	45,89	06201
6	0,4	13	5,8	19	21	57	6	5	48,02	06204
6	0,5	13	5,8	19	21	57	6	5	45,68	06205
6	0,6	13	5,8	19	21	57	6	5	46,02	06206
6	0,8	13	5,8	19	21	57	6	5	46,39	06208
6	1,0	13	5,8	19	21	57	6	5	45,68	06210
6	1,5	13	5,8	19	21	57	6	5	46,02	06215
8	0,2	19	7,7	25	27	63	8	5	58,57	08202
8	0,5	21	7,7	25	27	63	8	5	58,23	08205
8	0,8	21	7,7	25	27	63	8	5	58,95	08208
8	1,0	21	7,7	25	27	63	8	5	58,23	08210
8	1,2	21	7,7	25	27	63	8	5	58,39	08212
8	1,5	21	7,7	25	27	63	8	5	58,57	08215
8	2,0	21	7,7	25	27	63	8	5	58,23	08220
10	0,2	22	9,7	30	32	72	10	5	76,68	10202
10	0,5	22	9,7	30	32	72	10	5	76,09	10205
10	1,0	22	9,7	30	32	72	10	5	76,09	10210
10	1,2	22	9,7	30	32	72	10	5	76,45	10212
10	1,5	22	9,7	30	32	72	10	5	76,09	10215
10	1,6	22	9,7	30	32	72	10	5	76,30	10216
10	2,0	22	9,7	30	27	72	10	5	76,45	10220
12	0,2	26	11,6	36	38	83	12	5	117,30	12202
12	0,5	26	11,6	36	38	83	12	5	117,50	12205
12	1,0	26	11,6	36	38	83	12	5	117,50	12210
12	1,2	26	11,6	36	38	83	12	5	118,00	12212
12	1,5	26	11,6	36	38	83	12	5	117,70	12215
12	1,6	26	11,6	36	38	83	12	5	117,80	12216
12	2,0	26	11,6	36	38	83	12	5	117,70	12220
12	2,5	26	11,6	36	38	83	12	5	118,00	12225
12	3,0	26	11,6	36	38	83	12	5	118,40	12230
16	0,3	36	15,5	42	44	92	16	5	181,50	16203
16	1,0	36	15,5	42	44	92	16	5	182,00	16210
16	1,6	36	15,5	42	44	92	16	5	183,90	16216
16	2,0	36	15,5	42	44	92	16	5	182,00	16220
16	2,5	36	15,5	42	44	92	16	5	182,80	16225
16	3,0	36	15,5	42	44	92	16	5	183,30	16230
16	3,2	36	15,5	42	44	92	16	5	183,50	16232
16	4,0	36	15,5	42	44	92	16	5	182,30	16240
20	0,3	41	19,5	52	54	104	20	5	284,50	20203
20	2,0	41	19,5	52	54	104	20	5	285,20	20220
20	3,0	41	19,5	52	54	104	20	5	286,80	20230
20	4,0	41	19,5	52	54	104	20	5	288,20	20240
20	5,0	41	19,5	52	54	104	20	5	289,10	20250
20	6,3	41	19,5	52	54	104	20	5	289,50	20263

Steel	
Stainless steel	○
Cast iron	
Non ferrous metals	
Heat resistant alloys	●
Hardened materials	

→ v_c/f_z Page 112

Material examples referring to the cutting data tables

	Index	Material	Strength N/mm² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²	3.2315	A- G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm²	2.1247	Cub2 (Berylium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-Al11 Fe5 Ni5)		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe -Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

Cutting data standard values – MonsterMill – end mill – NCR, long – 53 030 ...

					Ø DC = 4 mm			Ø DC = 5 mm			Ø DC = 6 mm			Ø DC = 8 mm		
	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC		a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC
Index	v_c m/min	v_c m/min	v_c m/min	$a_{p\,max.}$ x DC	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm
2.1	120	100	70	1,0	0,04	0,03	0,02	0,05	0,04	0,03	0,05	0,04	0,03	0,07	0,06	0,04
2.2	120	100	70	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
2.3	100	80	60	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
2.4	100	80	60	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
2.5	120	100	70	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
2.6	120	100	70	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
2.7	60	50	40	1,0	0,03	0,02	0,01	0,04	0,03	0,02	0,04	0,03	0,02	0,06	0,04	0,02
5.1	**60**	**50**	**40**	1,0	0,04	0,03	0,02	0,05	0,04	0,03	0,05	0,04	0,03	0,07	0,06	0,04
5.2	**35**	**30**	**25**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.3	**35**	**30**	**25**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.4	**35**	**30**	**25**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.5	**35**	**30**	**25**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.6	**35**	**30**	**25**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.7	**50**	**40**	**30**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.8	**35**	**30**	**25**	1,0	0,03	0,02	0,02	0,04	0,03	0,02	0,05	0,04	0,02	0,06	0,05	0,03
5.9	**120**	**100**	**80**	1,0	0,04	0,03	0,02	0,05	0,04	0,03	0,05	0,04	0,03	0,07	0,06	0,04
5.10	**100**	**80**	**60**	1,0	0,04	0,03	0,02	0,05	0,04	0,03	0,05	0,04	0,03	0,07	0,06	0,04
5.11	**80**	**70**	**60**	1,0	0,04	0,03	0,02	0,05	0,04	0,03	0,05	0,04	0,03	0,07	0,06	0,04

Plunging angle for ramping and helical milling: 3°

Cutting data standard values – MonsterMill – end mill – NCR, extra-long – 53 030 ...

				Ø DC = 4 mm		Ø DC = 5 mm		Ø DC = 6 mm		Ø DC = 8 mm		Ø DC = 10 mm		Ø DC = 12mm	
	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC		a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC
Index	v_c m/min	v_c m/min	$a_{p\,max.}$ x DC	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm
2.1	100	80	1,0	0,04	0,03	0,05	0,04	0,05	0,04	0,07	0,06	0,09	0,07	0,11	0,08
2.2	100	80	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
2.3	90	70	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
2.4	90	70	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
2.5	100	80	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
2.6	100	80	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
2.7	60	50	1,0	0,03	0,02	0,04	0,03	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06
5.1	**60**	**50**	1,0	0,04	0,03	0,05	0,04	0,05	0,04	0,07	0,06	0,09	0,07	0,11	0,08
5.2	**35**	**30**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.3	**35**	**30**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.4	**35**	**30**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.5	**35**	**30**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.6	**35**	**30**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.7	**50**	**40**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.8	**35**	**30**	1,0	0,03	0,02	0,04	0,03	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07
5.9	**100**	**80**	1,0	0,04	0,03	0,05	0,04	0,05	0,04	0,07	0,06	0,09	0,07	0,11	0,08
5.10	**80**	**70**	1,0	0,04	0,03	0,05	0,04	0,05	0,04	0,07	0,06	0,09	0,07	0,11	0,08
5.11	**70**	**60**	1,0	0,04	0,03	0,05	0,04	0,05	0,04	0,07	0,06	0,09	0,07	0,11	0,08

Plunging angle for ramping and helical milling: 3°

	Ø DC = 10 mm			Ø DC = 12 mm			Ø DC = 16 mm			Ø DC = 20 mm			● 1st choice		○ suitable
	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC			
Index	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	Emulsion	Compressed air	MMS
2.1	0,09	0,07	0,05	0,11	0,08	0,06	0,13	0,10	0,07	0,16	0,12	0,08	●		○
2.2	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		○
2.3	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		○
2.4	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		○
2.5	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		○
2.6	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		○
2.7	0,07	0,05	0,03	0,08	0,06	0,04	0,10	0,07	0,04	0,12	0,08	0,04	●		○
5.1	0,09	0,07	0,05	0,11	0,08	0,06	0,13	0,10	0,07	0,16	0,12	0,08	●		
5.2	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.3	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.4	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.5	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.6	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.7	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.8	0,08	0,06	0,04	0,10	0,07	0,05	0,12	0,09	0,05	0,14	0,10	0,06	●		
5.9	0,09	0,07	0,05	0,11	0,08	0,06	0,13	0,10	0,07	0,16	0,12	0,08	●		
5.10	0,09	0,07	0,05	0,11	0,08	0,06	0,13	0,10	0,07	0,16	0,12	0,08	●		
5.11	0,09	0,07	0,05	0,11	0,08	0,06	0,13	0,10	0,07	0,16	0,12	0,08	●		

	Ø DC = 16 mm		Ø DC = 20 mm		● 1st choice		○ suitable
	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC			
Index	f_z mm	f_z mm	f_z mm	f_z mm	Emulsion	Compressed air	MMS
2.1	0,13	0,10	0,16	0,12	●		○
2.2	0,12	0,09	0,14	0,10	●		○
2.3	0,12	0,09	0,14	0,10	●		○
2.4	0,12	0,09	0,14	0,10	●		○
2.5	0,12	0,09	0,14	0,10	●		○
2.6	0,12	0,09	0,14	0,10	●		○
2.7	0,10	0,07	0,12	0,08	●		○
5.1	0,13	0,10	0,16	0,12	●		
5.2	0,12	0,09	0,14	0,10	●		
5.3	0,12	0,09	0,14	0,10	●		
5.4	0,12	0,09	0,14	0,10	●		
5.5	0,12	0,09	0,14	0,10	●		
5.6	0,12	0,09	0,14	0,10	●		
5.7	0,12	0,09	0,14	0,10	●		
5.8	0,12	0,09	0,14	0,10	●		
5.9	0,13	0,10	0,16	0,12	●		
5.10	0,13	0,10	0,16	0,12	●		
5.11	0,13	0,10	0,16	0,12	●		

Cutting data standard values – MonsterMill – end mill – NCR, long – 53 031 ...

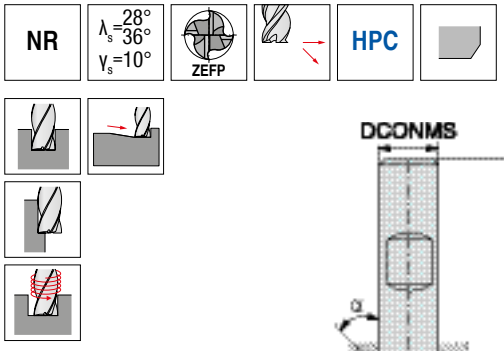
			Ø DC = 6 mm		Ø DC = 8 mm		Ø DC = 10 mm		Ø DC = 12 mm		Ø DC = 16 mm		Ø DC = 20 mm		● 1st choice		○ suitable
			a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	Emulsion	Compressed air	MMS
Index	v_c m/min	$a_{p\,max}$ x DC	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm	f_z mm			
2.1	100	1,5	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07	0,12	0,09	0,14	0,10	●		○
2.2	100	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		○
2.3	80	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		○
2.4	80	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		○
2.5	100	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		○
2.6	100	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		○
2.7	50	1,5	0,04	0,02	0,05	0,03	0,06	0,04	0,07	0,05	0,09	0,05	0,10	0,06	●		○
5.1	**50**	1,5	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07	0,12	0,09	0,14	0,10	●		
5.2	**35**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.3	**35**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.4	**35**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.5	**35**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.6	**35**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.7	**40**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.8	**35**	1,5	0,04	0,03	0,06	0,04	0,07	0,05	0,08	0,06	0,10	0,07	0,12	0,08	●		
5.9	**100**	1,5	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07	0,12	0,09	0,14	0,10	●		
5.10	**80**	1,5	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07	0,12	0,09	0,14	0,10	●		
5.11	**70**	1,5	0,05	0,04	0,06	0,05	0,08	0,06	0,10	0,07	0,12	0,09	0,14	0,10	●		

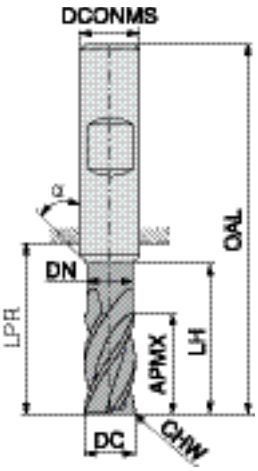
Plunging angle for ramping and helical milling = 1°

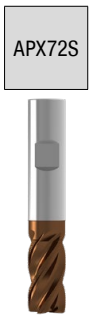
PROJECTS IN THE BEST OF HANDS

From conception to successful completion, we realize your application-specific projects

S-Cut – Rough milling cutter







										≈DIN 6527		≈DIN 6527		≈DIN 6527	
										HB		HB		HB	
										NEW V1/1#		NEW V1/1#		NEW V1/1#	
DC h11	APMX	DN	LH	LPR	OAL	DCONMS h6	CHW	α°	ZEFP	Article no. 52 205 ...		Article no. 52 205 ...		Article no. 52 205 ...	
mm	mm	mm	mm	mm	mm	mm	mm			EUR		EUR		EUR	
3	6	2,8	12,0	18	54	6	0,18	15	4	65,58	03100				
3	8	2,8	14,0	21	57	6	0,18	15	4			77,66	03200		
3	8	2,8	19,0	26	62	6	0,18	15	4					88,78	03400
4	8	3,8	13,5	18	54	6	0,20	15	4	65,58	04100				
4	11	3,8	18,0	21	57	6	0,20	15	4			77,66	04200		
4	11	3,8	23,0	26	62	6	0,20	15	4					88,78	04400
5	9	4,8	15,5	18	54	6	0,25	15	4	65,58	05100				
5	13	4,8	19,0	21	57	6	0,25	15	4			77,66	05200		
5	13	4,8	24,0	26	62	6	0,25	15	4					88,78	05400
6	10	5,5	18,0	18	54	6	0,25		4	65,58	06100				
6	13	5,5	20,0	21	57	6	0,25		4			77,66	06200		
6	13	5,5	25,0	26	62	6	0,25		4					88,78	06400
8	12	7,5	22,0	22	58	8	0,30		4	83,43	08100				
8	19	7,5	25,0	27	63	8	0,30		4			98,79	08200		
8	19	7,5	30,0	32	68	8	0,30		4					113,00	08400
10	14	9,5	26,0	26	66	10	0,30		4	101,90	10100				
10	22	9,5	30,0	32	72	10	0,30		4			120,70	10200		
10	22	9,5	35,0	40	80	10	0,30		4					138,00	10400
12	16	11,5	28,0	28	73	12	0,45		4	115,60	12100				
12	26	11,5	35,0	38	83	12	0,45		4			136,90	12200		
12	26	11,5	45,0	48	93	12	0,45		4					156,50	12400
14	18	13,5	30,0	30	75	14	0,50		4	155,90	14100				
14	26	13,5	35,0	38	83	14	0,50		4			184,60	14200		
14	26	13,5	50,0	54	99	14	0,50		4					211,10	14400
16	22	15,5	34,0	34	82	16	0,60		4	210,70	16100				
16	32	15,5	40,0	44	92	16	0,60		4			249,50	16200		
16	32	15,5	55,0	60	108	16	0,60		4					285,30	16400
20	26	19,5	42,0	42	92	20	0,60		4	304,20	20100				
20	38	19,5	50,0	54	104	20	0,60		4			360,30	20200		
20	38	19,5	70,0	76	126	20	0,60		4					411,90	20400

Steel	●	●	●
Stainless steel	●	●	●
Cast iron	●	●	●
Non ferrous metals	○	○	○
Heat resistant alloys	○	○	○
Hardened materials	○	○	○

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Material examples referring to the cutting data tables

	Index	Material	Strength N/mm² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²	3.2315	A- G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm²	2.1247	Cub2 (Berylium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-Al11 Fe5 Ni5)		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe -Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

Cutting data standard values – S-Cut – End mills – SC-UNI, short – long

	Type short / long		Ø DC = 3 mm			Ø DC = 4 mm			Ø DC = 5 mm			Ø DC = 6 mm			Ø DC = 8 mm		
			a_p 0,1–0,2 x DC	a_p 0,3–0,4 x DC	a_p 0,6–1,0 x DC	a_p 0,1–0,2 x DC	a_p 0,3–0,4 x DC	a_p 0,6–1,0 x DC	a_p 0,1–0,2 x DC	a_p 0,3–0,4 x DC	a_p 0,6–1,0 x DC	a_p 0,1–0,2 x DC	a_p 0,3–0,4 x DC	a_p 0,6–1,0 x DC	a_p 0,1–0,2 x DC	a_p 0,3–0,4 x DC	a_p 0,6–1,0 x DC
Index	v_c m/min	$a_{p\,max}$ x DC	f_z mm			f_z mm			f_z mm			f_z mm			f_z mm		
1.1	105–240	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.2	105–250	1,0	0,036	0,028	0,020	0,049	0,038	0,028	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
1.3	90–210	1,0	0,036	0,028	0,020	0,049	0,038	0,028	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
1.4	80–190	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.5	90–200	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.6	90–190	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.7	80–190	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.8	70–170	1,0	0,029	0,022	0,016	0,040	0,031	0,023	0,058	0,044	0,029	0,077	0,058	0,039	0,104	0,081	0,058
1.9	70–170	1,0	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.10	70–190	1,0	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.11	70–170	1,0	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.12	70–190	1,0	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.13	70–150	1,0	0,023	0,017	0,013	0,032	0,024	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
1.14	50–120	1,0	0,020	0,015	0,012	0,028	0,021	0,015	0,039	0,029	0,020	0,053	0,039	0,026	0,069	0,058	0,035
1.15	70–180	1,0	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.16	80–160	1,0	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
2.1	90–130	1,0	0,029	0,022	0,016	0,040	0,031	0,023	0,058	0,044	0,029	0,077	0,058	0,039	0,104	0,081	0,058
2.2	80–120	1,0	0,023	0,017	0,013	0,032	0,024	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.3	80–120	1,0	0,023	0,017	0,013	0,032	0,024	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.4	80–120	1,0	0,023	0,017	0,013	0,032	0,024	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.5	80–120	1,0	0,023	0,017	0,013	0,032	0,024	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.6	80–120	1,0	0,023	0,017	0,013	0,032	0,024	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.7	40–60	1,0	0,020	0,015	0,012	0,028	0,021	0,015	0,039	0,029	0,020	0,053	0,039	0,026	0,069	0,029	0,035
3.1	200–240	1,0	0,046	0,036	0,025	0,063	0,049	0,036	0,091	0,068	0,046	0,122	0,091	0,061	0,161	0,127	0,081
3.2	180–220	1,0	0,046	0,036	0,025	0,063	0,049	0,036	0,091	0,068	0,046	0,122	0,091	0,061	0,161	0,127	0,081
3.3	200–240	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
3.4	180–220	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
3.5	160–200	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
3.6	140–180	1,0	0,032	0,025	0,018	0,046	0,036	0,025	0,066	0,048	0,032	0,087	0,064	0,044	0,115	0,092	0,058
3.7	160–200	1,0	0,032	0,025	0,018	0,046	0,036	0,025	0,066	0,048	0,032	0,087	0,064	0,044	0,115	0,092	0,058
3.8	140–180	1,0	0,032	0,025	0,018	0,046	0,036	0,025	0,066	0,048	0,032	0,087	0,064	0,044	0,115	0,092	0,058
4.1																	
4.2																	
4.3																	
4.4																	
4.5																	
4.6	140–280	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.7	120–300	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.8	110–180	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.9	90–160	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.10	80–140	1,0	0,039	0,030	0,022	0,054	0,041	0,030	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.11	150–350	1,0	0,036	0,028	0,020	0,049	0,038	0,028	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
4.12	140–300	1,0	0,036	0,028	0,020	0,049	0,038	0,028	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
4.13																	
4.14	180–400	1,0	0,077	0,060	0,044	0,108	0,084	0,061	0,155	0,116	0,078	0,207	0,154	0,104	0,276	0,207	0,138
4.15																	
4.16																	
4.17																	
4.18	60–120	0,5	0,031	0,024	0,017	0,044	0,033	0,024	0,062	0,046	0,031	0,083	0,062	0,041	0,115	0,081	0,058
4.19	40–80	0,5	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,021	0,026	0,069	0,052	0,035	0,092	0,069	0,046
5.1	30	0,5	0,025	0,020	0,014	0,035	0,026	0,020	0,049	0,037	0,025	0,067	0,049	0,033	0,092	0,069	0,046
5.2	30	0,5	0,023	0,018	0,013	0,032	0,025	0,018	0,047	0,035	0,023	0,062	0,046	0,031	0,081	0,058	0,046
5.3	30	0,5	0,021	0,016	0,012	0,029	0,022	0,016	0,041	0,031	0,021	0,055	0,041	0,028	0,069	0,058	0,035
5.4	30	0,5	0,018	0,014	0,010	0,025	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.5	30	0,5	0,018	0,014	0,010	0,025	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.6	30	0,5	0,013	0,014	0,007	0,018	0,014	0,010	0,026	0,020	0,013	0,035	0,025	0,017	0,046	0,035	0,023
5.7	45	0,5	0,018	0,008	0,010	0,025	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.8	30	0,5	0,018	0,008	0,010	0,025	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.9	80–160	0,5	0,029	0,022	0,016	0,040	0,031	0,023	0,058	0,044	0,029	0,077	0,058	0,039	0,104	0,081	0,058
5.10	80–140	0,5	0,029	0,022	0,016	0,040	0,031	0,022	0,058	0,043	0,029	0,076	0,056	0,038	0,104	0,081	0,058
5.11	50–100	0,5	0,025	0,020	0,015	0,036	0,028	0,021	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
6.1	120–160	0,5	0,023	0,018	0,013	0,032	0,025	0,018	0,047	0,035	0,023	0,062	0,046	0,031	0,081	0,058	0,046
6.2	80–120	0,3	0,021	0,016	0,012	0,029	0,022	0,016	0,041	0,031	0,021	0,055	0,041	0,028	0,069	0,058	0,035
6.3	60–100	0,2	0,018	0,014	0,010	0,025	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
6.4																	
6.5																	

With an a_p of 1.5 x DC the f_z should be multiplied by 0.75.
With an a_p of 2.0 x DC the f_z should be multiplied by 0.5.

Plunging angle for ramping and helical milling: 3°

Index	Ø DC = 10 mm			Ø DC = 12 mm			Ø DC = 16 mm			Ø DC = 20 mm			● 1st choice		○ suitable
	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,4 x DC	a_e 0,6–1,0 x DC	Emulsion	Compressed air	MMS
	f_z mm			f_z mm			f_z mm			f_z mm					
1.1	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●	○	○
1.2	0,161	0,115	0,081	0,173	0,127	0,092	0,184	0,150	0,115	0,230	0,184	0,138	●	○	○
1.3	0,161	0,115	0,081	0,173	0,127	0,092	0,184	0,150	0,115	0,230	0,184	0,138	●	○	○
1.4	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●	○	○
1.5	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●	○	○
1.6	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●	○	○
1.7	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●	○	○
1.8	0,127	0,092	0,069	0,138	0,104	0,069	0,150	0,115	0,092	0,184	0,150	0,115	●	○	○
1.9	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●	○	○
1.10	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●	○	○
1.11	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●	○	○
1.12	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●	○	○
1.13	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●	○	○
1.14	0,092	0,069	0,046	0,092	0,069	0,046	0,104	0,081	0,058	0,127	0,104	0,081	●	○	○
1.15	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●	○	○
1.16	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●	○	○
2.1	0,127	0,092	0,069	0,138	0,104	0,069	0,150	0,115	0,092	0,184	0,150	0,115	●		
2.2	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.3	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.4	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.5	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.6	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.7	0,092	0,069	0,046	0,092	0,069	0,046	0,104	0,081	0,058	0,127	0,104	0,081	●		
3.1	0,207	0,150	0,104	0,219	0,161	0,115	0,242	0,184	0,138	0,288	0,230	0,184		●	
3.2	0,207	0,150	0,104	0,219	0,161	0,115	0,242	0,184	0,138	0,288	0,230	0,184		●	
3.3	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161		●	
3.4	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161		●	
3.5	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161		●	
3.6	0,150	0,104	0,069	0,161	0,115	0,081	0,173	0,127	0,104	0,207	0,173	0,127		●	
3.7	0,150	0,104	0,069	0,161	0,115	0,081	0,173	0,127	0,104	0,207	0,173	0,127		●	
3.8	0,150	0,104	0,069	0,161	0,115	0,081	0,173	0,127	0,104	0,207	0,173	0,127		●	
4.1															
4.2															
4.3															
4.4															
4.5															
4.6	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●		○
4.7	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●		○
4.8	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●		○
4.9	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●		○
4.10	0,173	0,127	0,092	0,196	0,138	0,092	0,207	0,161	0,127	0,242	0,196	0,161	●		○
4.11	0,161	0,115	0,081	0,173	0,127	0,092	0,184	0,150	0,127	0,230	0,184	0,138	●		○
4.12	0,161	0,115	0,081	0,173	0,127	0,092	0,184	0,150	0,115	0,230	0,184	0,138	●		○
4.13															
4.14	0,345	0,253	0,173	0,380	0,288	0,196	0,414	0,311	0,242	0,495	0,403	0,311	●		○
4.15															
4.16															
4.17															
4.18	0,138	0,104	0,069	0,115	0,115	0,081	0,161	0,127	0,092	0,196	0,161	0,127	●		○
4.19	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●		○
5.1	0,115	0,081	0,058	0,127	0,092	0,058	0,127	0,104	0,081	0,161	0,127	0,104	●		
5.2	0,104	0,081	0,058	0,115	0,046	0,058	0,127	0,092	0,069	0,150	0,127	0,092	●		
5.3	0,092	0,069	0,046	0,104	0,081	0,046	0,115	0,081	0,069	0,127	0,104	0,081	●		
5.4	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.5	0,081	0,058	0,046	0,092	0,035	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.6	0,058	0,046	0,035	0,069	0,046	0,035	0,069	0,058	0,046	0,081	0,069	0,058	●		
5.7	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.8	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.9	0,127	0,092	0,069	0,138	0,104	0,069	0,150	0,115	0,092	0,184	0,150	0,115	●		
5.10	0,127	0,092	0,069	0,138	0,104	0,069	0,150	0,115	0,092	0,184	0,150	0,115	●		
5.11	0,115	0,092	0,058	0,127	0,092	0,069	0,138	0,104	0,081	0,161	0,138	0,104	●		
6.1	0,104	0,081	0,058	0,115	0,081	0,058	0,127	0,092	0,069	0,150	0,127	0,092	●		
6.2	0,092	0,069	0,046	0,104	0,081	0,046	0,115	0,081	0,069	0,127	0,104	0,081	●		
6.3	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
6.4															
6.5															

Cutting data standard values – S-Cut – End mills – SC-UNI, extra-long

	Type extra long			Ø DC = 3 mm			Ø DC = 4 mm			Ø DC = 5 mm			Ø DC = 6 mm			Ø DC = 8 mm		
				a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC
Index	v_c m/min	$a_{p\,max}$ x DC		f_z mm			f_z mm			f_z mm			f_z mm			f_z mm		
1.1	90–180	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.2	90–180	1,0	0,5	0,040	0,030	0,020	0,053	0,040	0,027	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
1.3	70–160	1,0	0,5	0,040	0,030	0,020	0,053	0,040	0,027	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
1.4	70–140	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.5	70–160	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.6	70–160	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.7	70–140	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
1.8	50–120	1,0	0,5	0,032	0,025	0,016	0,043	0,033	0,022	0,058	0,044	0,029	0,077	0,058	0,039	0,104	0,081	0,058
1.9	50–120	1,0	0,5	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.10	50–120	1,0	0,5	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.11	50–120	1,0	0,5	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.12	50–120	1,0	0,5	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.13	50–120	1,0	0,5	0,026	0,019	0,013	0,035	0,026	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
1.14	40–80	1,0	0,5	0,022	0,016	0,011	0,029	0,022	0,015	0,039	0,029	0,020	0,053	0,039	0,026	0,069	0,058	0,035
1.15	50–120	1,0	0,5	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
1.16	60–140	1,0	0,5	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
2.1	60–100	1,0	0,5	0,032	0,025	0,016	0,043	0,033	0,022	0,058	0,044	0,029	0,077	0,058	0,039	0,104	0,081	0,058
2.2	50–80	1,0	0,5	0,026	0,019	0,013	0,035	0,026	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.3	50–80	1,0	0,5	0,026	0,019	0,013	0,035	0,026	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.4	50–80	1,0	0,5	0,026	0,019	0,013	0,035	0,026	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.5	50–80	1,0	0,5	0,026	0,019	0,013	0,035	0,026	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.6	50–80	1,0	0,5	0,026	0,019	0,013	0,035	0,026	0,017	0,046	0,035	0,023	0,061	0,045	0,030	0,081	0,058	0,046
2.7	30–50	1,0	0,5	0,022	0,016	0,011	0,029	0,022	0,015	0,039	0,029	0,020	0,054	0,039	0,026	0,069	0,058	0,035
3.1	160–200	1,0	0,5	0,051	0,038	0,026	0,068	0,051	0,035	0,091	0,068	0,046	0,122	0,091	0,061	0,161	0,127	0,081
3.2	120–160	1,0	0,5	0,051	0,038	0,026	0,068	0,051	0,035	0,091	0,068	0,046	0,122	0,091	0,061	0,161	0,127	0,081
3.3	160–200	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
3.4	120–160	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
3.5	120–160	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
3.6	100–140	1,0	0,5	0,037	0,027	0,018	0,049	0,036	0,024	0,066	0,048	0,032	0,087	0,064	0,044	0,115	0,092	0,058
3.7	120–160	1,0	0,5	0,037	0,027	0,018	0,049	0,036	0,024	0,066	0,048	0,032	0,087	0,064	0,044	0,115	0,092	0,058
3.8	100–140	1,0	0,5	0,037	0,027	0,018	0,049	0,036	0,024	0,066	0,048	0,032	0,087	0,064	0,044	0,115	0,092	0,058
4.1																		
4.2																		
4.3																		
4.4																		
4.5																		
4.6	100–240	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.7	90–220	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.8	80–180	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.9	60–160	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.10	60–140	1,0	0,5	0,044	0,032	0,022	0,059	0,043	0,029	0,078	0,058	0,039	0,104	0,077	0,052	0,138	0,104	0,069
4.11	110–320	1,0	0,5	0,040	0,030	0,020	0,053	0,040	0,027	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
4.12	100–300	1,0	0,5	0,040	0,030	0,020	0,053	0,040	0,027	0,071	0,053	0,036	0,095	0,071	0,047	0,127	0,092	0,069
4.13																		
4.14	120–400	1,0	0,5	0,087	0,065	0,044	0,116	0,087	0,059	0,155	0,116	0,078	0,207	0,154	0,104	0,276	0,207	0,138
4.15																		
4.16																		
4.17																		
4.18	40–120	0,5	0,25	0,035	0,026	0,017	0,047	0,035	0,023	0,062	0,046	0,031	0,083	0,062	0,041	0,115	0,081	0,058
4.19	30–80	0,5	0,25	0,029	0,012	0,015	0,039	0,016	0,020	0,052	0,021	0,026	0,069	0,052	0,035	0,092	0,069	0,046
5.1	30	0,5	0,25	0,028	0,021	0,014	0,037	0,028	0,019	0,049	0,037	0,025	0,067	0,049	0,033	0,092	0,069	0,046
5.2	30	0,5	0,25	0,027	0,019	0,013	0,035	0,026	0,017	0,047	0,035	0,023	0,062	0,046	0,031	0,081	0,058	0,046
5.3	25	0,5	0,25	0,023	0,017	0,012	0,031	0,023	0,016	0,041	0,031	0,021	0,055	0,041	0,028	0,069	0,058	0,035
5.4	25	0,5	0,25	0,021	0,015	0,010	0,028	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.5	25	0,5	0,25	0,021	0,015	0,010	0,028	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.6	25	0,5	0,25	0,015	0,011	0,007	0,020	0,015	0,009	0,026	0,020	0,013	0,035	0,025	0,017	0,046	0,035	0,023
5.7	45	0,5	0,25	0,021	0,015	0,010	0,028	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.8	25	0,5	0,25	0,021	0,015	0,010	0,028	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
5.9	35–65	0,5	0,25	0,032	0,025	0,016	0,043	0,033	0,022	0,058	0,044	0,029	0,077	0,058	0,039	0,104	0,081	0,058
5.10	30–55	0,5	0,25	0,032	0,024	0,016	0,043	0,032	0,022	0,058	0,043	0,029	0,076	0,056	0,038	0,104	0,081	0,046
5.11	30–55	0,5	0,25	0,029	0,022	0,015	0,039	0,029	0,020	0,052	0,039	0,026	0,069	0,052	0,035	0,092	0,069	0,046
6.1	80–120	0,5	0,5	0,027	0,019	0,013	0,035	0,026	0,017	0,047	0,035	0,023	0,062	0,046	0,031	0,081	0,058	0,046
6.2	60–100	0,5	0,3	0,023	0,017	0,012	0,031	0,023	0,016	0,041	0,031	0,021	0,055	0,041	0,028	0,069	0,058	0,035
6.3	50–90	0,5	0,15	0,021	0,015	0,010	0,028	0,020	0,014	0,037	0,026	0,018	0,048	0,036	0,024	0,069	0,046	0,035
6.4																		
6.5																		

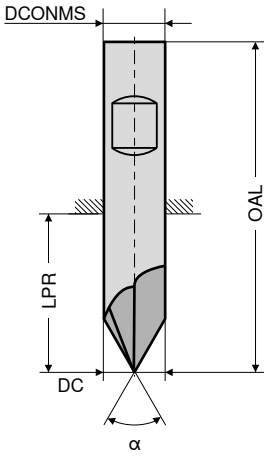
Plunging angle for ramping and helical milling: 3°

	Ø DC = 10 mm			Ø DC = 12 mm			Ø DC = 14 mm			Ø DC = 16 mm			Ø DC = 20 mm			● 1st choice		○ suitable
	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	a_e 0,1–0,2 x DC	a_e 0,3–0,5 x DC	a_e 0,6–1,0 x DC	Emulsion	Compressed air	MMS
Index	f_z mm			f_z mm			f_z mm			f_z mm			f_z mm					
1.1	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●	○	○
1.2	0,161	0,115	0,081	0,173	0,127	0,092	0,173	0,138	0,092	0,173	0,150	0,115	0,230	0,184	0,138	●	○	○
1.3	0,161	0,115	0,081	0,173	0,127	0,092	0,173	0,138	0,092	0,173	0,150	0,115	0,230	0,184	0,138	●	○	○
1.4	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●	○	○
1.5	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●	○	○
1.6	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●	○	○
1.7	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●	○	○
1.8	0,127	0,092	0,069	0,138	0,104	0,069	0,138	0,115	0,081	0,138	0,115	0,092	0,184	0,150	0,115	●	○	○
1.9	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●	○	○
1.10	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●	○	○
1.11	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●	○	○
1.12	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●	○	○
1.13	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●	○	○
1.14	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,092	0,081	0,058	0,127	0,104	0,081	●	○	○
1.15	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●	○	○
1.16	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●	○	○
2.1	0,127	0,092	0,069	0,138	0,104	0,069	0,138	0,115	0,081	0,138	0,115	0,092	0,184	0,150	0,115	●		
2.2	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.3	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.4	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.5	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.6	0,104	0,081	0,046	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,115	0,092	●		
2.7	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,092	0,081	0,058	0,127	0,104	0,081	●		
3.1	0,207	0,150	0,104	0,219	0,161	0,115	0,219	0,173	0,127	0,230	0,184	0,138	0,288	0,230	0,184	○	●	○
3.2	0,207	0,150	0,104	0,219	0,161	0,115	0,219	0,173	0,127	0,230	0,184	0,138	0,288	0,230	0,184	○	●	○
3.3	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	○	●	○
3.4	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	○	●	○
3.5	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	○	●	○
3.6	0,150	0,104	0,069	0,161	0,115	0,081	0,161	0,127	0,092	0,161	0,127	0,104	0,207	0,173	0,127	○	●	○
3.7	0,150	0,104	0,069	0,161	0,115	0,081	0,161	0,127	0,092	0,161	0,127	0,104	0,207	0,173	0,127	○	●	○
3.8	0,150	0,104	0,069	0,161	0,115	0,081	0,161	0,127	0,092	0,161	0,127	0,104	0,207	0,173	0,127	○	●	○
4.1																		
4.2																		
4.3																		
4.4																		
4.5																		
4.6	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●		○
4.7	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●		○
4.8	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●		○
4.9	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●		○
4.10	0,173	0,127	0,092	0,196	0,138	0,092	0,184	0,150	0,104	0,196	0,161	0,127	0,242	0,196	0,161	●		○
4.11	0,161	0,115	0,081	0,173	0,127	0,092	0,173	0,138	0,092	0,173	0,150	0,115	0,230	0,184	0,138	●		○
4.12	0,161	0,115	0,081	0,173	0,127	0,092	0,173	0,138	0,092	0,173	0,150	0,115	0,230	0,184	0,138	●		○
4.13																		
4.14	0,345	0,253	0,173	0,380	0,288	0,196	0,380	0,299	0,207	0,380	0,311	0,242	0,495	0,403	0,311	●		○
4.15																		
4.16																		
4.17																		
4.18	0,138	0,104	0,069	0,115	0,115	0,081	0,150	0,115	0,081	0,150	0,127	0,092	0,196	0,161	0,127	●		○
4.19	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●		○
5.1	0,115	0,081	0,058	0,127	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,081	0,161	0,127	0,104	●		
5.2	0,104	0,081	0,058	0,115	0,046	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,127	0,092	●		
5.3	0,092	0,069	0,046	0,104	0,081	0,046	0,104	0,081	0,058	0,104	0,081	0,069	0,127	0,104	0,081	●		
5.4	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.5	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.6	0,058	0,046	0,035	0,069	0,046	0,035	0,069	0,046	0,035	0,069	0,058	0,046	0,081	0,069	0,058	●		
5.7	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.8	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069	●		
5.9	0,127	0,092	0,069	0,138	0,104	0,069	0,138	0,115	0,081	0,138	0,115	0,092	0,184	0,150	0,115	●		
5.10	0,127	0,092	0,069	0,138	0,104	0,069	0,138	0,104	0,081	0,138	0,115	0,092	0,184	0,150	0,115	●		
5.11	0,115	0,092	0,058	0,127	0,092	0,069	0,127	0,104	0,069	0,127	0,104	0,081	0,161	0,138	0,104	●		
6.1	0,104	0,081	0,058	0,115	0,081	0,058	0,115	0,092	0,058	0,115	0,092	0,069	0,150	0,127	0,092		●	
6.2	0,092	0,069	0,046	0,104	0,081	0,046	0,104	0,081	0,058	0,104	0,081	0,069	0,127	0,104	0,081		●	
6.3	0,081	0,058	0,046	0,092	0,069	0,046	0,092	0,069	0,046	0,092	0,069	0,058	0,115	0,092	0,069		●	
6.4																		
6.5																		

AluLine – NC deburring cutter

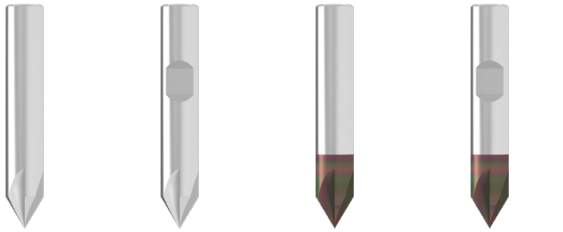
W

λ_s=0°
γ_s=8°



DLC DRAGONSKIN

DLC DRAGONSKIN



α = 60°
Factory standard
HA

α = 60°
Factory standard
HB

α = 60°
Factory standard
HA

α = 60°
Factory standard
HB

DC h6	OAL	LPR	DCONMS h6	ZEFP	NEW V1 Article no. 53 666 ...		NEW V1 Article no. 53 667 ...		NEW V1 Article no. 53 662 ...		NEW V1 Article no. 53 663 ...	
mm	mm	mm	mm		EUR		EUR		EUR		EUR	
4	50	22	4	4	30,43	04000			35,64	04000		
6	55	19	6	4	33,96	06000	33,96	06000	39,18	06000	39,18	06000
8	58	22	8	4	39,68	08000	39,68	08000	45,57	08000	45,57	08000
10	60	20	10	4	56,04	10000	56,04	10000	63,11	10000	63,11	10000
12	70	25	12	4	63,11	12000	63,11	12000	71,18	12000	71,18	12000
16	80	32	16	4	105,10	16000	105,10	16000	116,00	16000	116,00	16000

Steel				
Stainless steel				
Cast iron				
Non ferrous metals	●	●	●	●
Heat resistant alloys				
Hardened materials				

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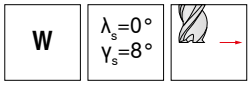
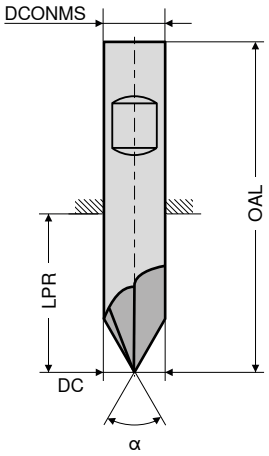
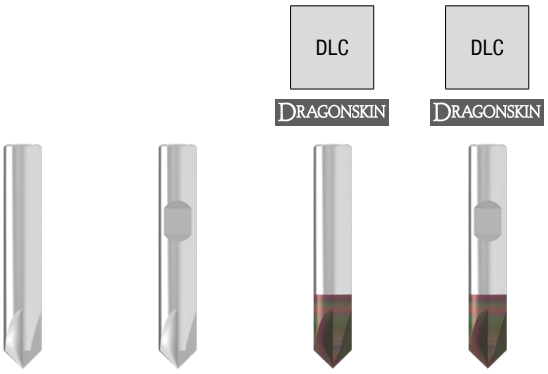
AluLine – NC deburring cutter

W

λ_s=0°
γ_s=8°







DC h6	OAL	LPR	DCONMS h6	ZEFP	α = 90° Factory standard HA NEW V1 Article no. 53 664 ... EUR		α = 90° Factory standard HB NEW V1 Article no. 53 665 ... EUR		α = 90° Factory standard HA NEW V1 Article no. 53 660 ... EUR		α = 90° Factory standard HB NEW V1 Article no. 53 661 ... EUR	
mm	mm	mm	mm									
4	50	22	4	4	30,43	**04000**			35,64	**04000**		
6	55	19	6	4	33,96	**06000**	33,96	**06000**	39,18	**06000**	39,18	**06000**
8	58	22	8	4	39,68	**08000**	39,68	**08000**	45,57	**08000**	45,57	**08000**
10	60	20	10	4	56,04	**10000**	56,04	**10000**	63,11	**10000**	63,11	**10000**
12	70	25	12	4	63,11	**12000**	63,11	**12000**	71,18	**12000**	71,18	**12000**
16	80	32	16	4	105,10	**16000**	105,10	**16000**	116,00	**16000**	116,00	**16000**

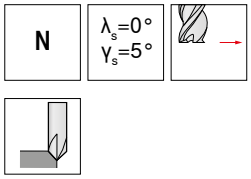
Steel				
Stainless steel				
Cast iron				
Non ferrous metals	●	●	●	●
Heat resistant alloys				
Hardened materials				

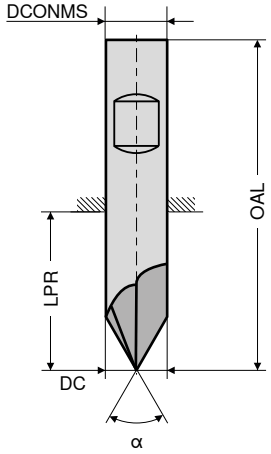
→ v_c/f_z Page 126

SilverLine – NC deburring cutter

N

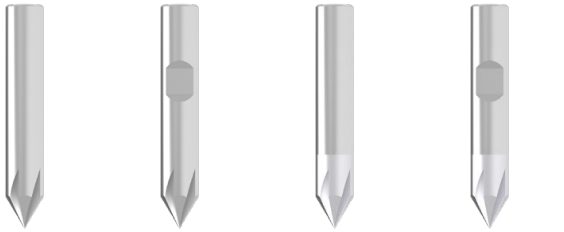
λ_s=0°
γ_s=5°





DPB72S
DRAGONSKIN

DPB72S
DRAGONSKIN



DC h6	OAL	LPR	DCONMS h6	ZEFP	α = 60° Factory standard HA NEW V1 Article no. 50 566 ... EUR		α = 60° Factory standard HB NEW V1 Article no. 50 567 ... EUR		α = 60° Factory standard HA NEW V1 Article no. 50 562 ... EUR		α = 60° Factory standard HB NEW V1 Article no. 50 563 ... EUR	
mm	mm	mm	mm									
4	50	22	4	5	30,43	04000			37,54	04000		
6	55	19	6	5	34,14	06000	34,14	06000	41,25	06000	41,25	06000
8	58	22	8	5	45,61	08000	45,61	08000	53,75	08000	53,75	08000
10	60	20	10	5	54,14	10000	54,14	10000	63,89	10000	63,89	10000
12	70	25	12	5	70,54	12000	70,54	12000	81,64	12000	81,64	12000
16	80	32	16	5	112,20	16000	112,20	16000	127,10	16000	127,10	16000

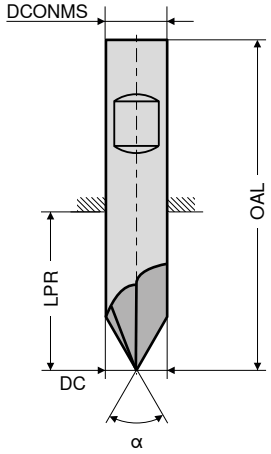
Steel	●	●	●	●
Stainless steel	●	●	●	●
Cast iron	●	●	●	●
Non ferrous metals				
Heat resistant alloys	●	●	●	●
Hardened materials				

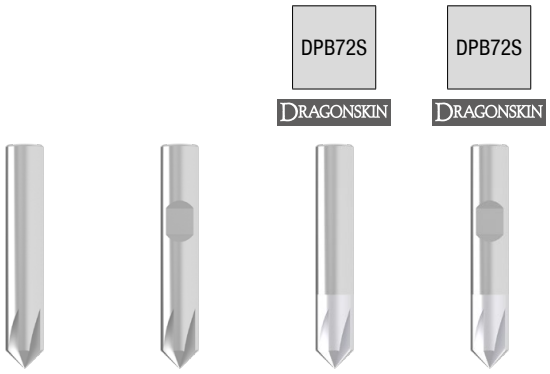
→ v_c/f_z Page 127

SilverLine – NC deburring cutter

N

λ_s=0°
γ_s=5°





DC h6	OAL	LPR	DCONMS h6	ZEFP	α = 90° Factory standard HA NEW V1 Article no. 50 564 ... EUR		α = 90° Factory standard HB NEW V1 Article no. 50 565 ... EUR		α = 90° Factory standard HA NEW V1 Article no. 50 560 ... EUR		α = 90° Factory standard HB NEW V1 Article no. 50 561 ... EUR	
mm	mm	mm	mm									
4	50	22	4	5	30,43	**04000**			37,54	**04000**		
6	55	19	6	5	34,14	**06000**	34,14	**06000**	41,25	**06000**	41,25	**06000**
8	58	22	8	5	45,61	**08000**	45,61	**08000**	53,75	**08000**	53,75	**08000**
10	60	20	10	5	54,14	**10000**	54,14	**10000**	63,89	**10000**	63,89	**10000**
12	70	25	12	5	70,54	**12000**	70,54	**12000**	81,64	**12000**	81,64	**12000**
16	80	32	16	5	112,20	**16000**	112,20	**16000**	127,10	**16000**	127,10	**16000**

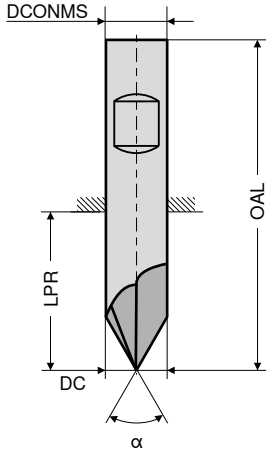
Steel	●	●	●	●
Stainless steel	●	●	●	●
Cast iron	●	●	●	●
Non ferrous metals				
Heat resistant alloys	●	●	●	●
Hardened materials				

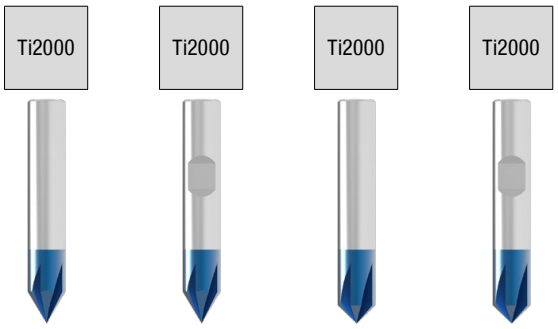
→ v_c/f_z Page 127

BlueLine – NC deburring cutter

H

$\lambda_s = 0°$
$\gamma_s = -5°$





DC h5	OAL	LPR	DCONMS h5	ZEFP	α = 60° Factory standard HA NEW V1 Article no. 52 562 ... EUR		α = 60° Factory standard HB NEW V1 Article no. 52 563 ... EUR		α = 90° Factory standard HA NEW V1 Article no. 52 560 ... EUR		α = 90° Factory standard HB NEW V1 Article no. 52 561 ... EUR	
mm	mm	mm	mm									
4	50	22	4	5	41,25	04000			41,25	04000		
6	57	21	6	6	52,00	06000	52,00	06000	52,00	06000	52,00	06000
8	63	27	8	6	62,89	08000	62,89	08000	62,89	08000	62,89	08000
10	72	32	10	6	84,25	10000	84,25	10000	84,25	10000	84,25	10000
12	83	38	12	6	108,70	12000	108,70	12000	108,70	12000	108,70	12000
16	92	44	16	8	168,70	16000	168,70	16000	168,70	16000	168,70	16000

Steel	●	●	●	●
Stainless steel				
Cast iron				
Non ferrous metals				
Heat resistant alloys				
Hardened materials	●	●	●	●

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Material examples referring to the cutting data tables

	Index	Material	Strength N/mm² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²	3.2315	A- G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm²	2.1247	Cub2 (Berylium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-Al11 Fe5 Ni5)		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe -Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

Cutting data standard values – AluLine – NC deburring cutter

		DLC							uncoated									
		Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16		Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16	Emulsion	Compressed air	MMS
Index	v_c m/min	f_z mm						v_c m/min	f_z mm									
1.1																		
1.2																		
1.3																		
1.4																		
1.5																		
1.6																		
1.7																		
1.8																		
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1.10																		
1.11																		
1.12																		
1.13																		
1.14																		
1.15																		
1.16																		
2.1																		
2.2																		
2.3																		
2.4																		
2.5																		
2.6																		
2.7																		
3.1																		
3.2																		
3.3																		
3.4																		
3.5																		
3.6																		
3.7																		
3.8																		
4.1	310	0,03	0,04	0,05	0,06	0,07	0,08	200	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.2	310	0,03	0,04	0,05	0,06	0,07	0,08	200	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.3	290	0,03	0,04	0,05	0,06	0,07	0,08	190	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.4	270	0,03	0,04	0,05	0,06	0,07	0,08	180	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.5	260	0,03	0,04	0,05	0,06	0,07	0,08	175	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.6	130	0,03	0,04	0,05	0,06	0,07	0,08	90	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.7	130	0,03	0,04	0,05	0,06	0,07	0,08	90	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.8	120	0,03	0,04	0,05	0,06	0,07	0,08	85	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.9	120	0,03	0,04	0,05	0,06	0,07	0,08	85	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.10	110	0,03	0,04	0,05	0,06	0,07	0,08	80	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.11	150	0,03	0,04	0,05	0,06	0,07	0,08	100	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.12	150	0,03	0,04	0,05	0,06	0,07	0,08	100	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.13	330	0,03	0,04	0,05	0,06	0,07	0,08	205	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.14	330	0,03	0,04	0,05	0,06	0,07	0,08	205	0,02	0,03	0,04	0,05	0,06	0,07	●	○*	○
4.15																	
4.16																	
4.17																	
4.18																	
4.19																	
5.1																	
5.2																	
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5.10																	
5.11																	
6.1																	
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6.3																	
6.4																	
6.5																	

* = only suitable for DLC-coated cutters

Cutting data standard values – SilverLine – NC deburring cutter

		DPB72S							uncoated								
		Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16		Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16	Emulsion	Compressed air	MMS
Index	v_c m/min	f_z mm						v_c m/min	f_z mm								
1.1	145	0,03	0,035	0,045	0,06	0,08	0,09	90	0,02	0,025	0,035	0,05	0,07	0,08	●	○	○
1.2	140	0,03	0,035	0,045	0,06	0,08	0,09	80	0,02	0,025	0,035	0,05	0,07	0,08	●	○	○
1.3	140	0,03	0,035	0,045	0,06	0,08	0,09	80	0,02	0,025	0,035	0,05	0,07	0,08	●	○	○
1.4	100	0,025	0,03	0,04	0,055	0,075	0,085	65	0,015	0,02	0,03	0,045	0,065	0,075	●	○	○
1.5	130	0,03	0,035	0,045	0,06	0,08	0,09	80	0,02	0,025	0,035	0,05	0,07	0,08	●	○	○
1.6	120	0,025	0,03	0,04	0,055	0,075	0,085	75	0,015	0,02	0,03	0,045	0,065	0,075	●	○	○
1.7	100	0,03	0,035	0,045	0,06	0,08	0,09	65	0,02	0,025	0,035	0,05	0,07	0,08	●	○	○
1.8	90	0,02	0,02	0,025	0,03	0,04	0,05	60	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
1.9	150	0,03	0,035	0,045	0,06	0,08	0,09	90	0,02	0,025	0,035	0,05	0,07	0,08	●	○	○
1.10	100	0,025	0,03	0,04	0,055	0,075	0,085	65	0,015	0,02	0,03	0,045	0,065	0,075	●	○	○
1.11	90	0,02	0,02	0,025	0,03	0,04	0,05	60	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
1.12	90	0,02	0,02	0,025	0,03	0,04	0,05	60	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
1.13	90	0,02	0,02	0,025	0,03	0,04	0,05	60	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
1.14	80	0,02	0,02	0,025	0,03	0,04	0,05	50	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
1.15	80	0,02	0,02	0,025	0,03	0,04	0,05	50	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
1.16	80	0,02	0,02	0,025	0,03	0,04	0,05	50	0,01	0,015	0,025	0,04	0,06	0,07	●	○	○
2.1	110	0,025	0,03	0,03	0,04	0,05	0,055	75	0,025	0,03	0,03	0,04	0,05	0,055	●		
2.2	110	0,025	0,03	0,03	0,04	0,05	0,055	75	0,025	0,03	0,03	0,04	0,05	0,055	●		
2.3	105	0,025	0,03	0,03	0,04	0,05	0,055	70	0,025	0,03	0,03	0,04	0,05	0,055	●		
2.4	90	0,02	0,025	0,025	0,03	0,04	0,045	60	0,02	0,025	0,025	0,03	0,04	0,045	●		
2.5	110	0,025	0,03	0,03	0,04	0,05	0,055	75	0,025	0,03	0,03	0,04	0,05	0,055	●		
2.6	110	0,025	0,03	0,03	0,04	0,05	0,055	75	0,025	0,03	0,03	0,04	0,05	0,055	●		
2.7	90	0,02	0,025	0,025	0,03	0,04	0,045	60	0,02	0,025	0,025	0,03	0,04	0,045	●		
3.1	140	0,03	0,035	0,045	0,06	0,08	0,09	95	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.2	110	0,03	0,035	0,045	0,06	0,08	0,09	75	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.3	140	0,03	0,035	0,045	0,06	0,08	0,09	95	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.4	130	0,03	0,035	0,045	0,06	0,08	0,09	90	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.5	140	0,03	0,035	0,045	0,06	0,08	0,09	95	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.6	140	0,03	0,035	0,045	0,06	0,08	0,09	95	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.7	140	0,03	0,035	0,045	0,06	0,08	0,09	95	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
3.8	130	0,03	0,035	0,045	0,06	0,08	0,09	90	0,02	0,025	0,035	0,05	0,07	0,08	●	●	●
4.1																	
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4.16																	
4.17																	
4.18																	
4.19																	
5.1	90	0,02	0,02	0,025	0,03	0,04	0,05	55	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.2	90	0,02	0,02	0,025	0,03	0,04	0,05	55	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.3	90	0,02	0,02	0,025	0,03	0,04	0,05	55	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.4	55	0,02	0,02	0,025	0,03	0,04	0,05	35	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.5	55	0,012	0,012	0,018	0,018	0,035	0,045	35	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.6	55	0,012	0,012	0,018	0,018	0,035	0,045	35	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.7	55	0,012	0,012	0,018	0,018	0,035	0,045	35	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.8	50	0,01	0,01	0,015	0,02	0,03	0,04	28	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.9	70	0,02	0,02	0,025	0,03	0,04	0,05	48	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.10	75	0,02	0,02	0,025	0,03	0,04	0,05	53	0,01	0,015	0,025	0,03	0,035	0,04	●		
5.11	60	0,015	0,015	0,02	0,025	0,035	0,045	38	0,01	0,015	0,025	0,03	0,035	0,04	●		
6.1																	
6.2																	
6.3																	
6.4																	
6.5																	

Cutting data standard values – BlueLine – NC deburring cutter

		Ti2000								
		Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16	Emulsion	Compressed air	MMS
Index	v_c m/min	f_z mm								
1.1										
1.2										
1.3										
1.4										
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11	90	0,02	0,02	0,025	0,03	0,04	0,05	●	○	○
1.12	90	0,02	0,02	0,025	0,03	0,04	0,05	●	○	○
1.13	90	0,02	0,02	0,025	0,03	0,04	0,05	●	○	○
1.14	80	0,02	0,02	0,025	0,03	0,04	0,05	●	○	○
1.15	80	0,02	0,02	0,025	0,03	0,04	0,05	●	○	○
1.16	80	0,02	0,02	0,025	0,03	0,04	0,05	●	○	○
2.1										
2.2										
2.3										
2.4										
2.5										
2.6										
2.7										
3.1										
3.2										
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4.10										
4.11										
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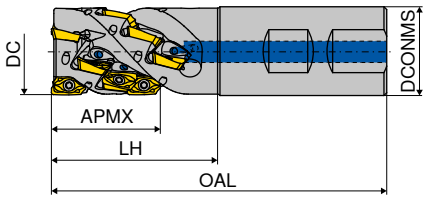
4.17										
4.18										
4.19										
5.1										
5.2										
5.3										
5.4										
5.5										
5.6										
5.7										
5.8										
5.9										
5.10										
5.11										
6.1	125	0,06	0,065	0,07	0,075	0,075	0,08		●	
6.2	115	0,045	0,055	0,06	0,065	0,065	0,07		●	
6.3	100	0,04	0,05	0,055	0,06	0,06	0,065		●	
6.4	80	0,035	0,045	0,05	0,055	0,055	0,06		●	
6.5	60	0,025	0,03	0,04	0,045	0,045	0,05		●	

STRONG SUPPORT, THAT COMES FROM PRACTICAL EXPERIENCE

With concentrated expertise and personal advice, we increase the productivity of our customers

MaxiMill – Shell end mill C 211-11KN

▲ ZEFP = Number of inserts
▲ ZNP = Number of teeth

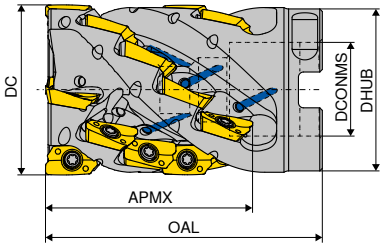


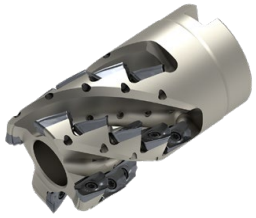
B 

ISO designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	NEW 2B/40 Article no. 50 784 ... EUR	
C211.25.R.02KN3-11-B-40	25	2	28	97	40	25	6	3	1,6	XD.T 11T3	635,30	02523
C211.25.R.02KN4-11-B-50	25	2	37	107	50	25	8	4	1,6	XD.T 11T3	672,60	02524
C211.25.R.02KN5-11-B-60	25	2	46	117	60	25	10	5	1,6	XD.T 11T3	717,40	02525
C211.32.R.02KN4-11-B-50	32	2	37	111	50	32	8	4	1,6	XD.T 11T3	696,80	03224
C211.32.R.03KN5-11-B-60	32	3	46	121	60	32	15	5	1,6	XD.T 11T3	840,70	03235
C211.40.R.03KN4-11-B32-50	40	3	37	111	50	32	12	4	1,6	XD.T 11T3	799,60	04034
C211.40.R.04KN5-11-B32-60	40	4	46	121	60	32	20	5	1,6	XD.T 11T3	964,00	04045

MaxiMill – Shell end mill A 211-11KN

▲ ZEFP = Number of inserts
▲ ZNP = Number of teeth





ISO designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	NEW 2B/40 Article no. 50 794 ... EUR	
A211.40.R.03KN4-11	40	3	37	12	4	65	22	38	1,6	XD.T 11T3	799,60	04034
A211.40.R.04KN4-11	40	4	37	16	4	65	22	38	1,6	XD.T 11T3	874,20	04044
A211.40.R.04KN5-11	40	4	46	20	5	74	22	38	1,6	XD.T 11T3	964,00	04045
A211.50.R.04KN5-11	50	4	46	20	5	75	27	48	1,6	XD.T 11T3	1.054,00	05045
A211.50.R.05KN5-11	50	5	46	25	5	75	27	48	1,6	XD.T 11T3	1.148,00	05055
A211.50.R.05KN6-11	50	5	55	30	6	85	27	48	1,6	XD.T 11T3	1.258,00	05056

Spare parts	2A/28  Cylindrical screw Article no. 70 950 ...		Y7 TORX® blade Article no. 80 950 ...		Y7 Key D Article no. 80 950 ...		2A/28  Molykote Article no. 70 950 ...		2A/28  Clamping screw Article no. 70 950 ...		2A/28  Socket head screw Article no. 70 950 ...		Y7 Torque screwdriver Article no. 80 950 ...	
Designation	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
A211.40. KN4			4,76	043	10,20	125	4,38	303	7,09	20400	11,50	20900	118,90	191
A211.40. KN5			4,76	043	10,20	125	4,38	303	7,09	20400	11,50	21000	118,90	191
A211.50. KN5	11,50	002	4,76	043	10,20	125	4,38	303	7,09	20400	11,50	20600	118,90	191
C211.25			4,76	043	10,20	125	4,38	303	7,09	20700			118,90	191
C211.32			4,76	043	10,20	125	4,38	303	7,09	20700			118,90	191
C211.40			4,76	043	10,20	125	4,38	303	7,09	20400			118,90	191

Milling guide

Matching indexable inserts can be found in the main catalogue in Chapter 15 → **Milling tools with indexable inserts Page 63–65**

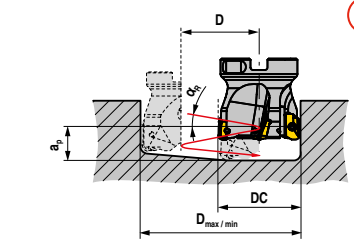
System MaxiMill 211-11

Cutting data recommendations/Technology data

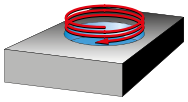
for shell end mill

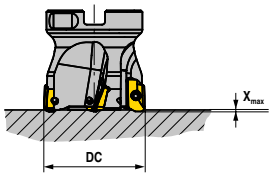
	F			M			R		
Material	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm
Steel	100–300	0,05–0,20	≤ APMX						
Stainless steel	80–200	0,05–0,20	≤ APMX						
Cast iron	110–300	0,05–0,20	≤ APMX						
Non ferrous metals	300–2000	0,10–0,25	≤ APMX						
Heat resistant	40–80	0,05–0,15	≤ APMX						
hardened materials	30–50	0,05–0,10	≤ APMX						

Machining strategy

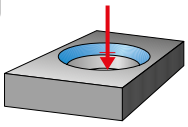


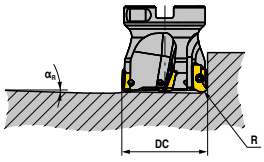
1 Helical plunge milling



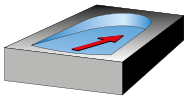


2 Axial plunging





3 Angled ramping



	maximum rpm based on overhang length. n_{max} in min^{-1}				
DC mm	l_a = 1-2 x Ø mm	l_a = 2,5 x Ø mm	l_a = 3 x Ø mm	l_a = 4 x Ø mm	l_a = 5 x Ø mm
12	55000	51500	47000	42000	37000
16	42000	38500	34100	28900	24200
20	36900	33000	28500	23900	19500
25	33200	29000	24400	19900	15400
32	30200	26000	20900	16600	11900
40	27700	23000	18000	13500	9000
50	25400	20400	15400	10800	6100
63	23300	18300	12900	8300	3700
80	21300	16100	10600	5800	
100	19600	14100	8400		

		1	2	3
DC mm		Helical plunge milling RE = 0,8 mm	Axial plunging X_{max}	Angled ramping α_R
12	α_R	16 °	1,3 mm	18 °
	D_{max}	21 mm		
	D_{min}	14 mm		
16	α_R	9,5 °	1,5 mm	10,8 °
	D_{max}	29 mm		
	D_{min}	21 mm		
20	α_R	7 °	2,0 mm	9,8 °
	D_{max}	37 mm		
	D_{min}	30 mm		
25	α_R	4,5 °	2,0 mm	7,5 °
	D_{max}	47 mm		
	D_{min}	40 mm		
32	α_R	3,2 °	1,0 mm	4,8 °
	D_{max}	61 mm		
	D_{min}	53 mm		
40	α_R	2,2 °	1,6 mm	2,9 °
	D_{max}	77 mm		
	D_{min}	72 mm		
50	α_R	1,7 °	1,6 mm	2,2 °
	D_{max}	98 mm		
	D_{min}	93 mm		
63	α_R	1,5 °	1,6 mm	1,8 °
	D_{max}	123 mm		
	D_{min}	116 mm		
80	α_R	1,0 °	1,6 mm	1,4 °
	D_{max}	157 mm		
	D_{min}	153 mm		
100	α_R	0,8 °	1,6 mm	1,1 °
	D_{max}	107 mm		
	D_{min}	101 mm		

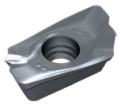
$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest diameter for flat bottom hole

a_p in mm = D x π x tan (α_R) = Pitch

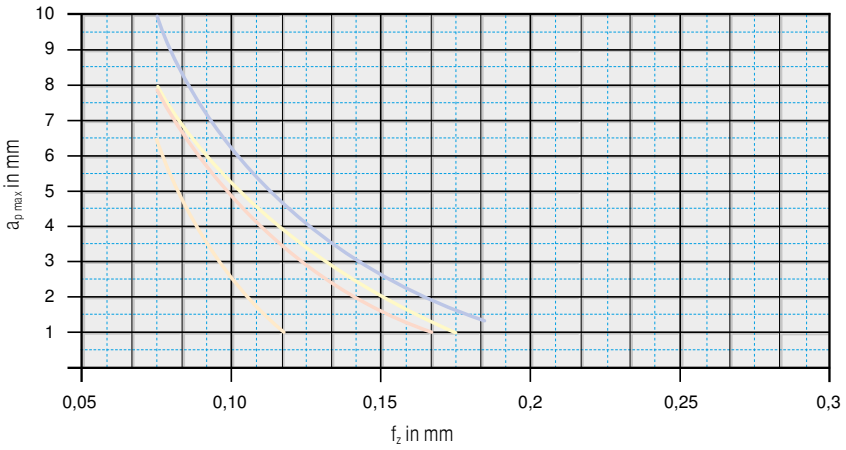
l_a in mm = Overhang length

System MaxiMill 211-11

Starting Parameter



XDKT 11

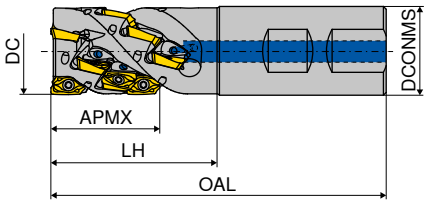


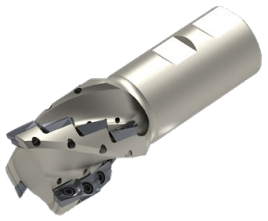
Index	Material			Inserts		v_c in m/min	Cooling
1.15	Steel	1.2312	40CrMnMoS 8-6	**XDKT11T308SR-M50**	**CTPP235**	200	Dry
2.6	Stainless steel	1.4571	X6CrNiMoTi 1712 2	**XDKT11T308SR-F50**	**CTPM240**	180	Dry
3.1	Cast iron	5.1301	EN-GJL-250 (GG25)	**XDKT11T308SR-R50**	**CTCK215**	250	Dry
5.8	Heat resistant	2.4856	Inconel 718	**XDKT11T308ER-F50**	**CTC5240**	35	Emulsion

From v_c > 400 m/min, the tool must be balanced!

MaxiMill – Shell end mill C 211-15KN

▲ ZEFP = Number of Inserts
▲ ZNP = Number of rows



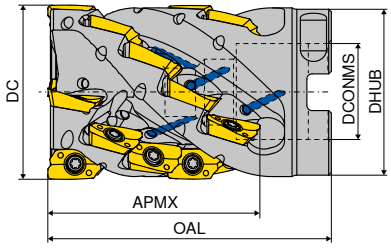


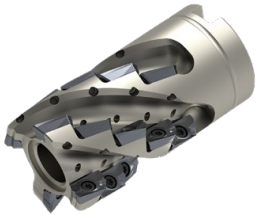
B

ISO designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	NEW 2B/40 Article no. 50 783 ... EUR	
C211.40.R.03KN3-15-B32-60	40	3	39,6	121	60	32	9	3	3,2	XD.T 1505	743,60	**04033**
C211.50.R.03KN4-15-B40-68	50	3	52,6	138	67	40	12	4	3,2	XD.T 1505	904,40	**05034**

MaxiMill – Shell end mill A 211-15KN

▲ ZEFP = Number of Inserts
▲ ZNP = Number of rows





ISO designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	NEW 2B/40 Article no. 50 781 ... EUR	
A211.50.R.03KN4-15	50	3	52,6	12	4	87	27	48	3,2	XD.T 1505	904,40	**05034**
A211.50.R.03KN5-15	50	3	65,8	15	5	100	27	48	3,2	XD.T 1505	960,40	**05035**
A211.50.R.04KN5-15	50	4	65,8	20	5	100	27	48	3,2	XD.T 1505	1.070,00	**05045**
A211.63.R.03KN4-15	63	3	52,6	12	4	76	27	58	3,2	XD.T 1505	986,00	**06334**
A211.63.R.03KN5-15	63	3	65,8	15	5	90	27	58	3,2	XD.T 1505	1.042,00	**06335**
A211.63.R.04KN6-15	63	4	78,5	24	6	102	27	58	3,2	XD.T 1505	1.210,00	**06346**
A211.63.R.05KN5-15	63	5	65,8	25	5	90	27	58	3,2	XD.T 1505	1.252,00	**06355**
A211.80.R.04KN5-15	80	4	65,8	20	5	90	32	78	3,2	XD.T 1505	1.216,00	**08045**
A211.80.R.05KN6-15	80	5	78,5	30	6	102	32	78	3,2	XD.T 1505	1.404,00	**08056**

Spare parts	2A/28  Cylindrical screw Article no. 70 950 ...		Y7 TORX® blade Article no. 80 950 ...		Y7  Key D Article no. 80 950 ...		2A/28  Molykote Article no. 70 950 ...		2A/28  Clamping screw Article no. 70 950 ...		2A/28  Socket head screw Article no. 70 950 ...		Y7  Torque screwdriver Article no. 80 950 ...	
Designation	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
A211.50	11,50	**002**	5,26	**054**	11,89	**128**	4,38	**303**	8,97	**20800**	11,50	**20600**	131,90	**193**
A211.63	11,50	**002**	5,26	**054**	11,89	**128**	4,38	**303**	8,97	**20500**	11,50	**20600**	131,90	**193**
A211.80	25,73	**004**	5,26	**054**	11,89	**128**	4,38	**303**	8,97	**20500**	11,50	**234**	131,90	**193**
C211.40			5,26	**054**	11,89	**128**	4,38	**303**	8,97	**20800**			131,90	**193**
C211.50			5,26	**054**	11,89	**128**	4,38	**303**	8,97	**20800**			131,90	**193**

Milling guide

Matching indexable inserts can be found in the main catalogue in Chapter 15 → **Milling tools with indexable inserts Page 69–71**

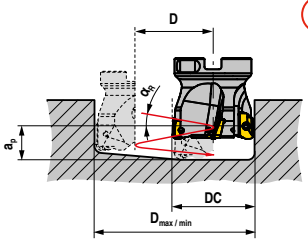
System MaxiMill 211-15

Cutting data recommendations/Technology data

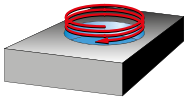
for shell end mill

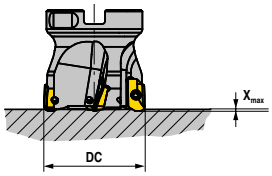
	F			M			R		
Material	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm
Steel	120–300	0,08–0,35	≤ APMX						
Stainless steel	150–200	0,08–0,35	≤ APMX						
Cast iron	130–300	0,08–0,35	≤ APMX						
Non ferrous metals	400–2500	0,12–0,40	≤ APMX						
Heat resistant	25–80	0,08–0,20	≤ APMX						
hardened materials									

Machining strategy

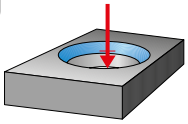


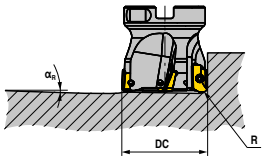
1 Helical plunge milling



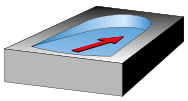


2 Axial plunging





3 Angled ramping



		1	2	3
DC mm	Helical plunge milling RE = 0,8 mm		Axial plunging X_{max}	Angled ramping α_R
25	α_R	7,5 °	2,7 mm	9,5 °
	D_{max}	48 mm		
	D_{min}	37 mm		
32	α_R	5 °	2,5 mm	6,8 °
	D_{max}	62 mm		
	D_{min}	47 mm		
40	α_R	3,2 °	2,5 mm	5,1 °
	D_{max}	78 mm		
	D_{min}	63 mm		
50	α_R	2,5 °	2,5 mm	2,5 °
	D_{max}	98 mm		
	D_{min}	86 mm		
63	α_R	1,5 °	2,5 mm	2,5 °
	D_{max}	124 mm		
	D_{min}	111 mm		
80	α_R	1,3 °	2,5 mm	2,0 °
	D_{max}	158 mm		
	D_{min}	147 mm		
100	α_R	1,1 °	2,5 mm	1,5 °
	D_{max}	198 mm		
	D_{min}	190 mm		
125	α_R	0,9 °	2,5 mm	0,9 °
	D_{max}	248 mm		
	D_{min}	240 mm		
160	α_R	0,6 °	2,5 mm	0,7 °
	D_{max}	318 mm		
	D_{min}	310 mm		

	maximum rpm based on overhang length. n_{max} in min^{-1}		
DC mm	l_a = 2 x Ø mm	l_a = 3 x Ø mm	l_a = 5 x Ø mm
25	26560	19520	13320
32	24160	16720	9520
40	22160	14400	7200
50	20320	12320	4880
63	18640	10320	2960
80	17040	8480	
100	15680	6720	
125	14320		
160	13200		

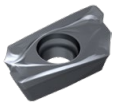
$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest diameter for flat bottom hole

a_p in mm = D x π x tan (α_R) = Pitch

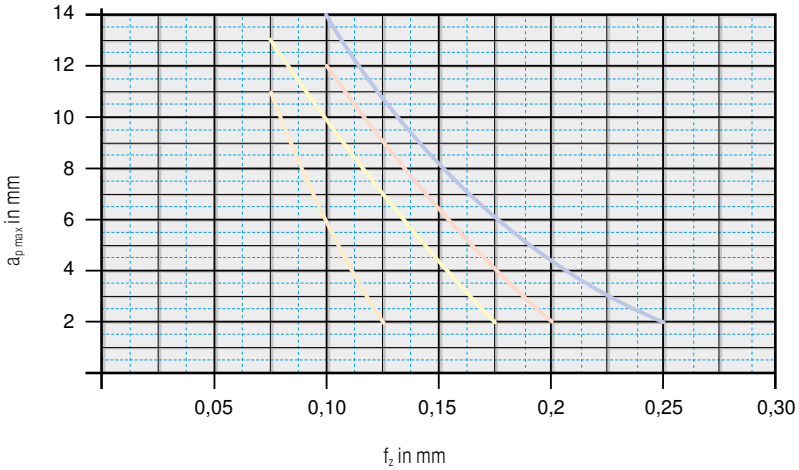
l_a in mm = Overhang length

System MaxiMill 211-15

Starting Parameter



XDKT 15



Index	Material			Inserts		v_c in m/min	Cooling
1.15	Steel	1.2312	40CrMnMoS 8-6	**XDKT150508SR-M50**	**CTPP235**	200	Dry
2.6	Stainless steel	1.4571	X6CrNiMoTi 1712 2		**CTPM240**	180	Dry
3.1	Cast iron	5.1301	EN-GJL-250 (GG25)	**XDKT150508SR-R50**	**CTCK215**	250	Dry
5.8	Heat resistant	2.4856	Inconel 718	**XDKT150508ER-F40**	**CTC5240**	35	Emulsion

From v_c > 400 m/min, the tool must be balanced!

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WNT \ Performance

Premium quality tools for high performance.

The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

WNT \ Standard

Quality tools for standard applications.

The quality tools of the **WNT Standard** product line are high quality, powerful and reliable and enjoy the highest trust of our customers worldwide. Tools from this product line are the first choice for many standard applications and guarantee optimal results.

Overview of ABS tool holders

Holder Type	DIN 69871		JIS B 6339		ISO 12164	ISO 26623-1
	SK	SK-FC	MAS-BT	MAS-BT-FC	HSK-A	PSC
ABS tool holders	137–139	140	141–143	144	145–147	148

Overview of ABS adapters

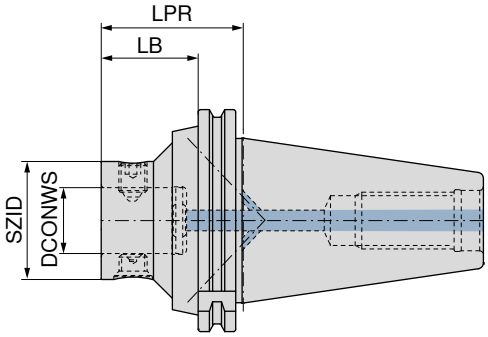
Holder Type	Hydraulic chuck	Heat Shrink Adapter	Weldon	Whistle notch	ER Collet chuck	Quick change tapping chuck with length compensation	Short drill chuck	Synchro tapping chuck	Shell mill adapter
ABS adapters	149	150	151	152+153	154	155	155	156	157

Holder Type	Combination shell mill adapter	Extension with ABS Connection	Torsional vibration dampers with ABS connection	Eccentric adjuster with ABS connection	Damping element with ABS connection	ABS reduction	Adjuster with ABS connection	Blank
ABS adapters	158	159	160	161	162	163	164	165

Adapter with ABS Connection

Scope of supply:
Steep taper adapter (Form B) with conversion kit (Form AD) and sealing disc

ABS




AD
G 6,3 n_{max} 8000


AD/B
G 6,3 n_{max} 8000

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	NEW 3E Article no. 84 211 ... EUR		NEW 3E Article no. 84 201 ... EUR	
			mm	mm	mm				
SK 40	A50 00120	ABS 25	13	50		348,40	04090		
SK 40	A50 55120	ABS 25	13	50	31,0			386,90	04090
SK 40	A50 00130	ABS 32	16	50		348,40	04089		
SK 40	A50 55130	ABS 32	16	50	31,0			386,90	04089
SK 40	A50 00140	ABS 40	20	50	30,0	348,40	04088		
SK 40	A50 55140	ABS 40	20	50	31,0			386,90	04088
SK 40	A50 00150	ABS 50	28	50	31,0	348,40	04097		
SK 40	A50 55150	ABS 50	28	50	30,0			386,90	04097
SK 40	A50 00160	ABS 63	34	90	70,0	353,60	04096		
SK 40	A50 55160	ABS 63	34	90	71,0			393,10	04096
SK 50	A50 00320	ABS 25	13	60		398,30	05090		
SK 50	A50 55320	ABS 25	13	60	41,0			457,60	05090
SK 50	A50 00330	ABS 32	16	60		398,30	05089		
SK 50	A50 55330	ABS 32	16	60	41,0			452,40	05089
SK 50	A50 00340	ABS 40	20	60		398,30	05088		
SK 50	A50 55340	ABS 40	20	60	41,0			452,40	05088
SK 50	A50 00350	ABS 50	28	60	40,0	398,30	05097		
SK 50	A50 55350	ABS 50	28	60	40,9			452,40	05097
SK 50	A50 00360	ABS 63	34	60	41,0	403,50	05096		
SK 50	A50 55360	ABS 63	34	60	41,0			457,60	05096
SK 50	A50 00370	ABS 80	46	70	50,0	410,80	05092		
SK 50	A50 55370	ABS 80	46	70	51,0			463,80	05092
SK 50	A50 00380	ABS 100	56	115		454,50	05091		
SK 50	A50 55380	ABS 100	56	115	96,0			493,00	05091
SK 50	A50 00390	ABS 125	70	145		515,80	05085		

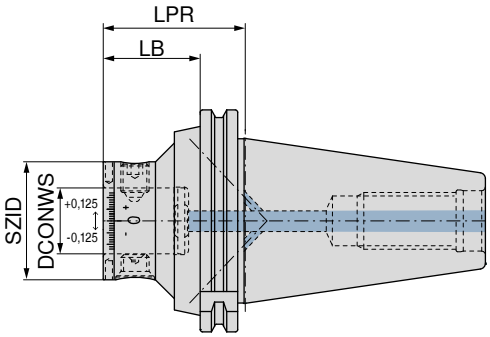
Spare parts SZID	Adapter		W7 SK conversion kit (AD/B) Article no. 84 950 ... EUR		XX Clamping screw Article no. 84 950 ... EUR		XX Set Article no. 84 950 ... EUR		XX Taper screw Article no. 84 950 ... EUR	
ABS 100	SK 50	Ø 6 mm	4,98	23400	13,05	25700	27,30	99200	14,30	25200
ABS 100	SK 50				13,05	25700	27,30	99200	14,30	25200
ABS 125	SK 50				23,35	25800	47,60	99100	24,30	25300
ABS 25	SK 50				5,95	26800	14,45	99700	8,60	27000
ABS 25	SK 40	Ø 4 mm	4,98	23200	5,95	26800	14,45	99700	8,60	27000
ABS 25	SK 50	Ø 6 mm	4,98	23400	5,95	26800	14,45	99700	8,60	27000
ABS 25	SK 40				5,95	26800	14,45	99700	8,60	27000
ABS 32	SK 40						14,45	99600	8,60	27100
ABS 32	SK 50						14,45	99600	8,60	27100
ABS 32	SK 50	Ø 6 mm	4,98	23400			14,45	99600	8,60	27100
ABS 32	SK 40	Ø 4 mm	4,98	23200			14,45	99600	8,60	27100
ABS 40	SK 40				6,75	26900	15,60	99500	8,95	27200
ABS 40	SK 50	Ø 6 mm	4,98	23400	6,75	26900	15,60	99500	8,95	27200
ABS 40	SK 50				6,75	26900	15,60	99500	8,95	27200
ABS 40	SK 40	Ø 4 mm	4,98	23200	6,75	26900	15,60	99500	8,95	27200
ABS 50	SK 40				12,64	20300	28,81	99800	16,22	20400
ABS 50	SK 50				12,64	20300	28,81	99800	16,22	20400
ABS 63	SK 40				8,60	25500	19,35	99400	10,90	27300
ABS 63	SK 50	Ø 6 mm	4,98	23400	8,60	25500	19,35	99400	10,90	27300
ABS 63	SK 50				8,60	25500	19,35	99400	10,90	27300
ABS 63	SK 40	Ø 4 mm	4,98	23200	8,60	25500	19,35	99400	10,90	27300
ABS 80	SK 50				10,60	25600	23,45	99300	12,90	25100
ABS 80	SK 50	Ø 6 mm	4,98	23400	13,05	25700	23,45	99300	14,30	25200

Eccentric adjuster with ABS Connection

▲ Adjustment ± 0.25 mm on diameter

Scope of supply:
Steep taper adapter (Form B) with conversion kit (Form AD) and sealing disc

ABS



AD/B

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	NEW W4 Article no. 84 204 ...
			mm	mm	mm	EUR
SK 40	A50 56150	ABS 50	28	50	30,0	521,00 **04097**
SK 40	A50 56160	ABS 63	34	90	71,0	559,50 **04096**
SK 50	A50 56350	ABS 50	28	60	40,9	584,50 **05097**
SK 50	A50 56360	ABS 63	34	60	41,0	640,60 **05096**

Spare parts for Article no.		W7 SK conversion kit (AD/B) Article no. 84 950 ... EUR	XX Clamping screw Article no. 84 950 ... EUR	XX Set Article no. 84 950 ... EUR	XX Taper screw Article no. 84 950 ... EUR
84 204 04097			12,64 **20300**	28,81 **99800**	16,22 **20400**
84 204 04096	Ø 4 mm	4,98 **23200**	8,60 **25500**	19,35 **99400**	10,90 **27300**
84 204 05097			12,64 **20300**	28,81 **99800**	16,22 **20400**
84 204 05096	Ø 6 mm	4,98 **23400**	8,60 **25500**	19,35 **99400**	10,90 **27300**

Accessories

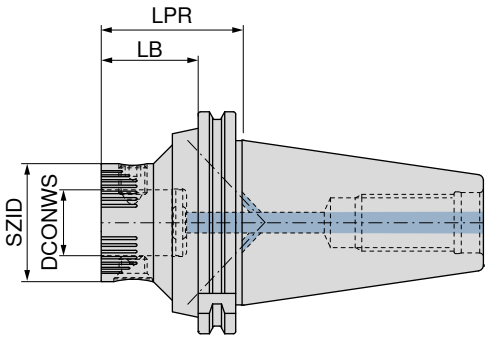



Pull stud	ABS extension	ABS reduction	Others
→ Main catalogue, Chapter 16	→ 159	→ 163	→ Chapter 17 in main catalogue

Torsional vibration dampers with ABS Connection

Scope of supply:
Steep taper adapter (Form B) with conversion kit (Form AD) and sealing disc

ABS



AD/B

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	NEW 3E Article no. 84 207 ... EUR	
			mm	mm	mm		
SK 40	A50 01351	ABS 50	28	50	30,0	667,70	**04097**
SK 40	A50 01361	ABS 63	34	90	71,0	652,00	**04096**
SK 50	A50 01451	ABS 50	28	60	40,9	744,60	**05097**
SK 50	A50 01461	ABS 63	34	60	41,0	689,00	**05096**
SK 50	A50 01470	ABS 80	46	70	51,0	756,00	**05092**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories


Pull stud
→ Main catalogue, Chapter 16


ABS extension
→ 159

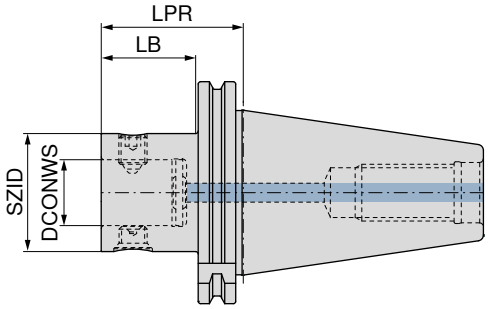

ABS reduction
→ 163


Others
→ Chapter 17 in main catalogue

Adapter with ABS Connection

▲ with face contact

ABS



AD
G 6,3 n_{max} 8000

NEW 3E

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	Article no. 84 213 ...	
			mm	mm	mm	EUR	
SK-FC 40	A50 57151	ABS 50	28	50	31	569,90	**04097**
SK-FC 40	A50 57161	ABS 63	34	90		586,60	**04096**
SK-FC 50	A50 57351	ABS 50	28	60	41	628,20	**05097**
SK-FC 50	A50 57361	ABS 63	34	60	41	628,20	**05096**
SK-FC 50	A50 57371	ABS 80	46	70	51	668,70	**05092**
SK-FC 50	A50 57381	ABS 100	56	115		725,90	**05091**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ...		XX  Set Article no. 84 950 ...		XX  Taper screw Article no. 84 950 ...	
	EUR		EUR		EUR	
ABS 100	13,05	**25700**	27,30	**99200**	14,30	**25200**
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

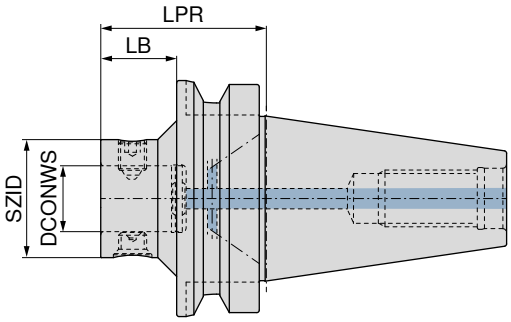
ABS extension
→ 159

ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Adapter with ABS Connection

ABS



Adapter	KOMET no.	SZID	DCONWS	LPR	LB	AD NEW 3E Article no. 84 202 ... EUR		AD/B NEW 3E Article no. 84 212 ... EUR	
			mm	mm	mm				
BT 40	A55 00120	ABS 25	13	60		348,40	**04090**		
BT 40	A55 00130	ABS 32	16	60	33	348,40	**04089**		
BT 40	A55 00140	ABS 40	20	60	33	348,40	**04088**		
BT 40	A55 00150	ABS 50	28	60	33	348,40	**04097**		
BT 40	A55 55150	ABS 50	28	60	33			386,90	**04097**
BT 40	A55 00160	ABS 63	34	70		353,60	**04096**		
BT 40	A55 55160	ABS 63	34	70				432,60	**04096**
BT 50	A55 00330	ABS 32	16	70		398,30	**05089**		
BT 50	A55 00340	ABS 40	20	70		398,30	**05088**		
BT 50	A55 00350	ABS 50	28	70	32	398,30	**05097**		
BT 50	A55 55350	ABS 50	28	70				452,40	**05097**
BT 50	A55 55360	ABS 63	34	90				488,80	**05096**
BT 50	A55 00360	ABS 63	34	80		403,50	**05096**		
BT 50	A55 55370	ABS 80	46	100	60			504,40	**05092**
BT 50	A55 00370	ABS 80	46	100	62	410,80	**05092**		
BT 50	A55 55380	ABS 100	56	110				515,80	**05091**
BT 50	A55 00380	ABS 100	56	110		454,50	**05091**		

Spare parts **SZID**	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 100	13,05	**25700**	27,30	**99200**	14,30	**25200**
ABS 25	5,95	**26800**	14,45	**99700**	8,60	**27000**
ABS 32			14,45	**99600**	8,60	**27100**
ABS 40	6,75	**26900**	15,60	**99500**	8,95	**27200**
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

ABS reduction
→ 163

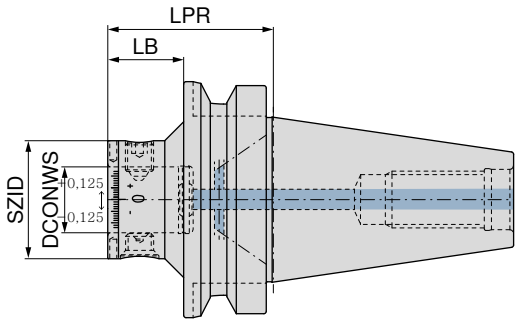
Others
→ Chapter 17 in main catalogue

Eccentric adjuster with ABS Connection

▲ Adjustment ± 0.25 mm on diameter

Scope of supply:
Steep taper adapter (Form B) with conversion kit (Form AD) and sealing disc

ABS



Adapter	KOMET no.	SZID	DCONWS	LPR	LB	AD NEW W4 Article no. 84 205 ... EUR		AD/B NEW W4 Article no. 84 205 ... EUR	
			mm	mm	mm				
BT 40	A55 56150	ABS 50	28	60	33			521,00	**04097**
BT 40	A55 56160	ABS 63	34	70		559,50	**04096**		
BT 50	A55 56350	ABS 50	28	70	32			584,50	**05097**
BT 50	A55 56360	ABS 63	34	80		640,60	**05096**		

Spare parts SZID	XX Clamping screw Article no. 84 950 ... EUR		XX Set Article no. 84 950 ... EUR		XX Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**

Accessories


Pull stud
→ Main catalogue, Chapter 16


ABS extension
→ 159

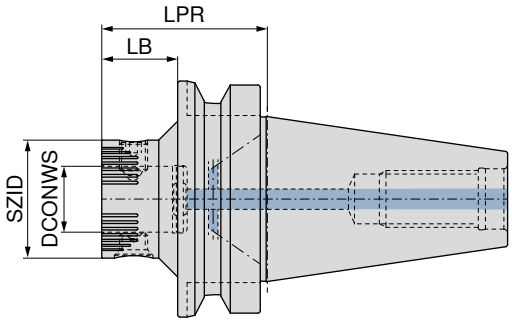

ABS reduction
→ 163

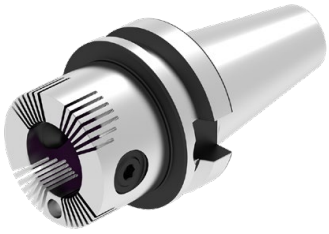

Others
→ Chapter 17 in main catalogue

Torsional vibration dampers with ABS Connection

Scope of supply:
Steep taper adapter (Form B) with conversion kit (Form AD) and sealing disc

ABS






AD/B

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	NEW 3E Article no. 84 208 ... EUR	
			mm	mm	mm		
BT 40	A55 02160	ABS 63	34	70		979,70	**04096**
BT 40	A55 02150	ABS 50	28	60	33	748,80	**04097**
BT 50	A55 02350	ABS 50	28	70	32	905,80	**05097**
BT 50	A55 02360	ABS 63	34	80		699,00	**05096**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**

Accessories


Pull stud
→ Main catalogue, Chapter 16


ABS extension
→ 159

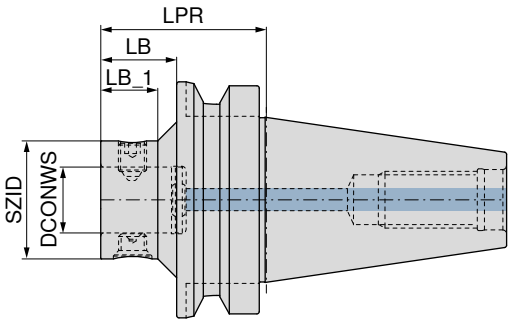

ABS reduction
→ 163


Others
→ Chapter 17 in main catalogue

Adapter with ABS Connection – BT-FC

▲ with face contact

ABS



AD

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	LB_1	NEW 3E Article no. 84 214 ... EUR	
			mm	mm	mm	mm		
BT-FC 40	A55 57121	ABS 25	13	60		25	574,10	**04090**
BT-FC 40	A55 57131	ABS 32	16	60	31		574,10	**04089**
BT-FC 40	A55 57141	ABS 40	20	60	33		574,10	**04088**
BT-FC 40	A55 57151	ABS 50	28	60	33		574,10	**04097**
BT-FC 40	A55 57161	ABS 63	34	70			590,70	**04096**
BT-FC 50	A55 57331	ABS 32	16	70		24	665,60	**05089**
BT-FC 50	A55 57341	ABS 40	20	70		24	665,60	**05088**
BT-FC 50	A55 57351	ABS 50	28	70		24	665,60	**05097**
BT-FC 50	A55 57361	ABS 63	34	80		37	677,00	**05096**
BT-FC 50	A55 57371	ABS 80	46	100	60		705,10	**05092**
BT-FC 50	A55 57381	ABS 100	56	110			757,10	**05091**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 100	13,05	**25700**	27,30	**99200**	14,30	**25200**
ABS 25	5,95	**26800**	14,45	**99700**	8,60	**27000**
ABS 32			14,45	**99600**	8,60	**27100**
ABS 40	6,75	**26900**	15,60	**99500**	8,95	**27200**
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

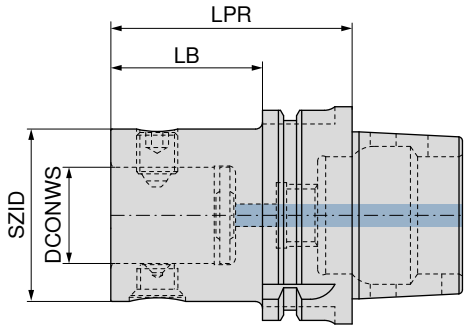
ABS extension
→ 159

ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Adapter with ABS Connection

ABS



AD
G 6,3 n_{max} 10000

NEW 3E

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	Article no. 84 200 ...	
			mm	mm	mm	EUR	
HSK-A 63	A06 30120	ABS 25	13	50	24	375,40	**06390**
HSK-A 63	A06 30130	ABS 32	16	50	24	375,40	**06389**
HSK-A 63	A06 30140	ABS 40	20	60	34	385,80	**06388**
HSK-A 63	A06 30150	ABS 50	28	70	44	396,20	**06397**
HSK-A 63	A06 30160	ABS 63	34	80	54	401,40	**06396**
HSK-A 63	A06 30170	ABS 80	46	100	74	426,40	**06392**
HSK-A 100	A06 50120	ABS 25	13	60	31	457,60	**10090**
HSK-A 100	A06 50130	ABS 32	16	60	31	457,60	**10089**
HSK-A 100	A06 50140	ABS 40	20	80	51	467,00	**10088**
HSK-A 100	A06 50150	ABS 50	28	80	51	476,30	**10097**
HSK-A 100	A06 50160	ABS 63	34	80	51	488,80	**10096**
HSK-A 100	A06 50170	ABS 80	46	90	61	510,60	**10092**
HSK-A 100	A06 50180	ABS 100	56	100	71	541,80	**10091**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ...		XX  Set Article no. 84 950 ...		XX  Taper screw Article no. 84 950 ...	
	EUR		EUR		EUR	
ABS 100	13,05	**25700**	27,30	**99200**	14,30	**25200**
ABS 25	5,95	**26800**	14,45	**99700**	8,60	**27000**
ABS 32			14,45	**99600**	8,60	**27100**
ABS 40	6,75	**26900**	15,60	**99500**	8,95	**27200**
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

ABS reduction
→ 163

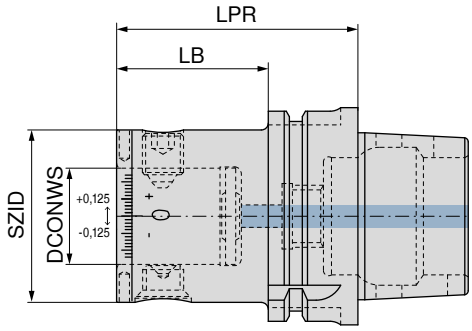
Others
→ Chapter 17 in main catalogue

Eccentric adjuster with ABS Connection

▲ Adjustment ± 0.25 mm on diameter

Scope of supply:
Eccentric adjuster with adjuster key Ø 2.8 mm

ABS



AD

NEW W4

Adapter	KOMET no.	SZID	DCONWS mm	LPR mm	LB mm	Article no. 84 203 ... EUR	
HSK-A 63	A06 36730	ABS 50	28	65,5	39,5	594,00	**06397**
HSK-A 100	A06 56730	ABS 50	28	75,5	46,5	676,00	**10097**
HSK-A 100	A06 56740	ABS 63	34	80,0	51,0	684,30	**10096**

Spare parts SZID	XX Clamping screw Article no. 84 950 ... EUR		XX Set Article no. 84 950 ... EUR		XX Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**

Accessories


Pull stud
→ Main catalogue, Chapter 16

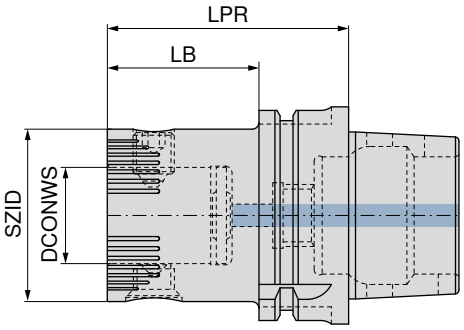

ABS extension
→ 159

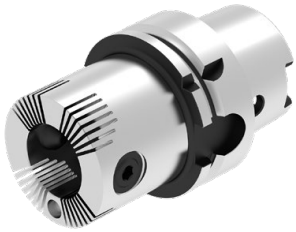

ABS reduction
→ 163


Others
→ Chapter 17 in main catalogue

Torsional vibration dampers with ABS Connection

ABS





AD

Adapter	KOMET no.	SZID	DCONWS	LPR	LB	NEW 3E Article no. 84 206 ... EUR	
			mm	mm	mm		
HSK-A 63	A06 30251	ABS 50	28	70	44	708,20	**06397**
HSK-A 63	A06 30261	ABS 63	34	80	54	695,00	**06396**
HSK-A 63	A06 30270	ABS 80	46	100	74	976,00	**06392**
HSK-A 100	A06 50251	ABS 50	28	80	51	829,90	**10097**
HSK-A 100	A06 50261	ABS 63	34	80	51	768,00	**10096**
HSK-A 100	A06 50270	ABS 80	46	90	61	1.047,00	**10092**

Spare parts SZID	XX Clamping screw Article no. 84 950 ... EUR		XX Set Article no. 84 950 ... EUR		XX Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

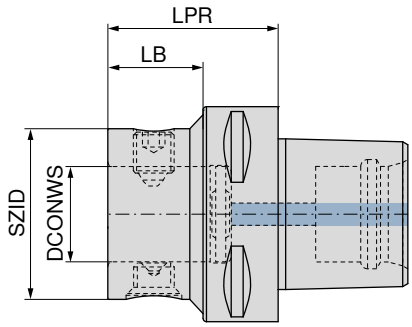
ABS extension
→ 159

ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Adapter with ABS Connection

ABS



AD

Adapter	KOMET no.	SZID	DCONWS mm	LPR mm	LB mm	NEW Y8 Article no. 84 215 ... EUR	
PSC 40	A69 04050	ABS 50	28	50	30	701,00	**04097**
PSC 50	A69 05050	ABS 50	28	50		451,40	**05097**
PSC 63	A69 06050	ABS 50	28	50	28	469,00	**06397**
PSC 63	A69 06060	ABS 63	34	60	36	484,60	**06396**
PSC 80	A69 08050	ABS 50	28	50	23	664,60	**08097**
PSC 80	A69 08060	ABS 63	34	60	30	701,00	**08096**
PSC 80	A69 08070	ABS 80	46	80	48	741,50	**08092**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
159

ABS reduction
163

Others
→ Chapter 17 in main catalogue

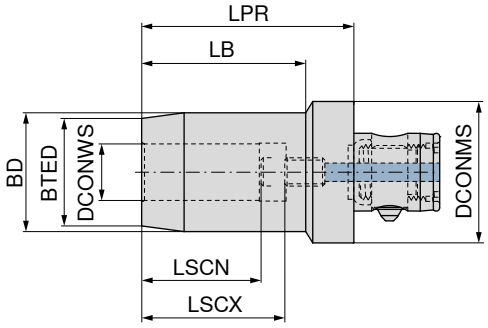
Hydraulic chuck

▲ for solid carbide and HSS shanks to h6 tolerance or better

Scope of supply:

Base body including backstop screw

ABS



AD

NEW 3E

DCONWS	KOMET no.	BTED	BD	LPR	LB	DCONMS	LSCX	LSCN	Article no. 84 223 ...	
mm		mm	mm	mm	mm	mm	mm	mm	EUR	
6	A32 42110	24	28	55	34,0	50	37	27	642,00	00697
8	A32 42120	26	30	65	45,0	50	41	31	657,00	00897
8	A32 32060	24	28	60	42,0	40	37	27	658,00	00888
10	A32 32070	26	30	65	47,5	40	41	31	604,00	01088
10	A32 42130	28	32	65	45,5	50	46	36	637,00	01097
12	A32 42140	30	34	65	46,0	50	46	36	636,00	01297
12	A32 32080	28	32	65	48,0	40	46	36	593,00	01288
14	A32 42150	34	38	70	52,0	50	49	39	637,00	01497
16	A32 42160	36	40	70	52,5	50	49	39	588,00	01697
18	A32 42170	38	42	75	58,0	50	51	41	615,00	01897
20	A32 52180	38	42	78	56,0	63	51	41	858,00	02096
20	A32 42101	22	26	55	33,5	50	37	27	600,00	02097
25	A32 52190	53	57	85	60,0	63	57	47	961,00	02596
32	A32 52200	60		90	61,0	63	61	51	1.044,00	03296

W7

Backstop screw

Spare parts DCONWS		Article no. 84 950 ...	
		EUR	
6	M6x12 - SW2,5	2,71	22000
8	M6x12 - SW2,5	2,71	22000
8	M8x1x12 - SW3	3,41	22100
10	M10x1x12 - SW4	3,41	22200
10	M8x1x12 - SW3	3,41	22100
12	M10x1x12 - SW4	3,41	22200
14	M10x1x12 - SW4	3,41	22200
16	M10x1x12 - SW4	3,41	22200
18	M16x1x16 - SW5	6,39	22400
20	M5x12 - SW2	2,71	22300
20	M16x1x16 - SW5	6,39	22400
25	M16x1x16 - SW5	6,39	22400
32	M16x1x16 - SW5	6,39	22400

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

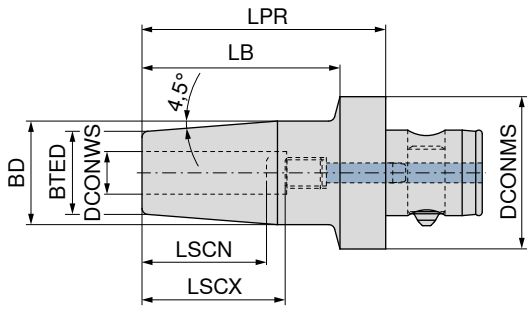
ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Shrink fit adapters 4.5°

▲ for solid carbide and HSS shanks to h6 tolerance or better

ABS



AD

G 6,3 n_{max} 15000

NEW 3E

Adapter	KOMET no.	DCONWS	LPR	BD	BTED	LB	LSCX	LSCN	DCONMS	Article no. 84 222 ...
		mm	mm	mm	mm	mm	mm	mm	mm	EUR
ABS 32	A32 26040	6	75	27	21	56	36	26	32	359,00 **00689**
ABS 32	A32 26050	8	70	27	21	56	36	26	32	297,00 **00889**
ABS 32	A32 26061	10	70	32	24	55	42	32	32	359,00 **01089**
ABS 32	A32 26071	12	80	32	24		47	37	32	331,00 **01289**
ABS 40	A32 36050	8	70	27	21	56	36	26	40	331,00 **00888**
ABS 40	A32 36061	10	70	32	24	56	42	32	40	331,00 **01088**
ABS 40	A32 36071	12	80	32	24	66	47	37	40	335,00 **01288**
ABS 40	A32 36091	16	90	34	27	76	50	40	40	359,00 **01688**
ABS 50	A32 46040	6	75	27	21	56	36	26	50	256,00 **00697**
ABS 50	A32 46050	8	75	27	21	56	36	26	50	254,00 **00897**
ABS 50	A32 46061	10	80	32	24	61	42	32	50	311,00 **01097**
ABS 50	A32 46071	12	80	32	24	61	47	37	50	317,00 **01297**
ABS 50	A32 46081	14	80	34	27	61	47	37	50	359,00 **01497**
ABS 50	A32 46091	16	85	34	27	66	50	40	50	301,00 **01697**
ABS 50	A32 46101	18	85	42	33	66	50	40	50	359,00 **01897**
ABS 50	A32 46111	20	90	42	33	71	52	42	50	289,00 **02097**
ABS 63	A32 56111	20	95	53	44	71	58	48	63	290,00 **02096**
ABS 63	A32 56121	25	90	42	33	76	52	42	63	371,00 **02596**
ABS 63	A32 56131	32	95	53	44	76	58	48	63	371,00 **03296**

W7

Backstop screw

Spare parts DCONWS		Article no. 84 950 ...
		EUR
6	M5x18	3,67 **21400**
8	M6x20	3,67 **21500**
10	M8x1x20	2,71 **21600**
12	M10x1x20	3,41 **21700**
14	M10x1x20	3,41 **21700**
16	M12x1x20	4,72 **21800**
18	M12x1x20	4,72 **21800**
20	M8x1x20	6,12 **21900**
25	M8x1x20	6,12 **21900**
32	M8x1x20	6,12 **21900**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

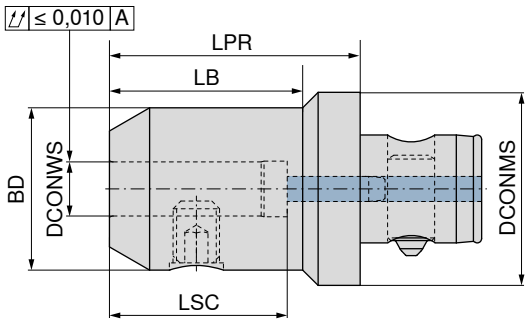
ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Cylindrical shank adapter (Weldon)

▲ For shanks according to DIN 6535 HB / 1835 B with lateral clamping flat

ABS



AD

NEW 3E

Adapter	KOMET no.	DCONWS	LPR	BD	LB	LSC	DCONMS	Article no. 84 221 ...	
		mm	mm	mm	mm	mm	mm	EUR	
ABS 50	A32 40010	6	45	25	27	40	50	212,00	**00697**
ABS 50	A32 40020	8	45	28	27	40	50	213,00	**00897**
ABS 50	A32 40030	10	55	35	37	44	50	212,00	**01097**
ABS 50	A32 40040	12	65	42	50	49	50	222,00	**01297**
ABS 50	A32 40080	14	65	44	50	49	50	232,00	**01497**
ABS 50	A32 40050	16	65	48	50	52	50	236,00	**01697**
ABS 50	A32 40090	18	65	50		52	50	212,00	**01897**
ABS 50	A32 40060	20	65	52		54	50	216,00	**02097**
ABS 50	A32 40070	25	75	65		60	50	368,00	**02597**
ABS 63	A32 50040	12	65	42		49	63	359,00	**01296**
ABS 63	A32 50100	14	65	44	50	49	63	352,00	**01496**
ABS 63	A32 50050	16	65	48	50	52	63	308,00	**01696**
ABS 63	A32 50110	18	65	50	50	52	63	323,00	**01896**
ABS 63	A32 50060	20	65	52	45	54	63	268,00	**02096**
ABS 63	A32 50070	25	75	65		60	63	300,00	**02596**
ABS 63	A32 50080	32	80	72		64	63	236,00	**03296**
ABS 80	A32 60060	20	65	52	45	54	80	382,00	**02092**
ABS 80	A32 60070	25	75	65	55	60	80	373,00	**02592**
ABS 80	A32 60080	32	80	72	66	64	80	279,00	**03292**

W7

Grubscrew

Spare parts DCONWS		Article no. 62 950 ...	
		EUR	
6	M6x10	0,66	**006**
8	M8x10	0,77	**008**
10	M10x12	1,02	**010**
12	M12x16	1,03	**012**
14	M12x16	1,03	**012**
16	M14x16	1,28	**016**
18	M14x16	1,28	**016**
20	M16x16	1,55	**020**
25	M18x2x20	2,84	**025**
32	M20x2x20	3,15	**032**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

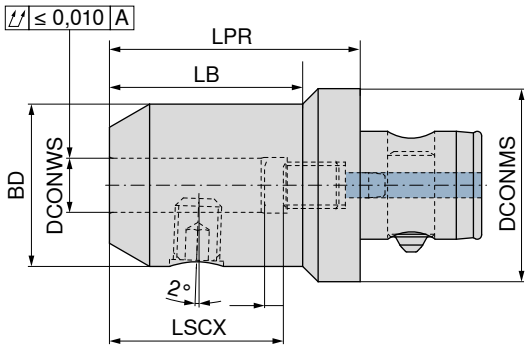
ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Cylindrical Shank Adapter (Whistle Notch)

▲ For shanks according to DIN 6535 HE / 1835 E with angled clamping flat

ABS



AD

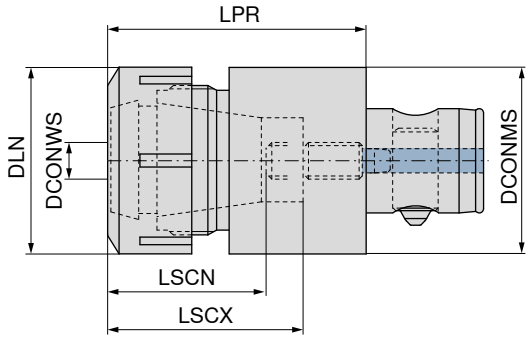
NEW 3E

Adapter	KOMET no.	DCONWS	LPR	LB	BD	LSCX	DCONMS	Article no. 84 220 ...	
		mm	mm	mm	mm	mm	mm	EUR	
ABS 25	A30 10601	6	55		25	36	25	238,00	**00690**
ABS 25	A30 10801	8	55		28	36	25	250,00	**00890**
ABS 25	A30 11001	10	60		35	40	25	237,00	**01090**
ABS 32	A30 20601	6	55	40	25	36	32	243,00	**00689**
ABS 32	A30 20801	8	55	40	28	36	32	244,00	**00889**
ABS 32	A30 20901	9	55	40	28	36	32	264,00	**00989**
ABS 32	A30 21001	10	60		35	40	32	222,00	**01089**
ABS 32	A30 21201	12	65		42	45	32	246,00	**01289**
ABS 32	A30 21401	14	65		42	45	32	334,00	**01489**
ABS 40	A30 30601	6	55	35	25	36	40	300,00	**00688**
ABS 40	A30 30801	8	55	35	28	36	40	277,00	**00888**
ABS 40	A30 31001	10	60	45	35	40	40	271,00	**01088**
ABS 40	A30 31201	12	65		42	45	40	253,00	**01288**
ABS 40	A30 31401	14	65		42	45	40	339,00	**01488**
ABS 40	A30 31601	16	70		48	48	40	283,00	**01688**
ABS 40	A30 31801	18	70		48	48	40	354,00	**01888**
ABS 50	A30 40601	6	55	30	25	36	50	242,00	**00697**
ABS 50	A30 40801	8	55	30	28	36	50	260,00	**00897**
ABS 50	A30 41001	10	60	40	35	40	50	240,00	**01097**
ABS 50	A30 41201	12	65	50	42	45	50	256,00	**01297**
ABS 50	A30 41301	13	65	50	42	45	50	358,00	**01397**
ABS 50	A30 41401	14	65	50	42	45	50	289,00	**01497**
ABS 50	A30 41601	16	70	55	48	48	50	268,00	**01697**
ABS 50	A30 41801	18	70	55	48	48	50	318,00	**01897**
ABS 50	A30 42002	20	75		52	50	50	264,00	**02097**
ABS 50	A30 42202	22	75		52	50	50	333,00	**02297**
ABS 50	A30 42502	25	75		52	50	50	280,00	**02597**
ABS 63	A30 51001	10	60	35	35	40	63	357,00	**01096**
ABS 63	A30 51201	12	65	45	42	45	63	313,00	**01296**
ABS 63	A30 51401	14	65	45	42	45	63	364,00	**01496**
ABS 63	A30 51601	16	70	50	48	48	63	326,00	**01696**
ABS 63	A30 51801	18	70	50	48	48	63	364,00	**01896**
ABS 63	A30 52001	20	75	55	52	50	63	271,00	**02096**
ABS 63	A30 52501	25	80		65	56	63	269,00	**02596**
ABS 63	A30 52801	28	80		65	56	63	388,00	**02896**
ABS 80	A30 62501	25	80	60	65	58	80	326,00	**02592**
ABS 80	A30 63201	32	90	70	72	60	80	399,00	**03292**

Spare parts DCONWS		W7 Backstop screw Article no. 84 950 ... EUR			W7 Grubscrew Article no. 62 950 ... EUR	
6	M5x16	2,71	20500	M6x10	0,66	006
8	M6x16 - SW2,5	2,71	20600	M8x10	0,77	008
9	M8x1x16 - SW3	2,71	20800	M8x10	0,77	008
10	M8x1x16 - SW2,5	2,71	20700	M10x12	1,02	010
12	M10x1x18 - SW3	3,41	20900	M12x16	1,03	012
13	M12x1x17 - SW3	4,72	21000	M12x16	1,03	012
14	M12x1x17 - SW3	4,72	21000	M12x16	1,03	012
16	M14x1x19 - SW4	5,68	21100	M14x16	1,28	016
18	M14x1x19 - SW4	5,68	21100	M14x16	1,28	016
20	M16x1x21 - SW5	6,12	21200	M16x16	1,55	020
22	M16x1x21 - SW5	6,12	21200	M16x16	1,55	020
25	M16x1x21 - SW5	6,12	21200	M16x16	1,55	020
28	M16x1x21 - SW5	6,12	21200	M18x2x20	2,84	025
32	M20x1x27 - SW8	9,35	21300	M20x2x20	3,15	032

ER Collet chuck

Scope of supply:
Holder with lock nut and adjustable back stop



AD

NEW 3E

Adapter	KOMET no.	DCONWS	LPR	DLN	DCONMS	LSCX	LSCN	Article no. 84 224 ...	
		mm	mm	mm	mm	mm	mm	EUR	
ABS 25	A33 11120	1-10	40,1	32	25	31	28	214,00	**01690**
ABS 32	A33 12130	1 - 13	52,5	34	32	39	35	235,00	**02089**
ABS 40	A33 13141	1 - 16	62,0	42	40	46	43	251,00	**02588**
ABS 50	A33 14151	2 - 20	69,3	50	50	51	48	290,00	**03297**
ABS 63	A33 15161	3 - 26	78,3	63	63	55	52	286,00	**04096**

Spare parts	W7 Backstop screw			W7 Lock nut			W7 Lock nut		
		Article no. 84 950 ...			Article no. 62 950 ...			Article no. 62 950 ...	
for Article no.		EUR			EUR			EUR	
84 224 01690	M5x8 - SW2	2,71	**22500**				M22x1,5	17,82	**054**
84 224 02089	M6x12 - SW2,5	2,71	**22000**	M25x1,5 - SW30	18,87	**045**			
84 224 02588	M8x1x14 - SW4	2,97	**22600**				M32x1,5	19,92	**055**
84 224 04096	M12x1x18 - SW8	4,72	**22800**				M50x1,5	18,04	**057**
84 224 03297	M10x1x14 - SW5	3,41	**22700**				M40x1,5	18,56	**056**

Accessories

Pull stud
→ Main catalogue, Chapter 16

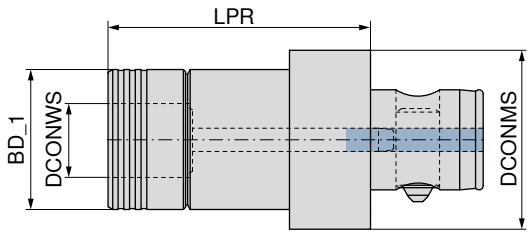
ABS extension
→ 159

ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Quick change tap chuck with length compensation

▲ With length compensation under tension and compression (LZD)

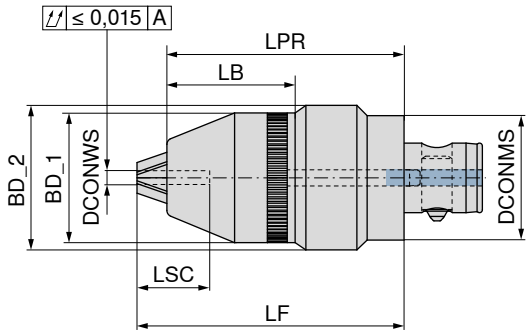


AD

Adapter	KOMET no.	DCONWS mm	BD_1 mm	LPR mm	DCONMS mm	LZD± mm	NEW 3E Article no. 84 225 ... EUR	
ABS 32	A34 32060	19	39	69	32	7,5	807,00	**01989**
ABS 40	A34 33060	19	39	73	40	7,5	807,00	**01988**
ABS 50	A34 34060	19	39	72	50	7,5	807,00	**01997**
ABS 50	A34 34070	31	60	98	50	10	937,00	**03197**
ABS 63	A34 35070	31	60	111	63	10	937,00	**03196**

Short drill chuck

Scope of supply:
Holder with clamping key



AD
G 6.3 $n_{max.}$ 6500

Adapter	KOMET no.	DCONWS mm	LPR mm	BD_1 mm	BD_2 mm	LSC mm	DCONMS mm	LF mm	LB mm	NEW 3E Article no. 84 227 ... EUR	
ABS 50	A34 24030	0,5 - 13	95	49	57,5	29	50	104,0	51,5	780,00	**01397**
ABS 50	A34 24040	3 - 16	95	52	57,5	29	50	104,7	52,0	905,00	**01697**

Accessories

Pull stud
→ Main catalogue, Chapter 16

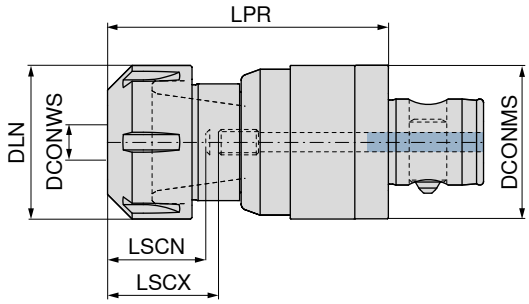
ABS extension
→ 159

ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Synchro tapping chuck with minimum length compensation

ABS



AD

Adapter	KOMET no.	DCONWS mm	LPR mm	DLN mm	LSCX mm	LSCN mm	DCONMS mm	NEW Y8 Article no. 84 226 ... EUR	
ABS 32	50795131002000	20	78,0	34	42	29	32	621,90	**02089**
ABS 50	50795135002000	20	84,5	34	42	29	50	621,90	**02097**
ABS 50	50795135003200	32	80,5	50	45	31	50	682,20	**03297**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

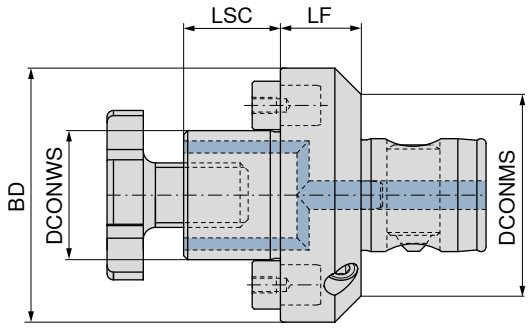
ABS reduction
→ 163

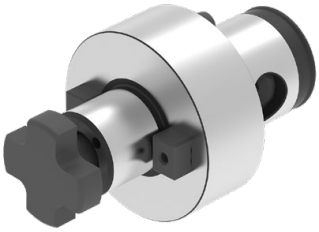
Others
→ Chapter 17 in main catalogue

Shell mill adapter

Scope of supply:
Base body including drive dogs and retaining screw

ABS





Adapter	KOMET no.	DCONWS	LSC	LF	BD	DCONMS	A NEW 3E Article no. 84 228 ...	EUR	AD/B NEW 3E Article no. 84 228 ...	EUR
		mm	mm	mm	mm	mm				
ABS 50	A40 24023	16	17	20		50			298,00	**01697**
ABS 50	A40 24034	22	19	20	22	50			284,00	**02297**
ABS 50	A40 24043	27	21	20	27	50			304,00	**02797**
ABS 50	A40 24053	32	24	20	32	50			335,00	**03297**
ABS 63	A40 25032	22	19	22	22	63			344,00	**02296**
ABS 63	A40 25042	27	21	22	27	63			363,00	**02796**
ABS 63	A40 25052	32	24	32	32	63			374,00	**03296**
ABS 63	A40 25062	40	27	22	40	63			386,00	**04096**
ABS 80	A40 26042	27	21	25	27	80			377,00	**02792**
ABS 80	A40 26052	32	24	25	32	80			381,00	**03292**
ABS 80	A40 26062	40	27	25	40	80			385,00	**04092**
ABS 80	A40 16062	40	30	43	88	80	502,00	**14092**		
ABS 100	A40 27052	32	24	25	32	100			496,00	**03291**
ABS 100	A40 17062	40	30	38	88	100	427,00	**14091**		
ABS 100	A40 27062	40	27	25	40	100			432,00	**04091**
ABS 100	A40 17072	60	40	56	130	100	545,00	**06091**		


Drive screw


Drive dog


Driver


Retaining screw

Spare parts for Article no.		Y8 Article no. 81 950 ... EUR		W7 Article no. 84 950 ... EUR		Y8 Article no. 83 950 ... EUR		Y8 Article no. 83 367 ... EUR	
84 228 01697	M3x8	0,38	**010**					M8	3,23 **016**
84 228 02297				13,6x8x10	29,85 **22900**			M10	3,54 **022**
84 228 02797				14,3x9x12	31,51 **23000**			M12	4,53 **027**
84 228 03297				17x12x14	29,85 **23100**			M16	7,28 **032**
84 228 02296				13,6x8x10	29,85 **22900**			M10	3,54 **022**
84 228 02796				14,3x9x12	31,51 **23000**			M12	4,53 **027**
84 228 03296				17x12x14	29,85 **23100**			M16	7,28 **032**
84 228 04096								M20	11,54 **040**
84 228 02792				14,3x9x12	31,51 **23000**			M12	4,53 **027**
84 228 03292				17x12x14	29,85 **23100**			M16	7,28 **032**
84 228 04092								M20	11,54 **040**
84 228 14092	M6x16	0,78	**014**			15,9x16,3x19,5	11,22 **295**		
84 228 03291				17x12x14	29,85 **23100**			M16	7,28 **032**
84 228 14091	M6x16	0,78	**014**			15,9x16,3x19,5	11,22 **295**		
84 228 04091								M20	11,54 **040**
84 228 06091	M12x25	8,41	**015**			25,4x16,3x26,5	14,57 **298**		

Accessories


Pull stud
→ Main catalogue, Chapter 16


ABS extension
→ 159


ABS reduction
→ 163

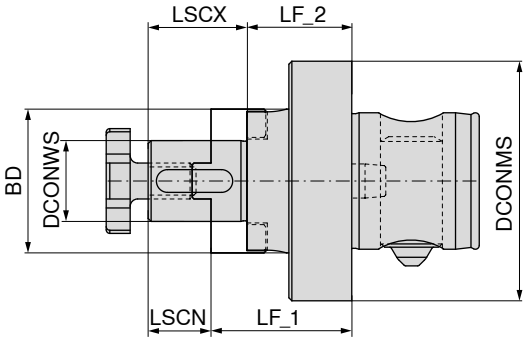

Others
→ Chapter 17 in main catalogue

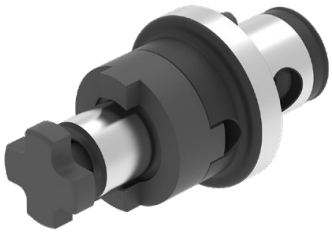
Combination shell mill adapter

▲ For milling cutters with transverse or longitudinal groove according to DIN 6358

Scope of supply:

Base body including retaining screw, drive ring and drive key





A

Adapter	KOMET no.	DCONWS	BD	LF_1	LF_2	LSCX	LSCN	DCONMS	NEW 3E Article no. 84 229 ...
		mm	mm	mm	mm	mm	mm	mm	EUR
ABS 50	A40 04022	16	32	32	22	27	17	50	231,00 **01697**
ABS 50	A40 04032	22	40	34	22	31	19	50	223,00 **02297**
ABS 63	A40 05021	16	32	36	26	27	17	63	324,00 **01696**
ABS 63	A40 05031	22	40	38	26	31	19	63	364,00 **02296**
ABS 63	A40 05041	27	48	38	26	33	21	63	283,00 **02796**
ABS 80	A40 06031	22	40	45	33	31	19	80	426,00 **02292**
ABS 80	A40 06041	27	48	45	33	33	21	80	383,00 **02792**
ABS 80	A40 06051	32	58	47	33	38	24	80	320,00 **03292**
ABS 80	A40 06061	40	70	47	33	41	27	80	337,00 **04092**

Spare parts DCONWS		Y8 Article no. 83 950 ...		Y8 Article no. 83 370 ...			Y8 Article no. 83 367 ...	
		EUR		EUR			EUR	
16	4 x 4 x 20	1,63	**284**	9,91	**116**	M8	3,23	**016**
22	6 x 6 x 25	1,63	**285**	11,01	**122**	M10	3,54	**022**
27	7 x 7 x 25	3,15	**286**	11,84	**127**	M12	4,53	**027**
32	8 x 7 x 28	1,87	**287**	14,16	**132**	M16	7,28	**032**
40				21,07	**140**	M20	11,54	**040**


Parallel key


Drive ring


Retaining screw

Accessories


Pull stud
→ Main catalogue, Chapter 16

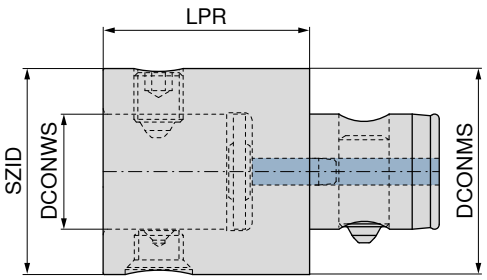

ABS extension
→ 159


ABS reduction
→ 163


Others
→ Chapter 17 in main catalogue

Extension with ABS Connection

ABS



AD

NEW 3E

Adapter	KOMET no.	SZID	DCONWS	LPR	DCONMS	Article no. 84 209 ...	
			mm	mm	mm	EUR	
ABS 25	A20 00020	ABS 25	13	45	25	235,00	**04590**
ABS 25	A20 00220	ABS 25	13	60	25	235,00	**06090**
ABS 32	A20 00530	ABS 32	16	35	32	248,60	**03589**
ABS 32	A20 00030	ABS 32	16	50	32	248,60	**05089**
ABS 32	A20 00230	ABS 32	16	70	32	248,60	**07089**
ABS 40	A20 00540	ABS 40	20	40	40	262,10	**04088**
ABS 40	A20 00040	ABS 40	20	60	40	262,10	**06088**
ABS 40	A20 00240	ABS 40	20	90	40	262,10	**09088**
ABS 50	A20 00550	ABS 50	28	50	50	292,20	**05097**
ABS 50	A20 00050	ABS 50	28	65	50	292,20	**06597**
ABS 50	A20 00250	ABS 50	28	100	50	292,20	**10097**
ABS 50	A20 00150	ABS 50	28	150	50	292,20	**15097**
ABS 63	A20 00560	ABS 63	34	60	63	330,70	**06096**
ABS 63	A20 00060	ABS 63	34	85	63	330,70	**08596**
ABS 63	A20 00260	ABS 63	34	125	63	330,70	**12596**
ABS 63	A20 00160	ABS 63	34	190	63	330,70	**19096**
ABS 80	A20 00570	ABS 80	46	70	80	390,00	**07092**
ABS 80	A20 00070	ABS 80	46	85	80	390,00	**08592**
ABS 80	A20 00270	ABS 80	46	125	80	406,60	**12592**
ABS 80	A20 00170	ABS 80	46	240	80	406,60	**24092**
ABS 100	A20 00080	ABS 100	56	125	100	434,70	**12591**
ABS 100	A20 00280	ABS 100	56	160	100	457,60	**16091**
ABS 100	A20 00580	ABS 100	56	85	100	434,70	**08591**
ABS 100	A20 00090	ABS 125	70	160	125	514,80	**16085**
ABS 125	A20 00290	ABS 125	70	200	125	542,90	**20085**

Spare parts DCONWS	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Positioning pin Article no. 84 950 ... EUR		XX  Pendulum bolt Article no. 84 950 ... EUR		XX  Coolant pipe Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
13	5,95	**26800**			14,45	**99700**							8,60	**27000**
16					14,45	**99600**							8,60	**27100**
20	6,75	**26900**			15,60	**99500**							8,95	**27200**
28	12,64	**20300**	58,24	**99900**	28,81	**99800**	14,92	**20200**	36,04	**20000**	7,33	**20100**	16,22	**20400**
34	8,60	**25500**			19,35	**99400**							10,90	**27300**
46	10,60	**25600**			23,45	**99300**							12,90	**25100**
56	13,05	**25700**			27,30	**99200**							14,30	**25200**
70	23,35	**25800**			47,60	**99100**							24,30	**25300**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
159

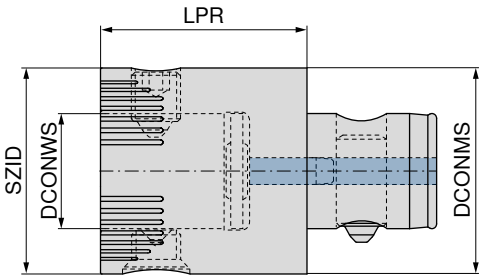
ABS reduction
163

Others
→ Chapter 17 in main catalogue

Torsional vibration dampers with ABS Connection

Scope of supply:
Base body with sealing disc

ABS



AD

Adapter	KOMET no.	SZID	DCONWS mm	LPR mm	DCONMS mm	NEW 3E Article no. 84 216 ... EUR	
ABS 50	A20 00651	ABS 50	28	50	50	562,60	**05097**
ABS 63	A20 00661	ABS 63	34	60	63	791,40	**06096**
ABS 80	A20 00670	ABS 80	46	70	80	776,00	**07092**

Spare parts SZID	XX Clamping screw Article no. 84 950 ... EUR		XX Set Article no. 84 950 ... EUR		XX Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

ABS reduction
→ 163

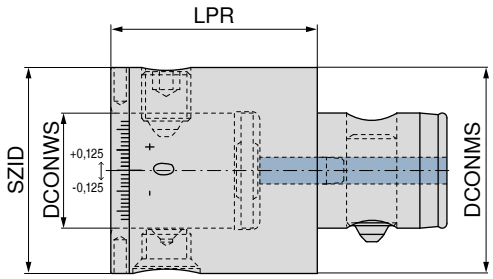
Others
→ Chapter 17 in main catalogue

Eccentric adjuster with ABS Connection

▲ Adjustment ± 0.25 mm on diameter

Scope of supply:
Eccentric adjuster with adjuster key Ø 2.8 mm

ABS



Adapter	KOMET no.	SZID	DCONWS	LPR	DCONMS	NEW W4 Article no. 84 217 ... EUR	
			mm	mm	mm		
ABS 50	A20 00620	ABS 50	28	50	50	488,80	**05097**
ABS 63	A20 00630	ABS 63	34	60	63	528,30	**06096**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**

Accessories


Pull stud
→ Main catalogue, Chapter 16


ABS extension
→ 159

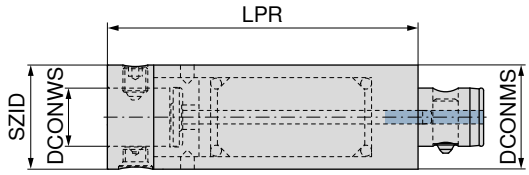

ABS reduction
→ 163


Others
→ Chapter 17 in main catalogue

Damping element with ABS connection

▲ Reduction in undesirable tool vibrations

ABS



AD

NEW 3E

Adapter	KOMET no.	SZID	DCONWS	LPR	DCONMS	Article no. 84 218 ...	
			mm	mm	mm	EUR	
ABS 40	A20 01240	ABS 40	20	120	40	1.163,00	12088
ABS 50	A20 01250	ABS 50	46	150	50	1.351,00	15097
ABS 63	A20 01260	ABS 63	63	190	63	1.767,00	19096
ABS 80	A20 01270	ABS 80	80	240	80	2.461,00	24092

Spare parts SZID	XX Clamping screw Article no. 84 950 ...		XX Set Article no. 84 950 ...		XX Taper screw Article no. 84 950 ...	
	EUR		EUR		EUR	
ABS 40	6,75	26900	15,60	99500	8,95	27200
ABS 50	12,64	20300	28,81	99800	16,22	20400
ABS 63	8,60	25500	19,35	99400	10,90	27300
ABS 80	10,60	25600	23,45	99300	12,90	25100

Accessories

Pull stud
→ Main catalogue, Chapter 16

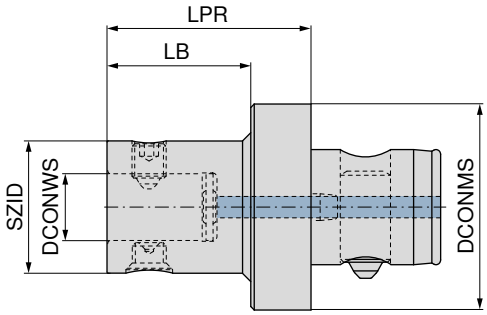
ABS extension
→ 159

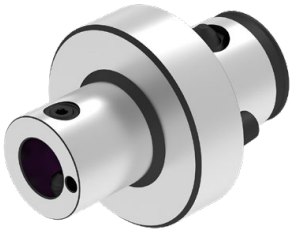
ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

ABS reduction

ABS





AD

Adapter	KOMET no.	SZID	DCONWS mm	LPR mm	LB mm	DCONMS mm	NEW 3E Article no. 84 219 ... EUR	
ABS 32	A20 10120	ABS 25	13	40	30	32	263,10	**03290**
ABS 40	A20 10220	ABS 25	13	40	28	40	277,70	**04090**
ABS 40	A20 10230	ABS 32	16	40	28	40	277,70	**04089**
ABS 50	A20 10320	ABS 25	13	50	35	50	301,60	**05090**
ABS 50	A20 10330	ABS 32	16	50	35	50	301,60	**05089**
ABS 50	A20 10340	ABS 40	20	50	35	50	301,60	**05088**
ABS 63	A20 10420	ABS 25	13	60	40	63	338,00	**06390**
ABS 63	A20 10430	ABS 32	16	60	40	63	338,00	**06389**
ABS 63	A20 10440	ABS 40	20	60	40	63	338,00	**06388**
ABS 63	A20 10450	ABS 50	28	60	40	63	338,00	**06397**
ABS 80	A20 10530	ABS 32	16	60	35	80	399,40	**08089**
ABS 80	A20 10540	ABS 40	20	60	35	80	399,40	**08088**
ABS 80	A20 10550	ABS 50	28	60	35	80	399,40	**08097**
ABS 80	A20 10560	ABS 63	34	60	35	80	399,40	**08096**
ABS 100	A20 10650	ABS 50	28	80	50	100	435,80	**10097**
ABS 100	A20 10660	ABS 63	34	80	50	100	435,80	**10096**
ABS 100	A20 10670	ABS 80	46	80	50	100	435,80	**10092**
ABS 125	A20 10770	ABS 80	46	100	50	125	481,50	**12592**
ABS 125	A20 10780	ABS 100	56	100	50	125	481,50	**12591**

Spare parts SZID	XX  Clamping screw Article no. 84 950 ... EUR		XX  Set Article no. 84 950 ... EUR		XX  Taper screw Article no. 84 950 ... EUR	
ABS 100	13,05	**25700**	27,30	**99200**	14,30	**25200**
ABS 25	5,95	**26800**	14,45	**99700**	8,60	**27000**
ABS 32			14,45	**99600**	8,60	**27100**
ABS 40	6,75	**26900**	15,60	**99500**	8,95	**27200**
ABS 50	12,64	**20300**	28,81	**99800**	16,22	**20400**
ABS 63	8,60	**25500**	19,35	**99400**	10,90	**27300**
ABS 80	10,60	**25600**	23,45	**99300**	12,90	**25100**

Accessories

Pull stud
→ Main catalogue, Chapter 16

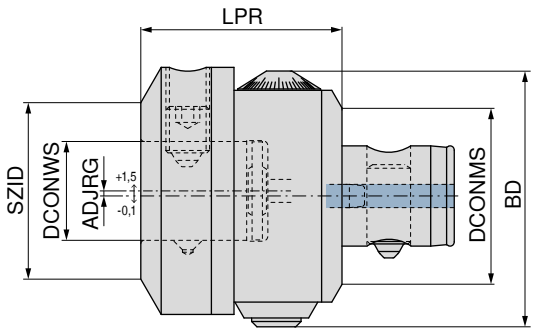
ABS extension
→ 159

ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Adjuster with ABS connection

- Precise adjustment using micrometric adjusting spindle
- Max. adjustment range 3 mm on diameter
- Graduation of scale 1 line 0.02 mm on diameter
- Stable clamping of the top section after adjustment using four clamping screws arranged on the face



AD

Adapter	KOMET no.	SZID	DCONWS	LPR	BD	ADJRG	DCONMS	NEW W4 Article no. 84 210 ...
			mm	mm	mm	mm	mm	EUR
ABS 50	M01 00001	ABS 50	28	57	70	1,5	50	1.184,00 **05097**
ABS 63	M01 00011	ABS 50	28	70	88	1,5	63	1.284,00 **06397**
ABS 63	M01 00021	ABS 63	34	70	88	1,5	63	1.284,00 **06396**

Spare parts	XX  Clamping screw	XX  Set	XX  Set	XX  Positioning pin	XX  Pendulum bolt	XX  Coolant pipe	XX  Taper screw
for Article no.	**Article no. 84 950 ...** EUR	**Article no. 84 950 ...** EUR	**Article no. 84 950 ...** EUR	**Article no. 84 950 ...** EUR	**Article no. 84 950 ...** EUR	**Article no. 84 950 ...** EUR	**Article no. 84 950 ...** EUR
84 210 05097	12,64 **20300**	58,24 **99900**	28,81 **99800**	14,92 **20200**	36,04 **20000**	7,33 **20100**	16,22 **20400**
84 210 06397	12,64 **20300**	40,10 **98600**	28,81 **99800**	7,90 **23900**	25,10 **26300**	7,05 **24700**	16,22 **20400**
84 210 06396	8,60 **25500**	40,10 **98600**	19,35 **99400**	7,90 **23900**	25,10 **26300**	7,05 **24700**	10,90 **27300**

Accessories


Pull stud
→ Main catalogue, Chapter 16


ABS extension
→ 159

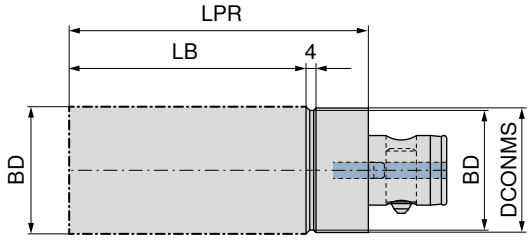

ABS reduction
→ 163


Others
→ Chapter 17 in main catalogue

Blank

- ▲ Connection area hardened and ground
- ▲ Dimension BD x dimension LB = unhardened area for further processing

ABS



AD

Adapter	KOMET no.	LPR mm	BD mm	LB mm	DCONMS mm	NEW W4 Article no. 84 230 ... EUR	
ABS 25	B10 01011	70	26	51	25	130,00	**02690**
ABS 32	B10 02011	80	33	61	32	137,00	**03389**
ABS 40	B10 03011	100	41	78	40	160,00	**04188**
ABS 50	B10 04011	120	51	95	50	156,00	**05197**
ABS 63	B10 05011	150	64	120	63	197,00	**06496**
ABS 80	B10 06011	180	81	141	80	305,00	**08192**
ABS 100	B10 07011	200	101	154	100	402,00	**10191**

Accessories

Pull stud
→ Main catalogue, Chapter 16

ABS extension
→ 159

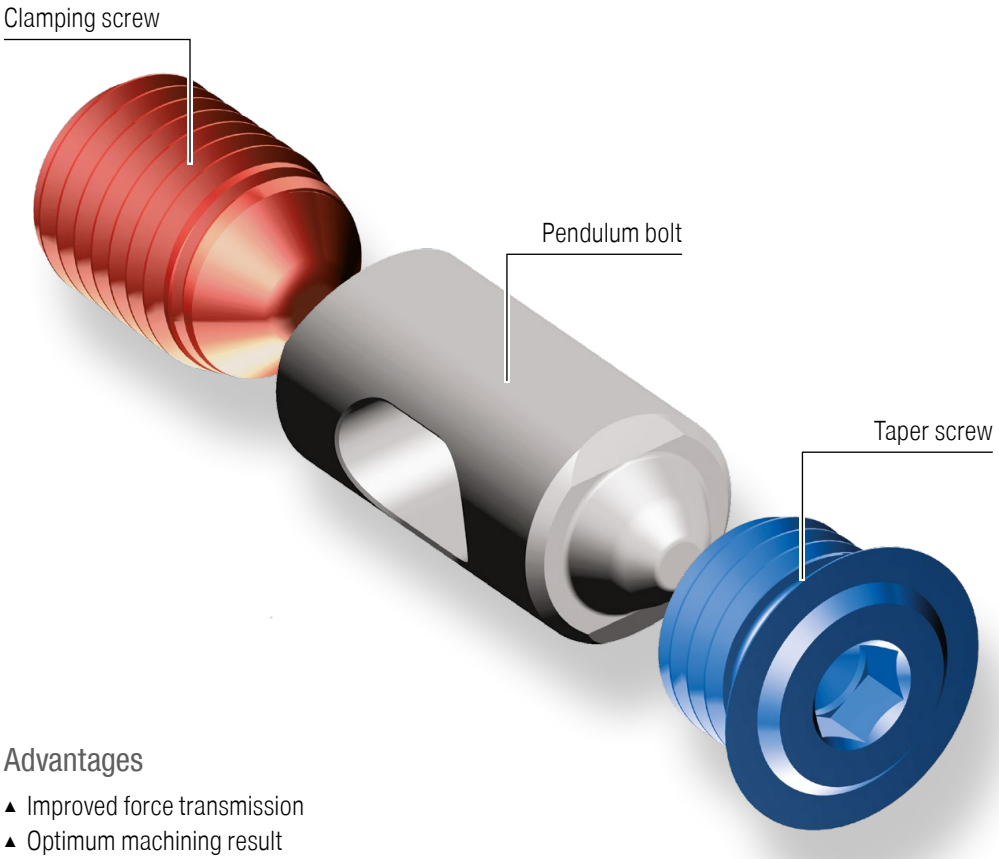
ABS reduction
→ 163

Others
→ Chapter 17 in main catalogue

Technical information – ABS

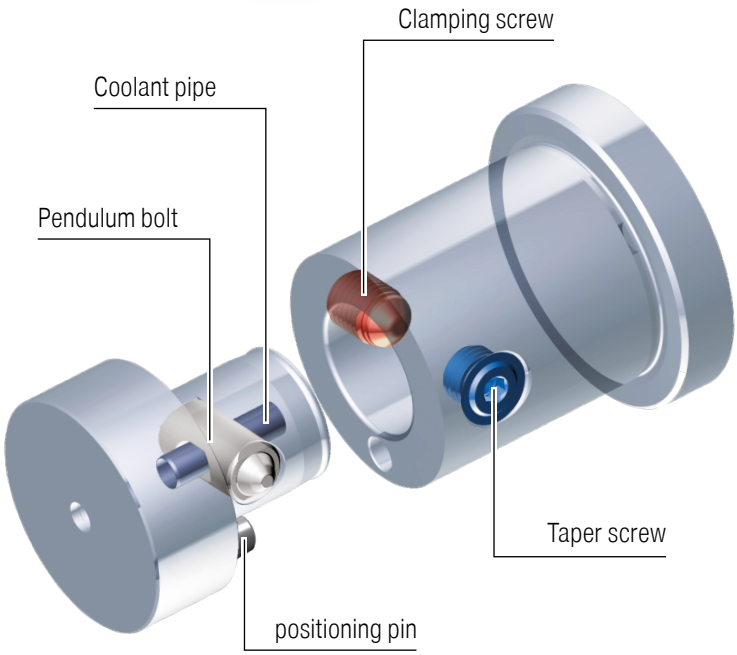
Even better connected

The new version of the ABS connection offers considerably higher clamping forces. It is fully compatible with the existing system and continues to meet the same high demands as the original in terms of accuracy. The adapter is an important element in tooling systems between the cutting tool and the machine. It must be able to reliably transmit the cutting forces that are produced. Adapters also have a considerable impact on the quality of the machining result. They also contribute to the cost-effectiveness of the machining process.



Advantages

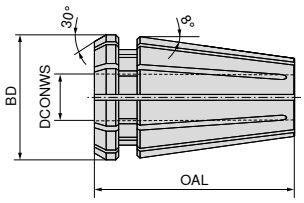
- Improved force transmission
- Optimum machining result
- Higher cutting values possible
- Less noise pollution in production
- System fully compatible upwards and downwards
- Suitable for ABS, ABS N and ABS T

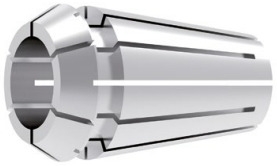


ER collet

- DIN ISO 15488-B (alt DIN 6499-B)
- 12 times slotted
- Double taper clamping
- Sets are supplied in wooden box

ER-B
10 µm





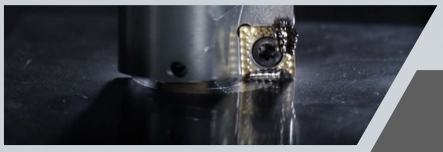
DCONWS mm		BD = 17 OAL = 27,5 426 E / ER16 NEW Y8 Article no. 82 663 ... EUR		BD = 26 OAL = 34 430 E / ER25 NEW Y8 Article no. 82 664 ... EUR		BD = 33 OAL = 40 470 E / ER32 NEW Y8 Article no. 82 665 ... EUR		BD = 8,5 OAL = 13,6 4004 E / ER08 NEW Y8 Article no. 82 666 ... EUR	
1,0		15,53	01000						
1,0								20,06	01000
1,5								20,06	01500
2,0								20,06	02000
2,0		15,53	02000	16,22	02000				
2,5								20,06	02500
3,0								20,06	03000
3,0		15,53	03000	16,22	03000	17,19	03000		
3,5								20,06	03500
4,0								20,06	04000
4,0		15,53	04000	16,22	04000	17,19	04000		
4,5								20,06	04500
5,0								20,06	05000
5,0		15,53	05000	16,22	05000	17,19	05000		
6,0		15,53	06000	16,22	06000	17,19	06000		
7,0		15,53	07000	16,22	07000	17,19	07000		
8,0		15,53	08000	16,22	08000	17,19	08000		
9,0		15,53	09000	16,22	09000	17,19	09000		
10,0		15,53	10000	16,22	10000	17,19	10000		
11,0				16,22	11000	17,19	11000		
12,0				16,22	12000	17,19	12000		
13,0				16,22	13000	17,19	13000		
14,0				16,22	14000	17,19	14000		
15,0				16,22	15000	17,19	15000		
16,0				16,22	16000	17,19	16000		
17,0						17,19	17000		
18,0						17,19	18000		
19,0						17,19	19000		
20,0						17,19	20000		
	Set in wooden box	171,90	99900	259,90	99900	328,80	99900	199,90	99900

UNITED. EXPERIENCED. METAL CUTTING.

CUTTING SOLUTIONS BY CERATIZIT

SPECIALIST FOR INDEXABLE INSERT TOOLS FOR TURNING, MILLING AND GROOVING

The product brand CERATIZIT stands for high-quality indexable insert tools. The products are characterized by their high quality and contain the DNA of many years of experience in the development and production of carbide tools.



KOMET

THE QUALITY LABEL FOR EFFICIENT BORE PRODUCTION

High-precision drilling, reaming, countersinking and boring is a matter of expertise: efficient tooling solutions for drilling and mechatronic tools are therefore part of the KOMET brand name.

WNT

EXPERTS FOR ROTATING TOOLS, TOOL HOLDERS AND CLAMPING SOLUTIONS

WNT is synonymous with product diversity: solid carbide and HSS rotating tools, tool holders and efficient workholding solutions are all part of this brand.

KLENK

CUTTING TOOLS FOR THE AEROSPACE INDUSTRY

Solid carbide drills specially developed for the aerospace industry bear the product name KLENK. The highly specialized products are specifically designed for machining lightweight materials.

CERATIZIT GROUP

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