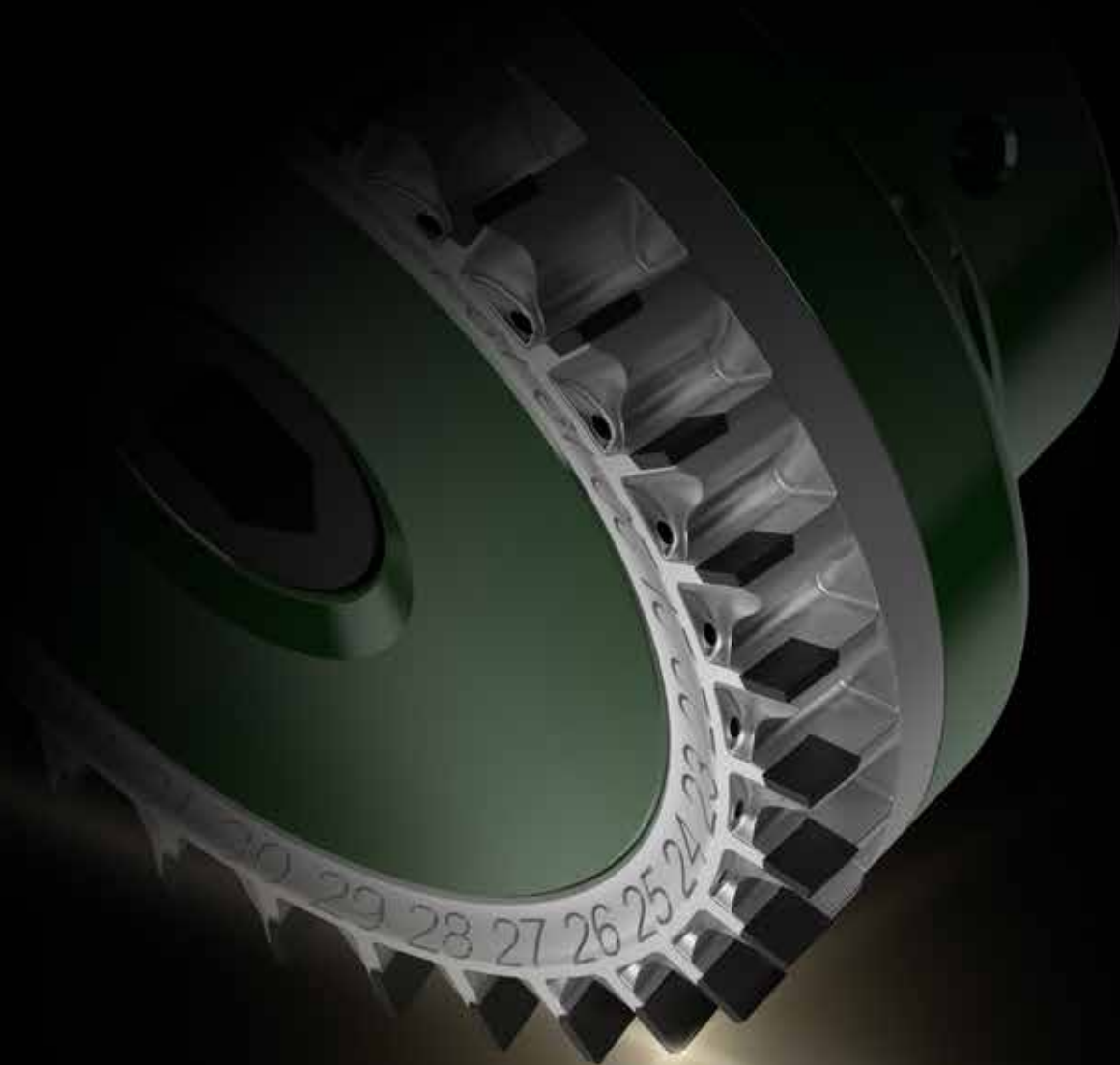


KomPass PCD.CVD-D.CBN



Ultra hard cutting materials

pdf edition October 2018

KomPass PCD.CVD-D.CBN – Ultra hard cutting materials



A diverse range of tools with diamond and CBN cutting materials

Tools with diamond cutting materials play a key role in efficient and effective machining processes – especially when working on composites and metal lightweight construction materials. Tools equipped with PCD indexable inserts have become established for series machining of such materials in recent years.

KOMET is backing this trend with an extensive range comprising more than 4000 different ISO PCD, CVD-D and even CBN indexable inserts. It includes a wide range of geometries (CC, CP, DC, RC, RD, TC, VB, VC, etc.) and different versions – e.g. as a corner blank or full-sided blank, full face, wiper, with 3D finishing and roughing chip breakers, etc.

Expertise in component-specific solutions and special tools

Chapter 8

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Solid drilling

KOMET® Drillmax 90 NCD High-performance drill
KOMET® Drillmax 90 PCD High-performance drill

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Lightweight construction – Focus COMPOSITE MATERIALS

1



In an era of increasing awareness of the issues surrounding energy, energy conservation and energy efficiency, the lightweight construction segment is becoming more and more important. At a rapid pace, composite materials are carving out ever larger market shares.

Outstanding material properties, however, also present challenges for the manufacturers of precision tools. The extremely high strength and complex make-up of these materials are placing new demands on the tools that work them: the high degree of abrasiveness means that conventional tools in drilling and milling setups last only a few metres.

In light of this requirement, KOMET has developed a brand new class of tools distinguished by their innovative geometry, suitability for new machining strategies involving very high cutting parameters and also by the use of intelligent cutting materials. These new solutions range from single-edge to multi-tooth milling cutters and from drills with a new chamfer geometry to indexable tools having a special insert arrangement.

Cutting materials have also followed the trend: diamond coatings and PCD solutions are demonstrating that they are fully equipped for the task.

The non-homogeneous nature of these new lightweight materials imposes exacting and individual requirements on the machining process. Not only does KOMET offer a standard product range, it is an expert partner for its customers – with absolute focus on problem-solving.

Thanks to full process control in-house – from carbide/cutting material selection, consolidated expertise and many years of experience in grinding – KOMET is your single source of smart and viable machining solutions.

2



3



ISO

4



5



6



7



8




KOMET® Drillmax

Page

NCD High-performance drill

5xD | Ø 0,8 – 13 mm | DIN 6535 HA

6 – 7

7xD | Ø 5 – 13 mm | DIN 6535 HA

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PCD High-performance drill

5xD | Ø 6 – 10 mm | DIN 6535 HA / HE

10 – 11

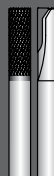
Recommended cutting data

12

1



2



3

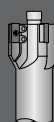


ISO

4



5



6



7



8

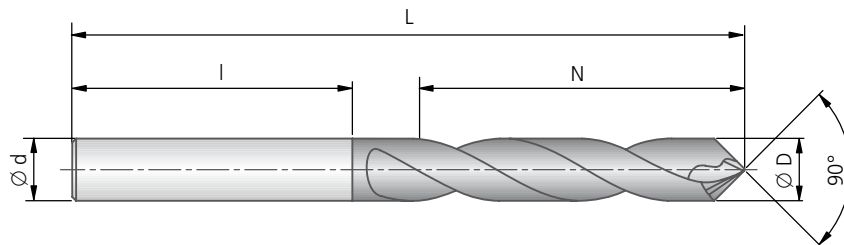


NCD High-performance drill

for workpiece material
N CFRP | GFRP
CFRP/Al stacks
Honeycombs

5xD

DIN 6535
HA



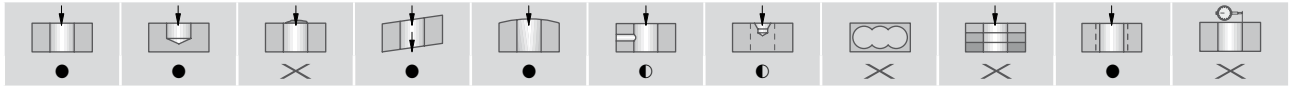
5xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
0,80	V11 00800.135210	3 × 28	38	6
1,00	V11 01000.135210	3 × 28	38	6
1,50	V11 01500.135210	3 × 28	48	12
1,60	V11 01600.135210	3 × 28	48	12
1,70	V11 01700.135210	3 × 28	48	12
1,80	V11 01800.135210	3 × 28	48	12
1,90	V11 01900.135210	3 × 28	48	12
2,00	V11 02000.135210	3 × 28	48	12
2,10	V11 02100.135210	3 × 28	48	15
2,20	V11 02200.135210	3 × 28	48	15
2,30	V11 02300.135210	3 × 28	48	15
2,40	V11 02400.135210	3 × 28	48	15
2,50	V11 02500.135210	6 × 36	66	19
2,60	V11 02600.135210	6 × 36	66	19
2,70	V11 02700.135210	6 × 36	66	19
2,80	V11 02800.135210	6 × 36	66	19
2,90	V11 02900.135210	6 × 36	66	19
3,00	V11 03000.135210	6 × 36	66	23
3,10	V11 03100.135210	6 × 36	66	23
3,20	V11 03200.135210	6 × 36	66	23
3,30	V11 03300.135210	6 × 36	66	23
3,40	V11 03400.135210	6 × 36	66	23
3,50	V11 03500.135210	6 × 36	66	23
3,60	V11 03600.135210	6 × 36	66	23
3,70	V11 03700.135210	6 × 36	66	23
3,80	V11 03800.135210	6 × 36	74	29
3,90	V11 03900.135210	6 × 36	74	29
4,00	V11 04000.135210	6 × 36	74	29
4,10	V11 04100.135210	6 × 36	74	29
4,20	V11 04200.135210	6 × 36	74	29
4,30	V11 04300.135210	6 × 36	74	29

5xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
4,40	V11 04400.135210	6 × 36	74	29
4,50	V11 04500.135210	6 × 36	74	29
4,60	V11 04600.135210	6 × 36	74	29
4,70	V11 04700.135210	6 × 36	74	29
4,80	V11 04800.135210	6 × 36	82	35
4,83	V11 04830.135210	6 × 36	82	35
4,90	V11 04900.135210	6 × 36	82	35
4,93	V11 04930.135210	6 × 36	82	35
5,00	V11 05000.135210	6 × 36	82	35
5,10	V11 05100.135210	6 × 36	82	35
5,20	V11 05200.135210	6 × 36	82	35
5,30	V11 05300.135210	6 × 36	82	35
5,40	V11 05400.135210	6 × 36	82	35
5,50	V11 05500.135210	6 × 36	82	35
5,60	V11 05600.135210	6 × 36	82	35
5,70	V11 05700.135210	6 × 36	82	35
5,80	V11 05800.135210	6 × 36	82	35
5,90	V11 05900.135210	6 × 36	82	35
6,00	V11 06000.135210	6 × 36	82	35
6,10	V11 06100.135210	8 × 36	91	42
6,20	V11 06200.135210	8 × 36	91	42
6,30	V11 06300.135210	8 × 36	91	42
6,35	V11 06350.135210	8 × 36	91	42
6,40	V11 06400.135210	8 × 36	91	42
6,50	V11 06500.135210	8 × 36	91	42
6,60	V11 06600.135210	8 × 36	91	42
6,70	V11 06700.135210	8 × 36	91	42
6,80	V11 06800.135210	8 × 36	91	42
6,90	V11 06900.135210	8 × 36	91	42
7,00	V11 07000.135210	8 × 36	91	42
7,10	V11 07100.135210	8 × 36	91	42

5xD

KOMET® Drillmax 90

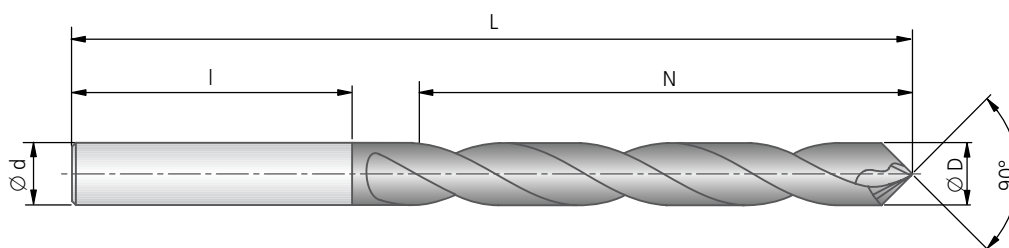
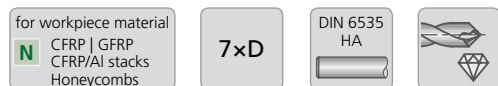
NCD High-performance drill



5xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
7,20	V11 07200.135210	8 × 36	91	42
7,30	V11 07300.135210	8 × 36	91	42
7,40	V11 07400.135210	8 × 36	91	42
7,50	V11 07500.135210	8 × 36	91	42
7,60	V11 07600.135210	8 × 36	91	42
7,70	V11 07700.135210	8 × 36	91	42
7,80	V11 07800.135210	8 × 36	91	42
7,90	V11 07900.135210	8 × 36	91	42
7,93	V11 07930.135210	8 × 36	91	42
8,00	V11 08000.135210	8 × 36	91	42
8,10	V11 08100.135210	10 × 40	103	48
8,20	V11 08200.135210	10 × 40	103	48
8,30	V11 08300.135210	10 × 40	103	48
8,40	V11 08400.135210	10 × 40	103	48
8,50	V11 08500.135210	10 × 40	103	48
8,60	V11 08600.135210	10 × 40	103	48
8,70	V11 08700.135210	10 × 40	103	48
8,80	V11 08800.135210	10 × 40	103	48
8,90	V11 08900.135210	10 × 40	103	48
9,00	V11 09000.135210	10 × 40	103	48
9,10	V11 09100.135210	10 × 40	103	48
9,20	V11 09200.135210	10 × 40	103	48
9,30	V11 09300.135210	10 × 40	103	48
9,40	V11 09400.135210	10 × 40	103	48
9,50	V11 09500.135210	10 × 40	103	48
9,52	V11 09520.135210	10 × 40	103	48
9,60	V11 09600.135210	10 × 40	103	48
9,70	V11 09700.135210	10 × 40	103	48
9,80	V11 09800.135210	10 × 40	103	48
9,90	V11 09900.135210	10 × 40	103	48
10,00	V11 10000.135210	10 × 40	103	48

5xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
10,10	V11 10100.135210	12 × 45	118	56
10,20	V11 10200.135210	12 × 45	118	56
10,30	V11 10300.135210	12 × 45	118	56
10,40	V11 10400.135210	12 × 45	118	56
10,50	V11 10500.135210	12 × 45	118	56
10,60	V11 10600.135210	12 × 45	118	56
10,70	V11 10700.135210	12 × 45	118	56
10,80	V11 10800.135210	12 × 45	118	56
10,90	V11 10900.135210	12 × 45	118	56
11,00	V11 11000.135210	12 × 45	118	56
11,10	V11 11100.135210	12 × 45	118	56
11,20	V11 11200.135210	12 × 45	118	56
11,30	V11 11300.135210	12 × 45	118	56
11,40	V11 11400.135210	12 × 45	118	56
11,50	V11 11500.135210	12 × 45	118	56
11,60	V11 11600.135210	12 × 45	118	56
11,70	V11 11700.135210	12 × 45	118	56
11,80	V11 11800.135210	12 × 45	118	56
11,90	V11 11900.135210	12 × 45	118	56
12,00	V11 12000.135210	12 × 45	118	56
12,10	V11 12100.135210	14 × 45	126	60
12,20	V11 12200.135210	14 × 45	126	60
12,30	V11 12300.135210	14 × 45	126	60
12,40	V11 12400.135210	14 × 45	126	60
12,50	V11 12500.135210	14 × 45	126	60
12,60	V11 12600.135210	14 × 45	126	60
12,70	V11 12700.135210	14 × 45	126	60
12,80	V11 12800.135210	14 × 45	126	60
12,90	V11 12900.135210	14 × 45	126	60
13,00	V11 13000.135210	14 × 45	126	60

NCD High-performance drill



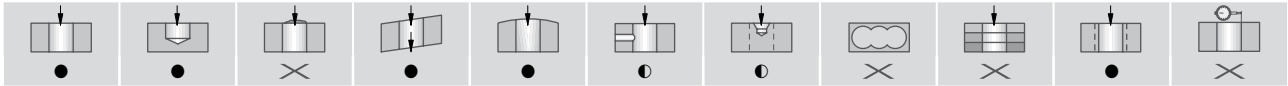
7xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
5,00	V21 05000.135210	6 × 36	88	43
5,10	V21 05100.135210	6 × 36	88	43
5,20	V21 05200.135210	6 × 36	88	43
5,30	V21 05300.135210	6 × 36	88	43
5,40	V21 05400.135210	6 × 36	88	43
5,50	V21 05500.135210	6 × 36	88	43
5,60	V21 05600.135210	6 × 36	88	43
5,70	V21 05700.135210	6 × 36	88	43
5,80	V21 05800.135210	6 × 36	88	43
5,90	V21 05900.135210	6 × 36	88	43
6,00	V21 06000.135210	6 × 36	88	43
6,10	V21 06100.135210	8 × 36	105	56
6,20	V21 06200.135210	8 × 36	105	56
6,30	V21 06300.135210	8 × 36	105	56
6,40	V21 06400.135210	8 × 36	105	56
6,50	V21 06500.135210	8 × 36	105	56
6,60	V21 06600.135210	8 × 36	105	56
6,70	V21 06700.135210	8 × 36	105	56
6,80	V21 06800.135210	8 × 36	105	56
6,90	V21 06900.135210	8 × 36	105	56

7xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
7,00	V21 07000.135210	8 × 36	105	56
7,10	V21 07100.135210	8 × 36	105	56
7,20	V21 07200.135210	8 × 36	105	56
7,30	V21 07300.135210	8 × 36	105	56
7,40	V21 07400.135210	8 × 36	105	56
7,50	V21 07500.135210	8 × 36	105	56
7,60	V21 07600.135210	8 × 36	105	56
7,70	V21 07700.135210	8 × 36	105	56
7,80	V21 07800.135210	8 × 36	105	56
7,90	V21 07900.135210	8 × 36	105	56
8,00	V21 08000.135210	8 × 36	105	56
8,10	V21 08100.135210	10 × 40	125	68
8,20	V21 08200.135210	10 × 40	125	68
8,30	V21 08300.135210	10 × 40	125	68
8,40	V21 08400.135210	10 × 40	125	68
8,50	V21 08500.135210	10 × 40	125	68
8,60	V21 08600.135210	10 × 40	125	68
8,70	V21 08700.135210	10 × 40	125	68
8,80	V21 08800.135210	10 × 40	125	68
8,90	V21 08900.135210	10 × 40	125	68

7xD

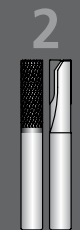
KOMET® Drillmax 90

NCD High-performance drill

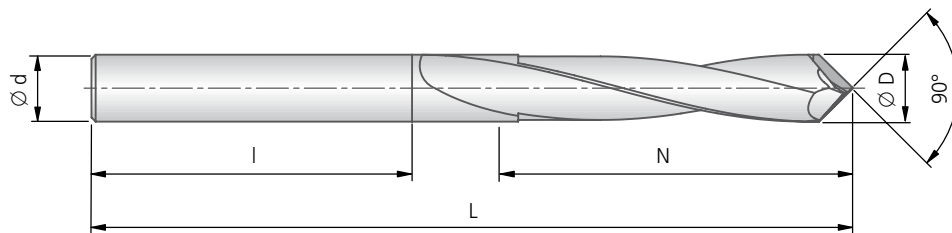


7xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
9,00	V21 09000.135210	10 × 40	125	68
9,10	V21 09100.135210	10 × 40	125	68
9,20	V21 09200.135210	10 × 40	125	68
9,30	V21 09300.135210	10 × 40	125	68
9,40	V21 09400.135210	10 × 40	125	68
9,50	V21 09500.135210	10 × 40	125	68
9,60	V21 09600.135210	10 × 40	125	68
9,70	V21 09700.135210	10 × 40	125	68
9,80	V21 09800.135210	10 × 40	125	68
9,90	V21 09900.135210	10 × 40	125	68
10,00	V21 10000.135210	10 × 40	125	68
10,10	V21 10100.135210	12 × 45	145	82
10,20	V21 10200.135210	12 × 45	145	82
10,30	V21 10300.135210	12 × 45	145	82
10,40	V21 10400.135210	12 × 45	145	82
10,50	V21 10500.135210	12 × 45	145	82
10,60	V21 10600.135210	12 × 45	145	82
10,70	V21 10700.135210	12 × 45	145	82
10,80	V21 10800.135210	12 × 45	145	82
10,90	V21 10900.135210	12 × 45	145	82

7xD				
Ø D _{m7}	DIN 6535 HA Order No.	Ø d _{h6} × l	L	N
11,00	V21 11000.135210	12 × 45	145	82
11,10	V21 11100.135210	12 × 45	145	82
11,20	V21 11200.135210	12 × 45	145	82
11,30	V21 11300.135210	12 × 45	145	82
11,40	V21 11400.135210	12 × 45	145	82
11,50	V21 11500.135210	12 × 45	145	82
11,60	V21 11600.135210	12 × 45	145	82
11,70	V21 11700.135210	12 × 45	145	82
11,80	V21 11800.135210	12 × 45	145	82
11,90	V21 11900.135210	12 × 45	145	82
12,00	V21 12000.135210	12 × 45	145	82
12,10	V21 12100.135210	14 × 45	160	92
12,20	V21 12200.135210	14 × 45	160	92
12,30	V21 12300.135210	14 × 45	160	92
12,40	V21 12400.135210	14 × 45	160	92
12,50	V21 12500.135210	14 × 45	160	92
12,60	V21 12600.135210	14 × 45	160	92
12,70	V21 12700.135210	14 × 45	160	92
12,80	V21 12800.135210	14 × 45	160	92
12,90	V21 12900.135210	14 × 45	160	92
13,00	V21 13000.135210	14 × 45	160	92



PCD High-performance drill



5xD					
Ø D _{m7}	DIN 6535 HA Order No.	DIN 6535 HE Order No.	Ø d _{h6} × l	L	N
6	V11 06000.135510	V11 06000.235510	6 × 36	82	30
8	V11 08000.135510	V11 08000.235510	8 × 36	91	42
10	V11 10000.135510	V11 10000.235510	10 × 40	103	50

5xD

KOMET® Drillmax

PCD High-performance drill

for workpiece material

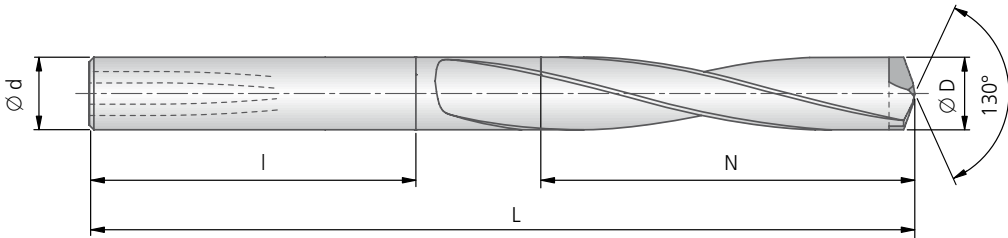
N

Al | CFRP | GFRP
CFRP/Al stacks
Honeycombs

5xD

DIN 6535
HA

PCD



5xD										
	DIN 6535 HA									
Ø D _{m7}	Order No.				Ø d _{h6} × l	L	N			
6	V03 06000.145510				6 × 36	82	30			
8	V03 08000.145510				8 × 36	91	42			
10	V03 10000.145510				10 × 40	103	50			

Recommended cutting data

NCD High-performance drill Drillmax 90 (V11.. / V21..)

Machining: through hole, blind hole

Cutting speed v_c (m/min) Feed f (mm/rev)	Ø 0,8 - 1,5 mm		Ø 1,6 - 3,9 mm		Ø 4 - 5,9 mm		Ø 6 - 7,9 mm		Ø 8 - 9,9 mm		Ø 10 - 13 mm	
	v_c	f	v_c	f	v_c	f	v_c	f	v_c	f	v_c	f
CFRP	30 - 100	0,01 - 0,03	60 - 200	0,02 - 0,06	100 - 200	0,04 - 0,08	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12
GFRP	30 - 100	0,01 - 0,04	60 - 200	0,02 - 0,08	100 - 200	0,04 - 0,10	100 - 300	0,06 - 0,15	100 - 300	0,06 - 0,18	100 - 300	0,06 - 0,20
CFRP/Al stacks	30 - 100	0,01 - 0,03	60 - 200	0,02 - 0,06	100 - 200	0,04 - 0,08	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12
Honeycombs	30 - 100	0,01 - 0,03	60 - 200	0,02 - 0,06	100 - 200	0,04 - 0,08	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12	100 - 300	0,06 - 0,12

PCD High-performance drill Drillmax and Drillmax 90 (V03..)

Machining: through hole, blind hole

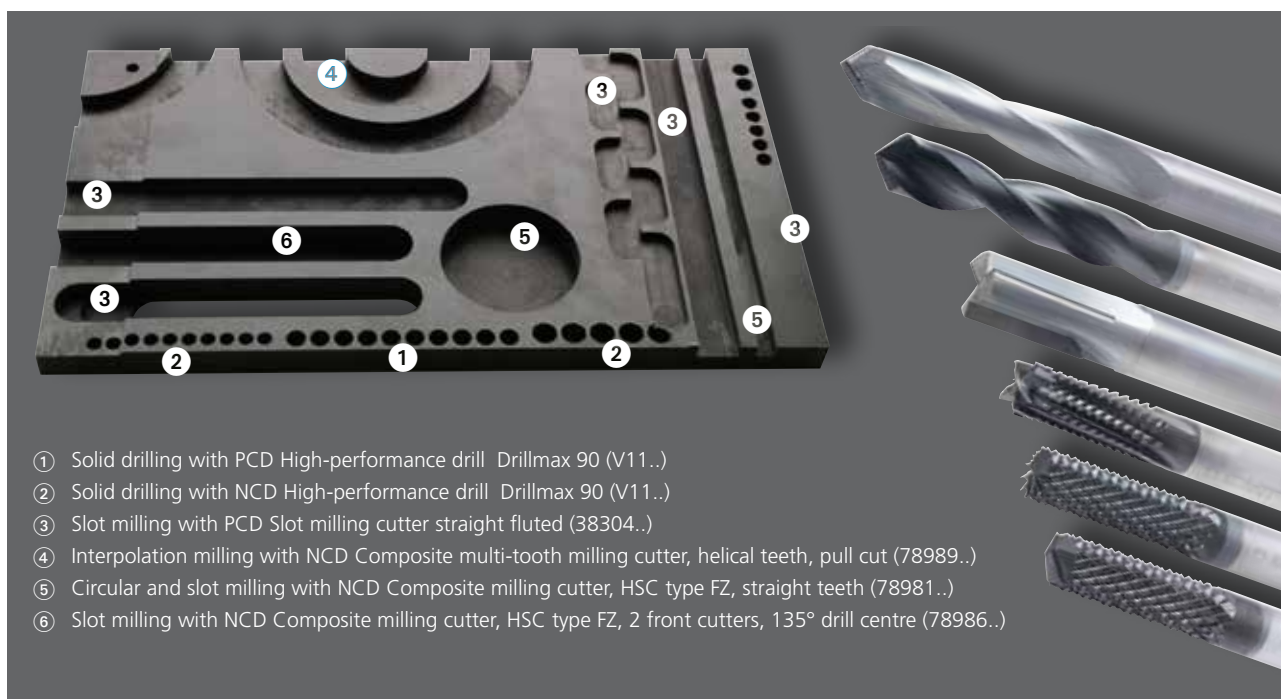
Cutting speed v_c (m/min) Feed f (mm/rev)	Ø 6 mm		Ø 8 mm		Ø 10 mm	
	v_c	f	v_c	f	v_c	f
Al short chipping	150-500	0,10-0,18	200-600	0,12-0,22	250-800	0,15-0,28
Al long chipping	150-500	0,06-0,12	200-600	0,08-0,15	250-800	0,10-0,20
CFRP	100-300	0,05-0,12	100-300	0,06-0,12	100-300	0,06-0,12
GFRP	100-300	0,05-0,15	100-300	0,06-0,18	100-300	0,06-0,20
CFRP/Al stacks	100-300	0,05-0,12	100-300	0,06-0,12	100-300	0,06-0,12
Honeycombs	100-300	0,05-0,12	100-300	0,06-0,12	100-300	0,06-0,12

Other materials and combinations on request.

We would be delighted to collaborate with you to develop new machining strategies. We offer a modern machining environment to conduct tests in-house or we can visit you to coordinate further.

Interested? Simply contact our experts in lightweight construction at www.kometgroup.com

Machining CFRP material



Classification of composite materials and typical applications

FIBROUS COMPOSITE MATERIALS

Fibrous composites are inhomogeneous materials that are essentially an assembly of three components – fibres and matrices or binders.

Typical fibres include carbon fibre (CFRP), glass fibre (GFRP) or aramid fibre (AFRP). With respect to their tensile strength, they are categorised into HT (high tenacity), UT (ultra high tenacity) and IM (intermediate modulus). Depending on the properties desired, the fibres differ in length, thickness and relative orientation (unidirectional, bidirectional, multidirectional).

As matrices, there are currently more than 100 different resins/polymers available on the market, which is just a hint at how varied these materials are. "Cold" cutting is generally recommended for duroplastics (90%) and thermoplastics (PEEK, PEI, PPS, etc.), while elastomers (PUR) should be cut at "high speed".

Applications:

Aerospace, automotive, medical industry, sports industry, wind farms, transport, building/architecture

HYBRIDS

Hybrids are material combinations of at least three layers of metals, polymers and fibrous composites.

Application: Aircraft construction

HONEYCOMBS

These materials are usually three-layer composite constructions with a honeycomb-shaped core made, for example, of aluminium, polycarbonate or polypropylene and are therefore characterised by their extremely lightweight and highly stiff properties.

Applications:

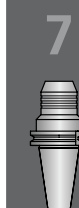
Satellite engineering, packaging industry, exhibition stand, model and aircraft construction

METAL MATRIX COMPOSITE MATERIAL

Metal matrix composites (MMC) have at least two constituent materials, usually a ceramic or organic component bonded in a metal matrix.

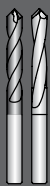
Applications:

Engine building, cylinder liners, connecting rods



KOMET® Diamond coated milling tools

1



2



3



ISO

4



5



6



7



8



The standard product range presented here enables you to order the right tool for your applications and feasibility tests with zero fuss. All other specifications including inch measurements can be created for you on request and tailored to your individual requirements.

We would be delighted to collaborate with you to develop new machining strategies. We offer a modern machining environment to conduct tests in-house or we can visit you to coordinate further. Interested? Simply contact our experts in light-weight construction at www.kometgroup.com

KOMET®

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NCD Composite milling cutter, HSC

Type FZ flat head	16
Type FZ burr style	16
Type FZ ball nose	16
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NCD Composite multi-tooth milling cutter

straight teeth	18
helical teeth pull cut	18

F.line Solid carbide milling cutter

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Graphite machining

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End milling cutter F144 D Ø 3 – 16 mm (corner radius)	21
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1



2



3

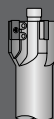


ISO

4



5



6



7



8

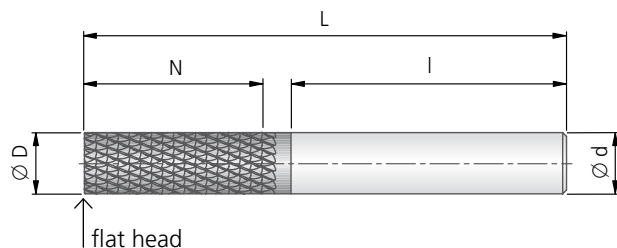


KOMET® NCD

NCD Composite milling cutter, HSC

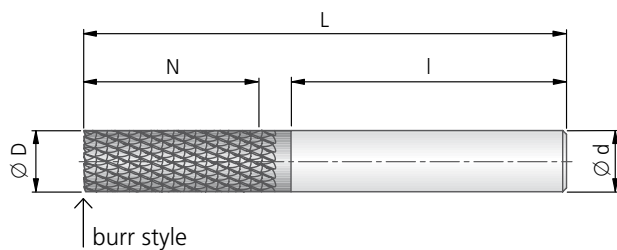


Milling and trimming



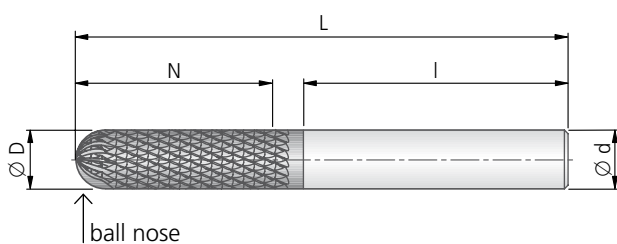
78980.. FZ				
Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
4	78980040000400	4 × 28	40	15
4	78980075000400	4 × 28	75	15
6	78980050000600	6 × 25	50	18
6	78980075000600	6 × 36	75	18
8	78980063000800	8 × 36	63	25
8	78980075000800	8 × 36	75	25
10	78980072001000	10 × 40	72	30

Milling and trimming

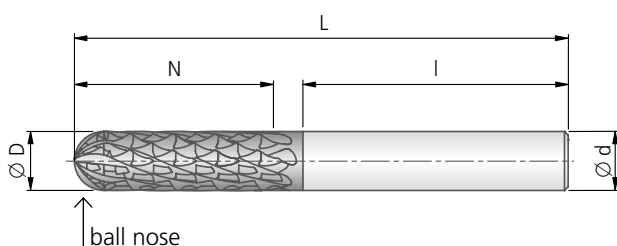


78981.. FZ				
Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
1,6	78981038000160	3 × 25	38	8
2	78981038000200	3 × 25	38	8
3	78981038000300	3 × 20	38	12
4	78981040000400	4 × 20	40	15
4	78981075000400	4 × 28	75	15
6	78981050000600	6 × 25	50	18
6	78981075000600	6 × 36	75	18
8	78981063000800	8 × 36	63	25
8	78981075000800	8 × 36	75	25
10	78981072001000	10 × 40	72	30
12	78981083001200	12 × 45	83	32

Slot milling and plunge milling

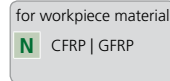


78982.. FZ				
Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
4	78982050000400	4 × 28	50	16
6	78982060000600	6 × 36	60	19
8	78982063000800	8 × 36	63	25
10	78982072001000	10 × 40	72	30
12	78982083001200	12 × 45	83	32

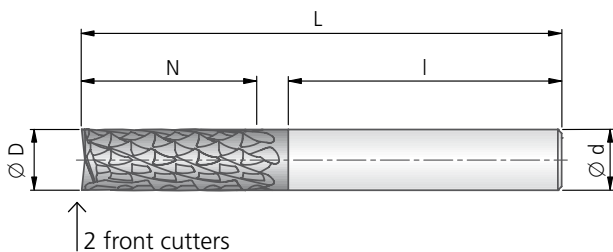
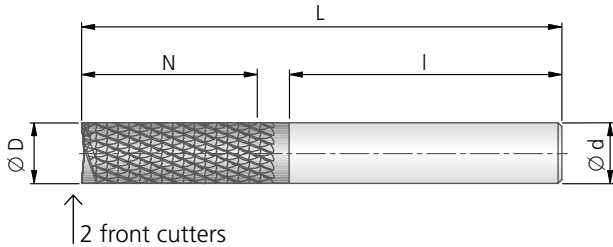


78983.. GZ				
Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
4	78983050000400	4 × 28	50	16
6	78983063000600	6 × 36	60	19
8	78983060000800	8 × 36	63	25
10	78983072001000	10 × 40	72	30
12	78983083001200	12 × 45	83	32

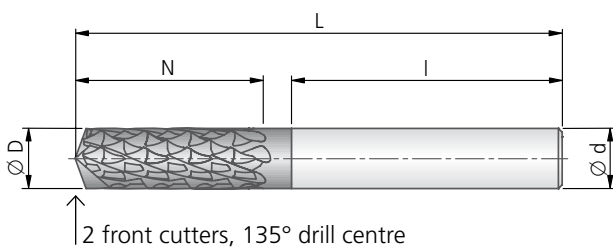
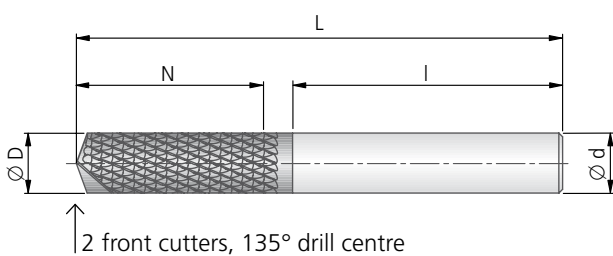
NCD Composite milling cutter, HSC



Trimming, slot milling, plunge milling and shoulder milling



Plunge milling and trimming



78984.. FZ

Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
1,6	78984038000160	3 × 25	38	8
2	78984038000200	3 × 25	38	8
3	78984038000300	3 × 20	38	12
4	78984050000400	4 × 28	50	16
4	78984075000400	4 × 28	75	15
6	78984060000600	6 × 36	60	19
6	78984075000600	6 × 36	75	30
8	78984063000800	8 × 36	63	25
8	78984075000800	8 × 36	75	35
10	78984072001000	10 × 40	72	30
12	78984083001200	12 × 45	83	32

78985.. GZ

Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
1,6	78985038000160	3 × 25	38	8
2	78985038000200	3 × 25	38	8
3	78985038000300	3 × 20	38	12
4	78985050000400	4 × 28	50	16
4	78985075000400	4 × 28	75	15
6	78985060000600	6 × 36	60	19
6	78985075000600	6 × 36	75	30
8	78985063000800	8 × 36	63	25
8	78985075000800	8 × 36	75	35
10	78985072001000	10 × 40	72	30
12	78985083001200	12 × 45	83	32

78986.. FZ

Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
3	78986038000300	3 × 20	38	12
4	78986050000400	4 × 28	50	16
4	78986075000400	4 × 28	75	15
6	78986060000600	6 × 36	60	19
6	78986075000600	6 × 36	75	18
8	78986063000800	8 × 36	63	25
8	78986075000800	8 × 36	75	25
10	78986072001000	10 × 40	72	30
12	78986083001200	12 × 45	83	32

78987.. GZ

Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N
3	78987038000300	3 × 20	38	12
4	78987050000400	4 × 28	50	16
4	78987075000400	4 × 28	75	15
6	78987060000600	6 × 36	60	19
6	78987075000600	6 × 36	75	18
8	78987063000800	8 × 36	63	25
8	78987075000800	8 × 36	75	25
10	78987072001000	10 × 40	72	30
12	78987083001200	12 × 45	83	32

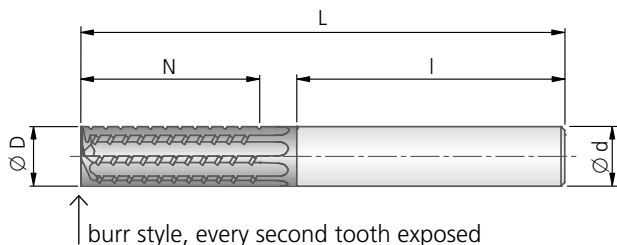


KOMET® NCD

NCD Composite multi-tooth milling cutter

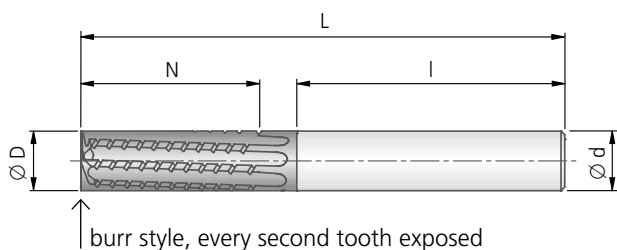


straight teeth, fine chip breaker



78988..					
$\emptyset D_{h10}$	Order No.	$\emptyset d_{h6} \times l$	L	N	Z
3	78988060000300	6 x 36	60	12	4
4	78988060000400	6 x 36	60	16	6
6	78988060000600	6 x 36	60	20	8
6	78988075000600	6 x 36	75	28	8
8	78988063000800	8 x 36	63	22	8
8	78988075000800	8 x 36	75	32	8
10	78988072001000	10 x 40	72	32	8
12	78988083001200	12 x 45	83	32	8

helical teeth, pull cut, fine chip breaker



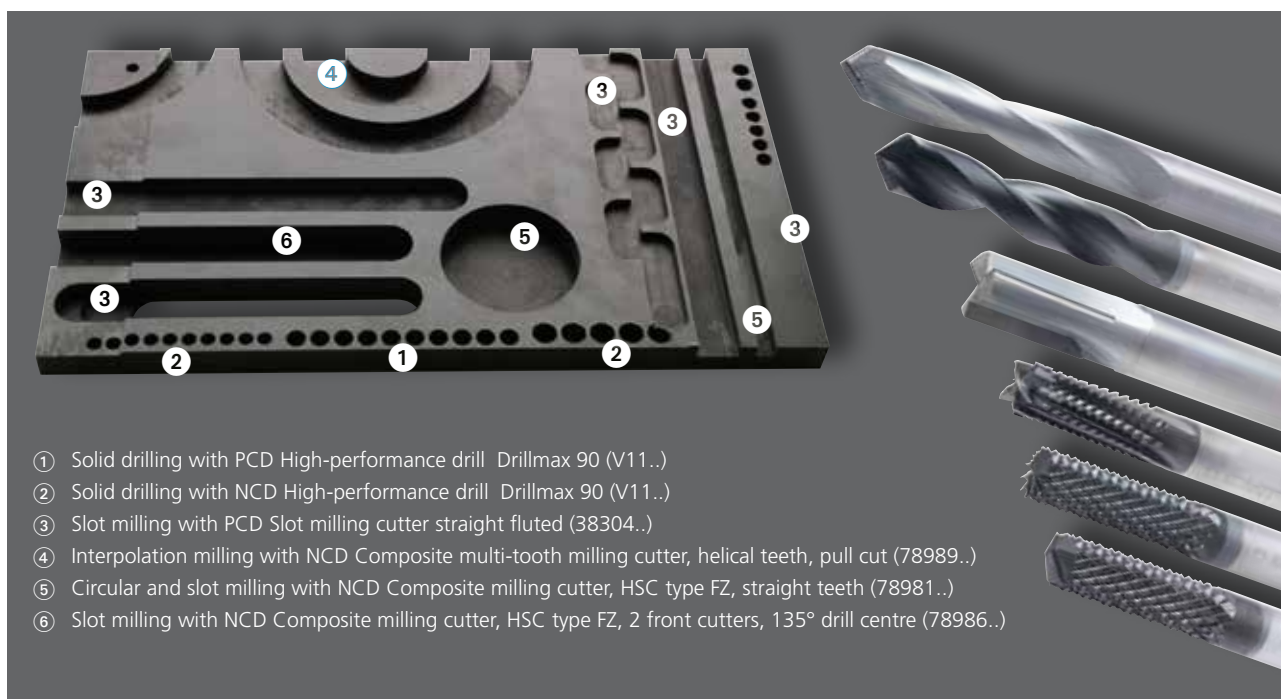
78989..					
$\emptyset D_{h10}$	Order No.	$\emptyset d_{h6} \times l$	L	N	Z
3	78989060000300	6 x 36	60	12	4
4	78989060000400	6 x 36	60	16	6
6	78989060000600	6 x 36	60	20	8
6	78989075000600	6 x 36	75	28	8
8	78989063000800	8 x 36	63	22	8
8	78989075000800	8 x 36	75	32	8
10	78989072001000	10 x 40	72	32	8
12	78989083001200	12 x 45	83	32	8

Recommended cutting data

NCD Composite milling cutter, HSC (78980.. · 78981.. · 78982.. · 78983.. · 78984.. · 78985.. · 78986.. · 78987..)																
Machining: trimming, circular cutting, grooving, ramping, plunging, pocket and slot milling																
Cutting speed v_C (m/min) Feed f (mm/rev)	Ø 1,6 mm		Ø 2 mm		Ø 3 mm		Ø 4 mm		Ø 6 mm		Ø 8 mm		Ø 10 mm		Ø 12 mm	
	v_C	f	v_C	f	v_C	f	v_C	f	v_C	f	v_C	f	v_C	f	v_C	f
CFRP	50-100	0,02-0,04	80-150	0,03-0,06	100-200	0,04-0,08	100-200	0,06-0,10	100-300	0,08-0,12	100-300	0,10-0,15	100-300	0,10-0,20	100-300	0,10-0,25
GFRP	70-100	0,02-0,05	100-150	0,03-0,07	120-200	0,04-0,10	120-200	0,06-0,12	100-300	0,08-0,15	100-300	0,10-0,20	100-300	0,10-0,25	100-300	0,10-0,30

NCD Composite multi-tooth milling cutter (78988.. · 78989..)												
Machining: trimming, circular cutting, axial grooving, pocket and slot milling												
Cutting speed v_c (m/min)	$\emptyset 3$ mm		$\emptyset 4$ mm		$\emptyset 6$ mm		$\emptyset 8$ mm		$\emptyset 10$ mm		$\emptyset 12$ mm	
Feed f_z (mm/tooth)	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z
CFRP	100-200	0,01-0,03	100-200	0,02-0,04	100-300	0,02-0,06	100-300	0,02-0,08	100-300	0,02-0,10	100-300	0,03-0,12
GFRP	100-200	0,01-0,04	100-200	0,02-0,06	100-300	0,02-0,08	100-300	0,02-0,10	100-300	0,02-0,12	100-300	0,03-0,15
CFRP/Al stacks	100-200	0,01-0,03	100-200	0,02-0,04	100-300	0,02-0,06	100-300	0,02-0,08	100-300	0,02-0,10	100-300	0,03-0,12
Honeycombs	100-200	0,01-0,03	100-200	0,02-0,04	100-300	0,02-0,06	100-300	0,02-0,08	100-300	0,02-0,10	100-300	0,03-0,12

Machining CFRP material



Classification of composite materials and typical applications

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As matrices, there are currently more than 100 different resins/polymers available on the market, which is just a hint at how varied these materials are. "Cold" cutting is generally recommended for duroplastics (90%) and thermoplastics (PEEK, PEI, PPS, etc.), while elastomers (PUR) should be cut at "high speed".

Applications:

Aerospace, automotive, medical industry, sports industry, wind farms, transport, building/architecture

HYBRIDS

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Application: Aircraft construction

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Applications:

Satellite engineering, packaging industry, exhibition stand, model and aircraft construction

METAL MATRIX COMPOSITE MATERIAL

Metal matrix composites (MMC) have at least two constituent materials, usually a ceramic or organic component bonded in a metal matrix.

Applications:

Engine building, cylinder liners, connecting rods

1



2



3

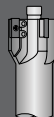


ISO

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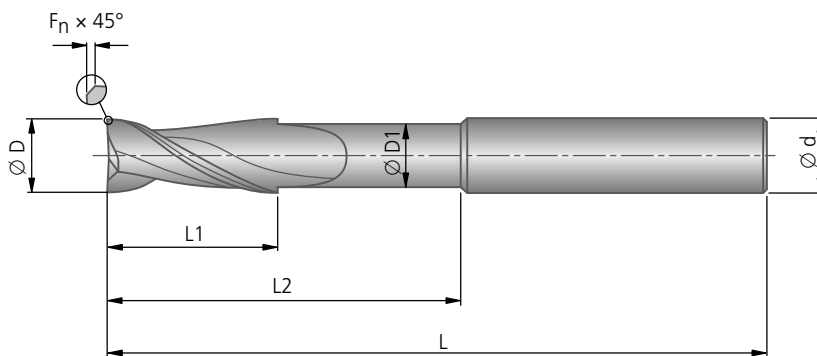
8



End milling cutter for graphite machining



with neck groove

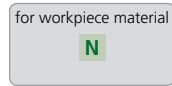


F.line F044 D							Z = 2 30°	
Ø D _{h10}	Ø d _{h6}	Ø D1	L	L1	L2	F _n	DIN 6535 HA Order No.	DIN 6535 HB Order No.
3	6	2,8	70	8	20	–	78933170020300	70933170020300
4	6	3,7	80	15	27	–	78933180020400	70933180020400
5	6	4,7	80	25	37	–	78933180020500	70933180020500
6	6	5,6	100	20	32	–	78933100020600	70933100020600
8	8	7,6	100	25	37	–	78933100020800	70933100020800
10	10	9,6	160	25	45	0,12	78933160021000	70933160021000
12	12	11,6	160	30	55	0,12	78933160021200	70933160021200
16	16	15,6	160	40	65	0,15	78933160021600	70933160021600

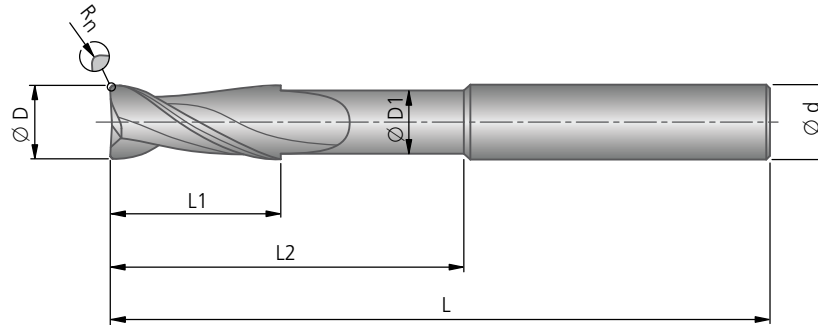
Ø 3 – 16 mm

KOMET® F.line F144 D

End milling cutter for graphite machining

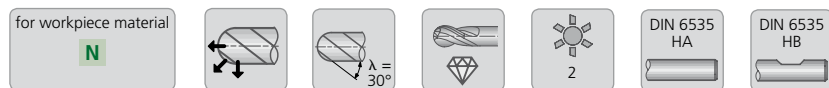


with corner radius
with neck groove

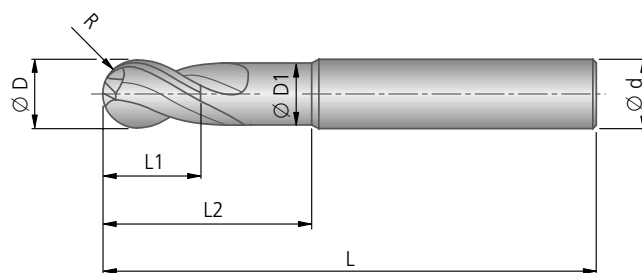


F.line F144 D							Z = 2 30°	
Ø Dh10	Ø dh6	Ø D1	L	L1	L2	Rn±0,02	DIN 6535 HA Order No.	DIN 6535 HB Order No.
3	3	2,8	50	7	13	0,3	78904012260300	
4	4	3,7	50	8	14	0,3	78904012260400	
4	4	3,7	80	8	28	0,3	78904022260400	
5	5	4,7	50	10	16	0,5	78904012280500	
5	5	4,7	100	10	30	0,5	78904022280500	
6	6	5,6	57	13	25	0,5	78904012280600	70904012280600
6	6	5,6	100	20	40	0,5	78904022280600	70904022280600
8	8	7,6	63	19	31	0,5	78904012280800	70904012280800
8	8	7,6	100	25	45	0,5	78904022280800	70904022280800
10	10	9,6	72	22	34	0,5	78904012281000	70904012281000
10	10	9,6	160	25	45	0,5	78904022281000	70904022281000
12	12	11,6	82	26	38	1,0	78904012311200	70904012311200
12	12	11,6	160	30	42	1,0	78904022311200	70904022311200
16	16	15,6	92	32	44	2,0	78904012331600	70904012331600
16	16	15,6	160	40	60	2,0	78904022331600	70904022331600

Spherical cutter for graphite machining



with neck groove
front cutting technology for plunging



F.line F344 D							Z = 2 30°	
Ø Dh10	Ø dh6	Ø D1	L	L1	L2	R ±0,02	DIN 6535 HA Order No.	DIN 6535 HB Order No.
3	4	2,8	57	8	14	1,5	78954010020300	
4	4	3,7	50	8	14	2,0	78954010020400	
4	6	3,7	80	15	25	2,0	78954020020400	70954020020400
5	5	4,7	50	11	17	2,5	78954010020500	
5	6	4,7	80	25	35	2,5	78954020020500	70954020020500
6	6	5,6	57	13	21	3,0	78954010020600	70954010020600
6	6	5,6	100	20	40	3,0	78954020020600	70954020020600
8	8	7,6	63	19	31	4,0	78954010020800	70954010020800
8	8	7,6	100	25	45	4,0	78954020020800	70954020020800
10	10	9,6	72	22	34	5,0	78954010021000	70954010021000
10	10	9,6	160	25	45	5,0	78954020021000	70954020021000
12	12	11,6	82	26	38	6,0	78954010021200	70954010021200
12	12	11,6	160	30	50	6,0	78954020021200	70954020021200
16	16	15,6	92	32	44	8,0	78954010021600	70954010021600
16	16	15,6	160	40	60	8,0	78954020021600	70954020021600

Ø 4 – 16 mm

KOMET® F.line F944 D

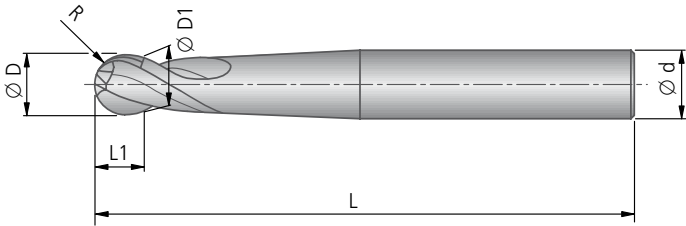
Spherical cutter for graphite machining

for workpiece material
N

DIN 6535
HA

DIN 6535
HB

conical version

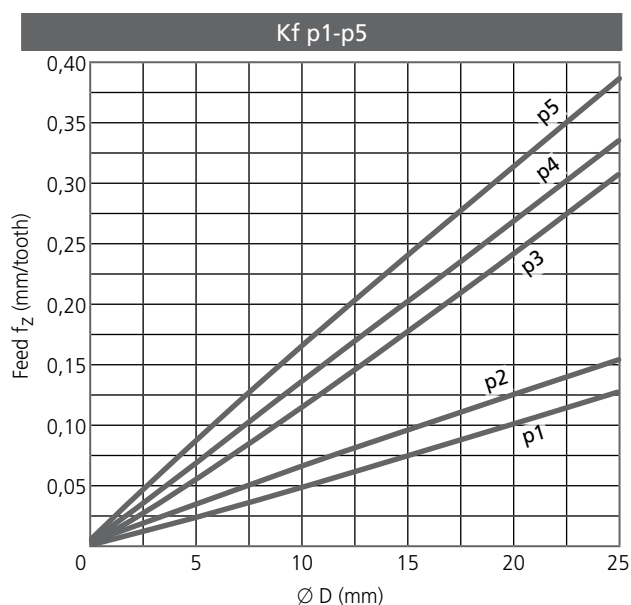
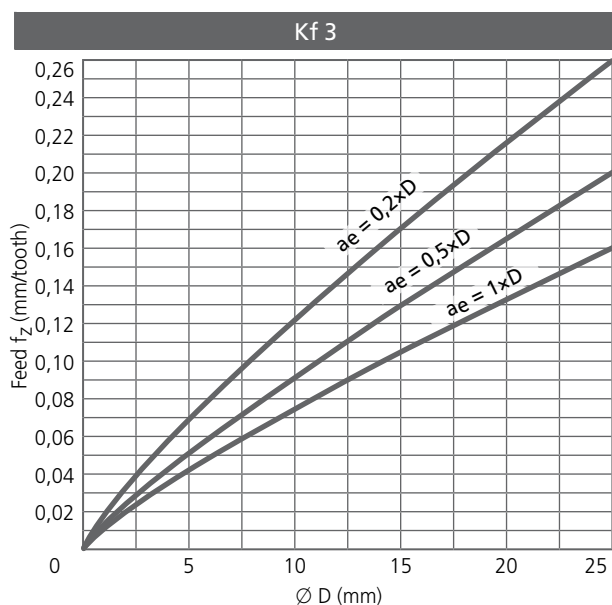


F.line F944 D						Z = 2 30°	
Ø D _{h10}	Ø d _{h6}	Ø D1	L	L1	R ±0,02	DIN 6535 HA Order No.	DIN 6535 HB Order No.
4	6	3,3	60	3,1	2,0	78955000020400	70955000020400
5	6	4,1	60	3,9	2,5	78955000020500	70955000020500
6	6	4,7	100	4,9	3,0	78955000020600	70955000020600
8	8	6,5	100	6,3	4,0	78955000020800	70955000020800
10	10	8,2	100	7,9	5,0	78955000021000	70955000021000
12	12	9,8	100	9,5	6,0	78955000021200	70955000021200
16	16	13,4	160	12,4	8,0	78955000021600	70955000021600

Recommended cutting data



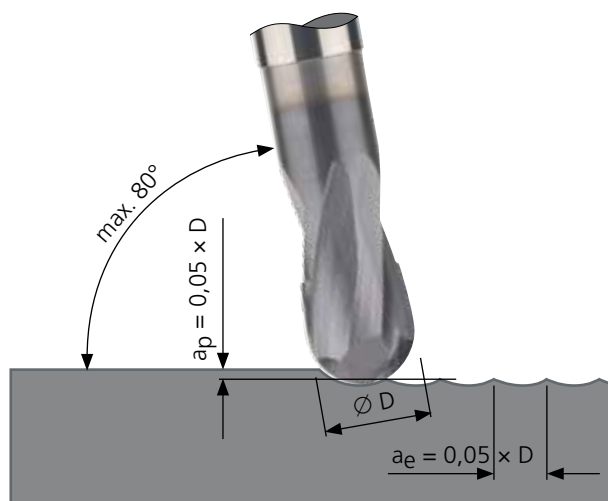
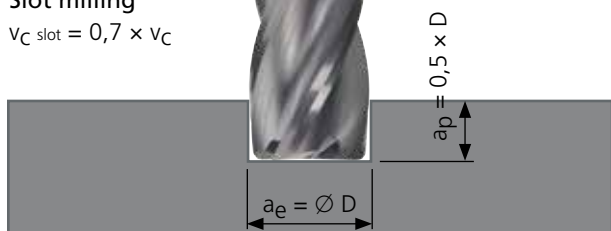
Machining				Graphite							
Material Group	Strength Rm (N/mm²)	Hardness HB	F.line	F044 D	F144 D	F344 D	F944 D				
			Diameter (mm)	Ø 3-16	Ø 3-16	Ø 3-16	Ø 4-16				
			No. of teeth	2	2	2	2				
			Shank DIN 6535 ..	HA HB	HA HB	HA HB	HA HB				
			Coating								
											
			Material	v _c	Kf	v _c	Kf	v _c	Kf		
P	1.1	≤400	≤120	Magnetic soft iron							
	1.2	≤700	≤200	Structural, case hardened steel							
	1.3	≤850	≤250	Carbon steel							
	1.4	≤850	≤250	Alloy steel							
	1.5	≤850 ≤1200	≤250 ≤350	Alloy/heat treated steel							
	1.6	>1200	>350	Alloy/heat treated steel							
H	1.7	≤1400	≤400	Hardened steel to 56 HRC							
	1.8	≤2200	≤600	Hardened steel to 65 HRC							
M	2.1	≤850	≤250	Stainless steel, sulphu- retted							
	2.2	≤850	≤250	Austentic							
	2.3	≤1000	≤300	Ferritic, ferritic & austen- tic, mart.							
K	3.1	≤500	≤150	Grey cast iron							
	3.2	>500 ≤1000	>150 ≤300	Grey cast iron , heat treated							
	3.3	400- 500	200- 250	Vermicular cast iron							
	3.4	≤700	≤200	Spher. graph. cast iron							
	3.5	>700 ≤1000	>200 ≤300	Spher. graph. cast iron, heat treated							
	3.6	≤700	≤200	Malleable iron							
	3.7	>700 ≤1000	>200 ≤300	Malleable iron, heat treated							
S	4.1	≤700	≤200	Pure titanium							
	4.2	≤900	≤270	Titanium alloys							
	4.3	>900 ≤1250	>270 ≤300	Titanium alloys							
	5.1	≤500	≤150	Pure nickel							
	5.2	≤900	<270	Nickel alloys, heat resistant							
	5.3	>900 ≤1200	>270 ≤350	Nickel alloys, high heat resistant							
N	6.1	≤350	≤100	Non-alloy copper							
	6.2	≤700	≤200	short chip, brass, bronze, red brass	175	3		230 p5	230 p5		
	6.3	≤700	≤200	long chip brass							
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)							
	7.1	≤350	≤100	Alu, Mg non-alloy							
	7.2	≤600	≤180	Alu wrought all., break. strain (A5) <14 %							
	7.3	≤600	≤180	Alu wrought all., break. strain (A5) ≥14 %							
	7.4	≤600	≤180	Alu cast alloy, Si <10 %							
	7.5	≤600	≤180	Alu cast alloy, Si ≥10 %	160	3		220 p5	220 p5		
				Fibre reinforced plastics	145	3		190 p5	190 p5		
				Graphite	265	3		340 p5	340 p5		



Coefficients cutting speed and feed		
	short version	$v_c = 100\%$ $f_z = 100\%$
	long version	$v_c = 60\%$ $(v_c \times 0,6)$ $f_z = 75\%$ $(f_z \times 0,75)$
	very long version	$v_c = 40\%$ $(v_c \times 0,4)$ $f_z = 30\%$ $(f_z \times 0,3)$

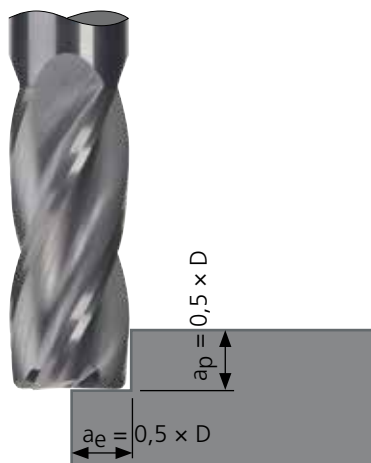
Slot milling

$$v_{C \text{ slot}} = 0,7 \times v_C$$



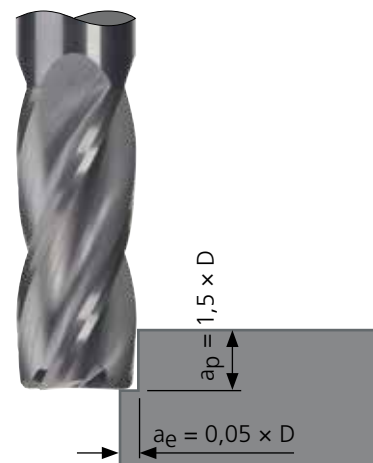
Rough milling

$$v_{C \text{ rough}} = v_C$$

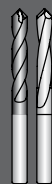


Finish milling

$$v_{C \text{ finish}} = 1,5 \times v_C$$



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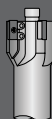


ISO

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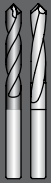


8



KOMET® PCD Milling cutter

1



The use of PCD monotools in the production of aluminium components is widespread.

This system is distinguished by the minimum effort required to set an increased number of teeth, as well as its long life time and very low roughness depths.

2



Different requirements for surface roughness are met using special tools that have the appropriate cutting geometry.

Our portfolio includes PCD face milling and shoulder milling cutters, radius milling cutters, slot milling cutters and compression milling cutters.

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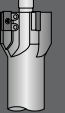


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3D-printed tools – welcome to the machining revolution HPC PCD face milling cutters

The cutter holders in the completely redesigned KOMET PCD milling cutters are manufactured using the generative process of laser melting, which means that these new tools can offer feed rates that are up to 100% higher than before.

3D printing enables up to twice as many cutting edges to be created, depending on the diameter.

In these milling cutters, KOMET is utilising the advantages offered by additive manufacturing, a method which allows the coolant channels to be designed optimally and positioned exactly so that each cutting edge is supplied with coolant by a separate channel.

The angle between the axes of the cutting edges is larger than that on conventionally manufactured tools, which makes the cutting action smoother while also maintaining a high level of tool stability.



PCD Milling cutter

Page

PCD Slot milling cutter

Ø 6 – 20 mm (DIN 6535 HA)
Ø 10 – 25 mm (screw-in)

28

PCD Radius milling cutter

Ø 10 – 16 mm (screw-in)

28

PCD Face milling cutter

Ø 10 – 32 mm (screw-in)
Ø 40 – 160 mm (HSK-A)
Ø 40 – 125 mm (DIN 8030 A/B)

30

PCD Face and corner milling cutter

Ø 16 – 25 mm (DIN 6535 HA)
Ø 32 – 63 mm (HSK-A)

32

PCD Face milling cutter ECO | PERFORMANCE | HPC

Ø 10 – 32 mm (DIN 6535 HA)
Ø 10 – 32 mm (screw-in)
Ø 40 – 100 mm (DIN 8030 A)

34

PCD Slot milling cutter

for machining composite materials
Ø 6 – 10 mm

40

PCD Compression milling cutter

for machining composite materials
Ø 6 – 16 mm

41

PCD Finishing, facing and corner milling cutter

HSC operations
Ø 63 – 100 mm (DIN 8030)

42 – 43

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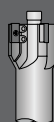


ISO

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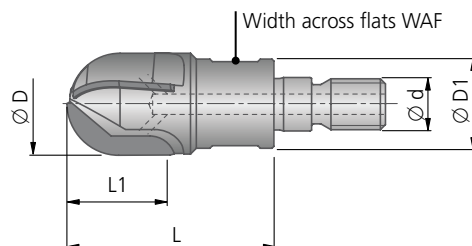
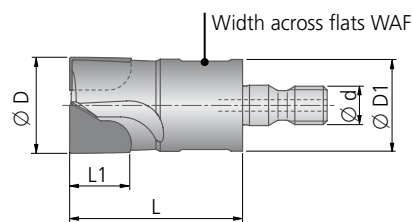
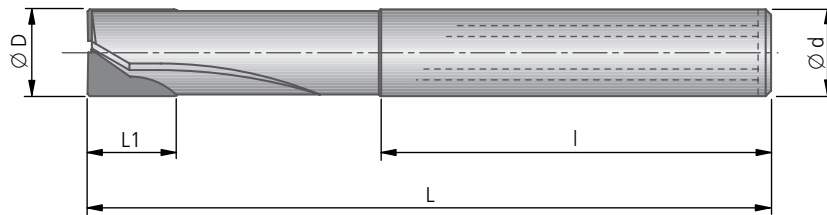
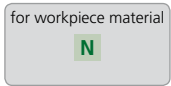
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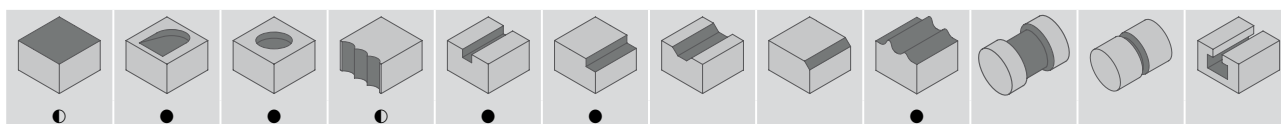
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PCD Slot milling cutter | PCD Radius milling cutter



PCD Slot milling cutter | PCD Radius milling cutter



DIN 6535 HA 1xD					
Ø D	Cylindrical shank Ø d x l	L	L1	 Z	Order No.
6	6 x 36	57	6	2	38390000000600
8	8 x 36	63	8	2	38390000000800
10	10 x 40	72	10	2	38390000001000
12	12 x 45	83	12	2	38390000001200
16	16 x 48	90	16	3	38391000001600
20	20 x 50	104	20	3	38391000002000
DIN 6535 HA 2xD					
6	6 x 36	57	12	2	38392057000600
8	8 x 36	63	16	2	38392063000800
10	10 x 40	72	20	2	38392072001000
12	12 x 45	83	24	2	38392083001200
16	16 x 48	90	32	3	38393090001600
20	20 x 50	104	40	3	38393004002000

Screw-in cutter									
Ø D	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1	 Z	 kg	Order No.
10	M5	8	7	9,6	28	10	2	0,018	37340099001000
12	M5	8	7	9,6	28	12	2	0,018	37340099001200
16	M8	13	18	13,8	32	16	3	0,036	37340099001600
20	M10	16	30	18,0	45	20	3	0,095	37340099002000
25	M12	18	40	21,0	45	20	3	0,165	37340099002500

Radius screw-in cutter										
Ø D	R	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1			Order No.
10	5	M5	8	7	9,6	28	10	2	0,018	37340098001000
12	6	M5	8	7	9,6	28	12	2	0,018	37340098001200
16	8	M8	13	18	13.8	32	16	3	0.036	37340098001600

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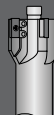


ISO

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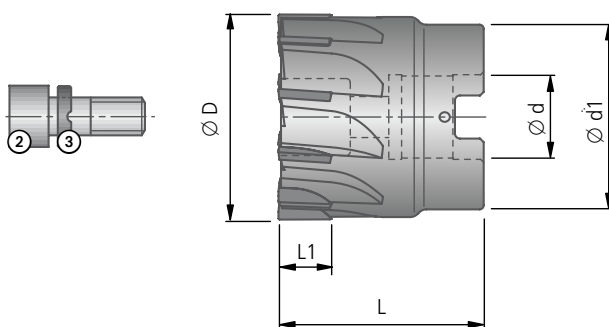
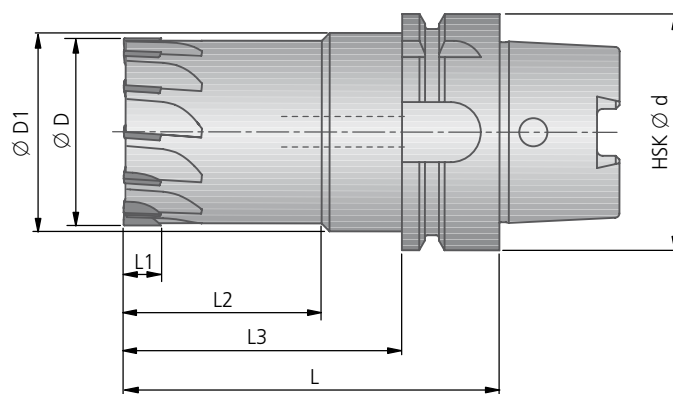
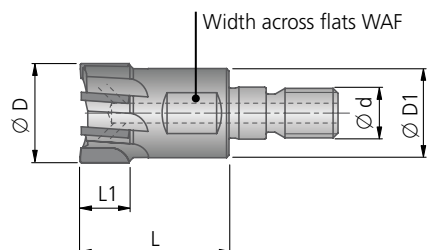
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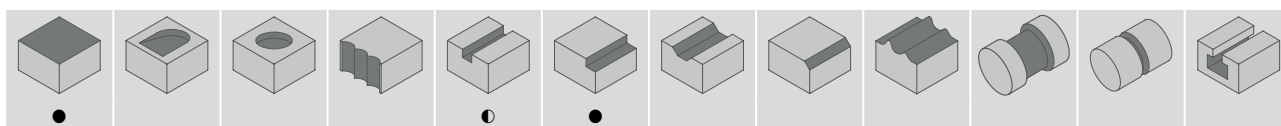
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PCD Face milling cutter



PCD Face milling cutter



Screw-in cutter

Ø D	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1			Order No.
10	M5	8	7	9,6	22	5	2	0,012	37341099001000
12	M5	8	7	9,6	28	5	2	0,018	37341099001200
16	M8	13	18	13,8	28	10	3	0,040	37341099001600
20	M10	16	30	18,0	30	10	4	0,070	37341099002000
25	M12	18	40	21,0	35	10	5	0,140	37341099002500
32	M16	27	80	29,0	35	10	6	0,250	37341099003200

HSK-A									Type 140 · R _Z > 10 µm eroded cutting edge	Type 150 · R _Z < 10 µm specially design cutting edge
Ø D	HSK Ø d	Ø D1	L ±0,02	L1	L2	L3			Order No.	Order No.
40	63	53	100	10	48	74	10	1,4	37140026004000	37150026004000
50	63	52	100	10	53	74	12	1,7	37140026005000	37150026005000
63	63	–	100	10	–	–	14	2,0	37140026006300	37150026006300
80	63	–	100	10	–	–	16	2,5	37140026008000	37150026008000
100	63	–	100	10	–	–	18	3,2	37140026010000	37150026010000
125	63	–	100	10	–	–	22	4,3	37140026012500	37150026012500
160	63	–	100	10	–	–	24	6,2	37140026016000	37150026016000

Other connections and cutting edge shapes available on request.

Supply includes: PCD milling cutter with coolant screw and coolant supply kit.

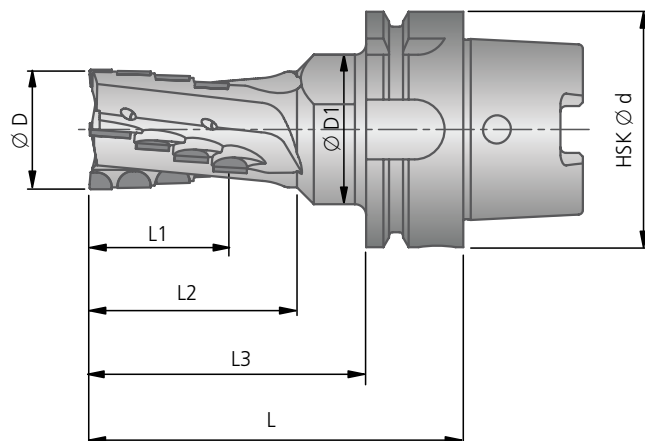
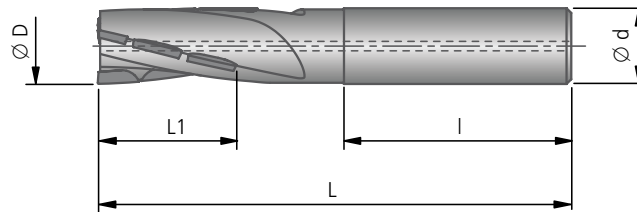
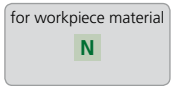
Arbor milling cutter

Ø D	DIN 8030 form	Ø d ^{H6}	Ø d1	L	L1			Order No.	Cylindrical screw  Order No. Article	Coolant sleeve  Order No.
40	A	16	36	40	10	10		37155099004000	55011 08025 M8x25	L01 01020  0,05
50	A	22	41	40	10	12		37155099005000	55011 10025 M10x25	L01 01030  0,05
63	A	22	48	40	10	14		37155099006300	55011 10025 M10x25	L01 01040  0,022
80	B	27	60	50	10	16		37155099008000	55011 12040 M12x40	L01 01050  0,152
100	B	32	78	50	10	18		37155099010000	55011 16030 M16x30	L01 01060  0,17
125	B	40	100	63	10	22		37155099012500	55011 20040 M20x40	L01 01070  0,396

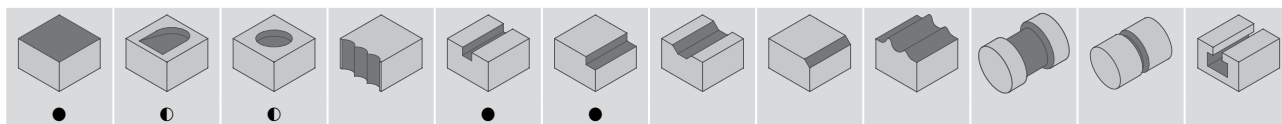
Supply includes milling cutter: with coolant sleeve ③ and cylindrical screw ②.

Screwdriver see chapter 8.

PCD Face and corner milling cutter



PCD Face and corner milling cutter



DIN 6535 HA					
Ø D	Cylindrical shank Ø d × l	L	L1	 Z	Order No.
16	16 × 48	93	30	3	38170099001600
20	20 × 50	100	30	3	38170099002000
25	25 × 56	110	30	3	38170099002500

HSK-A									
Ø D	HSK Ø d	Ø D1	L ±0,02	L1	L2	L3	 Z	 kg	Order No.
32	63	40	100	40	55	74	4		37170026003200
40	63	-	100	40	-	-	4		37170026004000
50	63	-	100	40	-	-	4		37170026005000
63	63	-	100	40	-	-	4		37170026006300

Supply includes: PCD milling cutter with coolant screw and coolant supply kit.

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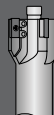


ISO

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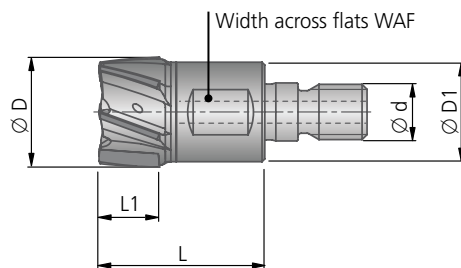
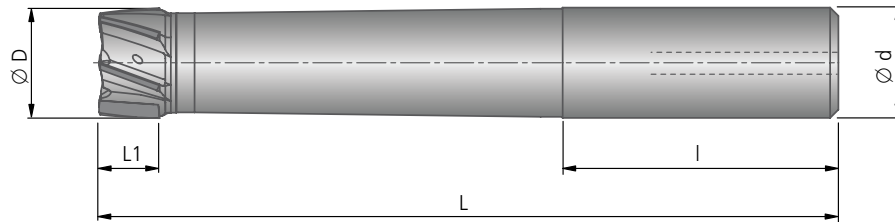
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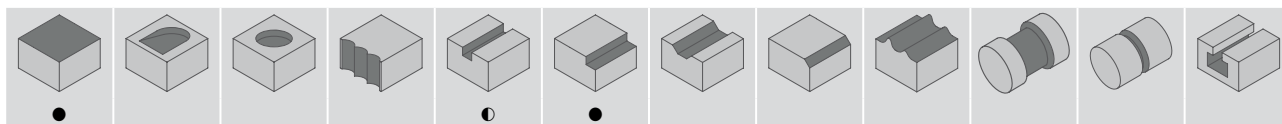
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PCD Face milling cutter HPC



PCD Face milling cutter HPC



DIN 6535 HA 2,5xD						
Ø D	Cylindrical shank Ø d × l	L	L1	 Z		Order No.
10	10 × 40	67	5	4	0,074	38320001001000
12	12 × 45	78	5	4	0,084	38320001001200
16	16 × 48	91	10	5	0,132	38320001001600
20	20 × 50	104	10	6	0,229	38320001002000
25	25 × 56	124	10	8	0,401	38320001002500
32	32 × 60	147	10	10	0,871	38320001003200
DIN 6535 HA 4xD						
10	10 × 40	82	5	4	0,084	38321001001000
12	12 × 45	96	5	4	0,104	38321001001200
16	16 × 48	115	10	5	0,192	38321001001600
20	20 × 50	134	10	6	0,349	38321001002000
25	25 × 56	161	10	8	0,631	38321001002500
32	32 × 60	195	10	10	1,391	38321001003200

Screw-in cutter									
Ø D	Ø d	Width across flats WAF	Tightening torque Nm	Ø D1	L	L1	 Z		Order No.
10	M5	8	7	9,6	22	5	4	0,012	37310001001000
12	M5	8	7	9,6	28	5	4	0,018	37310001001200
16	M8	13	15	13,8	28	10	5	0,040	37310001001600
20	M10	16	30	18,0	30	10	6	0,070	37310001002000
25	M12	18	50	21,0	35	10	8	0,140	37310001002500
32	M16	27	100	29,0	35	10	10	0,250	37310001003200

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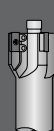


ISO

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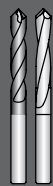
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PCD Face milling cutter ECO | PERFORMANCE | HPC



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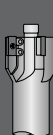


ISO

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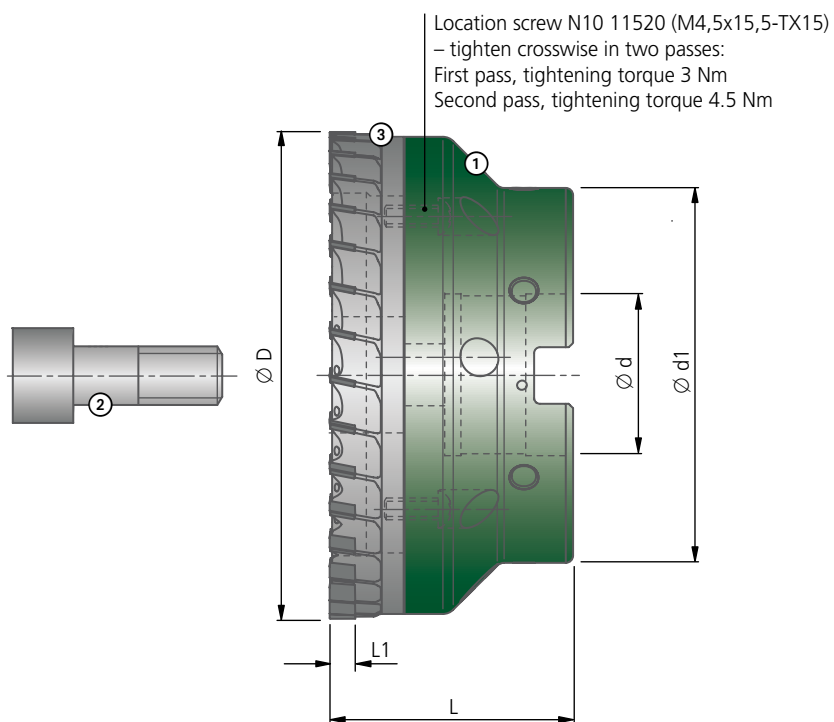
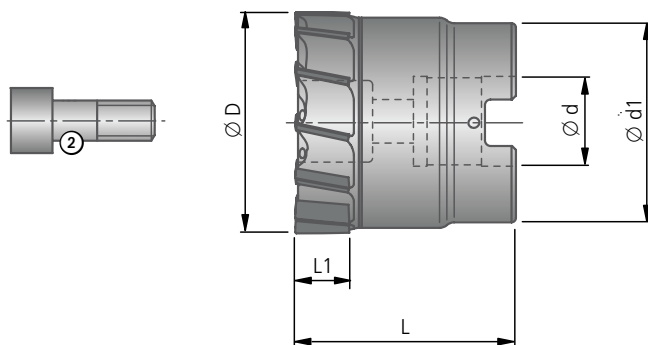
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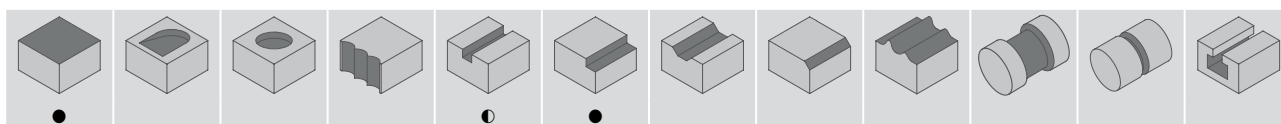
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PCD Face milling cutter ECO | PERFORMANCE | HPC



Arbor milling cutter											
ØD	DIN 8030 form	Ød ^{H6}	Ød1	L	L1	kg	Z	Description	Order No.	Cylindrical screw ②	
										Article	Order No.
40	A	16	36	40	5	0,3	5	ECO	37163099004000	M8x25	55011 08025
							8	PERFORMANCE	37164099004000		
							12	HPC	37165099004000		
50	A	22	41	40	5	0,4	5	ECO	37163099005000	M10x25	55011 10025
							10	PERFORMANCE	37164099005000		
							16	HPC	37165099005000		

Supply includes milling cutter: with cylindrical screw ②.
Screwdriver see chapter 8.

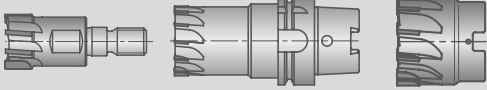
Arbor milling cutter								Milling ring ③		Basic body ①	
ØD	DIN 8030 form	Ød ^{H6}	Ød1	L	L1	kg	Z	Description	Order No.	Order No.	Cylindrical screw ②
											Order No. Article
63	A	22	48	40	5	0,34	5	ECO	37128099006300	50725085006300	55011 10025 M10x25
							10	PERFORMANCE	37129099006300		
							20	HPC	37130099006300		
80	A	27	58	50	5	0,62	6	ECO	37128099008000	50725085008000	55011 12040 M12x40
							12	PERFORMANCE	37129099008000		
							24	HPC	37130099008000		
100	A	32	77	50	5	1,0	8	ECO	37128099010000	50725085010000	55011 16045 M16x45
							16	PERFORMANCE	37129099010000		
							32	HPC	37130099010000		

Supply includes milling cutter:
Basic body ① with location screws N10 11520 (M4,5x15,5-TX15) and cylindrical screw ②.
Please order milling ring ③ separately.
Screwdriver see chapter 8.

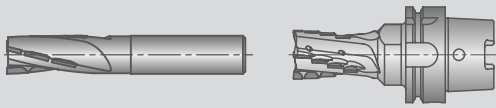


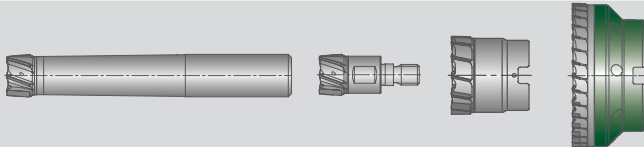
Recommended cutting data

Guideline values for milling				PCD Slot milling cutter PCD Radius milling cutter									
Material group	Strength Rm (N/mm²)	Hardness HB	Material										
				Ø 6		Ø 8		Ø 10		Ø 12		Ø 16 20 25	
				v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper									
	6.2	≤700	≤200	short chip, brass, bronze, red brass									
	6.3	≤700	≤200	long chip brass									
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)									
	7.1	≤350	≤100	Al, Mg non-alloy									
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %									
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %									
	7.4	≤600	≤180	Al cast alloy, Si <10 %									
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %									
	8.1			thermoplastics									
N	8.2			thermosetting plastics									
	8.3			fibre reinforced plastics									

Guideline values for milling				PCD Face milling cutter							
Material group	Strength Rm (N/mm²)	Hardness HB	Material								
				Ø 10		Ø 12		Ø 16 20 25 32		Ø 40 – 160	
				v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper							
	6.2	≤700	≤200	short chip, brass, bronze, red brass							
	6.3	≤700	≤200	long chip brass							
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)							
	7.1	≤350	≤100	Al, Mg non-alloy							
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %							
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %							
	7.4	≤600	≤180	Al cast alloy, Si <10 %							
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %							
	8.1			thermoplastics							
N	8.2			thermosetting plastics							
	8.3			fibre reinforced plastics							

Recommended cutting data

Guideline values for milling				PCD Face and corner milling cutter			
Material group	Strength Rm (N/mm²)	Hardness HB	Material v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed				
				Ø 16 20 25		Ø 32 40 50 63	
				v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper			
	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-1000	0,06-0,20	300-1500
	6.3	≤700	≤200	long chip brass			0,06-0,20
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)			
	7.1	≤350	≤100	Al, Mg non-alloy	400-1500	0,06-0,20	400-2500
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-1500	0,06-0,20	400-2500
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-1500	0,06-0,20	400-2500
	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-1500	0,06-0,20	400-2500
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-1500	0,06-0,20	400-2500
	8.1			thermoplastics			
	8.2			thermosetting plastics			
	8.3			fibre reinforced plastics	500-1200	0,05-0,15	500-1200

Guideline values for milling				PCD Face milling cutter ECO PERFORMANCE HPC							
Material group	Strength Rm (N/mm²)	Hardness HB	Material v_c (m/min) = Cutting speed f_z (mm/tooth) = Milling feed								
				Ø 10		Ø 12		Ø 16 20 25 32		Ø 40 – 100	
				v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth	v_c m/min	f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper							
	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-800	0,04-0,12	300-1000	0,04-0,15	300-1000	0,06-0,20	1000-1500
	6.3	≤700	≤200	long chip brass							0,04-0,15
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)							
	7.1	≤350	≤100	Al, Mg non-alloy	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-3500
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-3500
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-3500
	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-1500
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-1000	0,04-0,12	400-1500	0,04-0,15	400-1500	0,06-0,20	1000-1500
	8.1			thermoplastics							
	8.2			thermosetting plastics							
	8.3			fibre reinforced plastics	200-600	0,03-0,10	200-600	0,04-0,12	500-1200	0,05-0,15	500-1200

1



2



3

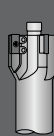


ISO

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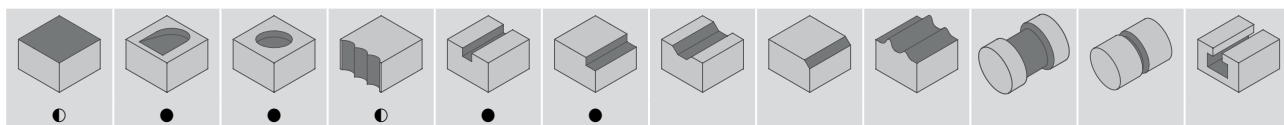
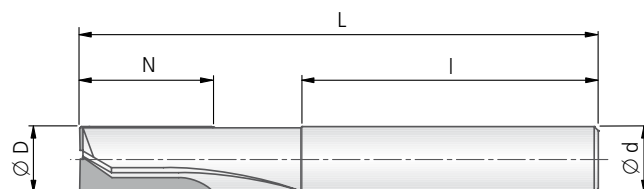
PCD Slot milling cutter

for workpiece material
N CFRP | GFRP
 CFRP/Al stacks
 Honeycombs



DIN 6535
 HA

straight fluted



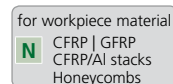
38304..					
Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N	Z
6	38304057000600	6 × 36	57	12	2
8	38304063000800	8 × 36	63	16	3
10	38304072001000	10 × 40	72	20	4

Recommended cutting data

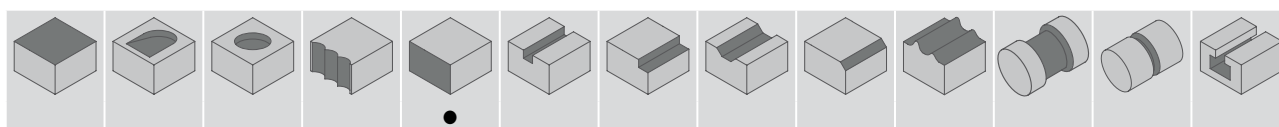
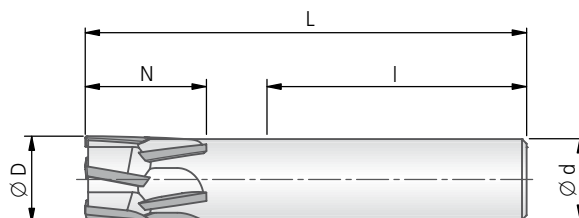
PCD Slot milling cutter (38304..)						
Machining: trimming, face milling, plunge milling						
Cutting speed v _C (m/min) Feed f _Z (mm/tooth)	Ø 6 mm		Ø 8 mm		Ø 10 mm	
	v _C	f _Z	v _C	f _Z	v _C	f _Z
CFRP	200-400	0,02-0,06	200-400	0,03-0,08	200-400	0,03-0,10
GFRP	200-400	0,02-0,08	200-400	0,03-0,10	200-400	0,03-0,12
CFRP/Al stacks	200-400	0,02-0,06	200-400	0,03-0,08	200-400	0,03-0,10
Honeycombs	200-400	0,02-0,06	200-400	0,03-0,08	200-400	0,03-0,10

● very good | ○ good

PCD Compression milling cutter



staggered cut with dual right and left helix



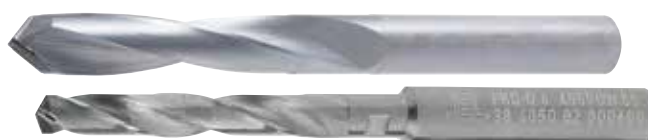
38300..					
Ø D _{h10}	Order No.	Ø d _{h6} × l	L	N	Z
6	38300057000600	6 × 36	57	10	3
10	38300072001000	10 × 40	72	16	4
16	38300090001600	16 × 48	90	20	5

Recommended cutting data

PCD Compression milling cutter (38300..)								
Machining: trimming, pocket and slot milling								
Cutting speed v _C (m/min) Feed f _Z (mm/tooth)	Ø 6 mm		Ø 8 mm		Ø 10 mm		Ø 16 mm	
	v _C	f _Z	v _C	f _Z	v _C	f _Z	v _C	f _Z
CFRP	200-400	0,02-0,06	200-400	0,03-0,08	200-400	0,03-0,10	200-400	0,03-0,12
GFRP	200-400	0,02-0,08	200-400	0,03-0,10	200-400	0,03-0,12	200-400	0,03-0,15
CFRP/Al stacks	200-400	0,02-0,06	200-400	0,03-0,08	200-400	0,03-0,10	200-400	0,03-0,12
Honeycombs	200-400	0,02-0,06	200-400	0,03-0,08	200-400	0,03-0,10	200-400	0,03-0,12

PCD high-performance drill Drillmax

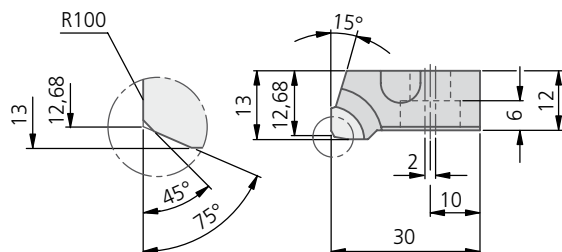
With a point angle of 90° and 130°, the Drillmax PCD high-performance drill is excellently suited for drilling composite materials.



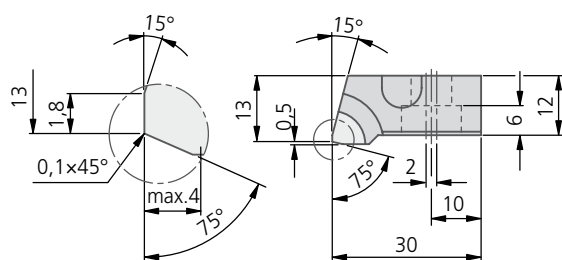
PCD Finishing, facing and corner milling cutter for HSC operations

Cartridges

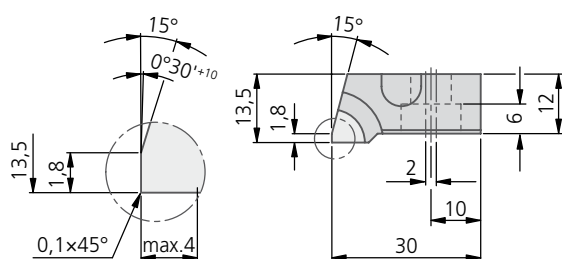
Finishing cartridge F51 34130



Facing cartridge F51 34120

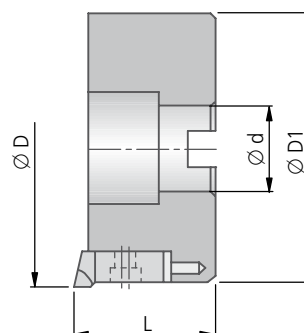


Corner cartridge F51 34110



Basic body

Dimensions to DIN 8030



Supply of basic body includes:

Basic body incl. balancing screws and clamping screws already fitted. Cartridges not included.

Supply of cartridges includes:

Cartridges without clamping screws.

Clamping screw for cartridges: Order No. 55024 06012

Examples for ordering:

Corner mill – complete tool Ø 63 mm, Z = 3

1 × basic body F51 02340

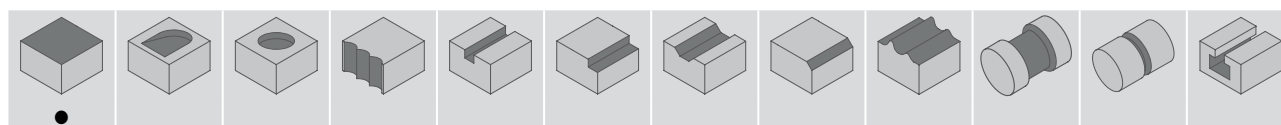
3 × corner cartridge F51 34110

Face milling cutter complete tool Ø 80 mm, Z = 5

1 × basic body F51 02350

4 × facing cartridge F51 34120

1 × finishing cartridge F51 34130



Basic body							Clamping screw		Cartridge with PCD insert		
Ø D	Order No.	Ø d ^{H7}	L	Ø D1	Z	kg	Size	Torque setting	Corner cartridge	Facing cartridge	Finishing cartridge
63	F51 02340 ¹⁾	22	48	61	3	0,75	M10	70 Nm	F51 34110	F51 34120	F51 34130
80	F51 02350	27	50	78	5	0,57	M12				
100	F51 02360	32	50	98	6	0,95	M16				

¹⁾ basic steel body

Special milling cutter features:**Internal coolant supply**

applied with clamping screw provided

Balance

Balanced to DIN 69888 and additional screws for precision balancing

Setting

Secure adjusting screws for setting axial run-out on the milling head

Cartridges

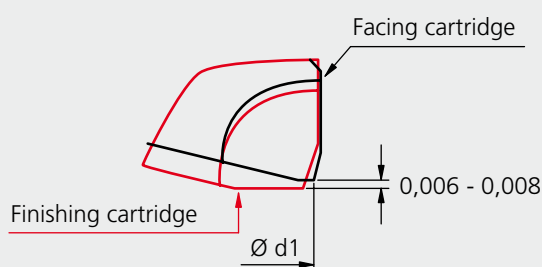
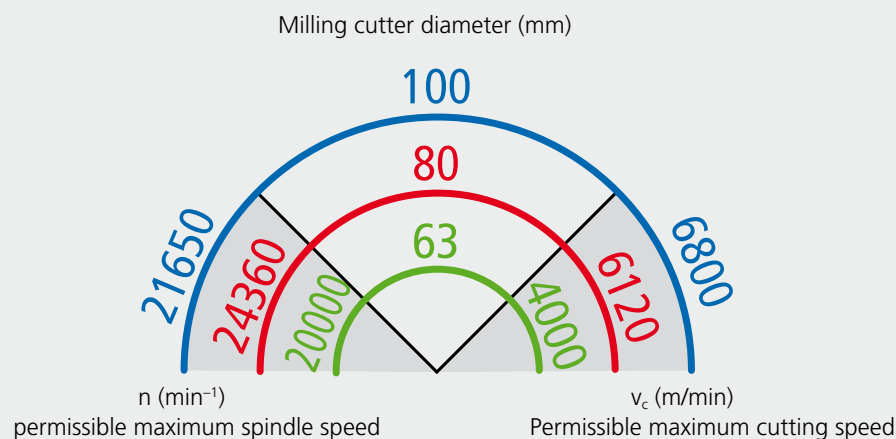
PCD cartridges manufactured to high precision for maximum stability and perfect circular cutting movement

Milling cutter body

Manufactured from special aluminium alloy with high tensile strength, considerably reduced weight and excellent surface finish (Note 63 mm diameter body in steel)

Secure screws

Strong, high quality screws in hardened threaded inserts and with additional lateral screws

Setting notes for combination finishing and facing cartridge**Spindle speeds and cutting speeds**

1



2



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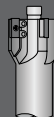


ISO

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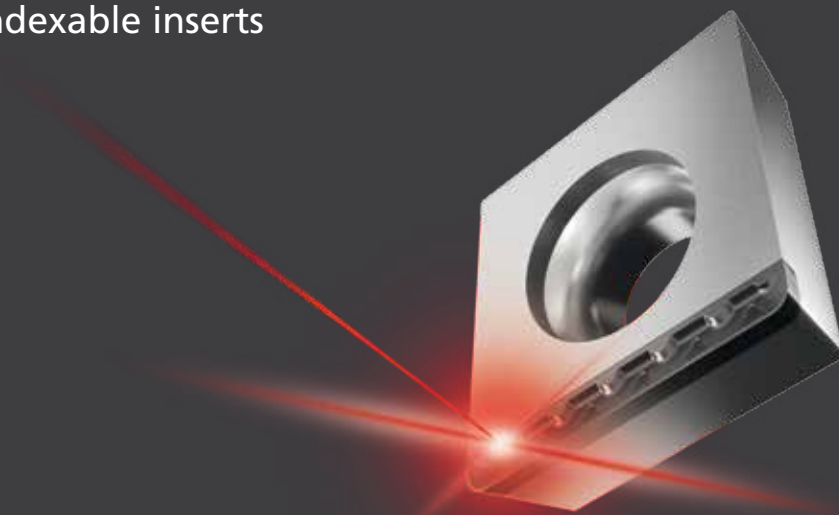


8



KOMET® ISO Diamond indexable inserts

With super-hard PCD / CVD-D diamond cutting tool materials. Superior performance at the cutting edge thanks to the use of state-of-the-art laser technology.



Laser technology and the benefit for YOU

The EXTRA FEATURE in the cutting tool material

- PCD mixed grain with bimodal microstructure By using large and small grains, the microstructure guarantees an increase in packing density and, consequently, a uniform diamond cutting edge with no gaps. As a result, the efficient machining of abrasive materials is guaranteed and the material can be used with interrupted cuts.
- CVD-D thickfilm diamond is pure polycrystalline diamond and, unlike PCD, is binder-free. That makes it the hardest and most wear-resistant cutting tool material for machining non-ferrous metals, composite materials, carbide, ceramic, plastic with fillers and MMC (metal matrix composite). This cutting tool material can only be machined with laser technology and its superior performance can be used to its full potential when maximum wear resistance is demanded.
- In addition to innovative laser technology, KOMET opts for high-vacuum soldering when fitting the diamond cutting edges. The high-strength solder used in this process wins favour in machining due to its higher temperature resistance, process reliability and service life.

The EXTRA FEATURE at the cutting edge

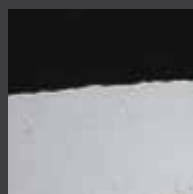
- Despite the use of larger-sized diamond grains in the PCD mixed grain, the chipping of the cutting edge is significantly reduced and, as a result, a good surface quality is assured with simultaneously prolonged service life of the cutting edge.
- Due to the laser technology, the diamond grains are cut apart and not torn out of the microstructure, as is the case with conventional grinding operations. Even damage to the PCD microstructure caused by grinding pressure can be avoided in this way. In addition to the lower level of chipping, laser machining allows extremely good accuracy in terms of shape to be achieved in the cutting edge contour.
- Regardless of the size of the diamond grain, an extremely sharp cutting edge is created as a result of the diamond grains splitting apart. The benefit for you is a soft cutting action with low shearing forces and an excellent surface quality.
- The wiper geometries provide a further possibility of significantly improving the surface quality.

The EXTRA FEATURE in chip control

- The laser technology enables the inclusion of 3D chip breakers and their arrangement in whatever formation may be desired. KOMET has optimised chip control and developed two outstanding chip breakers for finishing and roughing operations. As a result, excellent chip breaking properties are created in a wide application field of materials and cutting parameters.



Ground PCD cutting edge
Diamond grains that are torn out leave gaps in the microstructure and produce chipping. Microstructure close to cutting edges is also damaged by grinding pressure.



Laser-machined PCD cutting edge
The mixture of grain used and laser machining guarantee a uniform and undamaged cutting edge, with no gaps. Benefits for YOU in terms of service life, surface quality and accuracy of shape.

Portfolio overview – ISO PCD/CVD-D Indexable inserts

CCGT										CCGW			
 C85..98 ▶ 47	 C85..97 ▽ ▶ 48	 C85..93 ▽ Wiper ▶ 49	 C85..96 ▽▽ ▶ 50	 C85..92 ▽▽ Wiper ▶ 51	 C85..86 ▽ L.H. ▶ 52	 C85..87 ▽ R.H. ▶ 53	 C85..84 ▽▽ L.H. ▶ 54	 C85..85 ▽▽ R.H. ▶ 55	 C85..99 ▶ 56	 C85..91 Wiper ▶ 57	 C85..94 L.H. ▶ 58	 C85..95 R.H. ▶ 59	
CPGT						CPGW							
 C95..97 ▽ ▶ 60	 C95..96 ▽▽ ▶ 61	 C95..86 ▽ L.H. ▶ 62	 C95..87 ▽ R.H. ▶ 63	 C95..84 ▽▽ L.H. ▶ 64	 C95..85 ▽▽ R.H. ▶ 65	 C95..94 L.H. ▶ 66	 C95..95 R.H. ▶ 67	 C95..99 ▶ 68					
DCGT					DCGW								
 C86..98 ▶ 69	 C86..97 ▽ ▶ 70	 C86..93 ▽ Wiper ▶ 71	 C86..96 ▽▽ ▶ 72	 C86..92 ▽▽ Wiper ▶ 73	 C86..99 ▶ 74	 C86..91 Wiper ▶ 75							
RCGT				RCGW		RDHX							
 C87..90 ▽ standard ▶ 76	 C88..90 ▽ strengthened ▶ 77	 C87..89 ▽▽ standard ▶ 78	 C88..89 ▽▽ strengthened ▶ 79	 C87..88 standard ▶ 80	 C88..88 strengthened ▶ 81	 C98..90 ▽ ▶ 82	 C98..89 ▽▽ ▶ 83	 C98..88 ▶ 84					
TCGT								TCGW					
 C84..98 ▶ 85	 C84..97 ▽ ▶ 86	 C84..96 ▽▽ ▶ 87	 C84..81 ▶ 88	 C84..86 ▽ ▶ 89	 C84..84 ▽▽ ▶ 90	 C84..90 ▽ ▶ 91	 C84..89 ▽▽ ▶ 92	 C84..99 ▶ 93	 C84..94 ▶ 94	 C84..88 ▶ 95			
VBGT			VBGW	VCGT			VCGW						
 C79..98 ▶ 96	 C79..97 ▽ ▶ 97	 C79..96 ▽▽ ▶ 98	 C79..99 ▶ 99	 C89..98 ▶ 100	 C89..97 ▽ ▶ 101	 C89..96 ▽▽ ▶ 102	 C89..99 ▶ 103						



PKD5510: Polycrystalline diamond cutting tool material for machining aluminium materials, abrasive materials, plastics and composite materials with high cutting speeds.



DSD5605: CVD-D thick layer diamond is the latest generation of diamond cutting materials. The most wear-resistant cutting material for non-ferrous metals and non-metallic materials. Superior performance over PCD, particularly in applications requiring the greatest abrasion resistance.



Laser-machined cutting edges, chip breakers, chamfers and rounding



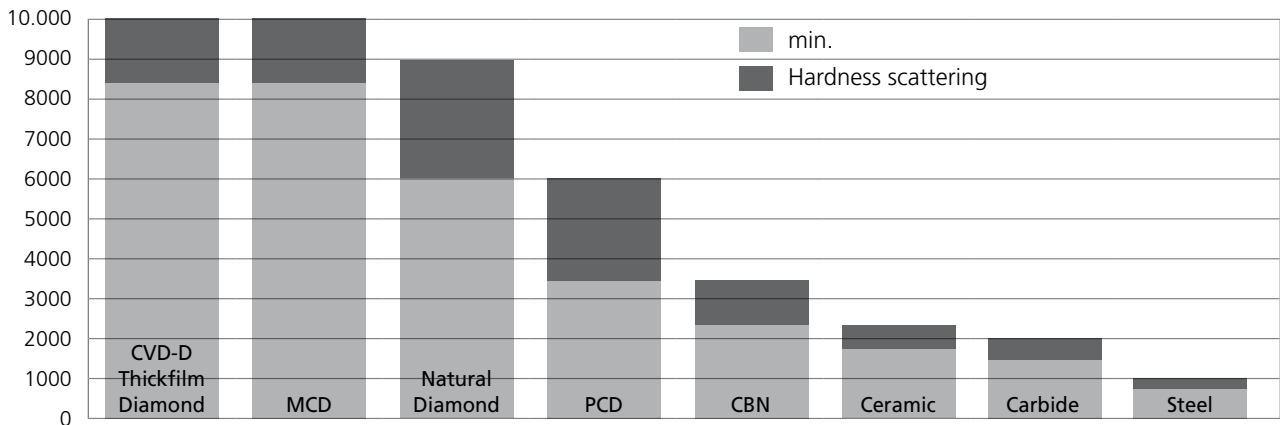
3-D chip breaker for roughing



3-D chip breaker for finishing

Hardness

Vickers hardness [kg/mm²]



Recommended cutting data

		Cutting depth a_p (mm)			Feed f (mm/rev)		
		without chip breaker	3-D chip breaker for finishing ▽▽▽	3-D chip breaker for roughing ▽	without chip breaker	3-D chip breaker for finishing ▽▽▽	3-D chip breaker for roughing ▽
Long blank	R	0,1	0,01 - $\frac{2}{3} \times L^*$		0,01 - 0,05		
		0,2	0,01 - $\frac{2}{3} \times L^*$	0,08 - $\frac{2}{3} \times L^*$	0,01 - 0,10	0,02 - 0,10	0,80 - 0,15
		0,4	0,01 - $\frac{2}{3} \times L^*$	0,10 - $\frac{2}{3} \times L^*$	0,01 - 0,20	0,04 - 0,20	0,12 - 0,25
		0,8	0,01 - $\frac{2}{3} \times L^*$	0,15 - $\frac{2}{3} \times L^*$	0,01 - 0,40	0,08 - 0,40	0,25 - 0,45
		1,2	0,01 - $\frac{2}{3} \times L^*$	0,20 - $\frac{2}{3} \times L^*$	0,01 - 0,60	0,12 - 0,60	0,30 - 0,65
Triangular blank		0,1	0,01 - 2,80		0,01 - 0,05		
		0,2	0,01 - 2,80	0,08 - 1,50	0,01 - 0,10	0,02 - 0,10	0,80 - 0,15
		0,4	0,01 - 2,80	0,10 - 2,00	0,01 - 0,20	0,04 - 0,20	0,12 - 0,25
		0,8	0,01 - 2,80	0,15 - 2,40	0,01 - 0,40	0,08 - 0,40	0,25 - 0,45
		1,2	0,01 - 2,80	0,20 - 2,85	0,01 - 0,60	0,12 - 0,60	0,30 - 0,65
Round insert	d1						
	5	0,05 - 1,25	0,20 - 1,25	0,80 - 1,25	0,05 - 0,40	0,08 - 0,40	0,15 - 0,50
	7	0,05 - 1,75	0,20 - 1,75	0,80 - 1,75	0,05 - 0,40	0,08 - 0,40	0,15 - 0,50
	10	0,05 - 2,50	0,20 - 2,50	0,80 - 2,50	0,05 - 0,60	0,08 - 0,60	0,15 - 0,70
	12	0,05 - 3,00	0,20 - 3,00	0,80 - 3,00	0,05 - 0,60	0,08 - 0,60	0,15 - 0,70

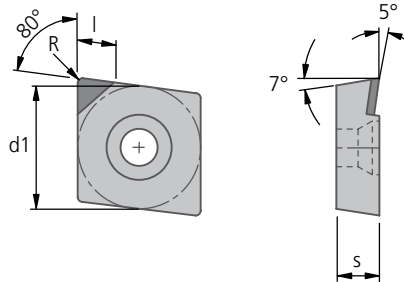
*When machining using large cutting depths, low feed values must generally be selected

Cutting speed v_c (m/min)				
N	Aluminium alloys Si < 1%	300 - 6000	Glass, quartz glass	140 - 200
	Aluminium alloys Si < 12%	300 - 4000	sintered carbides (G10-G60)	12 - 55
	Aluminium alloys Si > 12%	300 - 2000	non-sintered carbides (green carbide)	20 - 70
	CFRP, GFRP	100 - 4000	Metal Matrix Composites (MMC)	200 - 800
	Plastics, composites	300 - 1000	Graphite	100 - 3000
	Ceramics	12 - 55	other non-ferrous metals (copper / bronze / brass / magnesium)	300 - 3000



Cutter geometry:

positive rake angle
sharp cutting edge



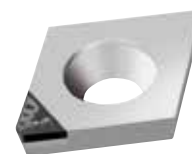
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
CCGT 060202 FN-98	C85 18980.02..	▲	▲				0,2
CCGT 060204 FN-98	C85 18980.04..	▲	▲	6,35	2,38	3,0	0,4
CCGT 060208 FN-98	C85 18980.08..	▲	▲				0,8
CCGT 09T302 FN-98	C85 32980.02..	▲	▲				0,2
CCGT 09T304 FN-98	C85 32980.04..	▲	▲				0,4
CCGT 09T308 FN-98	C85 32980.08..	▲	▲	9,52	3,97	3,0	0,8
CCGT 09T312 FN-98	C85 32980.12..	▲	▲				1,2
CCGT 120402 FN-98	C85 44980.02..	▲	▲				0,2
CCGT 120404 FN-98	C85 44980.04..	▲	▲	12,7	4,76	3,0	0,4
CCGT 120408 FN-98	C85 44980.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FN-98 Cutting material PKD5510 Order No. C85 18980.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes !



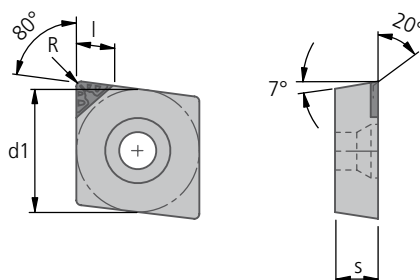
C85..97



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CCGT 060202 FN-97	C85 18970.02..	▲	▲				0,2
CCGT 060204 FN-97	C85 18970.04..	▲	▲	6,35	2,38	3,0	0,4
CCGT 060208 FN-97	C85 18970.08..	▲	▲				0,8
CCGT 09T302 FN-97	C85 32970.02..	▲	▲				0,2
CCGT 09T304 FN-97	C85 32970.04..	▲	▲				0,4
CCGT 09T308 FN-97	C85 32970.08..	▲	▲	9,52	3,97	3,0	0,8
CCGT 09T312 FN-97	C85 32970.12..	▲	▲				1,2
CCGT 120402 FN-97	C85 44970.02..	▲	▲				0,2
CCGT 120404 FN-97	C85 44970.04..	▲	▲				0,4
CCGT 120408 FN-97	C85 44970.08..	▲	▲	12,7	4,76	3,0	0,8
CCGT 120412 FN-97	C85 44970.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FN-97 Cutting material PKD5510 Order No. C85 18970.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass N		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

▽ Wiper

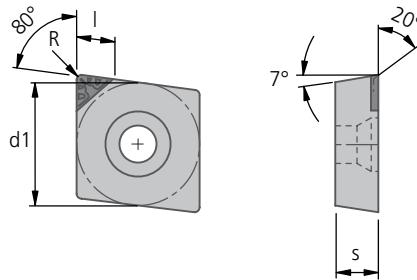
3-D chip breaker for roughing

with Wiper geometry for

setting angle $\alpha = 95^\circ$

With stabilised cutting edge for

$a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
CCGT 060202 FN-93W	C85 18930.02..	▲	▲				0,2
CCGT 060204 FN-93W	C85 18930.04..	▲	▲	6,35	2,38	3,0	0,4
CCGT 060208 FN-93W	C85 18930.08..	▲	▲				0,8
CCGT 09T302 FN-93W	C85 32930.02..	▲	▲				0,2
CCGT 09T304 FN-93W	C85 32930.04..	▲	▲				0,4
CCGT 09T308 FN-93W	C85 32930.08..	▲	▲	9,52	3,97	3,0	0,8
CCGT 09T312 FN-93W	C85 32930.12..	▲	▲				1,2
CCGT 120402 FN-93W	C85 44930.02..	▲	▲				0,2
CCGT 120404 FN-93W	C85 44930.04..	▲	▲				0,4
CCGT 120408 FN-93W	C85 44930.08..	▲	▲	12,7	4,76	3,0	0,8
CCGT 120412 FN-93W	C85 44930.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FN-93W Cutting material PKD5510 Order No. C85 18930.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Surface comparison

■ R0,4

■ R0,8

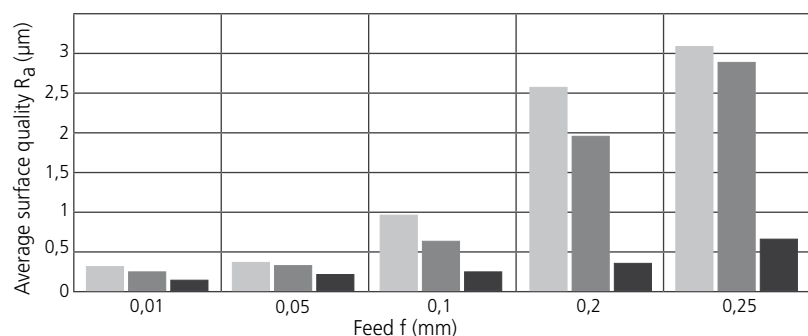
■ R0,4 Wiper $\alpha = 95^\circ$

Average surface quality R_a

Material: G-AlSi9Cu4Mg (~ 3.2573)

Cutting speed: $v_c = 1000 \text{ m/min}$

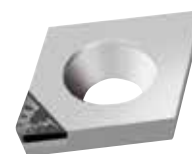
Cutting depth: $a_p = 0,5 \text{ mm}$



● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

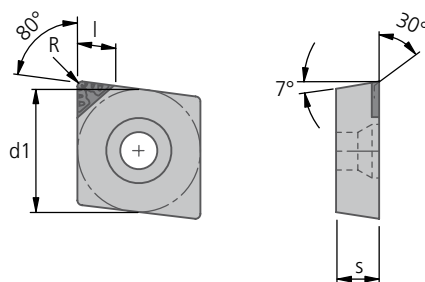
C85..96



Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CCGT 060202 FN-96	C85 18960.02..	▲	▲				0,2
CCGT 060204 FN-96	C85 18960.04..	▲	▲	6,35	2,38	3,0	0,4
CCGT 060208 FN-96	C85 18960.08..	▲	▲				0,8
CCGT 09T302 FN-96	C85 32960.02..	▲	▲				0,2
CCGT 09T304 FN-96	C85 32960.04..	▲	▲				0,4
CCGT 09T308 FN-96	C85 32960.08..	▲	▲	9,52	3,97	3,0	0,8
CCGT 09T312 FN-96	C85 32960.12..	▲	▲				1,2
CCGT 120402 FN-96	C85 44960.02..	▲	▲				0,2
CCGT 120404 FN-96	C85 44960.04..	▲	▲				0,4
CCGT 120408 FN-96	C85 44960.08..	▲	▲	12,7	4,76	3,0	0,8
CCGT 120412 FN-96	C85 44960.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FN-96 Cutting material PKD5510 Order No. C85 18960.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

Wiper

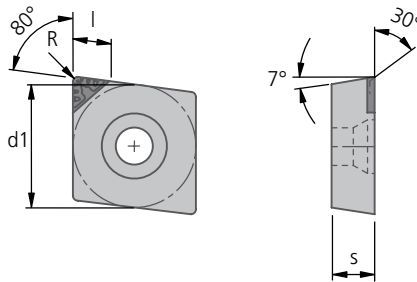
3-D chip breaker for finishing

with Wiper geometry for

setting angle $\alpha = 95^\circ$

With stabilised cutting edge for

$a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
CCGT 060202 FN-92W	C85 18920.02..	▲	▲	6,35	2,38	3,0	0,2
CCGT 060204 FN-92W	C85 18920.04..	▲	▲				0,4
CCGT 060208 FN-92W	C85 18920.08..	▲	▲				0,8
CCGT 09T302 FN-92W	C85 32920.02..	▲	▲	9,52	3,97	3,0	0,2
CCGT 09T304 FN-92W	C85 32920.04..	▲	▲				0,4
CCGT 09T308 FN-92W	C85 32920.08..	▲	▲				0,8
CCGT 09T312 FN-92W	C85 32920.12..	▲	▲				1,2
CCGT 120402 FN-92W	C85 44920.02..	▲	▲	12,7	4,76	3,0	0,2
CCGT 120404 FN-92W	C85 44920.04..	▲	▲				0,4
CCGT 120408 FN-92W	C85 44920.08..	▲	▲				0,8
CCGT 120412 FN-92W	C85 44920.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FN-92W Cutting material PKD5510 Order No. C85 18920.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Surface comparison

R0,4

R0,8

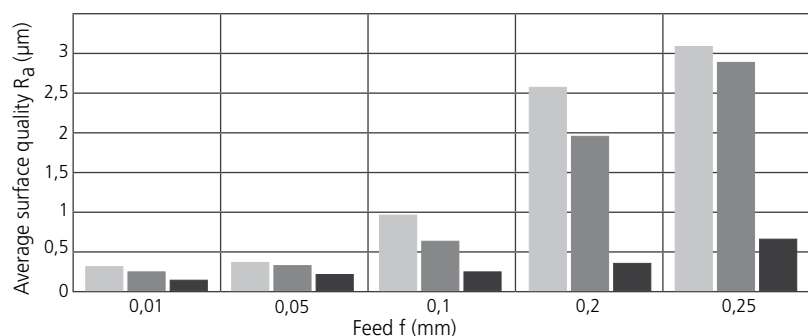
R0,4 Wiper $\alpha = 95^\circ$

Average surface quality R_a

Material: G-AlSi9Cu4Mg (~ 3.2573)

Cutting speed: $v_c = 1000 \text{ m/min}$

Cutting depth: $a_p = 0,5 \text{ mm}$



● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

C85..86



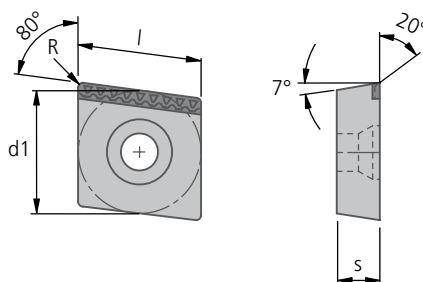
Cutter geometry:



L.H. cutting form „L“

3-D chip breaker for roughing

With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CCGT 060202 FL-86	C85 18860.02..	▲	▲				0,2
CCGT 060204 FL-86	C85 18860.04..	▲	▲	6,35	2,38	6,5	0,4
CCGT 060208 FL-86	C85 18860.08..	▲	▲				0,8
CCGT 09T304 FL-86	C85 32860.04..	▲	▲				0,4
CCGT 09T308 FL-86	C85 32860.08..	▲	▲	9,52	3,97	9,7	0,8
CCGT 09T312 FL-86	C85 32860.12..	▲	▲				1,2
CCGT 120404 FL-86	C85 44860.04..	▲	▲	12,7	4,76	12,9	0,4
CCGT 120408 FL-86	C85 44860.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FL-86 Cutting material PKD5510 Order No. C85 18860.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



C85..87

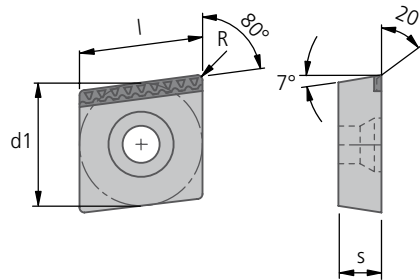


Cutter geometry:



R.H. cutting form „R“

3-D chip breaker for roughing

With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$ 

Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
CCGT 060202 FR-87	C85 18870.02..	▲	▲				0,2
CCGT 060204 FR-87	C85 18870.04..	▲	▲	6,35	2,38	6,5	0,4
CCGT 060208 FR-87	C85 18870.08..	▲	▲				0,8
CCGT 09T304 FR-87	C85 32870.04..	▲	▲				0,4
CCGT 09T308 FR-87	C85 32870.08..	▲	▲	9,52	3,97	9,7	0,8
CCGT 09T312 FR-87	C85 32870.12..	▲	▲				1,2
CCGT 120404 FR-87	C85 44870.04..	▲	▲	12,7	4,76	12,9	0,4
CCGT 120408 FR-87	C85 44870.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FR-87 Cutting material PKD5510 Order No. C85 18870.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

1



2



3



ISO

4



5



6



7



8



C85..84



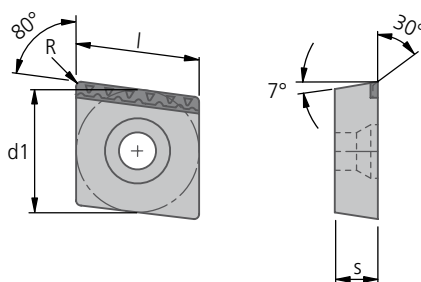
Cutter geometry:



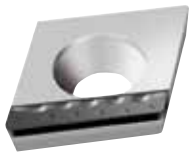
L.H. cutting form „L“

3-D chip breaker for finishing

With stabilised cutting edge for
ap > 0,08 mm



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CCGT 060202 FL-84	C85 18840.02..	▲	▲				0,2
CCGT 060204 FL-84	C85 18840.04..	▲	▲	6,35	2,38	6,5	0,4
CCGT 060208 FL-84	C85 18840.08..	▲	▲				0,8
CCGT 09T304 FL-84	C85 32840.04..	▲	▲				0,4
CCGT 09T308 FL-84	C85 32840.08..	▲	▲	9,52	3,97	9,7	0,8
CCGT 09T312 FL-84	C85 32840.12..	▲	▲				1,2
CCGT 120404 FL-84	C85 44840.04..	▲	▲	12,7	4,76	12,9	0,4
CCGT 120408 FL-84	C85 44840.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FL-84 Cutting material PKD5510 Order No. C85 18840.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



C85..85

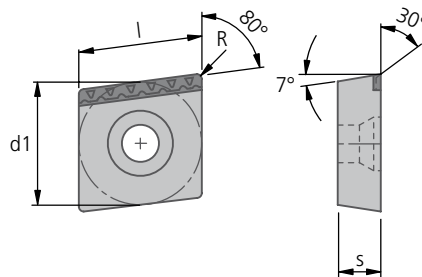


Cutter geometry:



R.H. cutting form „R“

3-D chip breaker for finishing

With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$ 

Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
CCGT 060202 FR-85	C85 18850.02..	▲	▲				0,2
CCGT 060204 FR-85	C85 18850.04..	▲	▲	6,35	2,38	6,5	0,4
CCGT 060208 FR-85	C85 18850.08..	▲	▲				0,8
CCGT 09T304 FR-85	C85 32850.04..	▲	▲				0,4
CCGT 09T308 FR-85	C85 32850.08..	▲	▲	9,52	3,97	9,7	0,8
CCGT 09T312 FR-85	C85 32850.12..	▲	▲				1,2
CCGT 120404 FR-85	C85 44850.04..	▲	▲	12,7	4,76	12,9	0,4
CCGT 120408 FR-85	C85 44850.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGT 060202 FR-85 Cutting material PKD5510 Order No. C85 18850.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

1



2



3



ISO

4



5



6



7



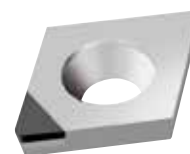
8



KOMET® ISO PCD/CVD-D Indexable inserts

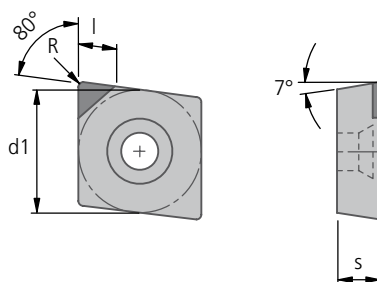
CCGW

C85..99



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CCGW 060202 FN-99	C85 18990.02..	▲	▲				0,2
CCGW 060204 FN-99	C85 18990.04..	▲	▲	6,35	2,38	3,0	0,4
CCGW 060208 FN-99	C85 18990.08..	▲	▲				0,8
CCGW 09T302 FN-99	C85 32990.02..	▲	▲				0,2
CCGW 09T304 FN-99	C85 32990.04..	▲	▲				0,4
CCGW 09T308 FN-99	C85 32990.08..	▲	▲	9,52	3,97	3,0	0,8
CCGW 09T312 FN-99	C85 32990.12..	▲	▲				1,2
CCGW 120402 FN-99	C85 44990.02..	▲	▲				0,2
CCGW 120404 FN-99	C85 44990.04..	▲	▲				0,4
CCGW 120408 FN-99	C85 44990.08..	▲	▲	12,7	4,76	3,0	0,8
CCGW 120412 FN-99	C85 44990.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGW 060202 FN-99 Cutting material PKD5510 Order No. C85 18990.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Recommended cutting data: page 46.

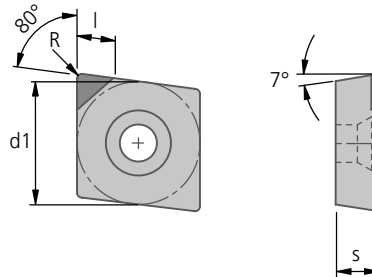
▲ Availability: for delivery see current price and stock list



Cutter geometry:

Wiper

sharp cutting edge
with Wiper geometry for
setting angle $\alpha = 95^\circ$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CCGW 060202 FN-91W	C85 18910.02..	▲	▲				0,2
CCGW 060204 FN-91W	C85 18910.04..	▲	▲	6,35	2,38	3,0	0,4
CCGW 060208 FN-91W	C85 18910.08..	▲	▲				0,8
CCGW 09T302 FN-91W	C85 32910.02..	▲	▲				0,2
CCGW 09T304 FN-91W	C85 32910.04..	▲	▲				0,4
CCGW 09T308 FN-91W	C85 32910.08..	▲	▲	9,52	3,97	3,0	0,8
CCGW 09T312 FN-91W	C85 32910.12..	▲	▲				1,2
CCGW 120402 FN-91W	C85 44910.02..	▲	▲				0,2
CCGW 120404 FN-91W	C85 44910.04..	▲	▲				0,4
CCGW 120408 FN-91W	C85 44910.08..	▲	▲	12,7	4,76	3,0	0,8
CCGW 120412 FN-91W	C85 44910.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGW 060202 FN-91W Cutting material PKD5510 Order No. C85 18910.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Surface comparison

■ R0,4

■ R0,8

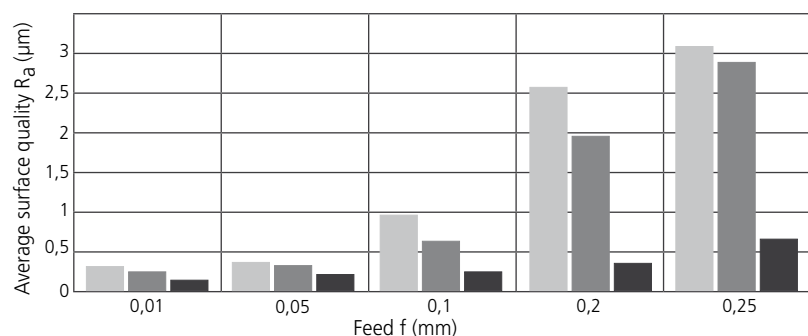
■ R0,4 Wiper $\alpha = 95^\circ$

Average surface quality R_a

Material: G-AlSi9Cu4Mg (~ 3.2573)

Cutting speed: $v_c = 1000$ m/min

Cutting depth: $a_p = 0,5$ mm



● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

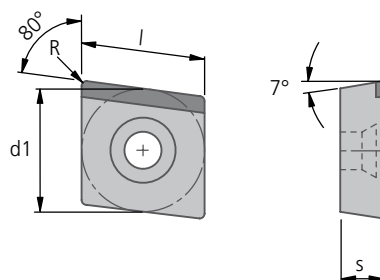


C85..94

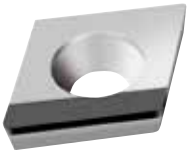


Cutter geometry:

L.H. cutting form „L“
sharp cutting edge

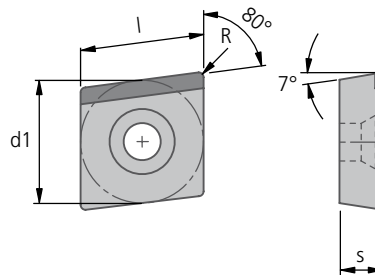


Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD 5510	CVD-D DSD 5605	d1	s	l	R
CCGW 060202 FL-94	C85 18940.02..	▲	▲				0,2
CCGW 060204 FL-94	C85 18940.04..	▲	▲	6,35	2,38	6,5	0,4
CCGW 060208 FL-94	C85 18940.08..	▲	▲				0,8
CCGW 09T304 FL-94	C85 32940.04..	▲	▲				0,4
CCGW 09T308 FL-94	C85 32940.08..	▲	▲	9,52	3,97	9,7	0,8
CCGW 09T312 FL-94	C85 32940.12..	▲	▲				1,2
CCGW 120404 FL-94	C85 44940.04..	▲	▲	12,7	4,76	12,9	0,4
CCGW 120408 FL-94	C85 44940.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGW 060202 FL-94 Cutting material PKD5510 Order No. C85 18940.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



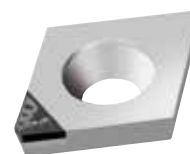
Cutter geometry:

R.H. cutting form „R“
sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
CCGW 060202 FR-95	C85 18950.02..	▲	▲				0,2
CCGW 060204 FR-95	C85 18950.04..	▲	▲	6,35	2,38	6,5	0,4
CCGW 060208 FR-95	C85 18950.08..	▲	▲				0,8
CCGW 09T304 FR-95	C85 32950.04..	▲	▲				0,4
CCGW 09T308 FR-95	C85 32950.08..	▲	▲	9,52	3,97	9,7	0,8
CCGW 09T312 FR-95	C85 32950.12..	▲	▲				1,2
CCGW 120404 FR-95	C85 44950.04..	▲	▲	12,7	4,76	12,9	0,4
CCGW 120408 FR-95	C85 44950.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CCGW 060202 FR-95 Cutting material PKD5510 Order No. C85 18950.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

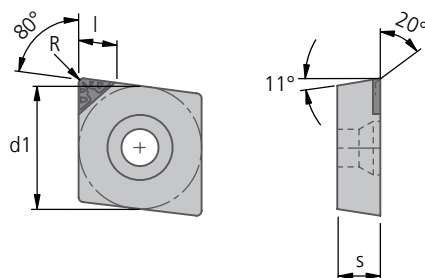
C95..97



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



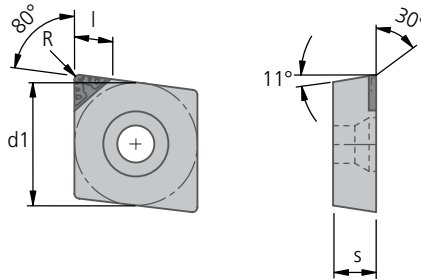
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CPGT 04T102 FN-97	C95 09970.02..	▲	▲	4,76	1,98	2,0	0,2
CPGT 060201 FN-97	C95 18970.01..	▲	▲				0,1
CPGT 060202 FN-97	C95 18970.02..	▲	▲				0,2
CPGT 060204 FN-97	C95 18970.04..	▲	▲	6,35	2,38	3,0	0,4
CPGT 060208 FN-97	C95 18970.08..	▲	▲				0,8
CPGT 09T302 FN-97	C95 32970.02..	▲	▲				0,2
CPGT 09T304 FN-97	C95 32970.04..	▲	▲				0,4
CPGT 09T308 FN-97	C95 32970.08..	▲	▲	9,52	3,97	3,0	0,8
CPGT 120404 FN-97	C95 44970.04..	▲	▲				0,4
CPGT 120408 FN-97	C95 44970.08..	▲	▲				0,8
CPGT 120412 FN-97	C95 44970.12..	▲	▲	12,7	4,76	3,0	1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGT 04T102 FN-97 Cutting material PKD5510 Order No. C95 09970.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D						
Cutting material designation		PKD5510	DSD5605						
Cutting edge design		F	F						
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R		
Cutting edge design F = sharp	Enter cutting material code	5510	5605						
CPGT 04T102 FN-96	C95 09960.02..	▲	▲	4,76	1,98	2,0	0,2		
CPGT 060201 FN-96	C95 18960.01..	▲	▲	6,35	2,38	3,0	0,1		
CPGT 060202 FN-96	C95 18960.02..	▲	▲				0,2		
CPGT 060204 FN-96	C95 18960.04..	▲	▲				0,4		
CPGT 060208 FN-96	C95 18960.08..	▲	▲				0,8		
CPGT 09T302 FN-96	C95 32960.02..	▲	▲	9,52	3,97	3,0	0,2		
CPGT 09T304 FN-96	C95 32960.04..	▲	▲				0,4		
CPGT 09T308 FN-96	C95 32960.08..	▲	▲				0,8		
CPGT 120404 FN-96	C95 44960.04..	▲	▲				0,4		
CPGT 120408 FN-96	C95 44960.08..	▲	▲	12,7	4,76	3,0	0,8		
CPGT 120412 FN-96	C95 44960.12..	▲	▲				1,2		
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGT 04T102 FN-96 Cutting material PKD5510 Order No. C95 09960.025510					
Aluminium alloys Si > 12%		●	●						
CFRP, GFRP, plastics, composites		◐	●						
Ceramics		◐	●						
Glass, quartz glass		◐	●						
sintered carbides (G10-G60)		●	●						
Metal Matrix Composites (MMC)		●	◐						
Graphite		◐	●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●						

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

C95..86



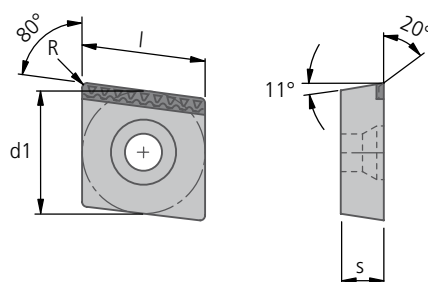
Cutter geometry:



L.H. cutting form „L“

3-D chip breaker for roughing

With stabilised cutting edge for
ap > 0,2 mm



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
CPGT 04T102 FL-86	C95 09860.02..	▲	▲	4,76	1,98	4,8	0,2
CPGT 060202 FL-86	C95 18860.02..	▲	▲	6,35	2,38	6,5	0,2
CPGT 060204 FL-86	C95 18860.04..	▲	▲				0,4
CPGT 080304 FL-86	C95 23860.04..	▲	▲	7,94	3,18	8,1	0,4
CPGT 09T304 FL-86	C95 32860.04..	▲	▲	9,52	3,97	9,7	0,4
CPGT 09T308 FL-86	C95 32860.08..	▲	▲				0,8
CPGT 120404 FL-86	C95 44860.04..	▲	▲	12,7	4,76	12,9	0,4
CPGT 120408 FL-86	C95 44860.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGT 04T102 FL-86 Cutting material PKD5510 Order No. C95 09860.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

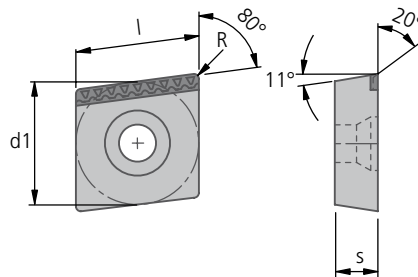


Cutter geometry:



R.H. cutting form „R“

3-D chip breaker for roughing

With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$ 

Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CPGT 04T102 FR-87	C95 09870.02..	▲	▲	4,76	1,98	4,8	0,2
CPGT 060202 FR-87	C95 18870.02..	▲	▲	6,35	2,38	6,5	0,2
CPGT 060204 FR-87	C95 18870.04..	▲	▲				0,4
CPGT 080304 FR-87	C95 23870.04..	▲	▲	7,94	3,18	8,1	0,4
CPGT 09T304 FR-87	C95 32870.04..	▲	▲				0,4
CPGT 09T308 FR-87	C95 32870.08..	▲	▲	9,52	3,97	9,7	0,8
CPGT 120404 FR-87	C95 44870.04..	▲	▲				0,4
CPGT 120408 FR-87	C95 44870.08..	▲	▲	12,7	4,76	12,9	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGT 04T102 FR-87 Cutting material PKD5510 Order No. C95 09870.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



C95..84



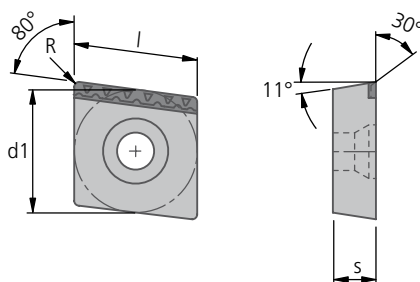
Cutter geometry:



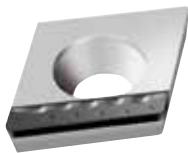
L.H. cutting form „L“

3-D chip breaker for finishing

With stabilised cutting edge for
ap > 0,08 mm



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
CPGT 04T102 FL-84	C95 09840.02..	▲	▲	4,76	1,98	4,8	0,2
CPGT 060202 FL-84	C95 18840.02..	▲	▲	6,35	2,38	6,5	0,2
CPGT 060204 FL-84	C95 18840.04..	▲	▲				0,4
CPGT 080304 FL-84	C95 23840.04..	▲	▲	7,94	3,18	8,1	0,4
CPGT 09T304 FL-84	C95 32840.04..	▲	▲				0,4
CPGT 09T308 FL-84	C95 32840.08..	▲	▲	9,52	3,97	9,7	0,8
CPGT 120404 FL-84	C95 44840.04..	▲	▲				0,4
CPGT 120408 FL-84	C95 44840.08..	▲	▲	12,7	4,76	12,9	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGT 04T102 FL-84 Cutting material PKD5510 Order No. C95 09840.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

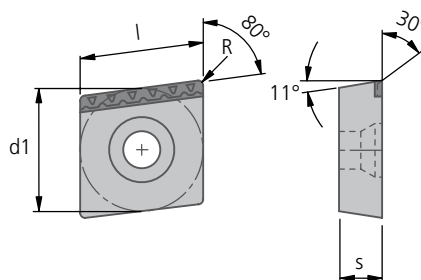


R.H. cutting form „R“

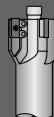
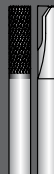
3-D chip breaker for finishing

With stabilised cutting edge for

ap > 0,08 mm



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CPGT 04T102 FR-85	C95 09850.02..	▲	▲	4,76	1,98	4,8	0,2
CPGT 060202 FR-85	C95 18850.02..	▲	▲	6,35	2,38	6,5	0,2
CPGT 060204 FR-85	C95 18850.04..	▲	▲				0,4
CPGT 080304 FR-85	C95 23850.04..	▲	▲	7,94	3,18	8,1	0,4
CPGT 09T304 FR-85	C95 32850.04..	▲	▲				0,4
CPGT 09T308 FR-85	C95 32850.08..	▲	▲	9,52	3,97	9,7	0,8
CPGT 120404 FR-85	C95 44850.04..	▲	▲				0,4
CPGT 120408 FR-85	C95 44850.08..	▲	▲	12,7	4,76	12,9	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGT 04T102 FR-85 Cutting material PKD5510 Order No. C95 09850.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



KOMET® ISO PCD/CVD-D Indexable inserts

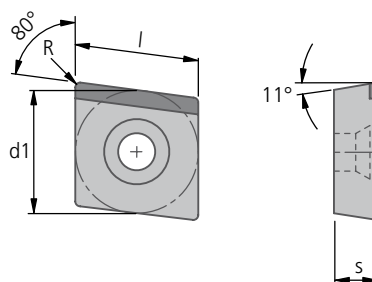
CPGW

C95..94



Cutter geometry:

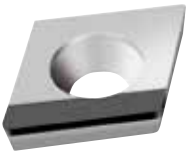
L.H. cutting form „L”
sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CPGW 04T102 FL-94	C95 09940.02..	▲	▲	4,76	1,98	4,8	0,2
CPGW 060202 FL-94	C95 18940.02..	▲	▲	6,35	2,38	6,5	0,2
CPGW 060204 FL-94	C95 18940.04..	▲	▲				0,4
CPGW 080302 FL-94	C95 23940.02..	▲	▲	7,94	3,18	8,1	0,2
CPGW 080304 FL-94	C95 23940.04..	▲	▲				0,4
CPGW 09T304 FL-94	C95 32940.04..	▲	▲	9,52	3,97	9,7	0,4
CPGW 09T308 FL-94	C95 32940.08..	▲	▲				0,8
CPGW 120404 FL-94	C95 44940.04..	▲	▲	12,7	4,76	12,9	0,4
CPGW 120408 FL-94	C95 44940.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGW 04T102 FL-94 Cutting material PKD5510 Order No. C95 09940.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

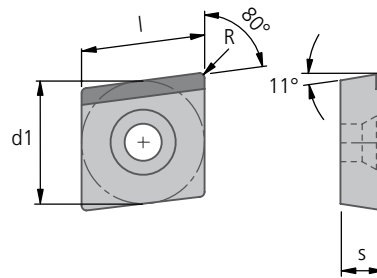
Recommended cutting data: page 46.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

R.H. cutting form „R“
sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
CPGW 04T102 FR-95	C95 09950.02..	▲	▲	4,76	1,98	4,8	0,2
CPGW 060202 FR-95	C95 18950.02..	▲	▲	6,35	2,38	6,5	0,2
CPGW 060204 FR-95	C95 18950.04..	▲	▲				0,4
CPGW 080304 FR-95	C95 23950.04..	▲	▲	7,94	3,18	8,1	0,4
CPGW 09T304 FR-95	C95 32950.04..	▲	▲				0,4
CPGW 09T308 FR-95	C95 32950.08..	▲	▲	9,52	3,97	9,7	0,8
CPGW 120404 FR-95	C95 44950.04..	▲	▲				0,4
CPGW 120408 FR-95	C95 44950.08..	▲	▲	12,7	4,76	12,9	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGW 04T102 FR-95 Cutting material PKD5510 Order No. C95 09950.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

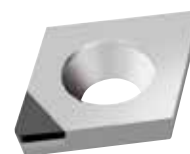
● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

KOMET® ISO PCD/CVD-D Indexable inserts

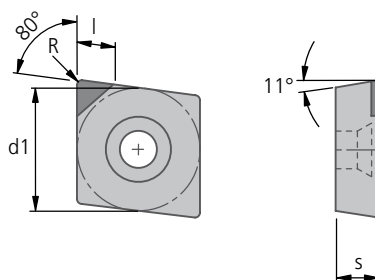
CPGW

C95..99



Cutter geometry:

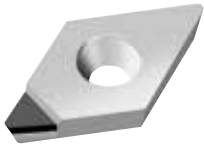
sharp cutting edge



Substrate		PCD	CVD-D						
Cutting material designation		PKD5510	DSD5605	d1	s	l	R		
Cutting edge design		F	F						
ISO Code	Order No.	PCD 	CVD-D  99,9%						
Cutting edge design F = sharp	Enter cutting material code	5510	5605						
CPGW 04T102 FN-99	C95 09990.02..	▲	▲	4,76	1,98	2,0	0,2		
CPGW 060201 FN-99	C95 18990.01..	▲	▲	6,35	2,38	3,0	0,1		
CPGW 060202 FN-99	C95 18990.02..	▲	▲				0,2		
CPGW 060204 FN-99	C95 18990.04..	▲	▲				0,4		
CPGW 060208 FN-99	C95 18990.08..	▲	▲				0,8		
CPGW 09T302 FN-99	C95 32990.02..	▲	▲	9,52	3,97	3,0	0,2		
CPGW 09T304 FN-99	C95 32990.04..	▲	▲				0,4		
CPGW 09T308 FN-99	C95 32990.08..	▲	▲				0,8		
CPGW 120404 FN-99	C95 44990.04..	▲	▲				0,4		
CPGW 120408 FN-99	C95 44990.08..	▲	▲	12,7	4,76	3,0	0,8		
CPGW 120412 FN-99	C95 44990.12..	▲	▲				1,2		
Aluminium alloys Si < 12%		●	●	Order example: ISO Code CPGW 04T102 FN-99 Cutting material PKD5510 Order No. C95 09990.025510					
Aluminium alloys Si > 12%		●	●						
CFRP, GFRP, plastics, composites		◐	●						
Ceramics		◐	●						
Glass, quartz glass		◐	●						
sintered carbides (G10-G60)		●	●						
Metal Matrix Composites (MMC)		●	◐						
Graphite		◐	●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●						

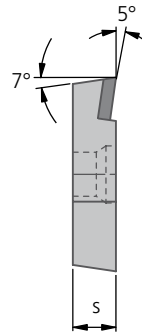
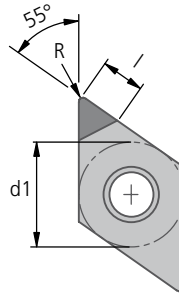
Recommended cutting data: page 46.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

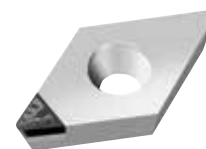
positive rake angle
sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
DCGT 070201 FN-98	C86 18980.01..	▲	▲	6,35	2,38	3,0	0,1
DCGT 070202 FN-98	C86 18980.02..	▲	▲				0,2
DCGT 070204 FN-98	C86 18980.04..	▲	▲				0,4
DCGT 070208 FN-98	C86 18980.08..	▲	▲				0,8
DCGT 11T301 FN-98	C86 32980.01..	▲	▲	9,52	3,97	3,0	0,1
DCGT 11T302 FN-98	C86 32980.02..	▲	▲				0,2
DCGT 11T304 FN-98	C86 32980.04..	▲	▲				0,4
DCGT 11T308 FN-98	C86 32980.08..	▲	▲				0,8
DCGT 11T312 FN-98	C86 32980.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code DCGT 070201 FN-98 Cutting material PKD5510 Order No. C86 18980.015510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



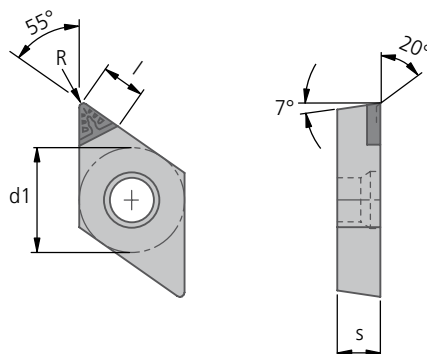
C86..97



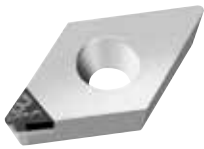
Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
DCGT 070202 FN-97	C86 18970.02..	▲	▲				0,2
DCGT 070204 FN-97	C86 18970.04..	▲	▲	6,35	2,38	3,0	0,4
DCGT 070208 FN-97	C86 18970.08..	▲	▲				0,8
DCGT 11T302 FN-97	C86 32970.02..	▲	▲				0,2
DCGT 11T304 FN-97	C86 32970.04..	▲	▲				0,4
DCGT 11T308 FN-97	C86 32970.08..	▲	▲	9,52	3,97	3,0	0,8
DCGT 11T312 FN-97	C86 32970.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code DCGT 070202 FN-97 Cutting material PKD5510 Order No. C86 18970.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

▽ Wiper

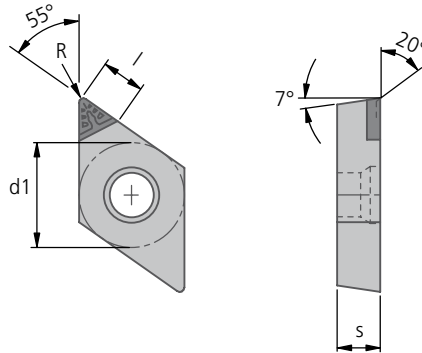
3-D chip breaker for roughing

with Wiper geometry for

setting angle $\alpha = 93^\circ$

With stabilised cutting edge for

$a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
DCGT 070202 FN-93W	C86 18930.02..	▲	▲				0,2
DCGT 070204 FN-93W	C86 18930.04..	▲	▲	6,35	2,38	3,0	0,4
DCGT 070208 FN-93W	C86 18930.08..	▲	▲				0,8
DCGT 11T302 FN-93W	C86 32930.02..	▲	▲				0,2
DCGT 11T304 FN-93W	C86 32930.04..	▲	▲	9,52	3,97	3,0	0,4
DCGT 11T308 FN-93W	C86 32930.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code DCGT 070202 FN-93W Cutting material PKD5510 Order No. C86 18930.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Surface comparison

■ R0,4

■ R0,8

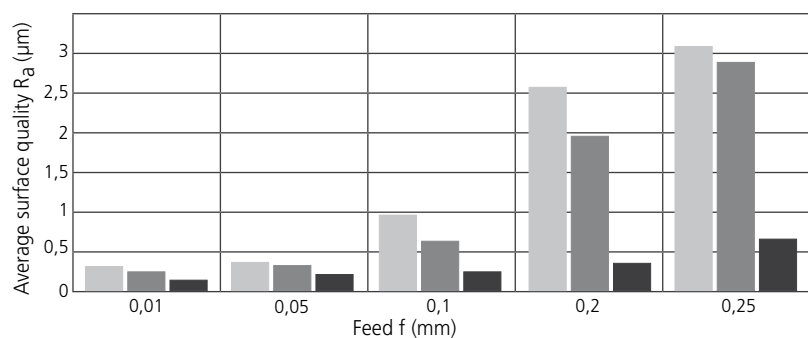
■ R0,4 Wiper $\alpha = 93^\circ$

Average surface quality R_a

Material: G-AlSi9Cu4Mg (~ 3.2573)

Cutting speed: $v_c = 1000 \text{ m/min}$

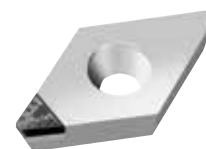
Cutting depth: $a_p = 0,5 \text{ mm}$



● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

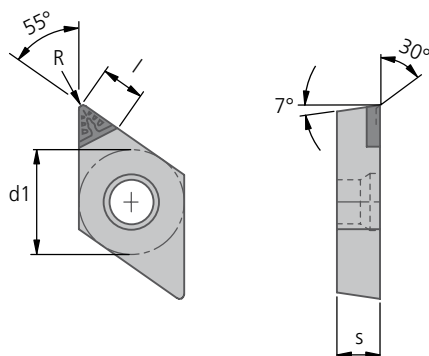
C86..96



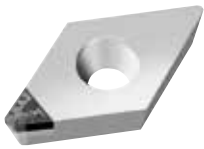
Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 				
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
DCGT 070202 FN-96	C86 18960.02..	▲	▲	6,35	2,38	3,0	0,2
DCGT 070204 FN-96	C86 18960.04..	▲	▲				0,4
DCGT 070208 FN-96	C86 18960.08..	▲	▲				0,8
DCGT 11T302 FN-96	C86 32960.02..	▲	▲	9,52	3,97	3,0	0,2
DCGT 11T304 FN-96	C86 32960.04..	▲	▲				0,4
DCGT 11T308 FN-96	C86 32960.08..	▲	▲				0,8
DCGT 11T312 FN-96	C86 32960.12..	▲	▲				1,2
Aluminium alloys Si < 12%	N	●	●	Order example: ISO Code DCGT 070202 FN-96 Cutting material PKD5510 Order No. C86 18960.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

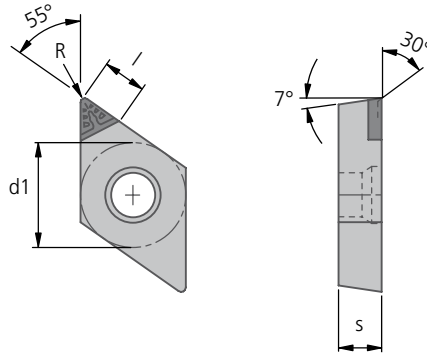


Cutter geometry:

Wiper

3-D chip breaker for finishing with Wiper geometry for setting angle $\kappa = 93^\circ$

With stabilised cutting edge for $a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
DCGT 070202 FN-92W	C86 18920.02..	▲	▲				0,2
DCGT 070204 FN-92W	C86 18920.04..	▲	▲	6,35	2,38	3,0	0,4
DCGT 070208 FN-92W	C86 18920.08..	▲	▲				0,8
DCGT 11T302 FN-92W	C86 32920.02..	▲	▲				0,2
DCGT 11T304 FN-92W	C86 32920.04..	▲	▲	9,52	3,97	3,0	0,4
DCGT 11T308 FN-92W	C86 32920.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code DCGT 070202 FN-92W Cutting material PKD5510 Order No. C86 18920.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Surface comparison

R0,4

R0,8

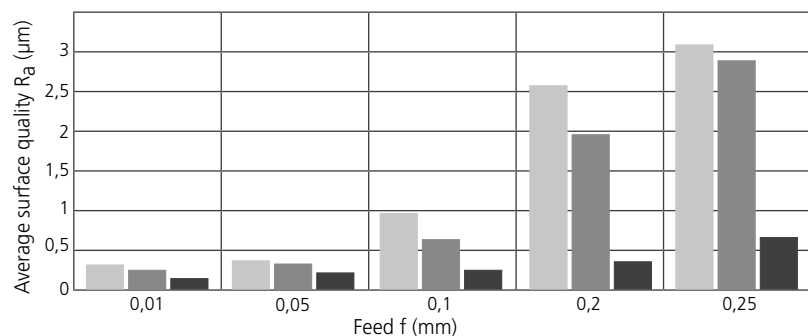
R0,4 Wiper $\kappa = 93^\circ$

Average surface quality R_a

Material: G-AlSi9Cu4Mg (~ 3.2573)

Cutting speed: $v_c = 1000 \text{ m/min}$

Cutting depth: $a_p = 0,5 \text{ mm}$



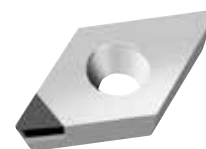
● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

KOMET® ISO PCD/CVD-D Indexable inserts

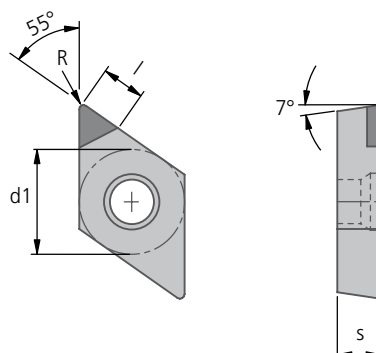
DCGW

C86..99



Cutter geometry:

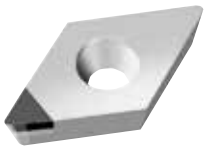
sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 				
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
DCGW 070201 FN-99	C86 18990.01..	▲	▲	6,35	2,38	3,0	0,1
DCGW 070202 FN-99	C86 18990.02..	▲	▲				0,2
DCGW 070204 FN-99	C86 18990.04..	▲	▲				0,4
DCGW 070208 FN-99	C86 18990.08..	▲	▲				0,8
DCGW 11T301 FN-99	C86 32990.01..	▲	▲	9,52	3,97	3,0	0,1
DCGW 11T302 FN-99	C86 32990.02..	▲	▲				0,2
DCGW 11T304 FN-99	C86 32990.04..	▲	▲				0,4
DCGW 11T308 FN-99	C86 32990.08..	▲	▲				0,8
DCGW 11T312 FN-99	C86 32990.12..	▲	▲				1,2
Aluminium alloys Si < 12%	N	●	●	Order example: ISO Code DCGW 070204 FN-99 Cutting material PKD5510 Order No. C86 18990.015510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Recommended cutting data: page 46.

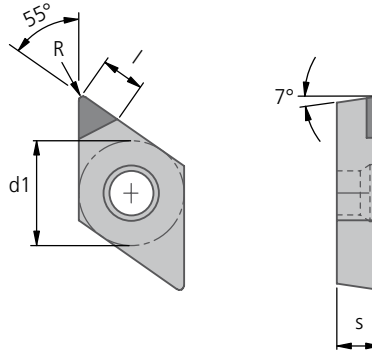
▲ Availability: for delivery see current price and stock list



Cutter geometry:



sharp cutting edge
with Wiper geometry for
setting angle $\alpha = 93^\circ$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
DCGW 070202 FN-91W	C86 18910.02..	▲	▲				0,2
DCGW 070204 FN-91W	C86 18910.04..	▲	▲	6,35	2,38	3,0	0,4
DCGW 070208 FN-91W	C86 18910.08..	▲	▲				0,8
DCGW 11T302 FN-91W	C86 32910.02..	▲	▲				0,2
DCGW 11T304 FN-91W	C86 32910.04..	▲	▲	9,52	3,97	3,0	0,4
DCGW 11T308 FN-91W	C86 32910.08..	▲	▲				0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code DCGW 070202 FN-91W Cutting material PKD5510 Order No. C86 18910.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

Surface comparison

■ R0,4

■ R0,8

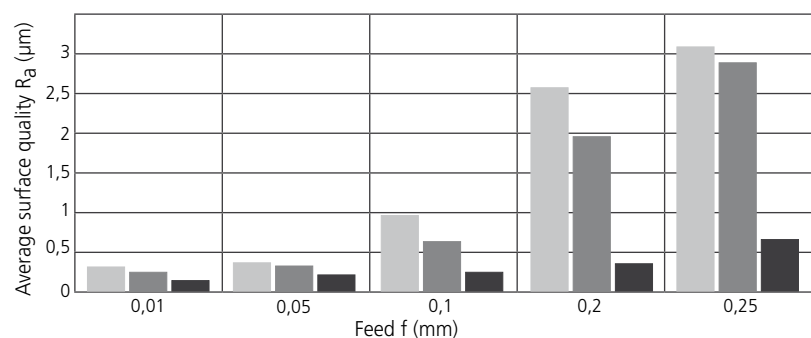
■ R0,4 Wiper $\alpha = 93^\circ$

Average surface quality R_a

Material: G-AlSi9Cu4Mg (~ 3.2573)

Cutting speed: $v_c = 1000$ m/min

Cutting depth: $a_p = 0,5$ mm



● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !



KOMET® ISO PCD/CVD-D Indexable inserts

RCGT

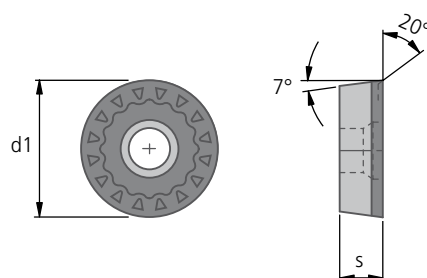
C87..90



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD 	CVD-D 	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RCGT 1003M0 FN-90F	C87 34900.00..	▲	▲	10,0	3,18
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RCGT 1003M0 FN-90F Cutting material PKD5510 Order No. C87 34900.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		◐	●		
Ceramics		◐	●		
Glass, quartz glass	N	◐	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	◐		
Graphite		◐	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

Recommended cutting data: page 46.

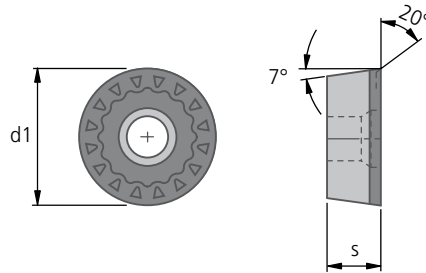
▲ Availability: for delivery see current price and stock list



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD 	CVD-D 	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RCGT 0602M0 FN-90F	C88 17900.00..	▲	▲	6,0	2,38
RCGT 0803M0 FN-90F	C88 24900.00..	▲	▲	8,0	3,18
RCGT 10T3M0 FN-90F	C88 34900.00..	▲	▲	10,0	3,97
RCGT 1204M0 FN-90F	C88 42900.00..	▲	▲	12,0	4,76
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RCGT 0602M0 FN-90F Cutting material PKD5510 Order No. C88 17900.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		●	●		
Ceramics		●	●		
Glass, quartz glass	N	●	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	●		
Graphite		●	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

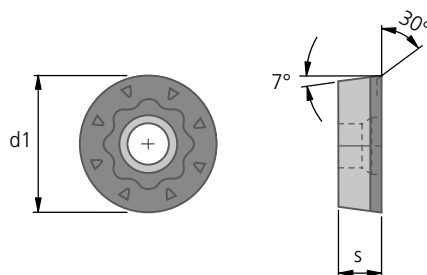
C87..89



Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



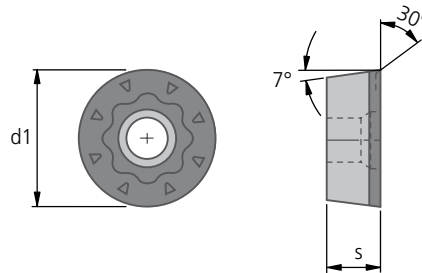
Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD PKD	CVD-D DSD	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RCGT 1003M0 FN-89F	C87 34890.00..	▲	▲	10,0	3,18
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RCGT 1003M0 FN-89F Cutting material PKD5510 Order No. C87 34890.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		●	●		
Ceramics		●	●		
Glass, quartz glass	N	●	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	●		
Graphite		●	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		



Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD 	CVD-D 	d1	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RCGT 0602M0 FN-89F	C88 17890.00..	▲	▲	6,0	2,38
RCGT 0803M0 FN-89F	C88 24890.00..	▲	▲	8,0	3,18
RCGT 10T3M0 FN-89F	C88 34890.00..	▲	▲	10,0	3,97
RCGT 1204M0 FN-89F	C88 42890.00..	▲	▲	12,0	4,76
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RCGT 0602M0 FN-89F Cutting material PKD5510 Order No. C88 17890.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		◐	●		
Ceramics		◐	●		
Glass, quartz glass	N	◐	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	◐		
Graphite		◐	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

KOMET® ISO PCD/CVD-D Indexable inserts

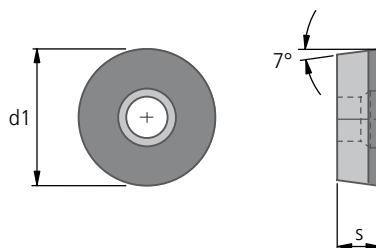
RCGW

C87..88



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605	10,0	3,18
RCGW 1003M0 FN-88F	C87 34880.00..	▲	▲		
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RCGW 1003M0 FN-88F Cutting material PKD5510 Order No. C87 34880.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		●	●		
Ceramics		●	●		
Glass, quartz glass	N	●	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	●		
Graphite		●	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

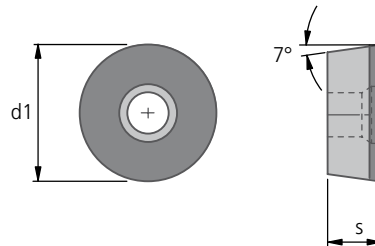
Recommended cutting data: page 46.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD 	CVD-D 	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RCGW 0602M0 FN-88F	C88 17880.00..	▲	▲	6,0	2,38
RCGW 0803M0 FN-88F	C88 24880.00..	▲	▲	8,0	3,18
RCGW 10T3M0 FN-88F	C88 34880.00..	▲	▲	10,0	3,97
RCGW 1204M0 FN-88F	C88 42880.00..	▲	▲	12,0	4,76
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RCGW 0602M0 FN-88F Cutting material PKD5510 Order No. C88 17880.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		◐	●		
Ceramics		◐	●		
Glass, quartz glass	N	◐	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	◐		
Graphite		◐	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

KOMET® ISO PCD/CVD-D Indexable inserts

RDHX

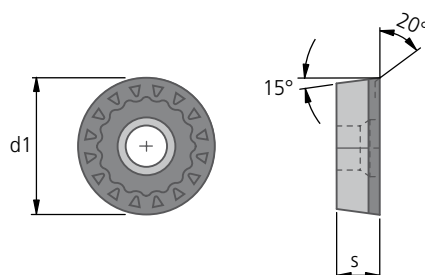
C98..90



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD 	CVD-D 	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RDHX 0501M0 FN-90F	C98 10900.00..	▲	▲	5,0	1,59
RDHX 0702M0 FN-90F	C98 20900.00..	▲	▲	7,0	2,38
RDHX 1003M0 FN-90F	C98 34900.00..	▲	▲	10,0	3,18
RDHX 12T3M0 FN-90F	C98 42900.00..	▲	▲	12,0	3,97
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RDHX 0501M0 FN-90F Cutting material PKD5510 Order No. C98 10900.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		●	●		
Ceramics		●	●		
Glass, quartz glass	N	●	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	●		
Graphite		●	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

Recommended cutting data: page 46.

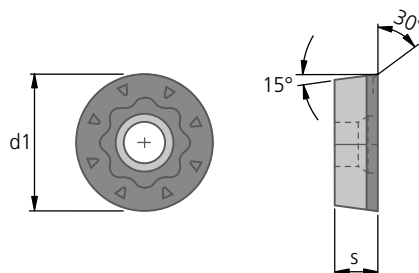
▲ Availability: for delivery see current price and stock list



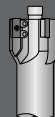
Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD 	CVD-D 	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RDHX 0501M0 FN-89F	C98 10890.00..	▲	▲	5,0	1,59
RDHX 0702M0 FN-89F	C98 20890.00..	▲	▲	7,0	2,38
RDHX 1003M0 FN-89F	C98 34890.00..	▲	▲	10,0	3,18
RDHX 12T3M0 FN-89F	C98 42890.00..	▲	▲	12,0	3,97
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RDHX 0501M0 FN-89F Cutting material PKD5510 Order No. C98 10890.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		◐	●		
Ceramics		◐	●		
Glass, quartz glass	N	◐	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	◐		
Graphite		◐	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		



KOMET® ISO PCD/CVD-D Indexable inserts

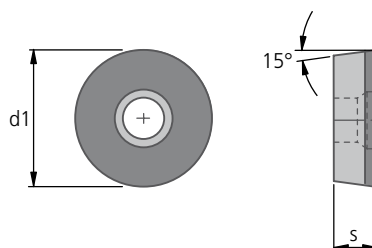
RDHX

C98..88



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D		
Cutting material designation		PKD5510	DSD5605		
Cutting edge design		F	F		
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s
Cutting edge design F = sharp	Enter cutting material code	5510	5605		
RDHX 0501M0 FN-88F	C98 10880.00..	▲	▲	5,0	1,59
RDHX 0702M0 FN-88F	C98 20880.00..	▲	▲	7,0	2,38
RDHX 1003M0 FN-88F	C98 34880.00..	▲	▲	10,0	3,18
RDHX 12T3M0 FN-88F	C98 42880.00..	▲	▲	12,0	3,97
Aluminium alloys Si < 12%		●	●	Order example: ISO Code RDHX 0501M0 FN-88F Cutting material PKD5510 Order No. C98 10880.005510	
Aluminium alloys Si > 12%		●	●		
CFRP, GFRP, plastics, composites		●	●		
Ceramics		●	●		
Glass, quartz glass	N	●	●		
sintered carbides (G10-G60)		●	●		
Metal Matrix Composites (MMC)		●	●		
Graphite		●	●		
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●		

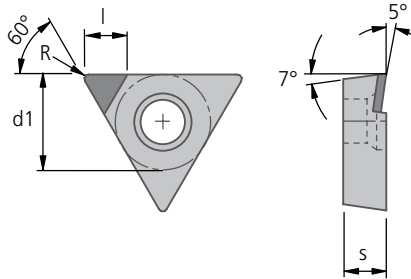
Recommended cutting data: page 46.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

positive rake angle
sharp cutting edge



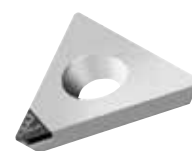
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
TCGT 090202 FN-98	C84 13980.02..	▲	▲	5,56	2,38	3,0	0,2
TCGT 090204 FN-98	C84 13980.04..	▲	▲				0,4
TCGT 090208 FN-98	C84 13980.08..	▲	▲				0,8
TCGT 110202 FN-98	C84 18980.02..	▲	▲	6,35	2,38	3,0	0,2
TCGT 110204 FN-98	C84 18980.04..	▲	▲				0,4
TCGT 110208 FN-98	C84 18980.08..	▲	▲				0,8
TCGT 16T302 FN-98	C84 32980.02..	▲	▲	9,52	3,97	3,0	0,2
TCGT 16T304 FN-98	C84 32980.04..	▲	▲				0,4
TCGT 16T308 FN-98	C84 32980.08..	▲	▲				0,8
TCGT 16T312 FN-98	C84 32980.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 090202 FN-98 Cutting material PKD5510 Order No. C84 13980.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes !



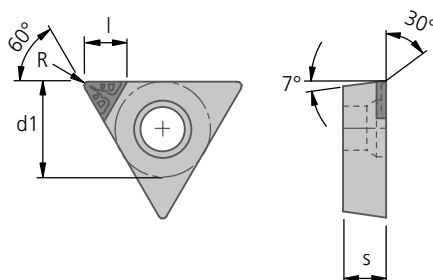
C84..97



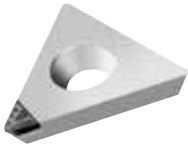
Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



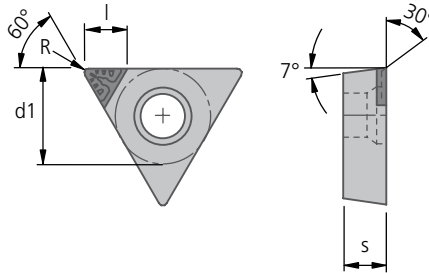
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp		5510	5605				
TCGT 090202 FN-97	C84 13970.02..	▲	▲				0,2
TCGT 090204 FN-97	C84 13970.04..	▲	▲	5,56	2,38	3,0	0,4
TCGT 090208 FN-97	C84 13970.08..	▲	▲				0,8
TCGT 110202 FN-97	C84 18970.02..	▲	▲				0,2
TCGT 110204 FN-97	C84 18970.04..	▲	▲	6,35	2,38	3,0	0,4
TCGT 110208 FN-97	C84 18970.08..	▲	▲				0,8
TCGT 16T302 FN-97	C84 32970.02..	▲	▲				0,2
TCGT 16T304 FN-97	C84 32970.04..	▲	▲				0,4
TCGT 16T308 FN-97	C84 32970.08..	▲	▲	9,52	3,97	3,0	0,8
TCGT 16T312 FN-97	C84 32970.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 090202 FN-97 Cutting material PKD5510 Order No. C84 13970.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



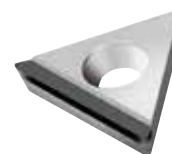
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD  5510	CVD-D  5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
TCGT 090202 FN-96	C84 13960.02..	▲	▲	5,56	2,38	3,0	0,2
TCGT 090204 FN-96	C84 13960.04..	▲	▲				0,4
TCGT 090208 FN-96	C84 13960.08..	▲	▲				0,8
TCGT 110202 FN-96	C84 18960.02..	▲	▲	6,35	2,38	3,0	0,2
TCGT 110204 FN-96	C84 18960.04..	▲	▲				0,4
TCGT 110208 FN-96	C84 18960.08..	▲	▲				0,8
TCGT 16T302 FN-96	C84 32960.02..	▲	▲	9,52	3,97	3,0	0,2
TCGT 16T304 FN-96	C84 32960.04..	▲	▲				0,4
TCGT 16T308 FN-96	C84 32960.08..	▲	▲				0,8
TCGT 16T312 FN-96	C84 32960.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 090202 FN-96 Cutting material PKD5510 Order No. C84 13960.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

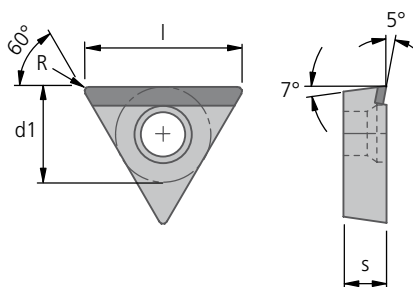


C84..81

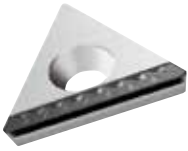


Cutter geometry:

positive rake angle
sharp cutting edge



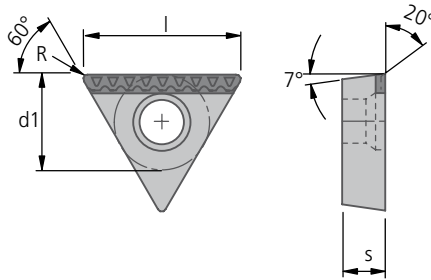
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D  99,9%				
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
TCGT 090202 F-81	C84 13810.02..	▲	▲	5,56	2,38	9,34	0,2
TCGT 090204 F-81	C84 13810.04..	▲	▲			9,04	0,4
TCGT 090208 F-81	C84 13810.08..	▲	▲			8,46	0,8
TCGT 110202 F-81	C84 18810.02..	▲	▲	6,35	2,38	10,71	0,2
TCGT 110204 F-81	C84 18810.04..	▲	▲			10,41	0,4
TCGT 110208 F-81	C84 18810.08..	▲	▲			9,83	0,8
TCGT 110212 F-81	C84 18810.12..	▲	▲			9,24	1,2
TCGT 16T302 F-81	C84 32810.02..	▲	▲	9,52	3,97	16,20	0,2
TCGT 16T304 F-81	C84 32810.04..	▲	▲			15,90	0,4
TCGT 16T308 F-81	C84 32810.08..	▲	▲			15,32	0,8
TCGT 16T312 F-81	C84 32810.12..	▲	▲			14,73	1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 090202 F-81 Cutting material PKD5510 Order No. C84 13810.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
TCGT 090202 F-86	C84 13860.02..	▲	▲	5,56	2,38	9,34	0,2
TCGT 090204 F-86	C84 13860.04..	▲	▲			9,04	0,4
TCGT 090208 F-86	C84 13860.08..	▲	▲			8,46	0,8
TCGT 110202 F-86	C84 18860.02..	▲	▲	6,35	2,38	10,71	0,2
TCGT 110204 F-86	C84 18860.04..	▲	▲			10,41	0,4
TCGT 110208 F-86	C84 18860.08..	▲	▲			9,83	0,8
TCGT 110212 F-86	C84 18860.12..	▲	▲			9,24	1,2
TCGT 16T302 F-86	C84 32860.02..	▲	▲	9,52	3,97	16,20	0,2
TCGT 16T304 F-86	C84 32860.04..	▲	▲			15,90	0,4
TCGT 16T308 F-86	C84 32860.08..	▲	▲			15,32	0,8
TCGT 16T312 F-86	C84 32860.12..	▲	▲			14,73	1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 090202 F-86 Cutting material PKD5510 Order No. C84 13860.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



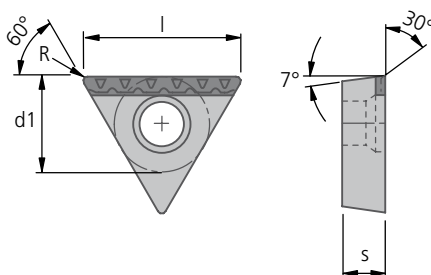
C84..84



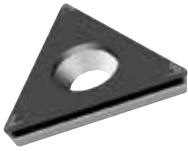
Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$



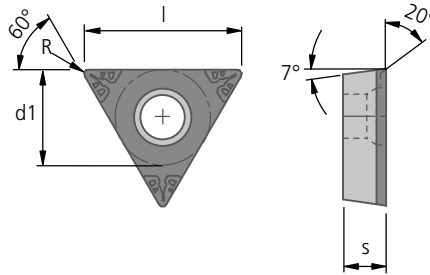
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD	CVD-D				
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
TCGT 090202 F-84	C84 13840.02..	▲	▲	5,56	2,38	9,34	0,2
TCGT 090204 F-84	C84 13840.04..	▲	▲			9,04	0,4
TCGT 090208 F-84	C84 13840.08..	▲	▲			8,46	0,8
TCGT 110202 F-84	C84 18840.02..	▲	▲	6,35	2,38	10,71	0,2
TCGT 110204 F-84	C84 18840.04..	▲	▲			10,41	0,4
TCGT 110208 F-84	C84 18840.08..	▲	▲			9,83	0,8
TCGT 110212 F-84	C84 18840.12..	▲	▲			9,24	1,2
TCGT 16T302 F-84	C84 32840.02..	▲	▲	9,52	3,97	16,20	0,2
TCGT 16T304 F-84	C84 32840.04..	▲	▲			15,90	0,4
TCGT 16T308 F-84	C84 32840.08..	▲	▲			15,32	0,8
TCGT 16T312 F-84	C84 32840.12..	▲	▲			14,73	1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 090202 F-84 Cutting material PKD5510 Order No. C84 13840.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass N		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:



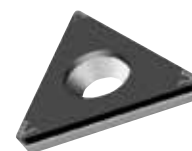
3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
TCGT 110202 FN-90F	C84 18900.02..	▲	▲			10,71	0,2
TCGT 110204 FN-90F	C84 18900.04..	▲	▲	6,35	2,38	10,41	0,4
TCGT 110208 FN-90F	C84 18900.08..	▲	▲			9,83	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 110202 FN-90F Cutting material PKD5510 Order No. C84 18890.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



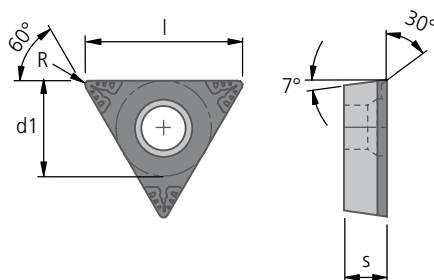
C84..89



Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$

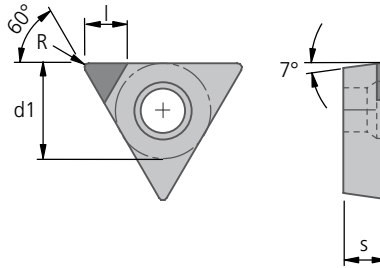


Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
TCGT 110202 FN-89F	C84 18890.02..	▲	▲			10,71	0,2
TCGT 110204 FN-89F	C84 18890.04..	▲	▲	6,35	2,38	10,41	0,4
TCGT 110208 FN-89F	C84 18890.08..	▲	▲			9,83	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGT 110202 FN-89F Cutting material PKD5510 Order No. C84 18890.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
TCGW 090202 FN-99	C84 13990.02..	▲	▲				0,2
TCGW 090204 FN-99	C84 13990.04..	▲	▲	5,56	2,38	3,0	0,4
TCGW 090208 FN-99	C84 13990.08..	▲	▲				0,8
TCGW 110202 FN-99	C84 18990.02..	▲	▲				0,2
TCGW 110204 FN-99	C84 18990.04..	▲	▲	6,35	2,38	3,0	0,4
TCGW 110208 FN-99	C84 18990.08..	▲	▲				0,8
TCGW 16T302 FN-99	C84 32990.02..	▲	▲				0,2
TCGW 16T304 FN-99	C84 32990.04..	▲	▲	9,52	3,97	3,0	0,4
TCGW 16T308 FN-99	C84 32990.08..	▲	▲				0,8
TCGW 16T312 FN-99	C84 32990.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGW 090202 FN-99 Cutting material PKD5510 Order No. C84 13990.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ◐ Suitable in some cases

Important: See chapter 8 for more application details and safety notes !



ISO

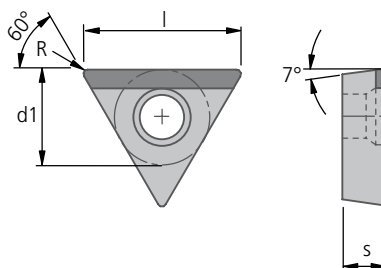


C84..94

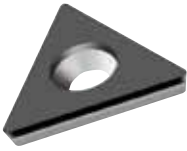


Cutter geometry:

sharp cutting edge

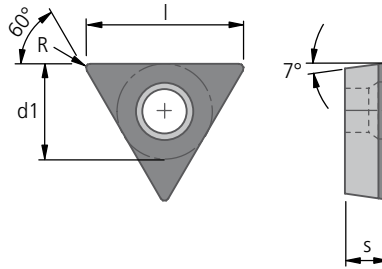


Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
TCGW 090202 F-94	C84 13940.02..	▲	▲	5,56	2,38	9,34	0,2
TCGW 090204 F-94	C84 13940.04..	▲	▲			9,04	0,4
TCGW 090208 F-94	C84 13940.08..	▲	▲			8,46	0,8
TCGW 110202 F-94	C84 18940.02..	▲	▲	6,35	2,38	10,71	0,2
TCGW 110204 F-94	C84 18940.04..	▲	▲			10,41	0,4
TCGW 110208 F-94	C84 18940.08..	▲	▲			9,83	0,8
TCGW 110212 F-94	C84 18940.12..	▲	▲			9,24	1,2
TCGW 16T302 F-94	C84 32940.02..	▲	▲	9,52	3,97	16,20	0,2
TCGW 16T304 F-94	C84 32940.04..	▲	▲			15,90	0,4
TCGW 16T308 F-94	C84 32940.08..	▲	▲			15,32	0,8
TCGW 16T312 F-94	C84 32940.12..	▲	▲			14,73	1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGW 090202 F-94 Cutting material PKD5510 Order No. C84 13940.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
TCGW 110202 FN-88F	C84 18880.02..	▲	▲			10,71	0,2
TCGW 110204 FN-88F	C84 18880.04..	▲	▲	6,35	2,38	10,41	0,4
TCGW 110208 FN-88F	C84 18880.08..	▲	▲			9,83	0,8
Aluminium alloys Si < 12%		●	●	Order example: ISO Code TCGW 110202 FN-88F Cutting material PKD5510 Order No. C84 18880.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

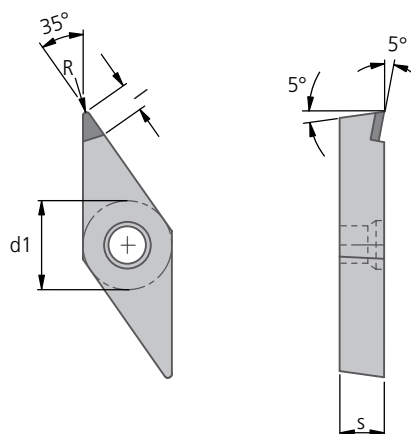


C79..98

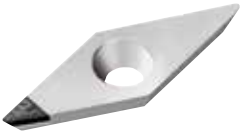


Cutter geometry:

positive rake angle
sharp cutting edge



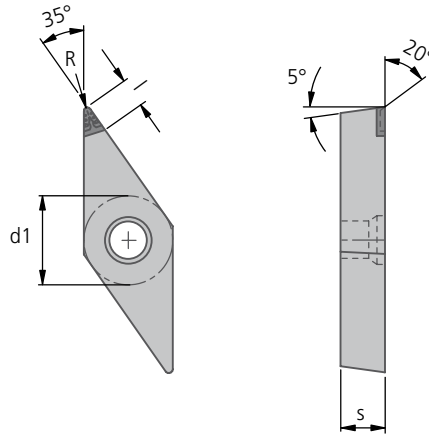
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 				
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
VBGT 110201 FN-98	C79 18980.01..	▲	▲	6,35	2,38	3,0	0,1
VBGT 110202 FN-98	C79 18980.02..	▲	▲				0,2
VBGT 110204 FN-98	C79 18980.04..	▲	▲				0,4
VBGT 110208 FN-98	C79 18980.08..	▲	▲				0,8
VBGT 160401 FN-98	C79 32980.01..	▲	▲	9,52	4,76	3,0	0,1
VBGT 160402 FN-98	C79 32980.02..	▲	▲				0,2
VBGT 160404 FN-98	C79 32980.04..	▲	▲				0,4
VBGT 160408 FN-98	C79 32980.08..	▲	▲				0,8
VBGT 160412 FN-98	C79 32980.12..	▲	▲				1,2
Aluminium alloys Si < 12%	N	●	●	Order example: ISO Code VBGT 110201 FN-98 Cutting material PKD5510 Order No. C79 18980.015510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)	●	●					



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2$ mm



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
VBGT 110202 FN-97	C79 18970.02..	▲	▲				0,2
VBGT 110204 FN-97	C79 18970.04..	▲	▲	6,35	2,38	3,0	0,4
VBGT 110208 FN-97	C79 18970.08..	▲	▲				0,8
VBGT 160402 FN-97	C79 32970.02..	▲	▲				0,2
VBGT 160404 FN-97	C79 32970.04..	▲	▲				0,4
VBGT 160408 FN-97	C79 32970.08..	▲	▲	9,52	4,76	3,0	0,8
VBGT 160412 FN-97	C79 32970.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code VBGT 110202 FN-97 Cutting material PKD5510 Order No. C79 18970.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



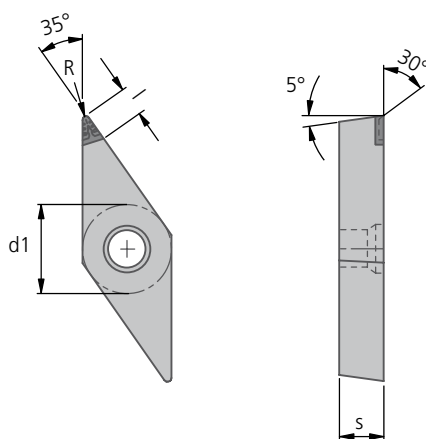
C79..96



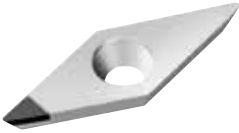
Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$

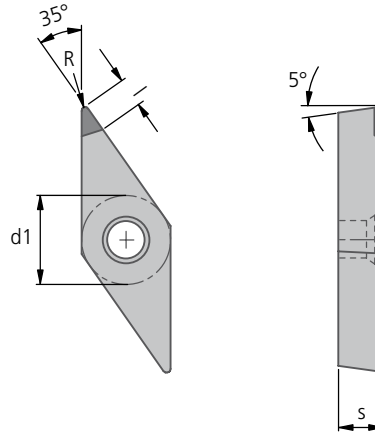


Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD PKD5510	CVD-D DSD5605	d1	s	l	R
VBGT 110202 FN-96	C79 18960.02..	▲	▲				0,2
VBGT 110204 FN-96	C79 18960.04..	▲	▲	6,35	2,38	3,0	0,4
VBGT 110208 FN-96	C79 18960.08..	▲	▲				0,8
VBGT 160402 FN-96	C79 32960.02..	▲	▲				0,2
VBGT 160404 FN-96	C79 32960.04..	▲	▲				0,4
VBGT 160408 FN-96	C79 32960.08..	▲	▲	9,52	4,76	3,0	0,8
VBGT 160412 FN-96	C79 32960.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code VBGT 110202 FN-96 Cutting material PKD5510 Order No. C79 18960.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

sharp cutting edge



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D 	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code	5510	5605				
VBGW 110201 FN-99	C79 18990.01..	▲	▲	6,35	2,38	3,0	0,1
VBGW 110202 FN-99	C79 18990.02..	▲	▲				0,2
VBGW 110204 FN-99	C79 18990.04..	▲	▲				0,4
VBGW 110208 FN-99	C79 18990.08..	▲	▲				0,8
VBGW 160401 FN-99	C79 32990.01..	▲	▲	9,52	4,76	3,0	0,1
VBGW 160402 FN-99	C79 32990.02..	▲	▲				0,2
VBGW 160404 FN-99	C79 32990.04..	▲	▲				0,4
VBGW 160408 FN-99	C79 32990.08..	▲	▲				0,8
VBGW 160412 FN-99	C79 32990.12..	▲	▲				1,2
Aluminium alloys Si < 12%	N	●	●	Order example: ISO Code VBGW 110201 FN-99 Cutting material PKD5510 Order No. C79 18990.015510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass		●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

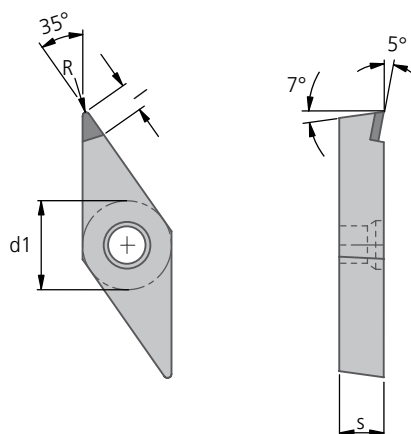


C89..98

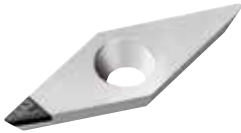


Cutter geometry:

positive rake angle
sharp cutting edge



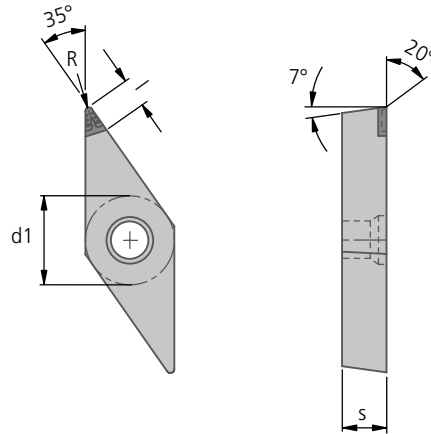
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D  99,9%				
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
VCGT 070201 FN-98	C89 03980.01..	▲	▲	3,97	2,38	3,0	0,1
VCGT 070202 FN-98	C89 03980.02..	▲	▲				0,2
VCGT 070204 FN-98	C89 03980.04..	▲	▲				0,4
VCGT 070208 FN-98	C89 03980.08..	▲	▲				0,8
VCGT 110301 FN-98	C89 18980.01..	▲	▲	6,35	3,18	3,0	0,1
VCGT 110302 FN-98	C89 18980.02..	▲	▲				0,2
VCGT 110304 FN-98	C89 18980.04..	▲	▲				0,4
VCGT 110308 FN-98	C89 18980.08..	▲	▲				0,8
VCGT 160401 FN-98	C89 32980.01..	▲	▲	9,52	4,76	3,0	0,1
VCGT 160402 FN-98	C89 32980.02..	▲	▲				0,2
VCGT 160404 FN-98	C89 32980.04..	▲	▲				0,4
VCGT 160408 FN-98	C89 32980.08..	▲	▲				0,8
VCGT 160412 FN-98	C89 32980.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code VCGT 070201 FN-98 Cutting material PKD5510 Order No. C89 03980.015510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass N		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:



3-D chip breaker for roughing
With stabilised cutting edge for
 $a_p > 0,2 \text{ mm}$



Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
VCGT 070202 FN-97	C89 03970.02..	▲	▲				0,2
VCGT 070204 FN-97	C89 03970.04..	▲	▲	3,97	2,38	3,0	0,4
VCGT 070208 FN-97	C89 03970.08..	▲	▲				0,8
VCGT 110302 FN-97	C89 18970.02..	▲	▲				0,2
VCGT 110304 FN-97	C89 18970.04..	▲	▲	6,35	3,18	3,0	0,4
VCGT 110308 FN-97	C89 18970.08..	▲	▲				0,8
VCGT 160402 FN-97	C89 32970.02..	▲	▲				0,2
VCGT 160404 FN-97	C89 32970.04..	▲	▲				0,4
VCGT 160408 FN-97	C89 32970.08..	▲	▲	9,52	4,76	3,0	0,8
VCGT 160412 FN-97	C89 32970.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code VCGT 070202 FN-97 Cutting material PKD5510 Order No. C89 03970.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass	N	◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

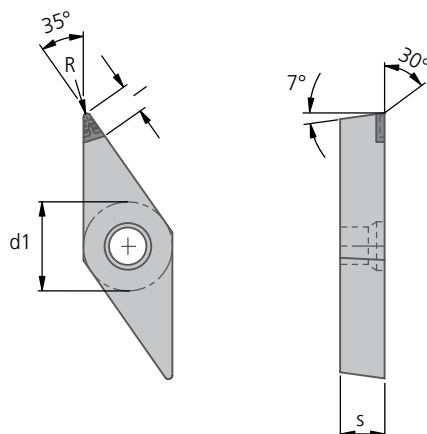
C89..96



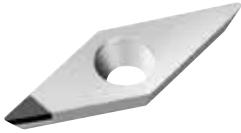
Cutter geometry:



3-D chip breaker for finishing
With stabilised cutting edge for
 $a_p > 0,08 \text{ mm}$

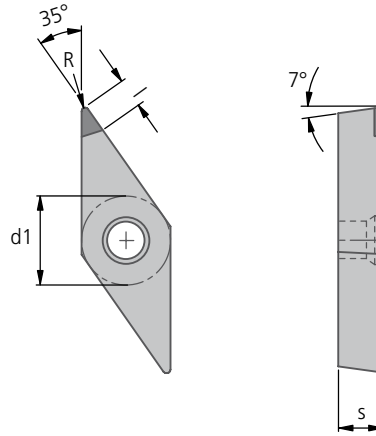


Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605	d1	s	l	R
Cutting edge design		F	F				
ISO Code	Order No.	PCD 	CVD-D  99,9%				
Cutting edge design F = sharp ▼	Enter cutting material code ▼	5510	5605				
VCGT 070202 FN-96	C89 03960.02..	▲	▲	3,97	2,38	3,0	0,2
VCGT 070204 FN-96	C89 03960.04..	▲	▲				0,4
VCGT 070208 FN-96	C89 03960.08..	▲	▲				0,8
VCGT 110302 FN-96	C89 18960.02..	▲	▲	6,35	3,18	3,0	0,2
VCGT 110304 FN-96	C89 18960.04..	▲	▲				0,4
VCGT 110308 FN-96	C89 18960.08..	▲	▲				0,8
VCGT 160402 FN-96	C89 32960.02..	▲	▲	9,52	4,76	3,0	0,2
VCGT 160404 FN-96	C89 32960.04..	▲	▲				0,4
VCGT 160408 FN-96	C89 32960.08..	▲	▲				0,8
VCGT 160412 FN-96	C89 32960.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code VCGT 070202 FN-96 Cutting material PKD5510 Order No. C89 03960.025510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		◐	●				
Ceramics		◐	●				
Glass, quartz glass N		◐	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	◐				
Graphite		◐	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				



Cutter geometry:

sharp cutting edge



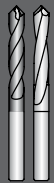
Substrate		PCD	CVD-D				
Cutting material designation		PKD5510	DSD5605				
Cutting edge design		F	F				
ISO Code	Order No.	PCD 5510	CVD-D 5605	d1	s	l	R
Cutting edge design F = sharp	Enter cutting material code						
VCGW 070201 FN-99	C89 03990.01..	▲	▲	3,97	2,38	3,0	0,1
VCGW 070202 FN-99	C89 03990.02..	▲	▲				0,2
VCGW 070204 FN-99	C89 03990.04..	▲	▲				0,4
VCGW 070208 FN-99	C89 03990.08..	▲	▲				0,8
VCGW 110301 FN-99	C89 18990.01..	▲	▲	6,35	3,18	3,0	0,1
VCGW 110302 FN-99	C89 18990.02..	▲	▲				0,2
VCGW 110304 FN-99	C89 18990.04..	▲	▲				0,4
VCGW 110308 FN-99	C89 18990.08..	▲	▲				0,8
VCGW 160401 FN-99	C89 32990.01..	▲	▲	9,52	4,76	3,0	0,1
VCGW 160402 FN-99	C89 32990.02..	▲	▲				0,2
VCGW 160404 FN-99	C89 32990.04..	▲	▲				0,4
VCGW 160408 FN-99	C89 32990.08..	▲	▲				0,8
VCGW 160412 FN-99	C89 32990.12..	▲	▲				1,2
Aluminium alloys Si < 12%		●	●	Order example: ISO Code VCGW 070201 FN-99 Cutting material PKD5510 Order No. C89 03990.015510			
Aluminium alloys Si > 12%		●	●				
CFRP, GFRP, plastics, composites		●	●				
Ceramics		●	●				
Glass, quartz glass	N	●	●				
sintered carbides (G10-G60)		●	●				
Metal Matrix Composites (MMC)		●	●				
Graphite		●	●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●	●				

● Main area of application ● Suitable in some cases

Important: See chapter 8 for more application details and safety notes !

KOMET® ISO CBN Indexable inserts

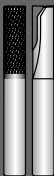
1



BENEFITS for you – KOMET® CBN indexable inserts:

- Large selection of cutting materials for cost-effective machining of hardened steels, cast iron, high-temperature alloys and sinter metals
- Diverse portfolio of shapes and sizes
- Double-sided model with up to eight insert corners for high efficiency
- Unique cutting material concept for easy and application-specific process optimisation (for custom solutions, see pages 108-109)

2



BENEFITS for you – machining hardened steels with CBN indexable inserts instead of grinding:

- Full machining flexibility with geometrically defined cutting edge
- Reduced machine times and higher removal rates
- Rotary machines typically less cost-intensive than grinding machines
- Also successful with interrupted cuts
- Lower energy consumption and power requirements than grinding equipment
- Save up to 15% in costs thanks to dry machining
- Easy chip disposal (recycling), reduced disposal costs compared with grinding sludge

3



ISO

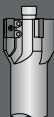
BENEFITS for you – machining cast iron and sinter metal with CBN instead of carbide indexable inserts:

- Potentially massive increase in productivity
- Significant reduction in the number of tool changes
- Significantly higher metal removal rate per cutting edge

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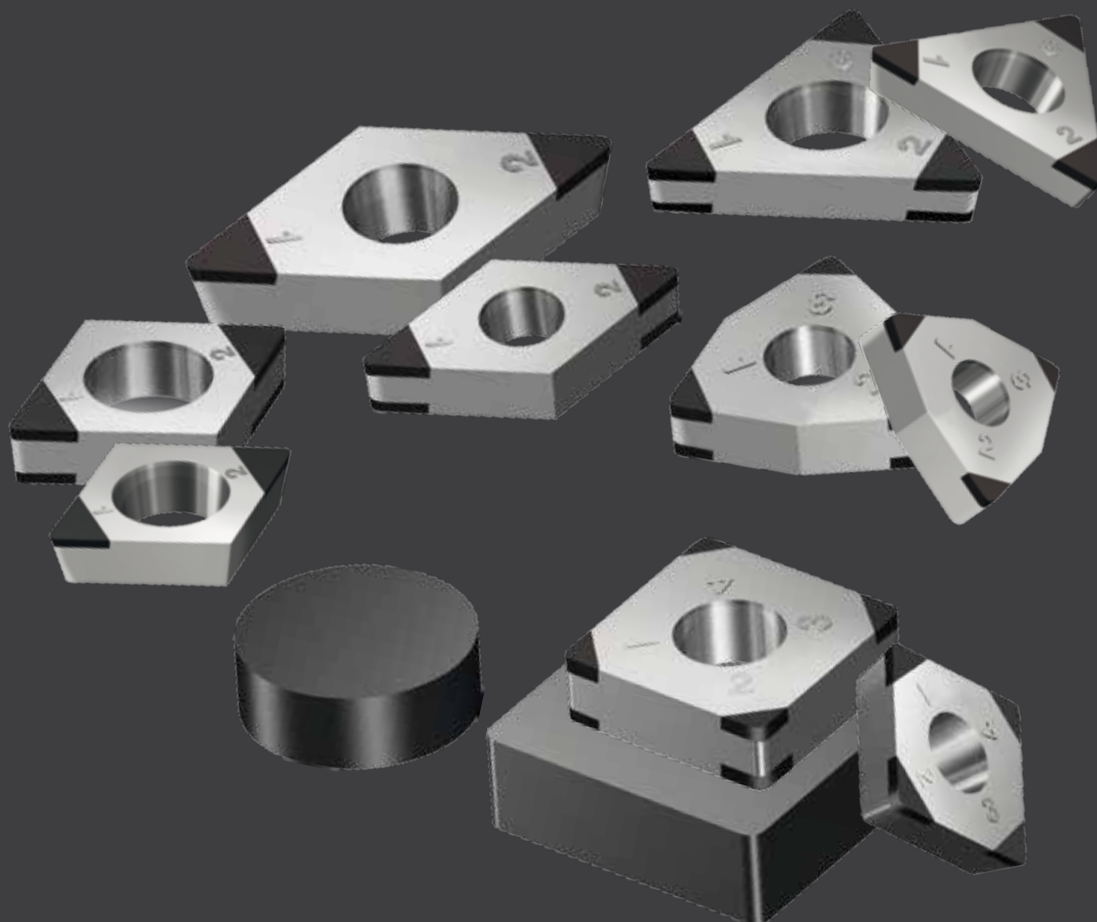
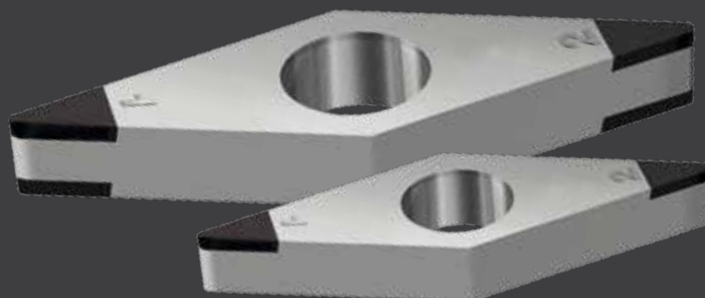
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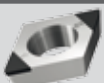
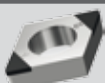
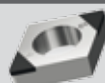
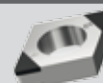
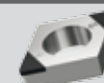
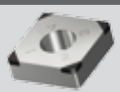
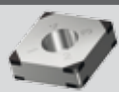
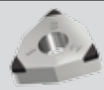
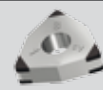
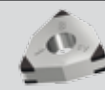
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Portfolio overview – ISO CBN Indexable inserts

CCGW		CNGA			
					
C85..69 ▶ 112	C85..75 Wiper ▶ 113	C64..69 ▶ 114	C64..75 Wiper ▶ 115	C64..70 ▶ 116	C64..76 Wiper ▶ 117
DCGW		DNGA			
					
C86..69 ▶ 118		C65..69 standard ▶ 120	C66..69 strengthened ▶ 122	C65..70 standard ▶ 124	C66..70 strengthened ▶ 126
					
C86..75 Wiper ▶ 119		C65..75 standard Wiper ▶ 121	C66..75 strengthened Wiper ▶ 123	C65..76 standard Wiper ▶ 125	C66..76 strengthened Wiper ▶ 127
RNGN					
					
C67..60 standard ▶ 128		C68..60 strengthened ▶ 129			
SCGW		SNGA		SNGN	
					
C83..69 ▶ 130	C62..69 ▶ 131	C62..70 ▶ 132		C62..60 ▶ 133	
TCGW		TNGA			
					
C84..69 ▶ 134	C63..69 ▶ 135	C63..70 ▶ 136			
VBGW		VCGW		VNGA	
					
C79..69 ▶ 137	C89..69 ▶ 138	C69..69 ▶ 139		C69..70 ▶ 140	
WNGA					
					
C70..69 ▶ 141	C70..75 Wiper ▶ 142	C70..70 ▶ 143	C70..76 Wiper ▶ 144		



CBN: Polycrystalline cubic boron nitride, particularly suitable for machining hardened steels, as well as cast iron and many other hard and abrasive materials with very efficient machining parameters. After diamond, CBN is the second hardest material in the world.



Laser-machined chip breakers



CS stands for custom solution. The CS cutting materials from KOMET facilitate easy and application-specific process optimisation thanks to a wide range of slightly modified standard cutting materials. This guarantees a significant and welcome productivity boost when using the most extreme cutting forces and temperatures – which are typical of CBN applications.

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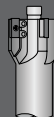


ISO

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Guidelines on selecting the right indexable insert/cutting material

Selection of a basic recommendation based on workpiece material and degree of cut interruption

Workpiece material	
P	Sintered materials: Iron-based alloys produced by powder metallurgy, sinter steels, valve seat materials
K	Cast iron: Grey cast iron, spheroidal graphite iron, malleable cast iron, compacted graphite iron
S	Highly heat-resistant iron-, nickel- and cobalt-based alloys
H	Hardened materials (45-70 HRC): Hardened steel (> 52 HRC), hardened cast iron materials, white cast iron

Degree of cut interruption		
Symbol	Machining	
	Continuous	 All non-interrupted surfaces
	Slight cut interruption, continuous with vibrations	 All surfaces with flat entry and exit angle in the cut interruption (10° - 30°) - Boreholes and longitudinal grooves with slight chamfers - Non-round shafts - Finishing threads/transverse grooves - Slight vibrations (otherwise HM)
	Medium cut interruption	 All surfaces with medium entry and exit angle in the cut interruption (30° - 60°) - Chamfered boreholes and longitudinal grooves - Gear flanks
	Heavy cut interruption	 All surfaces with steep entry and exit angle in the cut interruption from 60° to more than 90° - Non-chamfered boreholes and longitudinal grooves

As a general rule, machining of hardened materials can always be performed dry and is therefore both more affordable and more environmentally friendly than using cooling lubricant.

With continuous cutting, the use of cooling does not have any significant influence on the development of tool wear.

However, the use of cooling lubricant is necessary:

- To improve the chip shape
- To remove the chips from the machine area or the component
- To check the temperature balance throughout the entire machining area (component, clamping device, machine spindle and other components)
- When machining heat-resistant special alloys or carbide



Guidelines on selecting the right indexable insert/cutting material

Selection of a basic recommendation based on workpiece material and degree of cut interruption

Basic cutting data recommendation for internal and external turning											
	Cutting tool material designation	Degree of cut interruption	Cutting speed v_c (m/min) min ... optimum ... max			Feed f (mm/rev) min ... optimum ... max			Cutting depth a_p (mm) min ... optimum ... max		
P	CBN 5830		160	300	400	0,02	0,12	0,30	0,05	0,12	2,5
			130	240	320						
	CBN 5860		120	200	300	0,02	0,10	0,30	0,05	0,12	2,0
			100	160	240						
K	CBN 5730		400	800	1600	0,05	0,20	0,60	0,05	0,20	2,5
			320	640	1280						
	CBN 5750		400	600	1400	0,05	0,16	0,60	0,05	0,20	2,5
			320	480	1120						
S	CBN 5730		120	160	600	0,05	0,10	0,35	0,05	0,14	0,5
			100	130	480						
	CBN 5750		120	160	600	0,05	0,08	0,35	0,05	0,12	0,5
			100	130	480						
H	CBN 4020		100	200	400	0,05	0,18	0,30	0,05	0,20	2,5
	CBN 4040		100	180	300	0,05	0,16	0,30	0,05	0,20	2,5
	CBN 4060		80	140	220	0,05	0,14	0,30	0,05	0,18	2,5
	CBN 4080		80	120	180	0,05	0,12	0,30	0,05	0,18	2,5

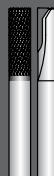
Max. L/D ratio as a function of indexable insert radius						
L/D	0,5xD	1xD	1,5xD	2xD	2,5xD	3xD
	Steel bracket	Solid carbide boring bar				
	Steel bracket	Solid carbide boring bar				
	Steel bracket	Solid carbide boring bar				

For wear or defect problems, please refer to page 108-111 for a detailed description of the application-based or cutting material-based optimisation.

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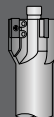


ISO

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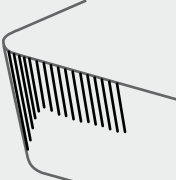
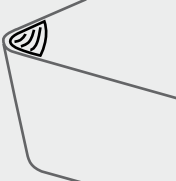


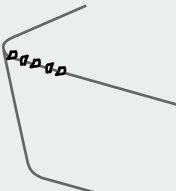
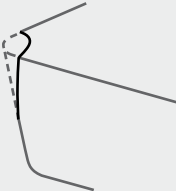
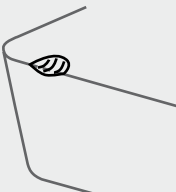
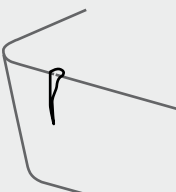
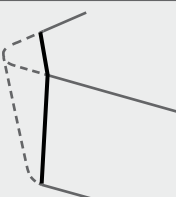
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Optimisation of application/cutting material selection

	Application-based optimisation	Cutting-material based optimisation
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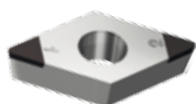
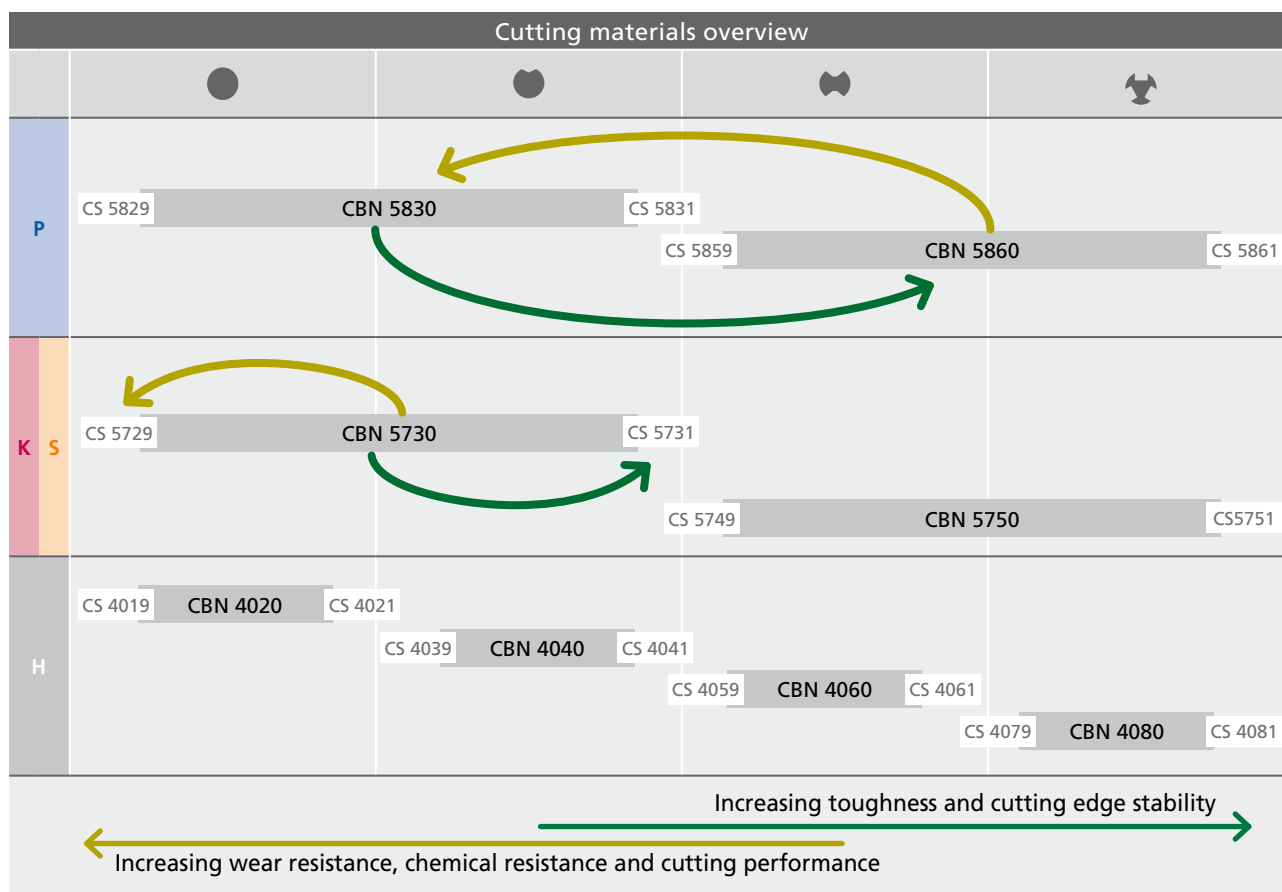
Types of wear			
	Flank wear on cutting edge Abrasion on the flank due to friction between cutting wedge and workpiece	· Increase the feed rate · Increase the cutting speed · Check the cutting edge height	 In the first step, select the next-most wear resistant CBN main cutting material and then the more wear resistant CS cutting material as the second step. Info: The lower the cutting material code, the greater the cutting performance.
	Crater wear Crater-shaped erosion on the rake face due to chips being removed	· Reduce the cutting speed · Reduce the feed rate · Only with continuous cutting: Cooling	

Defect shapes			
	Micro-blowouts on the cutting edge Chipping of the cutting material due to mechanical overloading	· Avoid vibrations · Thermal fluctuations	 In the first step, select the next toughest CBN main cutting material and then use the tougher CS cutting material as the second step. Info: The higher the cutting material code, the greater the cutting edge stability (chamfer+rounding).
	Corner breakage Fatal break of the insert corner due to mechanical overloading	· Reduce the feed rate · Reduce the cutting depth · Check the cutting edge height · Select a larger corner radius	
	Spalling on the rake face Large-scale spalling on the rake face due to mechanical overloading	· Reduce the feed rate · Select a flatter setting angle · Check the cutting edge height	
	Notch formation on the cutting edge Typically occurs at cutting depth level	· Select a flatter setting angle · Increase the cutting speed · Reduce the feed rate · Increase the corner radius or use a round insert	
	Insert breakage Break across the entire cross section	· Select the next largest or more stable indexable insert model · Check the insert seat for cleanliness and correct contact · Check the cutting edge height	

Component-based optimisation

- Use wiper geometries for poor surfaces (part of the catalogue program)
- In the event of chip break issues, laser-cut 3D chip breakers are available on request by stating the material, vc, fz and ap.

Optimised cutting material selection



ISO Code
DCGW 070204 TN-69

Ordering example of a standard CBN indexable insert:

Cutting material CBN 5830 | Order no. C86 18690.045830

Ordering example of an indexable insert with CS cutting material (available on request):

Cutting material CS **5829** | Order no. C86 18690.04**5829**



CS (custom solution) cutting materials are slightly modified standard cutting materials that are somewhat sharper, softer cutting and more wear resistant in use or display greater stability, toughness and predictability in the other direction.

This can be achieved via the CBN substrate or the design of the cutting edge.

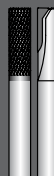
In the CBN4040 example, CS4039 is then the predefined type for somewhat better wear resistance and CS4041 for slightly greater toughness.

CS cutting materials are used when the step to the next standard type (in either direction) is too large and will not benefit the application in question.

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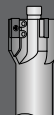


ISO

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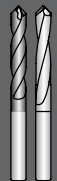
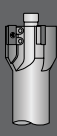
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Recommended cutting data (highlighted in colour = basic recommendation)

			Cutting speed v_c Feed rate f Cutting depth a_p						
Cutting material: Standard = CBN Custom solution = CS			●			●			
			v_c m/min	f mm/rev	a_p mm	v_c m/min	f mm/rev	a_p mm	
			min...opt...max	min...opt...max	min...opt...max	min...opt...max	min...opt...max	min...opt...max	
1 	P	Sintered materials: Iron-based alloys produced by powder metallurgy, sinter steels, valve seat materials	CS 5829 CBN 5830 CS 5831	160 300 400	0,02 0,12 0,30	0,05 0,12 2,5	130 240 320	0,02 0,12 0,30	0,05 0,12 2,5
			CS 5859 CBN 5860 CS 5861				130 240 320	0,02 0,12 0,3	0,05 0,12 2,5
3 	K	Cast iron: Grey cast iron, spheroidal graphite iron, malleable cast iron, compacted graphite iron	CS 5729 CBN 5730 CS 5731	400 800 1600	0,05 0,20 0,60	0,05 0,2 2,5	320 640 1280	0,05 0,20 0,60	0,05 0,20 2,5
			CS 5749 CBN 5750 CS 5751				320 640 1280	0,05 0,20 0,60	0,05 0,20 2,5
4 	S	Highly heat-resistant iron-, nickel- and cobalt-based alloys	CS 5729 CBN 5730 CS 5731	120 160 600	0,05 0,10 0,35	0,05 0,14 0,5	100 130 480	0,05 0,10 0,35	0,05 0,14 0,5
			CS 5749 CBN 5750 CS 5751				100 130 480	0,05 0,10 0,35	0,05 0,14 0,5
5 	H	Hardened materials (45-70 HRC): Hardened steel (> 52 HRC), hardened cast iron materials, white cast iron	CS 4019 CBN 4020 CS 4021	100 200 400	0,05 0,18 0,30	0,05 0,20 2,5	100 180 300	0,05 0,16 0,30	0,05 0,2 2,5
			CS 4039 CBN 4040 CS 4041	100 200 400	0,05 0,18 0,30	0,05 0,20 2,5	100 180 300	0,05 0,16 0,30	0,05 0,2 2,5
			CS 4059 CBN 4060 CS 4061				100 180 300	0,05 0,16 0,30	0,05 0,2 2,5
			CS 4079 CBN 4080 CS 4081						
		Hardened tool steels (> 52 HRC): e.g. 1.2379, 1.2550, ...	CS 5729 CBN 5730 CS 5731	100 200 400	0,05 0,18 0,30	0,05 0,20 2,5	100 180 300	0,05 0,16 0,30	0,05 0,2 2,5
6 			CS 5749 CBN 5750 CS 5751	100 200 400	0,05 0,18 0,30	0,05 0,20 2,5	100 180 300	0,05 0,16 0,30	0,05 0,2 2,5

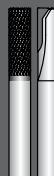
Recommended cutting data (highlighted in colour = basic recommendation)

	Cutting speed v_c Feed rate f Cutting depth a_p								
	 v_c m/min min...opt...max	 f mm/rev min...opt...max	 a_p mm min...opt...max	 v_c m/min min...opt...max	 f mm/rev min...opt...max	 a_p mm min...opt...max	Cutting material: Standard = CBN Custom solution = CS		
	120 200 300	0,02 0,10 0,30	0,05 0,12 2,0				CS 5829 CBN 5830 CS 5831	Sintered materials: Iron-based alloys produced by powder metallurgy, sinter steels, valve seat materials	P
	120 200 300	0,02 0,10 0,30	0,05 0,12 2,0	100 160 240	0,02 0,1 0,3	0,05 0,12 2,0	CS 5859 CBN 5860 CS 5861		
	400 600 1400	0,05 0,12 0,35	0,05 0,2 2,5				CS 5729 CBN 5730 CS 5731	Cast iron: Grey cast iron, spheroidal graphite iron, malleable cast iron, compacted graphite iron	K
	400 600 1400	0,05 0,12 0,35	0,05 0,2 2,5	320 480 1120	0,05 0,12 0,35	0,05 0,2 2,5	CS 5749 CBN 5750 CS 5751		
	120 160 600	0,05 0,08 0,35	0,05 0,12 2,5				CS 5729 CBN 5730 CS 5731	Highly heat-resistant iron-, nickel- and cobalt-based alloys	S
	120 160 600	0,05 0,08 0,35	0,05 0,12 0,5	100 130 480	0,05 0,08 0,35	0,05 0,12 0,5	CS 5749 CBN 5750 CS 5751		
							CS 4019 CBN 4020 CS 4021	Hardened materials (45-70 HRC): Hardened steel (> 52 HRC), hardened cast iron materials, white cast iron	H
	80 140 220	0,05 0,14 0,30	0,05 0,18 2,5				CS 4039 CBN 4040 CS 4041		
	80 140 220	0,05 0,14 0,30	0,05 0,18 2,5	80 120 180	0,05 0,12 0,30	0,05 0,18 2,5	CS 4059 CBN 4060 CS 4061		
	80 140 220	0,05 0,14 0,30	0,05 0,18 2,5	80 120 180	0,05 0,12 0,30	0,05 0,18 2,5	CS 4079 CBN 4080 CS 4081		
	80 140 220	0,05 0,14 0,30	0,05 0,18 2,5	80 120 180	0,05 0,12 0,30	0,05 0,18 2,5	CS 5729 CBN 5730 CS 5731	Hardened tool steels (> 52 HRC): e.g. 1.2379, 1.2550, ...	
	80 140 220	0,05 0,14 0,30	0,05 0,18 2,5	80 120 180	0,05 0,12 0,30	0,05 0,18 2,5	CS 5749 CBN 5750 CS 5751		

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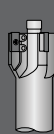


ISO

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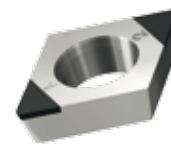
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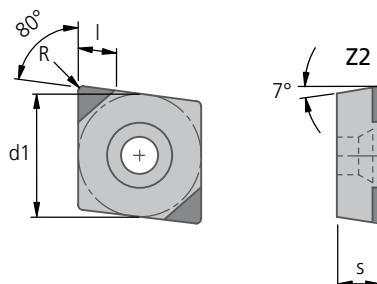
KOMET® ISO CBN Indexable inserts

CCGW

C85..69



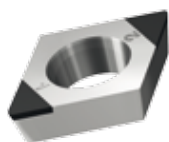
Cutter geometry:



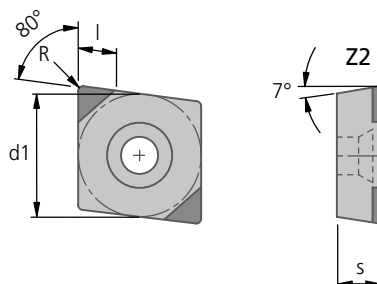
Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code CCGW060202TN-69 Cutting material CBN5830 Order No. C85 18690.025830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel		P											
Cast iron		K											
Highly heat-resistant alloys		S											
Hardened materials		H											
ISO Code	Order No.									For cutting conditions, see page 106			
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code												
		5830	5860	5730	5750	4020	4040	4060	4080	d1	s	l	R
CCGW060202..N-69	C85 18690.02..	▲	▲	▲	▲	▲	▲	▲	▲	6,35	2,38	2,8	0,2
CCGW060204..N-69	C85 18690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
CCGW060208..N-69	C85 18690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
CCGW09T302..N-69	C85 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,97	2,8	0,2
CCGW09T304..N-69	C85 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
CCGW09T308..N-69	C85 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
CCGW120402..N-69	C85 44690.02..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	4,76	2,8	0,2
CCGW120404..N-69	C85 44690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
CCGW120408..N-69	C85 44690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
CCGW120412..N-69	C85 44690.12..	▲	▲	▲	▲	▲	▲	▲	▲				1,2
 More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials			
	More stable	5831	5861	5731	5751	4021	4041	4061	4081				

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN															
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code CCGW060202TN-75W Cutting material CBN5830 Order No. C85 18750.025830							
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080								
Cutting edge design		T	T	T	S	T	T	T	S								
Sintered steel																	
Cast iron																	
Highly heat-resistant alloys																	
Hardened materials										For cutting conditions, see page 106							
ISO Code	Order No.																
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080								
CCGW09T302..N-75W	C85 32750.02..													9,525	3,97	2,8	0,2
CCGW09T304..N-75W	C85 32750.04..																0,4
CCGW09T308..N-75W	C85 32750.08..									0,8							
CCGW120404..N-75W	C85 44750.04..									12,7	4,76	2,8	0,4				
CCGW120408..N-75W	C85 44750.08..												0,8				
CCGW120412..N-75W	C85 44750.12..												1,2				
	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials							
	More stable	5831	5861	5731	5751	4021	4041	4061	4081								

● continuous ● slight cut interruption, continuous with vibrations

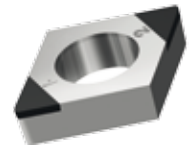
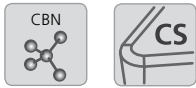
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

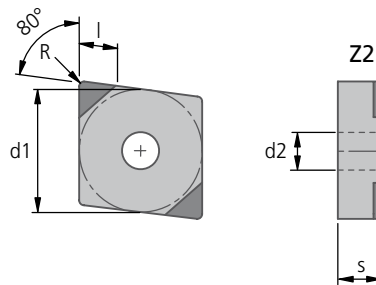
KOMET® ISO CBN Indexable inserts

CNGA

C64..69



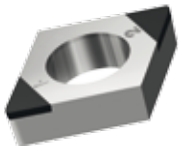
Cutter geometry:



Substrate		CBN													
Coating type		–	–	–	–	PVD	PVD	PVD	PVD	Order example: ISO Code CNGA120402TN-69 Cutting material CBN5830 Order No. C64 44690.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel 															
Cast iron 															
Highly heat-resistant alloys 															
Hardened materials 										For cutting conditions, see page 106					
ISO Code	Order No.	 	 	 	 										
Cutting edge design S = chamfered+rounded T = chamfered 	Enter cutting material code 	5830	5860	5730	5750	4020	4040	4060	4080	12,7	5,16	4,76	2,8	0,2	
CNGA120402..N-69	C64 44690.02..													0,4	
CNGA120404..N-69	C64 44690.04..													0,8	
CNGA120408..N-69	C64 44690.08..													1,2	
CNGA120412..N-69	C64 44690.12..														
	More wear resistant 	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

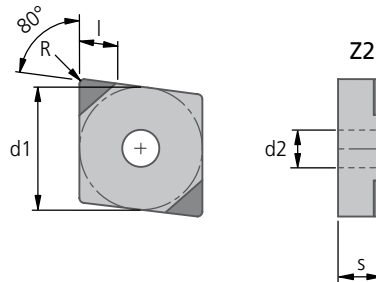
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

Wiper



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code CNGA120402TN-75W Cutting material CBN5830 Order No. C64 44750.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel 															
Cast iron 															
Highly heat-resistant alloys 															
Hardened materials 										For cutting conditions, see page 106					
ISO Code	Order No.	 	 	 	 										
Cutting edge design S = chamfered+rounded T = chamfered 	Enter cutting material code 	5830	5860	5730	5750	4020	4040	4060	4080	12,7	5,16	4,76	2,8	0,2	
CNGA120402..N-75W	C64 44750.02..													0,4	
CNGA120404..N-75W	C64 44750.04..													0,8	
CNGA120408..N-75W	C64 44750.08..													1,2	
CNGA120412..N-75W	C64 44750.12..														
	More wear resistant 	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

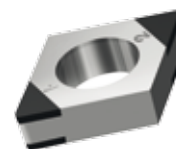
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

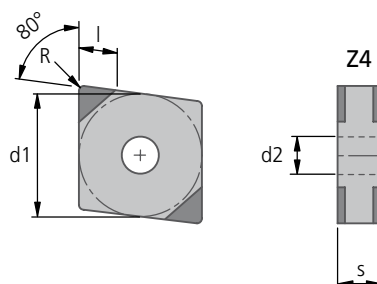
KOMET® ISO CBN Indexable inserts

CNGA

C64..70



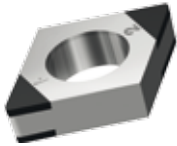
Cutter geometry:



Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code CNGA120402TN-70 Cutting material CBN5830 Order No. C64 44700.025830				
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P												
Cast iron		K												
Highly heat-resistant alloys		S								For cutting conditions, see page 106				
Hardened materials		H												
ISO Code	Order No.													
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080	d1	d2	s	l	R
CNGA120402..N-70	C64 44700.02..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,2
CNGA120404..N-70	C64 44700.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4
CNGA120408..N-70	C64 44700.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8
CNGA120412..N-70	C64 44700.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2
	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials				
	More stable	5831	5861	5731	5751	4021	4041	4061	4081					

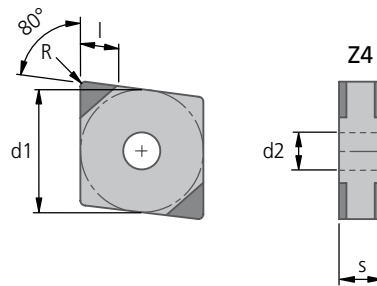
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

Wiper



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code CNGA120402TN-76W Cutting material CBN5830 Order No. C64 44760.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel P		●	●												
Cast iron K				●	●										
Highly heat-resistant alloys S				●	●										
Hardened materials H						●	●	●	●	For cutting conditions, see page 106					
ISO Code	Order No.														
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5830	5860	5730	5750	4020	4040	4060	4080	d1	d2	s	l	R	
CNGA120402..N-76W	C64 44760.02..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,2	
CNGA120404..N-76W	C64 44760.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4	
CNGA120408..N-76W	C64 44760.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8	
CNGA120412..N-76W	C64 44760.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2	
	More wear resistant ▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

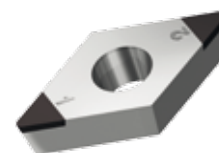
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

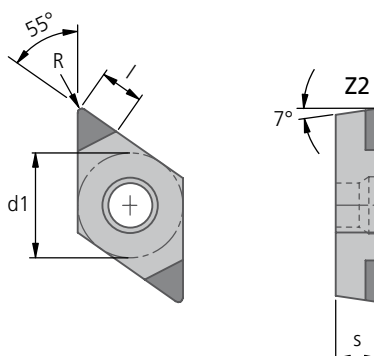
KOMET® ISO CBN Indexable inserts

DCGW

C86..69



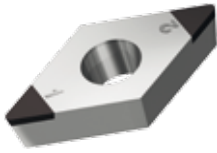
Cutter geometry:



Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DCGW070202TN-69 Cutting material CBN5830 Order No. C86 18690.025830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel		P											
Cast iron		K								For cutting conditions, see page 106			
Highly heat-resistant alloys		S											
Hardened materials		H											
ISO Code	Order No.												
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080	d1	s	l	R
DCGW070202..N-69	C86 18690.02..	▲	▲	▲	▲	▲	▲	▲	▲				0,2
DCGW070204..N-69	C86 18690.04..	▲	▲	▲	▲	▲	▲	▲	▲	6,35	2,38	2,8	0,4
DCGW070208..N-69	C86 18690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
DCGW11T302..N-69	C86 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲				0,2
DCGW11T304..N-69	C86 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,97	2,8	0,4
DCGW11T308..N-69	C86 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
CS	More wear resistant	▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials		
	More stable		5831	5861	5731	5751	4021	4041	4061	4081			

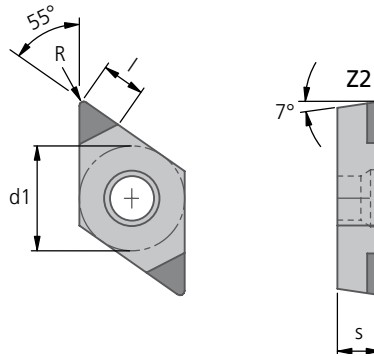
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

Wiper



Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DCGW070204TN-75W Cutting material CBN5830 Order No. C86 18750.045830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel		P											
Cast iron		K											
Highly heat-resistant alloys		S											
Hardened materials		H											
ISO Code	Order No.	●	●	●	●	●	●	●	●	For cutting conditions, see page 106			
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080				
DCGW070204..N-75W	C86 18750.04..	▲	▲	▲	▲	▲	▲	▲	▲	6,35	2,38	2,8	0,4
DCGW070208..N-75W	C86 18750.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
DCGW11T304..N-75W	C86 32750.04..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,97	2,8	0,4
DCGW11T308..N-75W	C86 32750.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials			
	More stable	5831	5861	5731	5751	4021	4041	4061	4081				

● continuous ● slight cut interruption, continuous with vibrations

● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

1



2



3



ISO

4



5



6



7



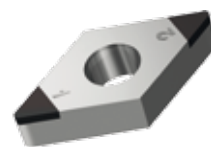
8



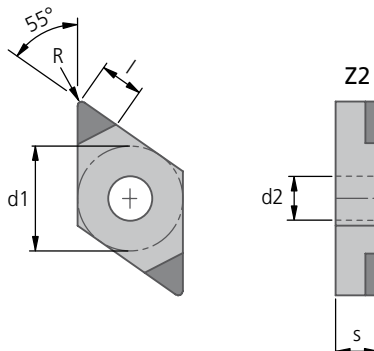
KOMET® ISO CBN Indexable inserts

DNGA

C65..69



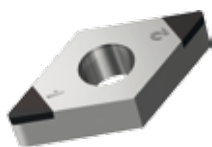
Cutter geometry:



Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P								Order example: ISO Code DNGA110402TN-69 Cutting material CBN5830 Order No. C65 32690.025830				
Cast iron		K												
Highly heat-resistant alloys		S												
Hardened materials		H												
ISO Code	Order No.									For cutting conditions, see page 106				
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080					
DNGA110402..N-69	C65 32690.02..	▲	▲	▲	▲									0,2
DNGA110404..N-69	C65 32690.04..	▲	▲	▲	▲					9,525	3,81	4,76	2,8	0,4
DNGA110408..N-69	C65 32690.08..	▲	▲	▲	▲									0,8
DNGA150402..N-69	C65 44690.02..	▲	▲	▲	▲	▲	▲	▲	▲					0,2
DNGA150404..N-69	C65 44690.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4
DNGA150408..N-69	C65 44690.08..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,8
DNGA150412..N-69	C65 44690.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2
	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials				
	More stable	5831	5861	5731	5751	4021	4041	4061	4081					

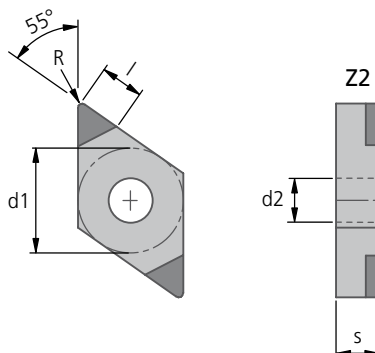
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

Wiper

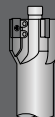


Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA150404TN-75W Cutting material CBN5830 Order No. C65 44750.045830				
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P	●	●	●									
Cast iron		K		●	●									
Highly heat-resistant alloys		S		●	●	●	●	●	●					
Hardened materials		H				●	●	●	●					
ISO Code Cutting edge design S = chamfered+rounded T = chamfered	Order No. Enter cutting material code	●	●	●	●	●	●	●	●	For cutting conditions, see page 106				
		5830	5860	5730	5750	4020	4040	4060	4080					
DNGA150404..N-75W	C65 44750.04..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,4
DNGA150408..N-75W	C65 44750.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8
More wear resistant	▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials				
	More stable	5831	5861	5731	5751	4021	4041	4061	4081					

● continuous ● slight cut interruption, continuous with vibrations

● medium cut interruption ● heavy cut interruption

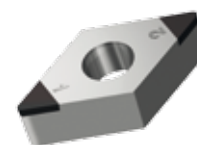
Important: See chapter 8 for more application details and safety notes !



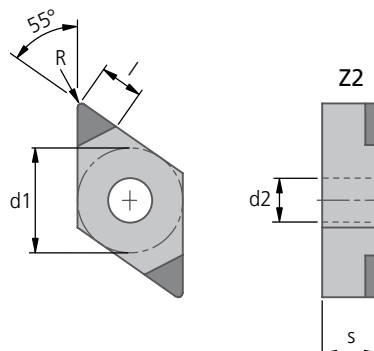
KOMET® ISO CBN Indexable inserts

DNGA

C66..69



Cutter geometry:



Substrate		CBN																		
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA150602TN-69 Cutting material CBN5830 Order No. C66 44690.025830										
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080											
Cutting edge design		T	T	T	S	T	T	T	S											
Sintered steel		P																		
Cast iron		K																		
Highly heat-resistant alloys		S								For cutting conditions, see page 106										
Hardened materials		H																		
ISO Code	Order No.									d1 d2 s l R										
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080											
DNGA150602..N-69	C66 44690.02..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	6,35	2,8	0,2						
DNGA150604..N-69	C66 44690.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4						
DNGA150608..N-69	C66 44690.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8						
DNGA150612..N-69	C66 44690.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2						
	More wear resistant	▲	5829	5859	5729	5749	4019	4039	4059	See pages 108-111 for a selection of CS cutting materials										
	More stable		5831	5861	5731	5751	4021	4041	4061							4081				

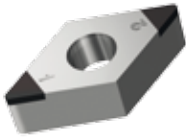
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list

DNGA

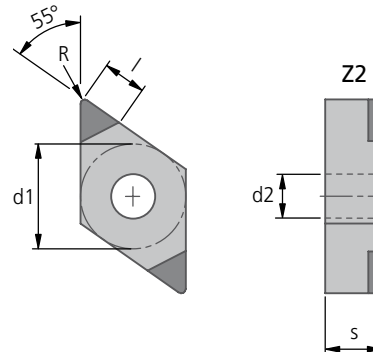
KOMET® ISO CBN Indexable inserts

C66..75



Cutter geometry:

Wiper



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA150604TN-75W Cutting material CBN5830 Order No. C66 44750.045830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel		P	●	●	●										
Cast iron		K		●	●										
Highly heat-resistant alloys		S		●	●	●	●	●	●						
Hardened materials		H				●	●	●	●						
ISO Code	Order No.	●	●	●	●	●	●	●	●	For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080						
DNGA150604..N-75W	C66 44750.04..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	6,35	2,8	0,4	0,8
DNGA150608..N-75W	C66 44750.08..	▲	▲	▲	▲	▲	▲	▲	▲						
More wear resistant More stable	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

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ISO

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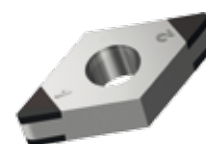
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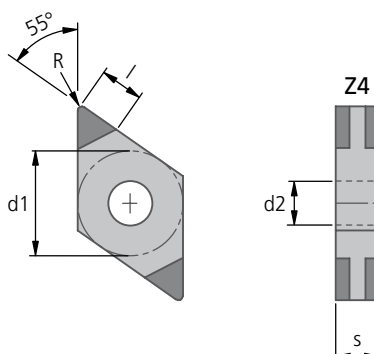
KOMET® ISO CBN Indexable inserts

DNGA

C65..70



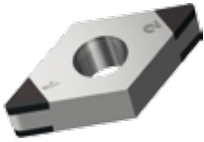
Cutter geometry:



Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA110402TN-70 Cutting material CBN5830 Order No. C65 32700.025830				
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P												
Cast iron		K												
Highly heat-resistant alloys		S												
Hardened materials		H												
ISO Code	Order No.	5830	5860	5730	5750	4020	4040	4060	4080	For cutting conditions, see page 106				
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080					
DNGA110402..N-70	C65 32700.02..	▲	▲	▲	▲									0,2
DNGA110404..N-70	C65 32700.04..	▲	▲	▲	▲					9,525	3,81	4,76	2,8	0,4
DNGA110408..N-70	C65 32700.08..	▲	▲	▲	▲									0,8
DNGA150402..N-70	C65 44700.02..	▲	▲	▲	▲	▲	▲	▲	▲					0,2
DNGA150404..N-70	C65 44700.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4
DNGA150408..N-70	C65 44700.08..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,8
DNGA150412..N-70	C65 44700.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2
More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials				
	More stable	5831	5861	5731	5751	4021	4041	4061	4081					

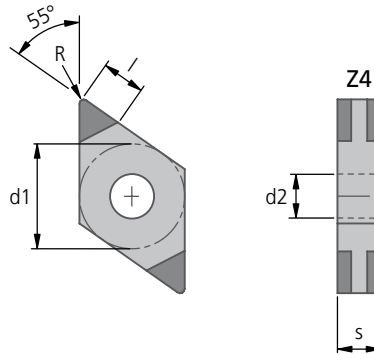
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:

Wiper



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA150404TN-76W Cutting material CBN5830 Order No. C65 44760.045830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel		P													
Cast iron		K													
Highly heat-resistant alloys		S													
Hardened materials		H													
ISO Code Cutting edge design S = chamfered+rounded T = chamfered	Order No. Enter cutting material code									For cutting conditions, see page 106					
		5830	5860	5730	5750	4020	4040	4060	4080						
DNGA150404..N-76W	C65 44760.04..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,4	0,8
DNGA150408..N-76W	C65 44760.08..	▲	▲	▲	▲	▲	▲	▲	▲						
More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

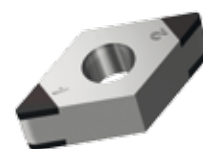
⚙ medium cut interruption ⚙ heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

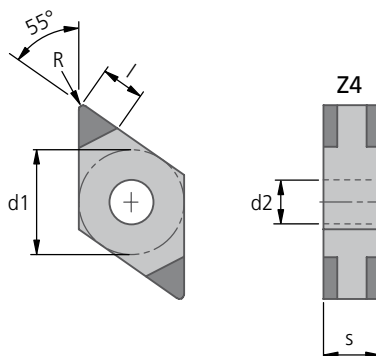
KOMET® ISO CBN Indexable inserts

DNGA

C66..70



Cutter geometry:



Substrate		CBN																
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA150602TN-70 Cutting material CBN5830 Order No. C66 44700.025830								
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080									
Cutting edge design		T	T	T	S	T	T	T	S									
Sintered steel		P																
Cast iron		K																
Highly heat-resistant alloys		S																
Hardened materials		H																
ISO Code	Order No.									For cutting conditions, see page 106								
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5830	5860	5730	5750	4020	4040	4060	4080									
DNGA150602..N-70	C66 44700.02..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	6,35	2,8	0,2				
DNGA150604..N-70	C66 44700.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4				
DNGA150608..N-70	C66 44700.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8				
DNGA150612..N-70	C66 44700.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2				
More wear resistant ▲		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials								
More stable		5831	5861	5731	5751	4021	4041	4061	4081									

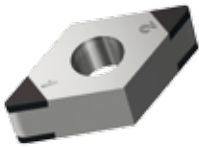
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list

DNGA

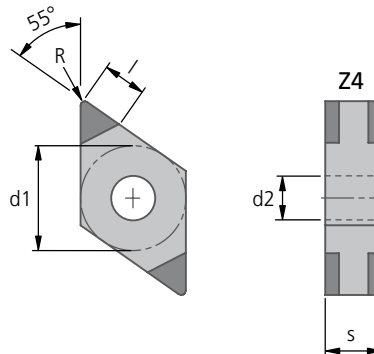
KOMET® ISO CBN Indexable inserts

C66..76



Cutter geometry:

Wiper



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code DNGA150604TN-76W Cutting material CBN5830 Order No. C66 44760.045830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel															
Cast iron															
Highly heat-resistant alloys															
Hardened materials										For cutting conditions, see page 106					
ISO Code	Order No.														
Cutting edge design S = chamfered+rounded T = chamfered															
Enter cutting material code		5830	5860	5730	5750	4020	4040	4060	4080						
		d1	d2	s	l	R									
DNGA150604..N-76W	C66 44760.04..									12,7	5,16	6,35	2,8	0,4	
DNGA150608..N-76W	C66 44760.08..													0,8	
	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

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ISO

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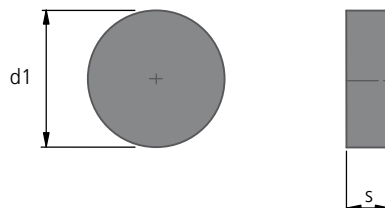
KOMET® ISO CBN Indexable inserts

RNGN

C67..60



Cutter geometry:



Substrate		CBN			
Coating type		—	PVD	Order example: ISO Code RNGN060300SN-60 Cutting material CBN5750 Order No. C67 17600.005750	
Cutting material designation		CBN5750	CBN4060		
Cutting edge design		S	T		
Sintered steel P					
Cast iron K					
Highly heat-resistant alloys S					
Hardened materials H					
ISO Code	Order No.			For cutting conditions, see page 106	
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5750	4060	d1	s
RNGN060300..N-60	C67 17600.00..	▲	▲	6,0	3,18
RNGN090300..N-60	C67 28600.00..	▲	▲	9,0	3,18
RNGN120300..N-60	C67 42600.00..	▲	▲	12,0	3,18
	More wear resistant ▲	5749	4059	See pages 108-111 for a selection of CS cutting materials	
	More stable	5751	4061		

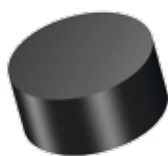
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list

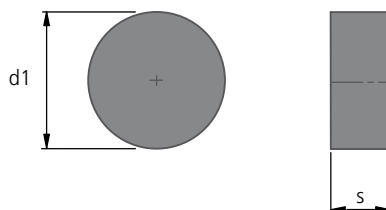
RNGN

KOMET® ISO CBN Indexable inserts

C68..60



Cutter geometry:



Substrate		CBN			
Coating type		–	PVD	Order example: ISO Code RNGN060400SN-60 Cutting material CBN5750 Order No. C68 17600.005750	
Cutting material designation		CBN5750	CBN4060		
Cutting edge design		S	T		
Sintered steel	P			For cutting conditions, see page 106	
Cast iron	K	●			
Highly heat-resistant alloys	S	●			
Hardened materials	H		●		
ISO Code	Order No.	ISO 1832	ISO 1832		
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5750	4060	d1	s
RNGN060400..N-60	C68 17600.00..	▲	▲	6,0	4,76
RNGN090400..N-60	C68 28600.00..	▲	▲	9,0	4,76
RNGN120400..N-60	C68 42600.00..	▲	▲	12,0	4,76
More wear resistant	▲	5749	4059	See pages 108-111 for a selection of CS cutting materials	
	More stable	5751	4061		

● continuous ● slight cut interruption, continuous with vibrations

⚙ medium cut interruption ⚙ heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

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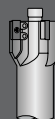


ISO

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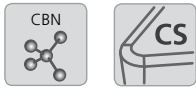
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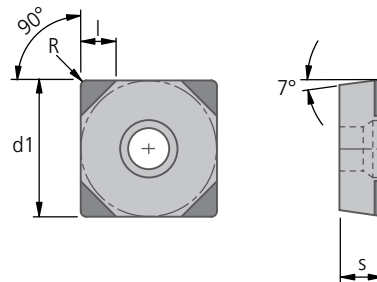
KOMET® ISO CBN Indexable inserts

SCGW

C83..69



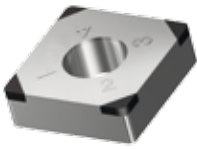
Cutter geometry:



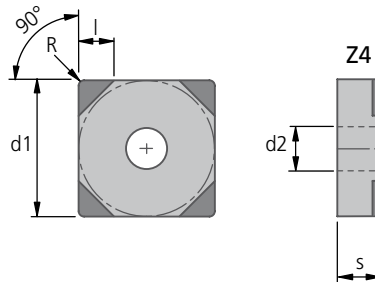
Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code SCGW09T302TN-69 Cutting material CBN5830 Order No. C83 32690.025830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel		P											
Cast iron		K											
Highly heat-resistant alloys		S											
Hardened materials		H											
ISO Code	Order No.									For cutting conditions, see page 106			
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080				
SCGW09T302..N-69	C83 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,97	2,8	0,2
SCGW09T304..N-69	C83 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
SCGW09T308..N-69	C83 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
SCGW120402..N-69	C83 44690.02..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	4,76	2,8	0,2
SCGW120404..N-69	C83 44690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
SCGW120408..N-69	C83 44690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
SCGW120412..N-69	C83 44690.12..	▲	▲	▲	▲	▲	▲	▲	▲				1,2
	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials			
	More stable	5831	5861	5731	5751	4021	4041	4061	4081				

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code SNGA120404TN-69 Cutting material CBN5830 Order No. C62 44690.045830				
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P	●	●	●									
Cast iron		K		●	●									
Highly heat-resistant alloys		S		●	●									
Hardened materials		H				●	●	●	●					
ISO Code	Order No.	●	●	●	●	●	●	●	●	For cutting conditions, see page 106				
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080					
SNGA120404..N-69	C62 44690.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4
SNGA120408..N-69	C62 44690.08..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,8
SNGA120412..N-69	C62 44690.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2
More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials				
	More stable	5831	5861	5731	5751	4021	4041	4061	4081					

● continuous ● slight cut interruption, continuous with vibrations

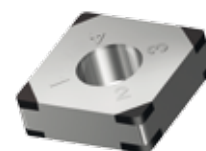
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

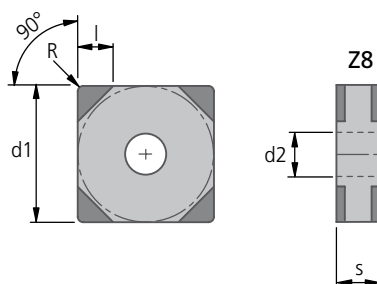
KOMET® ISO CBN Indexable inserts

SNGA

C62..70



Cutter geometry:



Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code SNGA120404TN-70 Cutting material CBN5830 Order No. C62 44700.045830				
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P												
Cast iron		K												
Highly heat-resistant alloys		S												
Hardened materials		H												
ISO Code	Order No.									For cutting conditions, see page 106				
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080					
SNGA120404..N-70	C62 44700.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4
SNGA120408..N-70	C62 44700.08..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,8
SNGA120412..N-70	C62 44700.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2
	More wear resistant	▲								See pages 108-111 for a selection of CS cutting materials				
	More stable													
		5829	5859	5729	5749	4019	4039	4059	4079					
		5831	5861	5731	5751	4021	4041	4061	4081					

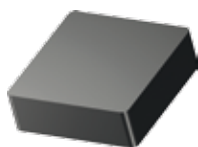
Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list

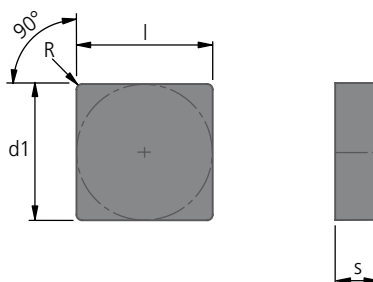
SNGN

KOMET® ISO CBN Indexable inserts

C62..60



Cutter geometry:



Substrate		CBN							
Coating type		—	PVD	Order example: ISO Code SNGN090304SN-60 Cutting material CBN5750 Order No. C62 32600.045750					
Cutting material designation		CBN5750	CBN4060						
Cutting edge design		S	T						
Sintered steel P									
Cast iron K									
Highly heat-resistant alloys S									
Hardened materials H									
ISO Code	Order No.			For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5750	4060						
SNGN090304..N-60	C62 32600.04..	▲	▲	9,525	3,18	9,52	0,4		
SNGN090308..N-60	C62 32600.08..	▲	▲				0,8		
SNGN090312..N-60	C62 32600.12..	▲	▲				1,2		
SNGN120404..N-60	C62 44600.04..	▲	▲	12,7	4,76	12,7	0,4		
SNGN120408..N-60	C62 44600.08..	▲	▲				0,8		
SNGN120412..N-60	C62 44600.12..	▲	▲				1,2		
SNGN120416TN-60	C62 44600.16..	▲	▲				1,6		
 More wear resistant ▲		5749	4059	See pages 108-111 for a selection of CS cutting materials					
	More stable	5751	4061						

● continuous ● slight cut interruption, continuous with vibrations

⚙ medium cut interruption ⚙ heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

1



2



3

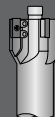


ISO

4



5



6



7



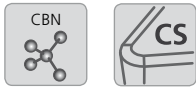
8



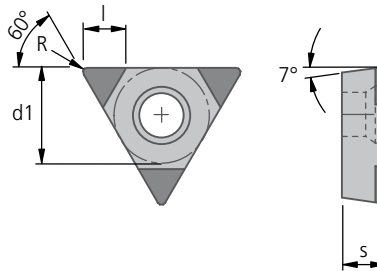
KOMET® ISO CBN Indexable inserts

TCGW

C84..69



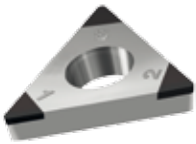
Cutter geometry:



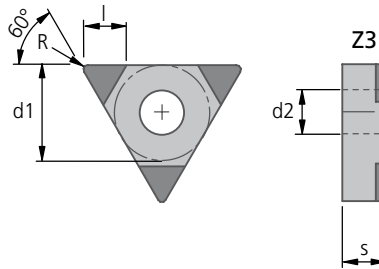
Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code TCGW090202TN-69 Cutting material CBN5830 Order No. C84 13690.025830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel P													
Cast iron K													
Highly heat-resistant alloys S													
Hardened materials H													
ISO Code	Order No.									For cutting conditions, see page 106			
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080	d1	s	l	R
TCGW090202..N-69	C84 13690.02..	▲	▲	▲	▲	▲	▲	▲	▲	5,56	2,38	2,8	0,2
TCGW090204..N-69	C84 13690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
TCGW090208..N-69	C84 13690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
TCGW110202..N-69	C84 18690.02..	▲	▲	▲	▲	▲	▲	▲	▲	6,35	2,38	2,8	0,2
TCGW110204..N-69	C84 18690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
TCGW110208..N-69	C84 18690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
TCGW16T302..N-69	C84 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,97	2,8	0,2
TCGW16T304..N-69	C84 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
TCGW16T308..N-69	C84 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials			
	More stable	5831	5861	5731	5751	4021	4041	4061	4081				

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code TNGA160402TN-69 Cutting material CBN5830 Order No. C63 32690.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel P															
Cast iron K															
Highly heat-resistant alloys S															
Hardened materials H															
ISO Code	Order No.	 	 	 	 					For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5830	5860	5730	5750	4020	4040	4060	4080						
TNGA160402..N-69	C63 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,81	4,76	2,8	0,2	
TNGA160404..N-69	C63 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4	
TNGA160408..N-69	C63 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8	
TNGA160412..N-69	C63 32690.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2	
	More wear resistant ▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

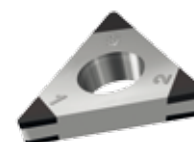
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

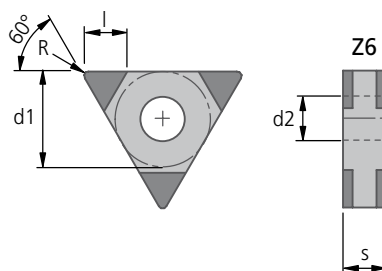
KOMET® ISO CBN Indexable inserts

TNGA

C63..70



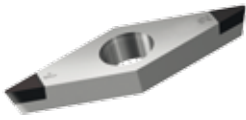
Cutter geometry:



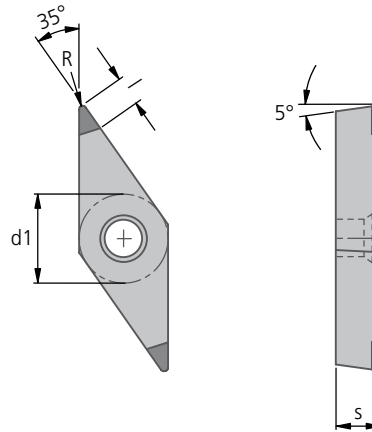
Substrate		CBN															
Coating type		–	–	–	–	PVD	PVD	PVD	PVD	Order example: ISO Code TNGA160402TN-70 Cutting material CBN5830 Order No. C63 32700.025830							
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080								
Cutting edge design		T	T	T	S	T	T	T	S								
Sintered steel		P															
Cast iron		K															
Highly heat-resistant alloys		S								For cutting conditions, see page 106							
Hardened materials		H															
ISO Code	Order No.																
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5830	5860	5730	5750	4020	4040	4060	4080	d1	d2	s	l	R			
TNGA160402..N-70	C63 32700.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,81	4,76	2,8	0,2			
TNGA160404..N-70	C63 32700.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4			
TNGA160408..N-70	C63 32700.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8			
TNGA160412..N-70	C63 32700.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2			
	More wear resistant ▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials							
	More stable	5831	5861	5731	5751	4021	4041	4061	4081								

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code VBGW070202TN-69 Cutting material CBN5830 Order No. C79 03690.025830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel		P	P	P	P								
Cast iron		K		K	K								
Highly heat-resistant alloys		S		S	S								
Hardened materials		H											
ISO Code	Order No.	●	●	●	●	●	●	●	●	For cutting conditions, see page 106			
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080				
VBGW070202..N-69	C79 03690.02..	▲	▲	▲	▲					3,97	2,38	2,8	0,2
VBGW070204..N-69	C79 03690.04..	▲	▲	▲	▲								0,4
VBGW110202..N-69	C79 18690.02..	▲	▲	▲	▲	▲	▲	▲	▲				0,2
VBGW110204..N-69	C79 18690.04..	▲	▲	▲	▲	▲	▲	▲	▲	6,35	2,38	2,8	0,4
VBGW110208..N-69	C79 18690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
VBGW160402..N-69	C79 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲				0,2
VBGW160404..N-69	C79 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
VBGW160408..N-69	C79 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	4,76	2,8	0,8
VBGW160412..N-69	C79 32690.12..	▲	▲	▲	▲	▲	▲	▲	▲				1,2
More wear resistant		5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials			
	More stable	5831	5861	5731	5751	4021	4041	4061	4081				

● continuous ● slight cut interruption, continuous with vibrations

● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

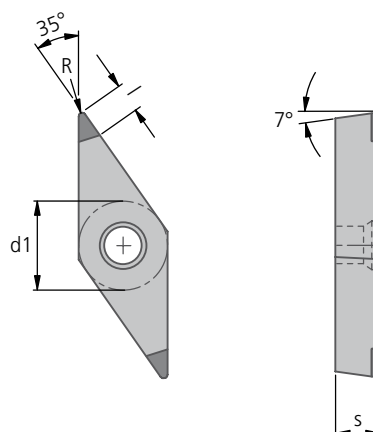
KOMET® ISO CBN Indexable inserts

VCGW

C89..69



Cutter geometry:



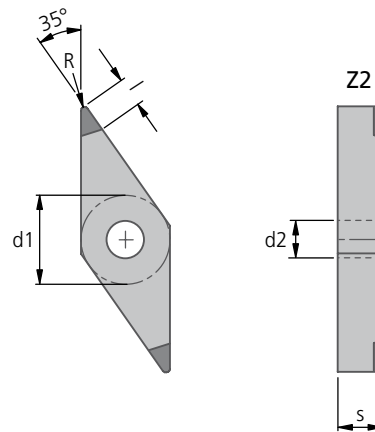
Substrate		CBN											
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code VCGW070202TN-69 Cutting material CBN5830 Order No. C89 03690.025830			
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080				
Cutting edge design		T	T	T	S	T	T	T	S				
Sintered steel		P											
Cast iron		K											
Highly heat-resistant alloys		S								For cutting conditions, see page 106			
Hardened materials		H											
ISO Code	Order No.									d1	s	l	R
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080	3,97	2,38	2,8	0,2
VCGW070202..N-69	C89 03690.02..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
VCGW070204..N-69	C89 03690.04..	▲	▲	▲	▲	▲	▲	▲	▲	6,35	2,38	2,8	0,2
VCGW110202..N-69	C89 18690.02..	▲	▲	▲	▲	▲	▲	▲	▲				0,4
VCGW110204..N-69	C89 18690.04..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	4,76	2,8	0,8
VCGW110208..N-69	C89 18690.08..	▲	▲	▲	▲	▲	▲	▲	▲				0,2
VCGW160402..N-69	C89 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	4,76	2,8	0,4
VCGW160404..N-69	C89 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲				0,8
VCGW160408..N-69	C89 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲				1,2
VCGW160412..N-69	C89 32690.12..	▲	▲	▲	▲	▲	▲	▲	▲				
	More wear resistant	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials			
	More stable	5831	5861	5731	5751	4021	4041	4061	4081				

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code VNGA160402TN-69 Cutting material CBN5830 Order No. C69 32690.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel P		●	●												
Cast iron K				●	●										
Highly heat-resistant alloys S				●	●					For cutting conditions, see page 106					
Hardened materials H						●	●	●	●						
ISO Code	Order No.	 	 	 	 					For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered ▼	Enter cutting material code ▼	5830	5860	5730	5750	4020	4040	4060	4080						
VNGA160402..N-69	C69 32690.02..	▲	▲	▲	▲	▲	▲	▲	▲	9,525	3,81	4,76	2,8	0,2	
VNGA160404..N-69	C69 32690.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4	
VNGA160408..N-69	C69 32690.08..	▲	▲	▲	▲	▲	▲	▲	▲					0,8	
VNGA160412..N-69	C69 32690.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2	
	More wear resistant ▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

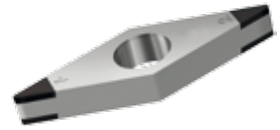
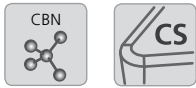
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

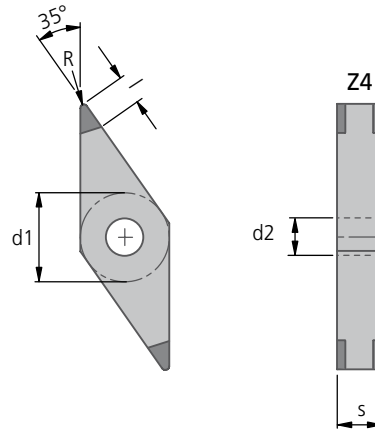
KOMET® ISO CBN Indexable inserts

VNGA

C69..70



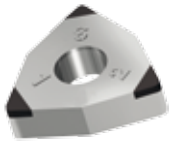
Cutter geometry:



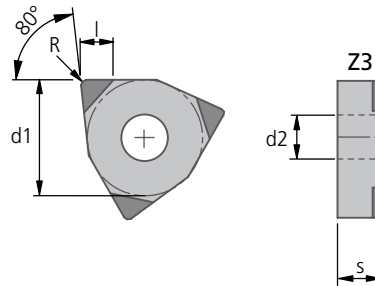
Substrate		CBN													
Coating type		–	–	–	–	PVD	PVD	PVD	PVD	Order example: ISO Code VNGA160402TN-70 Cutting material CBN5830 Order No. C69 32700.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel 															
Cast iron 															
Highly heat-resistant alloys 															
Hardened materials 															
ISO Code	Order No.									For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered 	Enter cutting material code 	5830	5860	5730	5750	4020	4040	4060	4080						
VNGA160402..N-70	C69 32700.02..									9,525	3,81	4,76	2,8	0,2	
VNGA160404..N-70	C69 32700.04..													0,4	
VNGA160408..N-70	C69 32700.08..													0,8	
VNGA160412..N-70	C69 32700.12..													1,2	
	More wear resistant 	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code WNGA080402TN-69 Cutting material CBN5830 Order No. C70 44690.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel 															
Cast iron 															
Highly heat-resistant alloys 										For cutting conditions, see page 106					
Hardened materials 															
ISO Code	Order No.	 	 	 	 					For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered 	Enter cutting material code 	5830	5860	5730	5750	4020	4040	4060	4080						
WNGA080402..N-69	C70 44690.02..									12,7	5,16	4,76	2,8	0,2	
WNGA080404..N-69	C70 44690.04..													0,4	
WNGA080408..N-69	C70 44690.08..													0,8	
WNGA080412..N-69	C70 44690.12..													1,2	
	More wear resistant 	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

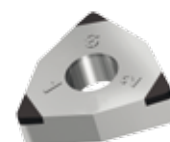
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

KOMET® ISO CBN Indexable inserts

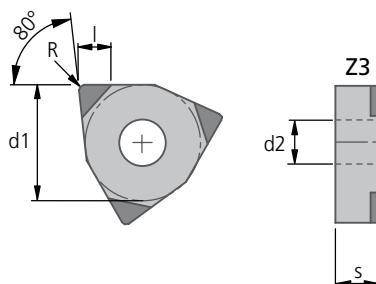
WNGA

C70..75



Cutter geometry:

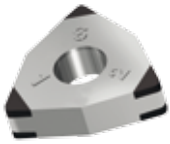
Wiper



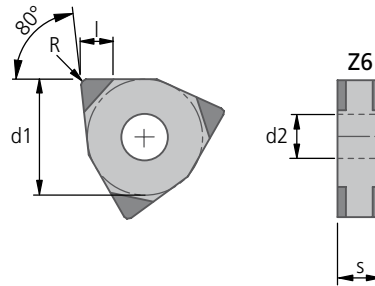
Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code WNGA080404TN-75W Cutting material CBN5830 Order No. C70 44750.045830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel		P													
Cast iron		K													
Highly heat-resistant alloys		S													
Hardened materials		H													
ISO Code	Order No.									For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code														
		5830	5860	5730	5750	4020	4040	4060	4080	d1	d2	s	l	R	
WNGA080404..N-75W	C70 44750.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4	
WNGA080408..N-75W	C70 44750.08..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,8	
WNGA080412..N-75W	C70 44750.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2	
More wear resistant	▲	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

Recommended cutting data: page 107.

▲ Availability: for delivery see current price and stock list



Cutter geometry:



Substrate		CBN													
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code WNGA080402TN-70 Cutting material CBN5830 Order No. C70 44700.025830					
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080						
Cutting edge design		T	T	T	S	T	T	T	S						
Sintered steel 															
Cast iron 															
Highly heat-resistant alloys 															
Hardened materials 															
ISO Code	Order No.	 	 	 	 					For cutting conditions, see page 106					
Cutting edge design S = chamfered+rounded T = chamfered 	Enter cutting material code 	5830	5860	5730	5750	4020	4040	4060	4080						
WNGA080402..N-70	C70 44700.02..									12,7	5,16	4,76	2,8	0,2	
WNGA080404..N-70	C70 44700.04..													0,4	
WNGA080408..N-70	C70 44700.08..													0,8	
WNGA080412..N-70	C70 44700.12..													1,2	
	More wear resistant 	5829	5859	5729	5749	4019	4039	4059	4079	See pages 108-111 for a selection of CS cutting materials					
	More stable	5831	5861	5731	5751	4021	4041	4061	4081						

● continuous ● slight cut interruption, continuous with vibrations

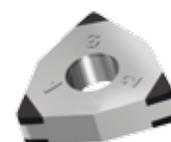
● medium cut interruption ● heavy cut interruption

Important: See chapter 8 for more application details and safety notes !

KOMET® ISO CBN Indexable inserts

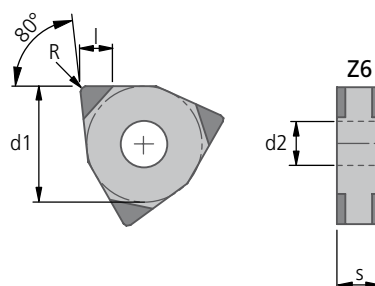
WNGA

C70..76



Cutter geometry:

Wiper



Substrate		CBN												
Coating type		—	—	—	—	PVD	PVD	PVD	PVD	Order example: ISO Code WNGA080404TN-76W Cutting material CBN5830 Order No. C70 44760.045830				
Cutting material designation		CBN5830	CBN5860	CBN5730	CBN5750	CBN4020	CBN4040	CBN4060	CBN4080					
Cutting edge design		T	T	T	S	T	T	T	S					
Sintered steel		P	●	●	●									
Cast iron		K		●	●					For cutting conditions, see page 106				
Highly heat-resistant alloys		S		●	●	●	●	●	●					
Hardened materials		H				●	●	●	●					
ISO Code	Order No.	●	●	●	●	●	●	●	●					
Cutting edge design S = chamfered+rounded T = chamfered	Enter cutting material code	5830	5860	5730	5750	4020	4040	4060	4080	d1	d2	s	l	R
WNGA080404..N-76W	C70 44760.04..	▲	▲	▲	▲	▲	▲	▲	▲					0,4
WNGA080408..N-76W	C70 44760.08..	▲	▲	▲	▲	▲	▲	▲	▲	12,7	5,16	4,76	2,8	0,8
WNGA080412..N-76W	C70 44760.12..	▲	▲	▲	▲	▲	▲	▲	▲					1,2
	More wear resistant	▲	5829	5859	5729	5749	4019	4039	4059	See pages 108-111 for a selection of CS cutting materials				
	More stable		5831	5861	5731	5751	4021	4041	4061					

Recommended cutting data: page 107.

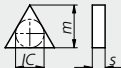
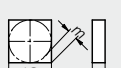
▲ Availability: for delivery see current price and stock list

ISO Codes for inserts

W	N	M	G	0	8	0	4	0	8	F	L	–	0	1
1	2	3	4	5	6	7	8	9	10	11	12		13	14
Form	Clearance angle	Tolerance	Type	Cutting edge length	Thickness	Corner radius	Cutting edge	Cutting direction					Topography	

Form		
1		
A		85°
C		80° / 100°
D		55°
E		75°
H		120°
L		90°
O		135°
R		90°
S		90°
T		60°
V		35°
W		80°
X	special design	

Clearance angle	
2	
B	 5°
C	 7°
D	 15°
E	 20°
N	 0°
O	according to manufacturer specification
P	 11°

Tolerance				
3				
	<i>m</i>	<i>s</i>	<i>IC</i>	
A	±0,005	±0,025	±0,025	
C	±0,013	±0,025	±0,025	
E	±0,025	±0,025	±0,025	
G	±0,025	±0,13	±0,025	
H	±0,013	±0,025	±0,013	
K	±0,013	±0,025	±0,05...±0,15	
L	±0,025	±0,025	±0,05...±0,15	
M	±0,08...±0,18 ¹⁾	±0,13	±0,05...±0,13 ¹⁾	
U	±0,13...±0,38 ¹⁾	±0,13	±0,08...±0,25 ¹⁾	
Tolerance in mm				
Ø <i>IC</i>	at <i>m</i> Class M	at <i>m</i> Class U	at <i>IC</i> Class M	at <i>IC</i> Class U
6,35	±0,08	±0,13	d±0,05	±0,08
9,52	±0,08	±0,13	d±0,05	±0,08
12,70	±0,13	±0,20	±0,08	±0,13
15,87	±0,15	±0,27	±0,10	±0,18
19,05	±0,15	±0,27	±0,10	±0,18
25,40	±0,18	±0,38	±0,13	±0,25

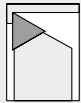
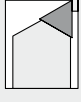
Type	
4	
A	 no chipformer, with hole
B	 no chipformer, countersunk hole 70-90°
G	 chipformer both sides, with hole
H	 chipformer on one side, countersunk hole 70-90°
M	 chipformer on one side, with hole
N	 no chipformer, no hole
P	 neg/pos. one or two sides, with hole
R	 chipformer on one side, no hole
T	 chipformer on one side, countersunk hole 40-60°
U	 chipformer both sides, with countersunk hole
W	 no chipformer, countersunk hole 40-60°
X	special design, drawing required

Cutting edge length										
5 - 6										
IC mm	A	C	D	E	H	L	R	S	T	V
3,97									06	07
4,76		04								
4,80						06				03
5,00							05			
5,56		05						05	09	
6,00							06			
6,35	10	06	07					06	11	11
7,00							07			
7,25						09				
7,94		08						07	13	13
8,00	12						08	08	14	
9,00							09			05
9,52		09	11			12		09	16	16
10,00							10			
11,10	16									06
11,40								11		
12,00				12			12			08
12,70		12	15					12	22	08
15,00									22	10
15,88								15	27	
16,00							16			
16,30					06					
17,60										12
19,05		19						19	33	13
20,00							20			
25,00							25			
25,40								25		

Thickness	
7 - 8	
T0	1,20 mm
01	1,59 mm
T1	1,80 / 1,98 mm
02	2,38 mm
T2	2,97 mm 
03	3,18 mm 
T3	3,97 mm 
04	4,76 mm
05	5,56 mm
06	6,35 mm
07	7,94 mm

Corner radius	
9 - 10	
00	0,0 mm
01	0,1 mm
02	0,2 mm
03	0,3 mm
04	0,4 mm
05	0,5 mm
06	0,6 mm
08	0,8 mm
10	1,0 mm
12	1,2 mm
16	1,6 mm
20	2,0 mm
24	2,4 mm
MO	IC for round insert
ZZ	Face cutting edge

Cutting edge	
11	
E	 rounded
F	 sharp
S	 chamfered and rounded
T	 chamfered (negative)

Cutting direction	
12	
R	 R.H.
L	 L.H.
N	 R.H. and L.H.

Topography	
13 - 14	
-01	
-05	
-11	
-13	
-14	
-15	
-21	
...	



Numerical coding for C... inserts

C	8	6	3	2	9	9	0	.	0	4	5	6	0	5
1	2	3	4	5	6	7	8		9	10	11	12	13	14
Main group	Type Form		Size IC		Topography		Index		Corner radius		Cutting material code			

Type Form				
2 - 3				
53	S...		90°	0°
54	R...			0°
55	R...			0°
62	S...		90°	0°
63	T...		60°	0°
64	C...		80°	0°
65	D...		55°	0°
66	D...		55°	0°
67	R...			0°
68	R...			0°
69	V...		35°	0°
70	W...		80°	0°
79	V...		35°	5°
83	S...		90°	7°
84	T...		60°	7°
85	C...		80°	7°
86	D...		55°	7°
87	R...			7°
88	R...			7°
89	V...		35°	7°
90	W...		80°	7°
93	S...		90°	11°
94	T...		60°	11°
95	C...		80°	11°
96	D...		55°	11°
98	R...			15°
00	W...		80°	11°

Size IC			
4 - 5			
03	3,97 mm	28	8,9 mm
13	5,56 mm	32	9,52 / 9,8 mm
17	6,0 mm	42	12,0 mm
18	6,2 / 6,35 mm	44	12,7 mm

Corner radius			
9 - 10			
01	R 0,1	06	R 0,6
02	R 0,2	08	R 0,8
03	R 0,3	10	R 1,0
04	R 0,4	12	R 1,2
05	R 0,5	16	R 1,6

Topography	
6 - 7	
01	Roughing operations Universal
05	Iron casting roughing and semi-machining operations
12	Semi-machining operations Highly positive (NF metal)
14	Finishing operations Chip control
15	Semi-finishing Chip control
60	Solid CBN
63	Triangular blank L+R (tipped), double sided, only 1 edge tipped
64	Triangular blank L+R (tipped), double sided, only 1 edge tipped; chip breaker for finishing
65	Triangular blank L+R (tipped), double sided, only 1 edge tipped; chip breaker for roughing
66	Triangular blank L+R (tipped), double sided, only 1 edge tipped; Wiper
67	Triangular blank L+R (tipped), double sided, only 1 edge tipped; Wiper + chip breaker for finishing
68	Triangular blank L+R (tipped), double sided, only 1 edge tipped; Wiper + chip breaker for roughing
69	Triangular blank L+R (tipped), single-sided, all edges tipped
70	Triangular blank L+R (tipped), double-sided, all edges tipped
71	Triangular blank L+R (tipped), single-sided, all edges tipped; chip breaker for finishing
72	Triangular blank L+R (tipped), double-sided, all edges tipped; chip breaker for finishing
73	Triangular blank L+R (tipped), single-sided, all edges tipped; chip breaker for roughing
74	Triangular blank L+R (tipped), double-sided, all edges tipped; chip breaker for roughing
75	Triangular blank L+R (tipped), single-sided, all edges tipped; Wiper
76	Triangular blank L+R (tipped), double-sided, all edges tipped; Wiper
77	Triangular blank L+R (tipped), single-sided, all edges tipped; Wiper + chip breaker for finishing
78	Triangular blank L+R (tipped), double-sided, all edges tipped; Wiper + chip breaker for finishing
79	Triangular blank L+R (tipped), single-sided, all edges tipped; Wiper + chip breaker for roughing
80	Triangular blank L+R (tipped), double-sided, all edges tipped; Wiper + chip breaker for roughing
81	Long blank L and R/L, full cutting edge (full edge) positive rake angle
84	Long blank L and R/L + 3D chip breaker for finishing
85	Long blank R + 3D chip breaker for finishing
86	Long blank L and R/L + 3D chip breaker for roughing
87	Long blank R + 3D chip breaker for roughing
88	Complete rake face R/L (full face)
89	Complete rake face R/L (full face) + 3D chip breaker for finishing
90	Complete rake face R/L (full face) + 3D chip breaker for roughing
91	Triangular blank L+R (tipped) Wiper
92	Triangular blank L+R (tipped) Wiper + 3D chip breaker for finishing
93	Triangular blank L+R (tipped) Wiper + 3D chip breaker for roughing
94	Long blank L and R/L, full cutting edge (full edge)
95	Long blank R, full cutting edge (full edge)
96	Triangular blank L+R (tipped) 3D chip breaker for finishing
97	Triangular blank L+R (tipped) 3D chip breaker for roughing
98	Triangular blank L+R (tipped) positive rake angle
99	Triangular blank L+R (tipped)

Numerical coding for W... inserts

W	2	9	2	4	0	1	0	.	0	4	8	4	2	5
1	2	3	4	5	6	7	8		9	10	11	12	13	14
Main group	Type Form		Size IC		Topography		Index		Corner radius		Cutting material code			

Type Form						
2 - 3						
				Version	peripheral	Clearance angle, other
00	W... Unisix®		84°	standard	ground	
01	W... Unisix®		84°	strengthened	ground	
04	W... Unisix®		84°	6 edged	ground	0°
05	W... Unisix®		84°	6 edged	ground	0°, wide flute
24	W... Unisix®		95°	strengthened	sintered	
25	W... Unisix®		84°	standard	sintered	
27	W... Unisix®		95°	strengthened	ground	
28	W... Unisix®		84°	standard	ground	
29	W... Unisix®		84°	strengthened		
30	T...		60°		ground	8°
32	T...		60°		ground	11°
34	T...		60°	strengthened	ground	
36	T...		60°	6 edged	ground	0°
37	T...		60°		ground	20°
57	T...		60°		ground	11°
58	T...		60°		ground	IC tolerance ±0,025
59	T...		60°	strengthened	ground	
60	D...		55°		ground	
78	V...		35°		ground	
79	D...		55°		ground	
80	S...		90°		sintered	
82	S...		90°		ground	
83	S...		90°		sintered	

Size IC			
4 - 5			
			
03	3,97 mm	26	8,2 mm
04	4,0 mm	28	8,9 mm
10	4,8 mm 5,0 mm	32	9,52 mm 9,8 mm
12	5,5 mm	34	10,0 mm
13	5,56 mm	38	10,9 mm 11,1 mm
14	5,6 mm	42	12,0 mm
17	6,0 mm	44	12,7 mm
18	6,2 mm 6,35 mm	46	13,2 mm
20	7,0 mm 7,1 mm	50	15,0 mm
22	7,7 mm	53	15,88 mm
23	7,94 mm	58	17,6 mm
24	8,0 mm	62	19,05 mm

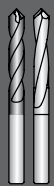
Topography	
6 - 7	
Code ground	Code sintered
00 L.H. cutting, neutral	00 Double chip groove (PD), cutting edge rounded
06 L.H. cutting, 6°	01 Double chip groove (K), cutting edge chamfered and rounded
12 L.H. cutting, 12°	02 Step geometry (KS), cutting edge chamfered and rounded
15 L.H. cutting, 15°	03 Dimple geometry (KX), cutting edge rounded
18 L.H. cutting, 18°	04 Finished geometry
20 L.H. cutting, 20°	05 10° chip groove (T), cutting edge rounded
30 R.H. cutting, neutral	06 12° chip groove (C), cutting edge rounded
36 R.H. cutting, 6°	07 Finished geometry
42 R.H. cutting, 12°	10 Shank geometry, cutting edge chamfered and rounded
45 R.H. cutting, 15°	11 20° chip groove, cutting edge rounded
48 R.H. cutting, 18°	12 AI / finished geometry
50 R.H. cutting, 20°	13 Shank geometry, cutting edge rounded
60 neutral	14 Finishing-Topographie
66 3x ground, 6°	15 Semi-finishing Topographie
70 3x ground, 10°	16 Semi-finishing Topographie with "Wiper" corner
72 3x ground, 12°	17 22° Topographie / tangential insert
80 3x ground, 20°	18 Finishing-Topographie with "Wiper" corner
82 L.H. cutting, 12°, sharp-edged	20 Universal topography 8° top rake
83 R.H. cutting, 12°, sharp-edged	21 20° Highly positive "Technology 21"
94 neutral, bright complete, L.H. + R.H. cutting	32 peripheral ground with minimal burring
98 bright with flute on corner, L.H. + R.H. cutting	33 peripheral sintered with minimal burring
99 neutral, bright on corner, L.H. + R.H. cutting	

Corner radius			
9 - 10			
			
01	R 0,1	06	R 0,6
02	R 0,2	08	R 0,8
03	R 0,3	10	R 1,0
04	R 0,4	12	R 1,2
05	R 0,5	16	R 1,6
30	U8.00 R 0		
31	UF		
32	US		
33	U8.77 15° clearance angle additional cutting edge form for Unisix® milling cutter inserts		
34	F / KUF 90°		
35	F / KUF 75°		
36	F / KUF 60°		
39	R 0,05		
40	45° corner for chamfering cartridge		
75	Support chamfer 75° L.H.		
90	Support chamfer 90° L.H.		



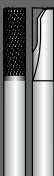
KOMET® Indexable inserts

1



With super-hard PCD diamond cutting tool materials. Superior performance at the cutting edge thanks to the use of state-of-the-art laser technology.

2



With polycrystalline cubic boron nitride CBN.

Large selection of CBN cutting materials. Superior performance thanks to optimisation-oriented cutting material portfolio.

3



With nanocrystalline diamond coating NCD.

For maximum number of cuts and productivity.

4



5



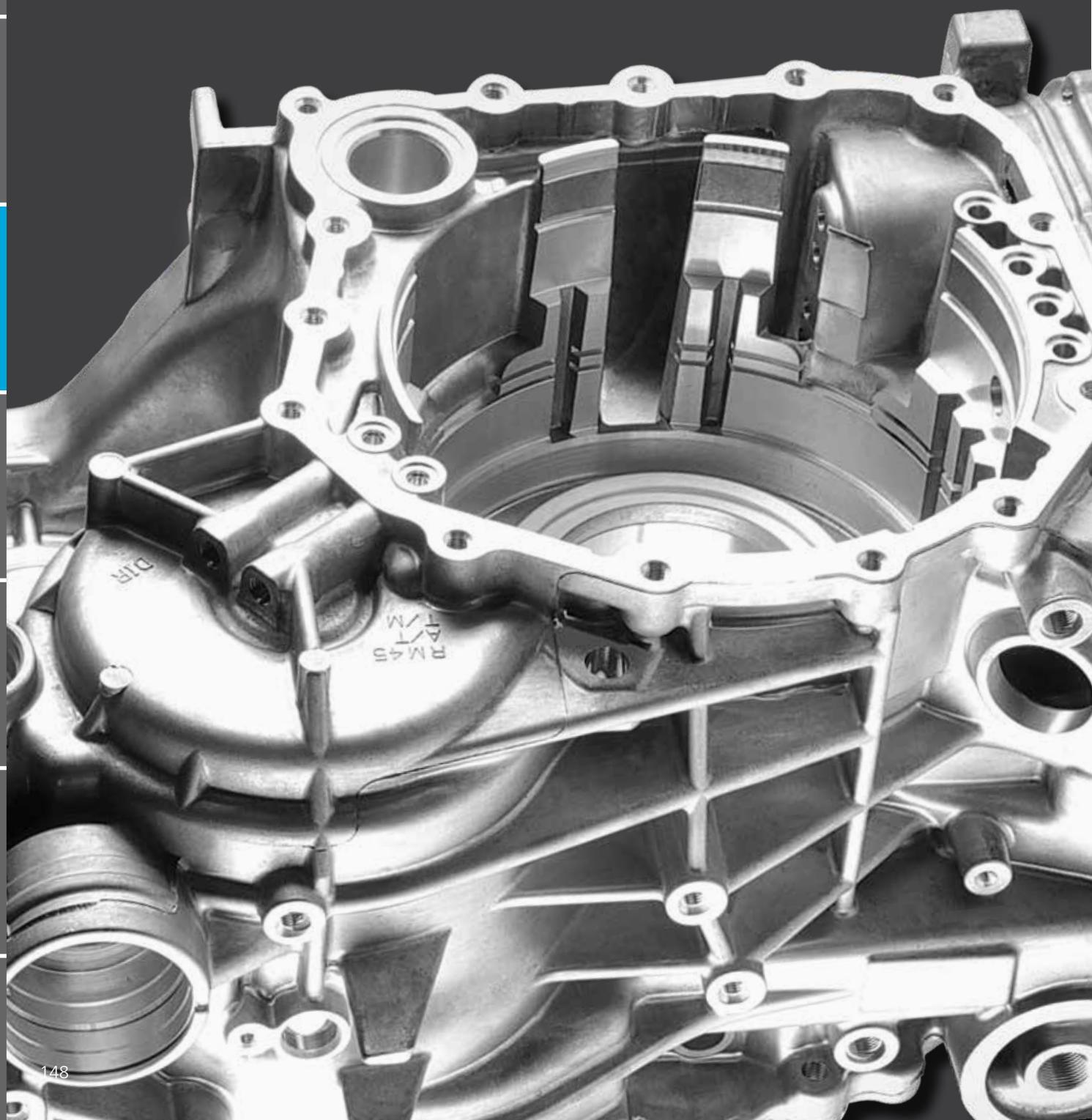
6



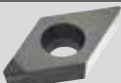
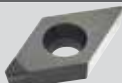
7



8



Portfolio overview – PCD Indexable inserts

DOET  W60..98 ▶ 150	DOEW  W60..99 ▶ 151	SPEW  W83 ▶ 152	TOEX		
			 W30..94 ▶ 153	 W30..98 ▶ 154	 W30..99 ▶ 155
WOEX  W01..94 ▶ 159	VOET  W78..98 ▶ 160	VOEW  W78..99 ▶ 161	TPHB		TPHX  W32..98 ▶ 158
			 W32..94 ▶ 156	 W32..99 ▶ 157	

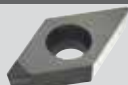
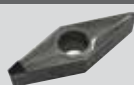


PKD5510: Polycrystalline diamond cutting tool material for machining aluminium materials, abrasive materials, plastics and composite materials with high cutting speeds.



Laser-machined cutting edges, chip breakers, chamfers and rounding

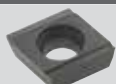
Portfolio overview – CBN Indexable inserts

CCGW  W85 ▶ 162	DOEW  W60..99 ▶ 163	TOEX		WOEX  W01..94 ▶ 166	VOEW  W78..99 ▶ 167
		 W30..94 ▶ 164	 W30..99 ▶ 165		



CBN: Polycrystalline cubic boron nitride, particularly suitable for machining hardened steels, as well as cast iron and many other hard and abrasive materials with very efficient machining parameters. After diamond, CBN is the second hardest material in the world.

Portfolio overview – NCD Indexable inserts

CPGT  W85 ▶ 168	TPHB  W32..60 ▶ 169	TPHX  W32..15 ▶ 170	WOEX  W29..11 ▶ 171
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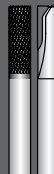


BK50: Nanocrystalline diamond-coated carbide for machining aluminium and aluminium alloys, graphite and many other non-ferrous metals, as well as fibre composites. The geometry, surface and sharpness of the tool remain intact thanks to the thin diamond layer.

1



2



3

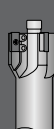


ISO

4



5



6



7



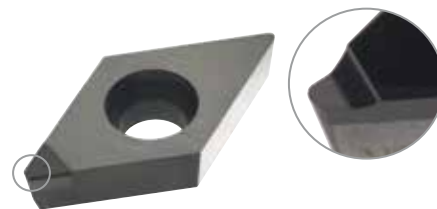
8



KOMET® W60..98

DOET

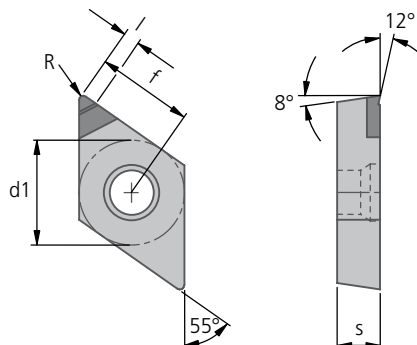
PCD Indexable inserts



Cutter geometry:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

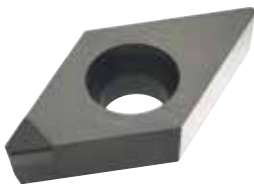


Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
DOET 070204 FN-G12	W60 18980.04..	▲		6,35	2,4	0,6	5,73	0,4
DOET 11T304 FN-G10	W60 32980.04..	▲		9,52	4,0	0,6	8,78	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code DOET 070204 FN-G12 Cutting material PKD5510 Order No. W60 18980.045510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

● Main area of application ● Suitable in some cases

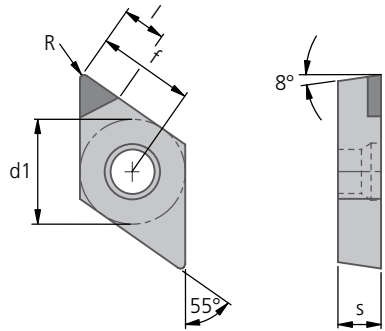
▲ Availability: for delivery see current price and stock list

DOEW



Cutter geometry:

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



KOMET® W60..99

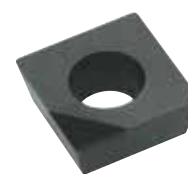
PCD Indexable inserts



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
DOEW 070202 FN	W60 18990.02..	▲		6,35	2,4	3,0	5,92	0,2
DOEW 070204 FN	W60 18990.04..	▲					5,73	0,4
DOEW 11T302 FN	W60 32990.02..	▲					8,96	0,2
DOEW 11T304 FN	W60 32990.04..	▲		9,52	4,0	3,0	8,78	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code DOEW 070202 FN Cutting material PKD5510 Order No. W60 18990.025510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						



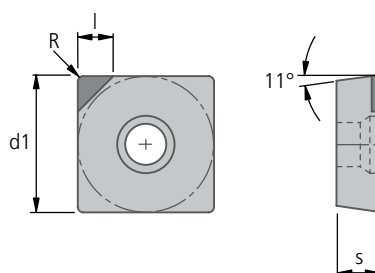
PCD Indexable inserts



Cutter geometry:

PCD

Increased edge stability so can also be used, for example, in aluminium with 12% Si content and with interrupted cut.



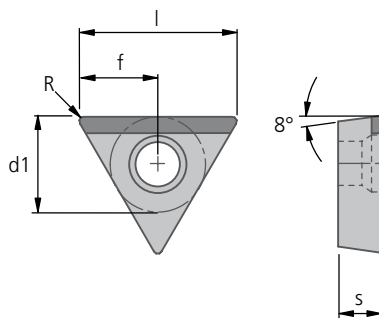
Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
SPEW 09T304 FN	W83 32000.13..	▲		9,52	3,97	3,0	0,4	0,4
SPEW 09T308 FN	W83 32000.14..	▲					0,8	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code SPEW 09T304 FN Cutting material PKD5510 Order No. W83 32000.135510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		🕒						
Ceramics		🕒						
Glass, quartz glass		🕒						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		🕒						
Graphite		🕒						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

TOEX



Cutter geometry:

Turning and for processing with very high cutting parameters and with interrupted cuts and for other non-ferrous metal materials.



KOMET® W30..94

PCD Indexable inserts



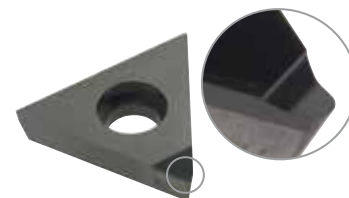
Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 		d1	s	l	f	R
Cutting edge design F = sharp	Enter cutting material code	5510						
TOEX 090204 F	W30 14940.04..	▲		5,6	2,5	9,12	4,56	0,4
TOEX 140305 F	W30 26940.05..	▲		8,2	3,0	13,5	6,74	0,5
Aluminium alloys Si < 12%	N	●		Order example: ISO Code TOEX 090204 F Cutting material PKD5510 Order No. W30 14940.045510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		◐						
Ceramics		◐						
Glass, quartz glass		◐						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		◐						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						



KOMET® W30..98

TOEX

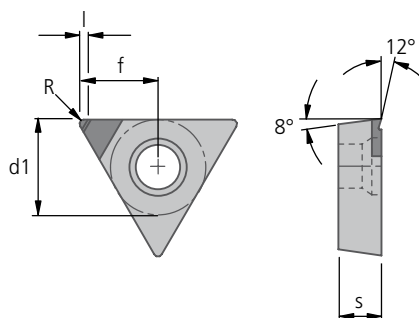
PCD Indexable inserts



Cutter geometry:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
TOEX 06T103 FN-G12	W30 04980.03..	▲		4,0	1,8	0,6	3,25	0,3
TOEX 090204 FN-G12	W30 14980.04..	▲		5,6	2,5	0,6	4,56	0,4
TOEX 140305 FN-G12	W30 26980.05..	▲		8,2	3,0	0,6	6,74	0,5
Aluminium alloys Si < 12%		●		Order example: ISO Code TOEX 06T103 FN Cutting material PKD5510 Order No. W30 04980.035510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

● Main area of application ● Suitable in some cases

▲ Availability: for delivery see current price and stock list

TOEX



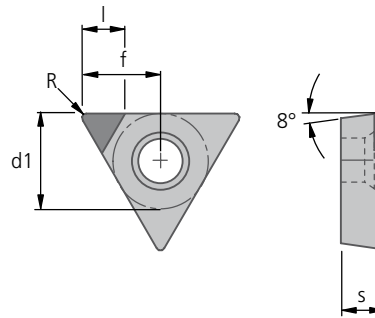
KOMET® W30..99

PCD Indexable inserts



Cutter geometry:

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
TOEX 06T102 FN	W30 04990.02..	▲		4,0	1,8	1,8	3,32	0,2
TOEX 06T103 FN	W30 04990.03..	▲					3,25	0,3
TOEX 06T104 FN	W30 04990.04..	▲					3,17	0,4
TOEX 090202 FN	W30 14990.02..	▲		5,6	2,5	2,7	4,70	0,2
TOEX 090204 FN	W30 14990.04..	▲					4,56	0,4
TOEX 090208 FN	W30 14990.08..	▲					4,26	0,8
TOEX 140302 FN	W30 26990.02..	▲		8,2	3,0	2,7	6,96	0,2
TOEX 140304 FN	W30 26990.04..	▲					6,81	0,4
TOEX 140305 FN	W30 26990.05..	▲					6,74	0,5
Aluminium alloys Si < 12%		●		Order example: ISO Code TOEX 06T102 FN Cutting material PKD5510 Order No. W30 04990.025510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						



KOMET® W32..94

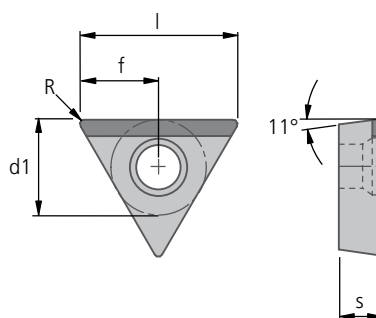
TPHB

PCD Indexable inserts



Cutter geometry:

PCD: Turning and for processing with very high cutting parameters and with interrupted cuts and for other non-ferrous metal materials.



Substrate		PCD				
Cutting material designation		PKD5510				
Cutting edge design		F				
ISO Code	Order No.	PCD				
Cutting edge design F = sharp	Enter cutting material code	5510				
TPHB 090204 F	W32 13940.04..	▲	5,56	2,38	9,05	4,52 0,4
TPHB 110204 F	W32 18940.04..	▲	6,35	2,38	10,41	5,21 0,4
TPHB 110208 F	W32 18940.08..	▲				4,91 0,8
TPHB 130304 F	W32 23940.04..	▲	7,94	3,18	13,17	6,59 0,4
TPHB 160304 F	W32 32940.04..	▲	9,52	3,18	15,9	7,95 0,4
Aluminium alloys Si < 12%		●	Order example: ISO Code TPHB 090204 F Cutting material PKD5510 Order No. W32 13940.045510			
Aluminium alloys Si > 12%		●				
CFRP, GFRP, plastics, composites		●				
Ceramics		●				
Glass, quartz glass	N	●				
sintered carbides (G10-G60)		●				
Metal Matrix Composites (MMC)		●				
Graphite		●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●				

● Main area of application ● Suitable in some cases

▲ Availability: for delivery see current price and stock list

TPHB



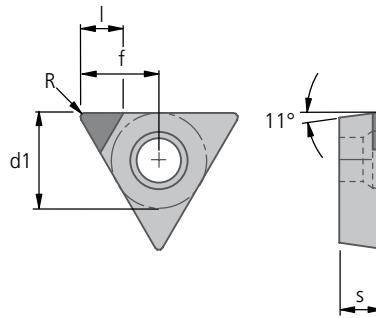
KOMET® W32..99

PCD Indexable inserts



Cutter geometry:

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
TPHB 060104 FN	W32 03990.04..	▲		3,97	1,60	1,8	3,15	0,4
TPHB 090204 FN	W32 13990.04..	▲		5,56	2,38	2,7	4,52	0,4
TPHB 110204 FN	W32 18990.04..	▲		6,35	2,38	3,8	5,21	0,4
TPHB 130304 FN	W32 23990.04..	▲		7,94	3,18	3,8	6,59	0,4
TPHB 160304 FN	W32 32990.04..	▲		9,52	3,18	3,8	7,95	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code TPHB 060104 FN Cutting material PKD5510 Order No. W32 03990.045510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		🇩🇪						
Ceramics		🇩🇪						
Glass, quartz glass		🇩🇪						
sintered carbides (G10-G60)		🇩🇪						
Metal Matrix Composites (MMC)		●						
Graphite		🇩🇪						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						



KOMET® W32..98

TPHX

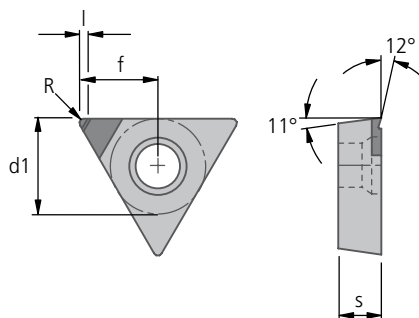
PCD Indexable inserts



Cutter geometry:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
TPHX 060104 FN	W32 03980.04..	▲		3,97	1,60	0,6	3,15	0,4
TPHX 090202 FN	W32 13980.02..	▲		5,56	2,38	0,6	5,35	0,2
TPHX 090204 FN	W32 13980.04..	▲					4,67	0,4
TPHX 110204 FN	W32 18980.04..	▲		6,35	2,38	0,6	5,21	0,4
TPHX 130304 FN	W32 23980.04..	▲		7,94	3,18	0,6	6,59	0,4
TPHX 160304 FN	W32 32980.04..	▲		9,52	3,18	0,6	7,95	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code TPHX 060104 FN Cutting material PKD5510 Order No. W32 03980.045510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

● Main area of application ● Suitable in some cases

▲ Availability: for delivery see current price and stock list



PCD Indexable inserts

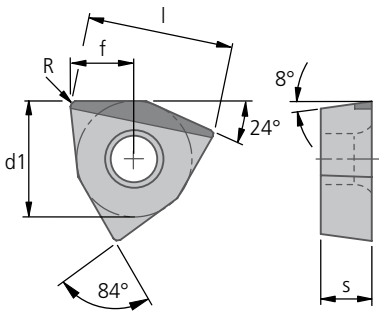


Cutter geometry:

neutral cutting form „N“

Inserts have the following advantages:

- high cutting speeds
- high dimensional consistency
- enormously long tool life
- above-average surface finish



Substrate		PCD				
Cutting material designation		PKD5510				
Cutting edge design		F				
ISO Code	Order No.	PCD				
Cutting edge design F = sharp	Enter cutting material code	5510				
WOEX 05T304 F	W01 24940.04..	▲	8,0	3,8	10,1	4,40 0,4
WOEX 06T304 F	W01 34940.04..	▲	10,0	3,8	12,7	5,51 0,4
WOEX 080404 F	W01 42940.04..	▲	12,0	4,8	15,3	6,62 0,4
Aluminium alloys Si < 12%		●	Order example: ISO Code WOEX 05T304 F Cutting material PKD5510 Order No. W01 24940.045510			
Aluminium alloys Si > 12%		●				
CFRP, GFRP, plastics, composites		●				
Ceramics		●				
Glass, quartz glass	N	●				
sintered carbides (G10-G60)		●				
Metal Matrix Composites (MMC)		●				
Graphite		●				
other non-ferrous metals (Cu / bronze / brass / Mg)		●				



KOMET® W78..98

PCD Indexable inserts

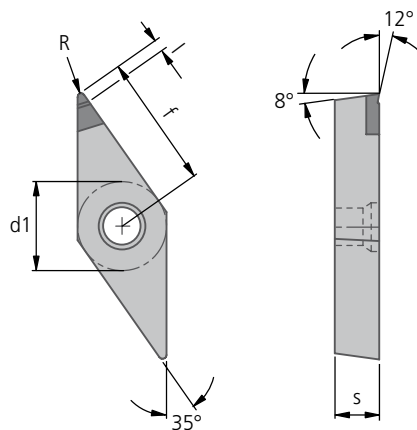
VOET



Cutter geometry:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 						
Cutting edge design F = sharp	Enter cutting material code	5510		d1	s	l	f	R
VOET 110304 FN-G12	W78 18980.04..	▲		6,35	3,18	0,6	9,20	0,4
VOET 160404 FN-G12	W78 32980.04..	▲		9,52	4,76	0,6	13,36	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code VOET 110304 FN-G12 Cutting material PKD5510 Order No. W78 18980.045510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

● Main area of application ● Suitable in some cases

▲ Availability: for delivery see current price and stock list

VOEW



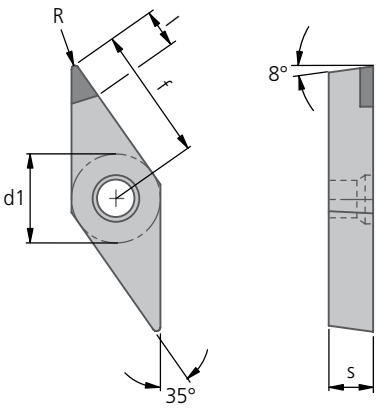
KOMET® W78..99

PCD Indexable inserts



Cutter geometry:

Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphite, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.



Substrate		PCD						
Cutting material designation		PKD5510						
Cutting edge design		F						
ISO Code	Order No.	PCD 		d1	s	l	f	R
Cutting edge design F = sharp	Enter cutting material code	5510						
VOEW 110304 FN	W78 18990.04..	▲		6,35	3,18	2,5	9,20	0,4
VOEW 160408 FN	W78 32990.08..	▲		9,52	4,76	3,5	13,36	0,8
Aluminium alloys Si < 12%	N	●		Order example: ISO Code VOEW 110304 FN Cutting material PKD5510 Order No. W78 18990.045510				
Aluminium alloys Si > 12%		●						
CFRP, GFRP, plastics, composites		●						
Ceramics		●						
Glass, quartz glass		●						
sintered carbides (G10-G60)		●						
Metal Matrix Composites (MMC)		●						
Graphite		●						
other non-ferrous metals (Cu / bronze / brass / Mg)		●						

CBN Indexable inserts



Cutter geometry:

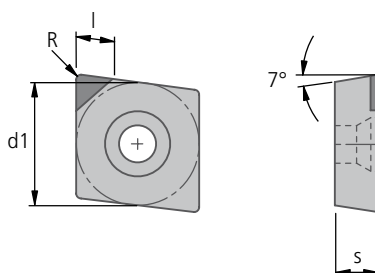
CBN57

for cutting cast iron (GJL) and alloyed cast iron (ferrite content <10%) and chilled cast iron and some heat resistant alloys

$v_c = 500 \dots 800 \text{ (1500) m/min}$

$f = 0.1 \dots 0.5 \text{ mm}$

$a_p = 0.1 \dots 1 \text{ mm}$



CBN40

for cutting hardened steels >48 HRC

$v_c = 100 \dots 160 \text{ m/min}$

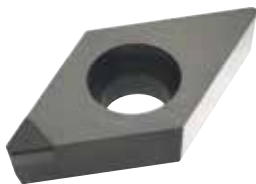
$f = 0.1 \dots 0.3 \text{ mm}$

$a_p = 0.1 \dots 0.5 \text{ mm}$

Substrate		CBN					
Coating type		—	—				
Cutting material designation		CBN40	CBN57				
Cutting edge design		T	T				
ISO Code	Order No.			d1	s	l	R
Cutting edge design T = chamfered ▼	Enter cutting material code ▼	40	57				
CCGW 060204 TN	W85 18000.26..		▲	6,35	2,38	3,0	0,4
CCGW 09T304 TN	W85 32000.31..	▲	▲	9,52	3,97	3,0	0,4
Steel	P			Order example: ISO Code CCGW 060204 TN Cutting material CBN57 Order No. W85 18000.2657			
Stainless steel	M						
Cast iron	K						
Non-ferrous metals	N						
Superalloys and titanium	S						
Hardened materials	H	≥ 52 HRC					

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting materials: available on request.

DOEW



KOMET® W60..99

CBN Indexable inserts



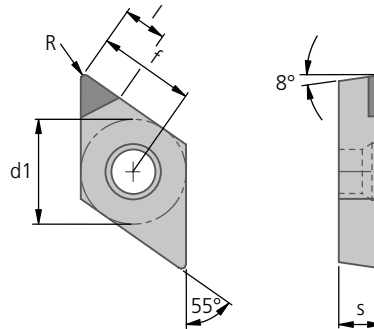
Cutter geometry:

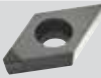
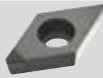
Internal and external machining, fine turning.

Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.

CBN 40: For machining hardened steels (over 52 HRC).



Substrate		CBN										
Coating type		—				d1	s	l	f	R		
Cutting material designation		—										
Cutting material designation		CBN57									CBN40	
Cutting edge design		T										
ISO Code	Order No.											
Cutting edge design T = chamfered ▼	Enter cutting material code ▼											
DOEW 070202 TN	W60 18990.02..	57		6,35 2,4 3,0 5,92 0,2								
DOEW 070204 TN	W60 18990.04..	▲		5,73 0,4								
DOEW 11T302 TN	W60 32990.02..	▲		8,96 0,2								
DOEW 11T304 TN	W60 32990.04..	▲		8,78 0,4								
Steel P				Order example: ISO Code DOEW 070202 TN Cutting material CBN40 Order No. W60 18990.0240								
Stainless steel M												
Cast iron K		●										
Non-ferrous metals N												
Superalloys and titanium S		●										
Hardened materials H				○ ≥ 52 HRC								

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting materials: available on request.

1



2



3



ISO

4



5



6



7



8



KOMET® W30..94

TOEX

CBN Indexable inserts

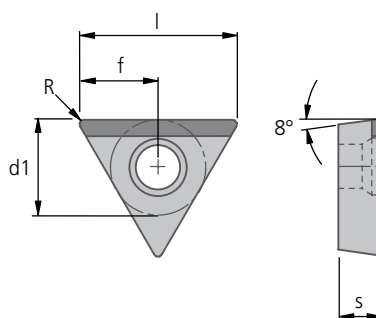


Cutter geometry:

Internal and external machining, fine turning.

Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.



Substrate		CBN						
Coating type		—						
Cutting material designation		CBN57						
Cutting edge design		T						
ISO Code	Order No.			d1	s	l	f	R
Cutting edge design T = chamfered ▼	Enter cutting material code ▼	57						
TOEX 090204 T	W30 14940.04..	▲		5,6	2,5	9,12	4,56	0,4
TOEX 140305 T	W30 26940.05..	▲		8,2	3,0	13,5	6,74	0,5
Steel P				Order example: ISO Code TOEX 090204 T Cutting material CBN57 Order No. W30 14940 0457				
Stainless steel M								
Cast iron K								
Non-ferrous metals N								
Superalloys and titanium S								
Hardened materials H		 < 52 HRC						

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting materials: available on request.

TOEX



KOMET® W30..99

CBN Indexable inserts



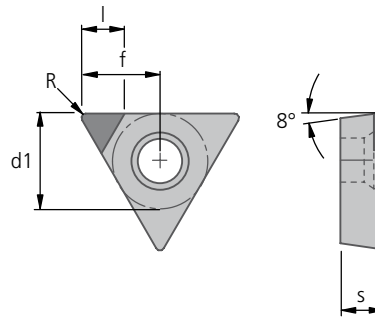
Cutter geometry:

Internal and external machining, fine turning.

Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.

CBN 40: For machining hardened steels (harder than 45 HRC)



Substrate		CBN						
Coating type		-						
Cutting material designation		CBN57						
Cutting edge design		T						
ISO Code	Order No.			d1	s	l	f	R
Cutting edge design T = chamfered ▼	Enter cutting material code ▼	57	40					
TOEX 06T102 TN	W30 04990.02..	▲	▲	4,0	1,8	1,8	3,32	0,2
TOEX 06T103 TN	W30 04990.03..	▲					3,25	0,3
TOEX 090202 TN	W30 14990.02..	▲	▲				4,70	0,2
TOEX 090204 TN	W30 14990.04..	▲	▲	5,6	2,5	2,7	4,56	0,4
TOEX 090208 TN	W30 14990.08..	▲					4,26	0,8
TOEX 140302 TN	W30 26990.02..	▲					6,96	0,2
TOEX 140304 TN	W30 26990.04..	▲	▲	8,2	3,0	2,7	6,81	0,4
TOEX 140305 TN	W30 26990.05..	▲					6,74	0,5
Steel P				Order example: ISO Code TOEX 06T102 TN Cutting material CBN57 Order No. W30 04990.0257				
Stainless steel M								
Cast iron K		●						
Non-ferrous metals N								
Superalloys and titanium S		●						
Hardened materials H			●	○ ≥ 52 HRC				

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting materials: available on request.

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ISO

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KOMET Unisix® W01..94

WOEX

CBN Indexable inserts



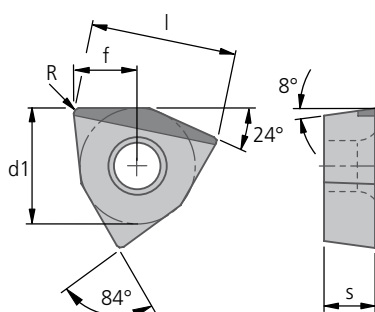
Cutter geometry:

CBN application range

Machining cast iron materials etc.

Inserts have the following advantages:

- high cutting speeds
- high dimensional consistency
- enormously long tool life
- above-average surface finish



Substrate		CBN					
Coating type		—					
Cutting material designation		CBN57					
Cutting edge design		S					
ISO Code	Order No.						
Cutting edge design S = chamfered+rounded ▼	Enter cutting material code ▼	57	d1	s	l	f	R
WOEX 05T304 S	W01 24940.04..	▲	8,0	3,8	10,1	4,40	0,4
WOEX 06T304 S	W01 34940.04..	▲	10,0	3,8	12,7	5,51	0,4
Steel P		 	Order example: ISO Code WOEX 05T304 S Cutting material CBN57 Order No. W01 24940 0457				
Stainless steel M							
Cast iron K							
Non-ferrous metals N							
Superalloys and titanium S							
Hardened materials H							

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting materials: available on request.

● Main area of application ○ Suitable in some cases

▲ Availability: for delivery see current price and stock list

VOEW



KOMET® W78..99

CBN Indexable inserts

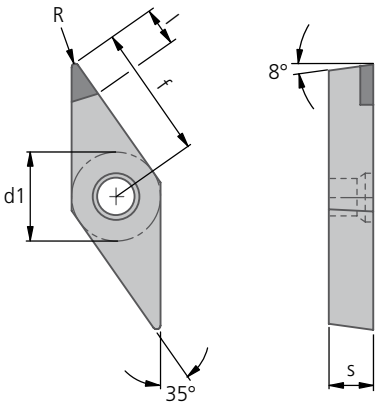


Cutter geometry:

Internal and external machining, fine turning.

Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

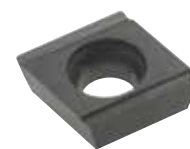
CBN 57: Preferably for cast materials and alloys on a nickel cobalt base.



Substrate		CBN						
Coating type		—						
Cutting material designation		CBN57						
Cutting edge design		T						
ISO Code	Order No.							
Cutting edge design T = chamfered ▼	Enter cutting material code ▼	57		d1	s	l	f	R
VOEW 110304 TN	W78 18990.04..	▲		6,35	3,18	2,5	9,20	0,4
VOEW 160408 TN	W78 32990.08..	▲		9,52	4,76	3,5	13,36	0,8
Steel	P			Order example: ISO Code VOEW 110304 TN Cutting material CBN57 Order No. W78 18990.0457				
Stainless steel	M							
Cast iron	K							
Non-ferrous metals	N							
Superalloys and titanium	S							
Hardened materials	H							

Cutting materials CBN 5830 / 5860 / 5730 / 5750 / 4020 / 4040 / 4060 / 4080 and CS cutting materials: available on request.

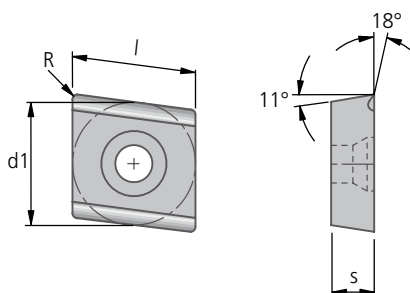
NCD Indexable inserts



Cutter geometry:

L.H. cutting form „L“

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades, high edge stability and high resistance to build-up on cutting edges (coated).



Substrate		NCD			
Cutting material designation		BK50			
Cutting edge design		F			
ISO Code	Order No.				
Cutting edge design F = sharp	Enter cutting material code				
		50			
CPGT 09T304 FL-P18	W85 32000.23..	▲	9,52	3,97	0,4
CPGT 09T308 FL-P18	W85 32000.24..	▲		9,65	0,8
CPGT 120404 FL-P18	W85 44000.29..	▲	12,7	4,76	0,4
Aluminium alloys Si < 12%		●	Order example: ISO Code CPGT 09T304 FL-P18 Cutting material BK50 Order No. W85 32000.2350		
Aluminium alloys Si > 12%		●			
CFRP, GFRP, plastics, composites		●			
Ceramics		●			
Glass, quartz glass	N	●			
sintered carbides (G10-G60)		●			
Metal Matrix Composites (MMC)		●			
Graphite		●			
other non-ferrous metals (Cu / bronze / brass / Mg)		●			

● Main area of application ● Suitable in some cases

▲ Availability: for delivery see current price and stock list

TPHB



KOMET® W32..60

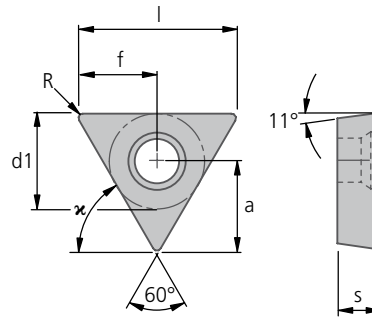
NCD Indexable inserts



Cutter geometry:

neutral cutting form „N“

11° TP HB insert (polished chip surface for uncoated carbide) for high tensile strength cast aluminium alloys.
5° top rake due to axial tilt for cutting speed range of ≤ 300 m/min.



$$a = \cos(\alpha - 60^\circ) \times (d1 - 2R) + R$$

Substrate		NCD					
Cutting material designation		BK50					
Cutting edge design		F					
ISO Code	Order No.						
Cutting edge design F = sharp	Enter cutting material code	50	d1	s	l	f α=90°	R
TPHB 060104 FN-P	W32 03600.04..	W32 03600.0450	3,97	1,60	6,29	3,15	0,4
TPHB 090204 FN-P	W32 13600.04..	W32 13600.0450	5,56	2,38	9,04	4,52	0,4
TPHB 090208 FN-P	W32 13600.08..	W32 13600.0850			8,46	4,23	0,8
TPHB 110204 FN-P	W32 18600.04..	W32 18600.0450	6,35	2,38	10,41	5,21	0,4
TPHB 110208 FN-P	W32 18600.08..	W32 18600.0850			9,83	4,91	0,8
TPHB 130304 FN-P	W32 23600.04..	W32 23600.0450	7,94	3,18	13,17	6,58	0,4
TPHB 160304 FN-P	W32 32600.04..	W32 32600.0450	9,52	3,18	15,9	7,95	0,4
TPHB 160308 FN-P	W32 32600.08..	W32 32600.0850			15,32	7,66	0,8
TPHB 220408 FN-P	W32 44600.08..	W32 44600.0850	12,7	4,30	20,83	10,41	0,8
Aluminium alloys Si < 12%			Order example: ISO Code TPHB 060104 FN-P Cutting material BK50 Order No. W32 03600.0450				
Aluminium alloys Si > 12%							
CFRP, GFRP, plastics, composites							
Ceramics							
Glass, quartz glass		N					
sintered carbides (G10-G60)							
Metal Matrix Composites (MMC)							
Graphite							
other non-ferrous metals (Cu / bronze / brass / Mg)							



NCD Indexable inserts



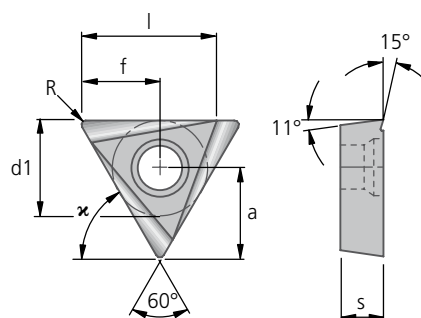
Cutter geometry:

L.H. cutting form „L“

11° TPHX insert with chip surface

(polished ground for uncoated carbide) for softer aluminium materials and other non-ferrous metals.

10 – 15° top rake with axial and radial tilt.



Substrate		NCD					
Cutting material designation		BK50	d1	s	l	f x=90°	R
Cutting edge design		F					
ISO Code	Order No.						
Cutting edge design F = sharp	Enter cutting material code	50					
TPHX 060104 FL-P15	W32 03150.04..	▲	3,97	1,60	3,3	3,12	0,4
TPHX 090204 FL-P15	W32 13150.04..	▲					
TPHX 090208 FL-P15	W32 13150.08..	▲	5,56	2,38		4,5 4,2	4,49 4,17
TPHX 110204 FL-P15	W32 18150.04..	▲					
TPHX 110208 FL-P15	W32 18150.08..	▲	6,35	2,38		4,6 4,3	5,17 4,87
TPHX 130304 FL-P15	W32 23150.04..	▲	7,94	3,18	5,0	6,55	0,4
TPHX 160304 FL-P15	W32 32150.04..	▲	9,52	3,18	8,0	7,92	0,4
Aluminium alloys Si < 12%		●	Order example: ISO Code TPHX 060104 FL-P15 Cutting material BK50 Order No. W32 03150.0450				
Aluminium alloys Si > 12%		○					
CFRP, GFRP, plastics, composites		⊙					
Ceramics							
Glass, quartz glass	N						
sintered carbides (G10-G60)							
Metal Matrix Composites (MMC)		○					
Graphite		●					
other non-ferrous metals (Cu / bronze / brass / Mg)		●					

Please note:

Should a TPHB be used instead of this insert,
dimension "a" changes according to angle " α "

$$a = \cos(\alpha - 60^\circ) \times (d1 - 2R) + R - \left(\frac{\pi}{90^\circ} \times \Delta\right)$$

 $\Delta 0.03$ for $R = 0.4$ $\Delta 0.06$ for $R = 0.8$

● Main area of application ◐ Suitable in some cases

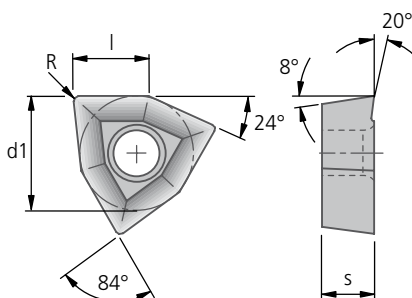
▲ Availability: for delivery see current price and stock list



Cutter geometry:

- KUB Centron®, KUB Trigon®, KUB® drill
- TwinKom® double insert tools
- Special tools
- Internal and external machining

The highly positive chip groove with minimal chamfer for soft cutting operations, mainly on aluminium



Substrate		NCD					
Cutting material designation		BK50					
Cutting edge design		F					
ISO Code	Order No.						
Cutting edge design F = sharp	Enter cutting material code	50		d1	s	l	R
WOEX 030204-11	W29 10110.04..	▲		5,0	2,3	3,2	0,4
WOEX 040304-11	W29 18110.04..	▲		6,35	3,18	4,1	0,4
WOEX 05T304-11	W29 24110.04..	▲		8,0	3,8	5,3	0,4
WOEX 06T304-11	W29 34110.04..	▲		10,0	3,8	6,6	0,4
WOEX 080404-11	W29 42110.04..	▲		12,0	4,8	7,9	0,4
WOEX 100504-11	W29 50110.04..	▲		15,0	5,3	9,9	0,4
Aluminium alloys Si < 12%		●		Order example: ISO Code WOEX 030204-11 Cutting material BK50 Order No. W29 10110.0450			
Aluminium alloys Si > 12%		●					
CFRP, GFRP, plastics, composites		●					
Ceramics		●					
Glass, quartz glass		●					
sintered carbides (G10-G60)		●					
Metal Matrix Composites (MMC)		●					
Graphite		●					
other non-ferrous metals (Cu / bronze / brass / Mg)		●					

KOMET® MicroSet System

1



Reaming with Adjustable Inserts

The new reamers from KOMET which boast individually adjustable inserts are an alternative to the ready-to-use ground tool variants. These reamers also feature multiple blades and offer maximum flexibility, reduce logistics with regard to retipping and enable cost savings thanks to the favourably priced inserts which are available from stock.

2



The single-blade inserts are screwed in place and set to a diameter and tapering using a newly developed fine adjustment system for indexable inserts with μm accuracy. This makes hole tolerances of $\geq \text{IT5}$ easily achievable. The reference dimension is provided by two measuring blocks.

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ISO

Only 14 inserts for the diameter range of 40 to 140 mm. Maximum flexibility in terms of fields of application, availability and variety of cutting materials and coatings are features of this tool, because certain components, tolerances, volumes, etc., often determine which combinations are used.

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Precision and productivity

Even when the demands on a component are particularly high and the highest precision is required, the KOMET® MicroSet System gives you a special advantage: The tools can be readjusted at any time. All that needs to be done is to readjust the indexable inserts in the precision adjustment system to the required diameter. Only when the cutting edges are worn do they need to be replaced.

6



The special strengths of the KOMET® MicroSet System can truly be seen when used with special tools, especially with stepped tools that the user can arrange themselves. Thanks to the variety of possible combinations, the user quickly puts together a suitable reamer that is ideally matched to the component with regard to its materials, tolerances and volumes.

7



Before: Good machining using PCD tool

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BENEFITS for you:

- Maximum flexibility
- Reduces logistics with regard to retipping
- Inserts available from stock
- Individually adjustable inserts
- Simple handling when making adjustments and changing the inserts

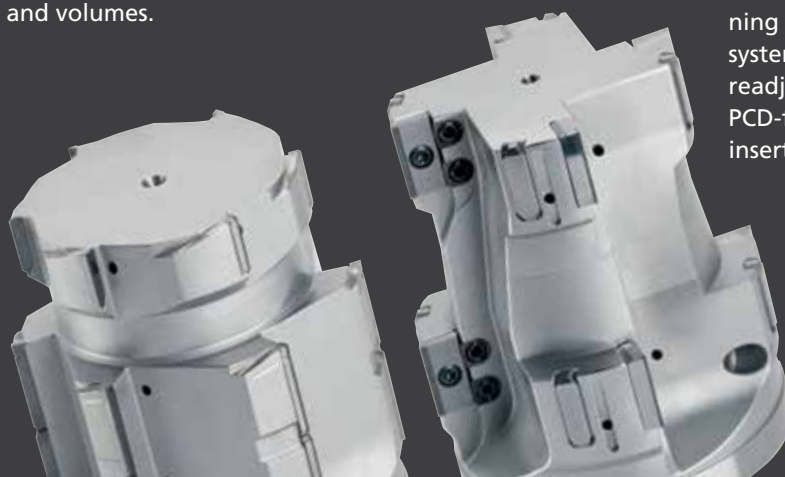
Variant:

- Diameter range of 40 – 140 mm
- Hole tolerances of $\geq \text{IT5}$
- Use with cast metal, solutions for steel, stainless steel, aluminium and other materials to follow
- The tool concept can be used in special and multiple dies

The MicroSet tool shown uses this advantage perfectly and solves the application requirements better than the previously used brazed PCD tools. An inability to correct the brazed PCD plates, particularly in the second stage, results in operating times of different lengths and irregular repair costs.

The standard indexable inserts available from stock (fitted with PCD in this case) make up for long repair cycles and not only increase the flexibility of the system but also the productivity and the profitability of an application.

New: Flexible machining using MicroSet system tool thanks to readjustment of the PCD-fitted indexable inserts





BENEFITS for you:

- Simplified logistics thanks to standard indexable inserts available from stock
- Can be fitted with CBN or PCD indexable inserts for a variety of machining requirements
- Uncomplicated readjustment using a precision-controlled adjustment system
- Can be used as a repeat operation tool e.g. integrated milling and reaming
- Easy and uncomplicated setting also on electronic presetting device



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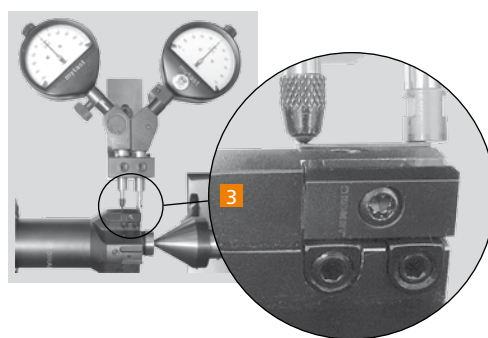
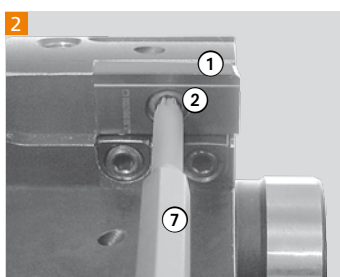
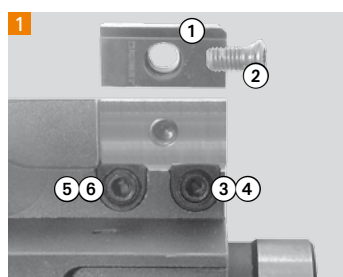


8



MicroSet System					Setting device
Ø D	Insert		Clamping screw	Wedge	 Order No.
	DST for material P	DBG-N for material K			
	Order No.	Order No.	Order No. Article	Order No.	
40,000 – 44,999	70W.93.02040A	70W.37.01040A	N00 57241 S3070-8IP 2,25 Nm	15F.00.30001	059.33.4154
45,000 – 49,999	70W.93.02045A	70W.37.01045A			
50,000 – 54,999	70W.93.02050A	70W.37.01050A			
55,000 – 59,999	70W.93.02055A	70W.37.01055A			
60,000 – 64,999	70W.93.02060A	70W.37.01060A			
65,000 – 69,999	70W.93.02065A	70W.37.01065A			
70,000 – 74,999	70W.93.02070A	70W.37.01070A			
75,000 – 79,999	70W.93.02075A	70W.37.01075A			
80,000 – 89,999	70W.93.02080A	70W.37.01080A			
90,000 – 99,999	70W.93.02090A	70W.37.01090A			
100,000 – 109,999	70W.93.02100A	70W.37.01100A			
110,000 – 119,999	70W.93.02110A	70W.37.01110A			
120,000 – 129,999	70W.93.02120A	70W.37.01120A			
130,000 – 140,000	70W.93.02130A	70W.37.01130A			

Assembly instructions



Assembly parts (Fig. 1)

- ① indexable insert
② clamping screw

Setting machining dia.

- ③ adjusting wedge, ④ differential screw

Setting conicity

- ⑤ adjusting wedge, ⑥ differential screw

Fit the indexable insert:

Make sure that the insert seat is clean.

Place the indexable insert ① into the insert seat and tighten the clamping screw ② only slightly.

Use torque wrench ⑦ (2,25 Nm) (Fig.2).

Reference dia. as reference dimension "0" for setting the machining dia. and conicity (Fig. 3), reference dia. is marked on tool.

Preset the machining dia. (Fig. 4) and conicity (Fig. 5):

Use an Allen key ⑧ (width across flats SW2) to turn the differential screws ④ and ⑥ until the indexable insert ① is set to approx. 10 µm below the desired machining dia. and approx. 25 µm over the reference dia.

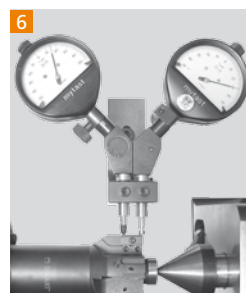
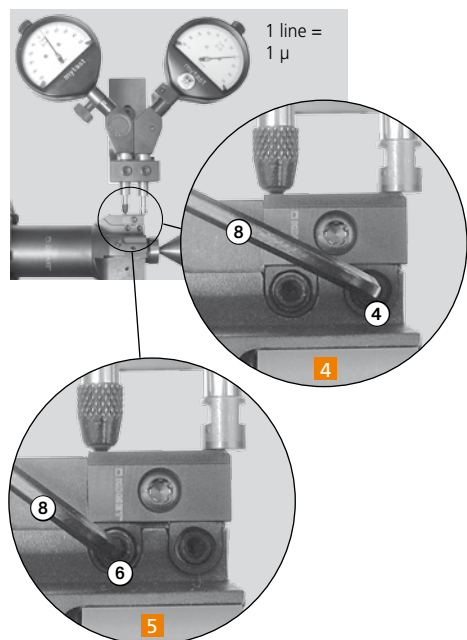
Secure the insert:

Use a torque wrench ⑦ (2,25 Nm) to secure the indexable insert ① at the preset tightening torque (Fig. 2).

Set the final machining dia. (Fig. 4) and conicity (Fig 5):

When tightened, the indexable insert ① is set to the machining diameter and the specified conicity using the differential screws ④ and ⑥.

Tool after setting (Fig 6).



Design your own tool!

Unique: Reaming with Adjustable Inserts!

The tools are specially manufactured for each application, with four to eight cutting edges on a basic body and for length/diameter ratios up to $2 \times D$.

We check your specifications for technical feasibility and you receive a prompt reply.

Company:

Contact:

Department:

E-Mail:

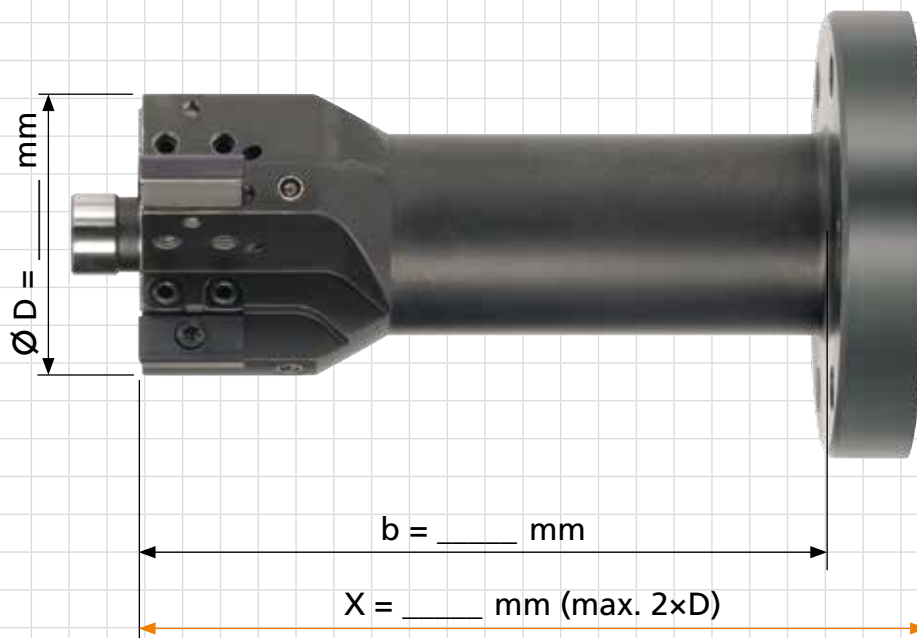
Telephone:

Customer-No.:

Fax:

Distributor:

Date:



Material to be machined:

Machining method

☐ through hole

☐ blind hole

Length of bore:

Interrupted cut

☐ yes ☐ no

Tolerance:

Required surface:

Allowance in Ø:

Required cutting material

Holder / Adaptor (Type and size)



☐ DAH _____



☐ HSK _____
DIN 69893 A



☐ SK _____
DIN 69871 AD/B



☐ BT _____
JIS B 6339 AD/B
(MAS 403 BT)

other adaptors on request

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KOMET® Special tools

Special solutions and multi-step tools – Greater range of functions, lower machining costs

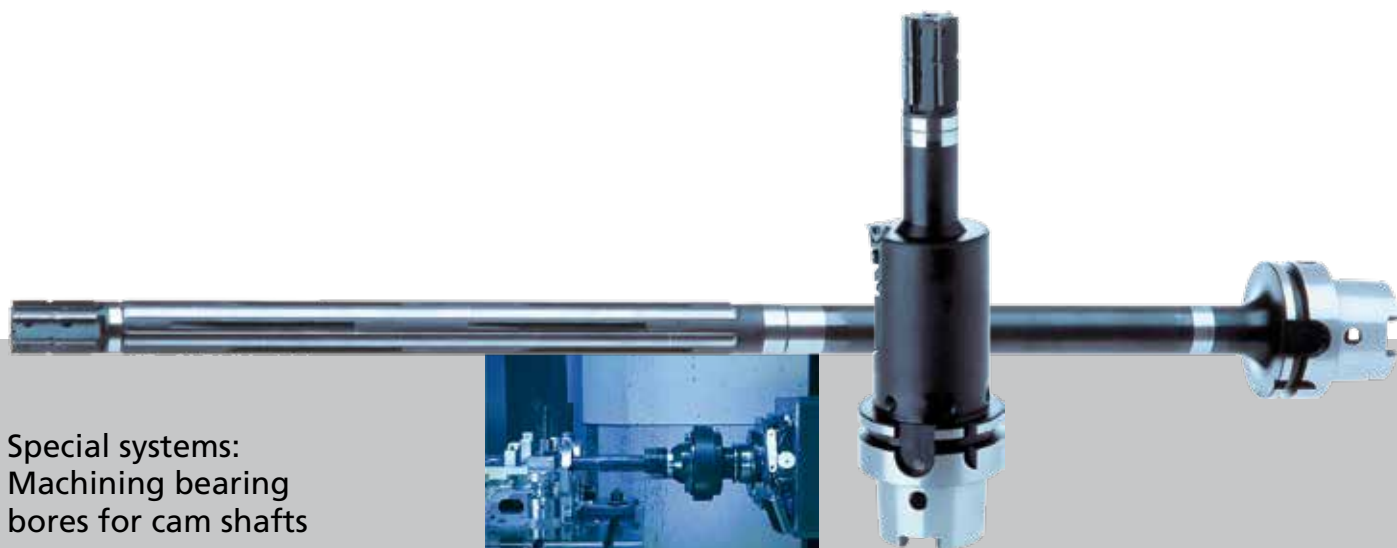
The development of specific solutions for customers represents a major area of competence for KOMET.

It is often impossible to carry out machining tasks with standard tools because of the demands for form, tolerance or quality which require special process analysis and tool development work.

References to applications can be found in our application examples.

BENEFITS for you:

- Optimised application design
- Major reduction of non-productive time
- Technical advice by KOMET technicians
- Combining several machining operations
- Highest efficiency and productivity



Special systems: Machining bearing bores for cam shafts

Example:

Finish machining operation for camshaft bearing for cylinder heads in Ck AlSi9Cu3 for car engines.

The task:

To simplify the process on transfer lines or machining centres.

The solution:

Using the newly developed tool, machining the cylinder heads on transfer lines is reduced to one station. On machining centres a pilot tool short, stable fitted with PCD inserts is initially used to pre-machine the bores for the first journal. The finishing tool (also with PCD inserts), which matches the length of the engine, then reams all the bores to size: $\varnothing 26,045 \text{ H7}$.

The concept has now become well established in engine and vehicle manufacturing.

The cutting values are:

$v_c = 220 \text{ m/min}$; $f = 1080 \text{ mm/min}$.

With its multi-flute stepped reaming tools and special solutions, KOMET improves the economics of reaming. The latest generation of tools is characterised by extremely high cutting speeds and high feed rates. Designed to suit workpiece and material, they guarantee dimensional stability and reliable production.

Multi-step tools

Multi-step and modular reaming tools from KOMET improve production performance. KOMET increases the range of functions for the tools and in doing so reduces machining costs.



Special tools

- Use of latest technology
- Tool design to suit application
- Advice from KOMET experts
- Stand the test in many references
- Multi-flute reaming tools for best performance
- Reduction in ancillary costs

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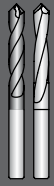


8



KOMET® PCD Thread milling tool

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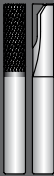
KOMET® MGF PKD – Thread milling and countersinking

The MGF thread milling tools feature a larger core cross section and narrow, geometrically optimised flutes. These characteristics produce good chip formation and low cutting pressure when thread milling.

BENEFITS for you:

- Excellent surface finish on the part because of variation of the cutting parameters
- Exact pitch – no flattening at front of the thread
- Shorter milling chips (no chip problems in the same way as for tap drills)
- Various tolerances and thread sizes p.ex. 6H, 6G or M18×1.5, M20×1.5 and M24×1.5 can be produced
- One tool for blind bore and through hole thread
- One tool for L.H. and R.H. thread
- Fewer tool spaces
- No chip residue at the bottom of the bore
- Low cutting pressure when machining thin-walled parts
- Exact thread depth

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ISO

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KOMET® TOMILL GWF HPC PKD – Optimised for high cutting speeds due to a higher number of teeth

Producing threads with the highest precision

The KOMET® TOMILL GWF is suitable for producing large thread diameters according to the 2/3 concept.

Our tools have a helix angle of approximately 15° to the right, with the effect that extremely quiet work can be achieved. The cubic capacity complies with the KOMET standard, and the shank is manufactured to DIN 6535.

BENEFITS for you:

- One and the same tool for different tolerances
- One and the same tool for different diameters > nominal Ø with same pitch
- One and the same tool for blind and through holes
- One and the same tool for different materials
- Exact and repeatable thread depth
- No chip root remaining in the thread
- High speed cutting (HSC) possible



Thread milling tool MGF PCD Page

MGF PCD – for lightweight structural materials

M-MGF PCD 2xD for metric ISO thread DIN 13	180
MF-MGF PCD 2xD for metric fine ISO thread DIN 13	181

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Thread milling tool TOMILL GWF PCD Page

TOMILL GWF – for lightweight structural materials

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M-GWF HPC PKD MF-GWF HPC PKD for metric ISO thread DIN 13	183

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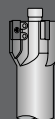
Tap drill diameters	187
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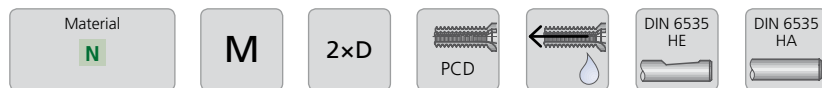

CNC programs for various control systems can be configured online at <http://tpt.kometgroup.com> or can be obtained on request by telephoning: +49 711 788910.

Also available as "TPT Mobile" app, with identical features for mobile end devices like iPhone and iPad, in the webshop App Store as well as Google Play™ for Android™ smartphones.

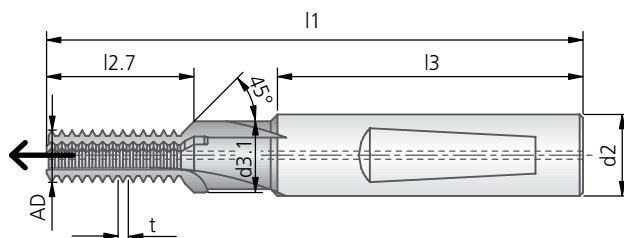
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KOMET® M-MGF PKD

Thread milling tool with rear chamfer



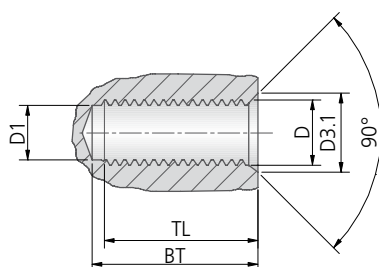
for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



M-MGF PKD 2xD											DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3.1	AD	Z	kg	Order No.	Order No.
M8	1,25	6,80	74	17,8	40	10	8,3	6,22	2		30970001000020	38970001000020
M10	1,50	8,50	79	21,4	45	12	10,3	7,79	3		30970001000022	38970001000022
M12	1,75	10,25	89	26,7	45	14	12,3	9,38	3		30970001000024	38970001000024

We can supply thread milling tools for other fixed thread lengths on request.

Thread engagements



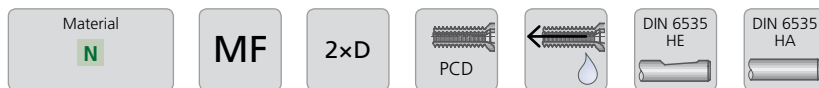
Nominal Ø D	M			
	D1	D3.1	2xD	
M8	6,80	8,30	BT	TL
M10	8,50	10,30	21,31	19,92
M12	10,30	12,30	26,60	24,96

TL = full thread length

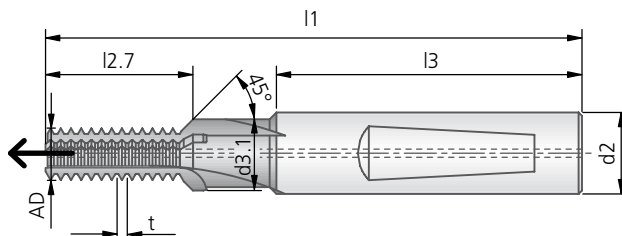
BT = min. drill depth

D3.1 = possible chamfer Ø with rear chamfer

Thread milling tool with rear chamfer



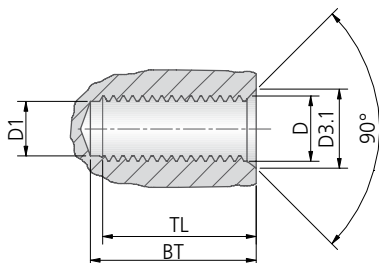
for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



MF-MGF PKD 2xD											DIN 6535 HE	DIN 6535 HA
Nominal Ø	t	Drill Ø	l1	l2.7	l3	d2	d3.1	AD	Z		 Order No.	 Order No.
M10x1	1,00	9,0	79	21,5	45	12	10,3	7,79	3		30970002000094	38970002000094
M12x1,5	1,50	10,5	88	26,0	45	14	12,3	9,38	3		30970002000113	38970002000113

We can supply thread milling tools for other fixed thread lengths on request.

Thread engagements



TL = full thread length
BT = min. drill depth
D3.1 = possible chamfer Ø with rear chamfer

MF				
Nominal Ø	2xD			
D	D1	D3.1	BT	TL
M10x1	9,00	10,30	21,46	20,17
M12x1,5	10,50	12,30	25,92	24,33

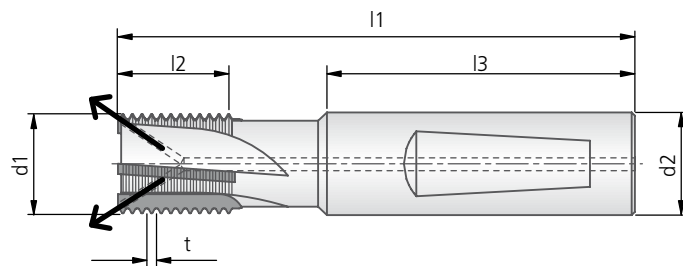


KOMET® TOMILL GWF SR PKD

Thread milling tool M-GWF SR PKD | MF-GWF SR PKD



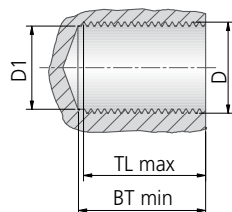
for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



M-GWF SR PKD MF-GWF SR PKD								DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	kg ~	Order No.	Order No.
16×16×M1,5	24	80	16,5	48	16	4		30802005001150	38802005001150
20×20×M1,5	30	92	19,5	50	20	4		30802007001150	38802007001150

Thread engagements

GWF SR

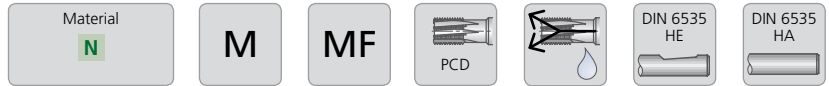


GWF SR			
d1×l2	BT min	Thread length on tool	TL max
16×16	TL + min. 0,20 mm	16,00	*28,00
20×20	TL + min. 0,20 mm	20,00	*38,00

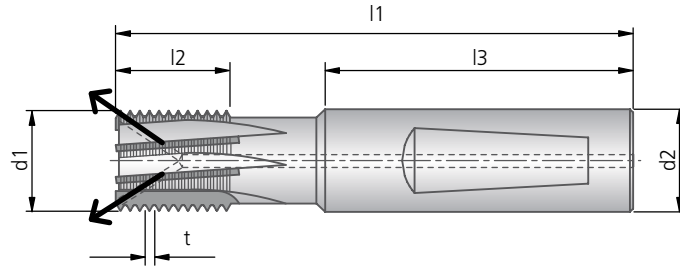
BT = drill depth
TL = full thread length
*with axial readjustment

KOMET® TOMILL GWF HPC PKD

Thread milling tool M-GWF HPC PKD | MF-GWF HPC PKD



for cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics



* without neck recess

M-GWF HPC PKD MF-GWF HPC PKD								DIN 6535 HE	DIN 6535 HA
d1 × l2 × t t = pitch in mm	Nut d min	l1	l2	l3	d2	Z	kg ~	 Order No.	 Order No.
12×12×M1*	16	70	12	45	12	5		30896003001100	38896003001100
12×12×M1,5*	18	70	12	45	12	5		30896003001150	38896003001150
16×16×M1	22	80	16	48	16	6		30896005001100	38896005001100
16×16×M1,5	24	80	16,5	48	16	6		30896005001150	38896005001150
20×20×M1	25	92	20	50	20	6		30896007001100	38896007001100
20×20×M1,5	27	92	21	50	20	6		30896007001150	38896007001150

Special variants:

- Delivered within 2-3 weeks of order confirmation
- Additional thread profiles: Buttress, Whitworth, pipe thread, UN
- With deburring cutting edge
- With countersink step on front face or shank
- For tool diameter range between 12 and 32 mm, individual dimensioning of l1, l2, l3

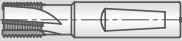


Click here for inquiry
www.kometgroup.com/gwf

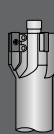
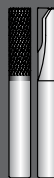


Recommended cutting data

Guideline values for thread milling							
Material group	Strength Rm (N/mm²)	Hardness HB	Material	MGF PKD			
				v_c m/min	Ø 8 f_z mm/tooth	Ø 10 f_z mm/tooth	Ø 12 f_z mm/tooth
N	6.1	≤350	≤100	non-alloy copper			
	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-1000	0,04-0,08	0,05-0,10
	6.3	≤700	≤200	long chip brass			
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)			
	7.1	≤350	≤100	Al, Mg non-alloy	400-1500	0,04-0,08	0,04-0,10
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-1500	0,04-0,08	0,04-0,10
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-1500	0,04-0,08	0,04-0,10
	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-1500	0,04-0,08	0,04-0,10
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-1500	0,04-0,08	0,04-0,10
	8.1			thermoplastics			
4	8.2			thermosetting plastics			
	8.3			fibre reinforced plastics	400-1500	0,04-0,10	0,05-0,20

Guideline values for thread milling							
Material group		Strength Rm (N/mm²)	Hardness HB	v _C (m/min) = Cutting speed f _Z (mm/tooth) = Milling feed	GWF SR PKD		
							
				Material	v _C m/min	Ø 16 f _Z mm/tooth	Ø 20 f _Z mm/tooth
N	6.1	≤350	≤100	non-alloy copper			
	6.2	≤700	≤200	short chip, brass, bronze, red brass	300-1500	0,04-0,15	0,05-0,20
	6.3	≤700	≤200	long chip brass			
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)			
	7.1	≤350	≤100	Al, Mg non-alloy	400-2000	0,05-0,15	0,06-0,20
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	400-2000	0,05-0,15	0,06-0,20
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	400-2000	0,05-0,15	0,06-0,20
	7.4	≤600	≤180	Al cast alloy, Si <10 %	400-2000	0,05-0,15	0,06-0,20
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	400-2000	0,05-0,15	0,06-0,20
	8.1			thermoplastics			
	8.2			thermosetting plastics			
	8.3			fibre reinforced plastics	500-2000	0,05-0,20	0,06-0,25

Guideline values for thread milling								
Material group		Strength Rm (N/mm²)	Hardness HB	v _C (m/min) = Cutting speed f _Z (mm/tooth) = Milling feed	GWF HPC PKD			
								
				Material	v _C m/min	Ø 12 f _Z mm/tooth	Ø 16 f _Z mm/tooth	Ø 20 f _Z mm/tooth
N	6.1	≤350	≤100	non-alloy copper				
	6.2	≤700	≤200	short chip, brass, bronze, red brass	500-1500	0,03-0,10	0,04-0,15	0,05-0,20
	6.3	≤700	≤200	long chip brass				
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)				
	7.1	≤350	≤100	Al, Mg non-alloy	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.4	≤600	≤180	Al cast alloy, Si <10 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	7.5	≤600	≤180	Al cast alloy, Si ≥10 %	600-2000	0,05-0,10	0,05-0,15	0,06-0,20
	8.1			thermoplastics				
	8.2			thermosetting plastics				
	8.3			fibre reinforced plastics	500-2000	0,05-0,10	0,05-0,15	0,06-0,25



KOMET® Thread milling tool

Problems → possible causes → solutions

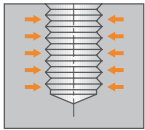
1



Chips packed or glued at the thread profile

1.
 - poor coolant
→ improve coolant (i.e. add flood coolant, lateral flute coolant supply for through holes)
→ add coolant flutes on shank

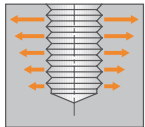
2



Thread go-gage doesn't fit

2.
 - thread too small → reduce tool radius in offset register
 - chips in thread → improve coolant

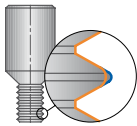
3



Thread is getting tapered

3.
 - poor tool clamping → improve tool holding (i.e. shrink fit holders)
 - thread milling feed too high → reduce thread milling feed

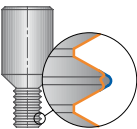
4



Erratic tool wear

4.
 - tool run out too high → use better tool holders (i.e. shrink fit holders), check material for homogeneity

6



Chippage, tool breakage

5.
 - feed rate thread milling too high → reduce thread milling feed
 - vibrations → check tool holder (don't use modular systems!!), change feeds and speeds

7



Poor thread surface

6.
 - tool overhang too long → check part clamping and fixture.
Use multiple cuts when part is clamped weak
 - non-suitable tool for this application → reduce cutting speed, increase feed/tooth, prefer conventional milling

8

Tap drill diameters for milled and cut threads

M Metric thread			
Size	Milled and cut threads		
	Nominal Ø	Pitch	Tap drill Ø
M 1	1,0	0,25	0,75
M 1,1	1,1	0,25	0,85
M 1,2	1,2	0,25	0,95
M 1,4	1,4	0,30	1,10
M 1,6	1,6	0,35	1,25
M 1,8	1,8	0,35	1,45
M 2	2,0	0,40	1,60
M 2,2	2,2	0,45	1,75
M 2,5	2,5	0,45	2,05
M 3	3,0	0,50	2,50
M 3,5	3,5	0,60	2,90
M 4	4,0	0,70	3,30
M 4,5	4,5	0,75	3,70
M 5	5,0	0,80	4,20
M 6	6,0	1,00	5,00
M 7	7,0	1,00	6,00
M 8	8,0	1,25	6,80
M 9	9,0	1,25	7,80
M10	10,0	1,50	8,50
M11	11,0	1,50	9,50
M12	12,0	1,75	10,20
M14	14,0	2,00	12,00
M16	16,0	2,00	14,00
M18	18,0	2,50	15,50
M20	20,0	2,50	17,50
M22	22,0	2,50	19,50
M24	24,0	3,00	21,00
M27	27,0	3,00	24,00
M30	30,0	3,50	26,50
M33	33,0	3,50	29,50
M36	36,0	4,00	32,00
M39	39,0	4,00	35,00
M42	42,0	4,50	37,50
M45	45,0	4,50	40,50
M48	48,0	5,00	43,00
M52	52,0	5,00	47,00
M56	56,0	5,50	50,50
M60	60,0	5,50	54,50
M64	64,0	6,00	58,00

MF Metric fine thread			
Size	Milled and cut threads		
	Nominal Ø	Pitch	Tap drill Ø
M2,5x0,35	2,5	0,35	2,15
M3x0,35	3	0,35	2,65
M3,5x0,35	3,5	0,35	3,15
M4x0,5	4	0,50	3,50
M5x0,5	5	0,50	4,50
M6x0,5	6	0,50	5,50
M6x0,75	6	0,75	5,30
M8x0,5	8	0,50	7,50
M8x0,75	8	0,75	7,30
M8x1	8	1,00	7,00
M10x0,75	10	0,75	9,30
M10x1	10	1,00	9,00
M12x1	12	1,00	11,00
M12x1,5	12	1,50	10,50
M14x1	14	1,00	13,00
M14x1,5	14	1,50	12,50
M15x1,5	15	1,50	13,50
M16x1	16	1,00	15,00
M16x1,5	16	1,50	14,50
M17x1,5	17	1,50	15,50
M18x1	18	1,00	17,00
M18x1,5	18	1,50	16,50
M18x2	18	2,00	16,00
M20x1	20	1,00	19,00
M20x1,5	20	1,50	18,50
M20x2	20	2,00	18,00
M22x1	22	1,00	21,00
M22x1,5	22	1,50	20,50
M22x2	22	2,00	20,00
M24x1	24	1,00	23,00
M24x1,5	24	1,50	22,50
M24x2	24	2,00	22,00
M30x1,5	30	1,50	28,50
M30x2	30	2,00	28,00
M30x3	30	3,00	27,00
M33x1,5	33	1,50	31,50
M33x2	33	2,00	31,00
M33x3	33	3,00	30,00
M36x1,5	36	1,50	34,50
M36x2	36	2,00	34,00
M36x3	36	3,00	33,00
M40x1,5	40	1,50	38,50
M40x2	40	2,00	38,00
M40x3	40	3,00	37,00
M42x1,5	42	1,50	40,50
M42x2	42	2,00	40,00
M42x3	42	3,00	39,00
M48x1,5	48	1,50	46,50
M48x2	48	2,00	46,00
M48x3	48	3,00	45,00
M48x4	48	4,00	44,00

MF Metric fine thread			
Size	Milled and cut threads		
	Nominal Ø	Pitch	Tap drill Ø
M50x1,5	50	1,50	48,50
M50x2	50	2,00	48,00
M50x3	50	3,00	47,00
M56x2	56	2,00	54,00
M56x4	56	4,00	52,00
M60x1,5	60	1,50	58,50
M60x2	60	2,00	58,00
M60x3	60	3,00	57,00
M60x4	60	4,00	56,00
M64x1,5	64	1,50	62,50
M64x2	64	2,00	62,00
M64x3	64	3,00	61,00
M64x4	64	4,00	60,00
M72x2	72	2,00	70,00
M72x3	72	3,00	69,00
M72x4	72	4,00	68,00
M72x6	72	6,00	66,00
M80x2	80	2,00	78,00
M80x4	80	4,00	76,00
M80x6	80	6,00	74,00
M90x2	90	2,00	88,00
M90x4	90	4,00	86,00
M90x6	90	6,00	84,00
M95x2	95	2,00	93,00
M95x6	95	6,00	89,00
M100x6	100	6,00	94,00



Special solutions



Combination tools

Take advantage of our know-how to reduce your production costs.

The development of innovative special tools in close cooperation with our customers is part of our everyday business.

Below you will see a few examples of special solutions:

PCD special boring tool

PCD special milling tool (buttress thread) KOMET® VABOS-M PKD

Drill thread milling tool KOMET® VABOS-M

Drill thread milling tool KOMET® PKD VABOS-K

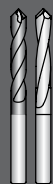
Machining example:
Housing in G-AlSi10Mg

- drilling Ø 5 mm
- chamfering 90°
- spot facing Ø 50 mm with PCD
- thread milling M6

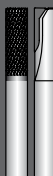
Cycle time: 3.9 secs.



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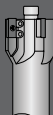


ISO

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ISO

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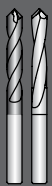
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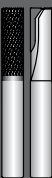
KOMET® Adaptors

Perfecting the connection

1



2



3



ISO

4



5



6



7



8



KOMET® Adaptors Page

Taper shank

DIN 69871 AD/B	
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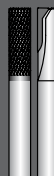
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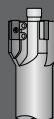


ISO

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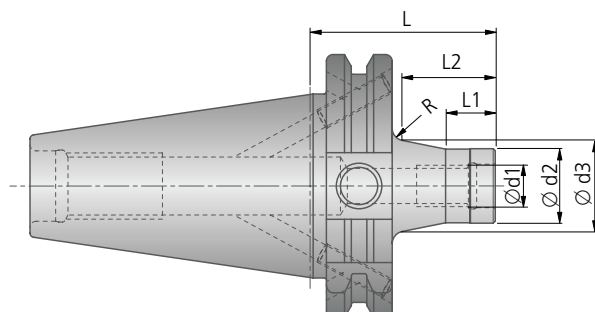


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KOMET® DIN 69871 AD/B

Taper shank for screw-on tools



DIN 69871 AD/B										
SK	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	L2	R	kg
40	SK40-AD/B-M10/44	A51 14500	M10	18	22,0	44	12	22,5	3	
40	SK40-AD/B-M10/69	A51 14510	M10	18	24,5	69	12	47,2	3	
40	SK40-AD/B-M10/94	A51 14520	M10	18	29,5	94	12	72,2	3	
40	SK40-AD/B-M10/119	A51 14530	M10	18	34,5	119	12	97,2	3	
40	SK40-AD/B-M10/169	A51 14540	M10	18	44,8	169	12	149,0	1	
40	SK40-AD/B-M12/44	A51 14550	M12	21	22,9	44	12	20,5	5	
40	SK40-AD/B-M12/69	A51 14560	M12	21	29,4	69	12	47,3	3	
40	SK40-AD/B-M12/94	A51 14570	M12	21	34,4	94	12	72,2	3	
40	SK40-AD/B-M12/119	A51 14580	M12	21	37,5	119	12	97,2	3	
40	SK40-AD/B-M12/169	A51 14590	M12	21	47,8	169	12	149,2	0,8	
40	SK40-AD/B-M16/44	A51 14600	M16	29	–	44	12	21,9	3	
40	SK40-AD/B-M16/69	A51 14610	M16	29	33,6	69	12	47,1	3	
40	SK40-AD/B-M16/94	A51 14620	M16	29	34,7	94	12	72,0	3	
40	SK40-AD/B-M16/119	A51 14630	M16	29	39,6	119	12	97,1	3	
40	SK40-AD/B-M16/169	A51 14640	M16	29	47,9	169	12	149,2	0,8	
50	SK50-AD/B-M10/69	A51 14700	M10	18	24,1	69	12	45,4	5	
50	SK50-AD/B-M10/119	A51 14710	M10	18	34,1	119	12	95,4	5	
50	SK50-AD/B-M10/169	A51 14720	M10	18	44,5	169	12	147,2	3	
50	SK50-AD/B-M12/69	A51 14730	M12	21	28,3	69	12	42,9	8	
50	SK50-AD/B-M12/119	A51 14740	M12	21	36,6	119	12	92,7	8	
50	SK50-AD/B-M12/169	A51 14750	M12	21	50,4	169	12	142,8	8	
50	SK50-AD/B-M16/69	A51 14760	M16	29	33,4	69	12	45,2	5	
50	SK50-AD/B-M16/119	A51 14770	M16	29	39,4	119	12	95,2	5	
50	SK50-AD/B-M16/169	A51 14780	M16	29	47,4	169	12	145,2	5	

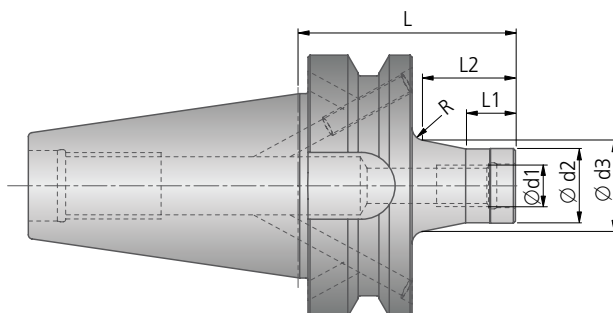
Taper shank in form B complete with conversion kit (for form AD). Please order pull stud separately (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET® JIS B 6339 (MAS 403 BT)

Taper shank for screw-on tools



JIS B 6339 AD/B										
Article	Order No.	BT	Ø d1	Ø d2	Ø d3	L	L1	L2	R	kg
JIS B6339-40M10/52	A51 15500	40	M10	18	22,0	52	12	22,5	3	
JIS B6339-40M10/77	A51 15510	40	M10	18	24,5	77	12	47,2	3	
JIS B6339-40M10/102	A51 15520	40	M10	18	24,7	102	12	72,1	3	
JIS B6339-40M12/52	A51 15530	40	M12	21	23,3	52	12	22,3	3	
JIS B6339-40M12/77	A51 15540	40	M12	21	35	77	12	49,9	–	
JIS B6339-40M12/102	A51 15550	40	M12	21	37,4	102	12	72,6	3	
JIS B6339-40M12/127	A51 15560	40	M12	21	38,0	127	12	99,9	–	
JIS B6339-40M16/52	A51 15570	40	M16	29	–	52	12	21,9	3	
JIS B6339-40M16/77	A51 15580	40	M16	29	33,6	77	12	47,1	3	
JIS B6339-40M16/102	A51 15590	40	M16	29	34,7	102	12	72,0	3	
JIS B6339-40M16/127	A51 15600	40	M16	29	39,6	127	12	97,1	3	
JIS B6339-40M16/152	A51 15610	40	M16	29	39,7	152	12	122,4	3	
JIS B6339-40M16/177	A51 15620	40	M16	29	42,5	177	12	149,9	–	
JIS B6339-50M12/88	A51 15700	50	M12	21	27,6	88	12	47,1	3	
JIS B6339-50M12/138	A51 15710	50	M12	21	37,4	138	12	97,1	3	
JIS B6339-50M12/188	A51 15720	50	M12	21	47,2	188	12	147,1	3	
JIS B6339-50M16/88	A51 15730	50	M16	29	32,3	88	12	46,9	3	
JIS B6339-50M16/113	A51 15740	50	M16	29	34,7	113	12	71,9	3	
JIS B6339-50M16/138	A51 15750	50	M16	29	37,2	138	12	96,9	3	
JIS B6339-50M16/188	A51 15760	50	M16	29	42,2	188	12	146,9	3	

Taper shank in form B complete with conversion kit (for form AD). Please order pull stud separately (chapter 8).

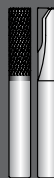


Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

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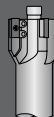


ISO

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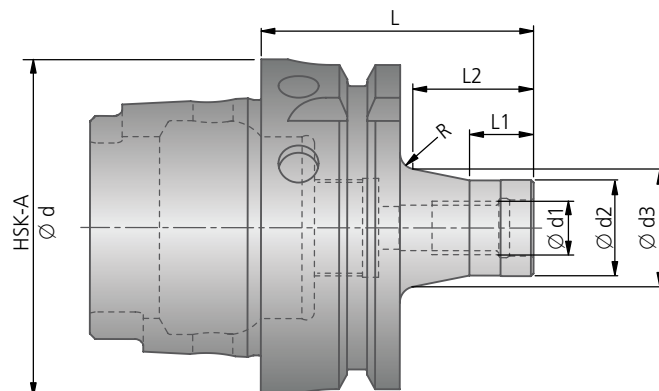


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KOMET® ISO 12164-1

HSK-A Adaptor for screw-on tools

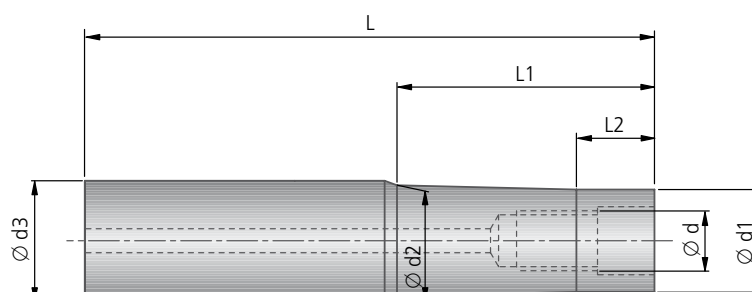


HSK-A										
Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	R	kg
HSK-A63-M10/51	A06 35100	63	M10	18	22,0	51	12	22,6	3	
HSK-A63-M10/76	A06 35110	63	M10	18	24,5	76	12	47,3	3	
HSK-A63-M10/126	A06 35120	63	M10	18	34,5	126	12	97,3	3	
HSK-A63-M10/176	A06 35130	63	M10	18	44,5	176	12	147,3	3	
HSK-A63-M12/51	A06 35140	63	M12	21	23,4	51	12	22,4	3	
HSK-A63-M12/76	A06 35150	63	M12	21	29,4	76	12	47,4	3	
HSK-A63-M12/126	A06 35160	63	M12	21	37,5	126	12	97,3	3	
HSK-A63-M12/176	A06 35170	63	M12	21	44,5	176	12	147,3	3	
HSK-A63-M16/51	A06 35180	63	M16	29	–	51	12	23,0	2	
HSK-A63-M16/76	A06 35190	63	M16	29	33,7	76	12	48,1	2	
HSK-A63-M16/126	A06 35200	63	M16	29	39,8	126	12	98,1	2	
HSK-A63-M16/176	A06 35210	63	M16	29	47,7	176	12	148,1	2	
HSK-A100-M10/79	A06 55100	100	M10	18	23,3	79	12	40,9	10	
HSK-A100-M10/129	A06 55110	100	M10	18	33,2	129	12	90,9	10	
HSK-A100-M10/179	A06 55120	100	M10	18	43,2	179	12	140,9	10	
HSK-A100-M12/79	A06 55130	100	M12	21	27,9	79	12	41,2	10	
HSK-A100-M12/129	A06 55140	100	M12	21	36,2	129	12	90,9	10	
HSK-A100-M12/179	A06 55150	100	M12	21	43,3	179	12	140,9	10	
HSK-A100-M16/79	A06 55160	100	M16	29	32,7	79	12	40,7	10	
HSK-A100-M16/129	A06 55170	100	M16	29	38,8	129	12	90,6	10	
HSK-A100-M16/179	A06 55180	100	M16	29	46,7	179	12	140,7	10	

Please order coolant supply connection and key separately (chapter 8).

Adaptor for screw-on tools


cylindrical shank suitable for shrink fit chuck



Order No.	Ø d	Ø d1	Ø d2	Cylindrical shank Ø d3	L	L1	L2	kg
58797012000065*	M5	9,5	11,5	12	65	20	7,8	0,054
58798012000085	M5	9,5	11,8	12	85	40	9	0,147
58798012000105	M5	9,5	11,8	12	105	60	9	0,166
58798012000125	M5	9,5	11,8	12	125	80	9	0,197
58797016000088*	M8	13,8	15,8	16	88	40	7,8	0,122
58798016000108	M8	14,2	15,8	16	108	60	9	0,333
58798016000128	M8	14,2	15,8	16	128	80	9	0,402
58798016000148	M8	14,2	15,8	16	148	100	9	0,451
58798016000168	M8	14,2	15,8	16	168	120	9	0,522
58798016000198	M8	14,2	15,8	16	198	150	9	0,678
58797020000095*	M10	18,0	19,8	20	95	45	7,8	0,208
58798020000110	M10	18,5	19,8	20	110	60	9	0,552
58798020000130	M10	18,5	19,8	20	130	80	9	0,654
58798020000150	M10	18,5	19,8	20	150	100	9	0,754
58798020000170	M10	18,5	19,8	20	170	120	9	0,850
58798020000190	M10	18,5	19,8	20	190	140	9	0,958
58797025000106*	M12	21,0	24,8	25	106	50	7,8	0,347
58798025000131	M12	23,0	24,8	25	131	75	9	1,022
58798025000156	M12	23,0	24,8	25	156	100	9	1,225
58798025000181	M12	23,0	24,8	25	181	125	9	1,417
58798025000206	M12	23,0	24,8	25	206	150	9	1,620
58798025000231	M12	23,0	24,8	25	231	175	9	1,822
58797032000110*	M16	29,0	31,9	32	110	50	7,8	0,619
58798032000160	M16	29,0	31,9	32	160	100	16	2,612
58798032000210	M16	29,0	31,9	32	210	150	16	3,310
58798032000260	M16	29,0	31,9	32	260	200	16	4,174
58798032000310	M16	29,0	31,9	32	310	250	16	4,955
58798036000160	M16	31,5	34,8	36	160	100	9	2,406
58798036000310	M16	31,5	34,8	36	310	250	9	

Variant: heavy metal, *steel

KOMET® DIN 69871 AD/B

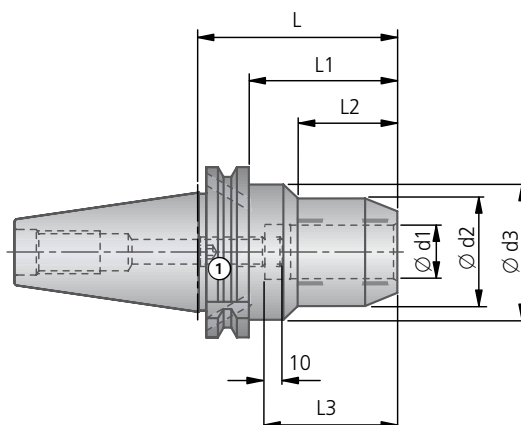
Expanding chuck



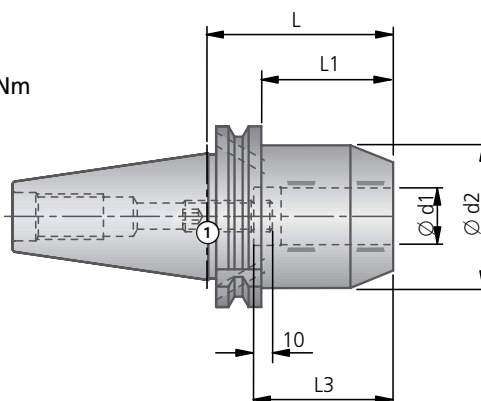
Admissible radial force F at the toolholder at an overhang of 50 mm

Ø d1	F (N)
Expanding chuck	
6	225
8	370
10	540
12	650
14	900
16	1410
18	1580
20	1860
25	4400
32	6500
Expanding chuck KS	
12	975
16	2115
20	2790
32	9750

Expanding chuck



Expanding chuck KS
Torque Ø 32 mm: 2000 Nm



DIN 69871 AD/B Expanding chuck

SK	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	L2	L3		Adjusting screw	
												
											Article	Order No.
40	ISO40 DIN69871AD/B-D12	A05 92090	12	32	49,5	80,5	61,5	31,5	46	1,4	M10×1×12	N00 71800
40	ISO40 DIN69871AD/B-D16	A05 92100	16	38	49,5	80,5	61,5	33	49	1,4	M12×1×12	N00 71860
40	ISO40 DIN69871AD/B-D20	A05 92110	20	42	49,5	80,5	61,5	34	51	1,4	M16×1×14	N00 71550
40	ISO40 DIN69871AD/B-D25	A05 92120	25	55	66	80,5	61,5	22	57	1,8	M16×1×14	N00 71550

DIN 69871 AD/B Expanding chuck KS

40	ISO40 DIN69871AD/B-D12-KS	A05 97530	12	42	—	50	31	—	46		M8x1x12	N00 71730
40	ISO40 DIN69871AD/B-D16-KS	A05 97550	16	49,25	—	64,5	45,45	—	51		M8x1x12	N00 71730
40	ISO40 DIN69871AD/B-D20-KS	A05 97570	20	49,25	—	64,5	45,5	—	51		M8x1x12	N00 71730
50	ISO50 DIN69871AD/B-D12-KS	A05 97630	12	42	—	50	31	—	46		M8x1x12	N00 71730
50	ISO50 DIN69871AD/B-D20-KS	A05 97670	20	49,25	—	64,5	45,5	—	51		M8x1x12	N00 71730
50	ISO50 DIN69871AD/B-D32-KS	A05 97690	32	72	—	81	62	—	61		M8x1x12	N00 71730

Tool shank tolerance: h6 for Ø 6 - 32 mm

Supply includes: Expanding chuck fitted complete.

Taper shank in form B complete with conversion kit (for form AD). Please order pull stud separately (chapter 8).

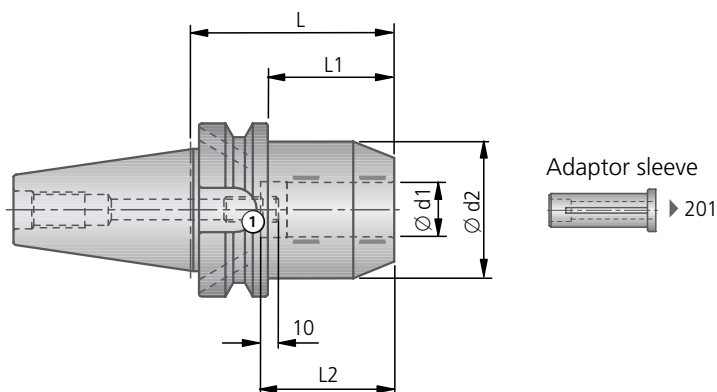


Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

Expanding chuck



Expanding chuck KS
Torque Ø 32 mm: 2000 Nm



JIS B 6339 AD/B Expanding chuck KS

Article	Order No.	BT	Ø d1	Ø d2	L	L1	L2	kg	Adjusting screw ①	
									Article	Order No.
MAS BT40-D12-KS	A05 97730	40	12	42	58	31	46		M8×1×12	N00 71730
MAS BT40-D16-KS	A05 97750	40	16	49,25	72,5	45,5	51		M8×1×12	N00 71730
MAS BT40-D20-KS	A05 97770	40	20	49,25	72,5	45,5	51		M8×1×12	N00 71730
MAS BT50-D20-KS	A05 97870	50	20	49,25	83,5	45,5	51		M8×1×12	N00 71730
MAS BT50-D32-KS	A05 97890	50	32	72	90	52	61		M8×1×12	N00 71730

Tool shank tolerance: h6 for Ø 6 - 32 mm

Supply includes: Expanding chuck fitted complete.
Taper shank in form B complete with conversion kit (for form AD). Please order pull stud separately (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET® ISO 12164-1

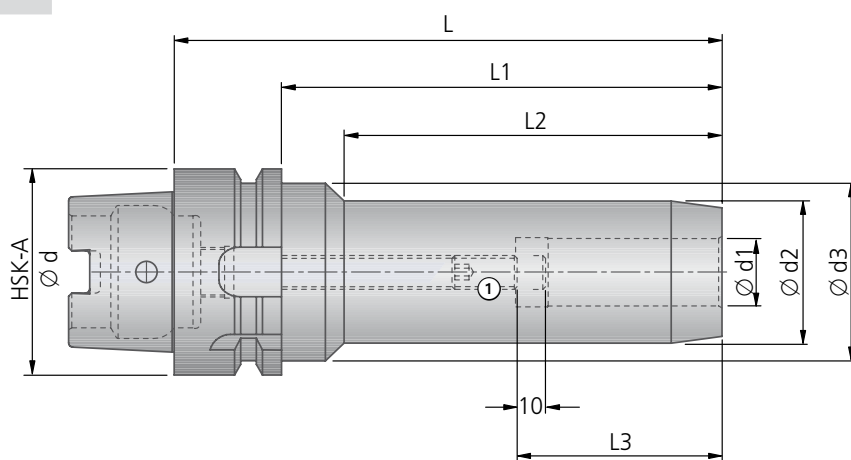
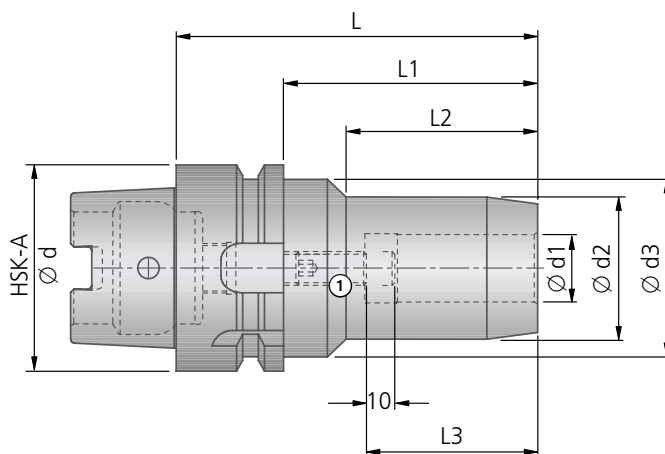
HSK-A Expanding chuck



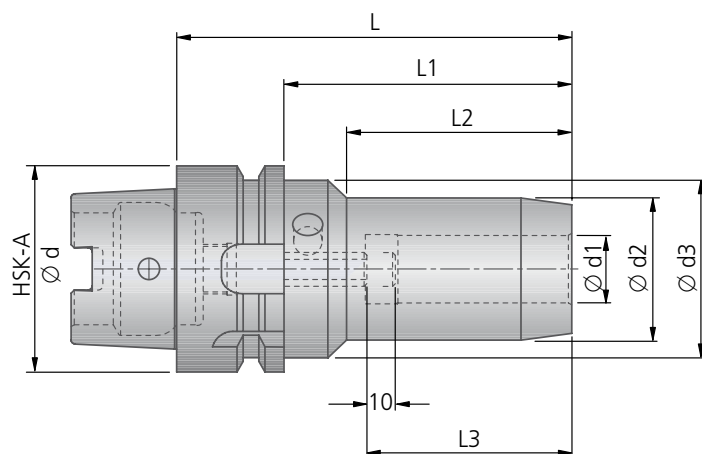
Admissible radial force F at the toolholder at an overhang of 50 mm

Ø d1	F (N)
Expanding chuck	
6	225
8	370
10	540
12	650
14	900
16	1410
18	1580
20	1860
25	4400
32	6500
Expanding chuck KS	
12	975
16	2115
20	2790
32	9750

Expanding chuck &
Expanding chuck KS
Torque Ø 32 mm: 2000 Nm



Expanding chuck
long version



Expanding chuck
radial length adjustment

Accessories expanding chuck:
Adaptor sleeve



► 201

HSK-A DIN 69893 T1 Expanding chuck

Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	L3		Adjusting screw 	
											Article	Order No.
HSK-A50-D12	A06 23530	50	12	32	40	85	59	44	46	0,80	M10×1×12	N00 71800
HSK-A50-D20	A06 23570	50	20	42	60	90	64	29	51	1,10	M16×1×14	N00 71550
HSK-A63-D6	A06 33500	63	6	26	50	70	44	24	37	0,74	M5×12	N00 71020
HSK-A63-D8	A06 33510	63	8	28	50	70	44	25	37	0,83	M6×12	N00 71070
HSK-A63-D10	A06 33520	63	10	30	50	80	54	35	41	0,83	M8×1×12	N00 71730
HSK-A63-D12	A06 33530	63	12	32	50	85	59	40	46	1,14	M10×1×12	N00 71800
HSK-A63-D14	A06 33540	63	14	34	50	85	59	40	46	0,83	M10×1×12	N00 71800
HSK-A63-D16	A06 33550	63	16	38	50	90	64	46	49	1,05	M12×1×12	N00 71860
HSK-A63-D18	A06 33560	63	18	40	50	90	64	47	49	0,91	M12×1×12	N00 71860
HSK-A63-D20	A06 33570	63	20	42	50	90	64	48	51	1,15	M16×1×14	N00 71550
HSK-A63-D25	A06 33580	63	25	57	63	120	94	59	57	2,3	M16×1×14	N00 71550
HSK-A63-D32	A06 33590	63	32	64	75	125	99	63	61	2,9	M16×1×14	N00 71550
HSK-A100-D6	A06 53500	100	6	26	50	75	46	26	37	2,28	M5×12	N00 71020
HSK-A100-D8	A06 53510	100	8	28	50	75	46	26	37	2,28	M6×12	N00 71070
HSK-A100-D10	A06 53520	100	10	30	50	90	61	42	41	2,40	M8×1×12	N00 71730
HSK-A100-D12	A06 53530	100	12	32	50	95	66	47	46	2,29	M10×1×12	N00 71800
HSK-A100-D14	A06 53540	100	14	34	50	95	66	47	46	2,45	M10×1×12	N00 71800
HSK-A100-D16	A06 53550	100	16	38	50	100	71	53	49	2,59	M12×1×12	N00 71860
HSK-A100-D18	A06 53560	100	18	40	50	100	71	53	49	2,61	M12×1×12	N00 71860
HSK-A100-D20	A06 53570	100	20	42	50	105	76	59	51	3,07	M16×1×14	N00 71550
HSK-A100-D25	A06 53580	100	25	57	63	110	81	62	57	3,54	M16×1×14	N00 71550
HSK-A100-D32	A06 53590	100	32	64	75	110	81	62	61	2,80	M16×1×14	N00 71550

HSK-A DIN 69893 T1 Expanding chuck KS

HSK-A63 D12 KS	A06 37530	63	12	42	52,5	80	54	34	46		M8×1×12	N00 71730
HSK-A63 D16 KS	A06 37550	63	16	52,5	–	80	54	–	51		M8×1×12	N00 71730
HSK-A63 D20 KS	A06 37570	63	20	52,5	–	80	54	–	51		M8×1×12	N00 71730
HSK-A100 D20 KS	A06 57570	100	20	52,5	–	90	61,05	–	51		M8×1×12	N00 71730
HSK-A100 D32 KS	A06 57590	100	32	72	–	100	71,05	–	61		M8×1×12	N00 71730

HSK-A DIN 69893 T1 Expanding chuck – long version

HSK-A63-D6 L-200	A06 34900	63	6	26	50	200	174	153	37	1,6	M5×12	N00 71020
HSK-A63-D8 L-200	A06 34910	63	8	28	50	200	174	154	37	1,6	M6×12	N00 71070
HSK-A63-D10 L-200	A06 34920	63	10	30	50	200	174	154	41	1,7	M8×1×12	N00 71730
HSK-A63-D12 L-200	A06 34930	63	12	32	50	200	174	155	46	1,8	M10×1×12	N00 71800
HSK-A63-D14 L-200	A06 34940	63	14	34	50	200	174	155	46	1,9	M10×1×12	N00 71800
HSK-A63-D16 L-200	A06 34950	63	16	38	50	200	174	156	49	2,2	M12×1×12	N00 71860
HSK-A63-D18 L-200	A06 34960	63	18	40	50	200	174	157	49	2,3	M12×1×12	N00 71860
HSK-A63-D20 L-200	A06 34970	63	20	42	50	200	174	158	51	2,4	M16×1×14	N00 71550

HSK-A DIN 69893 T1 Expanding chuck – radial length adjustment

HSK-A63-D6 RL	A06 34800	63	6	26	50	80	54	33	37	1,1		–
HSK-A63-D8 RL	A06 34810	63	8	28	50	80	54	33	37	1,1		–
HSK-A63-D10 RL	A06 34820	63	10	30	50	85	59	38	41	1,1		–
HSK-A63-D12 RL	A06 34830	63	12	32	50	90	64	40	46	1,2		–
HSK-A63-D14 RL	A06 34840	63	14	34	50	90	64	46	46	1,2		–
HSK-A63-D16 RL	A06 34850	63	16	38	50	95	69	51	49	1,3		–
HSK-A63-D18 RL	A06 34860	63	18	40	50	95	69	52	49	1,3		–
HSK-A63-D20 RL	A06 34870	63	20	42	50	100	74	51	51	1,4		–
HSK-A63-D25 RL	A06 34880	63	25	57	63	120	94	54,5	57	2,2		–
HSK-A63-D32 RL	A06 34890	63	32	64	75	125	99	57,5	61	2,7		–

Tool shank tolerance: h6 for Ø 6 - 32 mm

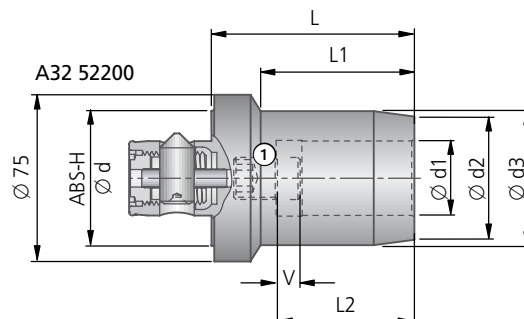
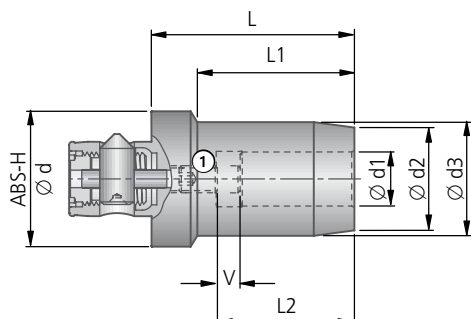
Supply includes: Expanding chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

further HSK-size on request



KOMET ABS® H

Expanding chuck



ABS® H Expanding chuck

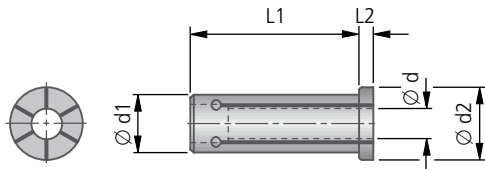
Article	Order No.	ABS-H Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	kg	Adjusting screw ①	
										Article	Order No.
ABS40-H D8	A32 32060	40	8	24	28	60	42	37	0,42	M6×12	N00 71070
ABS40-H D10	A32 32070	40	10	26	30	65	47,5	41	0,46	M8×1×12	N00 71730
ABS40-H D12	A32 32080	40	12	28	32	65	48	46	0,43	M10×1×12	N00 71800
ABS50-H D6	A32 42110	50	6	22	26	55	33,5	37	0,53	M5×12	N00 71020
ABS50-H D8	A32 42120	50	8	24	28	55	34	37	0,60	M6×12	N00 71070
ABS50-H D10	A32 42130	50	10	26	30	65	45	41	0,56	M8×1×12	N00 71730
ABS50-H D12	A32 42140	50	12	28	32	65	45,5	46	0,61	M10×1×12	N00 71800
ABS50-H D14	A32 42150	50	14	30	34	65	46	46	0,60	M10×1×12	N00 71800
ABS50-H D16	A32 42160	50	16	34	38	70	52	49	0,80	M10×1×12	N00 71800
ABS50-H D18	A32 42170	50	18	36	40	70	52,5	49	0,85	M10×1×12	N00 71800
ABS50-H D20	A32 42101	50	20	38	42	75	58	51	0,90	M16×1×16	N00 71540
ABS63-H D20	A32 52180	63	20	38	42	78	56	51	1,15	M16×1×16	N00 71540
ABS63-H D25	A32 52190	63	25	53	57	85	60	57		M16×1×16	N00 71540
ABS63-H D32	A32 52200	63	32	60	64	90	61	61	2,10	M16×1×16	N00 71540

Tool shank tolerance: h6 for Ø 6 - 32 mm

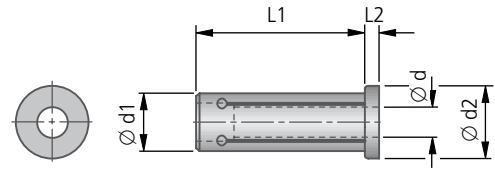
Supply includes: Expanding chuck fitted complete with adjusting screw.

- Axial adjustment: Adjustment is by means of the ABS® H spigot with an hexagonal key.
- ABS® H connection: ABS® H, the ABS® variation for use where greater concentricity is required, is fully compatible with the ABS® standard programme. During the clamping operation, the design of the ABS® H compensates for play in the connection.
- Spindle speed: from 15000 min⁻¹ we recommend that the chuck be balanced before using with clamped tool.
- no maintenance

KOMET® Adaptor sleeve for expanding chuck



with slotted collar
for peripheral cooling



with closed collar
for internal coolant supply

Adaptor sleeve						
Order No.	Ø d	Ø d1	Ø d2	L1	L2	kg
L01 13291	3	12	16,5	45	2	0,1
L01 13301	4					
L01 13311	5					
L01 13321	6					
L01 13331	8	20	24	50,5	2	0,1
L01 13261	3					
L01 13271	4					
L01 13281	5					
L01 13201	6					
L01 13211	8					
L01 13221	10					
L01 13231	12					
L01 13241	14					
L01 13251	16					
L01 13500	6	32	35,5	60,5	2	0,3
L01 13511	8					
L01 13520	10					
L01 13531	12					
L01 13540	14					
L01 13551	16					
L01 13561	18					
L01 13571	20					
L01 13581	25					

Adaptor sleeve						
Order No.	Ø d	Ø d1	Ø d2	L1	L2	kg
L01 14291	3	12	16,5	45	2	0,1
L01 14301	4					
L01 14311	5					
L01 14321	6					
L01 14331	8	20	24	50,5	2	0,1
L01 14261	3					
L01 14271	4					
L01 14281	5					
L01 14201	6					
L01 14211	8					
L01 14221	10					
L01 14231	12					
L01 14241	14					
L01 14251	16					
L01 14400	6	25	29	54,5	2	0,1
L01 14410	8					
L01 14420	10					
L01 14430	12					
L01 14440	14					
L01 14450	16					
L01 14460	18					
L01 14470	20					
L01 14501	6	32	35,5	60,5	2	0,3
L01 14511	8					
L01 14521	10					
L01 14531	12					
L01 14540	14					
L01 14551	16					
L01 14561	18					
L01 14571	20					
L01 14581	25					

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ISO

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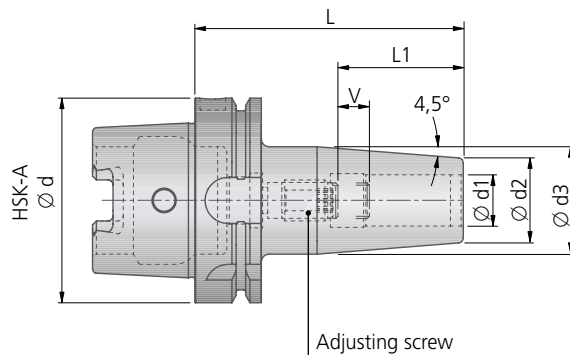


KOMET® ISO 12164-1

HSK-A Thermal expansion chuck ThermoGrip®



■ short design



HSK-A DIN 69893 T1 | ThermoGrip®

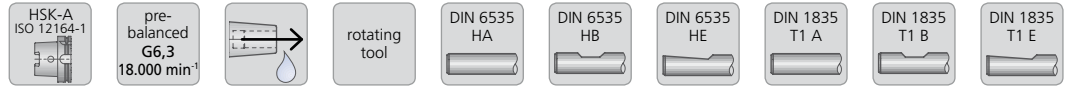
Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Article	Order No.
HSK-A32-T3	A06 06010	32	3	15	20	65	20	5		M6 / SW3	55051 06008
HSK-A32-T4	A06 06020	32	4	15	20	65	20	5		M6 / SW3	55051 06008
HSK-A32-T5	A06 06030	32	5	15	20	65	25	5		M6 / SW3	55051 06008
HSK-A32-T6	A06 06040	32	6	21	26	70	36	10		M5 / SW2,5	N00 72000
HSK-A32-T8	A06 06050	32	8	21	26	70	36	10		M6 / SW3	N00 72010
HSK-A32-T10	A06 06061	32	10	24	29	75	42	10		M8x1 / SW4	N00 72050
HSK-A32-T12	A06 06071	32	12	24	29	75	47	5		M10x1 / SW5	N00 72060
HSK-A40-T6	A06 16040	40	6	21	27	80	36	10	0,38	M5 / SW2,5	N00 72000
HSK-A40-T8	A06 16050	40	8	21	27	80	36	10	0,38	M6 / SW3	N00 72010
HSK-A40-T10	A06 16061	40	10	24	32	80	42	10	0,45	M8x1 / SW4	N00 72050
HSK-A40-T12	A06 16071	40	12	24	32	90	47	10	0,49	M10x1 / SW5	N00 72060
HSK-A40-T14	A06 16081	40	14	27	34	90	47	10		M10x1 / SW5	N00 72060
HSK-A40-T16	A06 16091	40	16	27	34	90	50	10	0,52	M12x1 / SW6	N00 72070
HSK-A50-T6	A06 26040	50	6	21	27	80	36	10	0,56	M5 / SW2,5	N00 72000
HSK-A50-T8	A06 26050	50	8	21	27	80	36	10		M6 / SW3	N00 72010
HSK-A50-T10	A06 26061	50	10	24	32	85	42	10	0,64	M8x1 / SW4	N00 72050
HSK-A50-T12	A06 26071	50	12	24	32	90	47	10	0,65	M10x1 / SW5	N00 72060
HSK-A50-T14	A06 26081	50	14	27	34	90	47	10		M10x1 / SW5	N00 72060
HSK-A50-T16	A06 26091	50	16	27	34	95	50	10		M12x1 / SW6	N00 72070
HSK-A50-T18	A06 26101	50	18	33	42	95	50	10		M12x1 / SW6	N00 72070
HSK-A50-T20	A06 26111	50	20	33	42	100	52	10		M16x1 / SW8	N00 72080
HSK-A63-T6	A06 36040	63	6	21	27	80	36	10	0,80	M5 / SW2,5	N00 72000
HSK-A63-T8	A06 36050	63	8	21	27	80	36	10	0,80	M6 / SW3	N00 72010
HSK-A63-T10	A06 36061	63	10	24	32	85	42	10	0,90	M8x1 / SW4	N00 72050
HSK-A63-T12	A06 36071	63	12	24	32	90	47	10	0,90	M10x1 / SW5	N00 72060
HSK-A63-T14	A06 36081	63	14	27	34	90	47	10	0,98	M10x1 / SW5	N00 72060
HSK-A63-T16	A06 36091	63	16	27	34	95	50	10	0,90	M12x1 / SW6	N00 72070
HSK-A63-T18	A06 36101	63	18	33	42	95	50	10	1,14	M12x1 / SW6	N00 72070
HSK-A63-T20	A06 36111	63	20	33	42	100	52	10	1,18	M16x1 / SW8	N00 72080
HSK-A63-T25	A06 36121	63	25	44	52,5	115	58	10	1,73	M16x1 / SW8	N00 72080
HSK-A63-T32	A06 36131	63	32	44	52,5	120	62	5	1,66	M16x1 / SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

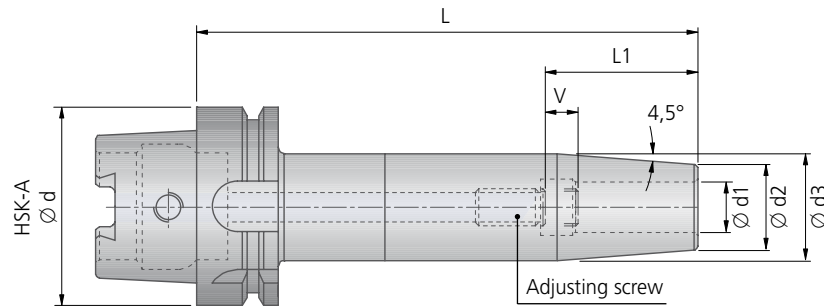
Supply includes:

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

HSK-A Thermal expansion chuck ThermoGrip®



long design ■



HSK-A DIN 69893 T1 ThermoGrip®											
Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Article	Order No.
HSK-A63-T6-120	A06 36240	63	6	21	27	120	36	10	1,09	M5/SW2,5	N00 72000
HSK-A63-T8-120	A06 36250	63	8	21	27	120	36	10	1,08	M6/SW3	N00 72010
HSK-A63-T10-120	A06 36261	63	10	24	32	120	42	10	1,20	M8x1/SW4	N00 72050
HSK-A63-T12-120	A06 36271	63	12	24	32	120	47	10	1,21	M10x1/SW5	N00 72060
HSK-A63-T14-120	A06 36281	63	14	27	34	120	47	10	1,25	M10x1/SW5	N00 72060
HSK-A63-T16-120	A06 36291	63	16	27	34	120	50	10	1,22	M12x1/SW6	N00 72070
HSK-A63-T6-160	A06 36440	63	6	21	32	160	36	10	1,37	M5/SW2,5	N00 72000
HSK-A63-T8-160	A06 36450	63	8	21	32	160	36	10	1,36	M6/SW3	N00 72010
HSK-A63-T10-160	A06 36461	63	10	24	34	160	42	10	1,49	M8x1/SW4	N00 72050
HSK-A63-T12-160	A06 36471	63	12	24	34	160	47	10	1,48	M10x1/SW5	N00 72060
HSK-A63-T14-160	A06 36481	63	14	27	42	160	47	10	1,72	M10x1/SW5	N00 72060
HSK-A63-T16-160	A06 36491	63	16	27	42	160	50	10	1,70	M12x1/SW6	N00 72070
HSK-A63-T18-160	A06 36501	63	18	33	51	160	50	10	1,87	M12x1/SW6	N00 72070
HSK-A63-T20-160	A06 36511	63	20	33	51	160	52	10	1,83	M16x1/SW8	N00 72080
HSK-A63-T25-160	A06 36521	63	25	44	52,5	160	58	10	2,50	M16x1/SW8	N00 72080
HSK-A63-T32-160	A06 36531	63	32	44	52,5	160	62	10	2,36	M16x1/SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

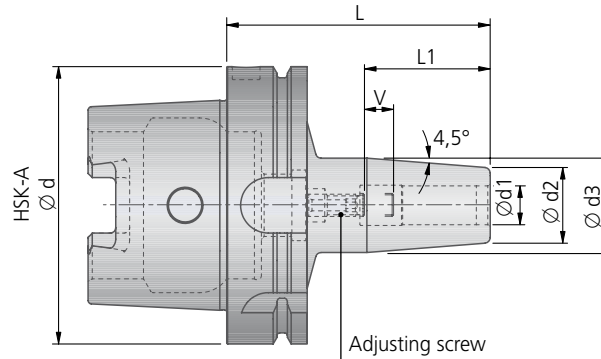
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

KOMET® ISO 12164-1

HSK-A Thermal expansion chuck ThermoGrip®



■ short design



HSK-A DIN 69893 T1 ThermoGrip®											
Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V		Adjusting screw	
											Article
HSK-A100-T6	A06 56040	100	6	21	27	85	36	10	2,16	M5 / SW2,5	N00 72000
HSK-A100-T8	A06 56050	100	8	21	27	85	36	10	2,15	M6 / SW3	N00 72010
HSK-A100-T10	A06 56061	100	10	24	32	90	42	10	2,24	M8x1 / SW4	N00 72050
HSK-A100-T12	A06 56071	100	12	24	32	95	47	10	2,26	M10x1 / SW5	N00 72060
HSK-A100-T14	A06 56081	100	14	27	34	95	47	10	2,31	M10x1 / SW5	N00 72060
HSK-A100-T16	A06 56091	100	16	27	34	100	50	10	2,32	M12x1 / SW6	N00 72070
HSK-A100-T18	A06 56101	100	18	33	42	100	50	10	2,48	M12x1 / SW6	N00 72070
HSK-A100-T20	A06 56111	100	20	33	42	105	52	10	2,49	M16x1 / SW8	N00 72080
HSK-A100-T25	A06 56121	100	25	44	53	115	58	10	3,01	M16x1 / SW8	N00 72080
HSK-A100-T32	A06 56131	100	32	44	53	120	62	10	2,93	M16x1 / SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

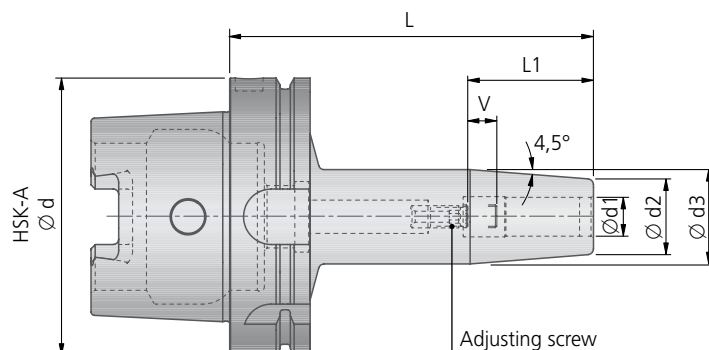
Supply includes:

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

HSK-A Thermal expansion chuck ThermoGrip®



long design ■



HSK-A DIN 69893 T1 ThermoGrip®											
Article	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V		Adjusting screw	
											Order No.
HSK-A100-T6-120	A06 56240	100	6	21	27	120	36	10	2,33	M5/SW2,5	N00 72000
HSK-A100-T8-120	A06 56250	100	8	21	27	120	36	10	2,34	M6/SW3	N00 72010
HSK-A100-T10-120	A06 56261	100	10	24	32	120	42	10	2,50	M8×1/SW4	N00 72050
HSK-A100-T12-120	A06 56271	100	12	24	32	120	47	10	2,44	M10×1/SW5	N00 72060
HSK-A100-T14-120	A06 56281	100	14	27	34	120	47	10	2,50	M10×1/SW5	N00 72060
HSK-A100-T16-120	A06 56291	100	16	27	34	120	50	10	2,50	M12×1/SW6	N00 72070
HSK-A100-T6-160	A06 56440	100	6	21	32	160	36	10	2,60	M5/SW2,5	N00 72000
HSK-A100-T8-160	A06 56450	100	8	21	32	160	36	10	2,50	M6/SW3	N00 72010
HSK-A100-T10-160	A06 56461	100	10	24	34	160	42	10	2,70	M8×1/SW4	N00 72050
HSK-A100-T12-160	A06 56471	100	12	24	34	160	47	10	2,70	M10×1/SW5	N00 72060
HSK-A100-T14-160	A06 56481	100	14	27	42	160	47	10	3,00	M10×1/SW5	N00 72060
HSK-A100-T16-160	A06 56491	100	16	27	42	160	50	10	3,00	M12×1/SW6	N00 72070
HSK-A100-T18-160	A06 56501	100	18	33	51	160	50	10	3,10	M12×1/SW6	N00 72070
HSK-A100-T20-160	A06 56511	100	20	33	51	160	52	10	3,10	M16×1/SW8	N00 72080
HSK-A100-T25-160	A06 56521	100	25	44	60	160	58	10	3,80	M16×1/SW8	N00 72080
HSK-A100-T32-160	A06 56531	100	32	44	60	160	62	10	3,70	M16×1/SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

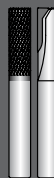
Supply includes:

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

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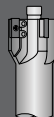


ISO

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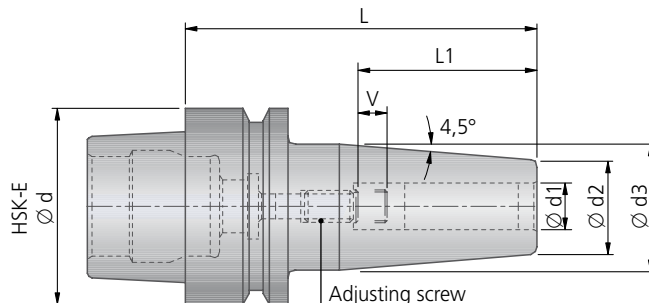


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KOMET® DIN 69893 T5

HSK-E Thermal expansion chuck ThermoGrip®



HSK-E DIN 69893 T5 ThermoGrip®											
Article	Order No.	HSK-E Ø d	Ø d1	Ø d2	Ø d3	L	L1	V		Adjusting screw	
											Article
HSK-E 32-T 3	A10 16010	32	3	15	20	60	20	5		M6/SW3	55051 06008
HSK-E 32-T 4	A10 16020	32	4	15	20	60	20	5		M6/SW3	55051 06008
HSK-E 32-T 6	A10 16040	32	6	21	26	70	36	10	0,28	M5/SW2,5	N00 72000
HSK-E 32-T 8	A10 16050	32	8	21	26	70	36	10		M6/SW3	N00 72010
HSK-E 32-T10	A10 16061	32	10	24	29	70	42	10		M8x1/SW4	N00 72050
HSK-E 32-T12	A10 16071	32	12	24	29	70	47	10		M10x1/SW5	N00 72060
HSK-E 40-T 3	A10 26010	40	3	15	20	60	20	5	0,24	M6/SW3	55051 06008
HSK-E 40-T 4	A10 26020	40	4	15	20	60	20	5		M6/SW3	55051 06008
HSK-E 40-T 6	A10 26040	40	6	21	27	80	36	10	0,39	M5/SW2,5	N00 72000
HSK-E 40-T 8	A10 26050	40	8	21	27	80	36	10	0,39	M6/SW3	N00 72010
HSK-E 40-T10	A10 26061	40	10	24	32	80	42	10	0,44	M8x1/SW4	N00 72050
HSK-E 40-T12	A10 26071	40	12	24	32	90	47	10	0,48	M10x1/SW5	N00 72060
HSK-E 40-T14	A10 26081	40	14	27	34	90	47	10		M10x1/SW5	N00 72060
HSK-E 40-T16	A10 26091	40	16	27	34	90	50	10		M12x1/SW6	N00 72070
HSK-E 50-T 3	A10 36010	50	3	15	20	80	20	5		M6/SW3	55051 06008
HSK-E 50-T 4	A10 36020	50	4	15	20	80	20	5		M6/SW3	55051 06008
HSK-E 50-T 5	A10 36030	50	5	15	20	80	20	5		M6/SW3	55051 06008
HSK-E 50-T 6	A10 36040	50	6	21	27	80	36	10	0,57	M5/SW2,5	N00 72000
HSK-E 50-T 8	A10 36050	50	8	21	27	80	36	10	0,66	M6/SW3	N00 72010
HSK-E 50-T10	A10 36061	50	10	24	32	85	42	10	0,68	M8x1/SW4	N00 72050
HSK-E 50-T12	A10 36071	50	12	24	32	90	47	10		M10x1/SW5	N00 72060
HSK-E 50-T14	A10 36081	50	14	27	34	90	47	10		M10x1/SW5	N00 72060
HSK-E 50-T16	A10 36091	50	16	27	34	95	50	10		M12x1/SW6	N00 72070
HSK-E 50-T18	A10 36101	50	18	33	42	95	50	10		M12x1/SW6	N00 72070
HSK-E 50-T20	A10 36111	50	20	33	42	100	52	10		M16x1/SW8	N00 72080
HSK-E 63-T 6	A10 46040	63	6	21	27	80	36	10		M5/SW2,5	N00 72000
HSK-E 63-T 8	A10 46050	63	8	21	27	80	36	10		M6/SW3	N00 72010
HSK-E 63-T10	A10 46060	63	10	24	32	85	42	10		M8x1/SW4	N00 72050
HSK-E 63-T12	A10 46070	63	12	24	32	90	47	10		M10x1/SW5	N00 72060
HSK-E 63-T14	A10 46080	63	14	27	34	90	47	10		M10x1/SW5	N00 72060
HSK-E 63-T16	A10 46090	63	16	27	34	95	50	10		M12x1/SW6	N00 72070
HSK-E 63-T20	A10 46110	63	20	33	42	100	52	10		M16x1/SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

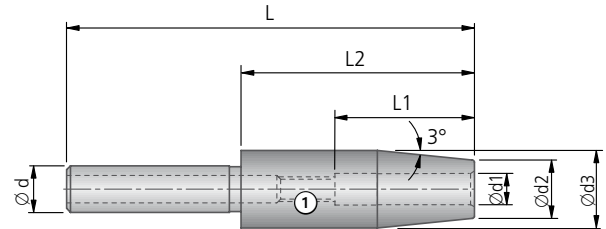
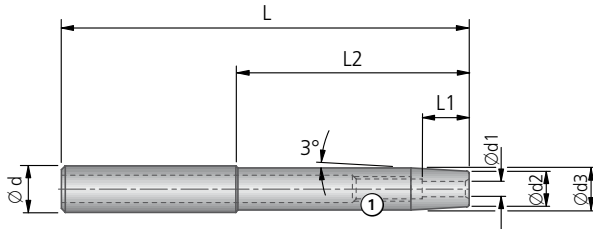
Supply includes:

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

Extension / Reducer ThermoGrip®



to extend and reduce to smaller diameters



Extension / Reducer ThermoGrip®											
Article	Order No.	Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2		Adjusting screw	
										 ①	
										Article	Order No.
D12-T 3	A21 02001	12	3	9	11,8	110	20	63	0,070	M6/SW3	55051 06008
D12-T 4	A21 02011	12	4	10	11,8	110	20	63	0,071	M6/SW3	55051 06008
D12-T 5	A21 02021	12	5	11	11,8	110	25	63	0,072	M6/SW3	55051 06008
D12-T 6	A21 02031	12	6	12	17	110	36	63	0,113	M5/SW2,5	N00 72000
D12-T 8	A21 02041	12	8	14	19	110	36	63	0,131	M6/SW3	N00 72010
D16-T 3	A21 04001	16	3	9	13	110	20	60	0,110	M6/SW3	55051 06008
D16-T 4	A21 04011	16	4	10	14	110	20	60	0,117	M6/SW3	55051 06008
D16-T 5	A21 04021	16	5	11	15	110	25	60	0,126	M6/SW3	55051 06008
D16-T 6	A21 04031	16	6	12	15,8	110	36	60	0,140	M5/SW2,5	N00 72000
D16-T 8	A21 04041	16	8	14	19	110	36	60	0,162	M6/SW3	N00 72010
D20-T 3	A21 06001	20	3	9	13	110	20	58	0,159	M6/SW3	55051 06008
D20-T 4	A21 06011	20	4	10	14	110	20	58	0,165	M6/SW3	55051 06008
D20-T 5	A21 06021	20	5	11	15	110	25	58	0,173	M6/SW3	55051 06008
D20-T 6	A21 06031	20	6	12	16	110	36	58	0,188	M5/SW2,5	N00 72000
D20-T 8	A21 06041	20	8	14	19	110	36	58	0,207	M6/SW3	N00 72010
D20-T10	A21 06052	20	10	16	19,8	110	42	58	0,210	M8x1/SW4	N00 72050
D20-T12	A21 06062	20	12	18	19,8	110	47	58	0,206	M10x1/SW5	N00 72060

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

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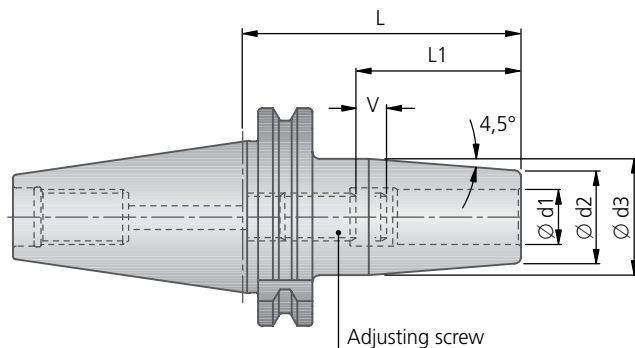


KOMET® DIN 69871 AD

Taper shank ThermoGrip®



■ short design



DIN 69871 AD | ThermoGrip®

SK	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Article	Order No.
40	ISO40 DIN69871AD-T3	A25 06010	3	15	20	80	20	5		M6/SW3	55051 06008
40	ISO40 DIN69871AD-T4	A25 06020	4	15	20	80	20	5		M6/SW3	55051 06008
40	ISO40 DIN69871AD-T5	A25 06030	5	15	20	80	25	5		M6/SW3	55051 06008
40	ISO40 DIN69871AD-T6	A25 36040	6	21	27	80	36	10	0,99	M5/SW2,5	N00 72000
40	ISO40 DIN69871AD-T8	A25 36050	8	21	27	80	36	10	0,98	M6/SW3	N00 72010
40	ISO40 DIN69871AD-T10	A25 36061	10	24	32	80	42	10	1,06	M8×1/SW4	N00 72050
40	ISO40 DIN69871AD-T12	A25 36071	12	24	32	80	47	10	1,05	M10×1/SW5	N00 72060
40	ISO40 DIN69871AD-T14	A25 36081	14	27	34	80	47	10	1,09	M10×1/SW5	N00 72060
40	ISO40 DIN69871AD-T16	A25 36091	16	27	34	80	50	10	1,07	M12×1/SW6	N00 72070
40	ISO40 DIN69871AD-T18	A25 36101	18	33	42	80	50	10	1,24	M12×1/SW6	N00 72070
40	ISO40 DIN69871AD-T20	A25 36111	20	33	42	80	52	10	1,18	M16×1/SW8	N00 72080
40	ISO40 DIN69871AD-T25	A25 36121	25	44	50	100	58	10	1,73	M16×1/SW8	N00 72080

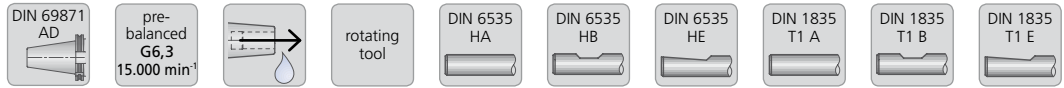
Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

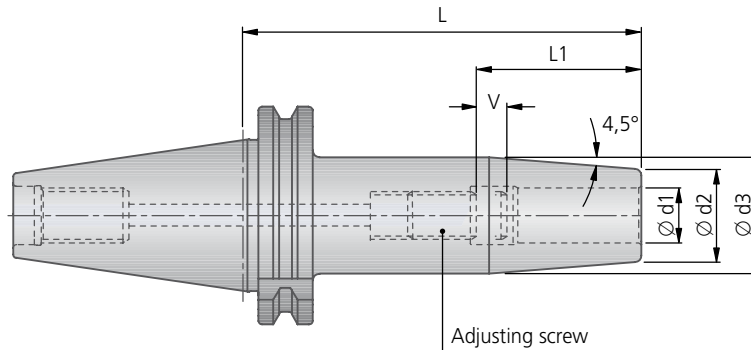
Thermal expansion chuck fitted complete. Pull studs not included (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



long design ■



DIN 69871 AD ThermoGrip®											
SK	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Article	Order No.
40	ISO40 DIN69871AD-T6-160	A25 36440	6	21	32	160	36	10		M5/SW2,5	N00 72000
40	ISO40 DIN69871AD-T8-160	A25 36450	8	21	32	160	36	10		M6/SW3	N00 72010
40	ISO40 DIN69871AD-T10-160	A25 36461	10	24	34	160	42	10		M8x1/SW4	N00 72050
40	ISO40 DIN69871AD-T12-160	A25 36471	12	24	34	160	47	10		M10x1/SW5	N00 72060
40	ISO40 DIN69871AD-T14-160	A25 36481	14	27	42	160	47	10		M10x1/SW5	N00 72060
40	ISO40 DIN69871AD-T16-160	A25 36491	16	27	42	160	50	10		M12x1/SW6	N00 72070
40	ISO40 DIN69871AD-T18-160	A25 36501	18	33	50	160	50	10		M12x1/SW6	N00 72070
40	ISO40 DIN69871AD-T20-160	A25 36511	20	33	50	160	52	10		M16x1/SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

Thermal expansion chuck fitted complete. Pull studs not included (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

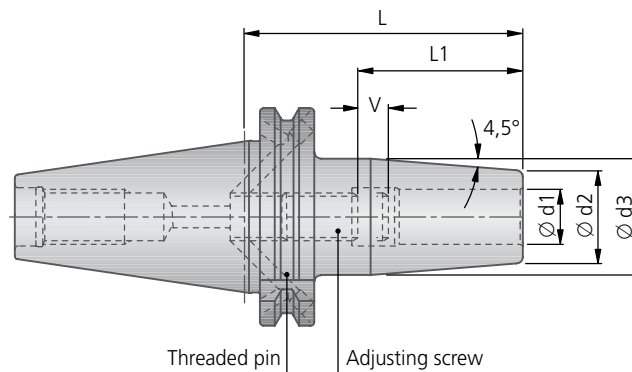


KOMET® DIN 69871 AD/B

Taper shank ThermoGrip®



■ short design



DIN 69871 AD/B | ThermoGrip®

SK	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw		Threaded pin
										Article	Order No.	
40	ISO40 DIN69871AD/B-T6	A25 06041	6	21	27	80	36	10	1,01	M5 / SW2,5	N00 72000	N00 70140 M5x5
40	ISO40 DIN69871AD/B-T8	A25 06051	8	21	27	80	36	10	1,00	M6 / SW3	N00 72010	
40	ISO40 DIN69871AD/B-T10	A25 06061	10	24	32	80	42	10	1,07	M8x1 / SW4	N00 72050	
40	ISO40 DIN69871AD/B-T12	A25 06071	12	24	32	80	47	10	1,05	M10x1 / SW5	N00 72060	
40	ISO40 DIN69871AD/B-T14	A25 06081	14	27	34	80	47	10	1,10	M10x1 / SW5	N00 72060	
40	ISO40 DIN69871AD/B-T16	A25 06091	16	27	34	80	50	10	1,07	M12x1 / SW6	N00 72070	
40	ISO40 DIN69871AD/B-T18	A25 06101	18	33	42	80	50	10	1,21	M12x1 / SW6	N00 72070	
40	ISO40 DIN69871AD/B-T20	A25 06111	20	33	42	80	52	10	1,17	M16x1 / SW8	N00 72080	
40	ISO40 DIN69871AD/B-T25	A25 06121	25	44	50	100	58	10	1,73	M16x1 / SW8	N00 72080	N00 70140 M5x5
50	ISO50 DIN69871AD/B-T6	A25 26040	6	21	27	80	36	10	1,95	M5 / SW2,5	N00 72000	
50	ISO50 DIN69871AD/B-T8	A25 26050	8	21	27	80	36	10	2,80	M6 / SW3	N00 72010	
50	ISO50 DIN69871AD/B-T10	A25 26061	10	24	32	80	42	10	2,82	M8x1 / SW4	N00 72050	
50	ISO50 DIN69871AD/B-T12	A25 26071	12	24	32	80	47	10	2,85	M10x1 / SW5	N00 72060	
50	ISO50 DIN69871AD/B-T14	A25 26081	14	27	34	80	47	10	2,85	M10x1 / SW5	N00 72060	
50	ISO50 DIN69871AD/B-T16	A25 26091	16	27	34	80	50	10	2,85	M12x1 / SW6	N00 72070	
50	ISO50 DIN69871AD/B-T18	A25 26101	18	33	42	80	50	10	2,90	M12x1 / SW6	N00 72070	
50	ISO50 DIN69871AD/B-T20	A25 26111	20	33	42	80	52	10	2,95	M16x1 / SW8	N00 72080	
50	ISO50 DIN69871AD/B-T25	A25 26121	25	44	53	90	58	10	3,00	M16x1 / SW8	N00 72080	
50	ISO50 DIN69871AD/B-T32	A25 26131	32	44	53	90	62	10	3,33	M16x1 / SW8	N00 72080	

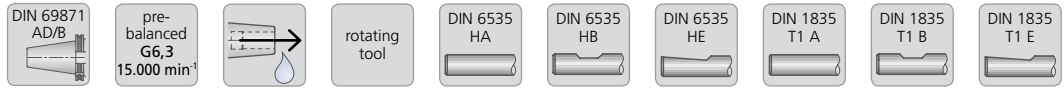
Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

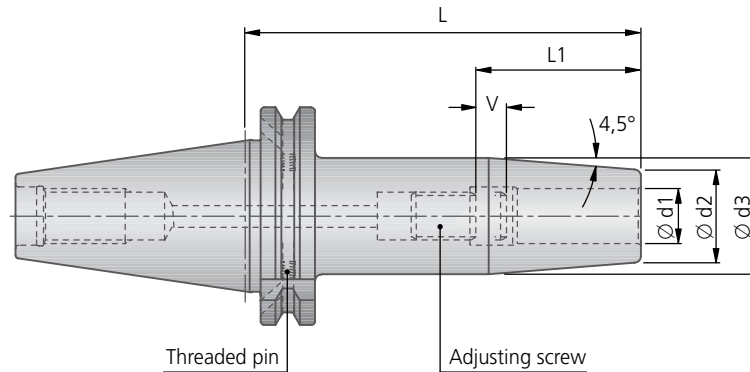
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



long design ■



DIN 69871 AD/B ThermoGrip®												
SK	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw		Threaded pin
										Article	Order No.	
40	ISO40 DIN69871AD/B-T6-120	A25 06240	6	21	27	120	36	10		M5/SW2,5	N00 72000	N00 70140 M5x5
40	ISO40 DIN69871AD/B-T8-120	A25 06250	8	21	27	120	36	10		M6/SW3	N00 72010	
40	ISO40 DIN69871AD/B-T10-120	A25 06261	10	24	32	120	42	10		M8x1/SW4	N00 72050	
40	ISO40 DIN69871AD/B-T12-120	A25 06271	12	24	32	120	47	10		M10x1/SW5	N00 72060	
40	ISO40 DIN69871AD/B-T14-120	A25 06281	14	27	34	120	47	10		M10x1/SW5	N00 72060	
40	ISO40 DIN69871AD/B-T16-120	A25 06291	16	27	34	120	50	10		M12x1/SW6	N00 72070	
40	ISO40 DIN69871AD/B-T18-120	A25 06301	18	33	42	120	50	10		M12x1/SW6	N00 72070	
40	ISO40 DIN69871AD/B-T20-120	A25 06311	20	33	42	120	52	10		M16x1/SW8	N00 72080	N00 70140 M5x5
50	ISO50 DIN69871AD/B-T6-120	A25 26240	6	21	27	120	36	10		M5/SW2,5	N00 72000	
50	ISO50 DIN69871AD/B-T8-120	A25 26250	8	21	27	120	36	10		M6/SW3	N00 72010	
50	ISO50 DIN69871AD/B-T10-120	A25 26261	10	24	32	120	42	10		M8x1/SW4	N00 72050	
50	ISO50 DIN69871AD/B-T12-120	A25 26271	12	24	32	120	47	10		M10x1/SW5	N00 72060	
50	ISO50 DIN69871AD/B-T14-120	A25 26281	14	27	34	120	47	10		M10x1/SW5	N00 72060	
50	ISO50 DIN69871AD/B-T16-120	A25 26291	16	27	34	120	50	10		M12x1/SW6	N00 72070	
50	ISO50 DIN69871AD/B-T18-120	A25 26301	18	33	42	120	50	10		M12x1/SW6	N00 72070	
50	ISO50 DIN69871AD/B-T20-120	A25 26311	20	33	42	120	52	10		M16x1/SW8	N00 72080	

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

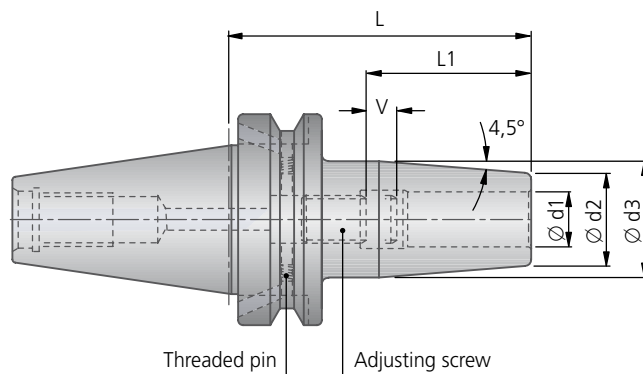


ISO



KOMET® JIS B 6339 (MAS 403 BT)

Taper shank ThermoGrip®



JIS B 6339 (MAS 403 BT) | ThermoGrip®

BT	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw		Threaded pin
										Article	Order No.	
40	ISO40 JIS B 6339AD/B-T6	A25 86040	6	21	27	90	36	10	1,15	M5/SW2,5	N00 72000	N00 70140 M5x5
40	ISO40 JIS B 6339AD/B-T8	A25 86050	8	21	27	90	36	10	1,15	M6/SW3	N00 72010	
40	ISO40 JIS B 6339AD/B-T10	A25 86061	10	24	32	90	42	10	1,22	M8x1/SW4	N00 72050	
40	ISO40 JIS B 6339AD/B-T12	A25 86071	12	24	32	90	47	10	1,21	M10x1/SW5	N00 72060	
40	ISO40 JIS B 6339AD/B-T14	A25 86081	14	27	34	90	47	10	1,26	M10x1/SW5	N00 72060	
40	ISO40 JIS B 6339AD/B-T16	A25 86091	16	27	34	90	50	10	1,23	M12x1/SW6	N00 72070	
40	ISO40 JIS B 6339AD/B-T18	A25 86101	18	33	42	90	50	10	1,38	M12x1/SW6	N00 72070	
40	ISO40 JIS B 6339AD/B-T20	A25 86111	20	33	42	90	52	10	1,35	M16x1/SW8	N00 72080	
40	ISO40 JIS B 6339AD/B-T25	A25 86121	25	44	53	100	58	10	1,79	M16x1/SW8	N00 72080	
40	ISO40 JIS B 6339AD/B-T32	A25 86131	32	44	53	100	62	10	1,7	M16x1/SW8	N00 72080	

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

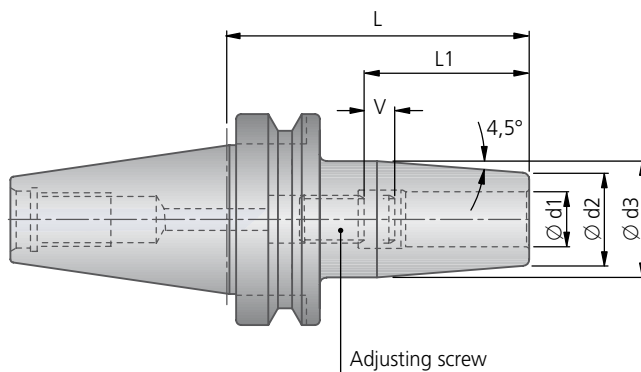
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).



Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

KOMET® JIS B 6339 (MAS 403 BT)

Taper shank ThermoGrip®



JIS B 6339 (MAS 403 BT) ThermoGrip®											
BT	Article	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Article	Order No.
50	ISO50 JIS B 6339AD-T6-100	A25 96040	6	21	27	100	36	10		M5/SW2,5	N00 72000
50	ISO50 JIS B 6339AD-T8-100	A25 96050	8	21	27	100	36	10		M6/SW3	N00 72010
50	ISO50 JIS B 6339AD-T10-100	A25 96061	10	24	32	100	42	10		M8×1/SW4	N00 72050
50	ISO50 JIS B 6339AD-T12-100	A25 96071	12	24	32	100	47	10		M10×1/SW5	N00 72060
50	ISO50 JIS B 6339AD-T14-100	A25 96081	14	27	34	100	47	10		M10×1/SW5	N00 72060
50	ISO50 JIS B 6339AD-T16-100	A25 96091	16	27	34	100	50	10		M12×1/SW6	N00 72070
50	ISO50 JIS B 6339AD-T18-100	A25 96101	18	33	42	100	50	10		M12×1/SW6	N00 72070
50	ISO50 JIS B 6339AD-T20-100	A25 96111	20	33	42	100	52	10		M16×1/SW8	N00 72080

Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

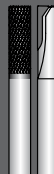


Note: With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

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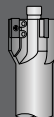


ISO

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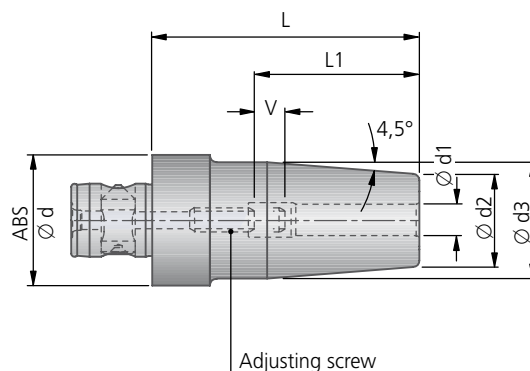


8



KOMET ABS®

Thermal expansion chuck ThermoGrip®



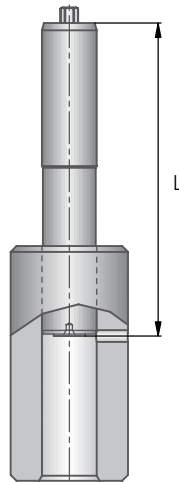
ABS® ThermoGrip®											
Article	Order No.	ABS Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Article	Order No.
ABS32-T8	A32 26050	32	8	21	27	70	36	10	0,30	M6 / SW3	N00 72010
ABS32-T10	A32 26061	32	10	24	32	70	42	10	0,37	M8x1 / SW4	N00 72050
ABS32-T12	A32 26071	32	12	24	32	80	47	10	0,40	M10x1 / SW5	N00 72060
ABS40-T8	A32 36050	40	8	21	27	70	36	10	0,39	M6 / SW3	N00 72010
ABS40-T10	A32 36061	40	10	24	32	70	42	10	0,44	M8x1 / SW4	N00 72050
ABS40-T12	A32 36071	40	12	24	32	80	47	10	0,48	M10x1 / SW5	N00 72060
ABS40-T16	A32 36091	40	16	27	34	90	50	10	0,58	M12x1 / SW6	N00 72070
ABS50-T6	A32 46040	50	6	21	27	75	36	10	0,64	M5 / SW2,5	N00 72000
ABS50-T8	A32 46050	50	8	21	27	75	36	10	0,63	M6 / SW3	N00 72010
ABS50-T10	A32 46061	50	10	24	32	80	42	10	0,70	M8x1 / SW4	N00 72050
ABS50-T12	A32 46071	50	12	24	32	80	47	10	0,68	M10x1 / SW5	N00 72060
ABS50-T14	A32 46081	50	14	27	34	80	47	10	0,73	M10x1 / SW5	N00 72060
ABS50-T16	A32 46091	50	16	27	34	85	50	10	0,71	M12x1 / SW6	N00 72070
ABS50-T18	A32 46101	50	18	33	42	85	50	10	0,89	M12x1 / SW6	N00 72070
ABS50-T20	A32 46111	50	20	33	42	90	52	10	0,90	M16x1 / SW8	N00 72080
ABS63-T14	A32 56081	63	14	27	34	85	47	10	1,07	M10x1 / SW5	N00 72060
ABS63-T18	A32 56101	63	18	33	42	90	50	10	1,25	M12x1 / SW6	N00 72070
ABS63-T20	A32 56111	63	20	33	42	90	52	10	1,21	M16x1 / SW8	N00 72080
ABS63-T25	A32 56121	63	25	44	53	95	58	10	1,61	M16x1 / SW8	N00 72080
ABS63-T32	A32 56131	63	32	44	53	95	58	10	1,44	M16x1 / SW8	N00 72080

Tool shank tolerance: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes: Thermal expansion chuck fitted complete.

KOMET® Measuring adaptor

for thermal expansion chuck
for length setting in cold state



Article	Order No.	Description	SW	L
TM 6	L05 09430	Measuring adaptor TM 6	2,5	80
TM 8	L05 09440	Measuring adaptor TM 8	3	80
TM 10	L05 09450	Measuring adaptor TM 10	4	80
TM 12	L05 09461	Measuring adaptor TM 12	5	80
TM 14	L05 09471	Measuring adaptor TM 14	5	80
TM 16	L05 09480	Measuring adaptor TM 16	6	80
TM 18	L05 09490	Measuring adaptor TM 18	6	80
TM 20	L05 09500	Measuring adaptor TM 20	8	80
TM 25	L05 09510	Measuring adaptor TM 25	8	80
TM 32	L05 09520	Measuring adaptor TM 32	8	80

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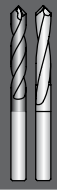
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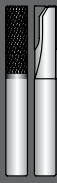
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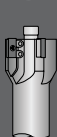
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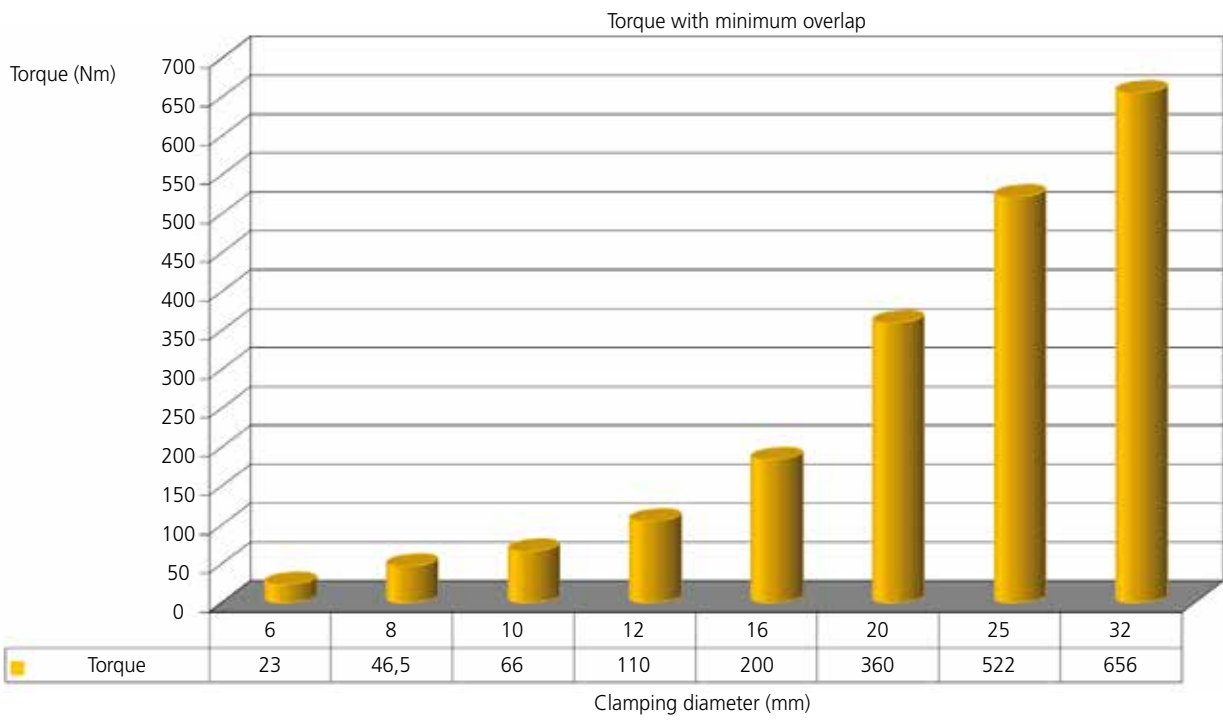
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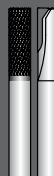
Torque transmission for thermal expansion connection



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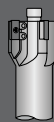
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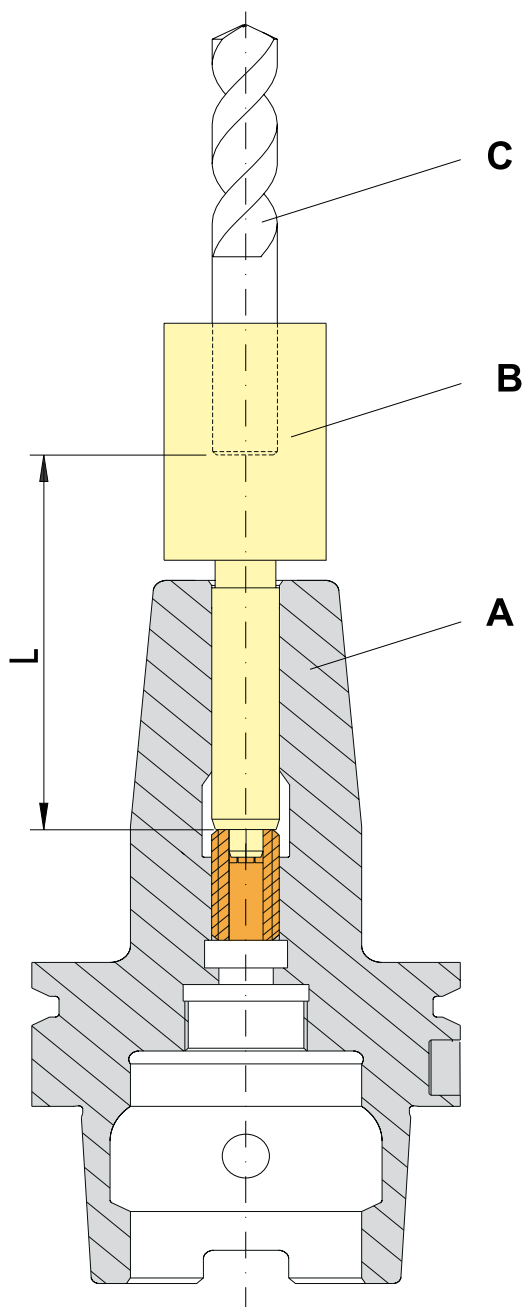


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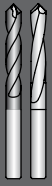


Length setting the tools

The length setting is carried out before the thermal expansion process using a measuring adaptor (B). This is inserted into the chuck (A) with the tool (C); by turning the adaptor, the tool length is defined with an adjustment screw, allowing for the dimension L. Finally the adaptor is removed and the tool fitted by thermal expansion.



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The ideas factory

The IDEEN-FABRIK reflects the evolution of KOMET from a tool manufacturer into a creative expert for solutions covering all aspects of boring, reaming, thread milling and mechatronic tools.

The central objective is to offer our customers and employees scope for creative working and learning.

On a total area of 2,500 m², we have created a modern, multi-storey factory environment. The IDEEN-FABRIK was deliberately not constructed as a separate, detached training building, but integrated directly above a manufacturing business.

While the metal swarf flies down below, ideas are exchanged above. By this, we aim to demonstrate that the work here is always associated with new ideas and creative ambition.

With the IDEEN-FABRIK and the comprehensive seminar programme for customers and employee qualification, we aim to offer you a measurable and permanent competitive advantage in your markets.



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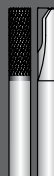
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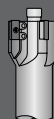
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Special solutions – Page 234 – 221

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3D-printed HPC PCD milling cutters

The benefits of 3D-printed tools:

- Their unique design affords productivity increases of up to 100% compared to conventional tools
- Lower cutting forces and minimised burring
- Reduced component weight – material is only used where necessary for optimum component functionality
- Optimised cooling channel design for improved chip evacuation and more effective cooling
- Greater design freedom – 3D printing is not restricted by conventional manufacturing rules. Innovative tool solutions thanks to new design freedom

KOMET® HPC face-milling cutter – application-specific versions

3D-printed HPC tools are available in the form of screw-in cutters, end milling cutters, arbour milling cutters and monobloc cutters. The following are tailored to your requirements:

- Connection and dimensions
- Number of cutting edges and cutting edge geometry
- Optimised coolant supply
- Reliable chip evacuation
- Cutting tool materials – tipped with PCD, PCBN or carbide



3D-printed HPC PCD milling cutters

Face milling into flange using 20 mm dia. tool

The challenge:

Material: 3.2315 (AlSiMgMn)
 Workpiece: Connector
 Tool: Conventional 20 mm diameter tool with four teeth
 Machining task: Producing a 60 mm diameter collar with a flange facing, $a_p = 3$ mm, $a_e = 20$ mm
 Objective: Reduce machining time per unit

The solution:

20 mm dia. KOMET® HPC PCD screw-in cutter with six teeth (37310001002000)

Cutting values:

$v_C = 1068$ m/min
 $= 17,000$ rpm
 $f_t = 0.1$ mm/tooth

**Customer benefits:**

The milling cutter runs very smoothly and quietly.
 Machining time per unit is reduced from 1 min 45 s to 55 s.

Machining time per unit is reduced by 48%

Face milling into filter housing using 32 mm dia. tool

The challenge:

Material: 3.2371 (AlSi7Mg0.3)
 Workpiece: Filter housing
 Tool: Conventional 50 mm diameter tool with seven teeth
 $v_C = 1600$ m/min, $f_t = 0.03$ mm/tooth
 Machining task: Milling various webs, lands, surfaces, reliefs and shoulders
 $a_p = 1-3$ mm, $a_e = 19-32$ mm
 Objective: Reduce machining time per unit

The solution:

32 mm dia. KOMET® HPC PCD screw-in cutter with 10 teeth (37310001003200), A = 129 mm

Cutting values:

$v_C = 1206$ m/min = 12,000 rpm
 (max. speed)
 $f_t = 0.04$ mm/tooth

**Customer benefits:**

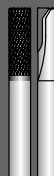
Machining time per unit is reduced from 1 min 23 s to 23 s.
 100 min machining time saved per day.

Machining time per unit is reduced by 72%

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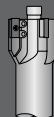


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Face milling into cylinder head using 40 mm dia. tool

The challenge:

Material: 3.2371 (G-AlSi7Mg)
 Workpiece: Cylinder head
 Tool: Conventional tool with six teeth for roughing, $a_p = 2$ mm
 Machining task: Milling the contact surface
 Objective: Increase productivity

The solution:

KOMET®
 40 mm dia. PCD arbour milling cutter with 12 teeth

Cutting values:

$v_C = 1382$ m/min
 $= 11,000$ rpm
 $f_t = 0.1$ mm/tooth = F 13,200 mm/min

**Customer benefits:**

This tool runs much more smoothly and quietly than conventional tools. No noticeable burr on the edge of the workpiece, unlike when conventional tools are used for machining.

Machining time per unit is reduced by 45%

Face milling into gearbox cover using 40 mm dia. tool

The challenge:

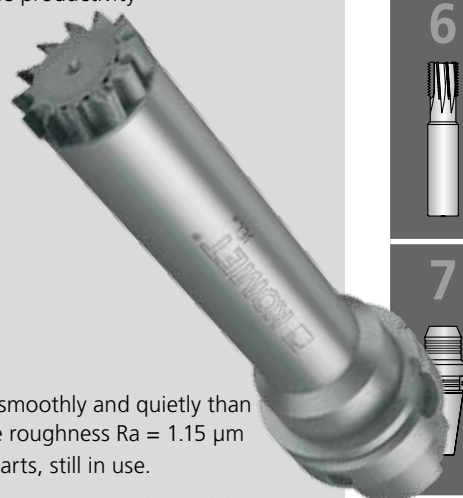
Material: EN AC-48000 (Al Si12CuNiMg)
 Workpiece: Gearbox cover
 Tool: Conventional 40 mm diameter tool with seven teeth
 Machining task: Milling webs or lands, $a_p = 1$ mm, requisite max. surface roughness $R_a = 1.6$ μ m
 Objective: Increase productivity

The solution:

KOMET®
 40 mm dia. PCD milling cutter with 12 teeth
 HSK-A63, A = 200 mm

Cutting values:

$v_C = 2000$ m/min
 $= 15,924$ rpm
 $f_t = 0.15$ mm/tooth

**Customer benefits:**

This tool runs much more smoothly and quietly than conventional tools, surface roughness $R_a = 1.15$ μ m
 Tool life to date 107,000 parts, still in use.

Machining time per unit is reduced by 30%

Allocation of indexable insert to clamping screw

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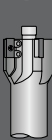


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Insert	Clamping screw	
Size	Order No.	Article
W00 WOHX		
W00 04..	N00 56011	S/M1,8x2,9-5IP
W00 10..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W00 17..	N00 55581	M2,5x4,5-8IP
	N00 55551*	M2,5x2,8-8IP
	N00 55561*	M2,5x4-8IP
W00 24..	N00 55571	M2,5x6-8IP
	N00 55561*	M2,5x4-8IP
	N00 55581*	M2,5x4,5-8IP
W00 34..	N00 55701	M3,5x5-8IP
	N00 55711	M3,5x7,4-8IP
W00 42..	N00 55811	M4,5x7-10IP
	N00 55801*	M4,5x6-10IP
	N00 55821*	M4,5x9-10IP
W00 50..	N00 55811	M4,5x7-10IP
	N00 55821*	M4,5x9-10IP
W00 58..	N00 55891	M5,5x8,5-20IP
	N00 55901*	M5,5x13,5-20IP
W01 WOHX		
W01 10..	N00 56041	S/M2x4,3-6IP
W01 18..	N00 57553	S/M2,2x5,5-6IP
W01 24..	N00 57511	S/M2,5x7,2-8IP
W01 34..	N00 57521	S/M3,5x7,3-10IP
W01 42..	N00 57531	S/M4,5x9-15IP
W01 50..	N00 57531	S/M4,5x9-15IP
W01 58..	N00 57541	S/M5,5x11-20IP
W04 WNHX		
W04 22..	N00 55050	M3x7,8 /75°-C1,5
	N00 55050	M3x7,8 /75°-C1,5
W04 34..	N00 55060	M3,5x9,4/60°-C1,5
	N00 55070	M3,5x11,4/60°-C1,5
W04 42..	N00 55100	M4,5x12,4-C2,5
	N00 55110	M4,5x14,5-C2,5
	N00 55130	M4,5x18,7-C2,5
W04 50..	N00 55120	M4,5x16,4-C2,5
	N00 55140	M4,5x22,5-C2,5
W04 58..	N00 55180	M5,5x29,2-C3
W24		
W24 12..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W24 20..	N00 56651	S2560-8IP
W27		
W27 12..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W27 20..	N00 56651	S2560-8IP
W28 WOEX		
W28 10..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W28 17..	N00 55581	M2,5x4,5-8IP
	N00 55551*	M2,5x2,8-8IP
	N00 55561*	M2,5x4-8IP

Insert	Clamping screw	
Size	Order No.	Article
W28 24..	N00 55571	M2,5x6-8IP
	N00 55561*	M2,5x4-8IP
W28 34..	N00 55581*	M2,5x4,5-8IP
	N00 55701	M3,5x5-8IP
W28 42..	N00 55711	M3,5x7,4-8IP
	N00 55811	M4,5x7-10IP
W28 50..	N00 55801*	M4,5x6-10IP
	N00 55821*	M4,5x9-10IP
W28 58..	N00 55811	M4,5x7-10IP
	N00 55821*	M4,5x9-10IP
W28 72..	N00 55891	M5,5x8,5-20IP
	N00 55901*	M5,5x13,5-20IP
W29 WOEX		
W29 04..	N00 56051	S/M1,8x3,8-5IP
W29 10..	N00 56041	S/M2x4,3-6IP
W29 18..	N00 57553	S/M2,2x5,5-6IP
W29 24..	N00 57511	S/M2,5x7,2-8IP
W29 34..	N00 57521	S/M3,5x7,3-10IP
	N00 57790**	S/M3,5x7,3-10IP
W29 42..	N00 57531	S/M4,5x9-15IP
W29 50..	N00 57531	S/M4,5x9-15IP
W29 58..	N00 57541	S/M5,5x11-20IP
W30 TOHX TOGX		
W30 04..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W30 14..	N00 56111	S/M2,6x6,2-8IP
	N00 56101*	S/M2,6x5,2-8IP
	N00 56121*	S/M2,6x4,7-8IP
W30 26..	N00 56201	S/M3,5x6,2-10IP
	N00 56211*	S/M3,5x7,3-10IP
W30 44..	N00 56401	S/M5x9,4-20IP
	N00 56411*	S/M5x13,4-20IP
W32 TPHX		
W32 03..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W32 13..	N00 56111	S/M2,6x6,2-8IP
	N00 56101*	S/M2,6x5,2-8IP
W32 18..	N00 56111	S/M2,6x6,2-8IP
	N00 56121*	S/M2,6x4,7-8IP
W32 23..	N00 56201	S/M3,5x6,2-10IP
	N00 56211*	S/M3,5x7,3-10IP
W32 32..	N00 56301	S/M4x8-10IP
W32 44..	N00 56401	S/M5x9,4-20IP
	N00 56411*	S/M5x13,4-20IP
W34 TOHT		
W34 18..	N00 56651	S2560-8IP
W34 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP

Insert	Clamping screw	
Size	Order No.	Article
W37 TPHB		
W37 18..	N00 56111	S/M2,6x6,2-8IP
	N00 56101*	S/M2,6x5,2-8IP
W37 23..	N00 56121*	S/M2,6x4,7-8IP
	N00 56201	S/M3,5x6,2-10IP
W37 32..	N00 56211*	S/M3,5x7,3-10IP
	N00 56301	S/M4x8-10IP
W57 TOHX TOGX		
W57 04..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W57 14..	N00 56111	S/M2,6x6,2-8IP
	N00 56101*	S/M2,6x5,2-8IP
	N00 56121*	S/M2,6x4,7-8IP
W57 26..	N00 56201	S/M3,5x6,2-10IP
	N00 56211*	S/M3,5x7,3-10IP
W58 TPHX		
W58 03..	N00 56031	S/M2x4,9-6IP
	N00 56021*	S/M2x3,8-6IP
W58 13..	N00 56111	S/M2,6x6,2-8IP
	N00 56101*	S/M2,6x5,2-8IP
W58 18..	N00 56111	S/M2,6x6,2-8IP
	N00 56121*	S/M2,6x4,7-8IP
W58 23..	N00 56201	S/M3,5x6,2-10IP
	N00 56211*	S/M3,5x7,3-10IP
W58 32..	N00 56301	S/M4x8-10IP
W59 TOHT		
W59 18..	N00 56651	S2560-8IP
W59 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W60 DOHT		
W60 18..	N00 56651	S2560-8IP
W60 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W78 VOHT VOGW		
W78 18..	N00 56651	S2560-8IP
W78 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W79 DOHT		
W79 18..	N00 56651	S2560-8IP
W79 32..	N00 56751	S3574-10IP
	N00 56771	S35102-10IP
W80 SOGX		
W80 10..	N00 56051	S/M1,8x3,8-5IP
W80 12..	N00 56041	S/M2x4,3-6IP
W80 18..	N00 57553	S/M2,2x5,5-6IP
W80 20..	N00 57553	S/M2,2x5,5-6IP
W80 24..	N00 57571	S/M2,5x6,3-8IP
W80 28..	N00 57251	S3076-8IP
W80 32..	N00 57261	S3575-15IP
W80 38..	N00 57261	S3575-15IP
W80 42..	N00 57301	S45100-20IP
W80 46..	N00 57301	S45100-20IP

Allocation of indexable insert to clamping screw

Insert	Clamping screw	
Size	Order No.	Article
W82 SOHX		
W82 32..	N00 57261	S3575-15IP
W83 SOEX		
W83 13..	N00 56041	S/M2x4,3-6IP
	N00 57553	S/M2,2x5,5-6IP
W83 18..	N00 57740**	S/M2,2x5,5-6IP
	N00 57760**	S/M2,2x7,5-6IP
	N00 57571	S/M2,5x6,3-8IP
W83 23..	N00 57730**	S/M2,5x6,3-8IP
	N00 57780**	S/M2,5x8,8-8IP
W83 32..	N00 57261	S3575-15IP
	N00 57750**	S3575-15IP
W83 44..	N00 57301	S45100-20IP
W83 SPGT/SPGW		
W83 18..	N00 57221	S2553-7IP
W83 32..	N00 57261	S3575-15IP
W83 44..	N00 56851	S45111-20IP
W84		
W84 18..	N00 56651	S2560-8IP
W84 32..	N00 56771	S35102-10IP
W85 CPGT/CPGW		
W85 09..	N00 57191	S2043-6IP
W85 18..	N00 57221	S2553-7IP
W85 18.. .01 .02	N00 56651	S2560-8IP
W85 23..	N00 57341	S3066-9IP
W85 32..	N00 57261	S3575-15IP
W85 32.. .02 .03 .04 .05	N00 56751	S3574-10IP
W85 44..	N00 56851	S45111-20IP
W86		
W86 18..	N00 56651	S2560-8IP
W86 32..	16301 00537	
W89 VCMT/VBMT		
W89 23..	51560 74551	
W89 32.. .05 .06	16301 00537	
W89 32.. .07 .08	N00 57271	S3585-15IP
C79 VBG VBGW		
C79 03..	N00 56031	S/M2x4,9-6IP
C79 18..	N00 57221	S2553-7IP
C79 32..	N00 57271	S3585-15IP
C83 SCMT SCGW		
C83 32..	N00 57261	S3575-15IP
C83 44..	N00 56851	S45111-20IP
C84 TCGT TCGW		
C84 13..	N00 57660	S/M2,2x4,8-6IP
C84 18..	N00 56651	S2560-8IP
C84 32..	N00 56771	S35102-10IP
C85 CCGT CCGW		
C85 18..	N00 57221	S2553-7IP
C85 32..	N00 56751	S3574-10IP
C85 44..	N00 56851	S45111-20IP

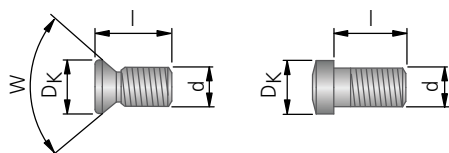
Insert	Clamping screw	
Size	Order No.	Article
C86 DCGT DCGW		
C86 18..	N00 56651	S2560-8IP
C86 32..	N00 57261	S3575-15IP
C87 RCGT RCGW		
C87 34..	N00 57261	S3575-15IP
C88 RCGT RCGW		
C88 17..	N00 57221	S2553-7IP
C88 24..	N00 57341	S3066-9IP
C88 34..	N00 57261	S3575-15IP
C88 42..	N00 57261	S3575-15IP
C89 VCGT VCGW		
C89 03..	N00 56031	S/M2x4,9-6IP
C89 18..	N00 57221	S2553-7IP
C89 32..	N00 57271	S3585-15IP
C95 CPGT CPGW		
C95 09..	N00 57191	S2043-6IP
C95 18..	N00 57221	S2553-7IP
C95 23..	N00 57341	S3066-9IP
C95 32..	N00 57261	S3575-15IP
C95 44..	N00 56851	S45111-20IP
C98 RDHX		
C98 10..	N00 56051	SM1,8x3,8-5IP
C98 20..	N00 57221	S2553-7IP
C98 34..	N00 57261	S3575-15IP
C98 42..	N00 57261	S3575-15IP
H60 H62 XOHX		
XOHX0802	N00 57660	S/M2,2x4,8-6IP
XOHX1003	N00 57630	S/M3x5,8-8IP
XOHX12T3	N00 57640	S/M3,5x6,9-10IP
XOHX1504	N00 57650	S/M4x8,7-15IP
XOHX2205	N00 57670	S/M5x10,4-20IP
H80 LNHX		
LNHX09T3	N00 57251	S3076-8IP
LNHX1205	N00 57411	S40101-15IP
Q09 SPGW SPMT SEHW SEHT		
Q09 13..	N00 57221	S2553-7IP
Q09 18..	N00 57221	S2553-7IP
Q09 44..	N00 57301	S45100-20IP
Q09 53..	N00 57301	S45100-20IP
Q12 TCAA TNAA TCAX TNAX TPAX		
	N00 57201	S2536-7IP
Q12 18..	N00 57211	S2542-8IP
	N00 57221	S2553-7IP
	N00 57231	S3056-8IP
Q12 32.. .05 .06	N00 57231	S3056-8IP
Q12 32.. .07	N00 57241	S3070-8IP
Q12 32.. .08 .09	N00 57271	S3585-15IP
Q12 32.. .15 .16 .17	N00 57281	S3598-15IP
Q12 32.. .18 .19 .20	N00 57251	S3076-8IP

* only be used for special tools

** tensile strength 1600 N/mm²

Insert	Clamping screw	
Size	Order No.	Article
Q12 32.. .38 .41 .42 .43	N00 57281	S3598-15IP
Q12 32.. .52 .53	N00 57431	S3066-8IP
Q12 44..	N00 57301	S45100-20IP
Q15 CPMT CPMW		
Q15 18..	N00 57221	S2553-7IP
Q15 32..	N00 57261	S3575-15IP
Q21		
Q21 24..	N00 57251	S3076-8IP
Q21 32..	N00 57261	S3575-15IP
Q21 44..	N00 57301	S45100-20IP
Q33		
Q33 18..	N00 56651	S2560-8IP
	N00 57241	S3070-8IP
Q33 23..	N00 57251	S3076-8IP
Q36 APKT		
Q36 18..	N00 57321	S2556-8IP
Q36 24..	N00 57341	S3066-9IP
Q36 38..	N00 57411	S40101-15IP
Q40 HOKT HPCT HPKT		
Q40 53..	N00 57890	S40110-15IP
Q43 SDHT SDKT SDMX		
Q43 28..	N00 57830	S3073-T8-55°
Q43 38.. Ø24,5	N00 57910	S4085-T15-55°
Q43 38.. Ø32,5-92,5	N00 57890	S40110-15IP
Q47 EOMT		
Q47 34.. Ø31,7	N00 57910	S4085-T15-55°
Q47 34.. Ø39,7-99,7	N00 57890	S40110-15IP
Q55 RPMX RPHX RDHW RDHX		
Q55 34..	N00 57840	S3075-10IP
Q55 42.. Ø25-32	N00 57910	S4085-T15-55°
Q55 42.. Ø40-100	N00 57890	S40110-15IP
Q56 XPLT XDLT XOLT		
Q56 20..	N00 57820	S2550-T8-55°
Q56 32..	N00 57860	S3572-T15-55°
Q56 46..	N00 57880	S45105-T20-55°
Q63 SOKU		
Q63 46..	N00 57890	S40110-15IP
Q63 53..	N00 57900	S45130-20IP
Q75 RNKU ROHU		
Q75 42..	N00 57890	S40110-15IP
Q80 LNGU		
Q80 09..	N00 57191	S2043-6IP
	N00 57720	S2053-6IP
Q80 20..	N00 57251	S3076-8IP
Q80 32..	N00 57411	S40101-15IP

Clamping screw



Order No.	Article	Packing unit  piece	Thread d	Length l	Screw head taper angle		Screw turning slot			Tightening torque Nm
					D _K	W	 TorxPlus	 WAF	 Torx	
16301 00537									Tx15	
51560 74551									Tx9	
N00 55050	M3x7,8 /75°	10	3	7,8	4,5	75°		1,5		2,25
N00 55060	M3,5x9,4/60°	10	3,5	9,4	4,6	60°		1,5		2,8
N00 55070	M3,5x11,4/60°	10	3,5	11,4	4,6	60°		1,5		2,8
N00 55100	M4,5x12,4	10	4,5	12,4	5,9			2,5		4,5
N00 55110	M4,5x14,5	10	4,5	14,5	5,9			2,5		4,5
N00 55120	M4,5x16,4	10	4,5	16,4	5,9			2,5		4,5
N00 55130	M4,5x18,7	10	4,5	18,7	5,9			2,5		4,5
N00 55140	M4,5x22,5	10	4,5	22,5	5,9			2,5		4,5
N00 55180	M5,5x29,2	10	5,5	29,2	7,1			3		6,5
N00 55551	M2,5x2,8-8IP	10	2,5	2,8	3,45		8IP			1,28
N00 55561	M2,5x4-8IP	10	2,5	4	3,45		8IP			1,28
N00 55571	M2,5x6-8IP	10	2,5	6	3,45		8IP			1,28
N00 55581	M2,5x4,5-8IP	10	2,5	4,5	3,45		8IP			1,28
N00 55701	M3,5x5-8IP	10	3,5	5	5,15		8IP			2,25
N00 55711	M3,5x7,4-8IP	10	3,5	7,4	5,15		8IP			2,25
N00 55801	M4,5x6-10IP	10	4,5	6	6,05		10IP			4,3
N00 55811	M4,5x7-10IP	10	4,5	7	6,05		10IP			4,3
N00 55821	M4,5x9-10IP	10	4,5	9	6,05		10IP			4,3
N00 55851	M5x13,5-15IP	10	5	13,5	7,25		15IP			6,25
N00 55891	M5,5x8,5-20IP	10	5,5	8,5	7,25		20IP			6,25
N00 55901	M5,5x13,5-20IP	10	5,5	13,5	7,25		20IP			6,25
N00 56011	S/M1,8x2,9-5IP	10	1,8	2,95	2,4	75°	5IP			0,38
N00 56021	S/M2x3,8-6IP	10	2	3,8	2,7	75°	6IP			0,62
N00 56031	S/M2x4,9-6IP	10	2	4,9	2,7	75°	6IP			0,62
N00 56041	S/M2x4,3-6IP	10	2	4,3	2,7	75°	6IP			0,62
N00 56051	S/M1,8x3,8-5IP	10	1,8	3,85	2,4	75°	5IP			0,38
N00 56101	S/M2,6x5,2-8IP	10	2,6	5,2	3,4	75°	8IP			1,28
N00 56111	S/M2,6x6,2-8IP	10	2,6	6,2	3,4	75°	8IP			1,28
N00 56121	S/M2,6x4,7-8IP	10	2,6	4,7	3,4	75°	8IP			1,28
N00 56201	S/M3,5x6,2-10IP	10	3,5	6,2	4,65	75°	10IP			2,8
N00 56211	S/M3,5x7,3-10IP	10	3,5	7,3	4,65	75°	10IP			2,8
N00 56301	S/M4x8-10IP	10	4	8	5,15	75°	10IP			4,3
N00 56401	S/M5x9,4-20IP	10	5	9,4	6,65	75°	20IP			6,25
N00 56411	S/M5x13,4-20IP	10	5	13,4	6,65	75°	20IP			6,25
N00 56591	S2247-6IP	10	2,2	4,7	3,15	60°	6IP			1,01
N00 56651	S2560-8IP	10	2,5	6	3,5	55°	8IP			1,28
N00 56751	S3574-10IP	10	3,5	7,4	5,5	55°	10IP			2,8
N00 56771	S35102-10IP	10	3,5	10,25	5,5	55°	10IP			2,8
N00 56811	S40101-20IP	10	4	10,1	7,2	60°	20IP			4,3
N00 56851	S45111-20IP	10	4,5	11,1	6,9	55°	20IP			6,25
N00 57191	S2043-6IP	10	2	4,3	2,7	55°	6IP			0,62
N00 57201	S2536-7IP	10	2,5	3,6	3,5	55°	7IP			0,90
N00 57211	S2542-8IP	10	2,5	4,2	3,5	55°	8IP			1,28
N00 57221	S2553-7IP	10	2,5	5,3	3,5	55°	7IP			0,90

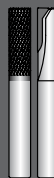
Clamping screw

Order No.	Article	Packing unit  piece	Thread d	Length l	Screw head taper angle		Screw turning slot		Tightening torque Nm
					D _K	W	 TorxPlus	 TORX®	
N00 57231	S3056-8IP	10	3	5,6	5	55°	8IP		2,25
N00 57241	S3070-8IP	10	3	7	4,3	55°	8IP		2,25
N00 57251	S3076-8IP	10	3	7,6	4,3	55°	8IP		2,25
N00 57261	S3575-15IP	10	3,5	7,5	5,5	55°	15IP		2,8
N00 57271	S3585-15IP	10	3,5	8,5	5,5	55°	15IP		2,8
N00 57281	S3598-15IP	10	3,5	9,8	5,5	55°	15IP		2,8
N00 57301	S45100-20IP	10	4,5	10	6,4	55°	20IP		6,25
N00 57321	S2556-8IP	10	2,5	5,6	3,8	50°	8IP		1,28
N00 57341	S3066-9IP	10	3	6,6	4,4	60°	9IP		2,5
N00 57411	S40101-15IP	10	4	10,1	5,5	60°	15IP		4,3
N00 57421	S/M4,5x7,8-15IP	10	4,5	7,8	6,7	60°	15IP		6,25
N00 57431	S3066-8IP	10	3	6,6	5	55°	8IP		2,25
N00 57440	S4089-15IP	10	4	8,9	5,5	55°	15IP		4,3
N00 57450	S50115-20IP	10	5	11,5	7,4	55°	20IP		6,25
N00 57460	S55140-20IP	10	5,5	14	8,2	55°	20IP		6,25
N00 57470	S60160-20IP	10	6	16	8,8	55°	20IP		6,25
N00 57480	S2564-8IP	10	2,5	6,4	3,5	55°	8IP		1,28
N00 57490	S3074-8IP	10	3	7,4	4,3	55°	8IP		2,25
N00 57500	S45105-20IP	10	4,5	10,5	6,4	55°	20IP		6,25
N00 57511	S/M2,5x7,2-8IP	10	2,5	7,2	3,4	75°	8IP		1,28
N00 57521	S/M3,5x7,3-10IP	10	3,5	7,3	5,1	75°	10IP		2,8
N00 57531	S/M4,5x9-15IP	10	4,5	9	6,0	75°	15IP		6,25
N00 57541	S/M5,5x11-20IP	10	5,5	11	7,2	75°	20IP		6,25
N00 57553	S/M2,2x5,5-6IP	10	2,2	5,5	3,1	75°	6IP		1,01
N00 57571	S/M2,5x6,3-8IP	10	2,5	6,3	3,4	75°	8IP		1,28
N00 57611	S/M3,5x6,6-10IP	10	3,5	6,6	5,1	75°	10IP		2,8
N00 57630	S/M3x5,8-8IP	10	3	5,8	3,8	75°	8IP		2,25
N00 57640	S/M3,5x6,9-10IP	10	3,5	6,9	4,6	75°	10IP		2,8
N00 57650	S/M4x8,7-15IP	10	4	8,7	5,3	75°	15IP		4,3
N00 57660	S/M2,2x4,8-6IP	10	2,2	4,8	2,9	75°	6IP		1,01
N00 57670	S/M5x10,4-20IP	10	5	10,4	6,6	75°	20IP		6,25
N00 57710	S3090-9IP	10	3	9	4,4	60°	9IP		2,5
N00 57720	S2053-6IP	10	2	5,3	2,7	55°	6IP		0,62
N00 57730	S/M2,5x6,3-8IP	10	2,5	6,3	3,4	75°	8IP		1,28
N00 57740	S/M2,2x5,5-6IP	10	2,2	5,5	3,1	75°	6IP		1,01
N00 57750	S3575-15IP	10	3,5	7,5	5,5	55°	15IP		2,8
N00 57760	S/M2,2x7,5-6IP	10	2,2	7,5	3,1	75°	6IP		1,01
N00 57770	S/M4,5x14-20IP	10	4,5	14	6,1	75°	20IP		6,25
N00 57780	S/M2,5x8,8-8IP	10	2,5	8,8	3,4	75°	8IP		1,28
N00 57790	S/M3,5x7,3-10IP	10	3,5	7,3	5,1	75°	10IP		2,8
N00 57820	S2550-T8-55°	10	2,5	5,0	3,45	55°		T8	1,2
N00 57830	S3073-T8-55°	10	3	7,3	4,1	55°		T8	2
N00 57840	S3075-10IP	10	3	7,5	4,2	55°	10IP		2
N00 57860	S3572-T15-55°	10	3,5	7,2	5,2	55°		T15	3,2
N00 57870	S3586-T15-55°	10	3,5	8,6	5,2	55°		T15	3,2
N00 57880	S45105-T20-55°	10	4,5	10,5	6,6	55°		T20	5
N00 57890	S40110-15IP	10	4	11,0	6,6	55°	15IP		4,3
N00 57900	S45130-20IP	10	4,5	13,0	5,3	55°	20IP		5
N00 57910	S4085-T15-55°	10	4	8,5	5,3	55°		T15	4,25
N00 57920	S40110-T15	10	4	11,0	5,3	55°		T15	4,25

1



2



3

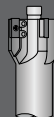


ISO

4



5



6



7

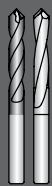


8



Torque tools | Screwdriver | Key

1



Reduce your costs: The correct torque protects you from warranty claims.

Protect your health: With a patented SoftFinish® handle design to protect your hands and muscles while you work. Recommended by German doctors and therapists from the AGR (German Campaign for Healthier Backs).

Increase your efficiency: The correct torque protects you from material damage and needing to perform rework.

Increase your process reliability: Preset torque for repetitive processes.

To ensure the correct starting torque on screws, the torque key from the TORX® and TORX PLUS® system has. Complies with the following requirements: EN ISO 6789, BS EN 26789, ASME B107.14M (with certificate).

2



3



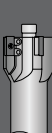
TorqueFix® torque tool
with fixed preset torque
accuracy: $\pm 6\%$
release torque: + 30%

easyTorque torque tool
with fixed preset torque
accuracy: $\pm 10\%$
release torque: unbounded

4



5



6



7



8



Preset torque tools

- For controlled screwdriving work, for example in series production or in applications that are frequently repeated.
- Click signal which can be heard and felt clearly when the set torque value is reached.
- Each rotary screwdriver handle provides a ratio between guidance, speed and torque that is perfectly adapted to the screwdriving task at hand.
- Logged inspection of individual parts immediately after manufacture in the plant.

TorqueFix®	
	
Torque	Order No.
0,38 Nm	L05 00901
0,62 Nm	L05 00911
0,90 Nm	L05 00921
1,01 Nm	L05 03301
1,28 Nm	L05 00931
2,25 Nm	L05 03311
2,50 Nm	L05 00941
2,80 Nm	L05 00951
4,30 Nm	L05 00961
6,25 Nm	L05 00971
8 Nm	L05 03400

easyTorque	
	
Torque	Order No.
0,38 Nm	L05 00902
0,62 Nm	L05 00912
1,01 Nm	L05 00922
1,28 Nm	L05 00932
1,8 Nm	L05 03320
2,25 Nm	L05 00942
2,50 Nm	L05 00952
2,80 Nm	L05 00962
4,30 Nm	L05 00972

Replaceable blade		
		
Size	Order No.	Torque max.
5IP	L05 00700	0,5 Nm
6IP	L05 00710	1,01 Nm
7IP	L05 00720	1,3 Nm
8IP	L05 00730	2,25 Nm
9IP	L05 00740	3,0 Nm
10IP	L05 00750	4,5 Nm
15IP	L05 00760	6,6 Nm
20IP	L05 00770	8,0 Nm
SW4	L05 03410	8,0 Nm

TORX PLUS®	
	
Size	Order No.
5IP	L05 00800
6IP	L05 00810
7IP	L05 00820
8IP	L05 00830
9IP	L05 00840
10IP	L05 00850
15IP	L05 00860
20IP	L05 00870

TORX PLUS®	
	
Size	Order No.
5IP	L05 01110
6IP	L05 01120
8IP	L05 01240

TORX®	
	
Size	Order No.
T15	L05 00607
T20	L05 00608

TORX®	
	
Size	Order No.
T8	L05 00605

The TORX® keys do fit the new TORX PLUS® shape but we recommend only TORX PLUS® keys be used for tightening screws.

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TorqueFix®, TorqueVario® and SoftFinish® are registered trademarks for the Wiha Werkzeuge GmbH, Schonach



Changing the torque

- ① Remove blade
- ② Insert adjusting key in variable torque key handle and turn to set the required torque. The appropriate IP size can be read from the graduated scale.
- ③ Push blade in again

TorqueVario® torque tool

Variable adjustment

TorqueVario®					
Size	Torque	Order No.	Adjusting key	Replaceable blades	
5IP – 7IP	0,38 – 1,01 Nm	L05 00781	L05 00990	5IP	L05 00700
				6IP	L05 00710
				7IP	L05 00720
				9IP	L05 00740
9IP – 20IP	2,25 – 6,25 Nm	L05 00791	L05 00990	10IP	L05 00750
				15IP	L05 00760
				20IP	L05 00770

Supply includes:

Torque wrench with adjusting key and replaceable blades.

TorqueVario®-S torque tool

Variable adjustment

TorqueVario®-S			appropriate replaceable blade	
Size	Torque	Order No.	Size	Order No.
T8 – T20	0,8 – 5 Nm (0,2 Nm)	L05 00600	T8	L05 00601
			T15	L05 00603
			T20	L05 00604

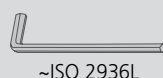
Supply includes: Torque wrench with adjusting key without replaceable blade.

Allen key



Size	Order No.
SW1,5	18591 10015
SW2,5	18591 10025
SW3	18591 10030
SW4	18591 10040
SW5	18591 10050
SW6	18591 10060
SW10	18591 10100

Allen key



Size	Order No.
SW4	18591 10041

Key

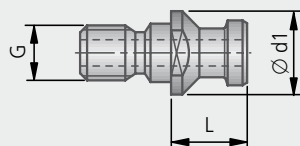


Size	Order No.
16	18701 80016
22	18701 80022
27	18701 80027
32	18701 80032
40	18701 80040
50	18701 80050

Pull studs

Note: With coolant supply through spindle, use pull stud with through hole.
To close off central coolant hole, use pull stud without through hole.

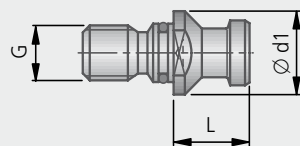
with through hole



DIN 69872 A

ISO size	Order No.	Ø d1	L	G
40	55391 01240	23	26	M16
45	55391 01645	30	30	M20
50	55391 02050	36	34	M24

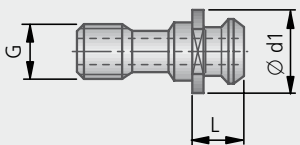
sealed,
for coolant through
collar



DIN 69872 B

ISO size	Order No.	Ø d1	L	G
40	55392 01240	23	26	M16
45	55392 01645	30	30	M20
50	55392 02050	36	34	M24

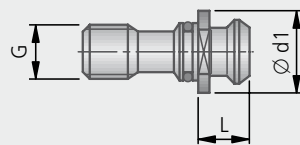
with through hole



ISO 7388/2 B

ISO size	Order No.	Ø d1	L	G
40	55391 51640	22,5	16,40	M16
45	55391 52045	30,0	20,95	M20
50	55391 52450	37,0	25,55	M24

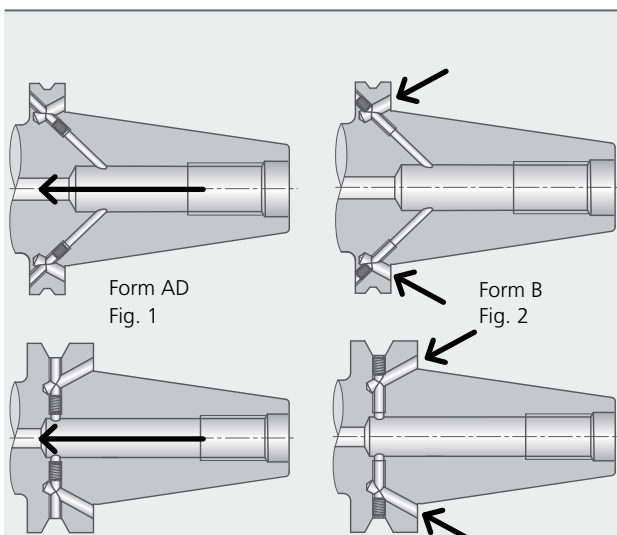
sealed,
for coolant through
collar



ISO 7388 B

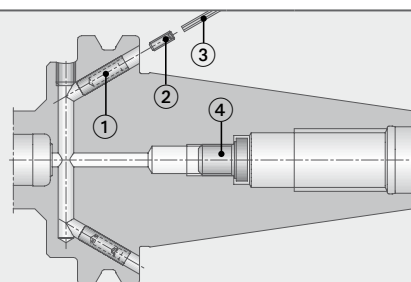
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40	55392 51640	22,5	16,40	M16
45	55392 52045	30,0	20,95	M20
50	55392 52450	37,0	25,55	M24

Modification instructions coolant supply



Standard

As delivered the adaptors are suitable for coolant supply according to form AD (centrally as shown in Fig. 1). To switch to form B, unscrew the screws (M5) to the top as shown in the Fig. 2 and secure with Loctite.



Central coolant supply (Form A).

Sealing the hole:

Push plug ① into hole with the hexagonal key ③ until the plug ① is completely in. Screw in with the hexagonal key ③

until the tool is fully into the plug ①. Remove plug screw ④ with seal. **Important Note! Each plug ① must only be used once! Supplied in Form B.**

Coolant supply through collar (Form B).

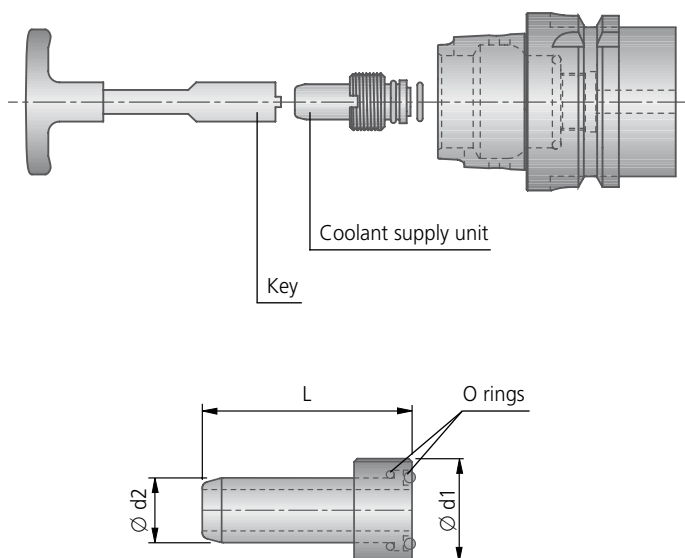
Opening up the hole: Unscrew the gripper screw ② and screw in a standard M3 or M4 screw with approx. 3–4 turns. Clamp the screw head in a vice and pull out the screw with the plug ①. Fit plug screw ④ with seal.

sealed

ISO size	Order No.	
40	L02 30920	Ø 4
45	L02 30930	Ø 5
50	L02 30940	Ø 6

Accessories HSK-A

Mounting of the coolant supply unit

**Note:**

The coolant supply unit should be fitted in the tool with the key, to ensure a seal is produced.

A coolant supply unit specifically for the machine can also be fitted, if required, using the thread in the tool.

Note re. supply:

The coolant supply connection for the tool adaptors must be ordered separately.

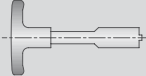
Only use the keys listed for assembly.

This will prevent coolant flowing back into the machine spindle/clamping system.

A specific coolant hose for the machine can also be fitted on all HSK adaptors.

Supply coolant supply unit includes:

Coolant tube, locking collar and two O rings.

HSK-A size	Key	Coolant supply unit						
		Order No.	Order No.	Ø d1	Ø d2	L	O ring face side and over tube	
							Article	Order No.
32	18021 01032	51391 00032	M10×1,0	6	26	5×1,2	2×	52914 00512
40	18021 01040	51391 00040	M12×1,0	8	29,1	7,5×1,5	2×	52914 00751
50	18021 01050	51391 00050	M16×1,0	10	32,7	9×2	2×	52914 00920
63	18021 01063	51391 00063	M18×1,0	12	36,2	10×2,5 10×2	1× 1×	52914 01025 52914 01020
80	18021 01080	51391 00080	M20×1,5	14	39,7	13×2	2×	52914 01320
100	18021 01100	51391 00100	M24×1,5	16	43,6	14×3	2×	52914 01430

Usage and safety notes

The application details given depend on the environmental and application conditions (e.g. machine, ambient temperature, lubricant/coolant used and machining result required): they are based on the correct application conditions, correct use and compliance with the spindle speed limits given for the tools.

All measurement specifications stated in the catalogue apply to the metric unit system, unless they are expressly identified using another unit of measurement.

Hazard warning:

If using tungsten carbide-based hard metal products together with cobalt as a binder metal, please read our safety data sheets, which are available for you to download from our website.

(<http://www.kometgroup.com/navigation-top/download/service/datenblaetter.html>)

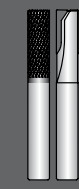
Balancing note:

Tool holders or adaptors are only balanced as supplied, i.e. no allowance has been made for items which can alter this, such as boring tools, milling cutters, inserts, etc. When used at high speeds, we recommend precision balancing be carried out when the tool is fitted ready for use.

Numerical Index



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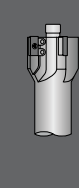


ISO

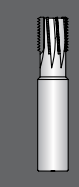
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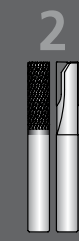
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A51 14540	192	C66 44700.12..	126	C84 13980.04..	85	C85 18930.08..	49	C85 44960.04..	50	C89 03990.04..	103
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A51 14560	192	C66 44750.08..	123	C84 13990.02..	93	C85 18940.04..	58	C85 44960.12..	50	C89 18690.02..	138
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A51 14600	192	C67 28600.00..	128	C84 18690.04..	134	C85 18950.08..	59	C85 44970.12..	48	C89 18690.16..	102
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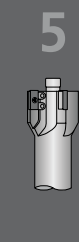


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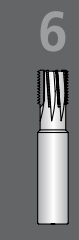
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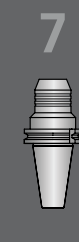
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A PLUS for our customers and the environment

The company targets

KOMET pursues a consistent policy of investments and achieves long-term and profitable growth via continuous improvement of products and processes as well as via consistent qualification of employees. This increases the value of the company. KOMET consistently increases its innovation quota via research and development, offering the market new products every year. KOMET is a premium quality manufacturer and motivates employee qualification and customers in their IDEAS FACTORY. The training quota of vocational beginners is exemplary for the entire field of business.

The products and services

KOMET products and services offer the customer incomparable added value. KOMET develops, manufactures and sells the comprehensive, modular portfolio on bore machining as full-range suppliers. KOMET offers the innovative technologies, thereby taking the high economic viability, best quality and most attractive designs into account. KOMET sees itself not purely as a tool manufacturer, but rather as suppliers of innovative solutions and ideas for the benefit of the customer: TOOLS+IDEAS®.

The customer

KOMET places value on long-term, binding customer relations, seeing itself as a partner of the customer in a balance of benefit supplies and benefit harvests.

KOMET records customers' demands and then produces the most effective ideas and tool solutions for their machining tasks. KOMET offers the customer information and collaboration via their worldwide presence in local Service Centres. The IDEAS FACTORY supports vocation-related training and further qualifications for customers.

The environment / surroundings

KOMET feels itself obliged to avoid any wastage, and therefore commits itself to responsible usage of raw materials and careful utilisation of remaining materials.

KOMET management is well aware of its responsibilities towards society, and creates the foundations for modern working environments and working conditions. The specifications on ergonomics and work safety are taken into account. Beholden to the founder, Robert Breuning, KOMET supports the site at Besigheim, maintaining direct contact to schools and social facilities in the region.

With these claims in mind, KOMET has introduced a modern, integrated management system, known as KMS (KOMET Management System), which is certified in accordance with ISO 9001:2008, ISO 14001:2009 and the German „Akkreditierungs-und Zulassungsverordnung Arbeitsförderung – AZAV“.

Certification

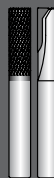
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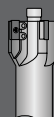


ISO

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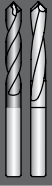


KOMET®

Production of through-holes in cavities and chambers

Produce a hole without chips remaining in the component

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ISO

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Conventional machining

Example: Freeze plug

Figure 1

Conventional PCD drilling tool with internal coolant supply

Figure 2

When the drilling tool breaks through into the cavity, the chips fall into the component, which entails time-consuming cleaning and checking

KOMET® solution: PCD drilling tool with 3D-printed chip guiding inserts

Figure 3

Tool concept with chip guiding inserts fitted

Figure 4

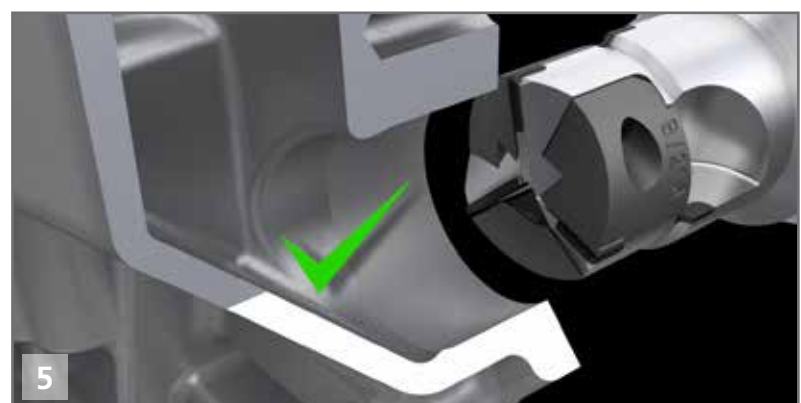
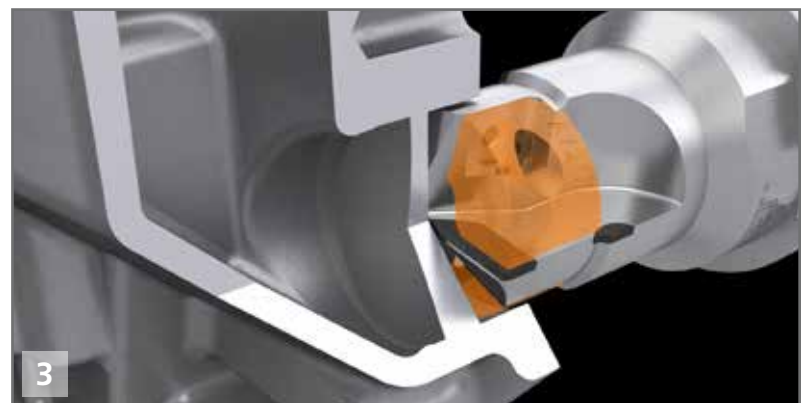
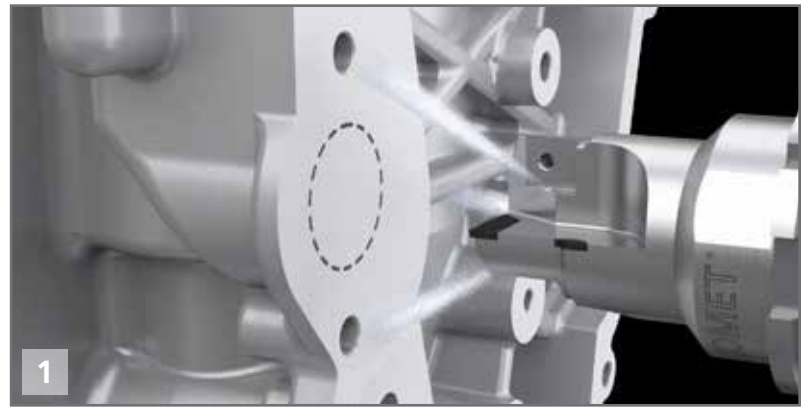
The special design of the chip guiding inserts with integrated back-flushing channel ensures reliable chip removal throughout the entire drilling process

Figure 5

Result: No chips remaining in the component



Watch entire
machining sequence



Gear Box

Material: 3.2163 (EN-AC-AlSi9Cu3(Fe))

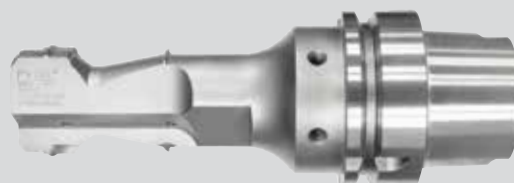
Tool: PCD-Groove Milling Cutter Ø 40 NZ3 IKS HSK-A63

Machining: bearing seat Ø60H8, grooves Ø62 and Ø57 by circular interpolation in one operation

Cutting data:

$v_c = 350 \text{ m/min} = 2758 \text{ rpm}$

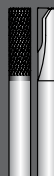
$f_z = 0,093 \text{ mm/tooth}$



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3



ISO

Master Brake Cylinder

Material: 3.2371 (G-AlSi7Mg)

Tool: PCD-Bell Milling Cutter Ø 50 IKS NZ4 HSK-A63

Machining: Contour groove front face

Cutting data: $v_c = 850 \text{ m/min} = 5539 \text{ rpm}$

Drilling and chamfering feed: $f = 0,5 \text{ mm/rev}$

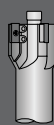
Cycle time: $t_h = 1,0 \text{ s}$



4



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Engine bloc

Material: 3.2581 (GAlSi12)

Tool: 2-Step PCD-Reamer Ø 84 NZ6 IKS HSK-A63

Machining: Exit hole crank shaft, Casted part –stock 2-3mm/side

Cutting data: $v_c = 500 \text{ m/min}$

Reaming feed: $f_z = 0,1 \text{ mm/tooth}$



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Cylinder head

Material: AS9Cu

Tool: 3-Step PCD Reamer Ø10R8 NZ4/4 IKS HSK-A63

Machining: Finish Machining

Cutting data: $v_c = 188 / 452 \text{ m/min}$

Reaming feed: $f = 0,4 \text{ mm/rev}$

Chamfer feed: $f = 0,2 \text{ mm/rev}$



Master Brake Cylinder

Material: AlSi4

Tool: PCD-Milling Cutter Ø27,02 NZ3 IKS

Machining: Chamber

Cutting data: $v_c = 1358 \text{ m/min} = 16.000 \text{ rpm}$

Milling feed:

$f_z = 0,052 \text{ mm/tooth}$ Roughing

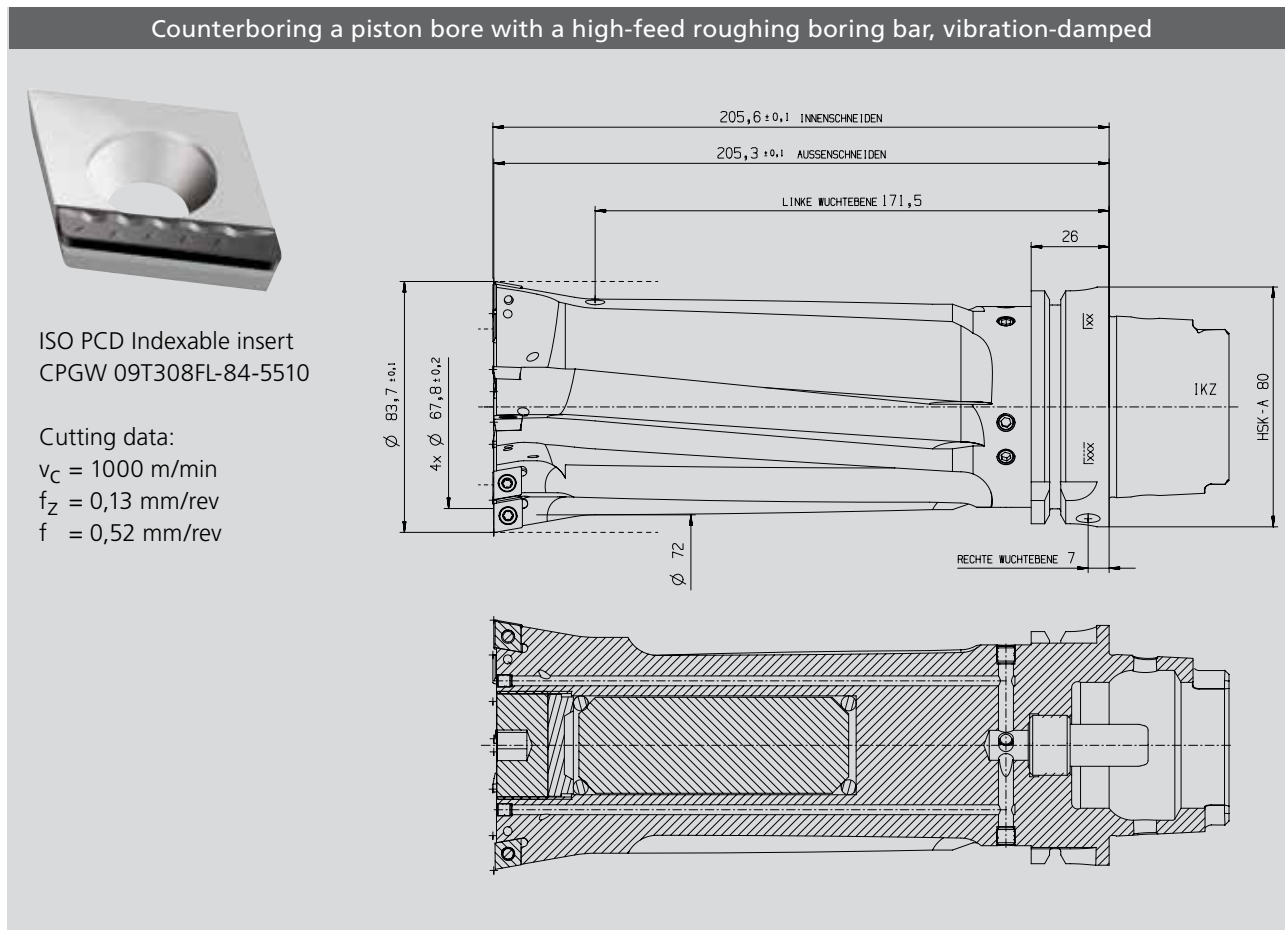
$f_z = 0,041 \text{ mm/tooth}$ Finishing



Slab milling | Chips removed by suction effect



Counterboring a piston bore with a high-feed roughing boring bar, vibration-damped



Counterboring with the Z 5 high-feed finishing boring bar

with coolant-controlled lifting of the cutting edge and central wear compensation



	Roundness 1	0.004	0.000	0.020	I-	0.004
	Roundness 2	0.007	0.000	0.020	I--	0.007
	Roundness 3	0.006	0.000	0.020	I--	0.006
	Roundness 4	0.007	0.000	0.020	I--	0.007
	Cylindrical shape 1	0.012	0.000	0.020	I---	0.012

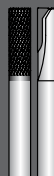
Cutting data:

 $v_c = 500 \text{ m/min}$ $f_z = 0,15 \text{ mm/rev}$ $f = 0,75 \text{ mm/rev}$

1



2



3



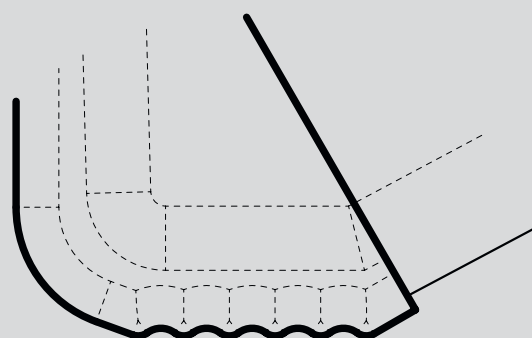
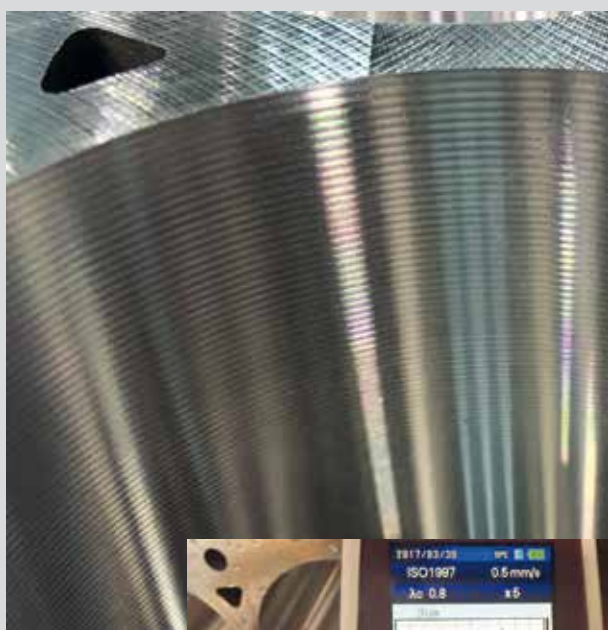
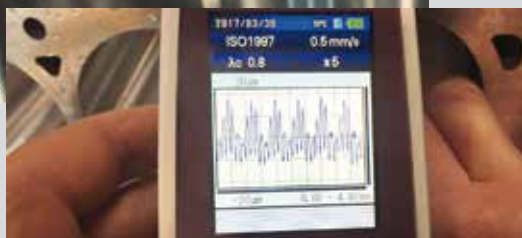
ISO

4

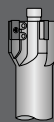


Counterboring with the Z 5 high-feed finishing boring bar

Specially shaped cutting edge for defined surface roughness

Special cutting edge for defined surface roughness
Rz 20 – 30 μm with 150 μm shaft spacing

5



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