



**KOMPASS – BORE MACHINING**

## KomPass Bore machining – BENEFITS for you:



### KOMET GROUP – The specialists in bore machining

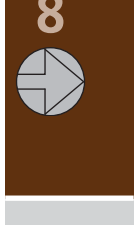
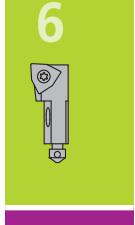
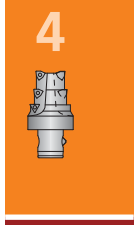
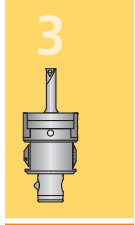
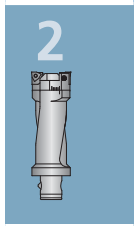
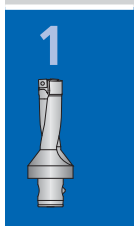
Innovative tool concepts and holistic solutions for the bore machining industry distinguish the KOMET GROUP as a worldwide leader in machining technology.

We are known by our customers as a manufacturer of premium quality tools. They recognise the ideas behind our solutions. We have set ourselves the goal of bringing out the added value that this has, to the benefit of our customers.

We call it TOOLS+IDEAS®. It is a new and innovative way of providing our customers with permanent and sustained benefits by means of improved support and services.

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The KOMET GROUP is one of the world's leading providers of high-precision KOMET® drilling and reaming tools for efficient bore machining. Our potential for providing innovative solutions, a comprehensive performance spectrum and personal commitment form the basis for successful partnerships with our customers.

With the development of solid drill bits, KOMET® entered completely new territory in the Seventies.

The KUB® solid drill bit range has now become a leading concept in tool design.

Through the use of high-performance carbides and the latest generation of coatings, the cutting edges are always ideally matched with the solid bit drilling process.

The KOMET GROUP also provides its service and after-sales spectrum internationally. You will find us in any location where you manufacture products which demand a high level of quality.



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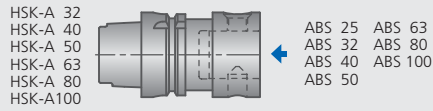
## 5 Adaptors

1

### HSK-A Adaptors

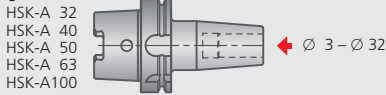
with ABS® connection

▶ 456



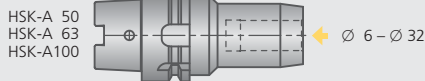
Thermal expansion chuck

▶ 566-570



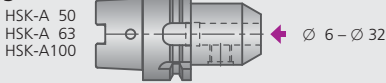
Expanding chuck

▶ 466-469



Adaptor sleeve Weldon

▶ 462-463



Eccentric adjusting device with ABS® connection

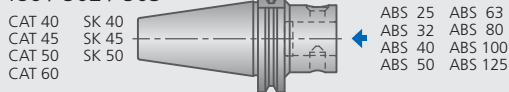
▶ 458



### Taper shanks DIN 69871

with ABS® connection

▶ 486 / 502 / 503



Thermal expansion chuck

▶ 572-579



Expanding chuck

▶ 498-501 / 520-521



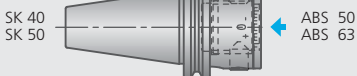
Adaptor sleeve Weldon / cylindrical shank (combination shank)

▶ 516 / 519



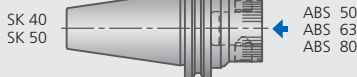
Eccentric adjusting device with ABS® connection

▶ 513



Torsional dampener with ABS® connection

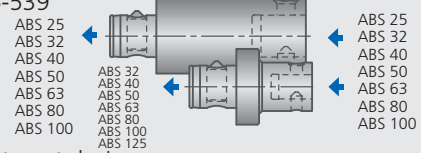
▶ 514



### ABS® Adaptors

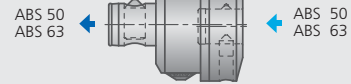
Extension / Reducer

▶ 536-539



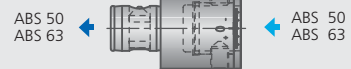
Adjustment device

▶ 533



Eccentric adjusting device

▶ 534



Expanding chuck

▶ 558



Thermal expansion chuck

▶ 580



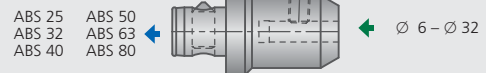
Adaptor sleeve Weldon

▶ 548-549



Adaptor sleeve Whistle Notch

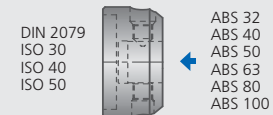
▶ 544-546



### Spindle adaptor flange

with ABS® connection

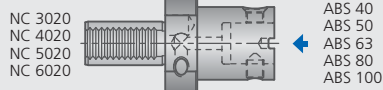
▶ 530



### VDI Adaptor

with ABS® connection

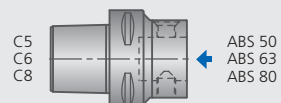
▶ 528



### PSC Adaptors ISO 26622-1 / -2

Polygonal shank taper with ABS® connection

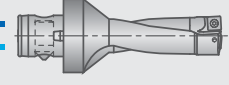
▶ 532



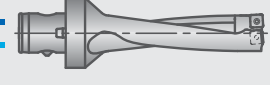
## 1 Tools for Solid Drilling, Trepanning and Flat Bottoming



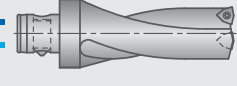
### with ABS® connection

- 

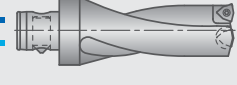
ABS 50  
ABS 63  
ABS 80

**KUB Quatron®**  
Ø 0.562 – 2.500 inch  
Ø 14 – 65 mm  
▶ 42 – 49
- 

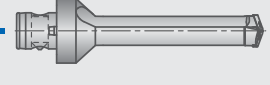
ABS 50  
ABS 63

**KUB Pentron®**  
Ø 0.562 – 1.750 inch  
Ø 14 – 46 mm  
▶ 66 – 71
- 


ABS 50

**KUB Trigon®**  
Ø 0.562 – 1.750 inch  
Ø 14 – 44 mm  
▶ 86 – 89
- 


ABS 50  
ABS 63  
ABS 80

**KUB® drill**  
Ø 38.5 – 82 mm  
▶ 124 – 131
- 


ABS 50  
ABS 63

**KUB Duon®**  
Ø 0.697 – 1.413 inch  
Ø 17.3 – 44.2 mm  
▶ 144 – 165
- 


ABS 50  
ABS 63  
ABS 80  
ABS 100

**KUB Centron®**  
Ø 0.812 – 2.500 inch  
Ø 20 – 81 mm  
▶ 172 – 177
- 

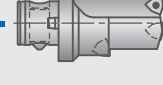
ABS 50  
ABS 63  
ABS 80

**KUB® V464**  
Ø 80 – 155 mm  
▶ 186
- 

ABS 50  
ABS 63  
ABS 80

**Flat-bottoming tool**  
Ø 37 – 64 mm  
▶ 192
- 

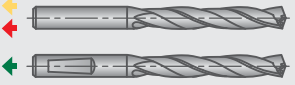
ABS 50  
ABS 63  
ABS 80

**Packet drill**  
Ø 14 – 82 mm  
▶ 195
- 


ABS 50

**Easy Special**  
Ø 14 – 44 mm  
▶ Chapter 4

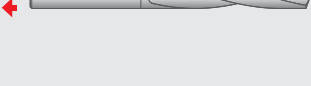
### with cylindrical shank

- 

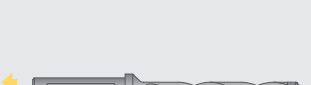
Ø 6  
Ø 8  
Ø 10  
Ø 12  
Ø 14  
Ø 16

**KUB® Drillmax**  
Ø 0.120 – 0.750 inch  
Ø 3 – 16 mm  
▶ 12 – 19
- 


Ø 6  
Ø 8  
Ø 10  
Ø 12

**JEL® Drillcut 24**  
Ø 5 – 12 mm  
▶ 26
- 

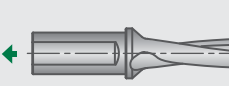
Ø 6  
Ø 8  
Ø 10

**JEL® Drillmax 22**  
Ø 6 – 10 mm  
▶ 27
- 

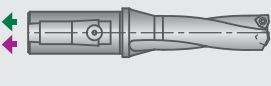
Ø 6  
Ø 8  
Ø 10  
Ø 12

**JEL® Dreammax**  
Ø 6 – 12 mm  
▶ 28
- 


Ø 16

**KUB K2®**  
Ø 10 – 20.5 mm  
▶ 32 – 37
- 


Ø 20  
Ø 25  
Ø 32  
Ø 40

**KUB Quatron®**  
Ø 0.562 – 1.750 inch  
Ø 14 – 44 mm  
▶ 50 – 57
- 

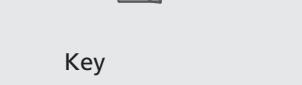
Ø 20  
Ø 25  
Ø 32  
Ø 40

**KUB Pentron®**  
Ø 0.562 – 1.750 inch  
Ø 14 – 46 mm  
▶ 72 – 77
- 


Ø 20  
Ø 25  
Ø 32  
Ø 40

**KUB Trigon®**  
Ø 0.562 – 1.750 inch  
Ø 12 – 44 mm  
▶ 92 – 105
- 

Ø 20  
Ø 25  
Ø 32  
Ø 40

**KUB Trigon®**  
Ø 14 – 54 mm  
▶ 108 – 113
- 







Ø 25  
Ø 32  
Ø 40

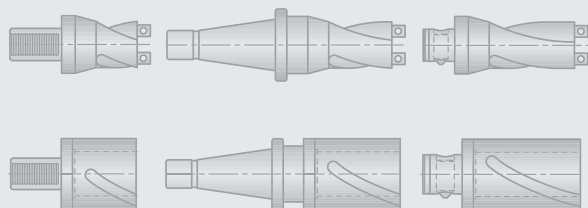
**KUB Duon®**  
Ø 17.3 – 44.2 mm  
▶ 144 – 161
- 


Ø 20  
Ø 25  
Ø 32  
Ø 40

**Easy Special**  
Ø 14 – 44 mm  
▶ Chapter 4


### Key

-  ABS® connection
-  ABS® connection
-  Cylindrical connection
-  Whistle Notch connection
-  Weldon connection
-  Shrink connection



- 

**KUB® drill head**  
larger sizes on request

Ø 83 – 128 mm  
▶ 190
- 

**Trepanning tool**  
on request

Ø 83 – 198 mm  
▶ 194

# KOMET® Tool Selection

## Help Table for Solid Drilling

1

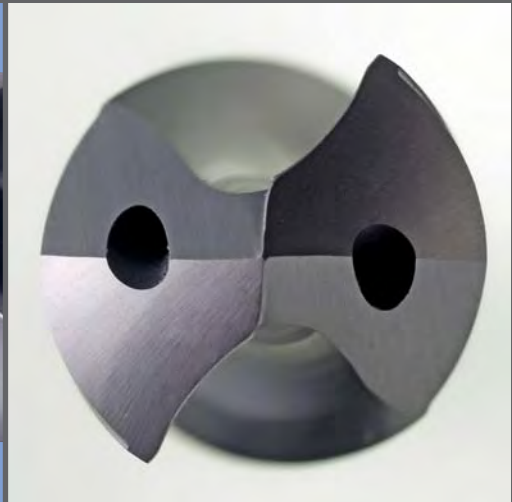
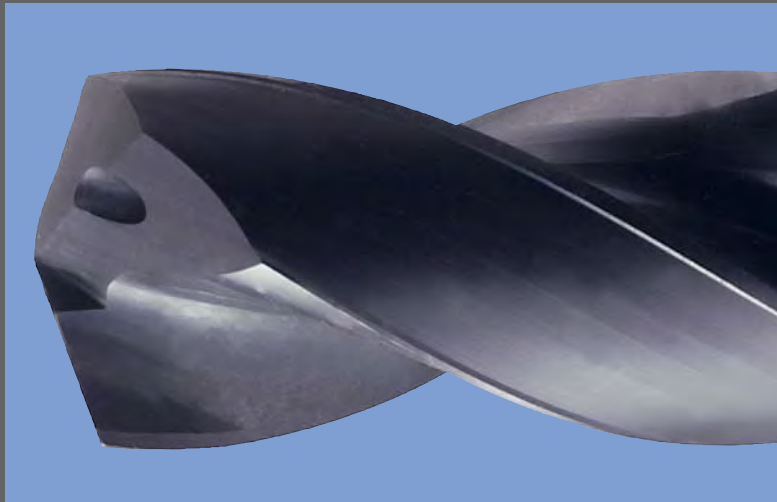


Ø (mm)	L / D	Machining										
		solid drilling	blind hole	forge/casting skin, interface	angled start and drilling out, interrupted cut	convex	cross bore	centering bore, seam	chamber	stack plate drilling	rough boring	adjustable
0.120 – 0.750 3.0 – 16.0	5xD 7-8xD	●	●	●	○	○	○	○		●	○	
3.0 – 10.0	20xD 30xD	●	●	●	○	○	○	○		○		
5.0 – 12.0	5xD	●	●	○	○	○	○	○		○		
6.0 – 10.0	5xD	●	●	○	○	○	○	○		○		
6.0 – 12.0	4xD	●	●	○	○	○	○	○		○	○	
10.0 – 20.5 <sup>+0.05</sup>	3 – 7xD	●	●	○	○				●	●		
0.562 – 2.500 <sup>±0.008</sup> 14.0 – 65.0 <sup>±0.2</sup>	2xD	●	●	●	●	●	●	●	●	●	●	●
	3xD	●	●	●	●	●	●	●	●	●	●	●
0.562 – 1.750 <sup>+0.012</sup> 14.0 – 46.0 <sup>-0.004</sup> <sup>+0.3</sup> <sup>-0.1</sup>	4xD	●	●	●	●	●	●	●	○	●		●
0.562 – 1.750 <sup>+0.014</sup> 14.0 – 46.0 <sup>-0.004</sup> <sup>+0.35</sup> <sup>-0.1</sup>	5xD	●	●	●	●	●	●	●		●		●
0.562 – 1.750 <sup>±0.004</sup> 12.0 – 44.0 <sup>±0.1</sup>	2xD	●	●	●	●	●	●	●	●		●	●
0.562 – 1.750 <sup>±0.004</sup> 12.0 – 54.0 <sup>±0.1</sup>	3xD	●	●	●	●	●	●	●	●		○	●
0.562 – 1.750 <sup>±0.004</sup> 14.0 – 44.0 <sup>±0.1</sup>	4xD	●	●	○	○	○	○	○	○			●
38.5 – 82.0 <sup>+1.0</sup> <sup>-0.5</sup>	3xD	●	●	○	○	○	○	○	○		○	●
1.781 – 3.250 <sup>+1.0</sup> <sup>-0.5</sup>	2xD	●	●	●	●	●	●	●	●		●	●
45.0 – 82.0 <sup>±0.2</sup>	3xD	●	●	●	●	●	●	●	●			●
0.697 – 1.413 <sup>±0.004</sup> 17.3 – 44.2 <sup>±0.1</sup>	5xD	●	●	●	○	●	●	○	●	●	○	
0.812 – 2.500 <sup>±0.004</sup> 20.0 – 81.0 <sup>±0.1</sup>	9xD	●	●	●	○	○	○	○	○			
80.0 – 155.0	6xD	●	●	●	○	○	○	○	○			●
83.0 – 128.0 <sup>±0.4</sup>	4xD	●	●	●	○	○	○	○	○			
83.0 – 198.0 <sup>±0.5</sup>	3xD	●		●	●	●	●	●	●			
37.0 – 64.0 <sup>±0.5</sup>	3xD		●								●	●
14.0 – 82.0	2xD	●	●	●	○	●	●	●	●	●	○	○
	3xD	●	●	●	○	●	●	●	●	●	○	○
14.0 – 44.0	1.5 - 4xD	●	●	●	●	●	●	●	●			●

● very good ● good ○ possible: see technical notes







**KUB® Drillmax**  
High-performance drill for small diameters

The KUB® Drillmax high-performance solid carbide drills complete our range for drill diameters of 0.118" to 0.630" (3 to 16 mm) and length/diameter ratios of 5xD and 7-8xD.

Optimised, special flutes are ideal for removing chips and for highly productive machining.

**Variant:**

- Drill diameter: 0.118 – 0.630 inch (3.00 – 16.00 mm)
- Hole tolerance: IT9 (achievable)
- Drilling depth: 5xD, 7-8xD
- Shank shape: HA and HE (DIN 6535)
- Coating: TiAlN
- Point angle: 140°
- Helix angle: 30°
- Internal coolant supply

**BENEFITS for you:**

- Excellent hole tolerances
- Optimum chip removal thanks to special flutes
- Optimum machining result thanks to good coordination of carbide and coating with drill geometry
- Long tool edge life thanks to effective coating

**KUB® Drillmax XL**  
High-performance drill for deep holes

With the KOMET KUB® Drillmax XL, the expertise gained from developing many special solutions has been transferred to a standard tool range, which is available from stock for 20xD in diameters of 0.118 to 0.394 inch (3.0 to 10.0 mm) and for 30xD in diameters of 0.394 to 0.315 inch (3.0 to 8.0 mm).

The spiral-fluted deep-hole drills have four guide chamfers, ensuring good guidance.

**Variant:**

- 4 x guide chamfers
- Drill diameter: for 20xD: 0.118 – 0.394" (3.00 – 10.0 mm)  
for 30xD: 0.118 – 0.315" (3.00 – 8.00 mm)
- Shank: DIN 6535 HA
- Coating: TiAlN
- Point angle: 140°
- Helix angle: 30°
- Internal coolant supply

**BENEFITS for you:**

- 4 x chamfers for high drilling and alignment precision
- Ideal chip removal thanks to optimised, special flutes
- Reliable drilling up to 30xD, with no pecking
- Significantly reduced production times due to extremely high feed rates and cutting speeds

**Note:**

Pilot hole required, depth: 2 – 3xD  
KOMET KUB® Drillmax 5xD standard drills with the same diameter can be used.


**KOMET KUB® Drillmax** Page
**Cylindrical Shank DIN 6535 HA / HE / HB**

Ø 0.120 – 0.750 inch, R.H. cutting Drilling depth 5xD	12
Ø 0.120 – 0.500 inch, R.H. cutting Drilling depth 7-8xD	13
Ø 3 – 16 mm, R.H. cutting Drilling depth 5xD	14 – 15
Drilling depth 7-8xD	16 – 17

**Cylindrical Shank DIN 6535 HA**

Ø 3 – 10 mm, R.H. cutting Drilling depth 20xD	18
Ø 3 – 8 mm, R.H. cutting Drilling depth 30xD	19

**Technical Notes** 20 – 21

Guideline values for solid drilling

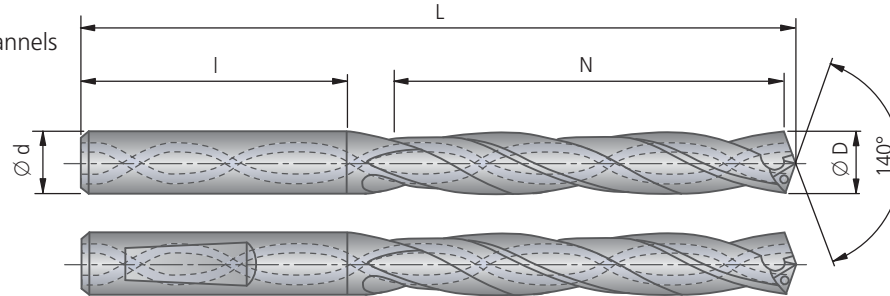
**Technical Information** 23




L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5xD	●	●	●	○	○	○	○	✗	●	○	✗

● very good ● good ○ possible: see technical notes, page 23 ✗ not possible

- 4 x guide chamfers
- coating: TiAlN
- with coolant channels

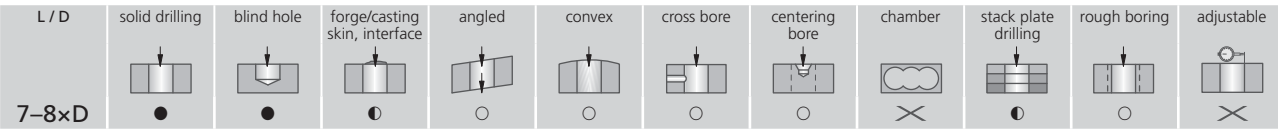


5 x D							for workpiece material					
Ø D	Ø d x l	DIN 6535 HA Order No.	DIN 6535 HE Order No.	DIN 6535 HB Order No.	L	N	P	M	K	N	S	H
0.120	0.188 x 1.417	V03 1200.412730	V03 1200.512730	V03 1200.612730	2.598	0.944						
0.125	0.188 x 1.417	V03 1250.412730	V03 1250.512730	V03 1250.612730	2.598	0.944						
0.129	0.188 x 1.417	V03 1285.412730	V03 1285.512730	V03 1285.612730	2.598	0.944						
0.136	0.188 x 1.417	V03 1360.412730	V03 1360.512730	V03 1360.612730	2.598	0.944						
0.141	0.188 x 1.417	V03 1406.412730	V03 1406.512730	V03 1406.612730	2.598	0.944	●	●	●			
0.156	0.188 x 1.417	V03 1562.412730	V03 1562.512730	V03 1562.612730	2.913	1.181						
0.159	0.188 x 1.417	V03 1590.412730	V03 1590.512730	V03 1590.612730	2.913	1.181						
0.172	0.188 x 1.417	V03 1719.412730	V03 1719.512730	V03 1719.612730	2.913	1.181						
0.188	0.188 x 1.417	V03 1875.412730	V03 1875.512730	V03 1875.612730	3.228	1.377						
0.203	0.250 x 1.417	V03 2031.412730	V03 2031.512730	V03 2031.612730	3.228	1.377						
0.219	0.250 x 1.417	V03 2187.412730	V03 2187.512730	V03 2187.612730	3.228	1.377						
0.221	0.250 x 1.417	V03 2210.412730	V03 2210.512730	V03 2210.612730	3.228	1.377	●	●	●			
0.234	0.250 x 1.417	V03 2344.412730	V03 2344.512730	V03 2344.612730	3.228	1.377						
0.250	0.250 x 1.417	V03 2500.412730	V03 2500.512730	V03 2500.612730	3.582	1.692						
0.257	0.312 x 1.417	V03 2570.412730	V03 2570.512730	V03 2570.612730	3.582	1.692						
0.261	0.312 x 1.417	V03 2610.412730	V03 2610.512730	V03 2610.612730	3.582	1.692						
0.266	0.312 x 1.417	V03 2656.412730	V03 2656.512730	V03 2656.612730	3.582	1.692	●	●	●			
0.281	0.312 x 1.417	V03 2812.412730	V03 2812.512730	V03 2812.612730	3.582	1.692						
0.297	0.312 x 1.417	V03 2969.412730	V03 2969.512730	V03 2969.612730	3.582	1.692						
0.313	0.437 x 1.574	V03 3125.412730	V03 3125.512730	V03 3125.612730	3.582	1.692						
0.328	0.437 x 1.574	V03 3281.412730	V03 3281.512730	V03 3281.612730	4.055	1.929						
0.332	0.437 x 1.574	V03 3320.412730	V03 3320.512730	V03 3320.612730	4.055	1.929						
0.344	0.437 x 1.574	V03 3438.412730	V03 3438.512730	V03 3438.612730	4.055	1.929						
0.359	0.437 x 1.574	V03 3594.412730	V03 3594.512730	V03 3594.612730	4.055	1.929	●	●	●			
0.375	0.437 x 1.574	V03 3750.412730	V03 3750.512730	V03 3750.612730	4.055	1.929						
0.391	0.437 x 1.574	V03 3906.412730	V03 3906.512730	V03 3906.612730	4.055	1.929						
0.406	0.437 x 1.574	V03 4062.412730	V03 4062.512730	V03 4062.612730	4.645	2.204						
0.422	0.437 x 1.574	V03 4219.412730	V03 4219.512730	V03 4219.612730	4.645	2.204						
0.438	0.500 x 1.771	V03 4375.412730	V03 4375.512730	V03 4375.612730	4.645	2.204						
0.453	0.500 x 1.771	V03 4531.412730	V03 4531.512730	V03 4531.612730	4.645	2.204						
0.469	0.500 x 1.771	V03 4688.412730	V03 4688.512730	V03 4688.612730	4.645	2.204	●	●	●			
0.484	0.500 x 1.771	V03 4844.412730	V03 4844.512730	V03 4844.612730	4.881	2.362						
0.500	0.500 x 1.771	V03 5000.412730	V03 5000.512730	V03 5000.612730	4.881	2.362						
0.516	0.562 x 1.771	V03 5156.412730	V03 5156.512730	V03 5156.612730	4.881	2.362						
0.531	0.562 x 1.771	V03 5312.412730	V03 5312.512730	V03 5312.612730	4.881	2.362	●	●	●			
0.547	0.562 x 1.771	V03 5469.412730	V03 5469.512730	V03 5469.612730	5.236	2.480						
0.563	0.625 x 1.771	V03 5625.412730	V03 5625.512730	V03 5625.612730	5.236	2.480						
0.594	0.625 x 1.771	V03 5938.412730	V03 5938.512730	V03 5938.612730	5.236	2.480	●	●	●			
0.625	0.625 x 1.771	V03 6250.412730	V03 6250.512730	V03 6250.612730	5.236	2.480						
0.656	0.687 x 1.771	V03 6562.412730	V03 6562.512730	V03 6562.612730	5.236	2.480						
0.688	0.750 x 1.771	V03 6875.412730	V03 6875.512730	V03 6875.612730	5.236	2.480	●	●	●			
0.750	0.750 x 1.771	V03 7500.412730	V03 7500.512730	V03 7500.612730	5.236	2.480						

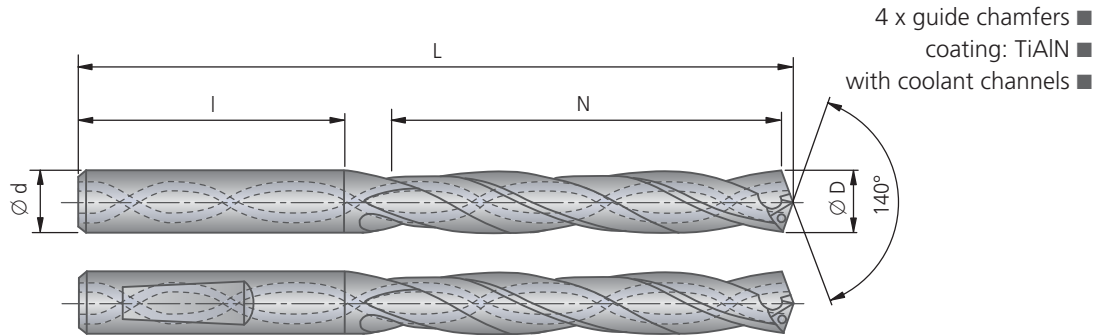
Ø 0.120 – 0.500 inch

KOMET KUB® Drillmax

High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA/HE/HB, R.H. cutting



● very good ◐ good ○ possible: see technical notes, page 23 ✕ not possible



7 – 8 x D												
Ø D	Ø d x l	DIN 6535 HA Order No.	DIN 6535 HE Order No.	DIN 6535 HB Order No.	L	N	P	M	K	N	S	H
0.120	0.188 x 1.417	V04 1200.412730	V04 1200.512730	V04 1200.612730	2.755	1.102						
0.125	0.188 x 1.417	V04 1250.412730	V04 1250.512730	V04 1250.612730	2.755	1.102						
0.129	0.188 x 1.417	V04 1285.412730	V04 1285.512730	V04 1285.612730	2.755	1.102						
0.136	0.188 x 1.417	V04 1360.412730	V04 1360.512730	V04 1360.612730	2.755	1.102						
0.141	0.188 x 1.417	V04 1406.412730	V04 1406.512730	V04 1406.612730	3.622	1.771	●	●	●			
0.156	0.188 x 1.417	V04 1562.412730	V04 1562.512730	V04 1562.612730	3.622	1.771						
0.159	0.188 x 1.417	V04 1590.412730	V04 1590.512730	V04 1590.612730	3.622	1.771						
0.172	0.188 x 1.417	V04 1719.412730	V04 1719.512730	V04 1719.612730	3.622	1.771						
0.188	0.188 x 1.417	V04 1875.412730	V04 1875.512730	V04 1875.612730	3.622	1.771						
0.203	0.250 x 1.417	V04 2031.412730	V04 2031.512730	V04 2031.612730	3.622	1.771						
0.219	0.250 x 1.417	V04 2187.412730	V04 2187.512730	V04 2187.612730	3.622	1.771						
0.221	0.250 x 1.417	V04 2210.412730	V04 2210.512730	V04 2210.612730	3.622	1.771	●	●	●			
0.234	0.250 x 1.417	V04 2344.412730	V04 2344.512730	V04 2344.612730	3.622	1.771						
0.250	0.250 x 1.417	V04 2500.412730	V04 2500.512730	V04 2500.612730	3.937	2.047						
0.257	0.312 x 1.417	V04 2570.412730	V04 2570.512730	V04 2570.612730	3.937	2.047						
0.261	0.312 x 1.417	V04 2610.412730	V04 2610.512730	V04 2610.612730	3.937	2.047						
0.266	0.312 x 1.417	V04 2656.412730	V04 2656.512730	V04 2656.612730	3.937	2.047	●	●	●			
0.281	0.312 x 1.417	V04 2812.412730	V04 2812.512730	V04 2812.612730	4.251	2.362						
0.297	0.312 x 1.417	V04 2969.412730	V04 2969.512730	V04 2969.612730	4.251	2.362						
0.313	0.437 x 1.574	V04 3125.412730	V04 3125.512730	V04 3125.612730	4.251	2.362						
0.328	0.437 x 1.574	V04 3281.412730	V04 3281.512730	V04 3281.612730	4.803	2.677						
0.332	0.437 x 1.574	V04 3320.412730	V04 3320.512730	V04 3320.612730	4.803	2.677						
0.344	0.437 x 1.574	V04 3438.412730	V04 3438.512730	V04 3438.612730	4.803	2.677						
0.359	0.437 x 1.574	V04 3594.412730	V04 3594.512730	V04 3594.612730	5.118	2.992	●	●	●			
0.375	0.437 x 1.574	V04 3750.412730	V04 3750.512730	V04 3750.612730	5.118	2.992						
0.391	0.437 x 1.574	V04 3906.412730	V04 3906.512730	V04 3906.612730	5.118	2.992						
0.406	0.437 x 1.574	V04 4062.412730	V04 4062.512730	V04 4062.612730	5.984	3.543						
0.422	0.437 x 1.574	V04 4219.412730	V04 4219.512730	V04 4219.612730	5.984	3.543						
0.438	0.500 x 1.771	V04 4375.412730	V04 4375.512730	V04 4375.612730	5.984	3.543						
0.453	0.500 x 1.771	V04 4531.412730	V04 4531.512730	V04 4531.612730	5.984	3.543						
0.469	0.500 x 1.771	V04 4688.412730	V04 4688.512730	V04 4688.612730	5.984	3.543	●	●	●			
0.484	0.500 x 1.771	V04 4844.412730	V04 4844.512730	V04 4844.612730	6.692	4.173						
0.500	0.500 x 1.771	V04 5000.412730	V04 5000.512730	V04 5000.612730	6.692	4.173						

Other diameters on request.

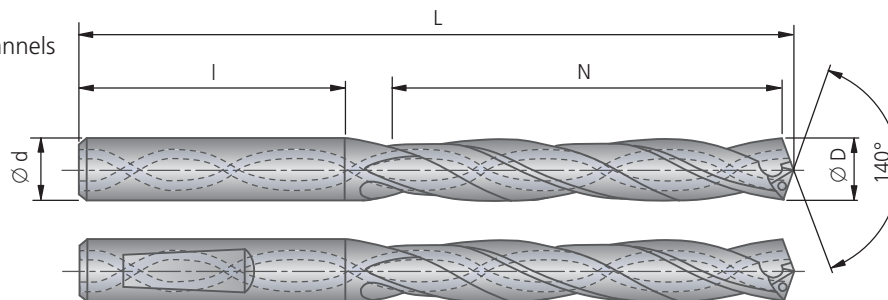
Guideline values for solid drilling: page 20-21.



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5xD	●	●	●	○	○	○	○	✗	●	○	✗










● very good ○ good ○ possible: see technical notes, page 23 ✗ not possible

- 4 x guide chamfers
- coating: TiAlN
- with coolant channels



5 x D							for workpiece material
Ø D	Ø d x l	DIN 6535 HA Order No.	DIN 6535 HE Order No.	L	N	kg ~	P M K N S H
3.0	6 x 36	V03 03000.112730	V03 03000.212730	66	24	0.016	
3.1	6 x 36	V03 03100.112730	V03 03100.212730	66	24	0.016	
3.2	6 x 36	V03 03200.112730	V03 03200.212730	66	24	0.017	
3.3	6 x 36	V03 03300.112730	V03 03300.212730	66	24	0.017	
3.4	6 x 36	V03 03400.112730	V03 03400.212730	66	24	0.017	
3.5	6 x 36	V03 03500.112730	V03 03500.212730	66	24	0.018	
3.6	6 x 36	V03 03600.112730	V03 03600.212730	66	24	0.018	
3.7	6 x 36	V03 03700.112730	V03 03700.212730	66	24	0.018	
3.8	6 x 36	V03 03800.112730	V03 03800.212730	74	30	0.018	
3.9	6 x 36	V03 03900.112730	V03 03900.212730	74	30	0.018	
4.0	6 x 36	V03 04000.112730	V03 04000.212730	74	30	0.018	
4.1	6 x 36	V03 04100.112730	V03 04100.212730	74	30	0.019	
4.2	6 x 36	V03 04200.112730	V03 04200.212730	74	30	0.019	
4.3	6 x 36	V03 04300.112730	V03 04300.212730	74	30	0.019	
4.4	6 x 36	V03 04400.112730	V03 04400.212730	74	30	0.019	
4.5	6 x 36	V03 04500.112730	V03 04500.212730	74	30	0.019	
4.6	6 x 36	V03 04600.112730	V03 04600.212730	74	30	0.019	
4.7	6 x 36	V03 04700.112730	V03 04700.212730	74	30	0.019	
4.8	6 x 36	V03 04800.112730	V03 04800.212730	82	35	0.020	
4.9	6 x 36	V03 04900.112730	V03 04900.212730	82	35	0.020	
5.0	6 x 36	V03 05000.112730	V03 05000.212730	82	35	0.020	
5.1	6 x 36	V03 05100.112730	V03 05100.212730	82	35	0.021	
5.2	6 x 36	V03 05200.112730	V03 05200.212730	82	35	0.021	
5.3	6 x 36	V03 05300.112730	V03 05300.212730	82	35	0.022	
5.4	6 x 36	V03 05400.112730	V03 05400.212730	82	35	0.022	
5.5	6 x 36	V03 05500.112730	V03 05500.212730	82	35	0.023	
5.54	6 x 36	V03 05540.112730	V03 05540.212730	82	35	0.023	
5.6	6 x 36	V03 05600.112730	V03 05600.212730	82	35	0.023	
5.7	6 x 36	V03 05700.112730	V03 05700.212730	82	35	0.024	
5.8	6 x 36	V03 05800.112730	V03 05800.212730	82	35	0.024	
5.9	6 x 36	V03 05900.112730	V03 05900.212730	82	35	0.025	
6.0	6 x 36	V03 06000.112730	V03 06000.212730	82	35	0.025	
6.1	8 x 36	V03 06100.112730	V03 06100.212730	91	43	0.027	
6.2	8 x 36	V03 06200.112730	V03 06200.212730	91	43	0.027	
6.3	8 x 36	V03 06300.112730	V03 06300.212730	91	43	0.030	
6.4	8 x 36	V03 06400.112730	V03 06400.212730	91	43	0.030	
6.5	8 x 36	V03 06500.112730	V03 06500.212730	91	43	0.032	
6.6	8 x 36	V03 06600.112730	V03 06600.212730	91	43	0.032	
6.7	8 x 36	V03 06700.112730	V03 06700.212730	91	43	0.032	
6.8	8 x 36	V03 06800.112730	V03 06800.212730	91	43	0.035	
6.9	8 x 36	V03 06900.112730	V03 06900.212730	91	43	0.035	

Note: with whistle notch clamping surface conforming to DIN 6535 HE.

5 x D							for workpiece material
Ø D	Ø d x l	 DIN 6535 HA	 DIN 6535 HE	L	N	 kg	
		Order No.	Order No.			~	
7.0	8 x 36	V03 07000.112730	V03 07000.212730	91	43	0.037	
7.1	8 x 36	V03 07100.112730	V03 07100.212730	91	43	0.037	
7.2	8 x 36	V03 07200.112730	V03 07200.212730	91	43	0.039	
7.3	8 x 36	V03 07300.112730	V03 07300.212730	91	43	0.039	
7.4	8 x 36	V03 07400.112730	V03 07400.212730	91	43	0.040	
7.43	8 x 36	V03 07430.112730	V03 07430.212730	91	43	0.040	
7.5	8 x 36	V03 07500.112730	V03 07500.212730	91	43	0.040	
7.6	8 x 36	V03 07600.112730	V03 07600.212730	91	43	0.041	
7.7	8 x 36	V03 07700.112730	V03 07700.212730	91	43	0.041	
7.8	8 x 36	V03 07800.112730	V03 07800.212730	91	43	0.043	
7.9	8 x 36	V03 07900.112730	V03 07900.212730	91	43	0.043	
8.0	8 x 36	V03 08000.112730	V03 08000.212730	91	43	0.044	
8.1	10 x 40	V03 08100.112730	V03 08100.212730	103	49	0.045	
8.2	10 x 40	V03 08200.112730	V03 08200.212730	103	49	0.045	
8.3	10 x 40	V03 08300.112730	V03 08300.212730	103	49	0.047	
8.4	10 x 40	V03 08400.112730	V03 08400.212730	103	49	0.047	
8.5	10 x 40	V03 08500.112730	V03 08500.212730	103	49	0.050	
8.6	10 x 40	V03 08600.112730	V03 08600.212730	103	49	0.050	
8.7	10 x 40	V03 08700.112730	V03 08700.212730	103	49	0.052	
8.8	10 x 40	V03 08800.112730	V03 08800.212730	103	49	0.052	
8.9	10 x 40	V03 08900.112730	V03 08900.212730	103	49	0.055	
9.0	10 x 40	V03 09000.112730	V03 09000.212730	103	49	0.055	
9.1	10 x 40	V03 09100.112730	V03 09100.212730	103	49	0.057	
9.2	10 x 40	V03 09200.112730	V03 09200.212730	103	49	0.057	
9.3	10 x 40	V03 09300.112730	V03 09300.212730	103	49	0.062	
9.4	10 x 40	V03 09400.112730	V03 09400.212730	103	49	0.062	
9.5	10 x 40	V03 09500.112730	V03 09500.212730	103	49	0.067	
9.54	10 x 40	V03 09540.112730	V03 09540.212730	103	49	0.067	
9.6	10 x 40	V03 09600.112730	V03 09600.212730	103	49	0.067	
9.7	10 x 40	V03 09700.112730	V03 09700.212730	103	49	0.072	
9.8	10 x 40	V03 09800.112730	V03 09800.212730	103	49	0.072	
9.9	10 x 40	V03 09900.112730	V03 09900.212730	103	49	0.077	
10.0	10 x 40	V03 10000.112730	V03 10000.212730	103	49	0.077	
10.1	12 x 45	V03 10100.112730	V03 10100.212730	118	56	0.080	
10.2	12 x 45	V03 10200.112730	V03 10200.212730	118	56	0.085	
10.3	12 x 45	V03 10300.112730	V03 10300.212730	118	56	0.090	
10.4	12 x 45	V03 10400.112730	V03 10400.212730	118	56	0.094	
10.5	12 x 45	V03 10500.112730	V03 10500.212730	118	56	0.097	
10.6	12 x 45	V03 10600.112730	V03 10600.212730	118	56	0.100	
10.7	12 x 45	V03 10700.112730	V03 10700.212730	118	56	0.102	
10.8	12 x 45	V03 10800.112730	V03 10800.212730	118	56	0.105	
10.9	12 x 45	V03 10900.112730	V03 10900.212730	118	56	0.107	
11.0	12 x 45	V03 11000.112730	V03 11000.212730	118	56	0.110	
11.1	12 x 45	V03 11100.112730	V03 11100.212730	118	56	0.112	
11.2	12 x 45	V03 11200.112730	V03 11200.212730	118	56	0.115	
11.3	12 x 45	V03 11300.112730	V03 11300.212730	118	56	0.117	
11.4	12 x 45	V03 11400.112730	V03 11400.212730	118	56	0.120	
11.5	12 x 45	V03 11500.112730	V03 11500.212730	118	56	0.122	
11.54	12 x 45	V03 11540.112730	V03 11540.212730	118	56	0.122	
11.6	12 x 45	V03 11600.112730	V03 11600.212730	118	56	0.125	
11.7	12 x 45	V03 11700.112730	V03 11700.212730	118	56	0.127	
11.8	12 x 45	V03 11800.112730	V03 11800.212730	118	56	0.130	
11.9	12 x 45	V03 11900.112730	V03 11900.212730	118	56	0.132	
12.0	12 x 45	V03 12000.112730	V03 12000.212730	118	56	0.135	
12.5	14 x 45	V03 12500.112730	V03 12500.212730	124	60	0.180	
12.8	14 x 45	V03 12800.112730	V03 12800.212730	124	60	0.180	
13.0	14 x 45	V03 13000.112730	V03 13000.212730	124	60	0.182	
13.3	14 x 45	V03 13300.112730	V03 13300.212730	124	60	0.182	
13.5	14 x 45	V03 13500.112730	V03 13500.212730	124	60	0.185	
13.8	14 x 45	V03 13800.112730	V03 13800.212730	124	60	0.185	
14.0	14 x 45	V03 14000.112730	V03 14000.212730	124	60	0.188	
14.5	16 x 48	V03 14500.112730	V03 14500.212730	133	63	0.240	
14.8	16 x 48	V03 14800.112730	V03 14800.212730	133	63	0.240	
15.0	16 x 48	V03 15000.112730	V03 15000.212730	133	63	0.250	
15.5	16 x 48	V03 15500.112730	V03 15500.212730	133	63	0.270	
15.8	16 x 48	V03 15800.112730	V03 15800.212730	133	63	0.270	
16.0	16 x 48	V03 16000.112730	V03 16000.212730	133	63	0.282	

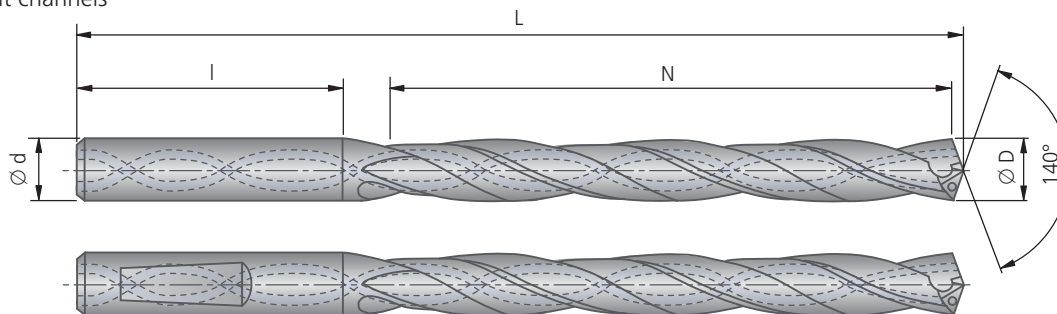




L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
7-8xD	●	●	●	○	○	○	○	✗	●	○	✗










● very good ○ good ○ possible: see technical notes, page 23 ✗ not possible

- 4 x guide chamfers
- coating: TiAlN
- with coolant channels



7 – 8 x D							for workpiece material					
Ø D	Ø d x l	DIN 6535 HA Order No.	DIN 6535 HE Order No.	L	N	kg ~	P	M	K	N	S	H
3.0	6 x 36	V04 03000.112730	V04 03000.212730	70	28	0.017						
3.1	6 x 36	V04 03100.112730	V04 03100.212730	70	28	0.017						
3.2	6 x 36	V04 03200.112730	V04 03200.212730	70	28	0.017						
3.3	6 x 36	V04 03300.112730	V04 03300.212730	70	28	0.017						
3.4	6 x 36	V04 03400.112730	V04 03400.212730	70	28	0.018	●	●	●			
3.5	6 x 36	V04 03500.112730	V04 03500.212730	70	28	0.018						
3.6	6 x 36	V04 03600.112730	V04 03600.212730	70	28	0.018						
3.7	6 x 36	V04 03700.112730	V04 03700.212730	70	28	0.018						
3.8	6 x 36	V04 03800.112730	V04 03800.212730	80	36	0.019						
3.9	6 x 36	V04 03900.112730	V04 03900.212730	80	36	0.019						
4.0	6 x 36	V04 04000.112730	V04 04000.212730	80	36	0.019						
4.1	6 x 36	V04 04100.112730	V04 04100.212730	80	36	0.020						
4.2	6 x 36	V04 04200.112730	V04 04200.212730	80	36	0.020	●	●	●			
4.3	6 x 36	V04 04300.112730	V04 04300.212730	80	36	0.020						
4.4	6 x 36	V04 04400.112730	V04 04400.212730	80	36	0.021						
4.5	6 x 36	V04 04500.112730	V04 04500.212730	80	36	0.021						
4.6	6 x 36	V04 04600.112730	V04 04600.212730	80	36	0.021						
4.7	6 x 36	V04 04700.112730	V04 04700.212730	80	36	0.021						
4.8	6 x 36	V04 04800.112730	V04 04800.212730	92	45	0.023						
4.9	6 x 36	V04 04900.112730	V04 04900.212730	92	45	0.023						
5.0	6 x 36	V04 05000.112730	V04 05000.212730	92	45	0.024						
5.1	6 x 36	V04 05100.112730	V04 05100.212730	92	45	0.025						
5.2	6 x 36	V04 05200.112730	V04 05200.212730	92	45	0.025						
5.3	6 x 36	V04 05300.112730	V04 05300.212730	92	45	0.026						
5.4	6 x 36	V04 05400.112730	V04 05400.212730	92	45	0.027	●	●	●			
5.5	6 x 36	V04 05500.112730	V04 05500.212730	92	45	0.027						
5.54	6 x 36	V04 05540.112730	V04 05540.212730	92	45	0.027						
5.6	6 x 36	V04 05600.112730	V04 05600.212730	92	45	0.028						
5.7	6 x 36	V04 05700.112730	V04 05700.212730	92	45	0.029						
5.8	6 x 36	V04 05800.112730	V04 05800.212730	92	45	0.030						
5.9	6 x 36	V04 05900.112730	V04 05900.212730	92	45	0.030						
6.0	6 x 36	V04 06000.112730	V04 06000.212730	92	45	0.031						
6.1	8 x 36	V04 06100.112730	V04 06100.212730	100	52	0.032						
6.2	8 x 36	V04 06200.112730	V04 06200.212730	100	52	0.034						
6.3	8 x 36	V04 06300.112730	V04 06300.212730	100	52	0.036						
6.4	8 x 36	V04 06400.112730	V04 06400.212730	100	52	0.038						
6.5	8 x 36	V04 06500.112730	V04 06500.212730	100	52	0.039	●	●	●			
6.6	8 x 36	V04 06600.112730	V04 06600.212730	100	52	0.040						
6.7	8 x 36	V04 06700.112730	V04 06700.212730	100	52	0.041						
6.8	8 x 36	V04 06800.112730	V04 06800.212730	100	52	0.043						



7 – 8 x D							for workpiece material
Ø D	Ø d x l	 DIN 6535 HA	 DIN 6535 HE	L	N		
		Order No.	Order No.			~	
6.9	8 x 36	V04 06900.112730	V04 06900.212730	108	60	0.045	
7.0	8 x 36	V04 07000.112730	V04 07000.212730	108	60	0.045	
7.1	8 x 36	V04 07100.112730	V04 07100.212730	108	60	0.046	
7.2	8 x 36	V04 07200.112730	V04 07200.212730	108	60	0.047	
7.3	8 x 36	V04 07300.112730	V04 07300.212730	108	60	0.047	
7.4	8 x 36	V04 07400.112730	V04 07400.212730	108	60	0.048	
7.43	8 x 36	V04 07430.112730	V04 07430.212730	108	60	0.048	
7.5	8 x 36	V04 07500.112730	V04 07500.212730	108	60	0.049	
7.6	8 x 36	V04 07600.112730	V04 07600.212730	108	60	0.050	
7.7	8 x 36	V04 07700.112730	V04 07700.212730	108	60	0.050	
7.8	8 x 36	V04 07800.112730	V04 07800.212730	108	60	0.051	
7.9	8 x 36	V04 07900.112730	V04 07900.212730	108	60	0.052	
8.0	8 x 36	V04 08000.112730	V04 08000.212730	108	60	0.053	
8.1	10 x 40	V04 08100.112730	V04 08100.212730	122	68	0.055	
8.2	10 x 40	V04 08200.112730	V04 08200.212730	122	68	0.057	
8.3	10 x 40	V04 08300.112730	V04 08300.212730	122	68	0.060	
8.4	10 x 40	V04 08400.112730	V04 08400.212730	122	68	0.062	
8.5	10 x 40	V04 08500.112730	V04 08500.212730	122	68	0.065	
8.6	10 x 40	V04 08600.112730	V04 08600.212730	122	68	0.067	
8.7	10 x 40	V04 08700.112730	V04 08700.212730	122	68	0.070	
8.8	10 x 40	V04 08800.112730	V04 08800.212730	122	68	0.072	
8.9	10 x 40	V04 08900.112730	V04 08900.212730	122	68	0.075	
9.0	10 x 40	V04 09000.112730	V04 09000.212730	122	68	0.077	
9.1	10 x 40	V04 09100.112730	V04 09100.212730	130	76	0.080	
9.2	10 x 40	V04 09200.112730	V04 09200.212730	130	76	0.082	
9.3	10 x 40	V04 09300.112730	V04 09300.212730	130	76	0.085	
9.4	10 x 40	V04 09400.112730	V04 09400.212730	130	76	0.087	
9.5	10 x 40	V04 09500.112730	V04 09500.212730	130	76	0.090	
9.54	10 x 40	V04 09540.112730	V04 09540.212730	130	76	0.090	
9.6	10 x 40	V04 09600.112730	V04 09600.212730	130	76	0.090	
9.7	10 x 40	V04 09700.112730	V04 09700.212730	130	76	0.092	
9.8	10 x 40	V04 09800.112730	V04 09800.212730	130	76	0.095	
9.9	10 x 40	V04 09900.112730	V04 09900.212730	130	76	0.097	
10.0	10 x 40	V04 10000.112730	V04 10000.212730	130	76	0.099	
10.1	12 x 45	V04 10100.112730	V04 10100.212730	152	90	0.102	
10.2	12 x 45	V04 10200.112730	V04 10200.212730	152	90	0.105	
10.3	12 x 45	V04 10300.112730	V04 10300.212730	152	90	0.110	
10.4	12 x 45	V04 10400.112730	V04 10400.212730	152	90	0.112	
10.5	12 x 45	V04 10500.112730	V04 10500.212730	152	90	0.115	
10.6	12 x 45	V04 10600.112730	V04 10600.212730	152	90	0.117	
10.7	12 x 45	V04 10700.112730	V04 10700.212730	152	90	0.120	
10.8	12 x 45	V04 10800.112730	V04 10800.212730	152	90	0.122	
10.9	12 x 45	V04 10900.112730	V04 10900.212730	152	90	0.125	
11.0	12 x 45	V04 11000.112730	V04 11000.212730	152	90	0.127	
11.1	12 x 45	V04 11100.112730	V04 11100.212730	152	90	0.130	
11.2	12 x 45	V04 11200.112730	V04 11200.212730	152	90	0.132	
11.3	12 x 45	V04 11300.112730	V04 11300.212730	152	90	0.135	
11.4	12 x 45	V04 11400.112730	V04 11400.212730	152	90	0.137	
11.5	12 x 45	V04 11500.112730	V04 11500.212730	152	90	0.140	
11.54	12 x 45	V04 11540.112730	V04 11540.212730	152	90	0.140	
11.6	12 x 45	V04 11600.112730	V04 11600.212730	152	90	0.145	
11.7	12 x 45	V04 11700.112730	V04 11700.212730	152	90	0.150	
11.8	12 x 45	V04 11800.112730	V04 11800.212730	152	90	0.155	
11.9	12 x 45	V04 11900.112730	V04 11900.212730	152	90	0.160	
12.0	12 x 45	V04 12000.112730	V04 12000.212730	152	90	0.168	
12.5	14 x 45	V04 12500.112730	V04 12500.212730	170	106	0.198	
12.8	14 x 45	V04 12800.112730	V04 12800.212730	170	106	0.200	
13.0	14 x 45	V04 13000.112730	V04 13000.212730	170	106	0.210	
13.3	14 x 45	V04 13300.112730	V04 13300.212730	170	106	0.220	
13.5	14 x 45	V04 13500.112730	V04 13500.212730	170	106	0.230	
13.8	14 x 45	V04 13800.112730	V04 13800.212730	170	106	0.240	
14.0	14 x 45	V04 14000.112730	V04 14000.212730	170	106	0.246	
14.5	16 x 48	V04 14500.112730	V04 14500.212730	192	122	0.315	
14.8	16 x 48	V04 14800.112730	V04 14800.212730	192	122	0.317	
15.0	16 x 48	V04 15000.112730	V04 15000.212730	192	122	0.320	
15.5	16 x 48	V04 15500.112730	V04 15500.212730	192	122	0.340	
15.8	16 x 48	V04 15800.112730	V04 15800.212730	192	122	0.350	
16.0	16 x 48	V04 16000.112730	V04 16000.212730	192	122	0.360	



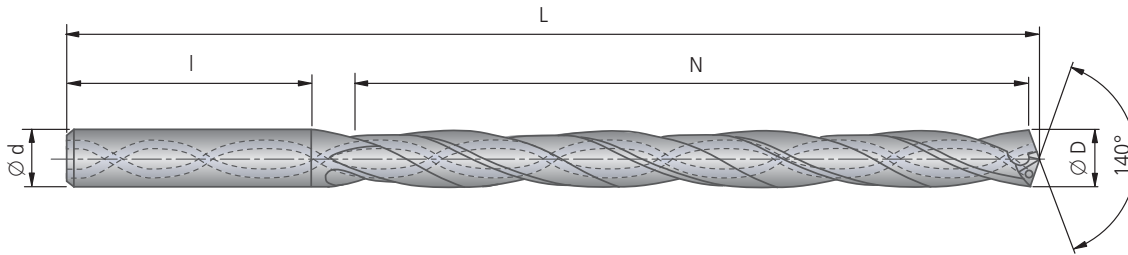
# KOMET KUB® Drillmax XL



Ø 3.0 – 10.0 mm · 20xD

## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting

**Warning!** A pilot hole must always be drilled. Direct spot drilling is not possible, even on a machined spot-drill surface. Angled surfaces or unmachined spot-drill surfaces must also be faced or spot faced for the pilot drilling tool (page 22).

- 4 x guide chamfers
- coating: TiAlN
- with coolant channels



20 × D						for workpiece material					
Ø D	Ø d × l	 DIN 6535 HA Order No.	L	N	 Kg ~	P	M	K	N	S	H
3.0	6 × 36	V05 03000.117830	108	62							
4.0	6 × 36	V05 04000.117830	132	82							
4.5	6 × 36	V05 04500.117830	144	95							
5.0	6 × 36	V05 05000.117830	156	103		●		●			
5.5	6 × 36	V05 05500.117830	168	113							
6.0	6 × 36	V05 06000.117830	178	123							
6.5	8 × 36	V05 06500.117830	192	133							
8.0	8 × 36	V05 08000.117830	222	164		●		●			
8.5	10 × 40	V05 08500.117830	244	174							
9.0	10 × 40	V05 09000.117830	256	184		●		●			
10.0	10 × 40	V05 10000.117830	270	205							

Other diameters on request.

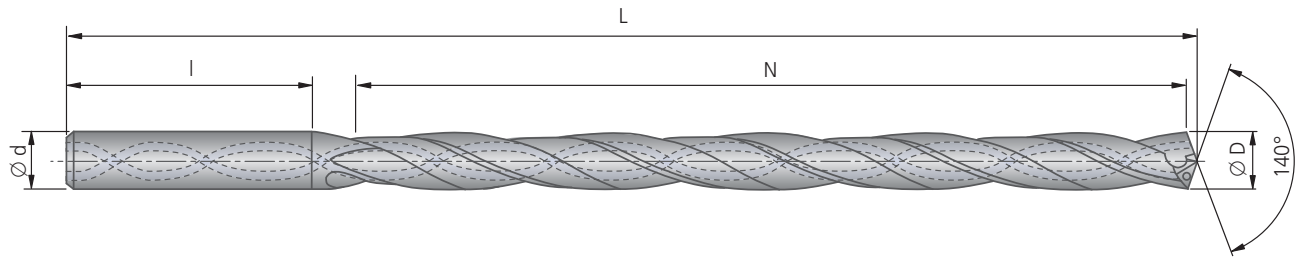
Ø 3.0 – 8.0 mm · 30×D

KOMET KUB® Drillmax XL

High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting

**Warning!** A pilot hole must always be drilled. Direct spot drilling is not possible, even on a machined spot-drill surface. Angled surfaces or unmachined spot-drill surfaces must also be faced or spot faced for the pilot drilling tool (page 22).

- 4 x guide chamfers ■
- coating: TiAlN ■
- with coolant channels ■



30 × D						for workpiece material					
Ø D	Ø d × l	DIN 6535 HA Order No.	L	N	kg	P	M	K	N	S	H
3.0	6 × 36	V06 03000.117830	138	92	~						
4.0	6 × 36	V06 04000.117830	172	122							
4.5	6 × 36	V06 04500.117830	189	137							
5.0	6 × 36	V06 05000.117830	206	153		●		●			
5.5	6 × 36	V06 05500.117830	223	168							
6.0	6 × 36	V06 06000.117830	238	183							
6.5	8 × 36	V06 06500.117830	257	198							
8.0	8 × 36	V06 08000.117830	302	244		●		●			

Other diameters on request.

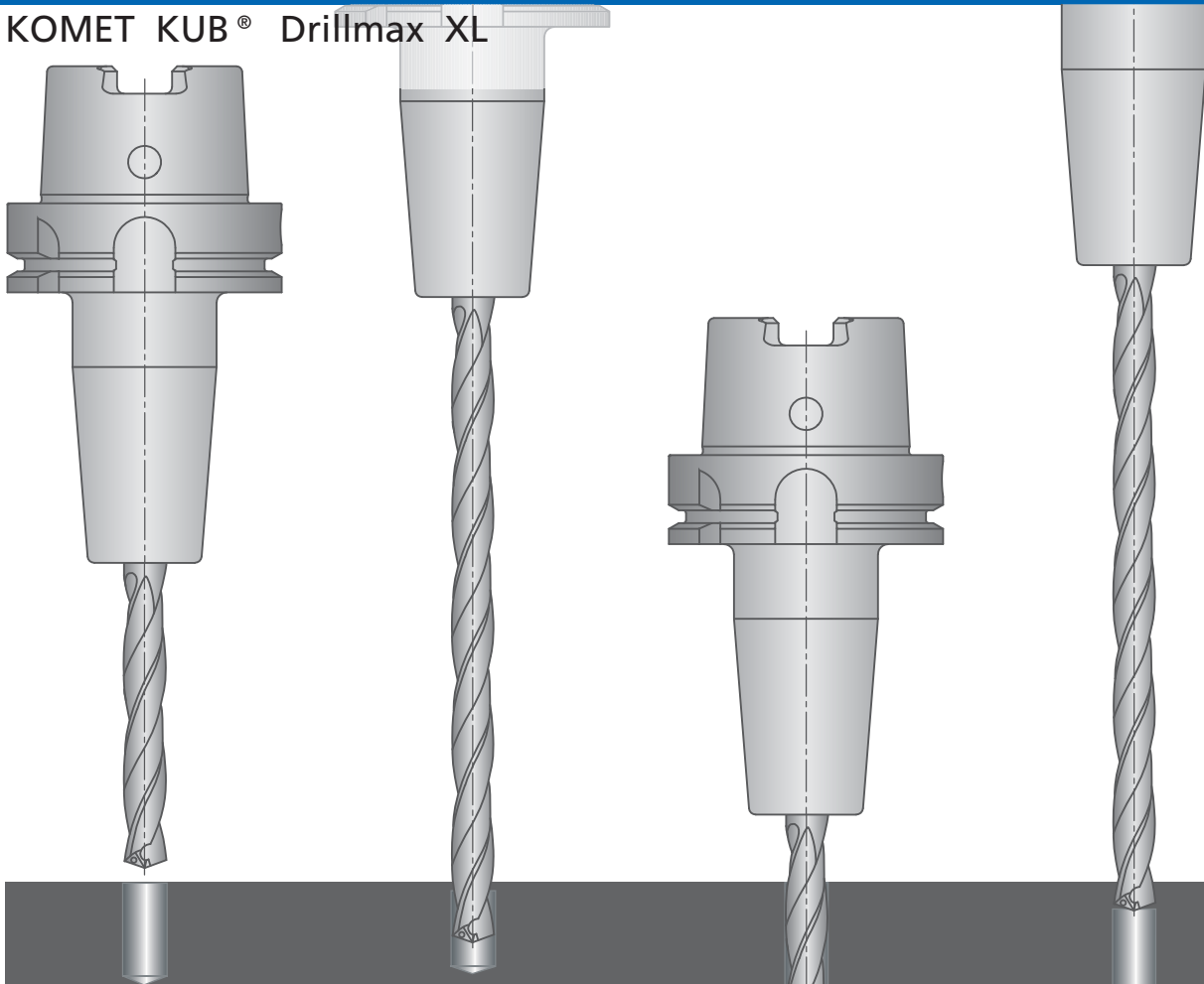
# KOMET KUB® Drillmax, KOMET KUB® Drillmax XL

## Technical Notes



Guideline values for solid drilling										5xD / 7-8xD					
Material group	Strength Rm lbf/in <sup>2</sup>	Hardness HB	Material	Material example, material code AISI/SAE	Cutting speed v <sub>c</sub> ft/min (m/min)										
					Feed f in/rev (mm/rev)			Ø 0.118-0.197 (Ø 3.0-5.0)			Ø 0.198-0.315 (Ø 5.1-8.0)				
					min	opt.	max	min	opt.	max	min	opt.	max		
P	1.0	≤72500	non-alloy steels	A570.36 1213 A573.81	310 (95)	<b>380</b> (115)	440 (135)	0.003 (0.08)	<b>0.006</b> (0.14)	0.008 (0.20)	0.006 (0.15)	<b>0.008</b> (0.20)	0.010 (0.25)		
	2.0	72500-130000	non-alloy / low alloy steels	5120 1055 5115	230 (70)	<b>280</b> (85)	330 (100)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.005 (0.12)	<b>0.007</b> (0.17)	0.009 (0.22)		
	2.1	<72500	lead alloys	12L13	230 (70)	<b>280</b> (85)	330 (100)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.004 (0.10)	<b>0.007</b> (0.18)	0.010 (0.25)		
	3.0	>130000 - 174000	low alloy steels: heat resistant structural, heat treated, nitride and tools steels	4140 1064	230 (70)	<b>245</b> (75)	260 (80)	0.002 (0.05)	<b>0.004</b> (0.10)	0.006 (0.15)	0.004 (0.10)	<b>0.006</b> (0.15)	0.008 (0.20)		
	4.0	>174000	high alloy steels	H13 H21	145 (45)	<b>195</b> (60)	245 (75)	0.002 (0.05)	<b>0.004</b> (0.09)	0.005 (0.13)	0.004 (0.10)	<b>0.006</b> (0.14)	0.007 (0.18)		
	4.1		HSS												
S	5.0		250 special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel® 718 Nimonic® 80A											
	5.1	58000	titanium, titanium alloys	AMS R54520											
M	6.0	≤87000	stainless steels	304L 316	130 (40)	<b>180</b> (55)	230 (70)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.005 (0.12)	<b>0.007</b> (0.17)	0.009 (0.22)		
	6.1	<130000	stainless steels	630	80 (25)	<b>150</b> (45)	210 (65)	0.002 (0.05)	<b>0.003</b> (0.08)	0.004 (0.10)	0.004 (0.09)	<b>0.006</b> (0.15)	0.008 (0.20)		
	7.0	>130000	stainless / fireproof steels	420 403	50 (15)	<b>100</b> (30)	130 (40)	0.002 (0.05)	<b>0.003</b> (0.08)	0.004 (0.10)	0.002 (0.06)	<b>0.004</b> (0.10)	0.006 (0.14)		
K	8.0		180 gray cast iron	No 35 B No 50 B	295 (90)	<b>380</b> (115)	460 (140)	0.004 (0.10)	<b>0.007</b> (0.18)	0.010 (0.25)	0.006 (0.15)	<b>0.009</b> (0.23)	0.012 (0.30)		
	8.1		250 alloy gray cast iron	A436 Type 2	230 (70)	<b>310</b> (95)	390 (120)	0.004 (0.10)	<b>0.007</b> (0.18)	0.010 (0.25)	0.006 (0.15)	<b>0.009</b> (0.23)	0.012 (0.30)		
	9.0	≤87000	130 spheroidal graphite cast iron, ferritic	60-40-18	330 (100)	<b>390</b> (120)	460 (140)	0.003 (0.08)	<b>0.006</b> (0.14)	0.008 (0.20)	0.006 (0.15)	<b>0.008</b> (0.20)	0.010 (0.25)		
	9.1		230 spheroidal graphite cast iron, ferritic/perlitic	80-55-06	260 (80)	<b>330</b> (100)	390 (120)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.004 (0.10)	<b>0.006</b> (0.15)	0.008 (0.20)		
	10.0	>87000	250 spheroidal graphite cast iron, perlitic malleable iron	100-70-03 70003	230 (70)	<b>295</b> (90)	360 (110)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.004 (0.10)	<b>0.006</b> (0.15)	0.008 (0.20)		
	10.1		200 alloyed spheroidal graphite cast iron	A43D2	195 (60)	<b>230</b> (70)	260 (80)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.004 (0.10)	<b>0.006</b> (0.15)	0.008 (0.20)		
10.2		300 vermicular cast iron		195 (60)	<b>230</b> (70)	260 (80)	0.002 (0.06)	<b>0.005</b> (0.12)	0.007 (0.18)	0.004 (0.10)	<b>0.006</b> (0.15)	0.008 (0.20)			
N	12.0		90 copper alloy, brass, lead-alloy bronze, lead bronze: good cut	UNS C36000											
	12.1		100 copper alloy, brass, bronze: average cut												
	13.0		60 wrought aluminium alloys	GD-AISI12											
	13.1		75 cast alum. alloy: Si-content <10% magnesium alloy												
	14.0		100 cast alum.alloy: Si-content >10%	A360.2											
H	15.0	203000	hardened steels < 45 HRC												
	16.0	261000	hardened steels > 45 HRC												





From experience:

**1. Pilot hole**

Drilling depth  $2 - 3 \times D$

**2. Start with deep-hole drill**

Enter the pilot hole at a reduced cutting speed  
 $v_c = 66-98 \text{ ft/min (20-30 m/min)}$  at the working feed rate.  
 Just before reaching the bottom of the pilot hole, stop the feed and increase the speed to the cycle speed steplessly.

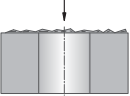
**3. Increase the deep-hole drilling**


Feed rate to the cycle speed. Drill to the required hole depth without pecking. When drilling a through hole, reduce the feed rate by 50 % when the drill tip exits at through holes – risk of chipping.


**4. Back out of the hole**

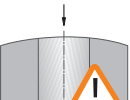
Once the final drilling depth is reached, withdraw the tool  $0.079" - 0.118" (2-3 \text{ mm})$ , then reduce the cutting speed to  $v_c = 66-98 \text{ ft/min (20-30 m/min)}$  and withdraw at  $v_f = 118 \text{ in/min (3000 mm/min)}$  until the pilot hole depth. Then back out from the hole at  $n = 300 \text{ rpm } v_f = 118 \text{ in/min (3000 mm/min)}$ .

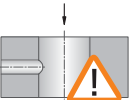


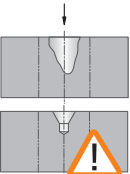
1.  **Starting on uneven surfaces (cast surfaces)**
- depending on the quality of the surface or when spot drilling, reduce the feed

2.  **Starting on angled surfaces**
- spot face surface before starting bore

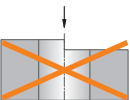
3.  **Angled bore exit**
- reduce feed by 50 % in the exit area

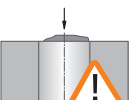
4.  **Starting on cambered surfaces**
- drilling on centre with reduced feed is possible
  - spot facing is required if the bore start point is outside the radius centre

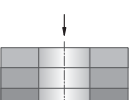
5.  **Drilling through a cross bore**
- half feed rate at interruption


6.  **Starting on a groove or large centering bore**
- end-face the seam or centre beforehand where applicable (diameter min. 0.1 mm greater than drill diameter)
  - possible under certain conditions. Reduce feed where necessary

7.  **Drilling a chamfer**
- not possible

8.  **Starting on an edge**
- not possible (start point must be flat)

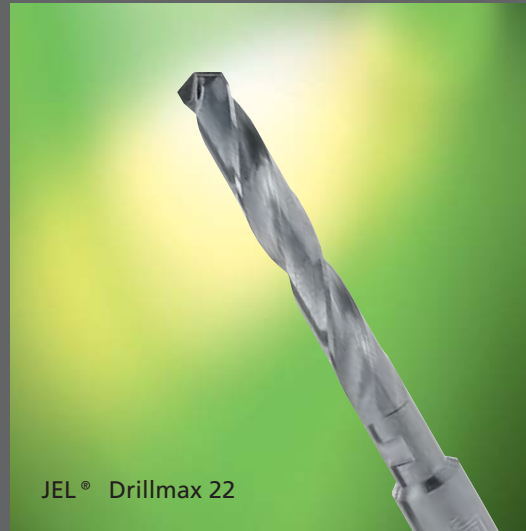
9.  **Starting on a welded seam**
- spot face surface before starting bore

10.  **Drilling through stacked plates**
- possible in principle
  - good workpiece clamping required
  - avoid large spaces between elements

11.  **Roughing**
- 5xD and 7-8xD possible
  - 20xD and 30xD not possible

# JEL® PCD High-performance Drill

1



## Modern PCD cutting material

Due to high hardness and resistance to abrasion, polycrystalline diamond (PCD) cutting materials have achieved significant importance in machining aluminium alloys.

With our PCD tipped cutting tools we will take your machine to its full potential at maximum productivity. Depending on the application there is almost unlimited cutting speed possible. It is no longer the tool which determines the cutting data but the efficiency of your machine.

## JEL® Drill Reamer



Drilling to precise tolerances in one operation, thereby reducing the tools required and saving costs

Hole tolerance IT 7 achievable

Main application area:

Grey cast iron

Spheroidal graphite cast iron

Aluminium



**BENEFITS for you:**

- For maximum cutting speeds and tool life
- For cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics

**Drillcut · Drillmax · Dreammax** Page

**PCD High-performance Drill Drillcut 24** 26

Ø 5 – 12 mm, R.H. cutting  
Drilling depth 5xD

**PCD High-performance Drill Drillmax 22** 27

Ø 6 – 10 mm, R.H. cutting  
Drilling depth 5xD

**Drill Reamer Dreammax** 28

Ø 6 – 12 mm, R.H. cutting  
Drilling depth 4xD

**Technical Notes** 29

Guidelines



# JEL® Drillcut 24

Ø 5.0 – 12.0 mm · 5×D

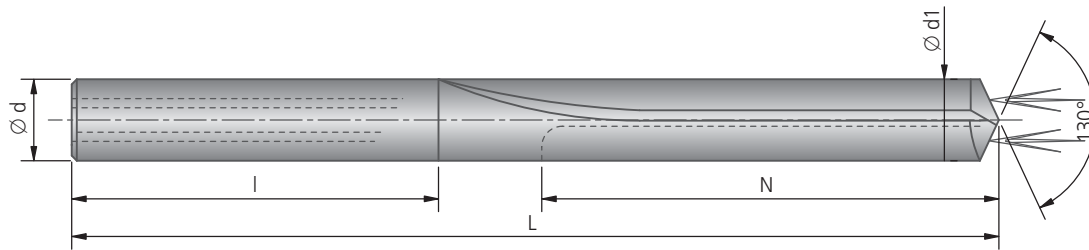
PCD High-Performance Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5×D	●	●	○	○	○	○	○	×	○	×	×

● very good ○ good ○ possible × not possible

- with solid carbide shank
- 2 cutting edges and 4 guides
- straight fluted
- with coolant channels
- cutting material: PCD sandwich



5 × D							for workpiece material					
Ø d1	for thread	Ø d × l	DIN 6535 HA Order No.	L	N	kg	P	M	K	N	S	H
5.00	M6	6 × 36	38588082000500	82	35	0.023						
5.50	M6 roll formed + M6×0.5	6 × 36	38588082000550	82	35	0.025	●					
6.00		6 × 36	38588082000600	82	35	0.027						
6.80	M8	8 × 36	38588091000680	91	43	0.045						
7.40	M8 roll formed	8 × 36	38588091000740	91	43	0.047	●					
8.00		8 × 36	38588091000800	91	43	0.050						
8.50	M10	10 × 40	38588003000850	103	49	0.060						
9.30	M10×1.25 roll formed	10 × 40	38588003000930	103	49	0.075	●					
10.00		10 × 40	38588003001000	103	49	0.090						
10.20	M12	12 × 45	38588018001020	118	56	0.116						
11.20	M12×1.5 roll formed	12 × 45	38588018001120	118	56	0.122	●					
12.00	M14	12 × 45	38588018001200	118	56	0.142						

Ø 6.0 – 10.0 mm · 5xD

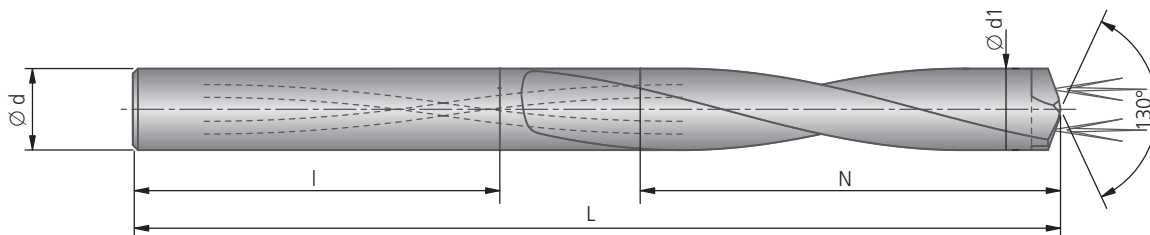
JEL® Drillmax 22

PCD High-Performance Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5xD	●	●	○	○	○	○	○	✗	○	✗	✗

● very good ● good ○ possible ✗ not possible

- with solid carbide shank ■
- 2 cutting edges and 4 guides ■
- spiral fluted ■
- with coolant channels ■
- cutting material: PCD sandwich ■



5 x D						for workpiece material
Ø d1	Ø d x l	DIN 6535 HA Order No.	L	N	kg	P M K N S H
6.00	6 x 36	38405002000600	82	30	0.038	●
8.00	8 x 36	38405002000800	91	42	0.047	●
10.00	10 x 40	38405002001000	103	50	0.083	●

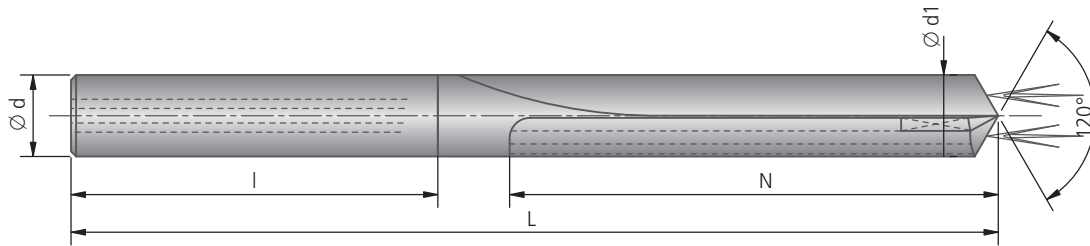
Drill Reamer with Cylindrical Shank DIN 6535 HA, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	○	○	○	○	○	×	○	○	×



● very good ○ good ○ possible × not possible

- for bore tolerance H7
- 2 cutting edges
- straight fluted
- with coolant channels
- cutting material: solid carbide



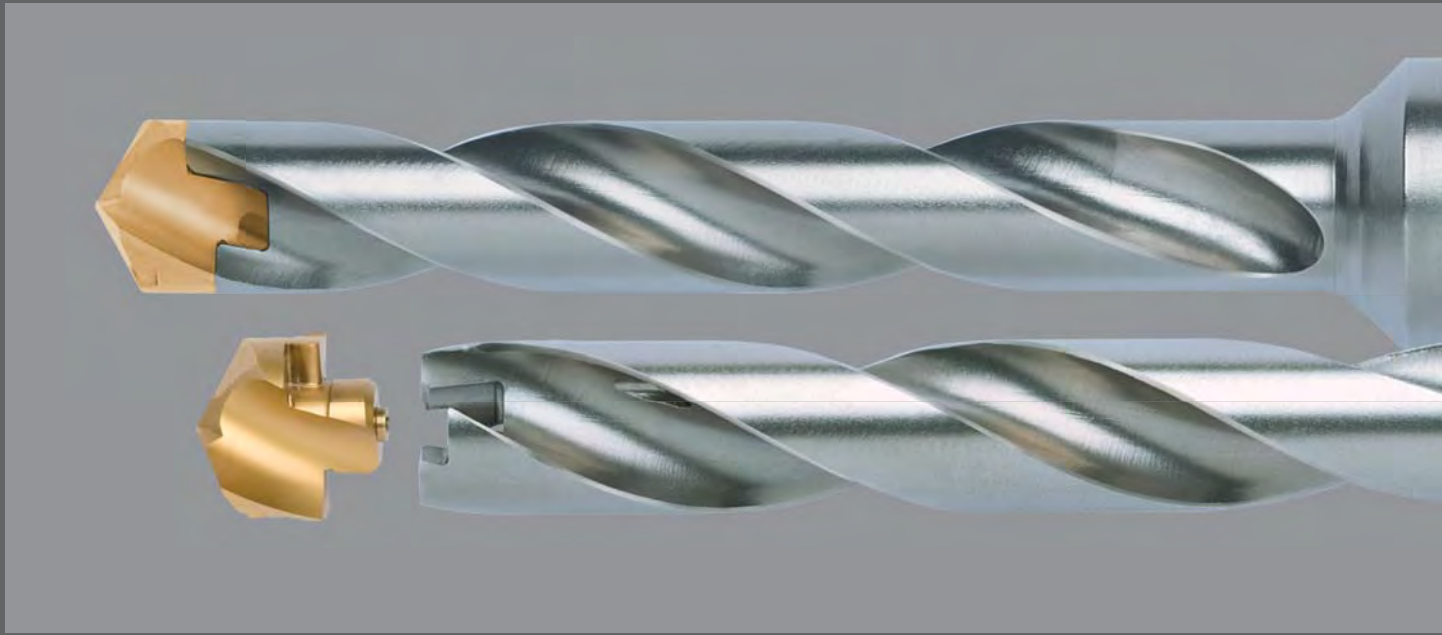
4 × D						for workpiece material
Ø d1	Ø d × l	DIN 6535 HA Order No.	L	N	kg	P M K N S H
6.00	6 × 36	78451082000600	82	24	~	● ●
8.00	8 × 36	78451091000800	91	32		● ●
10.00	10 × 40	78451003001000	103	40		● ●
12.00	12 × 45	78451018001200	118	48		● ●



Material Group	Strength Rm (N/mm <sup>2</sup> )	Hardness HB	Tool	Drillcut 24 · Drillmax 22								Dreammax			
			Cutting material	PCD								Solid carbide			
			Surface	uncoated								TiN			
															
Diameter	Ø 5 - 6		Ø 6 - 8		Ø 8 - 10		Ø 10 - 12			Ø 6-8	Ø 8-10	Ø 10-12			
Material	v <sub>c</sub> (m/min)	f <sub>b</sub> (mm/rev)	v <sub>c</sub> (m/min)	f <sub>b</sub> (mm/rev)	v <sub>c</sub> (m/min)	f <sub>b</sub> (mm/rev)	v <sub>c</sub> (m/min)	f <sub>b</sub> (mm/U)	v <sub>c</sub> (m/min)	f <sub>z</sub> (mm/tooth)	f <sub>z</sub> (mm/tooth)	f <sub>z</sub> (mm/tooth)			
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 45 HRC											
	1.8	≤2200	≤600	Hardened steel to 58 HRC											
M	2.1	≤850	≤250	Stainless steel, sulphuretted											
	2.2	≤850	≤250	Austenitic											
	2.3	≤1000	≤300	Ferritic, ferritic & austenitic, martensitic											
K	3.1	≤500	≤150	Grey cast iron						30-60	0.03-0.10	0.04-0.10	0.07-0.10		
	3.2	>500 ≤1000	>150 ≤300	Grey cast iron, heat treated						30-60	0.03-0.10	0.04-0.10	0.07-0.10		
	3.3	400-500	200-250	Vermicular cast iron											
	3.4	≤700	≤200	Spher. graph. cast iron						30-60	0.03-0.10	0.04-0.10	0.07-0.10		
	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	100-400	0.10-0.12	100-400	0.10-0.20	100-600	0.15-0.25	100-800	0.20-0.30			
	6.3	≤700	≤200	long chip brass											
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)											
	7.1	≤350	≤100	Alu, Mg non-alloy	100-600	0.10-0.15	100-800	0.15-0.25	150-1000	0.20-0.30	150-1200	0.25-0.35			
	7.2	≤600	≤180	Alu wrought all., break. strain (A 5) <14 %	100-600	0.10-0.15	100-800	0.15-0.25	150-1000	0.20-0.30	150-1200	0.25-0.35	50-100		
	7.3	≤600	≤180	Alu wrought all., break. strain (A 5) ≥14 %	100-600	0.10-0.15	100-800	0.15-0.25	150-1000	0.20-0.30	150-1200	0.25-0.35	50-100		
	7.4	≤600	≤180	Alu cast alloy, Si <10 %	100-600	0.10-0.15	100-800	0.15-0.25	150-1000	0.20-0.30	150-1200	0.25-0.35			
	7.5	≤600	≤180	Alu cast alloy, Si ≥10 %	100-600	0.10-0.15	100-800	0.15-0.25	150-1000	0.20-0.30	150-1200	0.25-0.35			
	8.1			Thermoplastics											
8.2			Thermosetting plastics												
8.3			Fibre reinforced plastics	150-400	0.10-0.20	150-600	0.15-0.30	250-800	0.20-0.40	250-1000	0.25-0.50				

v<sub>c</sub> = Cutting speed · f<sub>b</sub> = Drilling feed · f<sub>z</sub> = Milling feed  
 Important: See chapter 8 for more application details and safety notes!

1



### KOMET KUB K2® replaceable head drill

With this replaceable head system for the double-cutting KUB K2®, KOMET® has introduced an ingenious system of replaceable drill heads.

These now also make the most of the economic and flexibility advantages of replaceable cutting heads with small drilling diameters up to 10 mm.

The double-cutting carbide drill heads cannot be reground. A patented attachment point makes them self-clamping, self-centring and easy to change.

### BENEFITS for you:

- Easy replacement of the KUB K2® replaceable heads even in the machine, with secure, user-friendly quick-change connector
- Maximum performance and best possible feed with the latest coatings and high-end polished sections
- Outstanding tension release properties with all materials, due to optimum surface quality of the cutting channels
- Maximum performance and life of the main drill body due to a special surface treatment

#### Rotating application in a machining centre

Material: 1.4301, V2A

$v_c = 70 \text{ m/min} \cdot f = 0.2 \text{ mm/rev}$



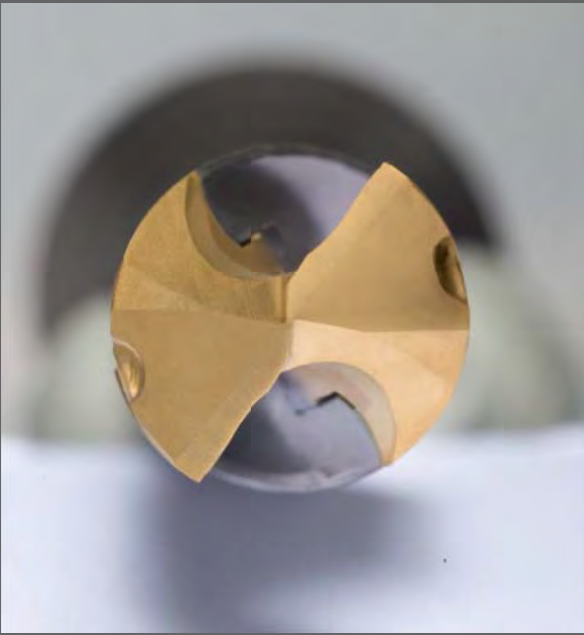
#### Stationary application

in a cyclically-controlled lathe

Material: 42CrMo4

$v_c = 90 \text{ m/min} \cdot f = 0.22 \text{ mm/rev}$





<b>KOMET KUB K2®</b>	Page
<b>Cylindrical Shank ISO 9766</b>	32 – 37
Ø 10 – 20.5 mm, R.H. cutting Drilling depth 3xD, 5xD, 7xD	
<b>Technical Notes</b>	38
Guideline values for solid drilling	
<b>Technical Information</b>	39

**Applications:**

- For diameter range 10 to 20.5 mm
- Internal coolant supply
- Suitable for use with steel, cast metal and stainless materials
- Replaceable head system enables use with a wide variety of sections and coatings.

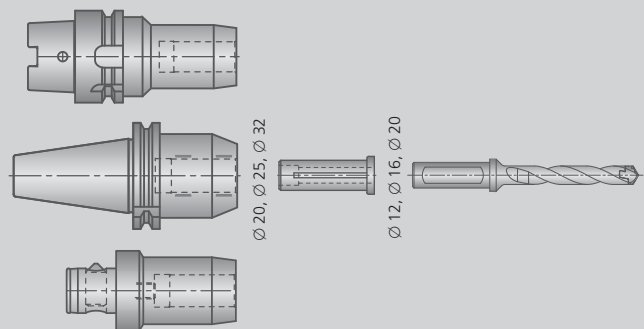
**Rotating application**  
in a machining centre

Material: 1.6758 (23MnNiMoCr5-4)  
 $v_c = 46 \text{ m/min} \cdot f = 0.1 \text{ mm/rev}$

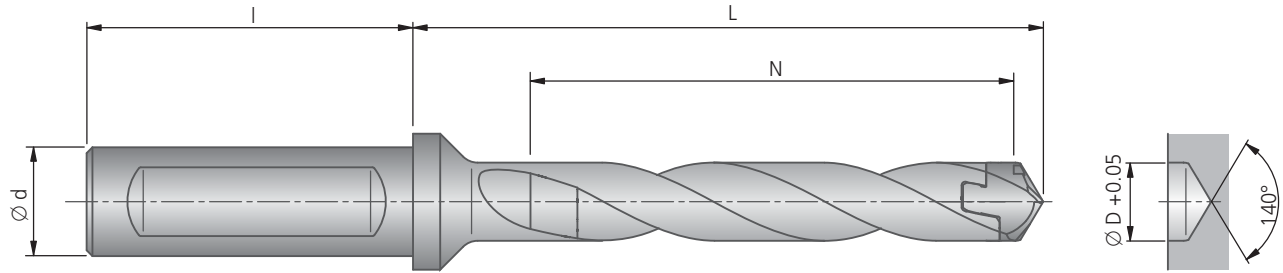


Reduced cutting speed due to very low coolant pressure.  
 Good process reliability.

**Please note:** When using the KUB K2® in a hydraulic expansion chuck, use a reducing sleeve.



1



Replaceable head									
Ø D	H70 BK8425	H70 BK2725	H71 BK2725	H70/H71 starting/roughing size	H72 BK7930	H70/H72 starting/roughing size	kg	Coating	for workpiece material
	Order No.	Order No.	Order No.		Order No.				
10.0	H70 10000.018425	H70 10000.012725	H71 10000.012725	4.0	H72 10000.017930	5.1	0.004	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
10.1	H70 10100.018425	H70 10100.012725	H71 10100.012725		H72 10100.017930				
10.2	H70 10200.018425	H70 10200.012725	H71 10200.012725		H72 10200.017930				
10.3	H70 10300.018425	H70 10300.012725	H71 10300.012725		H72 10300.017930				
10.4	H70 10400.018425	H70 10400.012725	H71 10400.012725	4.0	H72 10400.017930	5.1	0.004	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
10.5	H70 10500.018425	H70 10500.012725	H71 10500.012725		H72 10500.017930				
10.6	H70 10600.018425	H70 10600.012725	H71 10600.012725		H72 10600.017930				
10.7	H70 10700.018425	H70 10700.012725	H71 10700.012725		H72 10700.017930				
10.8	H70 10800.018425	H70 10800.012725	H71 10800.012725	4.3	H72 10800.017930	5.6	0.005	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
10.9	H70 10900.018425	H70 10900.012725	H71 10900.012725		H72 10900.017930				
11.0	H70 11000.018425	H70 11000.012725	H71 11000.012725		H72 11000.017930				
11.1	H70 11100.018425	H70 11100.012725	H71 11100.012725		H72 11100.017930				
11.2	H70 11200.018425	H70 11200.012725	H71 11200.012725	4.3	H72 11200.017930	5.6	0.005	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
11.3	H70 11300.018425	H70 11300.012725	H71 11300.012725		H72 11300.017930				
11.4	H70 11400.018425	H70 11400.012725	H71 11400.012725		H72 11400.017930				
11.5	H70 11500.018425	H70 11500.012725	H71 11500.012725		H72 11500.017930				
11.6	H70 11600.018425	H70 11600.012725	H71 11600.012725	4.7	H72 11600.017930	6.0	0.006	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
11.7	H70 11700.018425	H70 11700.012725	H71 11700.012725		H72 11700.017930				
11.8	H70 11800.018425	H70 11800.012725	H71 11800.012725		H72 11800.017930				
11.9	H70 11900.018425	H70 11900.012725	H71 11900.012725		H72 11900.017930				
12.0	H70 12000.018425	H70 12000.012725	H71 12000.012725	4.7	H72 12000.017930	6.0	0.007	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
12.1	H70 12100.018425	H70 12100.012725	H71 12100.012725		H72 12100.017930				
12.2	H70 12200.018425	H70 12200.012725	H71 12200.012725		H72 12200.017930				
12.3	H70 12300.018425	H70 12300.012725	H71 12300.012725		H72 12300.017930				
12.4	H70 12400.018425	H70 12400.012725	H71 12400.012725	4.7	H72 12400.017930	6.0	0.007	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
12.5	H70 12500.018425	H70 12500.012725	H71 12500.012725		H72 12500.017930				
12.6	H70 12600.018425	H70 12600.012725	H71 12600.012725		H72 12600.017930				
12.7	H70 12700.018425	H70 12700.012725	H71 12700.012725		H72 12700.017930				
12.8	H70 12800.018425	H70 12800.012725	H71 12800.012725	4.7	H72 12800.017930	6.0	0.007	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
12.9	H70 12900.018425	H70 12900.012725	H71 12900.012725		H72 12900.017930				

For other diameters see following page.

**Supply includes:**

Replaceable head with mounting key. Please order basic body and accessories separately..



Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting

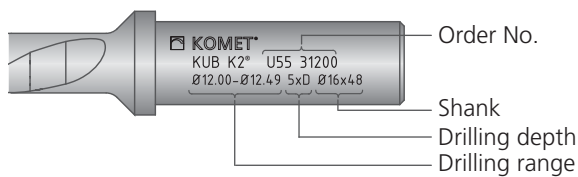


L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	○	○	×	×	●	×	●	×	×
5xD*	●	●	○	○	×	×	●	×	●	×	×
7xD*	●	●	○	○	×	×	●	×	●	×	×

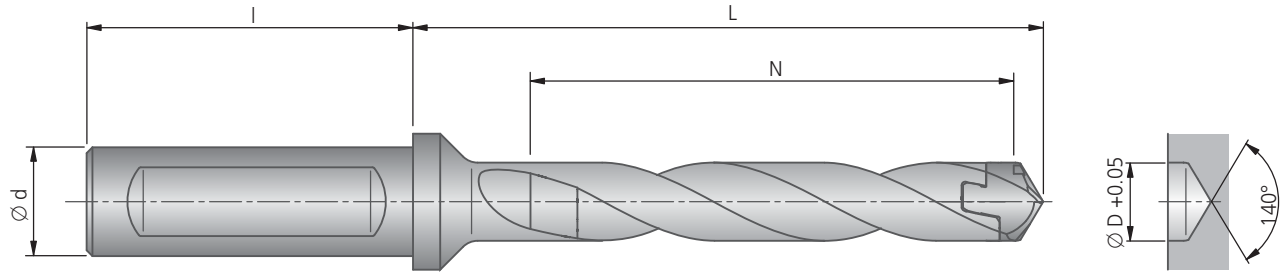
● very good ○ good ○ possible: see technical notes, page 39 × not possible

\* Please note: Technical notes page 39, position 15.

Cylindrical shank Ø d × l	Basic body												Accessories
	3xD					5xD				7xD			
	Order No.	L	N	kg	Order No.	L	N	kg	Order No.	L	N	kg	Order No. Description
12 × 45	U53 21000	56.6	33	0.05	U55 21000	78.6	55	0.055	U57 21000	100.6	77	0.06	L05 10010 Size 1
12 × 45	U53 21050	56.6	33	0.05	U55 21050	78.6	55	0.057	U57 21050	100.6	77	0.065	
12 × 45	U53 21100	60.7	36	0.054	U55 21100	84.7	60	0.062	U57 21100	108.7	84	0.07	
12 × 45	U53 21150	60.7	36	0.055	U55 21150	84.7	60	0.064	U57 21150	108.7	84	0.075	
16 × 48	U53 31200	66.7	39	0.09	U55 31200	92.7	65	0.10	U57 31200	118.7	91	0.111	L05 10020 Size 2
16 × 48	U53 31250	66.7	39	0.09	U55 31250	92.7	65	0.10	U57 31250	118.7	91	0.115	



1



Replaceable head									
Ø D	H70 BK8425 Order No.	H70 BK2725 Order No.	H71 BK2725 Order No.	H70/H71 starting/roughing size	H72 BK7930 Order No.	H70/H72 starting/roughing size	kg	Coating	for workpiece material P M K N S H
13.0	H70 13000.018425	H70 13000.012725	H71 13000.012725	5.0	H72 13000.017930	6.5	0.008	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
13.1	H70 13100.018425	H70 13100.012725	H71 13100.012725		H72 13100.017930				
13.2	H70 13200.018425	H70 13200.012725	H71 13200.012725		H72 13200.017930				
13.3	H70 13300.018425	H70 13300.012725	H71 13300.012725		H72 13300.017930				
13.4	H70 13400.018425	H70 13400.012725	H71 13400.012725		H72 13400.017930				
13.5	H70 13500.018425	H70 13500.012725	H71 13500.012725		H72 13500.017930				
13.6	H70 13600.018425	H70 13600.012725	H71 13600.012725		H72 13600.017930				
13.7	H70 13700.018425	H70 13700.012725	H71 13700.012725		H72 13700.017930				
13.8	H70 13800.018425	H70 13800.012725	H71 13800.012725		H72 13800.017930				
13.9	H70 13900.018425	H70 13900.012725	H71 13900.012725		H72 13900.017930				
14.0	H70 14000.018425	H70 14000.012725	H71 14000.012725	5.4	H72 14000.017930	6.9	0.010	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
14.1	H70 14100.018425	H70 14100.012725	H71 14100.012725		H72 14100.017930				
14.2	H70 14200.018425	H70 14200.012725	H71 14200.012725		H72 14200.017930				
14.3	H70 14300.018425	H70 14300.012725	H71 14300.012725		H72 14300.017930				
14.4	H70 14400.018425	H70 14400.012725	H71 14400.012725		H72 14400.017930				
14.5	H70 14500.018425	H70 14500.012725	H71 14500.012725		H72 14500.017930				
14.6	H70 14600.018425	H70 14600.012725	H71 14600.012725		H72 14600.017930				
14.7	H70 14700.018425	H70 14700.012725	H71 14700.012725		H72 14700.017930				
14.8	H70 14800.018425	H70 14800.012725	H71 14800.012725		H72 14800.017930				
14.9	H70 14900.018425	H70 14900.012725	H71 14900.012725		H72 14900.017930				
15.0	H70 15000.018425	H70 15000.012725	H71 15000.012725	5.7	H72 15000.017930	7.4	0.012	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
15.1	H70 15100.018425	H70 15100.012725	H71 15100.012725		H72 15100.017930				
15.2	H70 15200.018425	H70 15200.012725	H71 15200.012725		H72 15200.017930				
15.3	H70 15300.018425	H70 15300.012725	H71 15300.012725		H72 15300.017930				
15.4	H70 15400.018425	H70 15400.012725	H71 15400.012725		H72 15400.017930				
15.5	H70 15500.018425	H70 15500.012725	H71 15500.012725		H72 15500.017930				
15.6	H70 15600.018425	H70 15600.012725	H71 15600.012725		H72 15600.017930				
15.7	H70 15700.018425	H70 15700.012725	H71 15700.012725		H72 15700.017930				
15.8	H70 15800.018425	H70 15800.012725	H71 15800.012725		H72 15800.017930				
15.9	H70 15900.018425	H70 15900.012725	H71 15900.012725		H72 15900.017930				
16.0	H70 16000.018425	H70 16000.012725	H71 16000.012725	6.1	H72 16000.017930	7.9	0.014	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930	
16.1	H70 16100.018425	H70 16100.012725	H71 16100.012725		H72 16100.017930				
16.2	H70 16200.018425	H70 16200.012725	H71 16200.012725		H72 16200.017930				
16.3	H70 16300.018425	H70 16300.012725	H71 16300.012725		H72 16300.017930				
16.4	H70 16400.018425	H70 16400.012725	H71 16400.012725		H72 16400.017930				
16.5	H70 16500.018425	H70 16500.012725	H71 16500.012725		H72 16500.017930				
16.6	H70 16600.018425	H70 16600.012725	H71 16600.012725		H72 16600.017930				
16.7	H70 16700.018425	H70 16700.012725	H71 16700.012725		H72 16700.017930				
16.8	H70 16800.018425	H70 16800.012725	H71 16800.012725		H72 16800.017930				
16.9	H70 16900.018425	H70 16900.012725	H71 16900.012725		H72 16900.017930				

Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	○	○	✗	✗	●	✗	●	✗	✗
5xD*	●	●	○	○	✗	✗	●	✗	●	✗	✗
7xD*	●	●	○	○	✗	✗	●	✗	●	✗	✗

● very good ○ good ○ possible: see technical notes, page 39 ✗ not possible

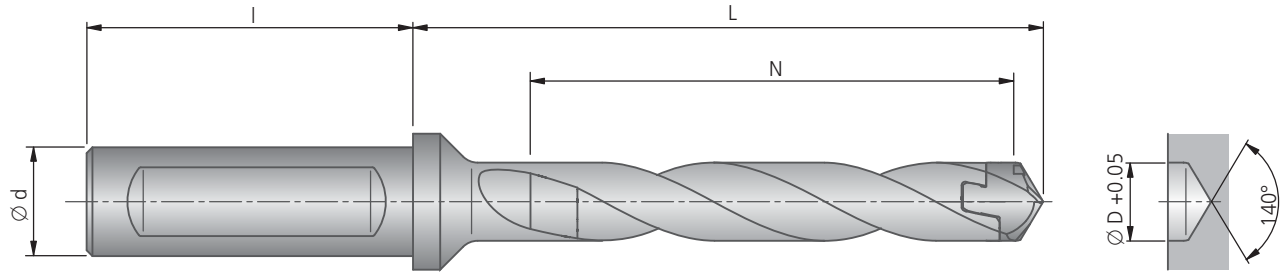
\* Please note: Technical notes page 39, position 15.

Supply includes:

Replaceable head with mounting key. Please order basic body and accessories separately..

Cylindrical shank Ø d x l	Basic body												Accessories
	3xD				5xD				7xD				Multi-key
	Order No.	L	N	kg	Order No.	L	N	kg	Order No.	L	N	kg	Order No. Description
16 x 48	U53 31300	70.8	42	0.10	U55 31300	98.8	70	0.11	U57 31300	126.8	98	0.123	L05 10020
16 x 48	U53 31400	74.9	45	0.10	U55 31400	104.9	75	0.12	U57 31400	134.8	105	0.137	
16 x 48	U53 31500	78.9	48	0.11	U55 31500	110.9	80	0.13	U57 31500	142.9	112	0.154	
20 x 50	U53 41600	85.5	50	0.17	U55 41600	119.5	50	0.19	U57 41600	153.4	119	0.220	

1



Replaceable head															
Ø D	chamfer			H70/H71 starting/roughing size	H70/H72 starting/roughing size		Coating	for workpiece material							
	H70 BK8425 Order No.	H70 BK2725 Order No.	H71 BK2725 Order No.		H72 BK7930 Order No.	⊖		P	M	K	N	S	H		
17.0	H70 17000.018425	H70 17000.012725	H71 17000.012725	6.4	H72 17000.017930	8.3	0.017	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930							
17.1	H70 17100.018425	H70 17100.012725	H71 17100.012725		H72 17100.017930										
17.2	H70 17200.018425	H70 17200.012725	H71 17200.012725		H72 17200.017930										
17.3	H70 17300.018425	H70 17300.012725	H71 17300.012725		H72 17300.017930										
17.4	H70 17400.018425	H70 17400.012725	H71 17400.012725		H72 17400.017930										
17.5	H70 17500.018425	H70 17500.012725	H71 17500.012725		H72 17500.017930										
17.6	H70 17600.018425	H70 17600.012725	H71 17600.012725		H72 17600.017930										
17.7	H70 17700.018425	H70 17700.012725	H71 17700.012725		H72 17700.017930										
17.8	H70 17800.018425	H70 17800.012725	H71 17800.012725		H72 17800.017930										
17.9	H70 17900.018425	H70 17900.012725	H71 17900.012725		H72 17900.017930										
18.0	H70 18000.018425	H70 18000.012725	H71 18000.012725	6.8	H72 18000.017930	8.8	0.020	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930							
18.1	H70 18100.018425	H70 18100.012725	H71 18100.012725		H72 18100.017930										
18.2	H70 18200.018425	H70 18200.012725	H71 18200.012725		H72 18200.017930										
18.3	H70 18300.018425	H70 18300.012725	H71 18300.012725		H72 18300.017930										
18.4	H70 18400.018425	H70 18400.012725	H71 18400.012725		H72 18400.017930										
18.5	H70 18500.018425	H70 18500.012725	H71 18500.012725		H72 18500.017930										
18.6	H70 18600.018425	H70 18600.012725	H71 18600.012725		H72 18600.017930										
18.7	H70 18700.018425	H70 18700.012725	H71 18700.012725		H72 18700.017930										
18.8	H70 18800.018425	H70 18800.012725	H71 18800.012725		H72 18800.017930										
18.9	H70 18900.018425	H70 18900.012725	H71 18900.012725		H72 18900.017930										
19.0	H70 19000.018425	H70 19000.012725	H71 19000.012725	7.4	H72 19000.017930	9.6	0.023	H70: BK8425 H70: BK2725 H71: BK2725 H72: BK7930							
19.1	H70 19100.018425	H70 19100.012725	H71 19100.012725		H72 19100.017930										
19.2	H70 19200.018425	H70 19200.012725	H71 19200.012725		H72 19200.017930										
19.3	H70 19300.018425	H70 19300.012725	H71 19300.012725		H72 19300.017930										
19.4	H70 19400.018425	H70 19400.012725	H71 19400.012725		H72 19400.017930										
19.5	H70 19500.018425	H70 19500.012725	H71 19500.012725		H72 19500.017930										
19.6	H70 19600.018425	H70 19600.012725	H71 19600.012725		H72 19600.017930										
19.7	H70 19700.018425	H70 19700.012725	H71 19700.012725		H72 19700.017930										
19.8	H70 19800.018425	H70 19800.012725	H71 19800.012725		H72 19800.017930										
19.9	H70 19900.018425	H70 19900.012725	H71 19900.012725		H72 19900.017930										
20.0	H70 20000.018425	H70 20000.012725	H71 20000.012725	H72 20000.017930											
20.1	H70 20100.018425	H70 20100.012725	H71 20100.012725	H72 20100.017930											
20.2	H70 20200.018425	H70 20200.012725	H71 20200.012725	H72 20200.017930											
20.3	H70 20300.018425	H70 20300.012725	H71 20300.012725	H72 20300.017930											
20.4	H70 20400.018425	H70 20400.012725	H71 20400.012725	H72 20400.017930											
20.5	H70 20500.018425	H70 20500.012725	H71 20500.012725	H72 20500.017930											

Supply includes:

Replaceable head with mounting key. Please order basic body and accessories separately..

Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	○	○	×	×	●	×	●	×	×
5xD*	●	●	○	○	×	×	●	×	●	×	×
7xD*	●	●	○	○	×	×	●	×	●	×	×

● very good ○ good ○ possible: see technical notes, page 39 ✕ not possible

\* Please note: Technical notes page 39, position 15.

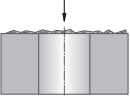
Cylindrical shank Ø d x l	Basic body												Accessories
	3xD				5xD				7xD				Multi-key
	Order No.	L	N	kg	Order No.	L	N	kg	Order No.	L	N	kg	Order No. Description
20 x 50	U53 41700	89.5	54	0.18	U55 41700	125.5	90	0.21	U57 41700	161.4	126	0.24	L05 10020 Size 2
20 x 50	U53 41800	93.7	57	0.19	U55 41800	131.7	95	0.23	U57 41800	169.5	133	0.26	
20 x 50	U53 41900	97.7	61.5	0.21	U55 41900	137.7	102.5	0.25	U57 41900	178.05	143.5	0.29	

Technical Notes




Material Group	Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	v <sub>c</sub> (m/min)												f (mm/U) · f (mm/rev)						
					Cutting speed												Feed						
					H70 BK8425			H70 BK2725			H71 BK2725			H72 BK7930			3xD / 5xD			7xD			
					min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	Ø10–20.5			Ø10–20.5			
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	100	120	140				100	120	140				0.15	0.18	0.22	0.16	0.18	0.20	
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	100	120	140	100	120	140	100	120	140				0.15	0.20	0.25	0.15	0.18	0.22	
	2.1	<500	lead alloys	95MnPb28 / 1.0718	80	100	120	80	100	120	80	100	120				0.20	0.25	0.30	0.18	0.22	0.28	
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	70	90	110	70	90	110	70	90	110				0.20	0.25	0.30	0.18	0.22	0.28	
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	50	70	90	50	70	90	50	70	90				0.15	0.20	0.25	0.14	0.18	0.22	
4.1			HSS																				
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.																			
	5.1	400		titanium, titanium alloys																			
M	6.0	≤600		stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401				40	60	80				40	60	80	0.10	0.15	0.20	0.08	0.13	0.18
	6.1	<900		stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571										30	50	70	0.10	0.12	0.14	0.08	0.10	0.12
	7.0	>900		stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862										30	50	70	0.10	0.12	0.14	0.08	0.10	0.12
K	8.0		180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	70	90	110				70	90	110				0.20	0.30	0.40	0.20	0.28	0.38
	8.1		250	alloy gray cast iron	GG-NiCr202 / 0.6660	60	80	100				60	80	100				0.20	0.30	0.40	0.20	0.28	0.38
	9.0	≤600	130	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	60	80	100				60	80	100				0.25	0.35	0.45	0.20	0.30	0.40
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	50	70	90				50	70	90				0.25	0.35	0.45	0.20	0.30	0.40
	10.0	>600	250	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	50	70	90				50	70	90				0.25	0.35	0.45	0.20	0.30	0.40
	10.1		200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	30	50	70				30	50	70				0.20	0.25	0.35	0.18	0.22	0.30
	10.2		300	vermicular cast iron	GGV Ti < 0,2, GGV Ti > 0,2	40	60	80				40	60	80				0.25	0.35	0.45	0.20	0.30	0.40
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182																		
	12.1		100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060																		
	13.0		60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517																		
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-ALSi9Mg / 3.2373																		
	14.0		100	cast alum.alloy: Si-content >10%	G-ALSi10Mg / 3.2381																		
H	15.0	1400		hardened steels < 45 HRC																			
	16.0	1800		hardened steels > 45 HRC																			




1.  **Starting on uneven surfaces (cast surfaces)**
  - depending on the quality of the surface or when spot drilling, reduce the feed

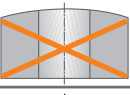
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2.  **Starting on angled surfaces**
  - spot face surface before starting bore

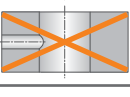
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3.  **Angled bore exit**
  - reduce feed by 50 % in the exit area

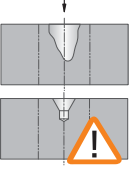
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4.  **Starting on cambered surfaces**
  - not possible

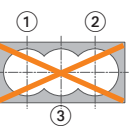
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5.  **Drilling through a cross bore**
  - not possible

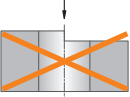
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6.  **Starting on a groove or large centering bore**
  - end-face the seam or centre beforehand where applicable (diameter min. 0.1 mm greater than drill diameter)
  - possible under certain conditions. Reduce feed where necessary


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7.  **Drilling a chamfer**
  - not possible

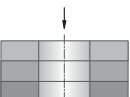
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8.  **Starting on an edge**
  - not possible (start point must be flat)

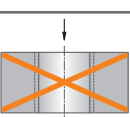
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9.  **Starting on a welded seam**
  - spot face surface before starting bore


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10.  **Drilling through stacked plates**
  - possible in principle
  - good workpiece clamping required
  - avoid large spaces between elements

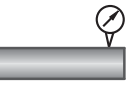
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11.  **Roughing**
  - not possible

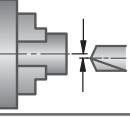
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12.  **Coolant**
  - internal coolant supply min. 5 bar

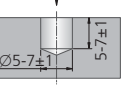
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13.  **Rotating application**
  - max. concentricity in rotating application 0.05 mm

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14.  **Stationary application**
  - max. offset in stationary application 0.025 mm

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15.  **Basic body from 5xD: for the material group 1.0**
  - basic body from 5xD: for the material group 1.0

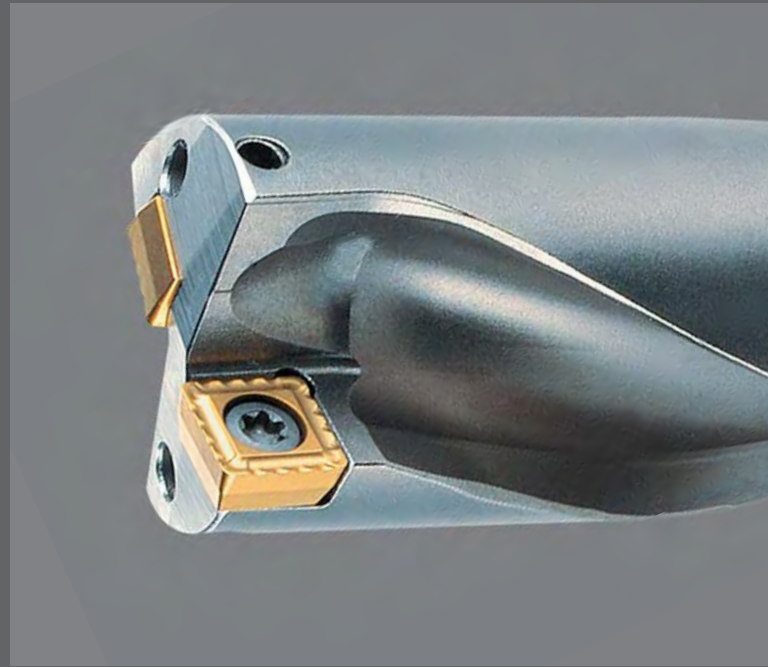


The KOMET KUB Quatron® is supplied as standard in drilling depths up to 3xD with combination shank DIN 6536 HE and DIN 6595 and also with ABS 50 connection.

A high overall rigidity with square inserts guarantee dimensional stability and accurate drilling with the KOMET KUB Quatron® at high feed speeds.

The four cutting edges on each insert make the KOMET KUB Quatron® totally economic. The latest coatings combined with tough, strong substrates reduce friction and also ensure maximum tool life.

The KUB Quatron® from KOMET®, which has already been successfully established in extreme technical situations such as for interrupted cuts, angled castings and rolling skins, is now available with the new insert technology -21 and -03 system.



### BENEFITS for you:

- High stability and economy by using square inserts
- Free flow of chips and no wear on the tool body because of the special surface treatment
- Can be used for difficult drilling conditions such as cast angles, rolling skin or interrupted cut
- Excellent bore quality with no withdrawal grooves
- Maximum tool life with four cutting edges made up of specific substrates and coatings
- Same insert internally and externally same coating, same locking screw
- Intermediate sizes can be supplied upon request

### Insert geometry 21:

Consisting of ultra fine grain carbide with highly positive top rake, clearly reduced cutting edge rounding and a new type of coating, it has been possible to halve cutting forces compared to previous versions.

This reduces the stress on machine and on workpiece, which allows significantly higher cutting parameters and, as a result, increases in productivity.

Geometry 21 was developed specifically for materials that produce long chips and for stainless steels. However, this is also very well suited to universal use in steel and for aluminium






**KOMET KUB Quatron®** Page
**ABS® Connection**

R.H. cutting	
Drilling depth 2xD, 3xD – Ø 0.562 - 2.500 inch	42 – 45
Drilling depth 2xD, 3xD – Ø 14 - 65 mm	46 – 49

**Cylindrical Shank (combination shank)**

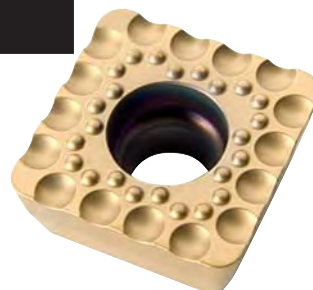
R.H. cutting	
Drilling depth 2xD, 3xD – Ø 0.562 - 1.750 inch	50 – 53
Drilling depth 2xD, 3xD – Ø 14 - 44 mm	54 – 57

**Technical Notes** 58 – 59

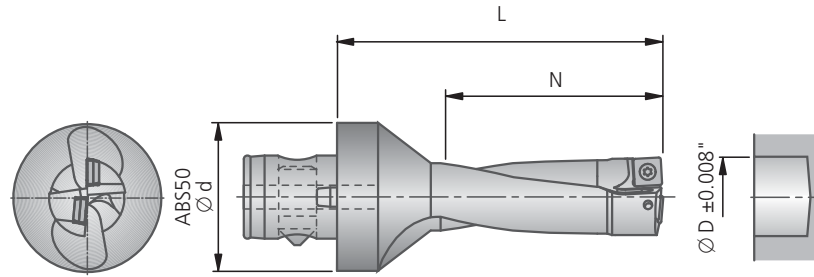
Guideline values for solid drilling

**Technical Information** 60 – 61
**Alternative Inserts** 62
**Problems → Causes → Solutions** 63
**Milling Cartridge** Chapter 6
**Insert geometry 03:**

Generally suitable for all steels, in particular for long-chipping steel materials and stainless steels. The SOEX indexable insert topography is predestined for use in long-chipping materials, and, thanks to its optimum chip formation, ensures reliable removal of chips, even with high L/D ratios.



Insert Drill with ABS® Connection, R.H. cutting



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L		Order No.	N	L	
0.562	0.581	50	U10 71432	1.181	2.559	0.99	U11 51432	1.772	3.150	1.04
0.593	0.612	50	U10 71510	1.260	2.638	1.01	U11 51510	1.890	3.268	1.04
0.625	0.644	50	U10 71590	1.260	2.638	1.01	U11 51590	1.890	3.268	1.04
0.656	0.675	50	U10 71670	1.339	2.717	1.01	U11 51670	2.008	3.386	1.06
0.687	0.706	50	U10 71750	1.417	2.795	1.04	U11 51750	2.126	3.504	1.06
0.703	0.722	50	U10 71790	1.417	2.795	1.04	U11 51790	2.126	3.504	1.08
0.718	0.737	50	U10 71820	1.496	2.874	1.04	U11 51820	2.244	3.622	1.08
0.750	0.769	50	U10 71910	1.575	2.953	1.06	U11 51910	2.362	3.740	1.10
0.765	0.784	50	U10 71940	1.575	2.953	1.06	U11 51940	2.362	3.740	1.10
0.781	0.800	50	U10 71980	1.575	2.953	1.08	U11 51980	2.362	3.740	1.13
0.812	0.831	50	U10 72060	1.654	3.031	1.08	U11 52060	2.480	3.858	1.15
0.828	0.847	50	U10 72100	1.654	3.031	1.10	U11 52100	2.480	3.858	1.15
0.843	0.862	50	U10 72140	1.732	3.110	1.12	U11 52140	2.598	3.976	1.16
0.875	0.894	50	U10 72220	1.811	3.189	1.13	U11 52220	2.717	4.094	1.23
0.906	0.925	50	U10 72300	1.811	3.189	1.15	U11 52300	2.717	4.094	1.30
0.937	0.956	50	U10 72380	1.890	3.268	1.15	U11 52380	2.835	4.213	1.32
0.968	0.987	50	U10 72460	1.969	3.346	1.19	U11 52460	2.953	4.331	1.32
0.985	1.004	50	U10 72500	1.969	3.346	1.19	U11 52500	2.953	4.331	1.35
1.000	1.019	50	U10 72540	2.047	3.425	1.21	U11 52540	3.071	4.449	1.35
1.031	1.051	50	U10 72620	2.126	3.504	1.23	U11 52620	3.189	4.567	1.39
1.062	1.082	50	U10 72700	2.126	3.504	1.27	U11 52700	3.189	4.567	1.39
1.109	1.129	50	U10 72820	2.283	3.661	1.32	U11 52820	3.425	4.803	1.43
1.125	1.145	50	U10 72860	2.283	3.661	1.34	U11 52860	3.425	4.803	1.47
1.156	1.176	50	U10 72940	2.323	3.74	1.34	U11 52940	3.543	4.921	1.47
1.187	1.207	50	U10 73020	2.441	4.015	1.39	U11 53020	3.661	5.236	1.52
1.218	1.238	50	U10 73090	2.441	4.016	1.46	U11 53090	3.661	5.236	1.74
1.250	1.270	50	U10 73180	2.520	3.094	1.50	U11 53180	3.780	5.354	1.74
1.281	1.301	50	U10 73250	2.598	4.173	1.54	U11 53250	3.898	5.472	1.74

For other diameters see following page.

Any intermediate dimensions from Ø 0.562" – 1.281" are available on request.

Supply includes: KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

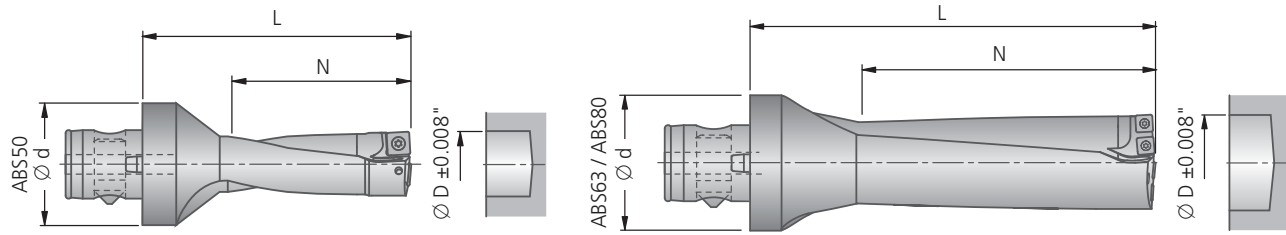
● very good ○ good ◐ possible: see technical notes, pages 60-61 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽▽ Size	Insert  -01 -21 ISO-Code	Qty	for workpiece material 	Clamping screw 	Starting torque	Screwdriver 
				Order No. Description	Order No. Description	
W83 13010.048425 W83 13210.042730 W83 13000.017615 W83 13210.047710 W83 13000.017935	SOEX 050204-01 BK8425 SOEX 050204-21 BK2730 ⚠ SOEX 050204-01 BK7615 SOEX 050204-21 BK7710 SOEX 050204-01 BK7935	2		N00 56041 S/M2x4.3-6IP	5.5 in-lbs	L05 00810 6IP
W83 18010.068425 W83 18210.062730 W83 18000.097615 W83 18210.067710 W83 18000.097935	SOEX 060306-01 BK8425 SOEX 060306-21 BK2730 ⚠ SOEX 060306-01 BK7615 SOEX 060306-21 BK7710 SOEX 060306-01 BK7935	2		N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP
W83 23010.088425 W83 23210.082730 W83 23000.017615 W83 23210.087710 W83 23000.017935	SOEX 07T308-01 BK8425 SOEX 07T308-21 BK2730 ⚠ SOEX 07T308-01 BK7615 SOEX 07T308-21 BK7710 SOEX 07T308-01 BK7935	2		N00 57571 S/M2.5x6.3-8IP	11.0 in-lbs	L05 00830 8IP
W83 32010.088425 W83 32210.082730 W83 32000.157615 W83 32210.087710 W83 32000.157935	SOEX 090408-01 BK8425 SOEX 090408-21 BK2730 ⚠ SOEX 090408-01 BK7615 SOEX 090408-21 BK7710 SOEX 090408-01 BK7935	2		N00 57261 S3575-15IP	25.0 in-lbs	L05 00860 15IP



Note: Only use this insert with KUB Quatron® as an external cutting edge:  
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminum).

1



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L	lbs	Order No.	N	L	lbs
1.312	1.332	50	U10 73330	2.677	4.251	1.60	U11 53330	4.016	5.591	1.76
1.328	1.348	50	U10 73370	2.677	4.251	1.60	U11 53370	4.016	5.591	1.85
1.375	1.395	50	U10 73490	2.756	4.330	1.65	U11 53490	4.134	5.709	1.87
1.406	1.426	50	U10 73570	2.835	4.409	1.70	U11 53570	4.252	5.827	1.96
1.437	1.457	50	U10 73650	2.913	4.881	1.76	U11 53650	4.370	6.339	2.05
1.469	1.489	50	U10 73730	2.992	4.960	1.94	U11 53730	4.488	6.457	2.29
1.500	1.520	50	U10 73810	3.071	5.039	2.03	U11 53810	4.606	6.575	2.38
1.531	1.551	50	U10 73890	3.071	5.039	2.09	U11 53890	4.606	6.575	2.49
1.562	1.582	50	U10 73970	3.150	5.118	2.16	U11 53970	4.724	6.693	2.58
1.625	1.645	50	U10 74130	3.307	5.275	2.25	U11 54130	4.961	6.929	2.58
1.656	1.676	50	U10 74210	3.386	5.354	2.33	U11 54210	5.079	7.047	2.80
1.687	1.707	50	U10 74290	3.386	5.354	2.43	U11 54290	5.079	7.047	2.93
1.750	1.770	50	U10 74450	3.465	5.433	2.51	U11 54450	5.197	7.165	3.10
1.781	1.801	63	U10 84520	3.622	5.787	3.24	U12 34520	5.433	7.598	3.81
1.812	1.832	63	U10 84600	3.622	5.787	3.33	U12 34600	5.433	7.598	3.97
1.875	1.895	63	U10 84760	3.780	5.945	3.53	U12 34760	5.669	7.835	4.26
1.937	1.957	63	U10 84920	3.937	6.102	3.64	U12 34920	5.906	8.071	4.41
1.975	1.995	63	U10 85020	4.016	6.181	3.75	U12 35020	6.024	8.189	4.59
2.000	2.020	63	U10 85080	4.016	6.181	3.86	U12 35080	6.024	8.189	4.74
2.062	2.082	63	U10 85240	4.173	6.339	3.99	U12 35240	6.260	8.425	4.94
2.125	2.145	63	U10 85400	4.252	6.417	4.15	U12 35400	6.378	8.543	5.18
2.165	2.185	80	U10 95500	4.331	6.496	5.67	U12 45500	6.496	8.661	6.77
2.203	2.223	80	U10 95600	4.409	6.575	5.82	U12 45600	6.614	8.780	6.97
2.250	2.270	80	U10 95720	4.567	6.732	5.95	U12 45720	6.850	9.016	7.19
2.281	2.301	80	U10 95790	4.567	6.732	6.09	U12 45790	6.850	9.016	7.39
2.375	2.395	80	U10 96030	4.803	6.969	6.46	U12 46030	7.205	9.370	7.92
2.437	2.457	80	U10 96190	4.882	7.047	6.79	U12 46190	7.323	9.488	8.40
2.500	2.520	80	U10 96350	5.039	7.205	7.19	U12 46350	7.559	9.724	8.97

Any intermediate dimensions from Ø 1.312" – 2.500" are available on request.

Supply includes: KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

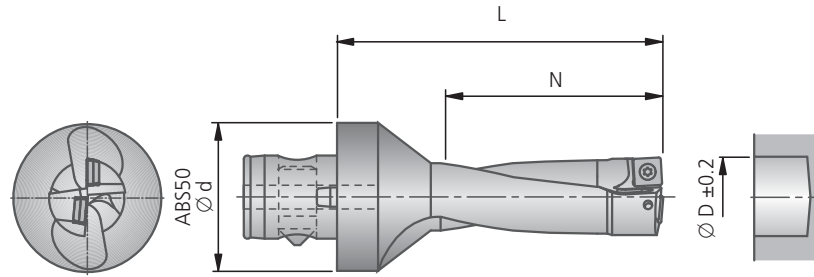


L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

● very good ○ good ○ possible: see technical notes, pages 60-61 ✕ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -21 ISO-Code	Qty	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description	Order No. Description	
W83 44010.088425 W83 44210.082730 W83 44000.187615 W83 44210.087710 W83 44000.187935	SOEX 120508-01 BK8425 SOEX 120508-21 BK2730 ⚠ SOEX 120508-01 BK7615 SOEX 120508-21 BK7710 SOEX 120508-01 BK7935	2		N00 57301 S45100-20IP	40.0 in-lbs	L05 00870 20IP
W83 23010.088425 W83 23210.082730 W83 23000.017615 W83 23210.087710 W83 23000.017935	SOEX 07T308-01 BK8425 SOEX 07T308-21 BK2730 ⚠ SOEX 07T308-01 BK7615 SOEX 07T308-21 BK7710 SOEX 07T308-01 BK7935	4		N00 57571 S/M2.5x6.3-8IP	11.0 in-lbs	L05 00830 8IP
W83 32010.088425 W83 32210.082730 W83 32000.157615 W83 32210.087710 W83 32000.157935	SOEX 090408-01 BK8425 SOEX 090408-21 BK2730 ⚠ SOEX 090408-01 BK7615 SOEX 090408-21 BK7710 SOEX 090408-01 BK7935	4		N00 57261 S3575-15IP	25.0 in-lbs	L05 00860 15IP

⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:  
 SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminum).



Ø D	* max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L	kg	Order No.	N	L	kg
14.0	14.5	50	U10 71402	28	63	0.45	U11 51402	42	77	0.47
15.0	15.5	50	U10 71502	30	65	0.46	U11 51502	45	80	0.47
15.5	16.0	50	U10 71550	32	67	0.46	U11 51550	48	83	0.47
16.0	16.5	50	U10 71600	32	67	0.46	U11 51600	48	83	0.48
16.5	17.0	50	–				U11 51650	51	86	0.48
17.0	17.5	50	U10 71700	34	69	0.47	U11 51700	51	86	0.48
17.5	18.0	50	U10 71750	36	71	0.47	U11 51750	54	89	0.49
18.0	18.5	50	U10 71800	36	71	0.47	U11 51800	54	89	0.49
18.5	19.0	50	U10 71850	38	73	0.48	U11 51850	57	92	0.50
19.0	19.5	50	U10 71900	38	73	0.48	U11 51900	57	92	0.48
19.5	20.0	50	U10 71950	40	75	0.49	U11 51950	60	95	0.51
20.0	20.5	50	U10 72000	40	75	0.49	U11 52000	60	95	0.52
20.5	21.0	50	U10 72050	42	77	0.5	U11 52050	63	98	0.52
21.0	21.5	50	U10 72100	42	77	0.5	U11 52100	63	98	0.53
22.0	22.5	50	U10 72200	44	79	0.51	U11 52200	66	101	0.52
22.5	23.0	50	U10 72250	46	81	0.52	U11 52250	69	104	0.56
23.0	23.5	50	U10 72300	46	81	0.52	U11 52300	69	104	0.59
24.0	24.5	50	U10 72400	48	83	0.54	U11 52400	72	107	0.60
24.5	25.0	50	U10 72450	50	85	0.54	U11 52450	75	110	0.60
25.0	25.5	50	U10 72500	50	85	0.55	U11 52500	75	110	0.60
26.0	26.5	50	U10 72600	52	87	0.56	U11 52600	78	113	0.61
26.5	27.0	50	U10 72650	54	89	0.58	U11 52650	81	116	0.63
27.0	27.5	50	U10 72700	54	89	0.58	U11 52700	81	116	0.63
28.0	28.5	50	U10 72800	56	91	0.60	U11 52800	84	119	0.65
28.5	29.0	50	U10 72850	58	93	0.61	U11 52850	87	122	0.67
29.0	29.5	50	U10 72900	58	93	0.61	U11 52900	87	122	0.67
29.5	30.0	50	U10 72950	59	95	0.63	U11 52950	88.5	125	0.69
30.0	30.5	50	U10 73000	60	100	0.66	U11 53000	90	130	0.79
31.0	31.5	50	U10 73100	62	102	0.68	U11 53100	93	133	0.79
31.5	32.0	50	U10 73150	64	104	0.70	U11 53150	96	136	0.78
32.0	32.5	50	U10 73200	64	104	0.70	U11 53200	96	136	0.80
33.0	33.5	50	U10 73300	66	106	0.73	U11 53300	99	139	0.84

For other diameters see following page.

Any intermediate dimensions from Ø 14 – 33 mm and inch dimensions are available on request.

**Supply includes:** KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

Patent applied for inside and outside Germany (ABS) and patent applications (KUB Quatron)



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

● very good ○ good ○ possible: see technical notes, pages 60-61 ✕ not possible

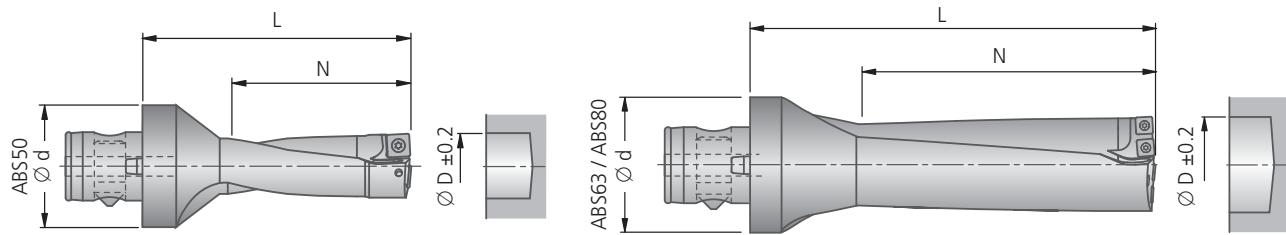
Basic recommendation				Assembly parts		Accessories
Order No. ▽▽ Size	Insert  ISO-Code	Piece	for workpiece material 	Clamping screw	Starting torque	Screwdriver
				 Order No. Description		 Order No. Description
W83 13010.048425 W83 13210.042730 W83 13000.017615 W83 13210.047710 W83 13000.017935	SOEX 050204-01 BK8425 SOEX 050204-21 BK2730 ⚠ SOEX 050204-01 BK7615 SOEX 050204-21 BK7710 SOEX 050204-01 BK7935	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W83 18010.068425 W83 18210.062730 W83 18000.097615 W83 18210.067710 W83 18000.097935	SOEX 060306-01 BK8425 SOEX 060306-21 BK2730 ⚠ SOEX 060306-01 BK7615 SOEX 060306-21 BK7710 SOEX 060306-01 BK7935	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W83 23010.088425 W83 23210.082730 W83 23000.017615 W83 23210.087710 W83 23000.017935	SOEX 07T308-01 BK8425 SOEX 07T308-21 BK2730 ⚠ SOEX 07T308-01 BK7615 SOEX 07T308-21 BK7710 SOEX 07T308-01 BK7935	2		N00 57571 S/M2.5x6.3-8IP	1.28 Nm	L05 00830 8IP
W83 32010.088425 W83 32210.082730 W83 32000.157615 W83 32210.087710 W83 32000.157935	SOEX 090408-01 BK8425 SOEX 090408-21 BK2730 ⚠ SOEX 090408-01 BK7615 SOEX 090408-21 BK7710 SOEX 090408-01 BK7935	2		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP



Note: Only use this insert with KUB Quatron® as an external cutting edge:

SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

1



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L	kg	Order No.	N	L	kg
34.0	34.5	50	U10 73400	68	108	0.75	U11 53400	102	142	0.85
35.0	35.5	50	U10 73500	70	110	0.77	U11 53500	105	145	0.89
36.0	36.5	50	U10 73600	72	112	0.8	U11 53600	108	148	0.93
37.0	37.5	50	U10 73700	74	124	0.88	U11 53700	111	161	1.04
37.5	38.0	50	U10 73750	76	126	0.9	U11 53750	114	164	1.02
38.0	38.5	50	U10 73800	76	126	0.92	U11 53800	114	164	1.08
39.0	39.5	50	U10 73900	78	128	0.95	U11 53900	117	167	1.13
39.5	40.0	50	U10 73950	80	130	0.97	U11 53950	120	170	1.14
40.0	40.5	50	U10 74000	80	130	0.98	U11 54000	120	170	1.17
41.0	41.5	50	U10 74100	82	132	1.02	U11 54100	123	173	1.22
42.0	42.5	50	U10 74200	84	134	1.06	U11 54200	126	176	1.27
43.0	43.5	50	U10 74300	86	136	1.1	U11 54300	129	179	1.33
44.0	44.5	50	U10 74400	88	138	1.14	U11 54400	132	182	1.41
45.0	45.5	63	U10 84500	90	145	1.47	U12 34500	135	190	1.73
46.0	46.5	63	U10 84600	92	147	1.51	U12 34600	138	193	1.8
47.0	47.5	63	U10 84700	94	149	1.55	U12 34700	141	196	1.86
48.0	48.5	63	U10 84800	96	151	1.6	U12 34800	144	199	1.93
49.0	49.5	63	U10 84900	98	153	1.65	U12 34900	147	202	2.0
50.0	50.5	63	U10 85000	100	155	1.7	U12 35000	150	205	2.08
51.0	51.5	63	U10 85100	102	157	1.75	U12 35100	153	208	2.15
52.0	52.5	63	U10 85200	104	159	1.81	U12 35200	156	211	2.24
53.0	53.5	63	U10 85300	106	161	1.82	U12 35300	159	214	2.27
54.0	54.5	63	U10 85400	108	163	1.88	U12 35400	162	217	2.35
55.0	55.5	80	U10 95500	110	165	2.57	U12 45500	165	220	3.07
56.0	56.5	80	U10 95600	112	167	2.64	U12 45600	168	223	3.16
57.0	57.5	80	U10 95700	114	169	2.7	U12 45700	171	226	3.26
58.0	58.5	80	U10 95800	116	171	2.76	U12 45800	174	229	3.35
59.0	59.5	80	U10 95900	118	173	2.83	U12 45900	177	232	3.45
60.0	60.5	80	U10 96000	120	175	2.93	U12 46000	180	235	3.59
61.0	61.5	80	U10 96100	122	177	3.01	U12 46100	183	238	3.6
62.0	62.5	80	U10 96200	124	179	3.08	U12 46200	186	241	3.81
63.0	63.5	80	U10 96300	126	181	3.18	U12 46300	189	244	3.95
64.0	64.5	80	U10 96400	128	183	3.26	U12 46400	192	247	4.07
65.0	65.5	80	U10 96500	130	185	3.35	U12 46500	195	250	4.2

Any intermediate dimensions from Ø 34 – 65 mm and inch dimensions are available on request.

Supply includes: KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

Patent applied for inside and outside Germany (ABS) and patent applications (KUB Quatron)





L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

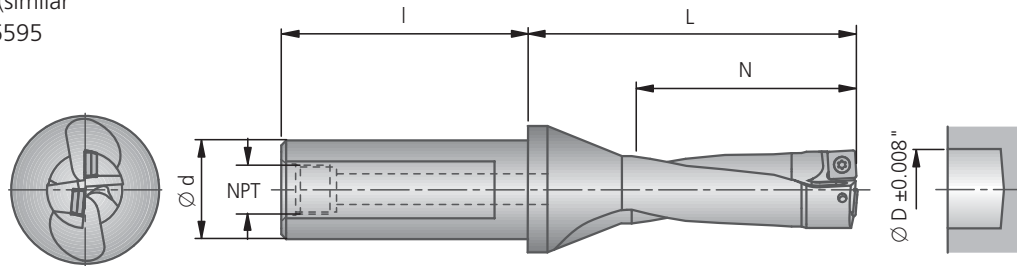
● very good ○ good ○ possible: see technical notes, pages 60-61 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -21 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W83 44010.088425 W83 44210.082730 W83 44000.187615 W83 44210.087710 W83 44000.187935	SOEX 120508-01 BK8425 SOEX 120508-21 BK2730 ⚠ SOEX 120508-01 BK7615 SOEX 120508-21 BK7710 SOEX 120508-01 BK7935	2		N00 57301 S45100-20IP	6.25 Nm	L05 00870 20IP
W83 23010.088425 W83 23210.082730 W83 23000.017615 W83 23210.087710 W83 23000.017935	SOEX 07T308-01 BK8425 SOEX 07T308-21 BK2730 ⚠ SOEX 07T308-01 BK7615 SOEX 07T308-21 BK7710 SOEX 07T308-01 BK7935	4		N00 57571 S/M2.5x6.3-8IP	1.28 Nm	L05 00830 8IP
W83 32010.088425 W83 32210.082730 W83 32000.157615 W83 32210.087710 W83 32000.157935	SOEX 090408-01 BK8425 SOEX 090408-21 BK2730 ⚠ SOEX 090408-01 BK7615 SOEX 090408-21 BK7710 SOEX 090408-01 BK7935	4		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP

⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:  
 SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank  
(combination shank)  
DIN 6535 HE (similar  
1835 E) and 6595



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2xD				3xD			
			Order No.	N	L	NPT	Order No.	N	L	NPT
0.562	0.581	0.750X2.250	U11 21435	1.181	2.126	1/8	U12 01434	1.772	2.717	1/8
0.593	0.612	0.750X2.250	U11 21513	1.260	2.205		U12 01512	1.890	2.835	
0.625	0.644	0.750X2.250	U11 21593	1.260	2.205		U12 01592	1.890	2.835	
0.656	0.675	0.750X2.250	U11 21673	1.339	2.284		U12 01672	2.008	2.953	
0.687	0.706	0.750X2.250	U11 21753	1.417	2.362		U12 01752	2.126	3.071	
0.703	0.722	1.000X3.250	U11 31793	1.417	2.362	1/8	U12 11792	2.126	3.071	1/8
0.718	0.737	1.000X3.250	U11 31823	1.496	2.441		U12 11822	2.244	3.189	
0.750	0.769	1.000X3.250	U11 31913	1.575	2.520		U12 11912	2.362	3.307	
0.765	0.784	1.000X3.250	U11 31943	1.575	2.520		U12 11942	2.362	3.307	
0.781	0.800	1.000X3.250	U11 31983	1.575	2.520		U12 11982	2.362	3.307	
0.812	0.831	1.000X3.250	U11 32063	1.654	2.599		U12 12062	2.480	3.425	
0.828	0.847	1.000X3.250	U11 32103	1.732	2.677		U12 12102	2.598	3.543	
0.843	0.862	1.000X3.250	U11 32143	1.732	2.677		U12 12142	2.598	3.543	
0.875	0.894	1.000X3.250	U11 32223	1.811	2.756		U12 12222	2.717	3.662	
0.906	0.925	1.000X3.250	U11 32303	1.890	2.835		U12 12302	2.835	3.780	
0.937	0.956	1.000X3.250	U11 32382	1.890	2.835	1/8	U12 12382	2.835	3.780	1/8
0.968	0.987	1.000X3.250	U11 32462	1.969	2.914		U12 12462	2.953	3.898	
0.985	1.004	1.000X3.250	U11 32502	1.969	2.914		U12 12502	2.953	3.898	
1.000	1.019	1.000X3.250	U11 32542	2.047	2.992		U12 12542	3.071	4.016	
0.937	0.956	1.250X3.250	U11 42383	1.890	2.835		U12 22382	2.835	3.780	
0.968	0.987	1.250X3.250	U11 42463	1.969	2.914	1/4	U12 22462	2.953	3.898	1/4
0.985	1.004	1.250X3.250	U11 42503	1.969	2.914		U12 22502	3.071	4.016	
1.000	1.019	1.250X3.250	U11 42543	2.047	2.992		U12 22542	3.071	4.016	
1.031	1.050	1.250X3.250	U11 42622	2.126	3.071		U12 22622	3.189	4.134	
1.062	1.081	1.250X3.250	U11 42702	2.126	3.071		U12 22702	3.189	4.134	

For other diameters see following page.

Any intermediate dimensions from Ø 0.562" – 1.062" are available on request.

Supply includes: KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

● very good ○ good ○ possible: see technical notes, pages 60-61 ✕ not possible

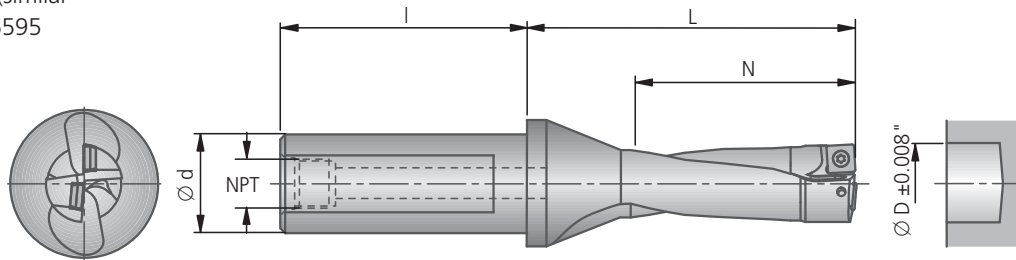
Basic recommendation				Assembly parts		Accessories
Order No. ▽▽ Size	Insert  -01 -21 ISO-Code	Qty	for workpiece material  P M K N S H	Clamping screw 	Starting torque	Screwdriver 
				Order No. Description	Order No. Description	
W83 13010.048425 W83 13210.042730 W83 13000.017615 W83 13210.047710 W83 13000.017935	SOEX 050204-01 BK8425 SOEX 050204-21 BK2730 ⚠ SOEX 050204-01 BK7615 SOEX 050204-21 BK7710 SOEX 050204-01 BK7935	2		N00 56041 S/M2x4.3-6IP	5.5 in-lbs	L05 00810 6IP
W83 18010.068425 W83 18210.062730 W83 18000.097615 W83 18210.067710 W83 18000.097935	SOEX 060306-01 BK8425 SOEX 060306-21 BK2730 ⚠ SOEX 060306-01 BK7615 SOEX 060306-21 BK7710 SOEX 060306-01 BK7935	2		N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP
W83 23010.088425 W83 23210.082730 W83 23000.017615 W83 23210.087710 W83 23000.017935	SOEX 07T308-01 BK8425 SOEX 07T308-21 BK2730 ⚠ SOEX 07T308-01 BK7615 SOEX 07T308-21 BK7710 SOEX 07T308-01 BK7935	2		N00 57571 S/M2.5x6.3-8IP	11.0 in-lbs	L05 00830 8IP



Note: Only use this insert with KUB Quatron® as an external cutting edge:  
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminum).

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

- cylindrical shank (combination shank)
- DIN 6535 HE (similar 1835 E) and 6595



Ø D	max. diameter with offset	Cylindrical shank Ø d × l	2×D				3×D			
			Order No.	N	L	NPT	Order No.	N	L	NPT
1.109	1.129	1.250X3.250	U11 42822	2.283	3.228	1/4	U12 22822	3.425	4.370	1/4
1.125	1.145	1.250X3.250	U11 42862	2.283	3.228		U12 22862	3.425	4.370	
1.156	1.176	1.250X3.250	U11 42942	2.323	3.307		U12 22942	3.543	4.488	
1.187	1.207	1.250X3.250	U11 43022	2.441	3.582		U12 23022	3.661	4.803	
1.218	1.238	1.250X3.250	U11 43092	2.441	3.582		U12 23092	3.661	4.803	
1.250	1.270	1.250X3.250	U11 43182	2.520	3.661		U12 23182	3.780	4.921	
1.281	1.301	1.250X3.250	U11 43252	2.598	3.740		U12 23252	3.898	5.039	
1.312	1.332	1.250X3.250	U11 43332	2.677	3.818	1/4	U12 23332	4.016	5.157	1/4
1.328	1.348	1.250X3.250	U11 43372	2.677	3.818		U12 23372	4.016	5.157	
1.375	1.395	1.250X3.250	U11 43492	2.756	3.897		U12 23492	4.134	5.276	
1.406	1.426	1.250X3.250	U11 43572	2.835	3.976		U12 23572	4.252	5.394	
1.437	1.457	1.250X3.250	U11 43652	2.913	4.448		U12 23652	4.370	5.906	
1.469	1.489	1.250X3.250	U11 43732	2.992	4.527		U12 23732	4.488	6.024	
1.500	1.520	1.250X3.250	U11 43812	3.071	4.606		1/4	U12 23812	4.606	
1.531	1.551	1.250X3.250	U11 43892	3.071	4.606	U12 23892		4.606	6.142	
1.562	1.582	1.250X3.250	U11 43972	3.150	4.685	U12 23972		4.724	6.260	
1.625	1.645	1.250X3.250	U11 44132	3.307	4.842	U12 24132		4.961	6.496	
1.656	1.676	1.250X3.250	U11 44212	3.386	4.921	U12 24212		5.079	6.614	
1.687	1.707	1.250X3.250	U11 44292	3.386	4.921	U12 24292		5.079	6.614	
1.750	1.770	1.250X3.250	U11 44452	3.465	5.000	U12 24452		5.197	6.732	

Any intermediate dimensions from Ø 1.109" – 1.750" are available on request.

### Supply includes:

KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

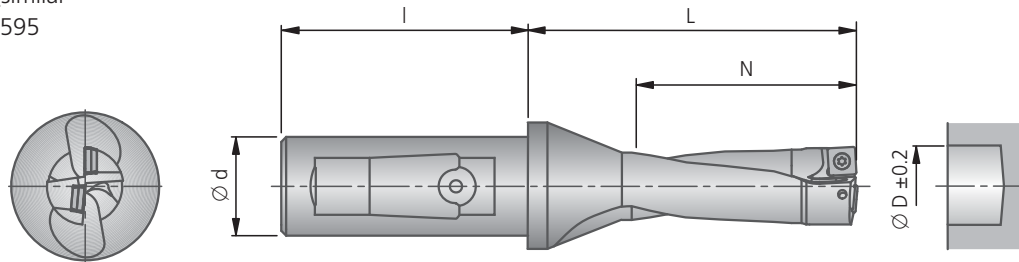
● very good ○ good ○ possible: see technical notes, pages 60-61 ✕ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  ISO-Code	Qty	for workpiece material 	Clamping screw	Starting torque	Screwdriver
				 Order No. Description		 Order No. Description
W83 32010.088425 W83 32210.082730 W83 32000.157615 W83 32210.087710 W83 32000.157935	SOEX 090408-01 BK8425 SOEX 090408-21 BK2730 ⚠ SOEX 090408-01 BK7615 SOEX 090408-21 BK7710 SOEX 090408-01 BK7935	2		N00 57261 S3575-15IP	25.0 in-lbs	L05 00860 15IP
W83 44010.088425 W83 44210.082730 W83 44000.187615 W83 44210.087710 W83 44000.187935	SOEX 120508-01 BK8425 SOEX 120508-21 BK2730 ⚠ SOEX 120508-01 BK7615 SOEX 120508-21 BK7710 SOEX 120508-01 BK7935	2		N00 57301 S45100-20IP	40.0 in-lbs	L05 00870 20IP

Note: Only use this insert with KUB Quatron® as an external cutting edge:  
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminum).

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank  
(combination shank)  
DIN 6535 HE (similar  
1835 E) and 6595



Ø D	max. diameter with offset	Cylindrical shank Ø d × l	2×D				3×D			
			Order No.	N	L	kg	Order No.	N	L	kg
14.0	14.5	20 × 50	U10 01402	28	52	0.17	U11 61402	42	66	0.18
15.0	15.5	20 × 50	U10 01502	30	54	0.18	U11 61502	45	69	0.19
15.5	16.0	20 × 50	U10 01550	32	56	0.18	U11 61550	48	72	0.19
16.0	16.5	20 × 50	U10 01600	32	56	0.19	U11 61600	48	72	0.20
16.5	17.0	20 × 50	–				U11 61650	51	75	0.20
17.0	17.5	20 × 50	U10 01700	34	58	0.19	U11 61700	51	75	0.20
17.5	18.0	25 × 56	U10 11750	36	60	0.27	U11 71750	54	78	0.28
18.0	18.5	25 × 56	U10 11800	36	60	0.27	U11 71800	54	78	0.28
18.5	19.0	25 × 56	U10 11850	38	62	0.27	U11 71850	57	81	0.29
19.0	19.5	25 × 56	U10 11900	38	62	0.28	U11 71900	57	81	0.29
19.5	20.0	25 × 56	U10 11950	40	64	0.29	U11 71950	60	84	0.30
20.0	20.5	25 × 56	U10 12000	40	64	0.29	U11 72000	60	84	0.31
20.5	21.0	25 × 56	U10 12050	42	66	0.30	U11 72050	63	87	0.31
21.0	21.5	25 × 56	U10 12100	42	66	0.30	U11 72100	63	87	0.32
22.0	22.5	25 × 56	U10 12200	44	68	0.31	U11 72200	66	90	0.33
22.5	23.0	25 × 56	U10 12250	46	70	0.31	U11 72250	69	93	0.34
23.0	23.5	25 × 56	U10 12300	46	70	0.32	U11 72300	69	93	0.35
24.0	24.5	32 × 60	U10 22400	48	72	0.51	U11 82400	72	96	0.55
24.5	25.0	32 × 60	U10 22450	50	74	0.52	U11 82450	75	99	0.56
25.0	25.5	32 × 60	U10 22500	50	74	0.52	U11 82500	75	99	0.56
26.0	26.5	32 × 60	U10 22600	52	76	0.54	U11 82600	78	102	0.58
26.5	27.0	32 × 60	U10 22650	54	78	0.55	U11 82650	81	105	0.60
27.0	27.5	32 × 60	U10 22700	54	78	0.56	U11 82700	81	105	0.61
28.0	28.5	32 × 60	U10 22800	56	80	0.57	U11 82800	84	108	0.63
28.5	29.0	32 × 60	U10 22850	58	82	0.58	U11 82850	87	111	0.65
29.0	29.5	32 × 60	U10 22900	58	82	0.59	U11 82900	87	111	0.66
29.5	30.0	32 × 60	U10 22950	59	84	0.60	U11 82950	88.5	114	0.67
30.0	30.5	32 × 60	U10 23000	60	89	0.63	U11 83000	90	119	0.70
31.0	31.5	32 × 60	U10 23100	62	91	0.65	U11 83100	93	122	0.73
31.5	32.0	32 × 60	U10 23150	64	93	0.66	U11 83150	96	125	0.75
32.0	32.5	32 × 60	U10 23200	64	93	0.67	U11 83200	96	125	0.76
33.0	33.5	32 × 60	U10 23300	66	95	0.73	U11 83300	99	128	0.83
		40 × 68	U10 33300	66	95	1.02	U11 93300	99	128	1.12

For other diameters see following page.

Any intermediate dimensions from Ø 14 – 33 mm and inch dimensions are available on request.

Supply includes: KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

Patent applications (KUB Quatron)

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

● very good ○ good ○ possible: see technical notes, pages 60-61 ✕ not possible

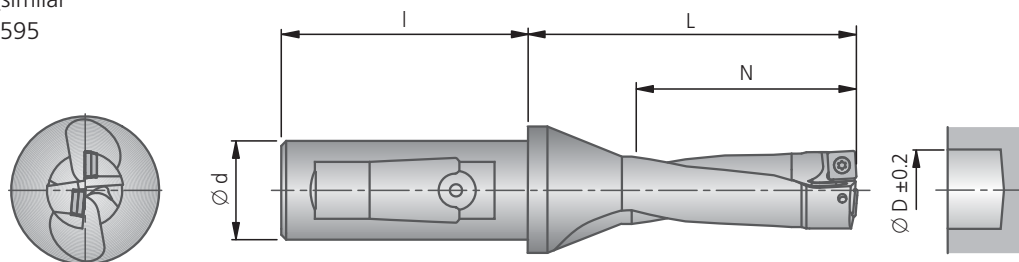
Basic recommendation				Assembly parts		Accessories
Order No. ▽▽ Size	Insert  -01 -21 ISO-Code	Piece	for workpiece material  P M K N S H	Clamping screw	Starting torque	Screwdriver
				 Order No. Description	 Order No. Description	 Order No. Description
W83 13010.048425 W83 13210.042730 W83 13000.017615 W83 13210.047710 W83 13000.017935	SOEX 050204-01 BK8425 SOEX 050204-21 BK2730 ⚠ SOEX 050204-01 BK7615 SOEX 050204-21 BK7710 SOEX 050204-01 BK7935	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W83 18010.068425 W83 18210.062730 W83 18000.097615 W83 18210.067710 W83 18000.097935	SOEX 060306-01 BK8425 SOEX 060306-21 BK2730 ⚠ SOEX 060306-01 BK7615 SOEX 060306-21 BK7710 SOEX 060306-01 BK7935	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W83 23010.088425 W83 23210.082730 W83 23000.017615 W83 23210.087710 W83 23000.017935	SOEX 07T308-01 BK8425 SOEX 07T308-21 BK2730 ⚠ SOEX 07T308-01 BK7615 SOEX 07T308-21 BK7710 SOEX 07T308-01 BK7935	2		N00 57571 S/M2.5x6.3-8IP	1.28 Nm	L05 00830 8IP
W83 32010.088425 W83 32210.082730 W83 32000.1561 W83 32210.087710 W83 32000.1579	SOEX 090408-01 BK8425 SOEX 090408-21 BK2730 ⚠ SOEX 090408-01 BK61 SOEX 090408-21 BK7710 SOEX 090408-01 BK79	2		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP

⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:  
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank  
(combination shank)  
DIN 6535 HE (similar  
1835 E) and 6595

1



Ø D	max. diameter with offset	Cylindrical shank Ø d × l	2×D				3×D			
			Order No.	N	L	kg	Order No.	N	L	kg
34.0	34.5	32 × 60	U10 23400	68	97	0.75	U11 83400	102	131	0.86
		40 × 68	U10 33400	68	97	1.04	U11 93400	102	131	1.15
35.0	35.5	32 × 60	U10 23500	70	99	0.78	U11 83500	105	134	0.89
		40 × 68	U10 33500	70	99	1.07	U11 93500	105	134	1.18
36.0	36.5	32 × 60	U10 23600	72	101	0.8	U11 83600	108	137	0.93
		40 × 68	U10 33600	72	101	1.09	U11 93600	108	137	1.22
37.0	37.5	32 × 60	U10 23700	74	113	0.89	U11 83700	111	150	1.03
		40 × 68	U10 33700	74	113	1.18	U11 93700	111	150	1.32
37.5	38.0	32 × 60	U10 23750	76	115	0.91	U11 83750	114	153	1.06
		40 × 68	U10 33750	76	115	1.2	U11 93750	114	153	1.35
38.0	38.5	32 × 60	U10 23800	76	115	0.92	U11 83800	114	153	1.07
		40 × 68	U10 33800	76	115	1.21	U11 93800	114	153	1.36
39.0	39.5	32 × 60	U10 23900	78	117	0.95	U11 83900	117	156	1.12
		40 × 68	U10 33900	78	117	1.24	U11 93900	117	156	1.41
39.5	40.0	32 × 60	U10 23950	80	119	0.97	U11 83950	120	159	1.15
		40 × 68	U10 33950	80	119	1.26	U11 93950	120	159	1.44
40.0	40.5	32 × 60	U10 24000	80	119	0.99	U11 84000	120	159	1.17
		40 × 68	U10 34000	80	119	1.28	U11 94000	120	159	1.46
41.0	41.5	32 × 60	U10 24100	82	121	1.02	U11 84100	123	162	1.22
		40 × 68	U10 34100	82	121	1.31	U11 94100	123	162	1.51
42.0	42.5	32 × 60	U10 24200	84	123	1.06	U11 84200	126	165	1.27
		40 × 68	U10 34200	84	123	1.35	U11 94200	126	165	1.56
43.0	43.5	32 × 60	U10 24300	86	125	1.1	U11 84300	129	168	1.33
		40 × 68	U10 34300	86	125	1.39	U11 94300	129	168	1.62
44.0	44.5	32 × 60	U10 24400	88	127	1.14	U11 84400	132	171	1.34
		40 × 68	U10 34400	88	127	1.43	U11 94400	132	171	1.63

Any intermediate dimensions from Ø 34 – 44 mm and inch dimensions are available on request.

Supply includes:

KUB Quatron® drill with assembly parts. Please order insert and accessories separately.



Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	●	●
3xD	●	●	●	●	●	●	●	●	●	●	●

● very good ● good ○ possible: see technical notes, pages 60-61 ✕ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -21 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W83 44010.088425 W83 44210.082730 W83 44000.187615 W83 44210.087710 W83 44000.187935	SOEX 120508-01 BK8425 SOEX 120508-21 BK2730 ⚠ SOEX 120508-01 BK7615 SOEX 120508-21 BK7710 SOEX 120508-01 BK7935	2		N00 57301 S45100-20IP	6.25 Nm	L05 00870 20IP



Note: Only use this insert with KUB Quatron® as an external cutting edge:  
 SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).



Guideline values for solid drilling					V <sub>C</sub>	Max. feed f in/rev (mm/rev)								
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI/SAE		Cutting speed v <sub>C</sub> (ft/min)	2xD							
					Ø 0.551 – 0.626 (Ø 14 – 15.9)		Ø 0.627 – 0.689 (Ø 16 – 17.5)	Ø 0.690 – 0.846 (Ø 17.6 – 21.5)	Ø 0.847 – 1.063 (Ø 21.6 – 27)	Ø 1.102 – 1.299 (Ø 28 – 33)	Ø 1.339 – 1.732 (Ø 34 – 44)	Ø 1.772 – 2.047 (Ø 45 – 52)	Ø 2.087 – 2.559 (Ø 53 – 65)	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	890	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)	
	2.1	<72500	Lead alloy	12L13	980	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	660	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)	
	4.0	>130000	Tool steels	H13 H21	590	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.008 (0.20)	0.007 (0.18)	0.007 (0.18)	
4.1			HSS		260	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.006 (0.14)	0.006 (0.14)	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	110	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	
	5.1	58000		titanium, titanium alloys	AMS R54520	260	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	
M	6.0	≤87000		Stainless steel: austenitic 300 series	304L 316	590	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.006 (0.14)	0.006 (0.14)	
	6.1	<130000		Stainless steels	630	520	0.003 (0.08)	0.003 (0.08)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.006 (0.16)	0.006 (0.16)
	7.0	>130000		Stainless steel: martensitic/ferritic 400 series	420 403	250	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.005 (0.12)	0.005 (0.12)
K	8.0		180	Grey cast iron	No 35 B No 50 B	660	0.006 (0.16)	0.006 (0.16)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.012 (0.30)	0.012 (0.30)	
	8.1		250	Alloy grey cast iron	A436 Type 2	520	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	590	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	520	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.009 (0.22)	0.009 (0.22)	0.010 (0.25)	0.009 (0.22)	0.009 (0.22)
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	460	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.009 (0.22)	0.009 (0.22)	0.010 (0.25)	0.009 (0.22)	0.009 (0.22)
	10.1		200	Alloyed nodular cast iron	A43D2	460	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.009 (0.22)	0.010 (0.25)	0.010 (0.25)	0.009 (0.22)	0.010 (0.25)
	10.2		300	Vermicular cast iron		390	0.004 (0.10)	0.005 (0.12)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
N	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.010 (0.25)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)	0.008 (0.20)
	12.1		100	Copper alloy, Brass, Bronze: average cut		1310	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.006 (0.15)	0.005 (0.12)	0.005 (0.12)
	13.0		60	Wrought alumi- num alloy	GD-AISI12	1970	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		980	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.006 (0.16)	0.006 (0.16)
	14.0		100	Aluminum alloy: Si content >10%	A360.2	820	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.012 (0.30)	0.008 (0.20)	0.008 (0.20)
H	15.0	203000		Hardened steels < 45 HRC		260	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)
	16.0	261000		Hardened steels > 45 HRC		130	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Patent applications (KUB Quatron)

(..) = mm

Max. feed f in/rev (mm/rev)

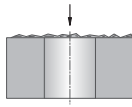


	3xD							
	Ø 0.551 – 0.626 (Ø 14 – 15.9)	Ø 0.627 – 0.688 (Ø 16 – 17.5)	Ø 0.689 – 0.846 (Ø 17.6 – 21.5)	Ø 0.847 – 1.063 (Ø 21.6 – 27)	Ø 1.102 – 1.299 (Ø 28 – 33)	Ø 1.339 – 1.732 (Ø 34 – 44)	Ø 1.772 – 2.047 (Ø 45 – 52)	Ø 2.087 – 2.559 (Ø 53 – 65)
	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)
	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.008 (0.20)	0.007 (0.18)	0.007 (0.18)
	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	–	–	0.006 (0.14)	–
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)	0.006 (0.14)	0.006 (0.14)
	0.003 (0.08)	0.003 (0.08)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.006 (0.16)	0.006 (0.16)
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.005 (0.12)	0.006 (0.14)
	0.006 (0.16)	0.006 (0.16)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.012 (0.30)	0.012 (0.30)	0.012 (0.30)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.009 (0.22)	0.009 (0.22)	0.010 (0.25)	0.009 (0.22)	0.009 (0.22)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.009 (0.22)	0.009 (0.22)	0.010 (0.25)	0.009 (0.22)	0.009 (0.22)
	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.009 (0.22)	0.010 (0.25)	0.010 (0.25)	0.009 (0.22)	0.010 (0.25)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)
	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.010 (0.25)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)	0.008 (0.20)
	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.006 (0.15)	0.005 (0.12)	0.005 (0.12)
	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.006 (0.16)	0.006 (0.16)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.012 (0.30)	0.008 (0.20)	0.008 (0.20)
	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)
	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)

## Technical Information


1



1.  **Starting on uneven surfaces (cast surfaces)**

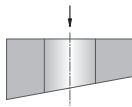
  - subject to the surface, reduce feed as required when starting the bore

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2.  **Starting on angled surfaces**

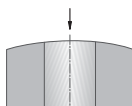
  - subject to the starting angle, the feed must be reduced when starting the bore.  
Rule of thumb: 3°  $\triangleq$  30%; 10°  $\triangleq$  40%; 25°  $\triangleq$  60% use tools max. 2xD
  - use tough insert and stable corner radius

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3.  **Angled bore exit**

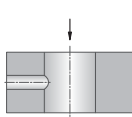
  - from wear cut is interrupted reduce feed rate up to 50%
  - use tough insert and stable corner radius

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4.  **Starting on cambered surfaces**

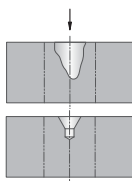
  - no problems
  - reduce feed rate if necessary

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5.  **Drilling through a cross bore**

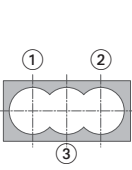
  - reduce feed rate 50% if necessary
  - watch for chip jamming around tool
  - use tough insert and stable corner radius

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6.  **Starting on a groove or large centering bore**

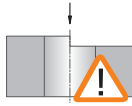
  - use short tools, max. 3xD
  - spot face if required
  - reduce feed
  - use tough insert for internal cutting edge

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7.  **Drilling a chamber**

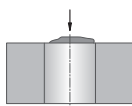
  - first bore Nos. 1 + 2, then bore No. 3
  - check distribution is symmetrical
  - avoid chip jams
  - if necessary reduce to approx. 1-1.5 mm in the  $\varnothing$  on circumference
  - reduce feed rate 50% for interrupted cut
  - use tough insert and stable corner radius

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8.  **Starting on an edge**

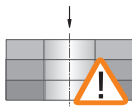
  - reduce feed rate by 50%
  - use tough insert and stable corner radius

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9.  **Starting on a welded seam**

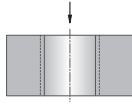
  - reduce feed rate
  - use max. 3xD tools

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10.  **Drilling through stacked plates**

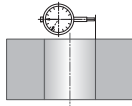
  - good workpiece clamping required
  - max. gap = 1 mm

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11.  **Roughing**

  - possible

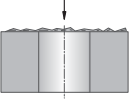

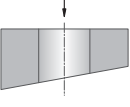
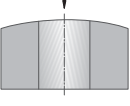
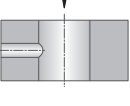
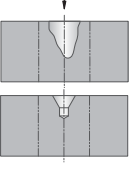
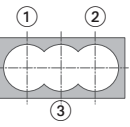
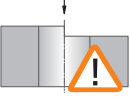
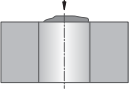

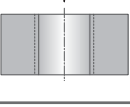
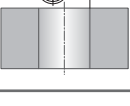
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12.  **Adjustable**

  - using adjusting device (ABS-MV) and eccentric adjusting device
  - for turning machines over axis

Note: please note max. offset  $\varnothing$  in tables



- 
1.  **Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore
- 
2.  **Starting on angled surfaces**
- max. 3° angled position possible (cast angles)
  - reduce feed rate when starting bore
  - use stable corner radius
- 
3.  **Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
  - use tough insert and stable corner radius
- 
4.  **Starting on cambered surfaces**
- no problems
  - reduce feed rate if necessary
- 
5.  **Drilling through a cross bore**
- reduce feed rate 50% if necessary
  - watch for chip jamming around tool
  - use tough insert and stable corner radius
- 
6.  **Starting on a groove or large centering bore**
- use short tools, max. 3xD
  - spot face if required
  - reduce feed
  - use tough insert for internal cutting edge
- 
7.  **Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
  - check distribution is symmetrical
  - avoid chip jams
  - if necessary reduce to approx. 1-1.5 mm in the Ø on circumference
  - reduce feed rate 50% for interrupted cut
  - use tough insert and stable corner radius
- 
8.  **Starting on an edge**
- not possible for 3xD tools
  - because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
  - then continue as described under Point 1
- 
9.  **Starting on a welded seam**
- reduce feed rate
  - use max. 3xD tools
- 
10.  **Drilling through stacked plates**
- good workpiece clamping required
- 
11.  **Roughing**
- possible
- 
12.  **Adjustable**
- using adjusting device (ABS-MV) and eccentric adjusting device
  - for turning machines over axis
- Note: please note max. offset Ø in tables
-

## Alternative Inserts

(..) = mm



Alternative Inserts 2xD / 3xD			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
for better chip control	W83 13130.048425	SOEX 050204-13 BK8425	●
	W83 13210.042730	SOEX 050204-21 BK2730 △	●
	W83 13030.048430	SOEX 050204-03 BK8430	● ●
	W83 13000.027935	SOEX 050204-13 BK7935	● ●
	W83 13210.047710	SOEX 050204-21 BK7710 △	● ● ● ●
	W83 18130.068425	SOEX 060306-13 BK8425	●
	W83 18210.062730	SOEX 060306-21 BK2730 △	●
	W83 18030.068430	SOEX 060306-03 BK8430	● ●
	W83 18000.1079	SOEX 060306-13 BK79	● ●
	W83 18210.067710	SOEX 060306-21 BK7710 △	● ● ● ●
	W83 23130.088425	SOEX 07T308-13 BK8425	●
	W83 23210.082730	SOEX 07T308-21 BK2730 △	●
W83 23030.088430	SOEX 07T308-03 BK8430	● ●	
W83 23000.027935	SOEX 07T308-13 BK7935	● ●	
W83 23210.087710	SOEX 07T308-21 BK7710 △	● ● ● ●	
W83 32130.088425	SOEX 090408-13 BK8425	●	
W83 32210.082730	SOEX 090408-21 BK2730 △	●	
W83 32030.088430	SOEX 090408-03 BK8430	● ●	
W83 32000.177935	SOEX 090408-13 BK7935	● ●	
W83 32210.087710	SOEX 090408-21 BK7710 △	● ● ● ●	
W83 44130.088425	SOEX 120508-13 BK8425	●	
W83 44210.082730	SOEX 120508-21 BK2730 △	●	
W83 44030.088430	SOEX 120508-03 BK8430	● ●	
W83 44000.197935	SOEX 120508-13 BK7935	● ●	
W83 44210.087710	SOEX 120508-21 BK7710 △	● ● ● ●	
W83 23130.088425	SOEX 07T308-13 BK8425	●	
W83 23210.082730	SOEX 07T308-21 BK2730 △	●	
W83 23030.088430	SOEX 07T308-03 BK8430	● ●	
W83 23000.027935	SOEX 07T308-13 BK7935	● ●	
W83 23210.087710	SOEX 07T308-21 BK7710 △	● ● ● ●	
W83 32130.088425	SOEX 090408-13 BK8425	●	
W83 32210.082730	SOEX 090408-21 BK2730 △	●	
W83 32030.088430	SOEX 090408-03 BK8430	● ●	
W83 32000.177935	SOEX 090408-13 BK7935	● ●	
W83 32210.087710	SOEX 090408-21 BK7710 △	● ● ● ●	


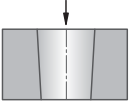
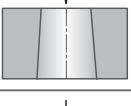
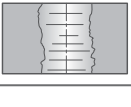
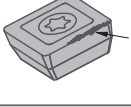
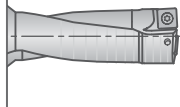
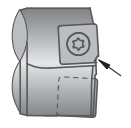
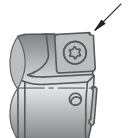
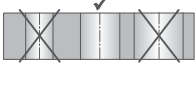
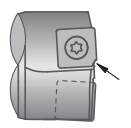
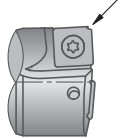
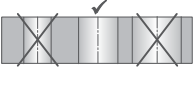


Only use this insert with KUB Quatron® as an external cutting edge:  
 SOEX ... -01 (Geometry 01) in BK6115,  
 SOEX ... -21 (Geometry 21) in BK2730 and BK7710  
 (suitable as internal cutting edge for machining BK7710 aluminium).

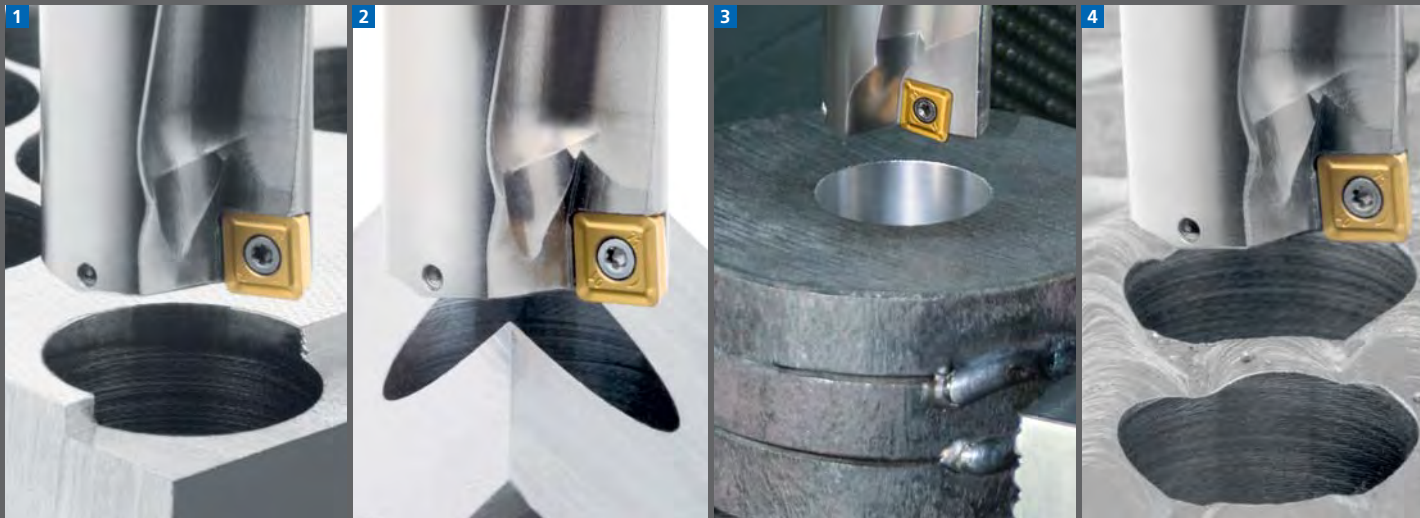
**Important: See chapter 8 for more application details and safety notes!**

Alternative Inserts 2xD / 3xD			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
for higher cutting speed	W83 13010.046420	SOEX 050204-01 BK6420	●
	W83 13210.046130	SOEX 050204-21 BK6130	● ●
	W83 13000.0174	SOEX 050204-01 BK74	● ●
	W83 13000.016115	SOEX 050204-01 BK6115 △	● ● ● ●
	W83 18010.066420	SOEX 060306-01 BK6420	●
	W83 18210.066130	SOEX 060306-21 BK6130	● ●
	W83 18000.0974	SOEX 060306-01 BK74	● ●
	W83 18000.096115	SOEX 060306-01 BK6115 △	● ● ● ●
	W83 23010.086420	SOEX 07T308-01 BK6420	●
	W83 23210.086130	SOEX 07T308-21 BK6130	● ●
	W83 23000.0174	SOEX 07T308-01 BK74	● ●
	W83 23000.016115	SOEX 07T308-01 BK6115 △	● ● ● ●
W83 32010.086420	SOEX 090408-01 BK6420	●	
W83 32210.086130	SOEX 090408-21 BK6130	● ●	
W83 32000.1574	SOEX 090408-01 BK74	● ●	
W83 32000.156115	SOEX 090408-01 BK6115 △	● ● ● ●	
W83 44010.086420	SOEX 120508-01 BK6420	●	
W83 44210.086130	SOEX 120508-21 BK6130	● ●	
W83 44000.1874	SOEX 120508-01 BK74	● ●	
W83 44000.186115	SOEX 120508-01 BK6115 △	● ● ● ●	
W83 23010.086420	SOEX 07T308-01 BK6420	●	
W83 23210.086130	SOEX 07T308-21 BK6130	● ●	
W83 23000.0174	SOEX 07T308-01 BK74	● ●	
W83 23000.016115	SOEX 07T308-01 BK6115 △	● ● ● ●	
W83 32010.086420	SOEX 090408-01 BK6420	●	
W83 32210.086130	SOEX 090408-21 BK6130	● ●	
W83 32000.1574	SOEX 090408-01 BK74	● ●	
W83 32000.156115	SOEX 090408-01 BK6115 △	● ● ● ●	
for greater strength	W83 13000.0179	SOEX 050204-01 BK79	●
	W83 13010.046420	SOEX 050204-01 BK6420	● ●
	W83 18000.0979	SOEX 060306-01 BK79	●
	W83 18010.066420	SOEX 060306-01 BK6420	● ●
	W83 23000.0179	SOEX 07T308-01 BK79	●
	W83 23010.086420	SOEX 07T308-01 BK6420	● ●
	W83 32000.1579	SOEX 090408-01 BK79	●
	W83 32010.086420	SOEX 090408-01 BK6420	● ●
	W83 44000.1879	SOEX 120508-01 BK79	●
	W83 44010.086420	SOEX 120508-01 BK6420	● ●
	W83 23000.0179	SOEX 07T308-01 BK79	●
	W83 23010.086420	SOEX 07T308-01 BK6420	● ●
W83 32000.1579	SOEX 090408-01 BK79	●	
W83 32010.086420	SOEX 090408-01 BK6420	● ●	



rotating and stationary use		<p><b>Short tool life</b> types of wear on inserts</p> <ul style="list-style-type: none"> <li>• cutting speed too high → select correct cutting speed</li> <li>• cutting material with too little wear resistance → select grade with higher wear resistance</li> <li>• tool overhang too great → if possible use shorter tool</li> <li>• damaged insert seating → check tool, change if necessary</li> <li>• clamping device not stable enough → improve stability</li> </ul>
		<p><b>Bore narrows at bottom</b></p> <ul style="list-style-type: none"> <li>• chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary</li> <li>• material very soft → increase cutting speed, reduce feed. Use positive chip geometry</li> </ul>
		<p><b>Bore widens at bottom</b></p> <ul style="list-style-type: none"> <li>• chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary</li> </ul>
		<p><b>Bad surface finish</b></p> <ul style="list-style-type: none"> <li>• bad chip removal → improve cutting parameters: increase cutting speed reduce feed</li> </ul>
		<p><b>Build up on cutting edge</b></p> <ul style="list-style-type: none"> <li>• cutting speed too low → increase cutting speed</li> <li>• insert too negative → use positive geometry</li> <li>• coating not suitable → select correct coating</li> </ul>
		<p><b>Friction marks on tool shank</b></p> <ul style="list-style-type: none"> <li>• bore diameter too small → check setting</li> <li>• chip removal problems → improve cutting parameters, check geometry of inserts</li> <li>• cutting edge corner radius too large → use correct cutting edge radius</li> </ul>
stationary use		<p><b>Fracture on internal cutting edge</b></p> <ul style="list-style-type: none"> <li>• drill bit height of tool too high/too low → tool turret/holder may have shifted. Readjust machine</li> <li>• feed rate too high → reduce feed rate</li> <li>• insert grade too brittle → use tougher insert grade</li> <li>• wrong insert geometry → use geometry with chamfered cutting edge</li> </ul>
		<p><b>Fracture on external cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• interrupted cut → change to tougher insert grade</li> <li>• cutting edge corner radius too small → use insert with larger cutting edge radius</li> </ul>
		<p><b>Bore too small/ too large</b></p> <ul style="list-style-type: none"> <li>• machine not at X-0 position → move axis to correct position</li> <li>• machine axis shifted → readjust machine</li> </ul>
rotating use		<p><b>Fracture on internal cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• insert grade too brittle → use tougher insert grade</li> <li>• wrong insert geometry → use geometry with chamfered cutting edge</li> </ul>
		<p><b>Fracture on external cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• interrupted cut → change to tougher insert grade</li> <li>• cutting edge corner radius too small → use insert with larger cutting edge radius</li> </ul>
		<p><b>Bore too small/ too large</b> with adjustable tool</p> <ul style="list-style-type: none"> <li>• wrong cutting edge radius used → use correct cutting edge radius</li> <li>• setting wrong → correct setting</li> </ul>

1



### KOMET KUB Pentron® continuous drill

In developing the KUB Pentron®, KOMET® has blazed a completely new trail.

It has combined key features such as real accuracy, top performance parameters and deep drilling depths in a single tool.

In comparison with the usual indexable insert drills available until now on the market, the KOMET KUB Pentron® gives up to 20% higher cut and feed values, right through to a 5xD length/diameter ratio.

It can handle extreme working conditions that were previously only feasible with 3xD.

### BENEFITS for you:

- Maximum performance and life with excellent drilling performance due to optimum main body stability and a special surface treatment.
- Optimum dimensional accuracy in the most difficult drilling conditions to 5xD.
- Cost reductions in stocking and ease of handling due to identical internal and external indexable inserts.
- Maximum tool life due to four fully useable cutting edges of modern substrates with appropriate coatings.

### Applications:

- Perfect for great drilling depths and high feed performance
- Ideal for extreme working situations
- Ideal for machining steel, cast metal, aluminium and stainless materials

### Extreme applications in the 5xD region:

- 1 Drilling on an edge
- 2 Drilling into an acute corner
- 3 Multiple drilling
- 4 Drilling on a welded seam or undulating surfaces





**KOMET KUB Pentron®** Page

**ABS® Connection**

R.H. cutting	
Drilling depth 4xD, 5xD – Ø 0.562 - 1.750 inch	66 – 67
Drilling depth 4xD, 5xD – Ø 14 - 46 mm	68 – 71

**Cylindrical Shank ISO 9766**

R.H. cutting	
Drilling depth 4xD, 5xD – Ø 0.562 - 1.750 inch	72 – 73
Drilling depth 4xD, 5xD – Ø 14 - 46 mm	74 – 77

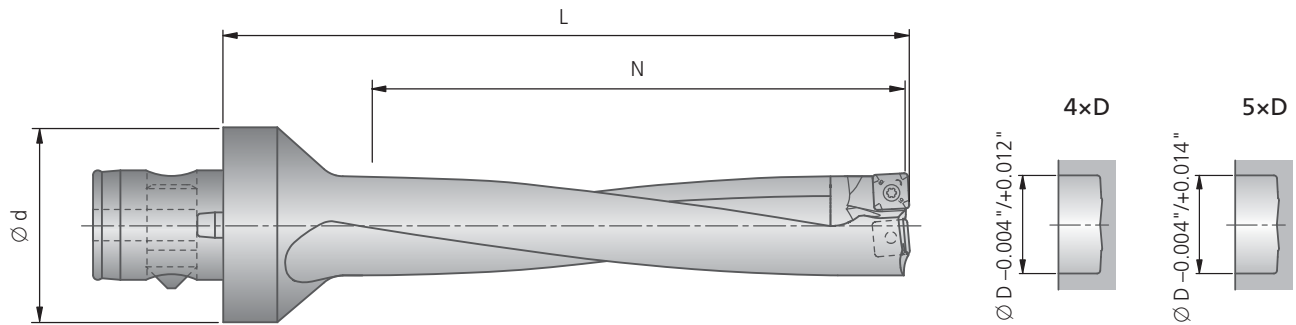
**Technical Notes** 78 – 81

Guideline values for solid drilling

**Technical Information** 82

**Alternative Inserts** 83

**Milling cartridge** Chapter 6



Ø D inch	**max. diameter with offset inch	ABS Ø d	4xD				5xD			
			Order No.	N	L	lbs	Order No.	N	L	lbs
0.562	0.582	50	U44 51430	2.362	3.465	0.88	U45 51430	2.953	4.055	0.90
0.593	0.613	50	U44 51510	2.520	3.701	0.90	U45 51510	3.150	4.331	0.92
0.625	0.645	50	U44 51590	2.520	3.701	0.92	U45 51590	3.150	4.331	0.95
0.656	0.676	50	U44 51670	2.677	3.898	0.95	U45 51670	3.346	4.567	0.97
0.687	0.708	50	U44 51750	2.835	4.055	0.97	U45 51750	3.543	4.764	0.99
0.703	0.723	50	U44 51790	2.835	4.055	0.97	U45 51790	3.543	4.764	0.99
0.750	0.771	50	U44 51910	3.150	4.409	1.08	U45 51910	3.937	5.197	1.17
0.765	0.783	50	U44 51940	3.150	4.409	1.10	U45 51940	3.937	5.197	1.17
0.781	0.799	50	U44 51980	3.150	4.409	1.12	U45 51980	3.937	5.197	1.17
0.812	0.830	50	U44 52060	3.307	4.567	1.12	U45 52060	4.134	5.394	1.17
0.828	0.846	50	U44 52100	3.307	4.567	1.12	U45 52100	4.134	5.394	1.19
0.875	0.893	50	U44 52220	3.622	4.882	1.19	U45 52220	4.528	5.787	1.28
0.906	0.925	50	U44 52300	3.622	4.882	1.23	U45 52300	4.528	5.787	1.32
0.937	0.956	50	U44 52380	3.780	5.039	1.26	U45 52380	4.724	5.984	1.34
0.985	1.003	50	U44 52500	3.937	5.236	1.32	U45 52500	4.921	6.220	1.41
1.000	1.019	50	U44 52540	4.094	5.394	1.34	U45 52540	5.118	6.417	1.45
1.031	1.051	50	U44 52620	4.252	5.591	1.34	U45 52620	5.315	6.654	1.46
1.062	1.082	50	U44 52700	4.252	5.591	1.37	U45 52700	5.315	6.654	1.48
1.109	1.129	50	U44 52820	4.567	5.945	1.48	U45 52820	5.709	7.087	1.61
1.125	1.145	50	U44 52860	4.567	5.945	1.50	U45 52860	5.709	7.087	1.65
1.156	1.176	50	U44 52940	4.724	6.102	1.54	U45 52940	5.906	7.283	1.70
1.187	1.207	63	U44 63020	4.882	6.417	2.27	U45 63020	6.102	7.638	2.47
1.218	1.238	63	U44 63090	4.882	6.417	2.34	U45 63090	6.102	7.638	2.54
1.250	1.270	63	U44 63180	5.039	6.575	2.43	U45 63180	6.299	7.835	2.62
1.281	1.301	63	U44 63250	5.197	6.772	2.54	U45 63250	6.496	8.071	2.76
1.312	1.332	63	U44 63330	5.354	6.929	2.60	U45 63330	6.693	8.268	2.82
1.328	1.348	63	U44 63370	5.354	6.929	2.62	U45 63370	6.693	8.268	2.84
1.375	1.395	63	U44 63490	5.512	7.126	2.73	U45 63490	6.890	8.504	3.00
1.437	1.457	63	U44 63650	5.827	7.480	2.95	U45 63650	7.283	8.937	3.26
1.469	1.489	63	U44 63730	5.984	7.638	3.04	U45 63730	7.480	9.134	3.35
1.500	1.520	63	U44 63810	6.142	7.835	3.13	U45 63810	7.677	9.370	3.46
1.562	1.582	63	U44 63970	6.299	7.992	3.31	U45 63970	7.874	9.567	3.66
1.625	1.645	63	U44 64130	6.614	8.346	3.57	U45 64130	8.268	10.000	4.01
1.656	1.676	63	U44 64210	6.772	8.543	3.66	U45 64210	8.465	10.236	4.17
1.687	1.707	63	U44 64290	6.772	8.543	3.75	U45 64290	8.465	10.236	4.23
1.750	1.770	63	U44 64450	7.087	8.898	4.06	U45 64450	8.858	10.669	4.61

All intermediate dimensions can be supplied quickly on request.

66 \*\* Adjustment device see "KomPass Bore machining – chapter 5"

Patent applied for inside and outside Germany (ABS) and patent applications (KUB Pentron)

Insert Drill with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	●	●	●	●	●	○	●	×	●
5xD	●	●	●	●	●	●	●	×	●	×	●

● very good ● good ○ possible: see technical notes, page 82 × not possible

Supply includes:

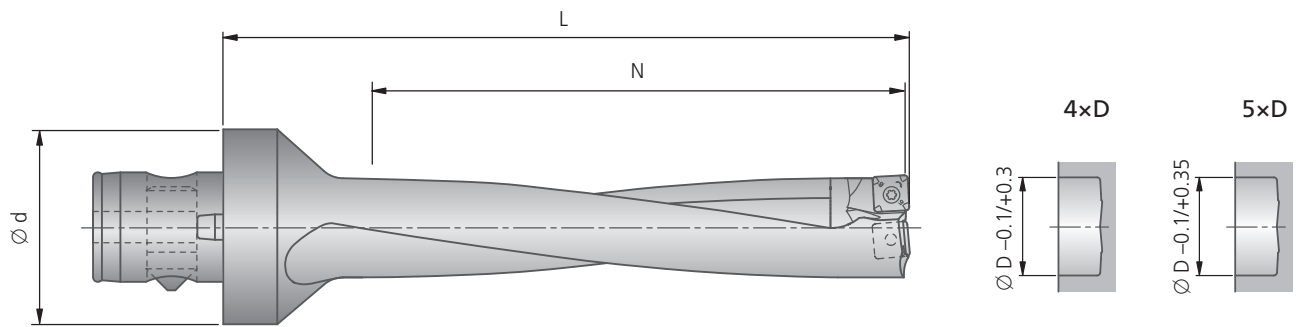
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert ISO-Code	Qty	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W80 10010.048425 W80 10010.042730 W80 10010.046115 W80 10010.047710	SOGX 040204-01 BK8425 SOGX 040204-01 BK2730 SOGX 040204-01 BK6115 △ SOGX 040204-01 BK7710	2	● ● ● ● ● ●	N00 56051 S/M1.8x3.85-5IP	5.5 in-lbs	L05 00800 5IP
W80 12010.048425 W80 12010.042730 W80 12010.046115 W80 12010.047710	SOGX 050204-01 BK8425 SOGX 050204-01 BK2730 SOGX 050204-01 BK6115 △ SOGX 050204-01 BK7710	2	● ● ● ● ● ●	N00 56041 S/M2x4.3-6IP	5.5 in-lbs	L05 00810 6IP
W80 18010.068425 W80 18010.062730 W80 18010.066115 W80 18010.067710	SOGX 060206-01 BK8425 SOGX 060206-01 BK2730 SOGX 060206-01 BK6115 △ SOGX 060206-01 BK7710	2	● ● ● ● ● ●	N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP
W80 20010.088425 W80 20010.082730 W80 20010.086115 W80 20010.087710	SOGX 07T208-01 BK8425 SOGX 07T208-01 BK2730 SOGX 07T208-01 BK6115 △ SOGX 07T208-01 BK7710	2	● ● ● ● ● ●	N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP
W80 24010.088425 W80 24010.082730 W80 24010.086115 W80 24010.087710	SOGX 080308-01 BK8425 SOGX 080308-01 BK2730 SOGX 080308-01 BK6115 △ SOGX 080308-01 BK7710	2	● ● ● ● ● ●	N00 57571 S/M2.5x6.3-8IP	11.3 in-lbs	L05 00830 8IP
W80 28010.088425 W80 28010.082730 W80 28010.086115 W80 28010.087710	SOGX 09T308-01 BK8425 SOGX 09T308-01 BK2730 SOGX 09T308-01 BK6115 △ SOGX 09T308-01 BK7710	2	● ● ● ● ● ●	N00 57251 S3076-8IP	19.9 in-lbs	L05 00830 8IP
W80 32010.088425 W80 32010.082730 W80 32010.086115 W80 32010.087710	SOGX 100408-01 BK8425 SOGX 100408-01 BK2730 SOGX 100408-01 BK6115 △ SOGX 100408-01 BK7710	2	● ● ● ● ● ●	N00 57261 S3575-15IP	24.8 in-lbs	L05 00860 15IP
W80 38010.088425 W80 38010.082730 W80 38010.086115 W80 38010.087710	SOGX 110408-01 BK8425 SOGX 110408-01 BK2730 SOGX 110408-01 BK6115 △ SOGX 110408-01 BK7710	2	● ● ● ● ● ●	N00 57261 S3575-15IP	24.8 in-lbs	L05 00860 15IP
W80 42010.088425 W80 42010.082730 W80 42010.086115 W80 42010.087710	SOGX 120408-01 BK8425 SOGX 120408-01 BK2730 SOGX 120408-01 BK6115 △ SOGX 120408-01 BK7710	2	● ● ● ● ● ●	N00 57301 S45100-20IP	55.3 in-lbs	L05 00870 20IP
W80 46010.088425 W80 46010.082730 W80 46010.086115 W80 46010.087710	SOGX 130408-01 BK8425 SOGX 130408-01 BK2730 SOGX 130408-01 BK6115 △ SOGX 130408-01 BK7710	2	● ● ● ● ● ●	N00 57301 S45100-20IP	55.3 in-lbs	L05 00870 20IP

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:  
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

Guideline values for solid drilling: pages 78-81 / alternative inserts: page 83.

Insert Drill with ABS® Connection, R.H. cutting



Ø D mm	**max. diameter with offset mm	ABS Ø d	4xD				5xD			
			Order No.	N	L	kg	Order No.	N	L	kg
14.0	14.5	50	U44 51400	56	83	0.39	U45 51400	70	97	0.40
14.5	15.0	50	U44 51450	60	88	0.40	U45 51450	75	103	0.41
15.0	15.5	50	U44 51500	60	88	0.41	U45 51500	75	103	0.41
15.5	16.0	50	U44 51550	64	94	0.41	U45 51550	80	110	0.42
16.0	16.5	50	U44 51600	64	94	0.42	U45 51600	80	110	0.43
16.5	17.0	50	U44 51650	68	99	0.43	U45 51650	85	116	0.44
17.0	17.5	50	U44 51700	68	99	0.43	U45 51700	85	116	0.44
18.0	18.5	50	U44 51800	72	103	0.44	U45 51800	90	121	0.46
18.5	19.0	50	U44 51850	76	108	0.47	U45 51850	95	127	0.51
19.0	19.5	50	U44 51900	76	108	0.49	U45 51900	95	127	0.52
19.5	20.0	50	U44 51950	80	112	0.50	U45 51950	100	132	0.53
20.0	20.5	50	U44 52000	80	112	0.51	U45 52000	100	132	0.53
20.5	21.0	50	U44 52050	84	116	0.51	U45 52050	105	137	0.53
21.5	22.0	50	U44 52150	88	120	0.52	U45 52150	110	142	0.55
22.0	22.5	50	U44 52200	88	120	0.53	U45 52200	110	142	0.56
22.5	23.0	50	U44 52250	92	124	0.55	U45 52250	115	147	0.59
23.5	24.0	50	U44 52350	96	128	0.56	U45 52350	120	152	0.60
24.0	24.5	50	U44 52400	96	128	0.57	U45 52400	120	152	0.61
24.5	25.0	50	U44 52450	100	133	0.59	U45 52450	125	158	0.63
25.5	26.0	50	U44 52550	104	137	0.61	U45 52550	130	163	0.66
26.0	26.5	50	U44 52600	104	137	0.63	U45 52600	130	163	0.68
26.5	27.0	50	U44 52650	108	142	0.61	U45 52650	135	169	0.66
27.5	28.0	50	U44 52750	112	146	0.64	U45 52750	140	174	0.70
28.0	28.5	50	U44 52800	112	146	0.65	U45 52800	140	174	0.71
28.5	29.0	50	U44 52850	116	151	0.68	U45 52850	145	180	0.74
29.0	29.5	50	U44 52900	116	151	0.69	U45 52900	145	180	0.76
29.5	30.0	50	U44 52950	120	155	0.70	U45 52950	150	185	0.77
30.0	30.5	50	U44 53000	120	155	0.71	U45 53000	150	185	0.79
30.5	31.0	63	U44 63050	124	163	1.05	U45 63050	155	194	1.13
31.0	31.5	63	U44 63100	124	163	1.07	U45 63100	155	194	1.15
31.5	32.0	63	U44 63150	128	167	1.10	U45 63150	160	199	1.18
32.0	32.5	63	U44 63200	128	167	1.11	U45 63200	160	199	1.20
33.0	33.5	63	U44 63300	132	172	1.17	U45 63300	165	205	1.27

All intermediate dimensions can be supplied quickly on request.

\*\* Adjustment device see "KomPass Bore machining – chapter 5"

Insert Drill with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	○	○	○	○	○	○	○	✗	○
5xD	●	●	○	○	○	○	○	✗	○	✗	○

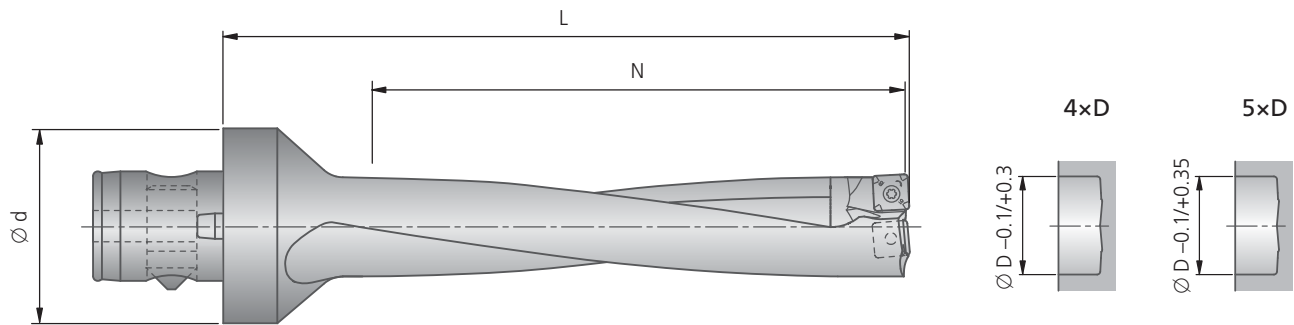
● very good ○ good ○ possible: see technical notes, page 82 ✗ not possible

Supply includes:

KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  ISO-Code	Piece	for workpiece material  P M K N S H	Clamping screw 	Starting torque	Screwdriver 
				Order No. Article		Order No. Article
W80 10010.048425 W80 10010.042730 W80 10010.046115 W80 10010.047710	SOGX 040204-01 BK8425 SOGX 040204-01 BK2730 SOGX 040204-01 BK6115 △ SOGX 040204-01 BK7710	2		N00 56051 S/M1.8x3.85-5IP	0.38 Nm	L05 00800 6IP
W80 12010.048425 W80 12010.042730 W80 12010.046115 W80 12010.047710	SOGX 050204-01 BK8425 SOGX 050204-01 BK2730 SOGX 050204-01 BK6115 △ SOGX 050204-01 BK7710	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W80 18010.068425 W80 18010.062730 W80 18010.066115 W80 18010.067710	SOGX 060206-01 BK8425 SOGX 060206-01 BK2730 SOGX 060206-01 BK6115 △ SOGX 060206-01 BK7710	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W80 20010.088425 W80 20010.082730 W80 20010.086115 W80 20010.087710	SOGX 07T208-01 BK8425 SOGX 07T208-01 BK2730 SOGX 07T208-01 BK6115 △ SOGX 07T208-01 BK7710	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W80 24010.088425 W80 24010.082730 W80 24010.086115 W80 24010.087710	SOGX 080308-01 BK8425 SOGX 080308-01 BK2730 SOGX 080308-01 BK6115 △ SOGX 080308-01 BK7710	2		N00 57571 S/M2.5x6.3-8IP	1.28 Nm	L05 00830 8IP
W80 28010.088425 W80 28010.082730 W80 28010.086115 W80 28010.087710	SOGX 09T308-01 BK8425 SOGX 09T308-01 BK2730 SOGX 09T308-01 BK6115 △ SOGX 09T308-01 BK7710	2		N00 57251 S3076-8IP	2.25 Nm	L05 00830 8IP
W80 32010.088425 W80 32010.082730 W80 32010.086115 W80 32010.087710	SOGX 100408-01 BK8425 SOGX 100408-01 BK2730 SOGX 100408-01 BK6115 △ SOGX 100408-01 BK7710	2		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge: SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425



Ø D mm	**max. diameter with offset mm	ABS Ø d	4xD				5xD			
			Order No.	N	L	kg	Order No.	N	L	kg
33.2	33.7	63	U44 63320	136	176	1.18	U45 63320	170	210	1.28
33.5	34.0	63	U44 63350	136	176	1.18	U45 63350	170	210	1.29
34.0	34.5	63	U44 63400	136	176	1.19	U45 63400	170	210	1.30
34.5	35.0	63	U44 63450	140	181	1.23	U45 63450	175	216	1.34
35.0	35.5	63	U44 63500	140	181	1.24	U45 63500	175	216	1.36
35.5	36.0	63	U44 63550	144	185	1.27	U45 63550	180	221	1.40
36.0	36.5	63	U44 63600	144	185	1.29	U45 63600	180	221	1.42
37.0	37.5	63	U44 63700	148	190	1.36	U45 63700	185	227	1.50
37.5	38.0	63	U44 63750	152	194	1.39	U45 63750	190	232	1.53
38.0	38.5	63	U44 63800	152	194	1.40	U45 63800	190	232	1.55
38.5	39.0	63	U44 63850	156	199	1.43	U45 63850	195	238	1.58
39.0	39.5	63	U44 63900	156	199	1.44	U45 63900	195	238	1.60
39.2	39.7	63	U44 63920	160	203	1.48	U45 63920	200	243	1.64
39.5	40.0	63	U44 63950	160	203	1.49	U45 63950	200	243	1.65
40.0	40.5	63	U44 64000	160	203	1.51	U45 64000	200	243	1.68
40.5	41.0	63	U44 64050	164	208	1.56	U45 64050	205	249	1.74
41.0	41.5	63	U44 64100	164	208	1.58	U45 64100	205	249	1.77
41.5	42.0	63	U44 64150	168	212	1.63	U45 64150	210	254	1.83
42.0	42.5	63	U44 64200	168	212	1.65	U45 64200	210	254	1.86
42.5	43.0	63	U44 64250	172	217	1.68	U45 64250	215	260	1.90
43.0	43.5	63	U44 64300	172	217	1.70	U45 64300	215	260	1.92
43.5	44.0	63	U44 64350	176	221	1.75	U45 64350	220	265	1.99
44.0	44.5	63	U44 64400	176	221	1.78	U45 64400	220	265	2.02
45.0	45.5	63	U44 64500	180	226	1.87	U45 64500	225	271	2.13
45.5	46.0	63	U44 64550	184	230	1.93	U45 64550	230	276	2.20
46.0	46.5	63	U44 64600	184	230	1.96	U45 64600	230	276	2.24

All intermediate dimensions can be supplied quickly on request.

\*\* Adjustment device see "KomPass Bore machining – chapter 5"

Insert Drill with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	●	●	●	●	●	○	●	✗	●
5xD	●	●	●	●	●	●	●	✗	●	✗	●

● very good ○ possible: see technical notes, page 82 ✗ not possible

Supply includes:

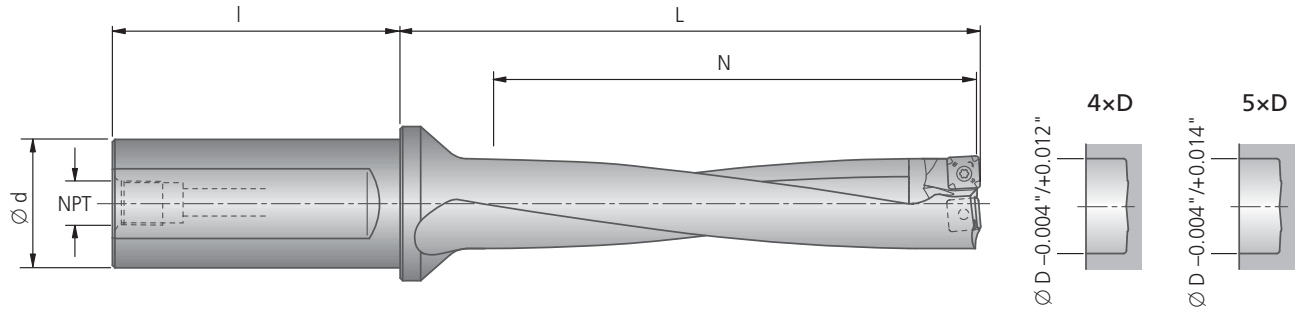
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Article	Order No. Article	
W80 38010.088425 W80 38010.082730 W80 38010.086115 W80 38010.087710	SOGX 110408-01 BK8425 SOGX 110408-01 BK2730 SOGX 110408-01 BK6115 ⚠ SOGX 110408-01 BK7710	2		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP
W80 42010.088425 W80 42010.082730 W80 42010.086115 W80 42010.087710	SOGX 120408-01 BK8425 SOGX 120408-01 BK2730 SOGX 120408-01 BK6115 ⚠ SOGX 120408-01 BK7710	2		N00 57301 S45100-20IP	6.25 Nm	L05 00870 20IP
W80 46010.088425 W80 46010.082730 W80 46010.086115 W80 46010.087710	SOGX 130508-01 BK8425 SOGX 130508-01 BK2730 SOGX 130508-01 BK6115 ⚠ SOGX 130508-01 BK7710	2		N00 57301 S45100-20IP	6.25 Nm	L05 00870 20IP

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:  
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

Inch Insert Drill with Inch Cylindrical Shank, R.H. cutting

1



Ø D inch	max. diameter with offset inch	Cylindrical shank Ø d x l	4xD					5xD				
			Order No.	N	L	NPT	lbs	Order No.	N	L	NPT	lbs
0.562	0.582	0.750x2.250	U44 81430	2.362	2.913		0.33	U45 81430	2.953	3.504		0.35
0.593	0.613	0.750x2.250	U44 81510	2.520	3.150	1/8	0.35	U45 81510	3.150	3.780	1/8	0.37
0.625	0.645	0.750x2.250	U44 81590	2.520	3.150		0.35	U45 81590	3.150	3.780		0.37
0.656	0.676	0.750x2.250	U44 81670	2.677	3.346		0.37	U45 81670	3.346	4.016		0.40
0.687	0.708	1.000x3.250	U44 81750	2.835	3.504	1/8	0.55	U45 81750	3.543	4.213	1/8	0.60
0.703	0.723	1.000x3.250	U44 81790	2.835	3.504		0.57	U45 81790	3.543	4.213		0.62
0.750	0.771	1.000x3.250	U44 81910	3.150	3.858		0.62	U45 81910	3.937	4.646		0.66
0.765	0.783	1.000x3.250	U44 81940	3.150	3.858	1/8	0.62	U45 81940	3.937	4.646	1/8	0.66
0.781	0.799	1.000x3.250	U44 81980	3.150	3.858		0.64	U45 81980	3.937	4.646		0.68
0.812	0.830	1.000x3.250	U44 82060	3.307	4.055		0.68	U45 82060	4.134	4.882		0.73
0.828	0.846	1.000x3.250	U44 82100	3.307	4.055		0.68	U45 82100	4.134	4.882		0.75
0.843	0.885	1.000x3.250	U44 82140	3.465	4.724	1/8	0.71	U45 82140	4.331	5.079	1/8	0.77
0.875	0.893	1.000x3.250	U44 82220	3.622	4.409		0.75	U45 82220	4.528	5.315		0.82
0.906	0.925	1.000x3.250	U44 82300	3.622	4.409		0.79	U45 82300	4.528	5.315		0.86
0.937	0.956	1.250x3.250	U44 82380	3.780	4.567		1.12	U45 82380	4.724	5.512		1.21
0.985	1.003	1.250x3.250	U44 82500	3.937	4.764	1/8	1.21	U45 82500	4.921	5.748	1/8	1.32
1.000	1.019	1.250x3.250	U44 82540	4.094	4.921		1.23	U45 82540	5.118	5.945		1.34
1.031	1.051	1.250x3.250	U44 82620	4.252	5.118		1.26	U45 82620	5.315	6.181		1.39
1.062	1.082	1.250x3.250	U44 82700	4.252	5.118		1.28	U45 82700	5.315	6.181		1.41
1.109	1.129	1.250x3.250	U44 82820	4.567	5.472	1/4	1.39	U45 82820	5.709	6.614	1/4	1.54
1.125	1.145	1.250x3.250	U44 82860	4.567	5.472		1.41	U45 82860	5.709	6.614		1.57
1.156	1.176	1.250x3.250	U44 82940	4.724	5.630		1.46	U45 82940	5.906	6.811		1.61
1.187	1.207	1.500x3.750	U44 83020	4.882	5.827		1.96	U45 83020	6.102	7.047		2.18
1.218	1.238	1.500x3.750	U44 83090	4.882	5.827	1/4	2.01	U45 83090	6.102	7.047	1/4	2.23
1.250	1.270	1.500x3.750	U44 83180	5.039	5.984		2.14	U45 83180	6.299	7.244		2.34
1.281	1.301	1.500x3.750	U44 83250	5.197	6.181		2.23	U45 83250	6.496	7.480		2.43
1.312	1.332	1.500x3.750	U44 83330	5.354	6.339		2.25	U45 83330	6.693	7.677		2.49
1.328	1.348	1.500x3.750	U44 83370	5.354	6.339	1/4	2.27	U45 83370	6.693	7.677	1/4	2.51
1.375	1.395	1.500x3.750	U44 83490	5.512	6.535		2.40	U45 83490	6.890	7.913		2.67
1.437	1.457	1.500x3.750	U44 83650	5.827	6.890		2.60	U45 83650	7.283	8.346		2.91
1.469	1.488	1.500x3.750	U44 83730	5.984	7.047		2.69	U45 83730	7.480	8.543		3.00
1.500	1.519	1.500x3.750	U44 83810	6.142	7.244		2.80	U45 83810	7.677	8.780		3.11
1.531	1.559	1.500x3.750	U44 83890	6.142	7.244	1/4	2.84	U45 83890	7.677	8.780	1/4	3.20
1.562	1.582	1.500x3.750	U44 83970	6.299	7.402		2.95	U45 83970	7.874	8.976		3.33
1.625	1.645	1.500x3.750	U44 84130	6.614	7.756		3.22	U45 84130	8.268	9.409		3.66
1.656	1.677	1.500x3.750	U44 84210	6.772	7.953		3.35	U45 84210	8.465	9.646		3.81
1.687	1.708	1.500x3.750	U44 84290	6.772	7.953	1/4	3.40	U45 84290	8.465	9.646	1/4	3.88
1.750	1.771	1.500x3.750	U44 84450	7.087	8.307		3.70	U45 84450	8.858	10.079		4.23



Inch Insert Drill with Inch Cylindrical Shank, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	○	○	○	○	○	○	○	✗	○
5xD	●	●	○	○	○	○	○	✗	○	✗	○

● very good ○ good ○ possible: see technical notes, page 82 ✗ not possible

Supply includes:

KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

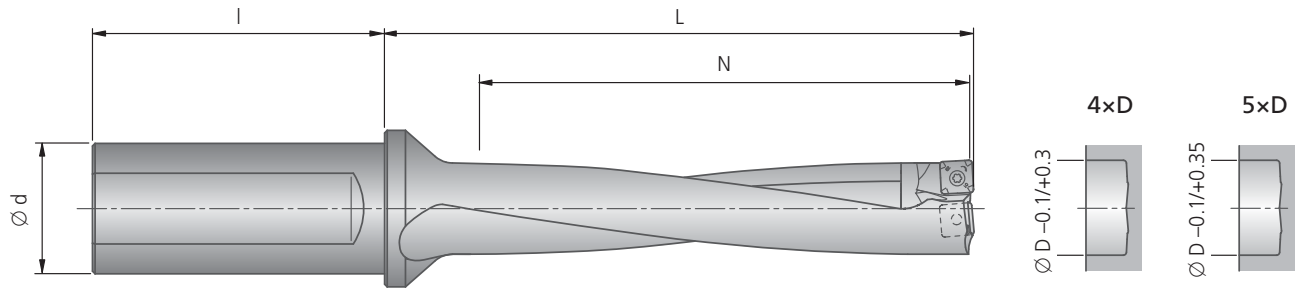
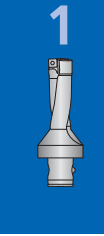
Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert ISO-Code	Qty	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description	Order No. Description	Order No. Description
W80 10010.048425 W80 10010.042730 W80 10010.046115 W80 10010.047710	SOGX 040204-01 BK8425 SOGX 040204-01 BK2730 SOGX 040204-01 BK6115 △ SOGX 040204-01 BK7710	2	● ● ● ● ● ●	N00 56051 S/M1.8x3.85-5IP	5.5 in-lbs	L05 00800 5IP
W80 12010.048425 W80 12010.042730 W80 12010.046115 W80 12010.047710	SOGX 050204-01 BK8425 SOGX 050204-01 BK2730 SOGX 050204-01 BK6115 △ SOGX 050204-01 BK7710	2	● ● ● ● ● ●	N00 56041 S/M2x4.3-6IP	5.5 in-lbs	L05 00810 6IP
W80 18010.068425 W80 18010.062730 W80 18010.066115 W80 18010.067710	SOGX 060206-01 BK8425 SOGX 060206-01 BK2730 SOGX 060206-01 BK6115 △ SOGX 060206-01 BK7710	2	● ● ● ● ● ●	N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP
W80 20010.088425 W80 20010.082730 W80 20010.086115 W80 20010.087710	SOGX 07T208-01 BK8425 SOGX 07T208-01 BK2730 SOGX 07T208-01 BK6115 △ SOGX 07T208-01 BK7710	2	● ● ● ● ● ●	N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP
W80 24010.088425 W80 24010.082730 W80 24010.086115 W80 24010.087710	SOGX 080308-01 BK8425 SOGX 080308-01 BK2730 SOGX 080308-01 BK6115 △ SOGX 080308-01 BK7710	2	● ● ● ● ● ●	N00 57571 S/M2.5x6.3-8IP	11.3 in-lbs	L05 00830 8IP
W80 28010.088425 W80 28010.082730 W80 28010.086115 W80 28010.087710	SOGX 09T308-01 BK8425 SOGX 09T308-01 BK2730 SOGX 09T308-01 BK6115 △ SOGX 09T308-01 BK7710	2	● ● ● ● ● ●	N00 57251 S3076-8IP	19.9 in-lbs	L05 00830 8IP
W80 32010.088425 W80 32010.082730 W80 32010.086115 W80 32010.087710	SOGX 100408-01 BK8425 SOGX 100408-01 BK2730 SOGX 100408-01 BK6115 △ SOGX 100408-01 BK7710	2	● ● ● ● ● ●	N00 57261 S3575-15IP	24.8 in-lbs	L05 00860 15IP
W80 38010.088425 W80 38010.082730 W80 38010.086115 W80 38010.087710	SOGX 110408-01 BK8425 SOGX 110408-01 BK2730 SOGX 110408-01 BK6115 △ SOGX 110408-01 BK7710	2	● ● ● ● ● ●	N00 57261 S3575-15IP	24.8 in-lbs	L05 00860 15IP
W80 42010.088425 W80 42010.082730 W80 42010.086115 W80 42010.087710	SOGX 120408-01 BK8425 SOGX 120408-01 BK2730 SOGX 120408-01 BK6115 △ SOGX 120408-01 BK7710	2	● ● ● ● ● ●	N00 57301 S45100-20IP	55.3 in-lbs	L05 00870 20IP
W80 46010.088425 W80 46010.082730 W80 46010.086115 W80 46010.087710	SOGX 130408-01 BK8425 SOGX 130408-01 BK2730 SOGX 130408-01 BK6115 △ SOGX 130408-01 BK7710	2	● ● ● ● ● ●	N00 57301 S45100-20IP	55.3 in-lbs	L05 00870 20IP

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:

SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

Guideline values for solid drilling: pages 78-81 / alternative inserts: page 83.

Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting



Ø D mm	max. diameter with offset mm	Cylindrical shank Ø d × l	4xD				5xD			
			Order No.	N	L	kg	Order No.	N	L	kg
14.0	14.5	20x50	U44 01400	56	69	0.14	U45 01400	70	83	0.15
14.5	15.0	20x50	U44 01450	60	74	0.15	U45 01450	75	89	0.16
15.0	15.5	20x50	U44 01500	60	74	0.15	U45 01500	75	89	0.16
15.5	16.0	20x50	U44 01550	64	80	0.16	U45 01550	80	96	0.17
16.0	16.5	20x50	U44 01600	64	80	0.16	U45 01600	80	96	0.17
16.5	17.0	20x50	U44 01650	68	85	0.17	U45 01650	85	102	0.18
17.0	17.5	20x50	U44 01700	68	85	0.17	U45 01700	85	102	0.19
18.0	18.5	25x56	U44 11800	72	89	0.26	U45 11800	90	107	0.28
18.5	19.0	25x56	U44 11850	76	94	0.26	U45 11850	95	113	0.28
19.0	19.5	25x56	U44 11900	76	94	0.27	U45 11900	95	113	0.29
19.5	20.0	25x56	U44 11950	80	98	0.28	U45 11950	100	118	0.30
20.0	20.5	25x56	U44 12000	80	98	0.29	U45 12000	100	118	0.31
20.5	21.0	25x56	U44 12050	84	103	0.31	U45 12050	105	124	0.33
21.5	22.0	25x56	U44 12150	88	107	0.32	U45 12150	110	129	0.35
22.0	22.5	25x56	U44 12200	88	107	0.33	U45 12200	110	129	0.36
22.5	23.0	25x56	U44 12250	92	112	0.35	U45 12250	115	135	0.38
23.5	24.0	32x60	U44 22350	96	116	0.51	U45 22350	120	140	0.54
24.0	24.5	32x60	U44 22400	96	116	0.51	U45 22400	120	140	0.55
24.5	25.0	32x60	U44 22450	100	121	0.54	U45 22450	125	146	0.59
25.5	26.0	32x60	U44 22550	104	125	0.56	U45 22550	130	151	0.61
26.0	26.5	32x60	U44 22600	104	125	0.57	U45 22600	130	151	0.62
26.5	27.0	32x60	U44 22650	108	130	0.57	U45 22650	135	157	0.63
27.5	28.0	32x60	U44 22750	112	134	0.60	U45 22750	140	162	0.66
28.0	28.5	32x60	U44 22800	112	134	0.62	U45 22800	140	162	0.68
28.5	29.0	32x60	U44 22850	116	139	0.64	U45 22850	145	168	0.71
29.0	29.5	32x60	U44 22900	116	139	0.65	U45 22900	145	168	0.72
29.5	30.0	32x60	U44 22950	120	143	0.66	U45 22950	150	173	0.73
30.0	30.5	32x60	U44 23000	120	143	0.67	U45 23000	150	173	0.75
30.5	31.0	40x68	U44 33050	124	148	0.90	U45 33050	155	179	1.00
31.0	31.5	40x68	U44 33100	124	148	0.92	U45 33100	155	179	1.01
31.5	32.0	40x68	U44 33150	128	152	0.96	U45 33150	160	184	1.05
32.0	32.5	40x68	U44 33200	128	152	0.97	U45 33200	160	184	1.06
33.0	33.5	40x68	U44 33300	132	157	1.02	U45 33300	165	190	1.12

All intermediate dimensions can be supplied quickly on request.

Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	○	○	○	○	○	○	○	×	○
5xD	●	●	○	○	○	○	○	×	○	×	○

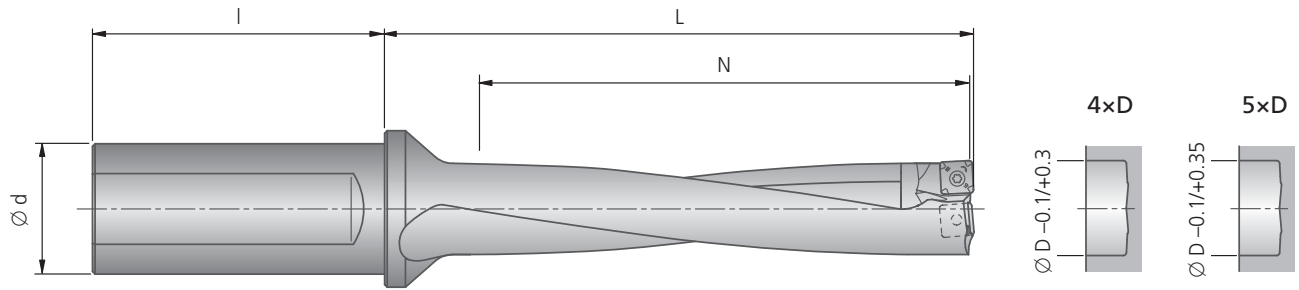
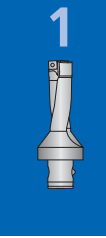
● very good ○ good ○ possible: see technical notes, page 82 × not possible

Supply includes:

KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Article	Order No. Article	
W80 10010.048425 W80 10010.042730 W80 10010.046115 W80 10010.047710	SOGX 040204-01 BK8425 SOGX 040204-01 BK2730 SOGX 040204-01 BK6115 △ SOGX 040204-01 BK7710	2		N00 56051 S/M1.8x3.85-5IP	0.38 Nm	L05 00800 6IP
W80 12010.048425 W80 12010.042730 W80 12010.046115 W80 12010.047710	SOGX 050204-01 BK8425 SOGX 050204-01 BK2730 SOGX 050204-01 BK6115 △ SOGX 050204-01 BK7710	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W80 18010.068425 W80 18010.062730 W80 18010.066115 W80 18010.067710	SOGX 060206-01 BK8425 SOGX 060206-01 BK2730 SOGX 060206-01 BK6115 △ SOGX 060206-01 BK7710	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W80 20010.088425 W80 20010.082730 W80 20010.086115 W80 20010.087710	SOGX 07T208-01 BK8425 SOGX 07T208-01 BK2730 SOGX 07T208-01 BK6115 △ SOGX 07T208-01 BK7710	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W80 24010.088425 W80 24010.082730 W80 24010.086115 W80 24010.087710	SOGX 080308-01 BK8425 SOGX 080308-01 BK2730 SOGX 080308-01 BK6115 △ SOGX 080308-01 BK7710	2		N00 57571 S/M2.5x6.3-8IP	1.28 Nm	L05 00830 8IP
W80 28010.088425 W80 28010.082730 W80 28010.086115 W80 28010.087710	SOGX 09T308-01 BK8425 SOGX 09T308-01 BK2730 SOGX 09T308-01 BK6115 △ SOGX 09T308-01 BK7710	2		N00 57251 S3076-8IP	2.25 Nm	L05 00830 8IP
W80 32010.088425 W80 32010.082730 W80 32010.086115 W80 32010.087710	SOGX 100408-01 BK8425 SOGX 100408-01 BK2730 SOGX 100408-01 BK6115 △ SOGX 100408-01 BK7710	2		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge: SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425



Ø D mm	max. diameter with offset mm	Cylindrical shank Ø d × l	4xD				5xD			
			Order No.	N	L	kg	Order No.	N	L	kg
33.2	33.7	40x68	U44 33320	136	161	1.01	U45 33320	170	195	1.13
33.5	34.0	40x68	U44 33350	136	161	1.03	U45 33350	170	195	1.14
34.0	34.5	40x68	U44 33400	136	161	1.04	U45 33400	170	195	1.15
34.5	35.0	40x68	U44 33450	140	166	1.08	U45 33450	175	201	1.19
35.0	35.5	40x68	U44 33500	140	166	1.09	U45 33500	175	201	1.21
35.5	36.0	40x68	U44 33550	144	170	1.13	U45 33550	180	206	1.25
36.0	36.5	40x68	U44 33600	144	170	1.14	U45 33600	180	206	1.27
37.0	37.5	40x68	U44 33700	148	175	1.20	U45 33700	185	212	1.34
37.5	38.0	40x68	U44 33750	152	179	1.23	U45 33750	190	217	1.37
38.0	38.5	40x68	U44 33800	152	179	1.24	U45 33800	190	217	1.39
38.5	39.0	40x68	U44 33850	156	184	1.28	U45 33850	195	223	1.43
39.0	39.5	40x68	U44 33900	156	184	1.29	U45 33900	195	223	1.45
39.2	39.7	40x68	U44 33920	160	188	1.33	U45 33920	200	228	1.49
39.5	40.0	40x68	U44 33950	160	188	1.34	U45 33950	200	228	1.50
40.0	40.5	40x68	U44 34000	160	188	1.35	U45 34000	200	228	1.52
40.5	41.0	40x68	U44 34050	164	193	1.40	U45 34050	205	234	1.58
41.0	41.5	40x68	U44 34100	164	193	1.42	U45 34100	205	234	1.61
41.5	42.0	40x68	U44 34150	168	197	1.47	U45 34150	210	239	1.67
42.0	42.5	40x68	U44 34200	168	197	1.49	U45 34200	210	239	1.70
42.5	43.0	40x68	U44 34250	172	202	1.53	U45 34250	215	245	1.74
43.0	43.5	40x68	U44 34300	172	202	1.54	U45 34300	215	245	1.76
43.5	44.0	40x68	U44 34350	176	206	1.60	U45 34350	220	250	1.82
44.0	44.5	40x68	U44 34400	176	206	1.62	U45 34400	220	250	1.85
45.0	45.5	40x68	U44 34500	180	211	1.70	U45 34500	225	256	1.96
45.5	46.0	40x68	U44 34550	184	215	1.76	U45 34550	230	261	2.03
46.0	46.5	40x68	U44 34600	184	215	1.79	U45 34600	230	261	2.07

All intermediate dimensions can be supplied quickly on request.

Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting








L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	○	○	○	○	○	○	○	×	○
5xD	●	●	○	○	○	○	○	×	○	×	○

● very good ○ good ○ possible: see technical notes, page 82 × not possible






Supply includes:

KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  ISO-Code	Piece	for workpiece material 	Clamping screw	Starting torque	Screwdriver
				Order No. Article	Order No. Article	Order No. Article
W80 38010.088425 W80 38010.082730 W80 38010.086115 W80 38010.087710	SOGX 110408-01 BK8425 SOGX 110408-01 BK2730 SOGX 110408-01 BK6115 ⚠ SOGX 110408-01 BK7710	2		N00 57261 S3575-15IP	2.8 Nm	L05 00860 15IP
W80 42010.088425 W80 42010.082730 W80 42010.086115 W80 42010.087710	SOGX 120408-01 BK8425 SOGX 120408-01 BK2730 SOGX 120408-01 BK6115 ⚠ SOGX 120408-01 BK7710	2		N00 57301 S45100-20IP	6.25 Nm	L05 00870 20IP
W80 46010.088425 W80 46010.082730 W80 46010.086115 W80 46010.087710	SOGX 130508-01 BK8425 SOGX 130508-01 BK2730 SOGX 130508-01 BK6115 ⚠ SOGX 130508-01 BK7710	2		N00 57301 S45100-20IP	6.25 Nm	L05 00870 20IP

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:  
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425








Guideline values for solid drilling					Cutting speed $v_c$ ft/min															
Material group	Strength Rm (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	4xD															
																				
					BK8425			BK2730			BK6425			BK6115			BK7710			
					min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	
P	1.0	≤ 77200	non-alloy steels	A570.36 1213 A573.81	660	<b>850</b>	1050	660	<b>820</b>	980	890	<b>1050</b>	1210	820	<b>980</b>	1150	-	-	-	
	2.0	77200-192000	non-alloy / low alloy steels	5120 1055 5115	820	<b>890</b>	980	820	<b>890</b>	980	820	<b>920</b>	1050	820	<b>890</b>	980	-	-	-	
	2.1	< 77200	lead alloys	12L13	660	<b>850</b>	1050	520	<b>720</b>	920	890	<b>1050</b>	1210	820	<b>980</b>	1150	-	-	-	
	3.0	< 192000	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	4140 1064	460	<b>590</b>	720	390	<b>520</b>	660	720	<b>850</b>	980	660	<b>790</b>	920	-	-	-	
	4.0	< 192000	high alloy steels	H13 H21	390	<b>520</b>	660	330	<b>460</b>	590	620	<b>720</b>	820	560	<b>660</b>	750	-	-	-	
	4.1		HSS		160	<b>230</b>	300	130	<b>200</b>	260	260	<b>330</b>	390	230	<b>300</b>	360	-	-	-	
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel* 718 Nimonic* 80A							on request								
	5.1	58000	titanium, titanium alloys	AMS R54520							on request									
M	6.0	≤ 87000	stainless steels	304L 316	490	<b>560</b>	690	460	<b>590</b>	720	620	<b>720</b>	820	690	<b>790</b>	890	-	-	-	
	6.1	< 192000	stainless steels	630	390	<b>490</b>	660	390	<b>520</b>	660	560	<b>660</b>	750	620	<b>720</b>	820	-	-	-	
	7.0	> 192000	stainless / fireproof steels	420 403	360	<b>490</b>	620	390	<b>520</b>	660	560	<b>660</b>	750	620	<b>720</b>	820	-	-	-	
K	8.0		180	gray cast iron	No 35 B No 50 B	460	<b>590</b>	720	390	<b>520</b>	660	490	<b>660</b>	820	520	<b>790</b>	1050	-	-	-
	8.1		250	alloy gray cast iron	A436 Type 2	390	<b>490</b>	590	330	<b>430</b>	520	330	<b>460</b>	590	330	<b>460</b>	590	-	-	-
	9.0	≤ 87000	130	spheroidal graphite cast iron, ferritic	60-40-18	460	<b>590</b>	720	390	<b>520</b>	660	390	<b>520</b>	660	390	<b>520</b>	660	-	-	-
	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	80-55-06	390	<b>490</b>	590	360	<b>430</b>	520	330	<b>460</b>	590	330	<b>460</b>	590	-	-	-
	10.0	> 87000	250	spheroidal graphite cast iron, perlitic malleable iron	100-70-03 70003	360	<b>460</b>	560	300	<b>390</b>	490	300	<b>390</b>	490	300	<b>390</b>	490	-	-	-
	10.1		200	alloyed spheroidal graphite cast iron	A43D2	360	<b>460</b>	560	300	<b>390</b>	490	300	<b>390</b>	490	300	<b>390</b>	490	-	-	-
10.2		300	vermicular cast iron		300	<b>360</b>	430	260	<b>330</b>	390	230	<b>330</b>	430	230	<b>330</b>	430	-	-	-	
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	UNS C36000	490	<b>660</b>	820	490	<b>660</b>	820	-	-	-	490	<b>820</b>	1150			
	12.1		100	copper alloy, brass, bronze: average cut		660	<b>980</b>	1310	660	<b>980</b>	1310	-	-	-	820	<b>1150</b>	1480			
	13.0		60	wrought aluminium alloys	GD-AISI12	980	<b>1310</b>	1640	980	<b>1310</b>	1640	-	-	-	980	<b>1640</b>	2300			
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy		590	<b>820</b>	1050	590	<b>820</b>	1050	-	-	-	690	<b>920</b>	1150			
	14.0		100	cast alum.alloy: Si-content >10%	A360.2	490	<b>660</b>	820	490	<b>660</b>	820	-	-	-	460	<b>720</b>	980			
H	15.0	209200		hardened steels < 45 HRC								on request								
	16.0	209200		hardened steels > 45 HRC								on request								

Cutting values shown are relating to the basic recommendations for cutting materials given. Patent applications (KUB Pentron)





Guideline values for solid drilling					Cutting speed $v_c$ ft/min														
Material group	Strength Rm (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	5xD														
																			
					BK8425			BK2730			BK6425			BK6115			BK7710		
					min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 77200	non-alloy steels	A570.36 1213 A573.81	660	<b>850</b>	1050	660	<b>820</b>	980	890	<b>1050</b>	1210	820	<b>980</b>	1150	-	-	-
	2.0	77200-192000	non-alloy / low alloy steels	5120 1055 5115	820	<b>890</b>	980	820	<b>890</b>	980	820	<b>920</b>	1050	820	<b>890</b>	980	-	-	-
	2.1	< 77200	lead alloys	12L13	660	<b>850</b>	1050	520	<b>720</b>	920	890	<b>1050</b>	1210	820	<b>980</b>	1150	-	-	-
	3.0	< 192000	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	4140 1064	460	<b>590</b>	720	390	<b>520</b>	660	720	<b>850</b>	980	660	<b>790</b>	920	-	-	-
	4.0	< 192000	high alloy steels	H13 H21	390	<b>520</b>	660	330	<b>460</b>	590	620	<b>720</b>	820	560	<b>660</b>	750	-	-	-
	4.1		HSS		160	<b>230</b>	300	130	<b>200</b>	260	260	<b>330</b>	390	230	<b>300</b>	360	-	-	-
S	5.0		250 special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel® 718 Nimonic® 80A							on request								
	5.1	58000	titanium, titanium alloys	AMS R54520							on request								
M	6.0	≤ 87000	stainless steels	304L 316	490	<b>560</b>	690	460	<b>590</b>	720	620	<b>720</b>	820	690	<b>790</b>	890	-	-	-
	6.1	< 192000	stainless steels	630	390	<b>490</b>	660	390	<b>520</b>	660	560	<b>660</b>	750	620	<b>720</b>	820	-	-	-
	7.0	> 192000	stainless / fireproof steels	420 403	360	<b>490</b>	620	390	<b>520</b>	660	560	<b>660</b>	750	620	<b>720</b>	820	-	-	-
K	8.0		180 gray cast iron	No 35 B No 50 B	460	<b>590</b>	720	390	<b>520</b>	660	490	<b>660</b>	820	520	<b>790</b>	1050	-	-	-
	8.1		250 alloy gray cast iron	A436 Type 2	390	<b>490</b>	590	330	<b>430</b>	520	330	<b>460</b>	590	330	<b>460</b>	590	-	-	-
	9.0	≤ 87000	130 spheroidal graphite cast iron, ferritic	60-40-18	460	<b>590</b>	720	390	<b>520</b>	660	390	<b>520</b>	660	390	<b>520</b>	660	-	-	-
	9.1		230 spheroidal graphite cast iron, ferritic/perlitic	80-55-06	390	<b>490</b>	590	360	<b>430</b>	520	330	<b>460</b>	590	330	<b>460</b>	590	-	-	-
	10.0	> 87000	250 spheroidal graphite cast iron, perlitic malleable iron	100-70-03 70003	360	<b>460</b>	560	300	<b>390</b>	490	300	<b>390</b>	490	300	<b>390</b>	490	-	-	-
	10.1		200 alloyed spheroidal graphite cast iron	A43D2	360	<b>460</b>	560	300	<b>390</b>	490	300	<b>390</b>	490	300	<b>390</b>	490	-	-	-
10.2		300 vermicular cast iron		300	<b>360</b>	430	260	<b>330</b>	390	230	<b>330</b>	430	230	<b>330</b>	430	-	-	-	
N	12.0		90 copper alloy, brass, lead-alloy bronze, lead bronze: good cut	UNS C36000	490	<b>660</b>	820	490	<b>660</b>	820	-	-	-	490	<b>820</b>	1150			
	12.1		100 copper alloy, brass, bronze: average cut		660	<b>980</b>	1310	660	<b>980</b>	1310	-	-	-	820	<b>1150</b>	1480			
	13.0		60 wrought aluminium alloys	GD-AISI12	980	<b>1310</b>	1640	980	<b>1310</b>	1640	-	-	-	980	<b>1640</b>	2300			
	13.1		75 cast alum. alloy: Si-content <10% magnesium alloy		590	<b>820</b>	1050	590	<b>820</b>	1050	-	-	-	690	<b>920</b>	1150			
	14.0		100 cast alum.alloy: Si-content >10%	A360.2	490	<b>660</b>	820	490	<b>660</b>	820	-	-	-	460	<b>720</b>	980			
H	15.0	209200	hardened steels < 45 HRC								on request								
	16.0	209200	hardened steels > 45 HRC								on request								

Cutting values shown are relating to the basic recommendations for cutting materials given. Patent applications (KUB Pentron)

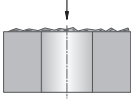




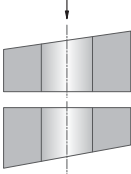
## Technical Information

1

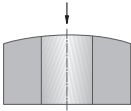


1.  **Starting on uneven surfaces (cast surfaces)**
  - when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)

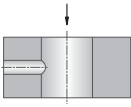
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2.  **Starting on angled surfaces / angled bore exit**
  - when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
  - when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60%
  - use tough insert and stable corner radius

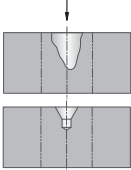
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3.  **Starting on cambered surfaces**
  - when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
  - when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60% (depending on component stability and clamping).

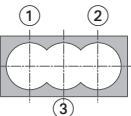
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4.  **Drilling through a cross bore**
  - when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)
  - in the vicinity of the cross bore, reduce the feed rate by 50%
  - watch for chip jamming around tool
  - use tough insert and stable corner radius

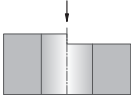
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5.  **Starting on a groove or large centering bore**
  - when inserting the drill, reduce the feed rate by approx. 30-50% until centring depth is reached
  - reduce feed rate
  - use tough insert for internal cutting edge
  - spot face if required

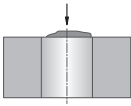
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6.  **Drilling a chamber**
  - first bore Nos. 1 + 2, then bore No. 3
  - check distribution is symmetrical
  - avoid chip jams
  - use tough insert and stable corner radius
  - Continuous drilling: when inserting the drill, reduce the feed rate by approx. 30-60% (depending on component stability and clamping)
  - Interruption to cut: when drilling the cut interruption, reduce the feed rate by approx. 50-60%

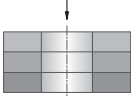
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7.  **Starting on an edge**
  - when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)
  - use tough insert and stable corner radius

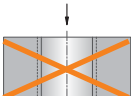
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8.  **Starting on a welded seam**
  - when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
  - when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60% (depending on component stability and clamping).

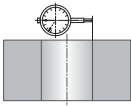
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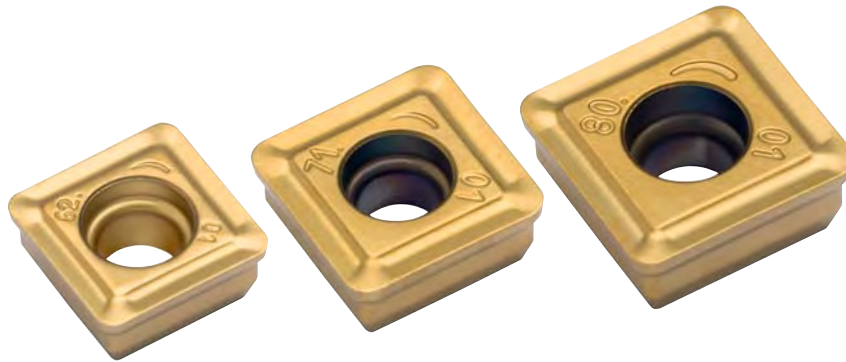
9.  **Drilling through stacked plates**
  - good workpiece clamping required
  - max. gap = 0.039 inch (1 mm)

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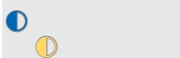
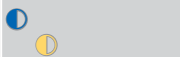
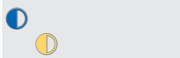
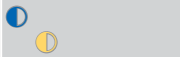
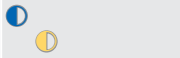
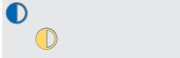
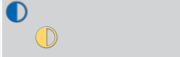
10.  **Roughing**
  - not possible

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11.  **Adjustable**
  - when inserting and withdrawing the drill reduce the feed rate by approx. 30-50% until full bore diameter is reached (depending on component stability and clamping).
  - use tough insert and stable corner radius



(..) = mm

for higher cutting speed			
Ø D	Order No. ▽▽ size	ISO-Code	P M K N S H
0.551 – 0.630 (14.0 – 16.0)	W80 10010.046425 W80 10010.046115	SOGX 040204-01 BK6425 SOGX 040204-01 BK6115 ⚠	
0.631 – 0.709 (16.1 – 18.0)	W80 12010.046425 W80 12010.046115	SOGX 050204-01 BK6425 SOGX 050204-01 BK6115 ⚠	
0.710 – 0.787 (18.1 – 20.0)	W80 18010.066425 W80 18010.066115	SOGX 060206-01 BK6425 SOGX 060206-01 BK6115 ⚠	
0.788 – 0.905 (20.1 – 23.0)	W80 20010.086425 W80 20010.086115	SOGX 07T208-01 BK6425 SOGX 07T208-01 BK6115 ⚠	
0.906 – 1.024 (23.1 – 26.0)	W80 24010.086425 W80 24010.086115	SOGX 080308-01 BK6425 SOGX 080308-01 BK6115 ⚠	
1.025 – 1.181 (26.1 – 30.0)	W80 28010.086425 W80 28010.086115	SOGX 09T308-01 BK6425 SOGX 09T308-01 BK6115 ⚠	
0.182 – 1.299 (30.1 – 33.0)	W80 32010.086425 W80 32010.086115	SOGX 100408-01 BK6425 SOGX 100408-01 BK6115 ⚠	
1.300 – 1.457 (33.1 – 37.0)	W80 38010.086425 W80 38010.086115	SOGX 110408-01 BK6425 SOGX 110408-01 BK6115 ⚠	
1.458 – 1.653 (37.1 – 42.0)	W80 42010.086425 W80 42010.086115	SOGX 120408-01 BK6425 SOGX 120408-01 BK6115 ⚠	
1.654 – 1.8111 (42.1 – 46.0)	W80 46010.086425 W80 46010.086115	SOGX 130508-01 BK6425 SOGX 130508-01 BK6115 ⚠	



Note: Only use this insert with KUB Pentron® as an external cutting edge:  
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

1



As early as 1977, KOMET® introduced the world's first indexable insert solid drill bit without an HSS centring tip, thereby laying the foundation for the triumphal procession of the KOMET KUB® drills.

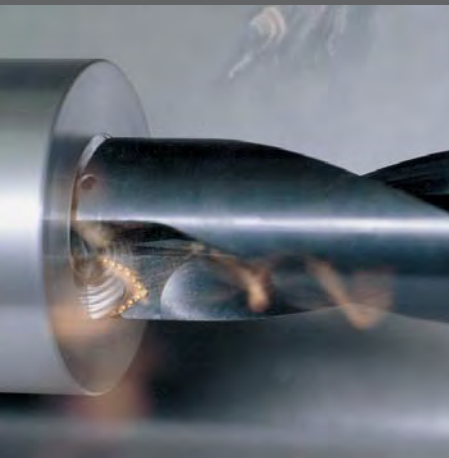
It was based on the familiar Unisix® indexable insert with three cutting edges.

This is also why it was known as the KOMET Unisix® drill.

The indexable insert today known by the name KUB Trigon® has 84° edge angles and a variable radial fitting angle which enable an ideal balancing of thrust forces. This has significantly contributed to the resounding success of the new solid drill bit tools.

In just a few years, the KOMET KUB Trigon® indexable insert drills have become the most commonly used solid drill bit tools in the diameter ranges from 12 millimetres to a maximum of 350 millimetres, with drilling depths of up to 4 × D.





**BENEFITS for you:**

- Flexibility in application with various geometries and coatings
- Close bore tolerances up to IT 8
- Extremely good surface finish can be achieved
- Machining to production dimension without separate fine machining
- Universal use – suitable for rotating and stationary operations



**KOMET KUB Trigon®** Page

**ABS® Connection - R.H. cutting**

Drilling depth 2xD, 3xD, 4xD – Ø 0.562 - 1.750 inch	86 – 87
Drilling depth 2xD, 3xD, 4xD – Ø 14 - 44 mm	88 – 89
Guideline values for solid drilling	90 – 91
Alternative Inserts	115

**Cylindrical Shank (combination shank) - R.H. cutting**

Drilling depth 2.5xD, 4xD – Ø 0.562 - 1.750 inch	92 – 97
Guideline values for solid drilling	98 – 99
Drilling depth 2xD, 3xD, 4xD – Ø 14 - 44 mm	100 – 105
Guideline values for solid drilling	106 – 107
Alternative Inserts	115

**Cylindrical Shank (parallel clamping surface) - R.H. cutting**

Drilling depth 3xD, 4xD – Ø 14 - 54 mm	108 – 113
Guideline values for solid drilling	114
Alternative Inserts	115

**ABS® Connection - ⌀ L.H. cutting**

Drilling depth 3xD, 4xD – Ø 14 - 44 mm	116 – 117
Guideline values for solid drilling	118
Alternative Inserts	119

**Cylindrical Shank (parallel clamping surface) - ⌀ L.H. cutting**

Drilling depth 3xD – Ø 14 - 54 mm	120 – 121
Guideline values for solid drilling	122
Alternative Inserts	123

**KOMET KUB®**

**ABS® Connection - R.H. cutting, adjustable**

Drilling depth 3xD – Ø 38.5 - 82 mm	124 – 125
Guideline values for solid drilling	126
Alternative Inserts	127

**ABS® Connection - R.H. cutting**

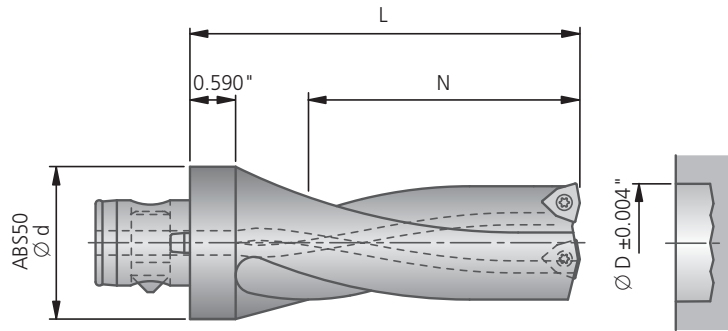
Drilling depth 2xD, 3xD – Ø 1.781 - 3.250 inch	128 – 129
Drilling depth 2xD, 3xD – Ø 45 - 82 mm	130 – 131
Guideline values for solid drilling	132
Alternative Inserts	133
Drilling depth 2.5xD – 1.812 - 3.250 inch	134 – 135
Guideline values for solid drilling	136
Alternative Inserts	137

**Technical Informations** 138 – 140

**Problems → Causes → Solutions** 141



Milling cartridge for KUB Trigon® see chapter 6



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD				4xD			
			Order No.	N	L	lbs	Order No.	N	L	lbs	Order No.	N	L	lbs
0.562	0.602	50	V30 31431	1.179	2.557	1.01	V30 71431	1.769	3.147	1.04	V30 91431	2.358	3.735	1.04
0.593	0.633	50	V30 31511	1.257	2.635	1.01	V30 71511	1.885	3.263	1.04	V30 91511	2.514	3.892	1.06
0.625	0.665	50	V30 31591	1.258	2.636	1.01	V30 71591	1.887	3.265	1.04	V30 91591	2.516	3.894	1.06
0.656	0.696	50				1.04	V30 71671	2.004	3.381	1.06	V30 91671	2.671	4.049	1.08
0.687	0.727	50	V30 31751	1.413	2.791	1.04	V30 71751	2.120	3.498	1.06	V30 91751	2.827	4.205	1.10
0.703	0.743	50	V30 31791	1.414	2.792	1.06	V30 71791	2.121	3.499	1.08	V30 91791	2.828	4.205	1.10
0.750	0.790	50	V30 31911	1.571	2.949	1.06	V30 71911	2.356	3.734	1.08	V30 91911	3.142	4.520	1.12
0.765	0.805	50				1.06	V30 71941	2.366	3.744	1.10	V30 91941	3.154	4.532	1.15
0.781	0.821	50	V30 31981	1.578	2.956	1.06	V30 71981	2.367	3.745	1.06	V30 91981	3.155	4.533	1.15
0.812	0.852	50	V30 32061	1.655	3.033	1.06	V30 72061	2.483	3.861	1.12	V30 92061	3.311	4.689	1.15
0.828	0.868	50	V30 32101	1.656	3.034	1.10	V30 72101	2.484	3.862	1.15	V30 92101	3.312	4.690	1.19
0.875	0.915	50	V30 32221	1.813	3.191	1.12	V30 72221	2.719	4.097	1.17	V30 92221	3.626	5.004	1.23
0.937	0.977	50	V30 32381	1.890	3.268	1.15	V30 72381	2.835	4.213	1.15	V30 92381	3.779	5.157	1.28
0.985	1.025	50	V30 32501	1.970	3.348	1.17	V30 72501	2.955	4.333	1.23	V30 92501	3.940	5.318	1.21
1.000	1.040	50	V30 32541	2.047	3.425	1.17	V30 72541	3.071	4.449	1.30	V30 92541	4.094	5.472	1.32
1.031	1.111	50	V30 32621	2.125	3.503	1.21	V30 72621	3.187	4.565	1.32	V30 92621	4.250	5.628	1.37
1.062	1.142	50	V30 32701	2.124	3.502	1.21	V30 72701	3.186	4.564	1.32	V30 92701	4.248	5.626	1.41
1.109	1.229	50	V30 32821	2.281	3.659	1.37	V30 72821	3.421	4.799	1.32	V30 92821	4.562	5.940	1.39
1.125	1.245	50	V30 32861	2.281	3.659	1.41	V30 72861	3.422	4.800	1.34	V30 92861	4.563	5.941	1.46
1.156	1.276	50	V30 32941	2.359	3.737	1.26	V30 72941	3.539	4.917	1.39	V30 92941	4.718	6.096	1.48
1.187	1.287	50	V30 33021	2.437	4.028	1.28	V30 73021	3.655	5.246	1.39	V30 93021	4.874	6.465	1.59
1.218	1.318	50	V30 33091	2.444	4.021	1.30	V30 73091	3.666	5.236	1.43	V30 93091	4.888	6.479	1.54
1.250	1.331	50	V30 33181	2.516	4.107	1.32	V30 73181	3.774	5.365	1.48	V30 93181	5.031	6.622	1.61
1.281	1.361	50	V30 33251	2.601	4.192	1.34	V30 73251	3.902	5.493	1.48	V30 93251	5.203	6.794	1.65
1.312	1.392	50	V30 33331	2.679	4.270	1.37	V30 73331	4.019	5.610	1.52	V30 93331	5.350	6.941	1.68
1.328	1.408	50	V30 33371	2.680	4.271	1.63	V30 73371	4.019	5.792	1.74	V30 93371	5.359	6.950	1.81
1.375	1.415	50	V30 33491	2.758	4.349	1.52	V30 73491	4.137	5.728	1.74	V30 93491	5.516	7.107	1.90
1.406	1.446	50	V30 33571	2.836	4.427	1.54	V30 73571	4.253	5.844	1.72	V30 93571	5.671	7.262	1.94
1.437	1.477	50	V30 33651	2.913	4.504	1.57	V30 73651	4.370	5.961	1.76	V30 93651	5.827	7.418	2.01
1.469	1.589	50	V30 33731	2.993	4.962	1.81	V30 73731	4.490	6.459	1.85	V30 93731	5.986	7.955	2.07
1.500	1.620	50	V30 33811	3.071	5.040	1.72	V30 73811	4.606	6.575	1.87	V30 93811	6.142	8.111	2.14
1.531	1.651	50	V30 33891	3.070	5.039	1.70	V30 73891	4.605	6.574	1.96	V30 93891	6.140	8.109	2.23
1.562	1.682	50	V30 33971	3.148	5.117	1.74	V30 73971	4.721	6.689	2.05	V30 93971	6.295	8.264	2.34
1.625	1.745	50	V30 34131	3.305	5.274	1.96	V30 74131	4.958	6.927	2.29	V30 94131	6.610	8.579	2.60
1.656	1.772	50	V30 34211	3.367	5.336	1.98	V30 74211	5.074	7.043	2.25	V30 94211	6.766	8.735	2.62
1.687	1.772	50	V30 34291	3.382	5.351	2.03	V30 74291	5.073	7.042	2.38	V30 94291	6.764	8.733	2.69
1.750	1.772	50	V30 34451	3.539	5.508	2.09	V30 74451	5.309	7.278	2.49	V30 94451	7.079	9.048	2.84

Any intermediate dimensions from Ø 0.562 – 1.750 inch are available on request.

Supply includes: KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)





L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	○	●	×	○	○
3xD	●	●	○	○	○	○	○	○	×	○	○
4xD	●	●	○	○	○	○	○	○	×	×	○

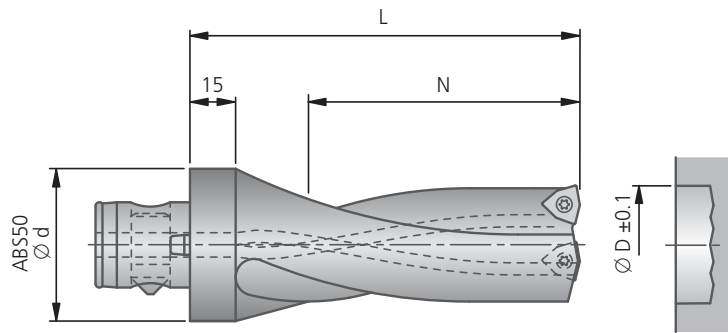
● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Qty	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2	● ● ● ● ● ● ●	N00 56041 S/M2×4.3-6IP	5.5 in-lbs	L05 00810 6IP
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2	● ● ● ● ● ● ●	N00 57553 S/M2.2×5.5-6IP	8.9in-lbs	L05 00810 6IP
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2	● ● ● ● ● ● ●	N00 57511 S/M2.5×7.2-8IP	11.0 in-lbs	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2	● ● ● ● ● ● ●	N00 57521 S/M3.5×7.3-10IP	25.0 in-lbs	L05 00850 10IP



**Note regarding insert radius:**

The nominal dimension Ø is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
14.0	15.0	50	V30 31403	28	63	0.46	V30 71403	42	77	0.47	V30 91403	56	91	0.47
15.0	16.0	50	V30 31503	30	65	0.46	V30 71503	45	80	0.47	V30 91503	60	95	0.48
15.5	16.5	50	V30 31551	32	67	0.46	V30 71551	48	83	0.47	V30 91551	64	99	0.48
16.0	17.0	50	V30 31601	32	67	0.47	V30 71601	48	83	0.48	V30 91601	64	99	0.49
17.0	18.0	50	V30 31701	34	69	0.47	V30 71701	51	86	0.48	V30 91701	68	103	0.50
17.5	18.5	50	V30 31751	36	71	0.48	V30 71751	54	89	0.49	V30 91751	72	107	0.50
18.0	19.0	50	V30 31801	36	71	0.48	V30 71801	54	89	0.49	V30 91801	72	107	0.51
18.5	19.0	50	V30 31851	38	73	0.48	V30 71851	57	92	0.50	V30 91851	76	111	0.52
19.0	20.0	50	V30 31901	38	73	0.48	V30 71901	57	92	0.48	V30 91901	76	111	0.52
19.5	20.0	50	V30 31951	40	75	0.48	V30 71951	60	95	0.51	V30 91951	80	115	0.52
20.0	21.0	50	V30 32001	40	75	0.50	V30 72001	60	95	0.52	V30 92001	80	115	0.54
21.0	22.0	50	V30 32101	42	77	0.51	V30 72101	63	98	0.53	V30 92101	84	119	0.56
22.0	23.0	50	V30 32201	44	79	0.52	V30 72201	66	101	0.52	V30 92201	88	123	0.58
22.5	23.5	50	V30 32251	46	81	0.53	V30 72251	69	104	0.56	V30 92251	92	127	0.55
23.0	24.0	50	V30 32301	46	81	0.53	V30 72301	69	104	0.59	V30 92301	92	127	0.60
24.0	25.0	50	V30 32401	48	83	0.55	V30 72401	72	107	0.60	V30 92401	96	131	0.62
24.5	25.5	50	V30 32451	50	85	0.55	V30 72451	75	110	0.60	V30 92451	100	135	0.64
25.0	26.0	50	V30 32501	50	85	0.62	V30 72501	75	110	0.60	V30 92501	100	135	0.63
26.0	28.0	50	V30 32601	52	87	0.64	V30 72601	78	113	0.61	V30 92601	104	139	0.66
26.5	28.5	50	V30 32651	54	89	0.57	V30 72651	81	116	0.63	V30 92651	108	143	0.67
27.0	30.0	50	V30 32701	54	89	0.58	V30 72701	81	116	0.63	V30 92701	108	143	0.72
28.0	31.0	50	V30 32801	56	91	0.59	V30 72801	84	119	0.65	V30 92801	112	147	0.70
28.5	31.5	50	V30 32851	58	93	0.60	V30 72851	87	122	0.67	V30 92851	116	151	0.73
29.0	32.0	50	V30 32901	58	93	0.61	V30 72901	87	122	0.67	V30 92901	116	151	0.75
29.5	32.5	50	V30 32951	60	95	0.62	V30 72951	90	125	0.69	V30 92951	120	155	0.76
30.0	32.5	50	V30 33001	60	100	0.74	V30 73001	90	130	0.79	V30 93001	120	160	0.82
31.0	33.5	50	V30 33101	62	102	0.69	V30 73101	93	133	0.79	V30 93101	124	164	0.86
31.5	33.5	50	V30 33151	64	104	0.70	V30 73151	96	136	0.78	V30 93151	128	168	0.88
32.0	34.0	50	V30 33201	64	104	0.71	V30 73201	96	136	0.8	V30 93201	128	168	0.91
33.0	34.0	50	V30 33301	66	106	0.82	V30 73301	99	139	0.84	V30 93301	132	172	0.94
34.0	35.0	50	V30 33401	68	108	0.78	V30 73401	102	142	0.85	V30 93401	136	176	0.97
35.0	36.0	50	V30 33501	70	110	0.77	V30 73501	105	145	0.89	V30 93501	140	180	1.01
36.0	37.0	50	V30 33601	72	112	0.79	V30 73601	108	148	0.93	V30 93601	144	184	1.06
37.0	40.0	50	V30 33701	74	124	0.89	V30 73701	111	161	1.04	V30 93701	148	198	1.18
37.5	40.5	50	V30 33751	76	126	0.9	V30 73751	114	164	1.02	V30 93751	152	202	1.19
38.0	41.0	50	V30 33801	76	126	0.92	V30 73801	114	164	1.08	V30 93801	152	202	1.22
39.0	42.0	50	V30 33901	78	128	0.95	V30 73901	117	167	1.13	V30 93901	156	206	1.29
39.5	42.5	50	V30 33951	80	130	0.96	V30 73951	120	170	1.14	V30 93951	160	210	1.32
40.0	43.0	50	V30 34001	80	130	0.98	V30 74001	120	170	1.17	V30 94001	160	210	1.36
41.0	44.0	50	V30 34101	82	132	1.10	V30 74101	123	173	1.22	V30 94101	164	214	1.43
42.0	45.0	50	V30 34201	84	134	1.10	V30 74201	126	176	1.27	V30 94201	168	218	1.50
43.0	45.0	50	V30 34301	86	136	1.10	V30 74301	129	179	1.33	V30 94301	172	222	1.52
44.0	45.0	50	V30 34401	88	138	1.13	V30 74401	132	182	1.41	V30 94401	176	226	1.66

Any intermediate dimensions from Ø 14 – 44 mm and inch dimensions are available on request.

Supply includes: KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)

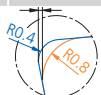




L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	○	●	×	○	○
3xD	●	●	○	○	○	○	○	○	×	○	○
4xD	●	●	○	○	○	○	○	○	×	×	○

● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2		N00 57521 S/M3.5x7.3-10IP	2.8 Nm	L05 00850 10IP



**Note regarding insert radius:**  
The nominal dimension  $\varnothing$  is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)

Guideline values for solid drilling: pages 90-91 / alternative inserts: page 115.



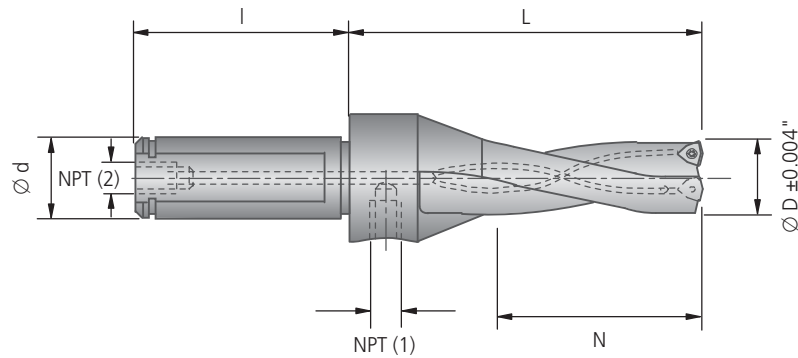
Guideline values for solid drilling					V <sub>C</sub>	Max. feed f in/rev (mm/rev)								
Material group	Strength R <sub>m</sub> (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		Cutting speed v <sub>C</sub> ft/min (m/min)	Ø 0.562 – 0.686 (Ø 14 – 16.9)	Ø 0.687 – 0.811 (Ø 17 – 19.9)	Ø 0.812 – 0.984 (Ø 20 – 24.9)	2xØ		Ø 0.985 – 1.186 (Ø 25 – 29.9)	Ø 1.187 – 1.468 (Ø 30 – 36.9)	Ø 1.469 – 1.624 (Ø 37 – 40.9)
P	1.0	≤72500	non-alloy steels	A570.36 1213 A573.81	980 (300)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	2.0	72500-130000	non-alloy / low alloy steels	5120 1055 5115	820 (250)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)
	2.1	<72500	lead alloys	12L13	980 (300)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)
	3.0	>130000	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	4140 1064	660 (200)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)
	4.0	>130000	high alloy steels	H13 H21	590 (180)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)
S	4.1		HSS		260 (80)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	-	-	-	-	-
	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel® 718 Nimonic® 80A	110 (60)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)
M	5.1	58000	titanium, titanium alloys	AMS R54520	260 (80)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	6.0	≤87000	stainless steels	304L 316	590 (180)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)
	6.1	<130000	stainless steels	630	520 (160)	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)
	7.0	>130000	stainless / fireproof steels	420 403	520 (160)	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
K	8.0		180	gray cast iron	No 35 B No 50 B	660 (200)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)
	8.1		250	alloy gray cast iron	A436 Type 2	520 (160)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)
	9.0	≤87000	130	spheroidal graphite cast iron, ferritic	60-40-18	590 (180)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)
	9.1		230	spheroidal graphite cast iron, ferritic / perlitic	80-55-06	520 (160)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)
	10.0	>87000	250	spheroidal graphite cast iron, perlitic malleable iron	100-70-03 70003	460 (140)	0.004 (0.10)	0.005 (0.12)	0.006 (0.16)	0.010 (0.25)	0.006 (0.16)	0.007 (0.18)	0.007 (0.18)	0.007 (0.18)
	10.1		200	alloyed spheroidal graphite cast iron	A43D2	460 (140)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)
	10.2		300	vermicular cast iron		390 (120)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)
N	12.0		90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	UNS C36000	980 (30)	0.002 (0.05)	0.003 (0.08)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)
	12.1		100	copper alloy, brass, bronze: average cut		1310 (400)	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)
	13.0		60	wrought aluminium alloys	GD-AISI12	1970 (600)	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	13.1		75	cast alum. alloy: Si-content <10% magnesium alloy		980 (300)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.007 (0.18)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)
	14.0		100	cast alum. alloy: Si-content >10%	A360.2	820 (250)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)
H	15.0	203000		hardened steels < 45 HRC		260 (80)	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	16.0	261000		hardened steels > 45 HRC		130 (40)	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)



Max. feed f (mm/rev)

	3xD							4xD						
	∅ 0.562 - 0.686 (∅ 14 - 16.9)	∅ 0.687 - 0.811 (∅ 17 - 19.9)	∅ 0.812 - 0.984 (∅ 20 - 24.9)	∅ 0.985 - 1.186 (∅ 25 - 29.9)	∅ 1.187 - 1.468 (∅ 30 - 36.9)	∅ 1.469 - 1.624 (∅ 37 - 40.9)	∅ 1.625 - 1.750 (∅ 41 - 44.0)	∅ 0.562 - 0.686 (∅ 14 - 16.9)	∅ 0.687 - 0.811 (∅ 17 - 19.9)	∅ 0.812 - 0.984 (∅ 20 - 24.9)	∅ 0.985 - 1.186 (∅ 25 - 29.9)	∅ 1.187 - 1.468 (∅ 30 - 36.9)	∅ 1.469 - 1.624 (∅ 37 - 40.9)	∅ 1.625 - 1.750 (∅ 41 - 44.0)
	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)
	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)	0.001 (0.04)	0.002 (0.06)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)
	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.007 (0.18)
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)
	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	-	-	-	0.001 (0.02)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	-	-	-
	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.001 (0.02)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	0.002 (0.06)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.001 (0.04)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)
	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.001 (0.04)	0.001 (0.04)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)
	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.005 (0.12)	0.001 (0.04)	0.001 (0.04)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.007 (0.18)	0.009 (0.23)
	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)
	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.007 (0.18)	0.009 (0.23)
	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.007 (0.18)	0.009 (0.23)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.16)	0.010 (0.25)	0.010 (0.25)	0.010 (0.25)	0.010 (0.25)	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.009 (0.23)	0.009 (0.23)	0.009 (0.23)	0.009 (0.23)
	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.007 (0.18)	0.009 (0.23)
	0.003 (0.08)	0.004 (0.10)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.16)	0.008 (0.20)	0.002 (0.06)	0.003 (0.08)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.006 (0.14)	0.007 (0.18)
	0.002 (0.05)	0.003 (0.08)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)	0.007 (0.18)	0.008 (0.20)	0.001 (0.03)	0.002 (0.06)	0.004 (0.10)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)	0.007 (0.18)
	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.001 (0.03)	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)
	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.001 (0.03)	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.007 (0.18)	0.007 (0.18)	0.008 (0.20)	0.008 (0.20)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)	0.007 (0.18)	0.007 (0.18)
	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.003 (0.08)	0.004 (0.10)	0.005 (0.12)	0.007 (0.18)	0.007 (0.18)	0.007 (0.18)	0.009 (0.23)
	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.005 (0.12)	0.005 (0.12)	0.001 (0.03)	0.001 (0.03)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.001 (0.03)	0.002 (0.06)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2.5xD				4xD			
			Order No.	N	L	NPT (1&2)	Order No.	N	L	NPT (1&2)
0.562	0.602	0.750 X 2.250	V57 41432	1.405	2.875	1/8	V57 61432	2.248	3.625	1/8
0.593	0.633	0.750 X 2.250	V57 41510	1.483	2.875		V57 61510	2.372	3.750	
0.625	0.665	0.750 X 2.250	V57 41590	1.563	2.875		V57 61590	2.500	3.878	
0.687	0.727	0.750 X 2.250	V57 41750	1.718	3.125		V57 61750	2.748	4.126	
0.703	0.743	0.750 X 2.250	V57 41790	1.758	3.125		V57 61790	2.812	4.189	
0.750	0.790	0.750 X 2.250	V57 41910	1.875	3.125		V57 61910	3.000	4.378	

Any intermediate dimensions from Ø 0.562" – 0.750" are available on request.

**Supply includes:**

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2.5xD	●	●	●	●	●	○	○	○	×	○	●
4xD	●	●	○	○	○	○	○	○	×	×	○

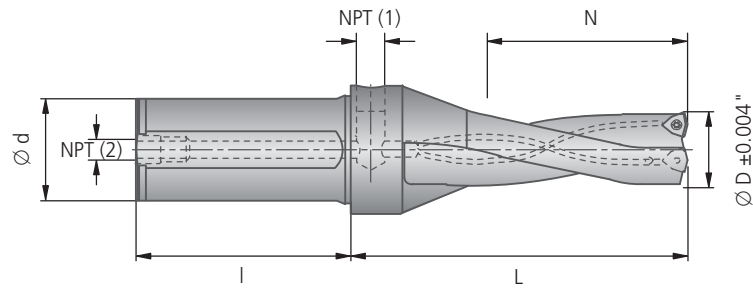
● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Qty	for workpiece material P M K N S H	Clamping screw 	Starting torque	Screwdriver 
				Order No. Description		Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX030204-01 BK8425 WOEX030204-01 BK7930 WOEX030204-01 BK62 WOEX030204-11 BK77	2		N00 56041 S/M2x4-6IP	5.5 in-lbs	L05 00810 6IP



Note regarding insert radius:

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2.5xD				4xD			
			Order No.	N	L	NPT (1&2)	Order No.	N	L	NPT (1&2)
0.562	0.602	1.250X3.250	V57 51434	1.405	2.875	1/8	V57 71434	2.248	3.625	1/8
0.593	0.633	1.250X3.250	V57 51512	1.483	2.875		V57 71512	2.372	3.750	
0.625	0.665	1.250X3.250	V57 51592	1.563	2.875		V57 71592	2.500	3.878	
0.656	0.696	1.250X3.250	V57 51672	1.718	3.125		V57 71672	2.624	4.002	
0.687	0.727	1.250X3.250	V57 51752	1.718	3.125		V57 71752	2.748	4.126	
0.703	0.743	1.250X3.250	V57 51792	1.758	3.125		V57 71792	2.812	4.189	
0.750	0.790	1.250X3.250	V57 51912	1.625	3.125		V57 71912	3.000	4.378	
0.765	0.805	1.250X3.250	V57 51942	1.625	3.125		V57 71942	3.060	4.438	
0.781	0.821	1.250X3.250	V57 51982	1.625	3.125		V57 71982	3.124	4.502	
0.812	0.852	1.250X3.250	V57 52062	1.625	3.125	1/8	V57 72062	3.248	4.626	1/8
0.828	0.868	1.250X3.250	V57 52102	2.000	3.625		V57 72102	3.312	4.690	
0.843	0.883	1.250X3.250	V57 52142	2.000	3.625		V57 72142	3.372	4.750	
0.875	0.915	1.250X3.250	V57 52222	2.000	3.625		V57 72222	3.500	4.878	
0.906	0.946	1.250X3.250	V57 52302	2.000	3.625		V57 72302	3.624	5.002	
0.937	0.977	1.250X3.250	V57 52382	2.000	3.625		V57 72382	3.748	5.126	

For other diameters see following page.

Any **intermediate dimensions** from Ø 0.562" – 1.750" are available on request.

**Supply includes:**

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2.5xD	●	●	●	○	○	○	○	○	×	○	○
4xD	●	●	○	○	○	○	○	○	×	×	○

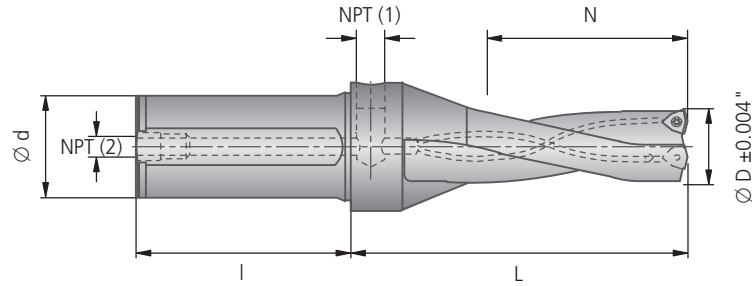
● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Qty	for workpiece material 	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX030204-01 BK8425 WOEX030204-01 BK7930 WOEX030204-01 BK62 WOEX030204-11 BK77	2		N00 56041 S/M2x4-6IP	5.5 in-lbs	L05 00810 6IP
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX040304-01 BK8425 WOEX040304-01 BK7930 WOEX040304-01 BK62 WOEX040304-11 BK77	2		N00 57553 S/M2.2x5.5-6IP	8.9 in-lbs	L05 00810 6IP



**Note regarding insert radius:**

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2.5xD				4xD			
			Order No.	N	L	NPT (1&2)	Order No.	N	L	NPT (1&2)
0.985	1.025	1.250X3.250	V57 52502	2.000	3.625	1/8	V57 72502	3.940	5.318	1/8
1.000	1.040	1.250X3.250	V57 52542	2.000	3.625		V57 72542	4.000	5.378	
1.031	1.111	1.250X3.250	V57 52622	2.750	4.312		V57 72622	4.124	5.502	
1.062	1.142	1.250X3.250	V57 52702	2.750	4.312		V57 72702	4.248	5.626	
1.109	1.229	1.250X3.250	V57 52822	2.750	4.312		V57 72822	4.436	5.814	
1.125	1.245	1.250X3.250	V57 52862	2.750	4.312		V57 72862	4.500	5.878	
1.156	1.276	1.250X3.250	V57 52942	3.250	5.000		V57 72942	4.624	6.002	
1.187	1.287	1.250X3.250	V57 53022	3.250	5.000		V57 73022	4.748	6.339	
1.218	1.318	1.250X3.250	V57 53092	3.250	5.000		V57 73092	4.872	6.463	
1.250	1.331	1.250X3.250	V57 53182	3.250	5.000		V57 73182	5.000	6.591	
1.281	1.361	1.250X3.250	V57 53252	3.250	5.000		V57 73252	5.124	6.715	
1.312	1.392	1.250X3.250	V57 53332	3.250	5.000		V57 73332	5.248	6.839	
1.328	1.408	1.250X3.250	V57 53372	3.250	5.000		V57 73372	5.312	6.887	
1.375	1.415	1.250X3.250	V57 53492	3.250	5.000		V57 73492	5.500	7.091	
1.406	1.446	1.250X3.250	V57 53572	3.250	5.000		V57 73572	5.624	7.199	
1.437	1.477	1.250X3.250	V57 53652	3.250	5.000		V57 73652	5.748	7.339	
1.469	1.589	1.250X3.250	V57 53732	3.500	5.118	V57 73732	5.876	7.845		
1.500	1.620	1.250X3.250	V57 53812	3.500	5.118	V57 73812	6.000	7.969		
1.531	1.651	1.250X3.250	V57 53892	3.500	5.118	V57 73892	6.124	8.093		
1.562	1.682	1.250X3.250	V57 53972	3.500	5.118	V57 73972	6.248	8.217		
1.625	1.745	1.250X3.250	V57 54132	3.500	5.118	V57 74132	6.500	8.469		
1.656	1.772	1.500X5.000	V57 54212	4.000	5.709	V57 74212	6.624	8.593		
1.687	1.772	1.500X5.000	V57 54262	4.000	5.709	V57 74292	6.748	8.717		
1.750	1.772	1.500X5.000	V57 54452	4.000	5.709	V57 74452	7.000	8.969		

Any intermediate dimensions from Ø 0.562" – 1.750" are available on request.

**Supply includes:**

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



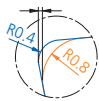
Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2.5xD	●	●	●	○	○	○	○	○	×	○	●
4xD	●	●	○	○	○	○	○	○	×	×	○

● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  -01 -11 ISO-Code	Qty	for workpiece material  P M K N S H	Clamping screw	Starting torque	Screwdriver
				 Order No. Description		 Order No. Description
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX05T304-01 BK8425 WOEX05T304-01 BK7930 WOEX05T304-01 BK62 WOEX05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	11.0 in-lbs	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX06T304-01 BK8425 WOEX06T304-01 BK7930 WOEX06T304-01 BK62 WOEX06T304-11 BK77	2		N00 57521 S/M3.5x7.3-10IP	25.0 in-lbs	L05 00850 10IP



Note regarding insert radius:

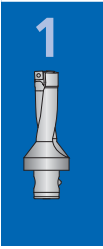
The nominal dimension Ø is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



Guideline values for solid drilling					V <sub>c</sub> Cutting speed v <sub>c</sub> (ft/min)	Max. f (in/rev)													
Material group	Strength Rm (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		2.5xD						4xD							
						Ø 0.562 – 0.686	Ø 0.687 – 0.811	Ø 0.812 – 0.984	Ø 0.985 – 1.186	Ø 1.187 – 1.468	Ø 1.469 – 1.624	Ø 1.625 – 1.750	Ø 0.562 – 0.686	Ø 0.687 – 0.811	Ø 0.812 – 0.984	Ø 0.985 – 1.186	Ø 1.187 – 1.468	Ø 1.469 – 1.624	Ø 1.625 – 1.750
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980	0.003	0.004	0.004	0.005	0.005	0.005	0.005	0.003	0.003	0.004	0.004	0.004	0.005	0.005
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820	0.003	0.004	0.005	0.006	0.006	0.006	0.006	0.002	0.002	0.004	0.005	0.005	0.006	0.006
	2.1	<72500	Lead alloy	12L13	980	0.003	0.004	0.005	0.006	0.006	0.006	0.008	0.002	0.003	0.004	0.005	0.006	0.006	0.008
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	660	0.002	0.003	0.004	0.006	0.006	0.006	0.006	0.002	0.002	0.003	0.005	0.006	0.006	0.006
	4.0	>130000	Tool steels	H13 H21	590	0.002	0.003	0.004	0.004	0.005	0.005	0.006	0.002	0.003	0.003	0.004	0.004	0.005	0.006
	4.1		HSS		260	0.002	0.002	0.003	0.004	0.004	0.005	0.005	0.001	0.002	0.003	0.003	0.004	0.005	0.005
S	5.0		250 Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	110	0.002	0.002	0.003	0.004	0.004	0.004	0.004	0.001	0.002	0.003	0.003	0.004	0.004	0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	260	0.002	0.003	0.004	0.004	0.005	0.005	0.005	0.002	0.002	0.003	0.004	0.004	0.005	0.005
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	590	0.002	0.003	0.004	0.006	0.006	0.006	0.006	0.002	0.002	0.003	0.005	0.005	0.006	0.006
	6.1	<130000	Stainless steels	630	520	0.002	0.002	0.003	0.005	0.005	0.005	0.006	0.002	0.002	0.002	0.004	0.004	0.005	0.006
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	520	0.002	0.002	0.003	0.005	0.005	0.005	0.005	0.002	0.002	0.002	0.004	0.004	0.005	0.005
K	8.0		180 Grey cast iron	No 35 B No 50 B	660	0.004	0.005	0.006	0.008	0.008	0.008	0.010	0.003	0.004	0.005	0.007	0.007	0.008	0.010
	8.1		250 Alloy grey cast iron	A436 Type 2	520	0.003	0.003	0.004	0.006	0.006	0.006	0.007	0.002	0.002	0.003	0.005	0.005	0.006	0.007
	9.0	≤87000	130 Nodular cast iron ferritic	60-40-18	590	0.003	0.004	0.006	0.008	0.008	0.008	0.010	0.002	0.003	0.005	0.007	0.007	0.008	0.010
	9.1		230 Nodular cast iron ferritic / pearlitic	80-55-06	520	0.003	0.004	0.006	0.008	0.008	0.008	0.010	0.002	0.003	0.005	0.007	0.007	0.008	0.010
	10.0	>87000	250 Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	460	0.004	0.005	0.006	0.010	0.010	0.010	0.010	0.003	0.004	0.006	0.009	0.009	0.010	0.010
	10.1		200 Alloyed nodular cast iron	A43D2	460	0.003	0.004	0.006	0.008	0.008	0.008	0.010	0.002	0.003	0.005	0.007	0.007	0.008	0.010
10.2		300 Vermicular cast iron		390	0.003	0.004	0.006	0.006	0.006	0.006	0.010	0.002	0.003	0.005	0.006	0.006	0.006	0.008	
N	12.0		90 Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.002	0.003	0.005	0.006	0.006	0.007	0.008	0.002	0.002	0.004	0.006	0.006	0.007	0.008
	12.1		100 Copper alloy, Brass, Bronze: average cut		1310	0.002	0.003	0.003	0.004	0.004	0.004	0.005	0.001	0.002	0.002	0.003	0.004	0.004	0.005
	13.0		60 Wrought alumi- num alloy	GD-AISi12	1970	0.002	0.003	0.003	0.004	0.004	0.005	0.005	0.001	0.002	0.002	0.003	0.004	0.005	0.005
	13.1		75 Aluminum alloy: Si content <10% Magnesium alloy		980	0.004	0.005	0.006	0.007	0.007	0.008	0.008	0.003	0.004	0.005	0.006	0.007	0.008	0.008
	14.0		100 Aluminum alloy: Si content >10%	A360.2	820	0.004	0.005	0.006	0.008	0.008	0.008	0.010	0.003	0.004	0.005	0.007	0.007	0.008	0.010
H	15.0	203000			260	0.002	0.002	0.003	0.004	0.004	0.005	0.005	0.001	0.001	0.002	0.003	0.004	0.005	0.005
	16.0	261000			130	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.001	0.002	0.002	0.003	0.004	0.004	0.004

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
EP 883 455 and other patents (KUB Trigon)



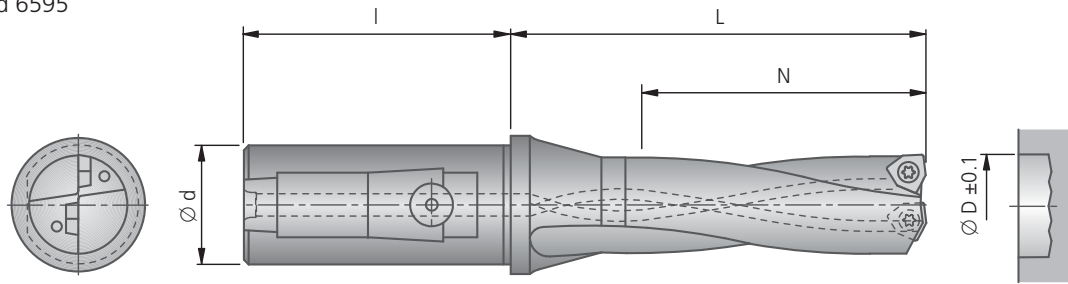
Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽ Size	ISO-Code	<b>P M K N S H</b>	
for better chip control	0.562 – 0.781	W29 10130.048425	WOEX 030204-13 BK8425	●
		W29 10130.047930	WOEX 030204-13 BK7930	●
	0.812 – 0.937	W29 18130.048425	WOEX 040304-13 BK8425	●
		W29 18130.047930	WOEX 040304-13 BK7930	●
	0.985 – 1.437	W29 24130.048425	WOEX 05T304-13 BK8425	●
		W29 24030.046425	WOEX 05T304-03 BK6425 △	● ● ●
W29 24130.047930		WOEX 05T304-13 BK7930	● ● ●	
1.469 – 1.750	W29 34130.048425	WOEX 06T304-13 BK8425	●	
	W29 34030.046425	WOEX 06T304-03 BK6425 △	● ● ●	
	W29 34130.047930	WOEX 06T304-13 BK7930	● ● ●	

⚠ Only use this insert with KUB Trigon® as an external cutting edge:  
 WOEX ... -03 (Geometry 03)  
 WOEX ... -01 (Geometry 01) in BK6115  
 WOEX ... -01 (Geometry 01) in BK6420

Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽ Size	ISO-Code	<b>P M K N S H</b>	
for higher cutting speed	0.562 – 0.781	W29 10010.0472	WOEX 030204-01 BK72	●
		W29 10110.0450	WOEX 030204-11 BK50	●
	0.812 – 0.937	W29 18010.0472	WOEX 040304-01 BK72	●
		W29 18110.0450	WOEX 040304-11 BK50	●
	0.985 – 1.437	W29 24010.0472	WOEX 05T304-01 BK72	●
		W29 24110.0450	WOEX 05T304-11 BK50	●
1.469 – 1.750	W29 34010.0472	WOEX 06T304-01 BK72	●	
	W29 34110.0450	WOEX 06T304-11 BK50	●	
for greater strength	0.562 – 0.781	W29 10010.047930	WOEX 030204-01 BK7930	● ● ● ●
		W29 10010.0404	WOEX 030204-01 P40	● ● ● ●
		W29 10010.0421	WOEX 030204-01 K10	● ● ● ●
		W29 10110.0421	WOEX 030204-11 K10	● ● ● ●
	0.812 – 0.937	W29 18010.047930	WOEX 040304-01 BK7930	● ● ● ●
		W29 18010.0404	WOEX 040304-01 P40	● ● ● ●
		W29 18010.0421	WOEX 040304-01 K10	● ● ● ●
		W29 18110.0421	WOEX 040304-11 K10	● ● ● ●
	0.985 – 1.437	W29 24010.047930	WOEX 05T304-01 BK7930	● ● ● ●
		W29 24010.0404	WOEX 05T304-01 P40	● ● ● ●
		W29 24010.0421	WOEX 05T304-01 K10	● ● ● ●
		W29 24110.0421	WOEX 05T304-11 K10	● ● ● ●
1.469 – 1.750	W29 34010.047930	WOEX 06T304-01 BK7930	● ● ● ●	
	W29 34010.0404	WOEX 06T304-01 P40	● ● ● ●	
	W29 34010.0421	WOEX 06T304-01 K10	● ● ● ●	
	W29 34110.0421	WOEX 06T304-11 K10	● ● ● ●	

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank  
(combination shank)  
DIN 6535 HE (similar  
1835 E) and 6595



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2xD				3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
12.0	13.0	20 x 50	V43 31202	24	48	0.17	V43 71202	36	60	0.17	-			
12.7	13.7	20 x 50	V43 31272	26	50	0.17	V43 71272	39	63	0.17	-			
13.0	14.0	20 x 50	V43 31302	26	50	0.17	V43 71302	39	63	0.18	-			
13.7	14.7	20 x 50	V43 31372	28	52	0.17	V43 71372	42	66	0.18	-			
14.0	15.0	20 x 50	V43 31404	28	52	0.17	V43 71404	42	66	0.20	V43 91404	56	80	0.22
		25 x 56	-				V44 71404	42	66	0.24	-			
15.0	16.0	20 x 50	V43 31504	30	54	0.18	V43 71504	45	69	0.20	V43 91504	60	84	0.20
		25 x 56	-				V44 71504	45	69	0.28	-			
15.5	16.5	20 x 50	V43 31552	32	56	0.18	V43 71552	48	72	0.20	-			
		25 x 56	-				V44 71552	48	72	0.28	-			
16.0	17.0	20 x 50	V43 31602	32	56	0.19	V43 71602	48	72	0.20	V43 91602	64	88	0.19
		25 x 56	-				V44 71602	48	72	0.28	-			
17.0	18.0	20 x 50	V43 31702	34	58	0.19	V43 71702	51	75	0.20	V43 91702	68	92	0.21
		25 x 56	-				V44 71702	51	75	0.29	-			
17.5	18.5	20 x 50	V43 31752	36	60	0.20	V43 71752	54	78	0.21	-			
		25 x 56	-				V44 71752	54	78	0.29	-			
18.0	19.0	20 x 50	V43 31802	36	60	0.20	V43 71802	54	78	0.21	V43 91802	72	96	0.27
		25 x 56	-				V44 71802	54	78	0.29	-			
18.5	19.0	20 x 50	V43 31852	38	62	0.20	V43 71852	57	81	0.22	-			
		25 x 56	-				V44 71852	57	81	0.31	-			
19.0	19.5	20 x 50	V43 31902	38	62	0.20	V43 71902	57	81	0.22	V43 91902	76	100	0.28
		25 x 56	-				V44 71902	57	81	0.31	-			
19.5	20.0	20 x 50	V43 31952	40	64	0.21	V43 71952	60	84	0.23	-			
		25 x 56	-				V44 71952	60	84	0.34	-			

For other diameters see following page.

Any intermediate dimensions from Ø 12 – 44 mm and inch dimensions are available on request.

Supply includes:

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●
3xD	●	●	●	●	●	●	●	●	✗	○	●
4xD	●	●	○	○	○	○	○	○	✗	✗	●

● very good ● good ○ possible: see technical notes, pages 138-140 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  -01 -11 ISO-Code	Piece	for workpiece material  P M K N S H	Clamping screw	Starting torque	Screwdriver
				 Order No. Description		 Order No. Description
W29 04010.028425 W29 04010.0279	WOEX 020102-01 BK8425 WOEX 020102-01 BK79	2		N00 56051 S/M1.8x3.8-5IP	0.38 Nm	L05 00800 5IP
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP

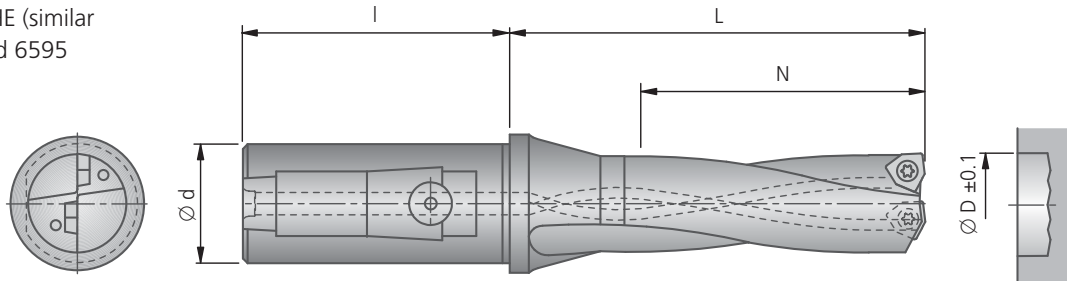


**Note re. insert radius:**

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank  
(combination shank)  
DIN 6535 HE (similar  
1835 E) and 6595



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2xD				3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
20.0	21.0	20 x 50	V43 32002	40	64	0.25	V43 72002	60	84	0.23	–			
		25 x 56	V44 32002	40	64	0.30	V44 72002	60	84	0.32	V44 92002	80	104	0.34
		32 x 60	–				V45 72002	60	84	0.51	–			
21.0	22.0	20 x 50	V43 32102	42	66	0.22	V43 72102	63	87	0.2	–			
		25 x 56	V44 32102	42	66	0.31	V44 72102	63	87	0.33	V44 92102	84	108	0.36
		32 x 60	–				V45 72102	63	87	0.55	–			
22.0	23.0	20 x 50	V43 32202	44	68	0.22	V43 72202	66	90	0.26	–			
		25 x 56	V44 32202	44	68	0.32	V44 72202	66	90	0.35	V44 92202	88	112	0.38
		32 x 60	–				V45 72202	66	90	0.54	–			
22.5	23.5	20 x 50	V43 32252	46	70	0.24	V43 72252	69	93	0.23	–			
		25 x 56	V44 32252	46	70	0.32	V44 72252	69	93	0.36	–			
		32 x 60	–				V45 72252	69	93	0.56	–			
23.0	24.0	20 x 50	V43 32302	46	70	0.24	V43 72302	69	93	0.28	–			
		25 x 56	V44 32302	46	70	0.33	V44 72302	69	93	0.36	V44 92302	92	116	0.40
		32 x 60	–				V45 72302	69	93	0.56	–			
24.0	25.0	20 x 50	V43 32402	48	72	0.25	V43 72402	72	96	0.30	–			
		25 x 56	V44 32402	48	72	0.34	V44 72402	72	96	0.38	V44 92402	96	120	0.45
		32 x 60	V45 32402	48	72	0.57	V45 72402	72	96	0.57	–			
24.5	25.5	20 x 50	V43 32452	50	74	0.26	V43 72452	75	99	0.31	–			
		25 x 56	V44 32452	50	74	0.35	V44 72452	75	99	0.4	V44 92452	100	124	0.43
		32 x 60	V45 32452	50	74	0.54	V45 72452	75	99	0.58	–			
25.0	26.0	25 x 56	V44 32502	50	74	0.35	V44 72502	75	99	0.4	–			
		32 x 60	V45 32502	50	74	0.55	V45 72502	75	99	0.59	V45 92502	100	124	0.63
26.0	28.0	25 x 56	V44 32602	52	76	0.37	V44 72602	78	102	0.44	–			
		32 x 60	V45 32602	52	76	0.56	V45 72602	78	102	0.61	V45 92602	104	128	0.65
26.5	28.5	25 x 56	V44 32652	54	78	0.37	V44 72652	81	105	0.43	–			
		32 x 60	V45 32652	54	78	0.57	V45 72652	81	105	0.62	–			
27.0	30.0	25 x 56	V44 32702	54	78	0.40	V44 72702	81	105	0.44	–			
		32 x 60	V45 32702	54	78	0.57	V45 72702	81	105	0.62	V45 92702	108	132	0.68
28.0	31.0	25 x 56	V44 32802	56	80	0.40	V44 72802	84	108	0.45	–			
		32 x 60	V45 32802	56	80	0.59	V45 72802	84	108	0.65	V45 92802	112	136	0.71
28.5	31.5	25 x 56	V44 32852	58	82	0.40	V44 72852	87	111	0.47	–			
		32 x 60	V45 32852	58	82	0.59	V45 72852	87	111	0.66	–			
29.0	32.0	25 x 56	V44 32902	58	82	0.41	V44 72902	87	111	0.48	–			
		32 x 60	V45 32902	58	82	0.60	V45 72902	87	111	0.68	V45 92902	116	140	0.74
29.5	32.5	25 x 56	V44 32952	60	84	0.42	V44 72952	90	114	0.49	–			
		32 x 60	V45 32952	60	84	0.61	V45 72952	90	114	0.69	–			

For other diameters see following page.

Any intermediate dimensions from Ø 12 – 44 mm and inch dimensions are available on request.

Supply includes: KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

EP 883 455 and other patents (KUB Trigon)



Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●
3xD	●	●	●	●	●	●	●	●	✗	○	●
4xD	●	●	○	○	○	○	○	○	✗	✗	●

● very good ● good ○ possible: see technical notes, pages 138-140 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				 Order No. Description		 Order No. Description
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP



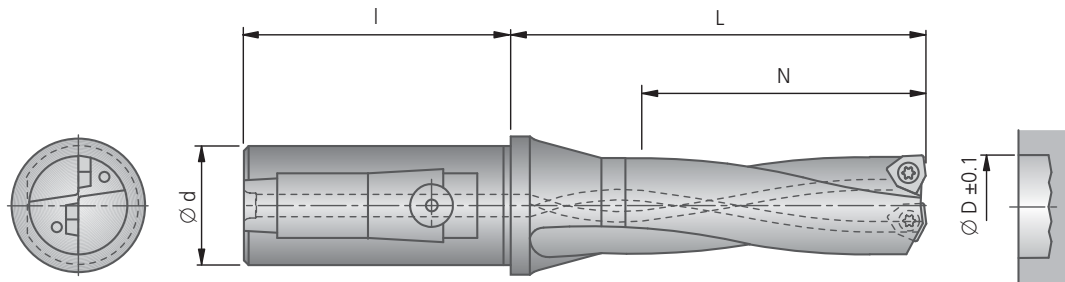
Note re. insert radius:

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)

Guideline values for solid drilling: pages 106-107 / alternative inserts: page 115.

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

- cylindrical shank  
(combination shank)  
DIN 6535 HE (similar  
1835 E) and 6595



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	2xD				3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg	Order No.	N	L	kg
30.0	32.5	32 x 60	V45 33002	60	89	0.65	V45 73002	90	119	0.72	V45 93002	120	149	0.81
31.0	33.5	32 x 60	V45 33102	62	91	0.67	V45 73102	93	122	0.76	V45 93102	124	153	0.84
31.5	33.5	32 x 60	V45 33152	64	93	0.68	V45 73152	96	125	0.77	–			
32.0	34.0	32 x 60	V45 33202	64	93	0.69	V45 73202	96	125	0.78	V45 93202	128	157	0.87
33.0	34.0	32 x 60	V45 33302	66	95	0.71	V45 73302	99	128	0.82	V45 93302	132	161	0.93
34.0	35.0	32 x 60	V45 33402	68	97	0.73	V45 73402	102	131	0.84	V45 93402	136	165	0.95
35.0	36.0	32 x 60	V45 33502	70	99	0.75	V45 73502	105	134	0.87	V45 93502	140	169	0.99
36.0	37.0	32 x 60	V45 33602	72	101	0.78	V45 73602	108	137	0.91	V45 93602	144	173	1.05
37.0	40.0	32 x 60	V45 33702	74	113	0.85	V45 73702	111	150	1.00	–			
37.5	40.5	32 x 60	V45 33752	76	115	0.86	V45 73752	114	153	1.01	–			
38.0	41.0	32 x 60	V45 33802	76	115	0.87	V45 73802	114	153	1.04	–			
39.0	42.0	32 x 60	V45 33902	78	117	0.90	V45 73902	117	156	1.09	–			
39.5	42.5	32 x 60	V45 33952	80	119	0.92	V45 73952	120	159	1.10	–			
40.0	43.0	32 x 60	V45 34002	80	119	0.94	V45 74002	120	159	1.12	–			
41.0	44.0	32 x 60	V45 34102	82	121	0.98	V45 74102	123	162	1.20	–			
42.0	45.0	32 x 60	V45 34202	84	123	1.04	V45 74202	126	165	1.25	–			
43.0	45.0	32 x 60	V45 34302	86	125	1.10	V45 74302	129	168	1.32	–			
44.0	45.0	32 x 60	V45 34402	88	127	1.13	V45 74402	132	171	1.39	–			

Any intermediate dimensions from Ø 12 – 44 mm and inch dimensions are available on request.

Supply includes:

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

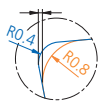




L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●
3xD	●	●	●	●	●	●	●	●	✗	○	●
4xD	●	●	○	○	○	○	○	○	✗	✗	●

● very good ● good ○ possible: see technical notes, pages 138-140 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2		N00 57521 S/M3.5x7.3-10IP	2.8 Nm	L05 00850 10IP



**Note re. insert radius:**

The nominal dimension Ø is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting



Guideline values for solid drilling				V <sub>C</sub>	Max. feed f (mm/rev)								
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material		Material example, material code / DIN	Cutting speed v <sub>C</sub> (m/min)	2xD						
				Ø 12 – 13.9			Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 29.9	Ø 30 – 36.9	Ø 37 – 40.9	Ø 41 – 44.0
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	300	0.05	0.08	0.10	0.10	0.12	0.12	0.12	0.12
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.05	0.06	0.08	0.12	0.14	0.14	0.14	0.16
	2.1	<500	lead alloys	95MnPb28 / 1.0718	300	0.08	0.08	0.10	0.12	0.14	0.16	0.16	0.20
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	200	0.05	0.06	0.08	0.10	0.14	0.16	0.16	0.16
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	180	0.03	0.05	0.08	0.10	0.12	0.12	0.12	0.14
4.1			HSS		80	0.02	0.04	0.06	0.08	0.10	0.10	0.12	0.12
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	60	0.02	0.04	0.06	0.08	0.10	0.10	0.10	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	80	0.02	0.06	0.08	0.10	0.12	0.10	0.12	0.12
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	180	0.03	0.06	0.08	0.10	0.14	0.14	0.14	0.14
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	160	0.05	0.06	0.06	0.08	0.12	0.12	0.12	0.14
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	160	0.05	0.06	0.06	0.08	0.12	0.12	0.12	0.12
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	200	0.10	0.10	0.12	0.14	0.20	0.20	0.20	0.25
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	160	0.08	0.08	0.08	0.10	0.14	0.14	0.16	0.18
	9.0	130	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.06	0.08	0.10	0.14	0.20	0.20	0.20	0.25
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	160	0.05	0.08	0.10	0.14	0.20	0.20	0.20	0.25
	10.0	250	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	140	0.05	0.10	0.12	0.16	0.25	0.25	0.25	0.25
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.03	0.08	0.10	0.14	0.20	0.20	0.20	0.25
	10.2	300	vermicular cast iron	GGV Ti < 0,2, GGV Ti > 0,2	120	0.05	0.08	0.10	0.14	0.16	0.16	0.16	0.20
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.05	0.05	0.08	0.12	0.16	0.16	0.18	0.20
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	400	0.03	0.05	0.08	0.08	0.10	0.10	0.10	0.12
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	600	0.03	0.05	0.08	0.08	0.10	0.10	0.12	0.12
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.08	0.10	0.12	0.14	0.18	0.18	0.20	0.20
	14.0	100	cast alum. alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.05	0.10	0.12	0.14	0.20	0.20	0.20	0.25
H	15.0	1400	hardened steels < 45 HRC		80	-	0.05	0.05	0.08	0.10	0.10	0.12	0.12
	16.0	1800	hardened steels > 45 HRC		40	-	0.05	0.08	0.08	0.10	0.10	0.10	0.10

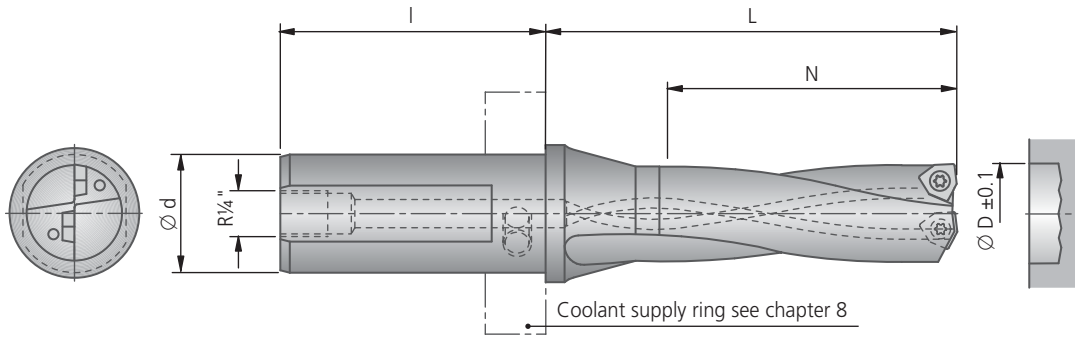
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

EP 883 455 and other patents (KUB Trigon)



	Max. feed f (mm/rev)												
	3xD								4xD				
	Ø 12 – 13.9	Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 29.9	Ø 30 – 36.9	Ø 37 – 40.9	Ø 41 – 44.0	Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 29.9	Ø 30 – 36.9
	0.05	0.08	0.10	0.10	0.12	0.12	0.12	0.12	0.06	0.08	0.08	0.10	0.11
	0.05	0.06	0.08	0.12	0.14	0.14	0.14	0.16	0.04	0.06	0.10	0.12	0.12
	0.08	0.08	0.10	0.12	0.14	0.16	0.16	0.20	0.06	0.08	0.10	0.12	0.14
	0.05	0.06	0.08	0.10	0.14	0.16	0.16	0.16	0.04	0.06	0.08	0.12	0.14
	0.03	0.05	0.08	0.10	0.12	0.12	0.12	0.14	0.04	0.06	0.08	0.10	0.11
	0.02	0.04	0.06	0.08	0.10	0.10	0.12	0.12	0.03	0.05	0.07	0.08	0.09
	0.02	0.04	0.06	0.08	0.10	0.10	0.10	0.10	0.03	0.05	0.07	0.08	0.09
	0.02	0.06	0.08	0.10	0.12	0.10	0.12	0.12	0.04	0.06	0.08	0.10	0.10
	0.03	0.06	0.08	0.10	0.14	0.14	0.14	0.14	0.04	0.06	0.08	0.12	0.13
	0.05	0.06	0.06	0.08	0.12	0.12	0.12	0.14	0.04	0.04	0.06	0.10	0.11
	0.05	0.06	0.06	0.08	0.12	0.12	0.12	0.12	0.04	0.04	0.06	0.10	0.11
	0.10	0.10	0.12	0.14	0.20	0.20	0.20	0.25	0.08	0.10	0.12	0.18	0.19
	0.08	0.08	0.08	0.10	0.14	0.14	0.16	0.18	0.06	0.06	0.08	0.12	0.12
	0.06	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.06	0.08	0.12	0.18	0.19
	0.05	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.06	0.08	0.12	0.18	0.19
	0.05	0.10	0.12	0.16	0.25	0.25	0.25	0.25	0.08	0.10	0.14	0.23	0.24
	0.03	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.06	0.08	0.12	0.18	0.19
	0.05	0.08	0.10	0.14	0.16	0.16	0.16	0.20	0.06	0.08	0.12	0.14	0.15
	0.05	0.05	0.08	0.12	0.16	0.16	0.18	0.20	0.04	0.06	0.10	0.14	0.15
	0.03	0.05	0.08	0.08	0.10	0.10	0.10	0.12	0.03	0.06	0.06	0.08	0.09
	0.03	0.05	0.08	0.08	0.10	0.10	0.12	0.12	0.03	0.06	0.06	0.08	0.09
	0.08	0.10	0.12	0.14	0.18	0.18	0.20	0.20	0.08	0.10	0.12	0.16	0.17
	0.05	0.10	0.12	0.14	0.20	0.20	0.20	0.25	0.08	0.10	0.12	0.18	0.19
	–	0.05	0.05	0.08	0.10	0.10	0.12	0.12	0.03	0.03	0.06	0.08	0.09
	–	0.05	0.08	0.08	0.10	0.10	0.10	0.10	0.03	0.06	0.06	0.08	0.08

1



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg
14.0	15.0	20 x 50	V36 71402	42	66	0.18	–			
		25 x 56	V37 71402	42	66	0.27	–			
		30 x 58	V38 71402	42	66	0.37	V38 91402	56	80	0.39
		40 x 68	V39 71402	42	66	0.73	V39 91402	56	80	0.74
15.0	16.0	20 x 50	V36 71502	45	69	0.19	–			
		25 x 56	V37 71502	45	69	0.25	–			
		30 x 58	V38 71502	45	69	0.38	V38 91502	60	84	0.40
		40 x 68	V39 71502	45	69	0.74	V39 91502	60	84	0.97
15.5	16.5	30 x 58	–				V38 91550	64	88	0.40
		40 x 68	–				V39 91550	64	88	0.97
16.0	17.0	20 x 50	V36 71600	48	72	0.20	–			
		25 x 56	V37 71600	48	72	0.28	–			
		30 x 58	V38 71600	48	72	0.39	V38 91600	64	88	0.40
		40 x 68	V39 71600	48	72	0.75	V39 91600	64	88	0.76
17.0	18.0	20 x 50	V36 71700	51	75	0.20	–			
		25 x 56	V37 71700	51	75	0.29	–			
		30 x 58	V38 71700	51	75	0.40	V38 91700	68	92	0.41
		40 x 68	V39 71700	51	75	0.76	V39 91700	68	92	0.76
17.5	18.5	30 x 58	–				V38 91750	72	96	0.42
		40 x 68	–				V39 91750	72	96	0.77
18.0	19.0	20 x 50	V36 71800	54	78	0.21	–			
		25 x 56	V37 71800	54	78	0.27	–			
		30 x 58	V38 71800	54	78	0.40	V38 91800	72	96	0.42
		40 x 68	V39 71800	54	78	0.76	V39 91800	72	96	0.76
18.5	19.0	30 x 58	–				V38 91850	76	100	0.43
		40 x 68	–				V39 91850	76	100	0.79
19.0	19.5	20 x 50	V36 71900	57	81	0.22	–			
		25 x 56	V37 71900	57	81	0.31	–			
		30 x 58	V38 71900	57	81	0.41	V38 91900	76	100	0.43
		40 x 68	V39 71900	57	81	0.78	V39 91900	76	100	0.79
19.5	20.0	30 x 58	–				V38 91950	80	104	0.44
		40 x 68	–				V39 91950	80	104	0.79

For other diameters see following page.

Any intermediate dimensions from Ø 14 – 54 mm and inch dimensions are available on request.

Supply includes:

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

EP 883 455 and other patents (KUB Trigon)

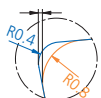
Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	●	●	●	●	●	●	×	○	●
4xD	●	●	○	○	○	○	○	○	×	×	●

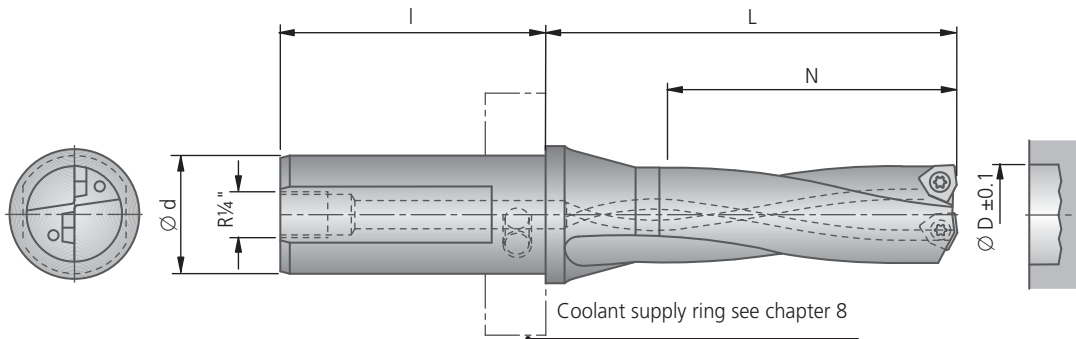
● very good ● good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP



Note re. insert radius:

The nominal dimension Ø is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg
20.0	21.0	20 x 50	V36 72000	60	84	0.23	–			
		25 x 56	V37 72000	60	84	0.32	–			
		30 x 58	V38 72000	60	84	0.44	V38 92000	80	104	0.46
		40 x 68	V39 72000	60	84	0.79	V39 92000	80	104	0.81
21.0	22.0	20 x 50	V36 72100	63	87	0.23	–			
		25 x 56	V37 72100	63	87	0.33	–			
		30 x 58	V38 72100	63	87	0.45	V38 92100	84	108	0.47
		40 x 68	V39 72100	63	87	0.81	V39 92100	84	108	0.82
22.0	23.0	20 x 50	V36 72200	66	90	0.23	–			
		25 x 56	V37 72200	66	90	0.35	–			
		30 x 58	V38 72200	66	90	0.46	V38 92200	88	112	0.49
		40 x 68	V39 72200	66	90	0.82	V39 92200	88	112	0.84
22.5	23.5	30 x 58	–				V38 92250	92	116	0.51
		40 x 68	–				V39 92250	92	116	0.85
23.0	24.0	20 x 50	V36 72300	69	93	0.27	–			
		25 x 56	V37 72300	69	93	0.37	–			
		30 x 58	V38 72300	69	93	0.48	V38 92300	92	116	0.52
		40 x 68	V39 72300	69	93	0.84	V39 92300	92	116	0.87
24.0	25.0	20 x 50	V36 72400	72	96	0.29	–			
		25 x 56	V37 72400	72	96	0.38	–			
		30 x 58	V38 72400	72	96	0.49	V38 92400	96	120	0.51
		40 x 68	V39 72400	72	96	0.86	V39 92400	96	120	0.88
24.5	25.5	30 x 58	–				V38 92450	100	124	0.55
		40 x 68	–				V39 92450	100	124	0.90
25.0	26.0	30 x 58	V38 72500	75	99	0.48	V38 92500	100	124	0.54
		40 x 68	V39 72500	75	99	0.86	V39 92500	100	124	0.91
26.0	28.0	25 x 56	V37 72600	78	102	0.35	–			
		30 x 58	V38 72600	78	102	0.55	V38 92600	104	128	0.57
		40 x 68	V39 72600	78	102	0.88	V39 92600	104	128	0.93
26.5	28.5	30 x 58	–				V38 92650	108	132	0.59
		40 x 68	–				V39 92650	108	132	0.98
27.0	30.0	30 x 58	V38 72700	81	105	0.54	V38 92700	108	132	0.65
		40 x 68	V39 72700	81	105	0.90	V39 92700	108	132	0.95
28.0	31.0	25 x 56	V37 72800	84	108	0.38	–			
		30 x 58	V38 72800	84	108	0.57	V38 92800	112	136	0.63
		40 x 68	V39 72800	84	108	0.91	V39 92800	112	136	0.98
28.5	31.5	30 x 58	–				V38 92850	116	140	0.70
		40 x 68	–				V39 92850	116	140	1.00
29.0	32.0	25 x 56	V37 72900	87	111	0.40	–			
		30 x 58	V38 72900	87	111	0.59	V38 92900	116	140	0.68
		40 x 68	V39 72900	87	111	0.96	V39 92900	116	140	0.70
29.5	32.5	30 x 58	–				V38 92950	120	144	1.01
		40 x 68	–				V39 92950	120	144	1.04

For other diameters see following page.

Any intermediate dimensions from Ø 14 – 54 mm and inch dimensions are available on request.

Supply includes: KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

EP 883 455 and other patents (KUB Trigon)

Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	●	●	●	●	●	●	✗	○	●
4xD	●	●	○	○	○	○	○	○	✗	✗	●

● very good ● good ○ possible: see technical notes, pages 138-140 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP

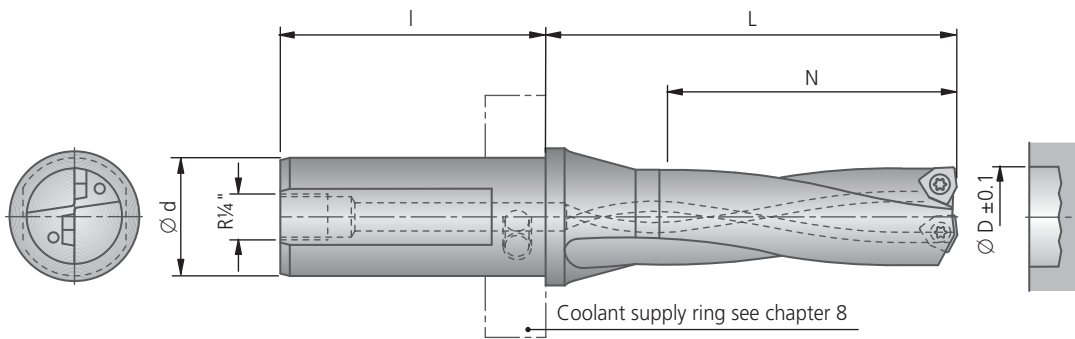


Note re. insert radius:

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)

Guideline values for solid drilling: page 114 / alternative inserts: page 115.

Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting



Ø D	max. diameter with offset	Cylindrical shank Ø d x l	3xD				4xD			
			Order No.	N	L	kg	Order No.	N	L	kg
30.0	32.5	30 x 58	V38 73000	90	119	0.65	V38 93000	120	149	0.72
		40 x 68	V39 73000	90	119	1.01	V39 93000	120	149	1.09
31.0	33.5	30 x 58	V38 73100	93	122	0.68	V38 93100	124	153	0.76
		40 x 68	V39 73100	93	122	0.99	V39 93100	124	153	1.13
31.5	33.5	30 x 58	–				V38 93150	128	157	0.78
		40 x 68	–				V39 93150	128	157	1.15
32.0	34.0	30 x 58	V38 73200	96	125	0.71	V38 93200	128	157	0.80
		40 x 68	V39 73200	96	125	1.08	V39 93200	128	157	1.17
33.0	34.0	30 x 58	V38 73300	99	128	0.74	V38 93300	132	161	0.85
		40 x 68	V39 73300	99	128	1.12	V39 93300	132	161	1.21
34.0	35.0	30 x 58	V38 73400	102	131	0.75	V38 93400	136	165	0.86
		40 x 68	V39 73400	102	131	1.13	V39 93400	136	165	1.23
35.0	36.0	30 x 58	V38 73500	105	134	0.79	V38 93500	140	169	0.91
		40 x 68	V39 73500	105	134	1.16	V39 93500	140	169	1.28
36.0	37.0	30 x 58	V38 73600	108	137	0.82	V38 93600	144	173	0.96
		40 x 68	V39 73600	108	137	1.19	V39 93600	144	173	1.33
37.0	40.0	30 x 58	V38 73700	111	150	0.9	–			
		40 x 68	V39 73700	111	150	1.29	V39 93700	148	187	1.44
37.5	40.5	40 x 68	–			V39 93750	152	191	1.57	
38.0	41.0	30 x 58	V38 73800	114	153	0.94	–			
		40 x 68	V39 73800	114	153	1.33	V39 93800	152	191	1.50
39.0	42.0	30 x 58	V38 73900	117	156	0.99	–			
		40 x 68	V39 73900	117	156	1.38	V39 93900	156	195	1.55
39.5	42.5	40 x 68	–			V39 93950	160	199	1.59	
40.0	43.0	30 x 58	V38 74000	120	159	1.03	–			
		40 x 68	V39 74000	120	159	1.43	V39 94000	160	199	1.62
41.0	44.0	30 x 58	V38 74100	123	162	1.08	–			
		40 x 68	V39 74100	123	162	1.48	V39 94100	164	203	1.68
42.0	45.0	30 x 58	V38 74200	126	165	1.15	–			
		40 x 68	V39 74200	126	165	1.54	V39 94200	168	207	1.76
43.0	45.0	30 x 58	V38 74300	129	168	1.22	–			
		40 x 68	V39 74300	129	168	1.60	V39 94300	172	211	1.83
44.0	45.0	30 x 58	V38 74400	132	171	1.23	–			
		40 x 68	V39 74400	132	171	1.66	V39 94400	176	215	1.91
45.0	48.0	40 x 68	V59 74500	135	179	1.88	–			
46.0	49.0	40 x 68	V59 74600	138	182	1.87	–			
47.0	50.0	40 x 68	V59 74700	141	185	1.94	–			
48.0	51.0	40 x 68	V59 74800	144	188	2.09	–			
49.0	52.0	40 x 68	V59 74900	147	191	2.19	–			
50.0	53.0	40 x 68	V59 75000	150	194	2.28	–			
51.0	54.0	40 x 68	V59 75100	153	197	2.40	–			
52.0	55.0	40 x 68	V59 75200	156	200	2.42	–			
53.0	55.0	40 x 68	V59 75300	159	203	2.51	–			
54.0	55.0	40 x 68	V59 75400	162	206	2.64	–			

Any intermediate dimensions from Ø 14 – 54 mm and inch dimensions are available on request.

Supply includes:

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

EP 883 455 and other patents (KUB Trigon)



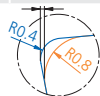
Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	○	○	○	○	○	○	×	○	○
4xD	●	●	○	○	○	○	○	○	×	×	○

● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2		N00 57521 S/M3.5x7.3-10IP	2.8 Nm	L05 00850 10IP
W29 42010.048425 W29 42010.047930 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK62 WOEX 080404-11 BK77	2		N00 57531 S/M4.5x9-15IP	6.25 Nm	L05 00860 15IP



Note re. insert radius:

The nominal dimension Ø is only achieved with the appropriate standardised insert radius.

Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Guideline values for solid drilling: page 114 / alternative inserts: page 115.



Guideline values for solid drilling					V <sub>C</sub>	Max. feed f (mm/rev)															
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code / DIN		Cutting speed v <sub>C</sub> (m/min)	3xD						4xD								
							Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 29.9	Ø 30 – 36.9	Ø 37 – 40.9	Ø 41 – 44.0	Ø 44.5 – 54.0	Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 29.9	Ø 30 – 36.9	Ø 37 – 40.9	Ø 41 – 44.0
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10	0.10	0.12	0.12	0.12	0.12	0.14	0.06	0.08	0.08	0.12	0.12	0.12	0.12	0.12
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.06	0.08	0.12	0.14	0.14	0.14	0.16	0.18	0.04	0.06	0.10	0.14	0.14	0.14	0.14	0.16
	2.1	<500	lead alloys	95MnPb28 / 1.0718	300	0.08	0.10	0.12	0.14	0.16	0.16	0.20	0.22	0.06	0.08	0.10	0.14	0.16	0.16	0.16	0.20
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	200	0.06	0.08	0.10	0.14	0.16	0.16	0.16	0.18	0.04	0.06	0.08	0.14	0.16	0.16	0.16	0.16
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	180	0.06	0.08	0.10	0.10	0.12	0.12	0.14	0.16	0.04	0.06	0.08	0.10	0.12	0.12	0.12	0.14
4.1		HSS			80	0.04	0.06	0.08	0.10	0.10	0.12	0.12	0.14	0.03	0.05	0.07	0.10	0.10	0.12	0.12	
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	60	0.04	0.06	0.08	0.10	0.10	0.10	0.10	0.10	0.03	0.05	0.07	0.10	0.10	0.10	0.10	
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	80	0.06	0.08	0.10	0.12	0.10	0.12	0.12	0.12	0.04	0.06	0.08	0.12	0.10	0.12	0.12	
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	180	0.06	0.08	0.10	0.14	0.14	0.14	0.14	0.14	0.04	0.06	0.08	0.14	0.14	0.14	0.14	
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	160	0.06	0.06	0.08	0.12	0.12	0.12	0.14	0.15	0.04	0.04	0.06	0.12	0.12	0.12	0.14	
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	160	0.06	0.06	0.08	0.12	0.12	0.12	0.12	0.14	0.04	0.04	0.06	0.12	0.12	0.12	0.12	
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	200	0.10	0.12	0.14	0.20	0.20	0.20	0.25	0.28	0.08	0.10	0.12	0.20	0.20	0.20	0.25	
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	160	0.08	0.08	0.10	0.14	0.14	0.16	0.18	0.20	0.06	0.06	0.08	0.14	0.14	0.16	0.18	
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.26	0.06	0.08	0.12	0.20	0.20	0.20	0.25	
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	160	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.26	0.06	0.08	0.12	0.20	0.20	0.20	0.25	
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	140	0.10	0.12	0.16	0.25	0.25	0.25	0.25	0.26	0.08	0.10	0.14	0.25	0.25	0.25	0.25	
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.26	0.06	0.08	0.12	0.20	0.20	0.20	0.25	
10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.08	0.10	0.14	0.16	0.16	0.16	0.20	0.22	0.06	0.08	0.12	0.16	0.16	0.16	0.20		
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.05	0.08	0.12	0.16	0.16	0.18	0.20	0.22	0.04	0.06	0.10	0.16	0.16	0.18	0.20	
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	400	0.05	0.08	0.08	0.10	0.10	0.10	0.12	0.14	0.03	0.06	0.06	0.10	0.10	0.10	0.12	
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	600	0.05	0.08	0.08	0.10	0.10	0.12	0.12	0.14	0.03	0.06	0.06	0.10	0.10	0.12	0.12	
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.10	0.12	0.14	0.18	0.18	0.20	0.20	0.22	0.08	0.10	0.12	0.18	0.18	0.20	0.20	
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.10	0.12	0.14	0.20	0.20	0.20	0.25	0.26	0.08	0.10	0.12	0.20	0.20	0.20	0.25	
H	15.0	1400	hardened steels < 45 HRC		80	0.05	0.05	0.08	0.10	0.10	0.12	0.12	0.12	0.03	0.03	0.06	0.10	0.10	0.12	0.12	
	16.0	1800	hardened steels > 45 HRC		40	0.05	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.03	0.06	0.06	0.10	0.10	0.10	0.10	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. EP 883 455 and other patents (KUB Trigon)



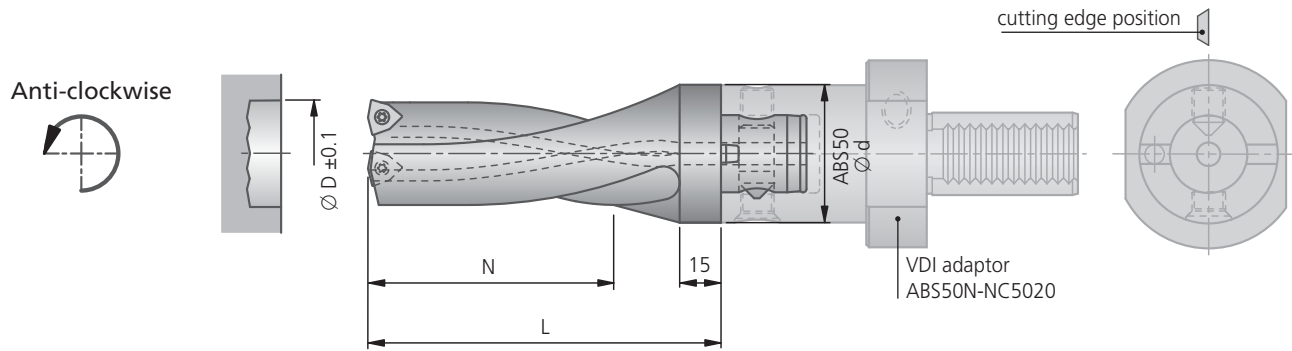
Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
12-13.7	-	-	
14 - 19.5	W29 10130.048425	WOEX 030204-13 BK8425	●
	W29 10130.0479	WOEX 030204-13 BK79	●
20 - 24.5	W29 18130.048425	WOEX 040304-13 BK8425	●
	W29 18130.0479	WOEX 040304-13 BK79	●
25 - 36	W29 24130.048425	WOEX 05T304-13 BK8425	●
	W29 24030.046425	WOEX 05T304-03 BK6425 △	● ● ●
	W29 24130.0479	WOEX 05T304-13 BK79	● ● ●
37 - 44	W29 34130.048425	WOEX 06T304-13 BK8425	●
	W29 34030.046425	WOEX 06T304-03 BK6425 △	● ● ●
	W29 34130.0479	WOEX 06T304-13 BK79	● ● ●
45 - 54	W29 42030.046425	WOEX 080404-03 BK6425 △	● ● ●
	W29 42000.048425	WOEX 080404-00 BK8425	● ● ●

⚠ Only use this insert with KUB Trigon® as an external cutting edge:  
WOEX ... -03 (Geometry 03)  
WOEX ... -01 (Geometry 01) in BK6115  
WOEX ... -01 (Geometry 01) in BK6420

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
12-13.7	-	-	
14 - 19.5	W29 10010.0472	WOEX 030204-01 BK72	●
	W29 10110.0450	WOEX 030204-11 BK50	●
20 - 24.5	W29 18010.0472	WOEX 040304-01 BK72	●
	W29 18110.0450	WOEX 040304-11 BK50	●
25 - 36	W29 24010.0472	WOEX 05T304-01 BK72	●
	W29 24110.0450	WOEX 05T304-11 BK50	●
37 - 44	W29 34010.0472	WOEX 06T304-01 BK72	●
	W29 34110.0450	WOEX 06T304-11 BK50	●
45 - 54	W29 42010.0472	WOEX 080404-01 BK72	● ●
	W01 42940.0455	WOHX 080404 F PKD55	● ●
	W01 42600.0461	WOHX 080404 EN BK61	● ●

for greater strength	12-13.7	W29 04010.0279	WOEX 020102-01 BK79	●
	14 - 19.5	W29 10010.047930	WOEX 030204-01 BK7930	● ● ● ●
		W29 10010.0404	WOEX 030204-01 P40	● ● ● ●
		W29 10010.0421	WOEX 030204-01 K10	● ● ● ●
	W29 10110.0421	WOEX 030204-11 K10	● ● ● ●	
	20 - 24.5	W29 18010.047930	WOEX 040304-01 BK7930	● ● ● ●
		W29 18010.0404	WOEX 040304-01 P40	● ● ● ●
		W29 18010.0421	WOEX 040304-01 K10	● ● ● ●
		W29 18110.0421	WOEX 040304-11 K10	● ● ● ●
	25 - 36	W29 24010.047930	WOEX 05T304-01 BK7930	● ● ● ●
		W29 24010.0404	WOEX 05T304-01 P40	● ● ● ●
		W29 24010.0421	WOEX 05T304-01 K10	● ● ● ●
W29 24110.0421		WOEX 05T304-11 K10	● ● ● ●	
37 - 44	W29 34010.047930	WOEX 06T304-01 BK7930	● ● ● ●	
	W29 34010.0404	WOEX 06T304-01 P40	● ● ● ●	
	W29 34010.0421	WOEX 06T304-01 K10	● ● ● ●	
	W29 34110.0421	WOEX 06T304-11 K10	● ● ● ●	
45 - 54	W29 42010.047930	WOEX 080404-01 BK7930	● ● ● ●	
	W29 42010.0404	WOEX 080404-01 P40	● ● ● ●	
	W29 42010.0421	WOEX 080404-01 K10	● ● ● ●	
	W29 42000.0421	WOEX 080404-00 K10	● ● ● ●	

1



Ø D	max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L	kg	Order No.	N	L	kg
14.0	15.0	50	V30 21402	28	63	0.40	V30 61402	42	77	0.50
15.0	16.0	50	V30 21502	30	65	0.40	V30 61502	45	80	0.50
16.0	17.0	50	V30 21600	32	67	0.40	V30 61600	48	83	0.50
17.0	18.0	50	V30 21700	34	69	0.40	V30 61700	51	86	0.50
18.0	19.0	50	V30 21800	36	71	0.40	V30 61800	54	89	0.50
19.0	20.0	50	V30 21900	38	73	0.50	V30 61900	57	92	0.55
20.0	21.0	50	V30 22000	40	75	0.50	V30 62000	60	95	0.60
21.0	22.0	50	V30 22100	42	77	0.55	V30 62100	63	98	0.60
22.0	23.0	50	V30 22200	44	79	0.55	V30 62200	66	101	0.60
23.0	24.0	50	V30 22300	46	81	0.55	V30 62300	69	104	0.60
24.0	25.0	50	V30 22400	48	83	0.60	V30 62400	72	107	0.65
25.0	26.0	50	V30 22500	50	85	0.60	V30 62500	75	110	0.65
26.0	28.0	50	V30 22600	52	87	0.60	V30 62600	78	113	0.70
27.0	30.0	50	V30 22700	54	89	0.60	V30 62700	81	116	0.70
28.0	31.0	50	V30 22800	56	91	0.65	V30 62800	84	119	0.75
29.0	32.0	50	V30 22900	58	93	0.70	V30 62900	87	122	0.75
30.0	32.5	50	V30 23000	60	100	0.75	V30 63000	90	130	0.80
31.0	33.5	50	V30 23100	62	102	0.75	V30 63100	93	133	0.85
32.0	34.0	50	V30 23200	64	104	0.75	V30 63200	96	136	0.90
33.0	34.0	50	V30 23300	66	106	0.80	V30 63300	99	139	0.95
34.0	35.0	50	V30 23400	68	108	0.85	V30 63400	102	142	1.00
35.0	36.0	50	V30 23500	70	110	0.90	V30 63500	105	145	1.00
36.0	37.0	50	V30 23600	72	112	0.90	V30 63600	108	148	1.05
37.0	40.0	50	V30 23700	74	124	1.05	V30 63700	111	161	1.20
38.0	41.0	50	V30 23800	76	126	1.05	V30 63800	114	164	1.25
39.0	42.0	50	V30 23900	78	128	1.10	V30 63900	117	167	1.30
40.0	43.0	50	V30 24000	80	130	1.15	V30 64000	120	170	1.40
41.0	44.0	50	V30 24100	82	132	1.20	V30 64100	123	173	1.45
42.0	45.0	50	V30 24200	84	134	1.20	V30 64200	126	176	1.50
43.0	45.0	50	V30 24300	86	136	1.25	V30 64300	129	179	1.55
44.0	45.0	50	V30 24400	88	138	1.25	V30 64400	132	182	1.55

### Supply includes:

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●
3xD	●	●	●	●	●	●	●	●	✗	○	●

● very good ● good ○ possible: see technical notes, pages 138-140 ✗ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert -01 -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description		Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2	● ● ● ● ● ●	N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2	● ● ● ● ● ●	N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2	● ● ● ● ● ●	N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2	● ● ● ● ● ●	N00 57521 S/M3,5x7,3-10IP	2,8 Nm	L05 00850 10IP



**Note re. insert radius:**

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)



Guideline values for solid drilling					V <sub>C</sub>	Max. feed f (mm/rev)									
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code / DIN		Cutting speed v <sub>C</sub> (m/min)	2xD					3xD			
						Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 36.9	Ø 37 – 44.0	Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 36.9	Ø 37 – 44.0
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10	0.10	0.12	0.12	0.08	0.10	0.10	0.12	0.12
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.06	0.08	0.12	0.14	0.16	0.06	0.08	0.12	0.14	0.16
	2.1	<500	lead alloys	95MnPb28 / 1.0718	300	0.08	0.10	0.12	0.14	0.20	0.08	0.10	0.12	0.14	0.20
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	200	0.06	0.08	0.10	0.14	0.16	0.06	0.08	0.10	0.14	0.16
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	180	0.06	0.08	0.10	0.12	0.14	0.06	0.08	0.10	0.12	0.14
4.1			HSS		80	0.04	0.06	0.08	0.10	-	0.04	0.06	0.08	0.10	0.12
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	60	0.04	0.06	0.08	0.10	0.10	0.04	0.06	0.08	0.10	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	80	0.06	0.08	0.10	0.12	0.12	0.06	0.08	0.10	0.12	0.12
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	180	0.06	0.08	0.10	0.14	0.14	0.06	0.08	0.10	0.14	0.14
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	160	0.06	0.06	0.08	0.12	0.14	0.06	0.06	0.08	0.12	0.14
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	160	0.06	0.06	0.08	0.12	0.12	0.06	0.06	0.08	0.12	0.12
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	200	0.10	0.12	0.14	0.20	0.25	0.10	0.12	0.14	0.20	0.25
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	160	0.08	0.08	0.10	0.14	0.18	0.08	0.08	0.10	0.14	0.18
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.08	0.10	0.14	0.20	0.25	0.08	0.10	0.14	0.20	0.25
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	160	0.08	0.10	0.14	0.20	0.25	0.08	0.10	0.14	0.20	0.25
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	140	0.10	0.12	0.16	0.25	0.25	0.10	0.12	0.16	0.25	0.25
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.08	0.10	0.14	0.20	0.25	0.08	0.10	0.14	0.20	0.25
	10.2	300	vermicular cast iron	GGV Ti < 0,2, GGV Ti > 0,2	120	0.08	0.10	0.14	0.16	0.20	0.08	0.10	0.14	0.16	0.20
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.05	0.08	0.12	0.16	0.20	0.05	0.08	0.12	0.16	0.20
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	400	0.05	0.08	0.08	0.10	0.12	0.05	0.08	0.08	0.10	0.12
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	600	0.05	0.08	0.08	0.10	0.12	0.05	0.08	0.08	0.10	0.12
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.10	0.12	0.14	0.18	0.20	0.10	0.12	0.14	0.18	0.20
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.10	0.12	0.14	0.20	0.25	0.10	0.12	0.14	0.20	0.25
H	15.0	1400	hardened steels < 45 HRC		80	0.05	0.05	0.08	0.10	0.12	0.05	0.05	0.08	0.10	0.12
	16.0	1800	hardened steels > 45 HRC		40	0.05	0.08	0.08	0.10	0.10	0.05	0.08	0.08	0.10	0.10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. EP 883 455 and other patents (KUB Trigon)

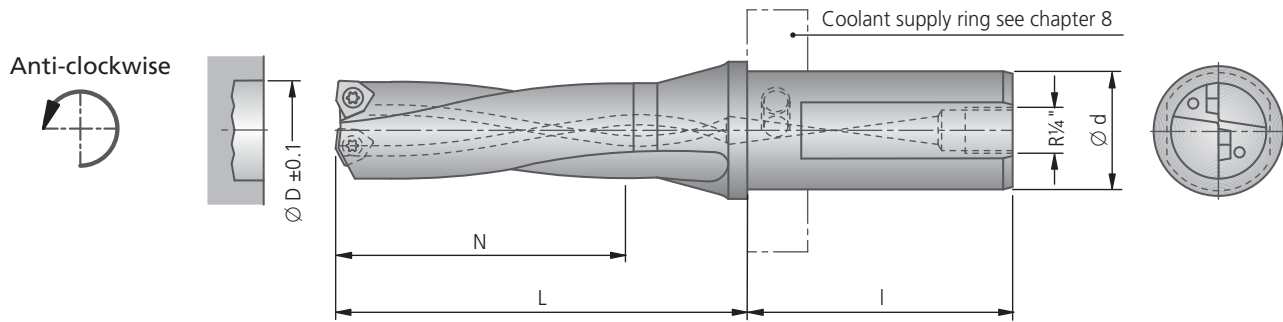
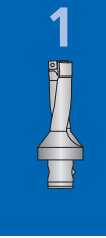


Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	<b>P M K N S H</b>
14 – 19.5	W29 10130.046425	WOEX 030204-13 BK6425 △	
20 – 24.5	W29 18130.046425	WOEX 040304-13 BK6425 △	
25 – 36	W29 24030.046425	WOEX 05T304-03 BK6425 △	
37 – 44	W29 34030.046425	WOEX 06T304-03 BK6425 △	

⚠ Only use this insert with KUB Trigon® as an external cutting edge:  
WOEX ... -03 (Geometry 03)  
WOEX ... -01 (Geometry 01) in BK6115  
WOEX ... -01 (Geometry 01) in BK6420

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	<b>P M K N S H</b>
14 – 19.5	W29 10010.0472 W29 10110.0450	WOEX 030204-01 BK72 WOEX 030204-11 BK50	
20 – 24.5	W29 18010.0472 W29 18110.0450	WOEX 040304-01 BK72 WOEX 040304-11 BK50	
25 – 36	W29 24010.0472 W29 24110.0450	WOEX 05T304-01 BK72 WOEX 05T304-11 BK50	
37 – 44	W29 34010.0472 W29 34110.0450	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	

14 – 19.5	W29 10010.047930 W29 10010.0404 W29 10010.0421 W29 10110.0421	WOEX 030204-01 BK7930 WOEX 030204-01 P40 WOEX 030204-01 K10 WOEX 030204-11 K10	
20 – 24.5	W29 18010.047930 W29 18010.0404 W29 18010.0421 W29 18110.0421	WOEX 040304-01 BK7930 WOEX 040304-01 P40 WOEX 040304-01 K10 WOEX 040304-11 K10	
25 – 36	W29 24010.047930 W29 24010.0404 W29 24010.0421 W29 24110.0421	WOEX 05T304-01 BK7930 WOEX 05T304-01 P40 WOEX 05T304-01 K10 WOEX 05T304-11 K10	
37 – 44	W29 34010.047930 W29 34010.0404 W29 34010.0421 W29 34110.0421	WOEX 080404-01 BK7930 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-00 K10	



Ø D	max. diameter with offset	N	L	3xD					
				Cylindrical shank Ø d x l Ø 25 x 56		Cylindrical shank Ø d x l Ø 30 x 58		Cylindrical shank Ø d x l Ø 40 x 68	
				Order No.	kg	Order No.	kg	Order No.	kg
14.0	15.0	42	66	V37 61402	0.27	V38 61402	0.37	V39 61402	0.73
15.0	16.0	45	69	V37 61502	0.25	V38 61502	0.38	V39 61502	0.74
16.0	17.0	48	72	V37 61600	0.28	V38 61600	0.39	V39 61600	0.75
17.0	18.0	51	75	V37 61700	0.29	V38 61700	0.40	V39 61700	0.76
18.0	19.0	54	78	V37 61800	0.27	V38 61800	0.40	V39 61800	0.76
19.0	19.5	57	81	V37 61900	0.31	V38 61900	0.41	V39 61900	0.78
20.0	21.0	60	84	V37 62000	0.32	V38 62000	0.44	V39 62000	0.79
21.0	22.0	63	87	V37 62100	0.33	V38 62100	0.45	V39 62100	0.81
22.0	23.0	66	90	V37 62200	0.35	V38 62200	0.46	V39 62200	0.82
23.0	24.0	69	93	V37 62300	0.37	V38 62300	0.48	V39 62300	0.84
24.0	25.0	72	96	V37 62400	0.38	V38 62400	0.49	V39 62400	0.86
25.0	26.0	75	99	-	-	V38 62500	0.48	V39 62500	0.86
26.0	28.0	78	102	-	-	V38 62600	0.55	V39 62600	0.88
27.0	30.0	81	105	-	-	V38 62700	0.54	V39 62700	0.90
28.0	31.0	84	108	-	-	V38 62800	0.57	V39 62800	0.91
29.0	32.0	87	111	-	-	V38 62900	0.59	V39 62900	0.96
30.0	32.5	90	119	-	-	V38 63000	0.65	V39 63000	1.01
31.0	33.5	93	122	-	-	V38 63100	0.68	V39 63100	0.99
32.0	34.0	96	125	-	-	V38 63200	0.71	V39 63200	1.08
33.0	35.0	99	128	-	-	V38 63300	0.74	V39 63300	1.12
34.0	35.0	102	131	-	-	V38 63400	0.75	V39 63400	1.13
35.0	36.0	105	134	-	-	V38 63500	0.79	V39 63500	1.16
36.0	37.0	108	137	-	-	V38 63600	0.82	V39 63600	1.19
37.0	40.0	111	150	-	-	V38 63700	0.90	V39 63700	1.29
38.0	41.0	114	153	-	-	V38 63800	0.94	V39 63800	1.33
39.0	42.0	117	156	-	-	V38 63900	0.99	V39 63900	1.38
40.0	43.0	120	159	-	-	V38 64000	1.03	V39 64000	1.43
41.0	44.0	123	162	-	-	V38 64100	1.08	V39 64100	1.48
42.0	45.0	126	165	-	-	V38 64200	1.15	V39 64200	1.54
43.0	45.0	129	168	-	-	V38 64300	1.22	V39 64300	1.60
44.0	45.0	132	171	-	-	V38 64400	1.23	V39 64400	1.66
45.0	48.0	135	179	-	-	-	-	V59 64500	1.88
46.0	49.0	138	182	-	-	-	-	V59 64600	1.87
47.0	50.0	141	185	-	-	-	-	V59 64700	1.94
48.0	51.0	144	188	-	-	-	-	V59 64800	2.09
49.0	52.0	147	191	-	-	-	-	V59 64900	2.19
50.0	53.0	150	194	-	-	-	-	V59 65000	2.28
51.0	54.0	153	197	-	-	-	-	V59 65100	2.40
54.0	55.0	162	206	-	-	-	-	V59 65400	2.64

Supply includes:



Insert Drill with Cylindrical Shank (parallel clamping surface), L.H. cutting



L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD											

● very good ● good ○ possible: see technical notes, pages 138-140 ✕ not possible

Basic recommendation				Assembly parts		Accessories
Order No. ▽ Size	Insert  -01  -11 ISO-Code	Piece	for workpiece material P M K N S H	Clamping screw	Starting torque	Screwdriver
				Order No. Description	Order No. Description	Order No. Description
W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2		N00 56041 S/M2x4.3-6IP	0.62 Nm	L05 00810 6IP
W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2		N00 57553 S/M2.2x5.5-6IP	1.01 Nm	L05 00810 6IP
W29 24010.048425 W29 24010.047930 W29 24010.0462 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK62 WOEX 05T304-11 BK77	2		N00 57511 S/M2.5x7.2-8IP	1.28 Nm	L05 00830 8IP
W29 34010.048425 W29 34010.047930 W29 34010.0462 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK62 WOEX 06T304-11 BK77	2		N00 57521 S/M3.5x7.3-10IP	2.8 Nm	L05 00850 10IP
W29 42010.048425 W29 42010.047930 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK62 WOEX 080404-11 BK77	2		N00 57531 S/M4.5x9-15IP	6.25 Nm	L05 00860 15IP



Note re. insert radius:

The nominal dimension Ø is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)



Guideline values for solid drilling					v <sub>c</sub>	Max. feed f (mm/rev)							
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code / DIN		Cutting speed v <sub>c</sub> (m/min)	3xD						
							Ø 14 – 16.9	Ø 17 – 19.9	Ø 20 – 24.9	Ø 25 – 29.9	Ø 30 – 36.9	Ø 37 – 40.9	Ø 41 – 44.0
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10	0.10	0.12	0.12	0.12	0.12	0.14
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.06	0.08	0.12	0.14	0.14	0.14	0.16	0.18
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.08	0.10	0.12	0.14	0.16	0.16	0.20	0.22
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	200	0.06	0.08	0.10	0.14	0.16	0.16	0.16	0.18
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	180	0.06	0.08	0.10	0.10	0.12	0.12	0.14	0.16
	4.1		HSS		80	0.04	0.06	0.08	0.10	0.10	0.12	0.12	0.14
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	60	0.04	0.06	0.08	0.10	0.10	0.10	0.10	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	80	0.06	0.08	0.10	0.12	0.10	0.12	0.12	0.12
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	180	0.06	0.08	0.10	0.14	0.14	0.14	0.14	0.14
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	160	0.06	0.06	0.08	0.12	0.12	0.12	0.14	0.15
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	160	0.06	0.06	0.08	0.12	0.12	0.12	0.12	0.14
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	200	0.10	0.12	0.14	0.20	0.20	0.20	0.25	0.28
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	160	0.08	0.08	0.10	0.14	0.14	0.16	0.18	0.20
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.26
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	160	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.26
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	140	0.10	0.12	0.16	0.25	0.25	0.25	0.25	0.26
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.08	0.10	0.14	0.20	0.20	0.20	0.25	0.26
	10.2	300	vermicular cast iron	GGV Ti < 0,2, GGV Ti > 0,2	120	0.08	0.10	0.14	0.16	0.16	0.16	0.20	0.22
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.05	0.08	0.12	0.16	0.16	0.18	0.20	0.22
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	400	0.05	0.08	0.08	0.10	0.10	0.10	0.12	0.14
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	600	0.05	0.08	0.08	0.10	0.10	0.12	0.12	0.14
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.10	0.12	0.14	0.18	0.18	0.20	0.20	0.22
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.10	0.12	0.14	0.20	0.20	0.20	0.25	0.26
H	15.0	1400	hardened steels < 45 HRC		80	0.05	0.05	0.08	0.10	0.10	0.12	0.12	0.12
	16.0	1800	hardened steels > 45 HRC		40	0.05	0.08	0.08	0.10	0.10	0.10	0.10	0.10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. EP 883 455 and other patents (KUB Trigon)



Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽▽ Size	ISO-Code	
for better chip control	14 – 19.5	W29 10130.046425 WOEX 030204-13 BK6425 △	
	20 – 24.5	W29 18130.046425 WOEX 040304-13 BK6425 △	
	25 – 36	W29 24030.046425 WOEX 05T304-03 BK6425 △	
	37 – 44	W29 34130.048425 W29 34030.046425 W29 34130.0479 WOEX 06T304-13 BK8425 WOEX 06T304-03 BK6425 △ WOEX 06T304-13 BK79	
	45 – 54	W29 42030.046425 W29 42000.048425 WOEX 080404-03 BK6425 △ WOEX 080404-00 BK8425	

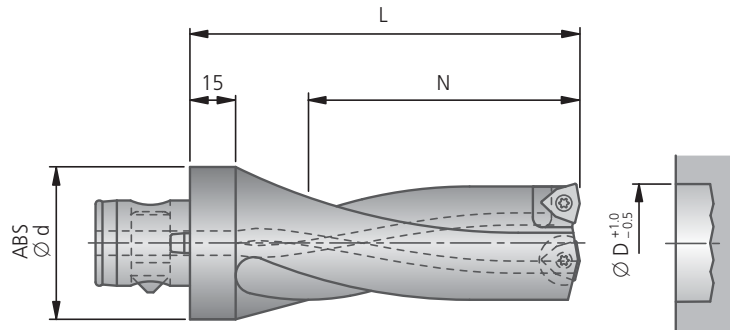
⚠ Only use this insert with KUB Trigon® as an external cutting edge:  
WOEX ... -03 (Geometry 03)  
WOEX ... -01 (Geometry 01) in BK6115  
WOEX ... -01 (Geometry 01) in BK6420

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽▽ Size	ISO-Code	
for higher cutting speed	14 – 19.5	W29 10010.0472 W29 10110.0450 WOEX 030204-01 BK72 WOEX 030204-11 BK50	
	20 – 24.5	W29 18010.0472 W29 18110.0450 WOEX 040304-01 BK72 WOEX 040304-11 BK50	
	25 – 36	W29 24010.0472 W29 24110.0450 WOEX 05T304-01 BK72 WOEX 05T304-11 BK50	
	37 – 44	W29 34010.0472 W29 34110.0450 WOEX 06T304-01 BK72 WOEX 06T304-11 BK50	
	45 – 54	W29 42010.0472 W01 42940.0455 W01 42600.0461 WOEX 080404-01 BK72 WOHX 080404 F PKD55 WOHX 080404 EN BK61	

for greater strength	14 – 19.5	W29 10010.047930 W29 10010.0404 W29 10010.0421 W29 10110.0421 WOEX 030204-01 BK7930 WOEX 030204-01 P40 WOEX 030204-01 K10 WOEX 030204-11 K10	
	20 – 24.5	W29 18010.047930 W29 18010.0404 W29 18010.0421 W29 18110.0421 WOEX 040304-01 BK7930 WOEX 040304-01 P40 WOEX 040304-01 K10 WOEX 040304-11 K10	
	25 – 36	W29 24010.047930 W29 24010.0404 W29 24010.0421 W29 24110.0421 WOEX 05T304-01 BK7930 WOEX 05T304-01 P40 WOEX 05T304-01 K10 WOEX 05T304-11 K10	
	37 – 44	W29 34010.047930 W29 34010.0404 W29 34010.0421 W29 34110.0421 WOEX 080404-01 BK7930 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-00 K10	
	45 – 54	W29 42010.047930 W29 42010.0404 W29 42010.0421 W29 42000.0421 WOEX 080404-01 BK7930 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-00 K10	

Insert Drill with ABS® Connection, R.H. cutting

2xD on request



Ø D adjustable	ABS Ø d	3xD				Basic recommendation		for workpiece material	P M K N S H
		Order No.	N	L	kg	Order No. ▽ Size	Insert -00 -01 -11 ISO-Code		
38.5 – 40	50	V82 73900	117	167	1.17				
39.5 – 41	50	V82 74000	120	170	1.20	W29 34010.048425	WOEX 06T304-01 BK8425	●	
40.5 – 42	50	V82 74100	123	173	1.32	W29 34010.047930	WOEX 06T304-01 BK7930	●	
41.5 – 43	50	V82 74200	126	176	1.33	W29 34010.0462	WOEX 06T304-01 BK62	●	
42.5 – 44	50	V82 74300	129	179	1.44	W29 34110.0477	WOEX 06T304-11 BK77	●	
43.5 – 45	50	V82 74400	132	182	1.44			●	
44.5 – 46	63	V83 74500	135	190	1.91				
45.5 – 47	63	V83 74600	138	193	1.79				
46.5 – 48	63	V83 74700	141	196	2.02				
47.5 – 49	63	V83 74800	144	199	2.01	W29 42010.048425	WOEX 080404-01 BK8425	●	
48.5 – 50	63	V83 74900	147	202	2.18	W29 42010.047930	WOEX 080404-01 BK7930	●	
49.5 – 51	63	V83 75000	150	205	2.23	W29 42010.0462	WOEX 080404-01 BK62	●	
50.5 – 52	63	V83 75100	153	208	2.30	W29 42110.0477	WOEX 080404-11 BK77	●	
51.5 – 53	63	V83 75200	156	211	2.40				
52.5 – 54	63	V83 75300	159	214	2.48				
53.5 – 55	63	V83 75400	162	217	2.55				
54.5 – 56	80	V84 75500	165	220	3.50				
55.5 – 57	80	V84 75600	168	223	3.68				
56.5 – 58	80	V84 75700	171	226	3.70				
57.5 – 59	80	V84 75800	174	229	3.80				
58.5 – 60	80	V84 75900	177	232	3.92				
59.5 – 61	80	V84 76000	180	235	4.00	W29 50010.048425	WOEX 100504-01 BK8425	●	
60.5 – 62	80	V84 76100	183	238	4.00	W29 50010.047930	WOEX 100504-01 BK7930	●	
61.5 – 63	80	V84 76200	186	241	4.10	W29 50010.0462	WOEX 100504-01 BK62	●	
62.5 – 64	80	V84 76300	189	244	4.43	W29 50110.0477	WOEX 100504-11 BK77	●	
63.5 – 65	80	V84 76400	192	247	4.31			●	
64.5 – 66	80	V84 76500	195	250	4.61				
65.5 – 67	80	V84 76600	198	253	4.65				
66.5 – 68	80	V84 76700	201	256	4.70				
67.5 – 69	80	V84 76800	204	259	5.00				
68.5 – 70	80	V84 76900	207	272	5.44				
69.5 – 71	80	V84 77000	210	275	5.51				
70.5 – 72	80	V84 77100	213	278	5.58				
71.5 – 73	80	V84 77200	216	281	5.91				
72.5 – 74	80	V84 77300	219	284	6.07	W29 58010.088425	WOEX 120608-01 BK8425	●	
73.5 – 75	80	V84 77400	222	287	6.15	W29 58010.087930	WOEX 120608-01 BK7930	●	
74.5 – 76	80	V84 77500	225	290	6.21	W29 58010.0862	WOEX 120608-01 BK62	●	
75.5 – 77	80	V84 77600	228	293	6.35	W29 58000.088425	WOEX 120608-00 BK8425	●	
76.5 – 78	80	V84 77700	231	296	6.50	W29 58000.0821	WOEX 120608-00 K10	●	
77.5 – 79	80	V84 77800	234	299	6.80				
78.5 – 80	80	V84 77900	237	302	7.00				
79.5 – 81	80	V84 78000	240	305	7.39				
80.5 – 82	80	V84 78100	243	308	7.61				

Any intermediate dimensions from Ø 38.5 – 82 mm and inch dimensions are available on request.

Supply includes:

KUB® drill with assembly parts. Please order insert and accessories separately.

Patent applied for inside and outside Germany (ABS)



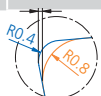
Insert Drill with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	●	○	○	○	○	○	○	×	×	●

● very good ● good ○ possible: see technical notes, pages 138-140 × not possible

Assembly parts	Accessories	Assembly parts					
Clamping screw	Screwdriver	Insert seating external	Clamping screw	Insert seating internal	Clamping screw	Pin	
Order No. Description	Order No. Description	Order No.	Order No.	Order No.	Order No. Description	Order No. Description	Order No. Description
N00 57611 S/M3.5×6.6-10IP 2.8 Nm	L05 00850 10IP	D53 56201	N10 11400	D50 55100	N00 55701 M3.5×5-8IP 2.25 Nm	N00 52000 1.8/2×4.5	
N00 57531 S/M4.5×9-15IP 6.25 Nm	L05 00860 15IP	D53 56211	N10 11500	D50 55110	N00 55821 M4.5×9-10IP 4.3 Nm	N00 52010 3/4×5.5	
N00 57531 S/M4.5×9-15IP 6.25 Nm	L05 00860 15IP	D53 56221	N10 11510	D50 55120	N00 55821 M4.5×9-10IP 4.3 Nm	N00 52010 3/4×5.5	
N00 57541 S/M5.5×11-20IP 6.25 Nm	L05 00870 20IP	D53 56231	N10 11010	D50 55130	N00 55891 M5.5×8.5-20IP 6.25 Nm	N00 52020 4/5×7.0	



**Note re. insert radius:**  
The nominal dimension  $\varnothing$  is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)

Insert Drill with ABS® Connection, R.H. cutting



Guideline values for solid drilling					V <sub>c</sub>	Max. feed f (mm/rev)			
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code / DIN		Cutting speed v <sub>c</sub> (m/min)	3xD		
					Ø 38.5 – 44		Ø 44.5 – 54	Ø 54.5 – 68	Ø 68.5 – 82
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	300	0.10	0.12	0.12	0.14
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.10	0.12	0.12	0.14
	2.1	<500	lead alloys	95MnPb28 / 1.0718	300	0.12	0.14	0.14	0.16
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	200	0.10	0.12	0.12	0.14
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	180	0.08	0.10	0.10	0.12
	4.1		HSS		80	0.06	0.08	0.08	0.10
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	60	0.06	0.08	0.08	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	80	0.06	0.08	0.08	0.10
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	180	0.08	0.10	0.10	0.12
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	160	0.08	0.10	0.10	0.12
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	160	0.06	0.08	0.08	0.10
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	200	0.16	0.18	0.18	0.23
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	160	0.16	0.18	0.18	0.23
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.14	0.16	0.16	0.18
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	160	0.14	0.16	0.16	0.18
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	140	0.12	0.14	0.14	0.16
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.10	0.12	0.12	0.14
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.12	0.14	0.14	0.16
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.14	0.16	0.16	0.18
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	400	0.14	0.16	0.16	0.18
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	600	0.14	0.16	0.16	0.18
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.16	0.18	0.18	0.23
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.16	0.18	0.18	0.23
H	15.0	1400	hardened steels < 45 HRC		80	0.06	0.08	0.08	0.10
	1800		hardened steels > 45 HRC		40	0.04	0.06	0.06	0.08

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Patent applied for inside and outside Germany (ABS)



Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
38.5 – 44	W29 34130.048425	WOEX 06T304-13 BK8425	
	W29 34020.0464	WOEX 06T304-02 BK64	
	W29 34030.046425	WOEX 06T304-03 BK6425 △	
	W29 34130.0479	WOEX 06T304-13 BK79	
44.5 – 54	W29 42130.048425	WOEX 080404-13 BK8425	
	W29 42020.0464	WOEX 080404-02 BK64	
	W29 42030.046425	WOEX 080404-03 BK6425 △	
	W29 42130.0479	WOEX 080404-13 BK79	
54.5 – 68	W29 50130.048425	WOEX 100504-13 BK8425	
	W29 50020.0864	WOEX 100508-02 BK64	
	W29 50030.086425	WOEX 100508-03 BK6425 △	
	W29 50130.0479	WOEX 100504-13 BK79	
68.5 – 82	W29 58130.088425	WOEX 120608-13 BK8425	
	W29 58030.086425	WOEX 120608-03 BK6425 △	
	W29 58130.0879	WOEX 120608-13 BK79	

for better chip control

⚠ Only use this insert with KUB® as an external cutting edge:  
WOEX ... -03 (Geometry 03)  
WOEX ... -01 (Geometry 01) in BK6115  
WOEX ... -01 (Geometry 01) in BK6420

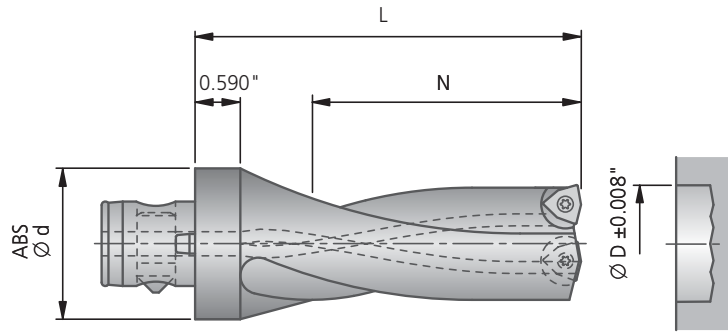
Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
38.5 – 44	W29 34010.0472	WOEX 06T304-01 BK72	
	W29 34110.0450	WOEX 06T304-11 BK50	
44.5 – 54	W29 42010.0472	WOEX 080404-01 BK72	
	W29 42110.0450	WOEX 080404-11 BK50	
54.5 – 68	W29 50010.0872	WOEX 100508-01 BK72	
	W29 50110.0450	WOEX 100504-11 BK50	
68.5 – 82	W29 58010.0872	WOEX 120608-01 BK72	
	W29 58000.0862	WOEX 120608-00 BK62	

for higher cutting speed

for greater strength

38.5 – 44	W29 34010.047930	WOEX 06T304-01 BK7930	
	W29 34010.0404	WOEX 06T304-01 P40	
	W29 34010.0421	WOEX 06T304-01 K10	
	W29 34110.0421	WOEX 06T304-11 K10	
44.5 – 54	W29 42010.047930	WOEX 080404-01 BK7930	
	W29 42010.0404	WOEX 080404-01 P40	
	W29 42010.0421	WOEX 080404-01 K10	
	W29 42110.0421	WOEX 080404-11 K10	
54.5 – 68	W29 50010.047930	WOEX 100504-01 BK7930	
	W29 50010.0804	WOEX 100508-01 P40	
	W29 50010.0821	WOEX 100508-01 K10	
	W29 50110.0421	WOEX 100504-11 K10	
68.5 – 82	W29 58010.087930	WOEX 120608-01 BK7930	
	W29 58010.0804	WOEX 120608-01 P40	
	W29 58010.0821	WOEX 120608-01 K10	
	W29 58000.0821	WOEX 120608-00 K10	

Insert Drill with ABS® Connection, R.H. cutting



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L	lbs	Order No.	N	L	lbs
1.781	1.897	63	V13 34520	3.562	5.728	3.86	V13 74520	5.343	7.509	4.63
1.812	1.929	63	V13 34600	3.624	5.790	3.97	V13 74600	5.436	7.602	4.74
1.875	1.992	63	V13 34760	3.750	5.916	4.08	V13 74760	5.625	7.791	4.85
1.937	2.055	63	V13 34920	3.874	6.040	4.30	V13 74920	5.811	7.977	5.18
1.975	2.093	63	V13 35020	3.950	6.116	4.41	V13 75020	5.925	8.091	5.51
2.000	2.118	63	V13 35080	4.000	6.166	4.52	V13 75080	6.000	8.166	5.51
2.062	2.160	63	V13 35240	4.124	6.290	4.74	V13 75240	6.186	8.532	5.73
2.125	2.171	63	V13 35400	4.250	6.416	4.96	V13 75400	6.375	8.541	5.95
2.165	2.283	80	V14 35500	4.330	6.496	6.73	V14 75500	6.495	8.661	7.35
2.203	2.321	80	V14 35600	4.406	6.572	6.84	V14 75600	6.609	8.775	8.16
2.250	2.366	80	V14 35720	4.500	6.666	6.95	V14 75720	6.750	8.916	8.38
2.281	2.397	80	V14 35790	4.562	6.728	7.06	V14 75790	6.843	9.009	8.49
2.375	2.429	80	V14 36030	4.750	6.916	7.39	V14 76030	7.125	9.291	8.85
2.437	2.555	80	V14 36190	4.874	7.040	7.83	V14 76190	7.311	9.477	9.59
2.500	2.630	80	V14 36350	5.000	7.166	8.16	V14 76350	7.500	9.666	9.92
2.593	2.711	80	V14 36590	5.186	7.352	8.71	V14 76590	7.779	9.945	11.03
2.625	2.740	80	V14 36670	5.250	7.416	8.82	V14 76670	7.875	10.041	11.55
2.656	2.774	80	V14 36750	5.312	7.478	8.93	V14 76750	7.968	10.134	11.68
2.750	2.866	80	V14 36990	5.500	8.060	9.92	V14 76990	8.250	10.810	12.90
2.875	2.992	80	V14 37300	5.750	8.310	10.69	V14 77300	8.625	11.185	13.56
3.000	3.118	80	V14 37620	6.000	8.560	11.58	V14 77620	9.000	11.560	15.21
3.250	3.285	80	V14 38260	6.500	9.060	13.34	V14 78260	9.750	12.310	16.75

Any intermediate dimensions from Ø 1.781" – 3.250" are available on request.

Supply includes: KUB® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"



Insert Drill with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	○	○	●	×	○	○
3xD	●	●	●	○	○	○	○	○	×	×	○

● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

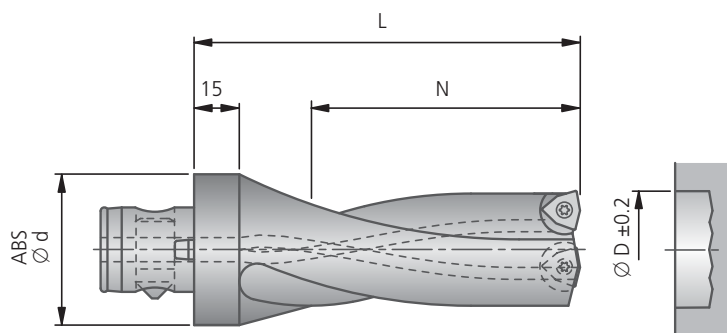
Basic recommendation		Assembly parts	Accessories	Assembly parts				
Insert		for workpiece material	Clamping screw	Screwdriver	Insert seating external	Insert seating internal	Clamping screw	Pin
Order No.	ISO-Code	P M K N S H	Order No. Description	Order No. Description	Order No.	Order No.	Order No. Description	Order No. Description
W29 42010.048425 W29 42010.047930 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK62 WOEX 080404-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5x9-15IP 55.3 in-lbs	L05 00860 15IP	D50 55310	D50 55110	N00 55821 Tx M4.5x9-10IP 38.1 in-lbs	N00 52010 3/4x5.5
W29 50010.048425 W29 50010.047930 W29 50010.0462 W29 50110.0477	WOEX 100504-01 BK8425 WOEX 100504-01 BK7930 WOEX 100504-01 BK62 WOEX 100504-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5x9-15IP 55.3 in-lbs	L05 00860 15IP	D50 55320	D50 55120	N00 55821 Tx M4.5x9-10IP 38.1 in-lbs	N00 52010 3/4x5.5
W29 58010.088425 W29 58010.087930 W29 58010.0862 W29 58000.088425 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7930 WOEX 120608-01 BK62 WOEX 120608-00 BK8425 WOEX 120608-00 K10	● ● ● ● ● ●	N00 57541 S/M5.5x11-20IP 55.3 in-lbs	L05 00870 20IP	D50 55330	D50 55130	N00 55901 S/ M5.5x13.5-20IP 55.3 in-lbs	N00 52020 4/5x7.0



Note regarding insert radius:

The nominal dimension Ø is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Insert Drill with ABS® Connection, R.H. cutting



Ø D	*max. diameter with offset	ABS Ø d	2xD				3xD			
			Order No.	N	L	kg	Order No.	N	L	kg
45	48	63	V13 34500	90	145	1.61	V13 74500	135	190	1.61
46	49	63	V13 34600	92	147	1.66	V13 74600	138	193	1.95
47	50	63	V13 34700	94	149	1.70	V13 74700	141	196	2.02
48	51	63	V13 34800	96	151	1.75	V13 74800	144	199	2.08
49	52	63	V13 34900	98	153	1.80	V13 74900	147	202	2.16
50	53	63	V13 35000	100	155	1.85	V13 75000	150	205	2.23
51	54	63	V13 35100	102	157	1.89	V13 75100	153	208	2.27
52	55	63	V13 35200	104	159	1.94	V13 75200	156	211	2.45
53	55	63	V13 35300	106	161	2.00	V13 75300	159	214	2.45
54	55	63	V13 35400	108	163	2.07	V13 75400	162	217	2.54
55	58	80	V14 35500	110	165	2.91	V14 75500	165	220	3.41
56	59	80	V14 35600	112	167	2.96	V14 75600	168	223	3.51
57	60	80	V14 35700	114	169	3.06	V14 75700	171	226	3.62
58	61	80	V14 35800	116	171	3.13	V14 75800	174	229	3.73
59	62	80	V14 35900	118	173	3.21	V14 75900	177	232	3.82
60	63	80	V14 36000	120	175	3.32	V14 76000	180	235	3.93
61	64	80	V14 36100	122	177	3.32	V14 76100	183	238	4.05
62	65	80	V14 36200	124	179	3.44	V14 76200	186	241	4.19
63	66	80	V14 36300	126	181	3.54	V14 76300	189	244	4.31
64	67	80	V14 36400	128	183	3.59	V14 76400	192	247	4.34
65	68	80	V14 36500	130	185	3.65	V14 76500	195	250	4.60
66	69	80	V14 36600	132	187	3.73	V14 76600	198	253	4.61
67	69.5	80	V14 36700	134	189	3.82	V14 76700	201	256	4.80
68	70	80	V14 36800	136	191	3.99	V14 76800	204	259	4.93
69	72	80	V14 36900	138	203	4.30	V14 76900	207	272	5.25
70	73	80	V14 37000	140	205	4.38	V14 77000	210	275	5.32
71	74	80	V14 37100	142	207	4.57	V14 77100	213	278	5.55
72	75	80	V14 37200	144	209	4.53	V14 77200	216	281	5.79
73	76	80	V14 37300	146	211	4.65	V14 77300	219	284	5.96
74	77	80	V14 37400	148	213	4.76	V14 77400	222	287	6.13
75	78	80	V14 37500	150	215	4.90	V14 77500	225	290	6.32
76	79	80	V14 37600	152	217	5.10	V14 77600	228	293	6.43
77	80	80	V14 37700	154	219	5.18	V14 77700	231	296	6.60
78	81	80	V14 37800	156	221	5.39	V14 77800	234	299	6.80
79	82	80	V14 37900	158	223	5.42	V14 77900	237	302	7.10
80	82	80	V14 38000	160	225	5.66	V14 78000	240	305	7.23
81	82.5	80	V14 38100	162	227	5.75	V14 78100	243	308	7.57
82	83	80	V14 38200	164	229	5.97	V14 78200	246	311	7.69

Any intermediate dimensions from Ø 45 – 82 mm and inch dimensions are available on request.

Supply includes: KUB® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

Insert Drill with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	○	○	●	×	○	○
3xD	●	●	●	○	○	○	○	○	×	×	○

● very good ○ good ○ possible: see technical notes, pages 138-140 × not possible

Basic recommendation		Assembly parts	Accessories	Assembly parts				
Order No. ▽▽ Size	Insert -00 -01 -11 ISO-Code	for workpiece material P M K N S H	Clamping screw	Screwdriver	Insert seating external	Insert seating internal	Clamping screw	Pin
			Order No. Description	Order No. Description	Order No.	Order No.	Order No. Description	Order No. Description
W29 42010.048425 W29 42010.047930 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK62 WOEX 080404-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5×9-15IP 6.25 Nm	L05 00860 15IP	D50 55310	D50 55110	N00 55821 M4.5×9-10IP 4.3 Nm	N00 52010 3/4×5.5
W29 50010.048425 W29 50010.047930 W29 50010.0462 W29 50110.0477	WOEX 100504-01 BK8425 WOEX 100504-01 BK7930 WOEX 100504-01 BK62 WOEX 100504-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5×9-15IP 6.25 Nm	L05 00860 15IP	D50 55320	D50 55120	N00 55821 M4.5×9-10IP 4.3 Nm	N00 52010 3/4×5.5
W29 58010.088425 W29 58010.087930 W29 58010.0862 W29 58000.088425 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7930 WOEX 120608-01 BK62 WOEX 120608-00 BK8425 WOEX 120608-00 K10	● ● ● ● ● ●	N00 57541 S/M5.5×11-20IP 6.25 Nm	L05 00870 20IP	D50 55330	D50 55130	N00 55901 M5.5×13.5-20IP 6.25 Nm	N00 52020 4/5×7.0



Note re. insert radius:

The nominal dimension Ø is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)



Guideline values for solid drilling					V <sub>c</sub> Cutting speed v <sub>c</sub> ft/min (m/min)	Max. feed f in/rev (mm/rev)					
Material group	Strength R <sub>m</sub> (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		2xD			3xD		
					Ø 1.771 – 2.125 (Ø 45 – 54)	Ø 2.146 – 2.677 (Ø 54.5 – 68)	Ø 2.697 – 3.250 (Ø 68.5 – 82.5)	Ø 1.771 – 2.125 (Ø 45 – 54)	Ø 2.146 – 2.677 (Ø 54.5 – 68)	Ø 2.697 – 3.250 (Ø 68.5 – 82.5)	
P	1.0	≤72500	non-alloy steels	A570.36 1213 A573.81	980 (300)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)
	2.0	72500-130000	non-alloy / low alloy steels	5120 1055 5115	820 (250)	0.006 (0.16)	0.008 (0.20)	0.010 (0.25)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)
	2.1	<72500	lead alloys	12L13	980 (300)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)
	3.0	>130000	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	4140 1064	660 (200)	0.006 (0.16)	0.008 (0.20)	0.008 (0.20)	0.006 (0.16)	0.007 (0.18)	0.007 (0.18)
	4.0	>130000	high alloy steels	H13 H21	590 (180)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)
	4.1		HSS		-	-	-	-	-	-	-
S	5.0	58000	250 special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel* 718 Nimonic* 80A	200 (60)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)	0.004 (0.10)	0.005 (0.12)	0.006 (0.14)
	5.1		titanium, titanium alloys	AMS R54520	260 (80)	0.005 (0.12)	0.006 (0.14)	0.006 (0.16)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)
M	6.0	≤87000	stainless steels	304L 316	590 (180)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.14)	0.006 (0.14)	0.006 (0.16)
	6.1	<130000	stainless steels	630	520 (160)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)	0.006 (0.14)	0.006 (0.16)	0.006 (0.16)
	7.0	>130000	stainless / fireproof steels	420 403	520 (160)	0.005 (0.12)	0.006 (0.16)	0.007 (0.18)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)
K	8.0	180	gray cast iron	No 35 B No 50 B	660 (200)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)
	8.1		250 alloy gray cast iron	A436 Type 2	520 (160)	0.007 (0.18)	0.012 (0.30)	0.012 (0.30)	0.007 (0.18)	0.008 (0.20)	0.010 (0.25)
	9.0	≤87000	130 spheroidal graphite cast iron, ferritic	60-40-18	590 (180)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)
	9.1	>87000	230 spheroidal graphite cast iron, ferritic / perlitic	80-55-06	520 (160)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)
	10.0		250 spheroidal graphite cast iron, perlitic malleable iron	100-70-03 70003	460 (140)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)
	10.1		200 alloyed spheroidal graphite cast iron	A43D2	460 (140)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.010 (0.25)	0.010 (0.25)	0.012 (0.30)
	10.2	300	vermicular cast iron		390 (120)	0.008 (0.20)	0.010 (0.25)	0.012 (0.30)	0.008 (0.20)	0.008 (0.20)	0.008 (0.20)
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	UNS C36000	980 (300)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)
	12.1	100	copper alloy, brass, bronze: average cut		1310 (400)	0.005 (0.12)	0.006 (0.16)	0.006 (0.16)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)
	13.0	60	wrought aluminium alloys	GD-AlSi12	1970 (600)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)	0.005 (0.12)	0.005 (0.12)	0.006 (0.14)
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy		980 (300)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)	0.008 (0.20)	0.010 (0.25)	0.010 (0.25)
	14.0	100	cast alum. alloy: Si-content >10%	A360.2	820 (250)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)	0.010 (0.25)	0.012 (0.30)	0.012 (0.30)
H	15.0	203000	hardened steels < 45 HRC		260 (80)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)	0.005 (0.12)	0.006 (0.14)	0.006 (0.14)
	16.0	261000	hardened steels > 45 HRC		130 (40)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)	0.004 (0.10)

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Patent applied for inside and outside Germany (ABS)



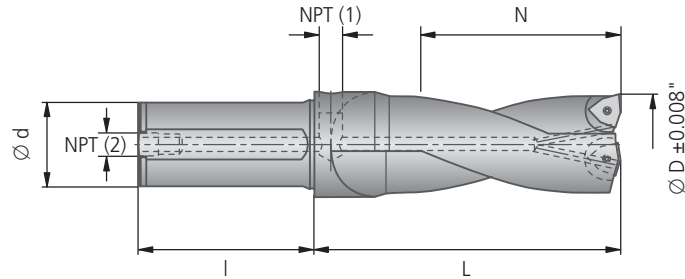
Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽ Size	ISO-Code	P M K N S H	
for better chip control	1.771 – 2.125" (45 – 54 mm)	W29 42130.048425 W29 42030.046425 W29 42130.0479	WOEX 080404-13 BK8425 WOEX 080404-03 BK6425 △ WOEX 080404-13 BK79	● ● ● ● ● ●
	2.165 – 2.677" (55 – 68 mm)	W29 50130.048425 W29 50030.086425 W29 50130.0479	WOEX 100504-13 BK8425 WOEX 100508-03 BK6425 △ WOEX 100504-13 BK79	● ● ● ● ● ●
	2.716 – 3.228" (69 – 82 mm)	W29 58130.088425 W29 58030.086425 W29 58130.0879	WOEX 120608-13 BK8425 WOEX 120608-03 BK6425 △ WOEX 120608-13 BK79	● ● ● ● ● ●

Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽ Size	ISO-Code	P M K N S H	
for higher cutting speed	1.771 – 2.125" (45 – 54 mm)	W29 42010.0472 W29 42110.0450	WOEX 080404-01 BK72 WOEX 080404-11 BK50	● ● ● ● ● ●
	2.165 – 2.677" (55 – 68 mm)	W29 50010.0872 W29 50110.0450	WOEX 100508-01 BK72 WOEX 100504-11 BK50	● ● ● ● ● ●
	2.716 – 3.228" (69 – 82 mm)	W29 58010.0872 W29 58000.0862	WOEX 120608-01 BK72 WOEX 120608-00 BK62	● ● ● ● ● ●

⚠ Only use this insert with KUB® as an external cutting edge:  
WOEX ... -03 (Geometry 03)  
WOEX ... -01 (Geometry 01) in BK6115  
WOEX ... -01 (Geometry 01) in BK6420

for greater strength	1.771 – 2.125" (45 – 54 mm)	W29 42010.047930 W29 42010.0404 W29 42010.0421 W29 42110.0421	WOEX 080404-01 BK7930 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-11 K10	● ● ● ● ● ● ● ● ● ● ● ●
	2.165 – 2.677" (55 – 68 mm)	W29 50010.047930 W29 50010.0804 W29 50010.0821 W29 50110.0421	WOEX 100504-01 BK7930 WOEX 100508-01 P40 WOEX 100508-01 K10 WOEX 100504-11 K10	● ● ● ● ● ● ● ● ● ● ● ●
	2.716 – 3.228" (69 – 82 mm)	W29 58010.087930 W29 58010.0804 W29 58010.0821 W29 58000.0821	WOEX 120608-01 BK7930 WOEX 120608-01 P40 WOEX 120608-01 K10 WOEX 120608-00 K10	● ● ● ● ● ● ● ● ● ● ● ●

Insert Drill with Cylindrical Shank, R.H. cutting



Ø D	*max. diameter with offset	Cylindrical shank Ø d x l	2.5xD			
			Order No.	N	L	NPT
1.812	1.929	1.500X2.750	V57 34601	4.000	5.709	1/4
1.875	1.992	1.500X2.750	V57 34761	4.000	5.709	
1.937	2.055	1.500X2.750	V57 34921	5.000	6.890	
2.000	2.118	1.500X2.750	V57 35081	5.000	6.890	
2.125	2.171	1.500X2.750	V57 35401	5.000	6.890	
2.250	2.366	2.000X3.961	V57 35721	5.000	6.890	1/4
2.375	2.492	2.000X3.961	V57 36031	5.000	6.890	
2.500	2.630	2.000X3.961	V57 36351	5.000	6.890	
2.750	2.866	2.000X3.961	V57 36991	6.000	8.267	1/4
3.000	3.118	2.000X3.961	V57 37621	6.000	8.267	
3.250	3.285	2.000X3.961	V57 38261	6.000	8.267	

Any intermediate dimensions from Ø 1.812" – 3.250" are available on request.

Supply includes: KUB® drill with assembly parts. Please order insert and accessories separately.

\* Adjustment device see "KomPass Bore machining – chapter 5"

Insert Drill with Cylindrical Shank, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2.5xD											
	●	●	●	●	●	○	○	●	✕	○	○

● very good ○ good ○ possible: see technical notes, pages 138-140 ✕ not possible

Basic recommendation		Assembly parts	Accessories	Assembly parts				
Insert		for workpiece material	Clamping screw	Screwdriver	Insert seating external	Insert seating internal	Clamping screw	Pin
Order No.	ISO-Code	P M K N S H	Order No. Description	Order No. Description	Order No.	Order No.	Order No. Description	Order No. Description
W29 42010.048425 W29 42010.047930 W29 42010.0462 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK62 WOEX 080404-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5x9-15IP 55.3 in-lbs	L05 00860 15IP	D50 55310	D50 55110	N00 55821 Tx M4.5x9-10IP 38.1 in-lbs	N00 52010 3/4x5.5
W29 50010.048425 W29 50010.047930 W29 50010.0462 W29 50110.0477	WOEX 100504-01 BK8425 WOEX 100504-01 BK7930 WOEX 100504-01 BK62 WOEX 100504-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5x9-15IP 55.3 in-lbs	L05 00860 15IP	D50 55320	D50 55120	N00 55821 Tx M4.5x9-10IP 38.1 in-lbs	N00 52010 3/4x5.5
W29 58010.088425 W29 58010.087930 W29 58010.0862 W29 58000.088425 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7930 WOEX 120608-01 BK62 WOEX 120608-00 BK8425 WOEX 120608-00 K10	● ● ● ● ● ●	N00 57541 S/M5.5x11-20IP 55.3 in-lbs	L05 00870 20IP	D50 55330	D50 55130	N00 55901 S/ M5.5x13.5-20IP 55.3 in-lbs	N00 52020 4/5x7.0



Note regarding insert radius:

The nominal dimension  $\varnothing$  is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension  $\varnothing$  (see Chapter 8)

Insert Drill with Cylindrical Shank, R.H. cutting



Guideline values for solid drilling					V <sub>C</sub>	Max. f (in/rev)		
Material group	Strength R <sub>m</sub> (lb <sub>f</sub> /in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		Ø 1.781 – 2.164	2.5×D Ø 2.250 – 2.749	Ø 2.750 – 3.250
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980	0.005	0.005	0.006
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820	0.005	0.005	0.006
	2.1	<72500	Lead alloy	12L13	980	0.006	0.006	0.006
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	660	0.005	0.005	0.005
	4.0	>130000	Tool steels	H13 H21	590	0.004	0.004	0.005
	4.1		HSS		260	0.003	0.003	0.004
S	5.0		250 Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	110	0.003	0.003	0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	260	0.003	0.003	0.004
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	590	0.004	0.004	0.005
	6.1	<130000	Stainless steels	630	520	0.004	0.004	0.005
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	520	0.003	0.003	0.004
K	8.0		180 Grey cast iron	No 35 B No 50 B	660	0.007	0.007	0.009
	8.1		250 Alloy grey cast iron	A436 Type 2	520	0.007	0.007	0.009
	9.0	≤87000	130 Nodular cast iron ferritic	60-40-18	590	0.006	0.006	0.007
	9.1		230 Nodular cast iron ferritic / pearlitic	80-55-06	520	0.006	0.006	0.007
	10.0	>87000	250 Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	460	0.006	0.006	0.006
	10.1		200 Alloyed nodular cast iron	A43D2	460	0.005	0.005	0.006
	10.2		300 Vermicular cast iron		390	0.006	0.006	0.006
N	12.0		90 Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.006	0.006	0.007
	12.1		100 Copper alloy, Brass, Bronze: average cut		1310	0.006	0.006	0.007
	13.0		60 Wrought aluminum alloy	GD-AISI12	1970	0.006	0.006	0.007
	13.1		75 Aluminum alloy: Si content <10% Magnesium alloy		980	0.007	0.007	0.009
	14.0		100 Aluminum alloy: Si content >10%	A360.2	820	0.007	0.007	0.009
H	15.0	203000	Hardened steels < 45 HRC		260	0.003	0.003	0.004
	16.0	261000	Hardened steels > 45 HRC		130	0.002	0.002	0.003

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Patent applied for inside and outside Germany (ABS)





Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽▽ Size	ISO-Code	
1.781 – 2.125	W29 42130.048425	WOEX 080404-13 BK8425	●
	W29 42030.046425	WOEX 080404-03 BK6425 △	●
	W29 42130.047930	WOEX 080404-13 BK7930	● ●
for better chip control 2.165 – 2.656	W29 50130.048425	WOEX 100504-13 BK8425	●
	W29 50030.086425	WOEX 100508-03 BK6425 △	●
	W29 50130.047930	WOEX 100504-13 BK7930	● ●
2.750 – 3.250	W29 58130.088425	WOEX 120608-13 BK8425	●
	W29 58030.086425	WOEX 120608-03 BK6425 △	●
	W29 58130.087930	WOEX 120608-13 BK7930	● ●

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽▽ Size	ISO-Code	
1.781 – 2.125	W29 42010.0472	WOEX 080404-01 BK72	●
	W29 42110.0450	WOEX 080404-11 BK50	●
for higher cutting speed 2.165 – 2.656	W29 50010.0872	WOEX 100508-01 BK72	●
	W29 50110.0450	WOEX 100504-11 BK50	●
2.750 – 3.250	W29 58010.0872	WOEX 120608-01 BK72	●
	W29 58000.0862	WOEX 120608-00 BK62	● ●

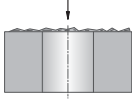
⚠ Only use this insert with KUB® as an external cutting edge:  
WOEX ... -03 (Geometry 03)  
WOEX ... -01 (Geometry 01) in BK6115  
WOEX ... -01 (Geometry 01) in BK6420

1.781 – 2.125	W29 42010.047930	WOEX 080404-01 BK7930	● ● ● ●
	W29 42010.0404	WOEX 080404-01 P40	● ● ● ●
	W29 42010.0421	WOEX 080404-01 K10	● ● ● ●
	W29 42110.0421	WOEX 080404-11 K10	● ● ● ●
for greater strength 2.165 – 2.656	W29 50010.047930	WOEX 100504-01 BK7930	● ● ● ●
	W29 50010.0804	WOEX 100508-01 P40	● ● ● ●
	W29 50010.0821	WOEX 100508-01 K10	● ● ● ●
	W29 50110.0421	WOEX 100504-11 K10	● ● ● ●
2.750 – 3.250	W29 58010.087930	WOEX 120608-01 BK7930	● ● ● ●
	W29 58010.0804	WOEX 120608-01 P40	● ● ● ●
	W29 58010.0821	WOEX 120608-01 K10	● ● ● ●
	W29 58000.0821	WOEX 120608-00 K10	● ● ● ●


## Technical Information

1

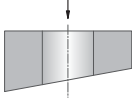


1.  **Starting on uneven surfaces (cast surfaces)**
  - subject to the surface, reduce feed as required when starting the bore

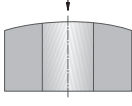
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2.  **Starting on angled surfaces**
  - subject to the starting angle, the feed must be reduced when starting the bore.  
Rule of thumb:  $3^\circ \triangleq 30\%$ ;  $10^\circ \triangleq 40\%$ ;  $25^\circ \triangleq 60\%$  use tools max.  $2 \times D$
  - use tough insert and stable corner radius

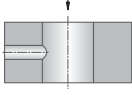
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3.  **Angled bore exit**
  - from wear cut is interrupted reduce feed rate up to 50%
  - use tough insert and stable corner radius

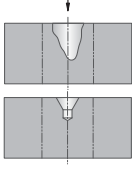
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4.  **Starting on cambered surfaces**
  - no problems
  - reduce feed rate if necessary

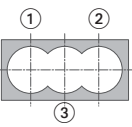
---

5.  **Drilling through a cross bore**
  - reduce feed rate 50% if necessary
  - watch for chip jamming around tool
  - use tough insert and stable corner radius


---

6.  **Starting on a groove or large centering bore**
  - use short tools, max.  $3 \times D$
  - spot face if required
  - reduce feed
  - use tough insert for internal cutting edge

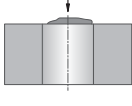
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7.  **Drilling a chamber**
  - first bore Nos. 1 + 2, then bore No. 3
  - check distribution is symmetrical
  - avoid chip jams
  - if necessary reduce to approx. 1-1.5 mm in the  $\varnothing$  on circumference
  - reduce feed rate 50% for interrupted cut
  - use tough insert and stable corner radius

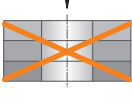
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8.  **Starting on an edge**
  - reduce feed rate by 50%
  - use tough insert and stable corner radius

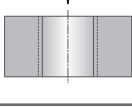
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9.  **Starting on a welded seam**
  - reduce feed rate
  - use max.  $3 \times D$  tools

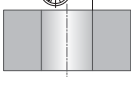
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10.  **Drilling through stacked plates**
  - not possible

---

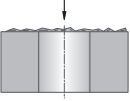

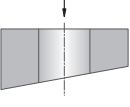
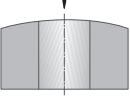
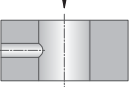
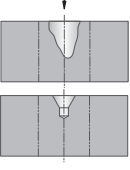
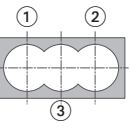
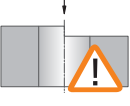
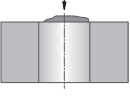
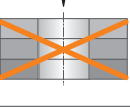
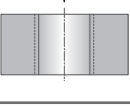
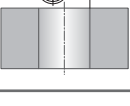
11.  **Roughing**
  - possible

---

12.  **Adjustable**
  - using adjusting device (ABS-MV) and eccentric adjusting device
  - for turning machines over axis

Note: please note max. offset  $\varnothing$  in tables

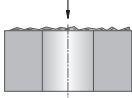


- 
1.  **Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore
- 
2.  **Starting on angled surfaces**
- max. 3° angled position possible (cast angles)
  - reduce feed rate when starting bore
  - use stable corner radius
- 
3.  **Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
  - use tough insert and stable corner radius
- 
4.  **Starting on cambered surfaces**
- no problems
  - reduce feed rate if necessary
- 
5.  **Drilling through a cross bore**
- reduce feed rate 50% if necessary
  - watch for chip jamming around tool
  - use tough insert and stable corner radius
- 
6.  **Starting on a groove or large centering bore**
- use short tools, max. 3xD
  - spot face if required
  - reduce feed
  - use tough insert for internal cutting edge
- 
7.  **Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
  - check distribution is symmetrical
  - avoid chip jams
  - if necessary reduce to approx. 1-1.5 mm in the Ø on circumference
  - reduce feed rate 50% for interrupted cut
  - use tough insert and stable corner radius
- 
8.  **Starting on an edge**
- not possible for 3xD tools
  - because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
  - then continue as described under Point 1
- 
9.  **Starting on a welded seam**
- reduce feed rate
  - use max. 3xD tools
- 
10.  **Drilling through stacked plates**
- not possible
- 
11.  **Roughing**
- possible
- 
12.  **Adjustable**
- using adjusting device (ABS-MV) and eccentric adjusting device
  - for turning machines over axis
- Note: please note max. offset Ø in tables
-


## Technical Notes

1

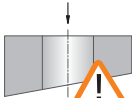


1.  **Starting on uneven surfaces (cast surfaces)**
  - subject to the surface, reduce feed as required when starting the bore

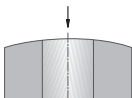
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2.  **Starting on angled surfaces**
  - not possible for 4xD tools
  - starting surface must be spot faced or spot milled

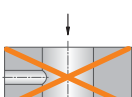
---

3.  **Angled bore exit**
  - reduce feed by up to 50% for 4xD tools

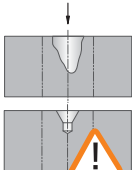
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4.  **Starting on cambered surfaces**
  - starting surface must be milled evenly

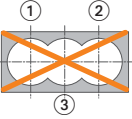
---

5.  **Drilling through a cross bore**
  - not possible with 4xD tools
  - if necessary apply cross bore later


---

6.  **Starting on a groove or large centering bore**
  - points for starting bore must be rough machined first

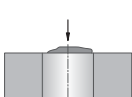
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7.  **Drilling a chamber**
  - not possible

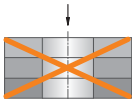
---

8.  **Starting on an edge**
  - not possible for 4xD tools
  - because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
  - then continue as described under Point 1

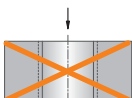
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9.  **Starting on a welded seam**
  - reduce feed by up to 50% for 4xD tools
  - if necessary pre-machine point for starting bore

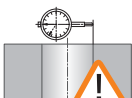
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10.  **Drilling through stacked plates**
  - not possible


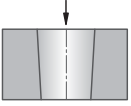
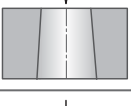
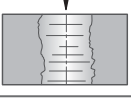
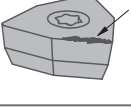
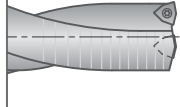
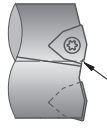
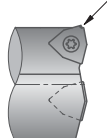
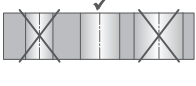
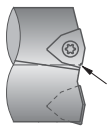
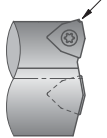
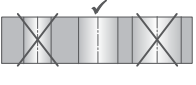
---

11.  **Roughing**
  - not possible

---

12.  **adjustable**
  - dimensional adjustment within 1/10 range possible



rotating and stationary use	 <p><b>Short tool life</b> types of wear on inserts</p> <ul style="list-style-type: none"> <li>• cutting speed too high → select correct cutting speed</li> <li>• cutting material with too little wear resistance → select grade with higher wear resistance</li> <li>• tool overhang too great → if possible use shorter tool</li> <li>• damaged insert seating → check tool, change if necessary</li> <li>• clamping device not stable enough → improve stability</li> </ul>
	 <p><b>Bore narrows at bottom</b></p> <ul style="list-style-type: none"> <li>• chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary</li> <li>• material very soft → increase cutting speed, reduce feed. Use positive chip geometry</li> </ul>
	 <p><b>Bore widens at bottom</b></p> <ul style="list-style-type: none"> <li>• chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary</li> </ul>
	 <p><b>Bad surface finish</b></p> <ul style="list-style-type: none"> <li>• bad chip removal → improve cutting parameters: increase cutting speed reduce feed</li> </ul>
	 <p><b>Build up on cutting edge</b></p> <ul style="list-style-type: none"> <li>• cutting speed too low → increase cutting speed</li> <li>• insert too negative → use positive geometry</li> <li>• coating not suitable → select correct coating</li> </ul>
	 <p><b>Friction marks on tool shank</b></p> <ul style="list-style-type: none"> <li>• bore diameter too small → check setting</li> <li>• chip removal problems → improve cutting parameters, check geometry of inserts</li> <li>• cutting edge corner radius too large → use correct cutting edge radius</li> </ul>
stationary use	 <p><b>Fracture on internal cutting edge</b></p> <ul style="list-style-type: none"> <li>• drill bit height of tool too high/too low → tool turret/holder may have shifted. Readjust machine</li> <li>• mix-up between reinforced/non reinforced insert → use correct insert</li> <li>• feed rate too high → reduce feed rate</li> <li>• insert grade too brittle → use tougher insert grade</li> <li>• wrong insert geometry → use geometry with chamfered cutting edge</li> </ul>
	 <p><b>Fracture on external cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• interrupted cut → change to tougher insert grade</li> <li>• cutting edge corner radius too small → use insert with larger cutting edge radius</li> </ul>
	 <p><b>Bore too small/ too large</b></p> <ul style="list-style-type: none"> <li>• machine not at X-0 position → move axis to correct position</li> <li>• machine axis shifted → readjust machine</li> </ul>
rotating use	 <p><b>Fracture on internal cutting edge</b></p> <ul style="list-style-type: none"> <li>• mix-up between reinforced/non reinforced insert → use correct insert</li> <li>• feed rate too high → reduce feed rate</li> <li>• insert grade too brittle → use tougher insert grade</li> <li>• wrong insert geometry → use geometry with chamfered cutting edge</li> </ul>
	 <p><b>Fracture on external cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• interrupted cut → change to tougher insert grade</li> <li>• cutting edge corner radius too small → use insert with larger cutting edge radius</li> </ul>
	 <p><b>Bore too small/ too large</b> with adjustable tool</p> <ul style="list-style-type: none"> <li>• wrong cutting edge radius used → use correct cutting edge radius</li> <li>• setting wrong → correct setting</li> </ul>

1

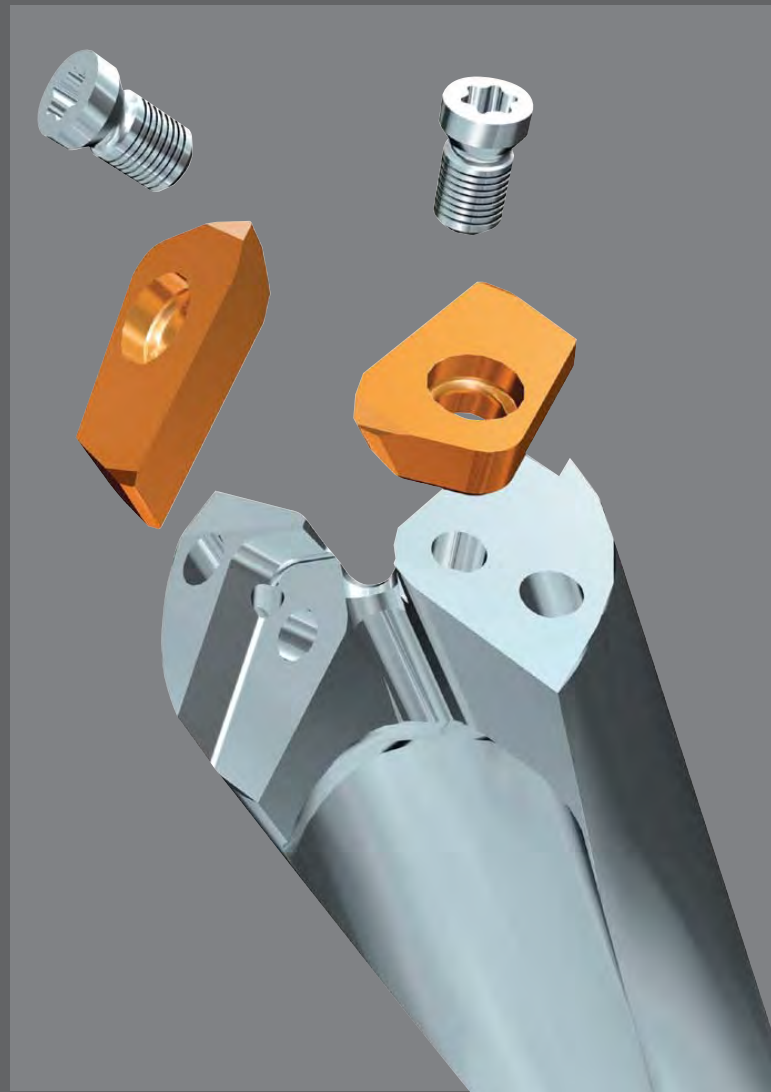


With our KOMET KUB Duon® drill concept, we have incorporated the principle of exchangeable cutting elements in double-edged tools.

The KOMET KUB Duon® is supplied as standard in drilling depths up to 5xD with combination shank DIN 6536 HE and DIN 6595 and also with ABS® connection.

### BENEFITS for you:

- Twin cutting edges with high cutting speeds
- Drills with 2 replaceable screw-on cutter bodies; no regrinding necessary
- Face side, tangential mounting of inserts produces greater stability
- Precision ground inserts
- Intermediate dimensions can be changed very flexibly on standard tool bodies by means of the inserts
- Bore machining accurate and highly productive



### Flexibility is the trump card:

- 1 Design to customer requirement e.g. with integral steps or chamfering insert
- 2 Suitable for retro-fitting a chamfering cartridge



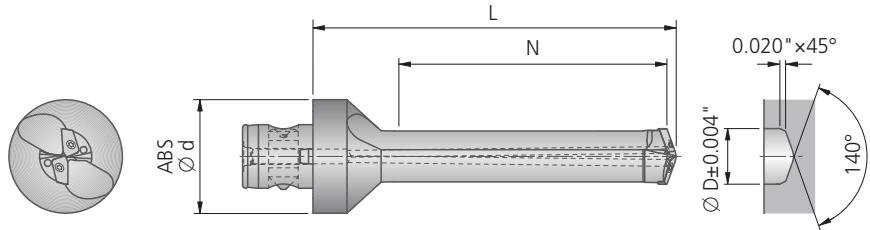


<b>KOMET KUB Duon®</b>	Page
<b>ABS® Connection</b>	
R.H. cutting	
Drilling depth 5xD – Ø 0.697 - 1.413 inch	144 – 149
Drilling depth 5xD – Ø 17.3 - 44.2 mm	150 – 165
<b>Cylindrical Shank (combination shank)</b>	
R.H. cutting	
Drilling depth 5xD – Ø 17.3 - 36.2 mm	
<b>Technical Notes</b>	166
Guideline values for solid drilling	
<b>Pre-centering</b>	
ABS® Connection	167
Cylindrical Shank (combination shank)	
<b>Technical Information</b>	168
<b>Problems → Causes → Solutions</b>	169
<b>Milling cartridge</b>	Chapter 6

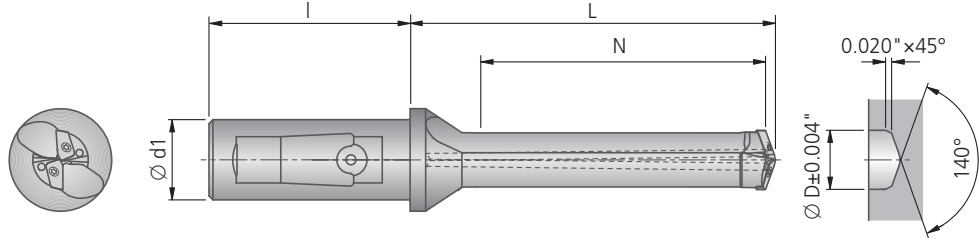
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




ABS® connection



Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595

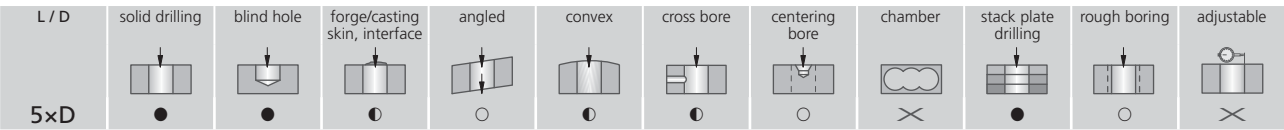


Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	 lbs approx.	Cylindrical shank Ø d1 x l	Order No.	N	L	 lbs approx.	Clamping screw  Order No. Description	Screwdriver  Order No. Description
0.697	50	U20 01790	3.543	4.921	1.32	1.250 x 2.362	U21 61790	3.543	4.488	0.75	N00 57660 S/M2.2x4.8-6IP 8.9 in-lbs	L05 00810 6IP
0.700												
0.703												
0.709												
0.713												
0.709	50	U20 01820	3.740	5.118	1.32	1.250 x 2.362	U21 61820	3.740	4.685	0.75	N00 57660 S/M2.2x4.8-6IP 8.9 in-lbs	L05 00810 6IP
0.713												
0.718												
0.720												
0.724												
0.744	50	U20 01910	3.937	5.315	1.32	1.250 x 2.362	U21 61910	3.937	4.882	0.77	N00 57660 S/M2.2x4.8-6IP 8.9 in-lbs	L05 00810 6IP
0.748												
0.750												
0.756												
0.760												
0.772	50	U20 01980	3.937	5.315	1.32	1.250 x 2.362	U21 61980	3.937	4.882	1.23	N00 57660 S/M2.2x4.8-6IP 8.9 in-lbs	L05 00810 6IP
0.776												
0.781												
0.783												
0.787												
0.803	50	U20 02060	4.133	5.512	1.32	1.250 x 2.362	U21 62060	4.133	5.275	1.23	N00 57660 S/M2.2x4.8-6IP 8.9 in-lbs	L05 00810 6IP
0.807												
0.812												
0.815												
0.819												
0.819	50	U20 02100	4.133	5.512	1.32	1.250 x 2.362	U21 62100	4.133	5.275	1.25	N00 57630 S/M3x5.8-8IP 20.0 in-lbs	L05 00830 8IP
0.823												
0.828												
0.831												
0.835												
0.866	50	U20 02220	4.527	5.709	1.32	1.250 x 2.362	U21 62220	4.527	5.669	1.30	N00 57630 S/M3x5.8-8IP 20.0 in-lbs	L05 00830 8IP
0.870												
0.875												
0.878												
0.882												
0.929	50	U20 02380	4.724	6.102	1.54	1.250 x 2.362	U21 62380	4.724	5.866		N00 57630 S/M3x5.8-8IP 20.0 in-lbs	L05 00850 10IP
0.933												
0.937												
0.941												
0.945												

For other diameters see following page.



Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminum alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 0.750", coating BK84,  
Order No.: H60 19100.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

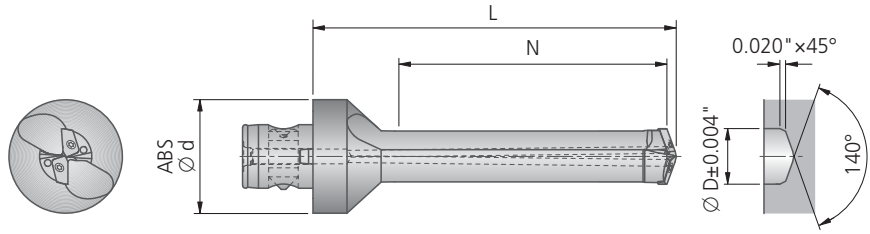
Basic recommendation				alternative for ...				Basic recommendation			
Insert		for workpiece material		higher cutting speed	greater strength			Insert			
ISO-Code	Order No.							ISO-Code	Order No.		
enter carbide ▼		BK8440 BK2715		BK84	BK8125	BK2740	BK8140	enter carbide ▼		BK7710	
XOHX 0802-17.7	H60 17700. ...							XOHX 0802-17.7-62	H62 17700. ...		
XOHX 0802-17.8	H60 17800. ...							XOHX 0802-17.8-62	H62 17800. ...		
XOHX 0802-17.9	H60 17900. ...	8440	2715	84	8125	2740	8140	XOHX 0802-17.9-62	H62 17900. ...	7710	
XOHX 0802-18.0	H60 18000. ...							XOHX 0802-18.0-62	H62 18000. ...		
XOHX 0802-18.1	H60 18100. ...							XOHX 0802-18.1-62	H62 18100. ...		
XOHX 0802-18.0	H60 18000. ...							XOHX 0802-18.0-62	H62 18000. ...		
XOHX 0802-18.1	H60 18100. ...							XOHX 0802-18.1-62	H62 18100. ...		
XOHX 0802-18.2	H60 18200. ...	8440	2715	84	8125	2740	8140	XOHX 0802-18.2-62	H62 18200. ...	7710	
XOHX 0802-18.3	H60 18300. ...							XOHX 0802-18.3-62	H62 18300. ...		
XOHX 0802-18.4	H60 18400. ...							XOHX 0802-18.4-62	H62 18400. ...		
XOHX 0802-18.9	H60 18900. ...							XOHX 0802-18.9-62	H62 18900. ...		
XOHX 0802-19.0	H60 19000. ...							XOHX 0802-19.0-62	H62 19000. ...		
XOHX 0802-19.1	H60 19100. ...	8440	2715	84	8125	2740	8140	XOHX 0802-19.1-62	H62 19100. ...	7710	
XOHX 0802-19.2	H60 19200. ...							XOHX 0802-19.2-62	H62 19200. ...		
XOHX 0802-19.3	H60 19390. ...							XOHX 0802-19.3-62	H62 19390. ...		
XOHX 0802-19.6	H60 19600. ...							XOHX 0802-19.6-62	H62 19600. ...		
XOHX 0802-19.7	H60 19700. ...							XOHX 0802-19.7-62	H62 19700. ...		
XOHX 0802-19.8	H60 19800. ...	8440	2715	84	8125	2740	8140	XOHX 0802-19.8-62	H62 19800. ...	7710	
XOHX 0802-19.9	H60 19900. ...							XOHX 0802-19.9-62	H62 19900. ...		
XOHX 0802-20.0	H60 20000. ...							XOHX 0802-20.0-62	H62 20000. ...		
XOHX 0802-20.4	H60 20400. ...							XOHX 0802-20.4-62	H62 20400. ...		
XOHX 0802-20.5	H60 20500. ...							XOHX 0802-20.5-62	H62 20500. ...		
XOHX 0802-20.6	H60 20600. ...	8440	2715	84	8125	2740	8140	XOHX 0802-20.6-62	H62 20600. ...	7710	
XOHX 0802-20.7	H60 20700. ...							XOHX 0802-20.7-62	H62 20700. ...		
XOHX 0802-20.8	H60 20890. ...							XOHX 0802-20.8-62	H62 20890. ...		
XOHX 1003-20.8	H60 20800. ...							XOHX 1003-20.8-62	H62 20800. ...		
XOHX 1003-20.9	H60 20900. ...							XOHX 1003-20.9-62	H62 20900. ...		
XOHX 1003-21.0	H60 21000. ...	8440	2715	84	8125	2740	8140	XOHX 1003-21.0-62	H62 21000. ...	7710	
XOHX 1003-21.1	H60 21100. ...							XOHX 1003-21.1-62	H62 21100. ...		
XOHX 1003-21.2	H60 21200. ...							XOHX 1003-21.2-62	H62 21200. ...		
XOHX 1003-22.0	H60 22000. ...							XOHX 1003-22.0-62	H62 22000. ...		
XOHX 1003-22.1	H60 22100. ...							XOHX 1003-22.1-62	H62 22100. ...		
XOHX 1003-22.2	H60 22200. ...	8440	2715	84	8125	2740	8140	XOHX 1003-22.2-62	H62 22200. ...	7710	
XOHX 1003-22.3	H60 22300. ...							XOHX 1003-22.3-62	H62 22300. ...		
XOHX 1003-22.4	H60 22400. ...							XOHX 1003-22.4-62	H62 22400. ...		
XOHX 1003-23.6	H60 23600. ...							XOHX 1003-23.6-62	H62 23600. ...		
XOHX 1003-23.7	H60 23700. ...							XOHX 1003-23.7-62	H62 23700. ...		
XOHX 1003-23.8	H60 23800. ...	8440	2715	84	8125	2740	8140	XOHX 1003-23.8-62	H62 23800. ...	7710	
XOHX 1003-23.9	H60 23900. ...							XOHX 1003-23.9-62	H62 23900. ...		
XOHX 1003-24.0	H60 24000. ...							XOHX 1003-24.0-62	H62 24000. ...		



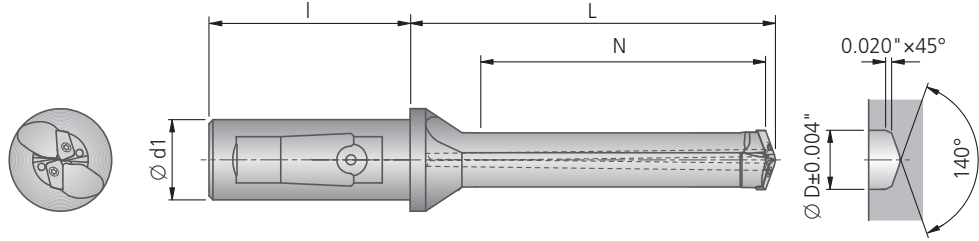
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




ABS® connection



Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	 lbs approx.	Cylindrical shank Ø d1 x l	Order No.	N	L	 lbs approx.	Clamping screw  Order No. Description	Screwdriver  Order No. Description
0.976	50	U20 02500	4.921	6.299	1.54	1.500 x 2.677	U21 62500	4.921	6.063		N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00850 10IP
0.980												
0.985												
0.988												
0.992												
0.992	50	U20 02540	5.118	6.496	1.54	1.500 x 2.677	U21 62540	5.118	6.260		N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00850 10IP
0.996												
1.000												
1.004												
1.008												
1.024	50	U20 02620	5.315	6.693	1.54	1.500 x 2.677	U21 62620	5.315	6.457		N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00850 10IP
1.028												
1.031												
1.035												
1.039												
1.055	50	U20 02700	5.315	6.693	1.54	1.500 x 2.677	U21 62700	5.315	6.457		N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00850 10IP
1.059												
1.062												
1.067												
1.071												
1.102	50	U20 02820	5.708	7.087	1.76	1.500 x 2.677	U21 72820	5.708	6.850		N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00850 10IP
1.106												
1.109												
1.114												
1.118												
1.118	50	U20 02860	5.708	7.087	1.76	1.500 x 2.677	U21 72860	5.708	6.850		N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00850 10IP
1.122												
1.125												
1.130												
1.134												
1.150	50	U20 02940	5.905	7.480	1.760	1.500 x 2.677	U21 72940	5.905	7.047	2.60	N00 57640 S/M3.5x6.9-10IP 25 in-lbs	L05 00860 15IP
1.154												
1.156												
1.161												
1.165												
1.177	50	U20 03010	6.102	7.480	1.980	1.500 x 2.677	U21 73010	6.102	7.244	2.69	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.181												
1.187												
1.189												
1.193												

For other diameters see following page.

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5xD											

● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminum alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

Order example insert:  
for Ø 1.000", coating BK84,  
Order No.: H60 25400.84

Supply includes:

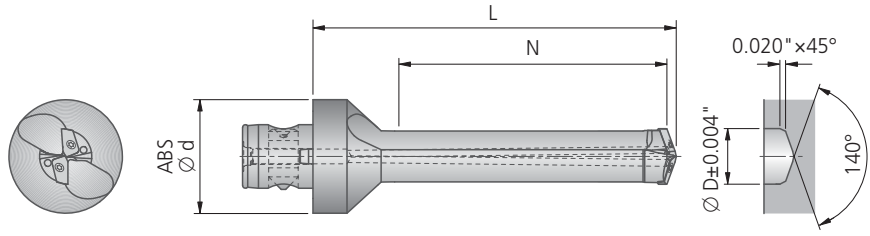
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

Basic recommendation				alternative for ...				Basic recommendation			
Insert		for workpiece material		higher cutting speed	greater strength			Insert			
ISO-Code	Order No.							ISO-Code	Order No.		
enter carbide ▼		BK8440	BK2715	BK84	BK8125	BK2740	BK8140	enter carbide ▼		BK7710	
XOHX 12T3-24.8	H60 24800. ...							XOHX 12T3-24.8-62	H62 24800. ...		
XOHX 12T3-24.9	H60 24900. ...							XOHX 12T3-24.9-62	H62 24900. ...		
XOHX 12T3-25.0	H60 25000. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-25.0-62	H62 25000. ...	7710	
XOHX 12T3-25.1	H60 25100. ...							XOHX 12T3-25.1-62	H62 25100. ...		
XOHX 12T3-25.2	H60 25200. ...							XOHX 12T3-25.2-62	H62 25200. ...		
XOHX 12T3-25.2	H60 25200. ...							XOHX 12T3-25.2-62	H62 25200. ...		
XOHX 12T3-25.3	H60 25300. ...							XOHX 12T3-25.3-62	H62 25300. ...		
XOHX 12T3-25.4	H60 25400. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-25.4-62	H62 25400. ...	7710	
XOHX 12T3-25.5	H60 25500. ...							XOHX 12T3-25.5-62	H62 25500. ...		
XOHX 12T3-25.6	H60 25600. ...							XOHX 12T3-25.6-62	H62 25600. ...		
XOHX 12T3-26.0	H60 26000. ...							XOHX 12T3-26.0-62	H62 26000. ...		
XOHX 12T3-26.1	H60 26100. ...							XOHX 12T3-26.1-62	H62 26100. ...		
XOHX 12T3-26.2	H60 26200. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-26.2-62	H62 26200. ...	7710	
XOHX 12T3-26.3	H60 26300. ...							XOHX 12T3-26.3-62	H62 26300. ...		
XOHX 12T3-26.4	H60 26400. ...							XOHX 12T3-26.4-62	H62 26400. ...		
XOHX 12T3-26.8	H60 26800. ...							XOHX 12T3-26.8-62	H62 26800. ...		
XOHX 12T3-26.9	H60 26900. ...							XOHX 12T3-26.9-62	H62 26900. ...		
XOHX 12T3-27.0	H60 27000. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-27.0-62	H62 27000. ...	7710	
XOHX 12T3-27.1	H60 27100. ...							XOHX 12T3-27.1-62	H62 27100. ...		
XOHX 12T3-27.2	H60 27200. ...							XOHX 12T3-27.2-62	H62 27200. ...		
XOHX 12T3-28.0	H60 28000. ...							XOHX 12T3-28.0-62	H62 28000. ...		
XOHX 12T3-28.1	H60 28100. ...							XOHX 12T3-28.1-62	H62 28100. ...		
XOHX 12T3-28.2	H60 28200. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-28.2-62	H62 28200. ...	7710	
XOHX 12T3-28.3	H60 28300. ...							XOHX 12T3-28.3-62	H62 28300. ...		
XOHX 12T3-28.4	H60 28400. ...							XOHX 12T3-28.4-62	H62 28400. ...		
XOHX 12T3-28.4	H60 28400. ...							XOHX 12T3-28.4-62	H62 28400. ...		
XOHX 12T3-28.5	H60 28500. ...							XOHX 12T3-28.5-62	H62 28500. ...		
XOHX 12T3-28.6	H60 28600. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-28.6-62	H62 28600. ...	7710	
XOHX 12T3-28.7	H60 28700. ...							XOHX 12T3-28.7-62	H62 28700. ...		
XOHX 12T3-28.8	H60 28800. ...							XOHX 12T3-28.8-62	H62 28800. ...		
XOHX 12T3-29.2	H60 29200. ...							XOHX 12T3-29.2-62	H62 29200. ...		
XOHX 12T3-29.3	H60 29300. ...							XOHX 12T3-29.3-62	H62 29300. ...		
XOHX 12T3-29.4	H60 29400. ...	8440	2715	84	8125	2740	8140	XOHX 12T3-29.4-62	H62 29400. ...	7710	
XOHX 12T3-29.5	H60 29500. ...							XOHX 12T3-29.5-62	H62 29500. ...		
XOHX 12T3-29.6	H60 29600. ...							XOHX 12T3-29.6-62	H62 29600. ...		
XOHX 1504-29.9	H60 29900. ...							XOHX 1504-29.9-62	H62 29900. ...		
XOHX 1504-30.0	H60 30000. ...							XOHX 1504-30.0-62	H62 30000. ...		
XOHX 1504-30.1	H60 30100. ...	8440	2715	84	8125	2740	8140	XOHX 1504-30.1-62	H62 30100. ...	7710	
XOHX 1504-30.2	H60 30200. ...							XOHX 1504-30.2-62	H62 30200. ...		
XOHX 1504-30.3	H60 30300. ...							XOHX 1504-30.3-62	H62 30300. ...		

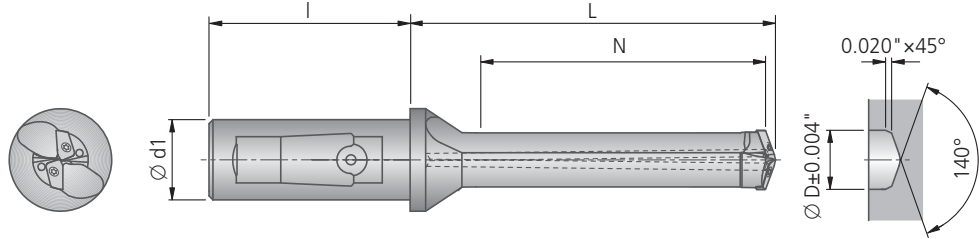








ABS® connection



Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	 lbs approx.	Cylindrical shank Ød1 x l	Order No.	N	L	 lbs approx.	Clamping screw  Order No. Description	Screwdriver  Order No. Description
1.209	50	U20 03090	6.102	7.480	1.98	1.500 x 2.677	U21 73090	6.102	7.244	2.80	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.213												
1.218												
1.220												
1.224												
1.244	50	U20 03180	6.299	7.677	1.98	1.500 x 2.677	U21 73180	6.299	7.441	2.82	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.248												
1.250												
1.256												
1.260												
1.272	50	U20 03250	6.496	7.874	1.98	1.500 x 2.677	U21 73250	6.496	7.638	2.91	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.276												
1.281												
1.283												
1.287												
1.303	50	U20 03330	6.693	8.070	1.98	1.500 x 2.677	U21 73330	6.693	7.835	2.99	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.307												
1.312												
1.315												
1.319												
1.319	50	U20 03370	6.693	8.070	2.20	1.500 x 2.677	U21 73370	6.693	7.835	3.02	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.323												
1.328												
1.331												
1.335												
1.366	50	U20 03490	6.890	8.268	2.20	1.500 x 2.677	U21 73490	6.890	8.031	3.15	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.370												
1.375												
1.378												
1.382												
1.398	50	U20 03570	7.087	8.465	2.20	1.500 x 2.677	U21 73570	7.087	8.228	3.29	N00 57650 S/M4x8.7-15IP 38 in-lbs	L05 00860 15IP
1.402												
1.406												
1.409												
1.413												

For other diameters see following page.

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5xD											

● very good ○ possible: see technical notes, page 168 ✕ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminum alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 1.250", coating BK84,  
Order No.: H60 31800.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

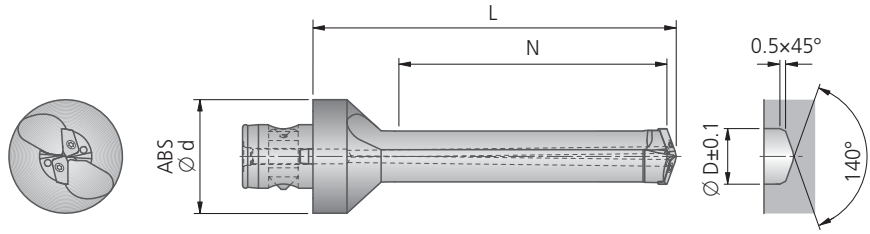
Basic recommendation				alternative for ...				Basic recommendation			
Insert		for workpiece material		higher cutting speed	greater strength			Insert			
ISO-Code	Order No.							ISO-Code	Order No.		
enter carbide ▼		BK8440 BK2715		BK84	BK8125	BK2740	BK8140	enter carbide ▼		BK7710	
XOHX 1504-30.7	H60 30700. ...							XOHX 1504-30.7-62	H62 30700. ...		
XOHX 1504-30.8	H60 30800. ...							XOHX 1504-30.8-62	H62 30800. ...		
XOHX 1504-30.9	H60 30900. ...	8440	2715	84	8125	2740	8140	XOHX 1504-30.9-62	H62 30900. ...	7710	
XOHX 1504-31.0	H60 31000. ...							XOHX 1504-31.0-62	H62 31000. ...		
XOHX 1504-31.1	H60 31100. ...							XOHX 1504-31.1-62	H62 31100. ...		
XOHX 1504-31.6	H60 31600. ...							XOHX 1504-31.6-62	H62 31600. ...		
XOHX 1504-31.7	H60 31700. ...							XOHX 1504-31.7-62	H62 31700. ...		
XOHX 1504-31.8	H60 31800. ...	8440	2715	84	8125	2740	8140	XOHX 1504-31.8-62	H62 31800. ...	7710	
XOHX 1504-31.9	H60 31900. ...							XOHX 1504-31.9-62	H62 31900. ...		
XOHX 1504-32.0	H60 32000. ...							XOHX 1504-32.0-62	H62 32000. ...		
XOHX 1504-32.3	H60 32300. ...							XOHX 1504-32.3-62	H62 32300. ...		
XOHX 1504-32.4	H60 32400. ...							XOHX 1504-32.4-62	H62 32400. ...		
XOHX 1504-32.5	H60 32500. ...	8440	2715	84	8125	2740	8140	XOHX 1504-32.5-62	H62 32500. ...	7710	
XOHX 1504-32.6	H60 32600. ...							XOHX 1504-32.6-62	H62 32600. ...		
XOHX 1504-32.7	H60 32700. ...							XOHX 1504-32.7-62	H62 32700. ...		
XOHX 1504-33.1	H60 33100. ...							XOHX 1504-33.1-62	H62 33100. ...		
XOHX 1504-33.2	H60 33200. ...							XOHX 1504-33.2-62	H62 33200. ...		
XOHX 1504-33.3	H60 33300. ...	8440	2715	84	8125	2740	8140	XOHX 1504-33.3-62	H62 33300. ...	7710	
XOHX 1504-33.4	H60 33400. ...							XOHX 1504-33.4-62	H62 33400. ...		
XOHX 1504-33.5	H60 33500. ...							XOHX 1504-33.5-62	H62 33500. ...		
XOHX 1504-33.5	H60 33500. ...							XOHX 1504-33.5-62	H62 33500. ...		
XOHX 1504-33.6	H60 33600. ...							XOHX 1504-33.6-62	H62 33600. ...		
XOHX 1504-33.7	H60 33700. ...	8440	2715	84	8125	2740	8140	XOHX 1504-33.7-62	H62 33700. ...	7710	
XOHX 1504-33.8	H60 33800. ...							XOHX 1504-33.8-62	H62 33800. ...		
XOHX 1504-33.9	H60 33900. ...							XOHX 1504-33.9-62	H62 33900. ...		
XOHX 1504-34.7	H60 34700. ...							XOHX 1504-33.1-62	H62 33100. ...		
XOHX 1504-34.8	H60 34800. ...							XOHX 1504-33.2-62	H62 33200. ...		
XOHX 1504-34.9	H60 34900. ...	8440	2715	84	8125	2740	8140	XOHX 1504-33.3-62	H62 33300. ...	7710	
XOHX 1504-35.0	H60 35000. ...							XOHX 1504-33.4-62	H62 33400. ...		
XOHX 1504-35.1	H60 35100. ...							XOHX 1504-33.5-62	H62 33500. ...		
XOHX 1504-35.5	H60 35500. ...							XOHX 1504-33.5-62	H62 33500. ...		
XOHX 1504-35.6	H60 35600. ...							XOHX 1504-33.6-62	H62 33600. ...		
XOHX 1504-35.7	H60 35700. ...	8440	2715	84	8125	2740	8140	XOHX 1504-33.7-62	H62 33700. ...	7710	
XOHX 1504-35.8	H60 35800. ...							XOHX 1504-33.8-62	H62 33800. ...		
XOHX 1504-35.9	H60 35900. ...							XOHX 1504-33.9-62	H62 33900. ...		



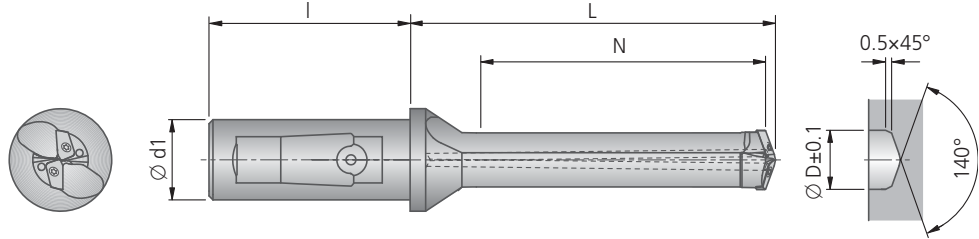
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ABS® connection

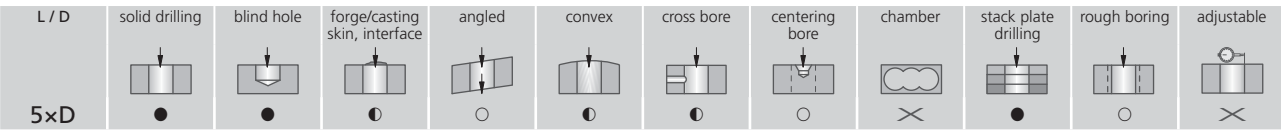


Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank				Assembly parts	Accessories	
	ABS Ø d	Order No.	N	L	 approx.	Cylindrical shank Ød1xL	Order No.	N	L	 approx.	Clamping screw  Order No. Description	 Order No. Description
17.3	50	U20 01750	90	125	0.6	25x56	U20 71750	90	114	0.34	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
17.4												
17.5												
17.6												
17.7												
17.8	50	U20 01800	90	125	0.6	25x56	U20 71800	90	114	0.34	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
17.9												
18.0												
18.1	50	U20 01850	95	130	0.6	25x56	U20 71850	95	119	0.35	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
18.2												
18.3												
18.4												
18.5												
18.6	50	U20 01900	95	130	0.6	25x56	U20 71900	95	119	0.35	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
18.7												
18.8												
18.9												
19.0												
19.1	50	U20 01950	100	135	0.6	32x60	U20 81950	100	124	0.56	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
19.2												
19.3												
19.4												
19.5												
19.6	50	U20 02000	100	135	0.6	32x60	U20 82000	100	124	0.56	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
19.7												
19.8												
19.9												
20.0												
20.1	50	U20 02050	105	140	0.6	32x60	U20 82050	105	134	0.57	N00 57660 S/M2.2x4.8-6IP 1.01 Nm	L05 00810 6IP
20.2												
20.3												
20.4												
20.5												
20.6												
20.7												

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 18.0 mm, coating BK84,  
Order No.: H60 18000.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

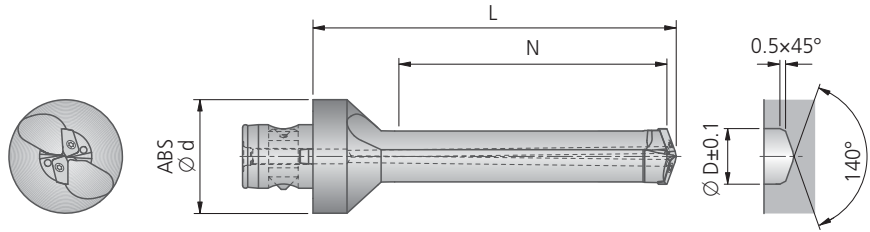
Basic recommendation		alternative for ...				Basic recommendation			
Insert		for workpiece material		higher cutting speed	greater strength		Insert		
ISO-Code <small>enter carbide</small>	Order No.						Order No.		
		BK8440	BK2715	BK84	BK8125	BK2740	BK8140	BK7710	
XOHX 0802-17.3...	H60 17300. ...							XOHX 0802-17.3-62...	H62 17300. ...
XOHX 0802-17.4...	H60 17400. ...							XOHX 0802-17.4-62...	H62 17400. ...
XOHX 0802-17.5...	H60 17500. ...	8440	2715	84	8125	2740	8140	XOHX 0802-17.5-62...	H62 17500. ...
XOHX 0802-17.6...	H60 17600. ...							XOHX 0802-17.6-62...	H62 17600. ...
XOHX 0802-17.7...	H60 17700. ...							XOHX 0802-17.7-62...	H62 17700. ...
XOHX 0802-17.8...	H60 17800. ...							XOHX 0802-17.8-62...	H62 17800. ...
XOHX 0802-17.9...	H60 17900. ...							XOHX 0802-17.9-62...	H62 17900. ...
XOHX 0802-18.0...	H60 18000. ...	8440	2715	84	8125	2740	8140	XOHX 0802-18.0-62...	H62 18000. ...
XOHX 0802-18.1...	H60 18100. ...							XOHX 0802-18.1-62...	H62 18100. ...
XOHX 0802-18.2...	H60 18200. ...							XOHX 0802-18.2-62...	H62 18200. ...
XOHX 0802-18.3...	H60 18300. ...							XOHX 0802-18.3-62...	H62 18300. ...
XOHX 0802-18.4...	H60 18400. ...							XOHX 0802-18.4-62...	H62 18400. ...
XOHX 0802-18.5...	H60 18500. ...	8440	2715	84	8125	2740	8140	XOHX 0802-18.5-62...	H62 18500. ...
XOHX 0802-18.6...	H60 18600. ...							XOHX 0802-18.6-62...	H62 18600. ...
XOHX 0802-18.7...	H60 18700. ...							XOHX 0802-18.7-62...	H62 18700. ...
XOHX 0802-18.8...	H60 18800. ...							XOHX 0802-18.8-62...	H62 18800. ...
XOHX 0802-18.9...	H60 18900. ...							XOHX 0802-18.9-62...	H62 18900. ...
XOHX 0802-19.0...	H60 19000. ...	8440	2715	84	8125	2740	8140	XOHX 0802-19.0-62...	H62 19000. ...
XOHX 0802-19.1...	H60 19100. ...							XOHX 0802-19.1-62...	H62 19100. ...
XOHX 0802-19.2...	H60 19200. ...							XOHX 0802-19.2-62...	H62 19200. ...
XOHX 0802-19.3...	H60 19300. ...							XOHX 0802-19.3-62...	H62 19300. ...
XOHX 0802-19.4...	H60 19400. ...							XOHX 0802-19.4-62...	H62 19400. ...
XOHX 0802-19.5...	H60 19500. ...	8440	2715	84	8125	2740	8140	XOHX 0802-19.5-62...	H62 19500. ...
XOHX 0802-19.6...	H60 19600. ...							XOHX 0802-19.6-62...	H62 19600. ...
XOHX 0802-19.7...	H60 19700. ...							XOHX 0802-19.7-62...	H62 19700. ...
XOHX 0802-19.8...	H60 19800. ...							XOHX 0802-19.8-62...	H62 19800. ...
XOHX 0802-19.9...	H60 19900. ...							XOHX 0802-19.9-62...	H62 19900. ...
XOHX 0802-20.0...	H60 20000. ...	8440	2715	84	8125	2740	8140	XOHX 0802-20.0-62...	H62 20000. ...
XOHX 0802-20.1...	H60 20100. ...							XOHX 0802-20.1-62...	H62 20100. ...
XOHX 0802-20.2...	H60 20200. ...							XOHX 0802-20.2-62...	H62 20200. ...
XOHX 0802-20.3...	H60 20300. ...							XOHX 0802-20.3-62...	H62 20300. ...
XOHX 0802-20.4...	H60 20400. ...							XOHX 0802-20.4-62...	H62 20400. ...
XOHX 0802-20.5...	H60 20500. ...	8440	2715	84	8125	2740	8140	XOHX 0802-20.5-62...	H62 20500. ...
XOHX 0802-20.6...	H60 20600. ...							XOHX 0802-20.6-62...	H62 20600. ...
XOHX 0802-20.7...	H60 20700. ...							XOHX 0802-20.7-62...	H62 20700. ...



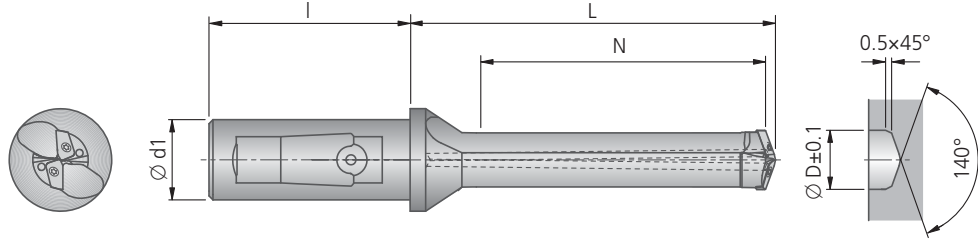
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ABS® connection



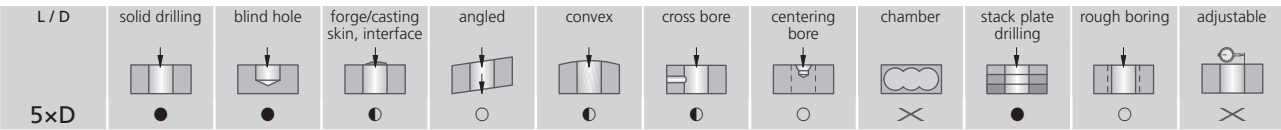
Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	 approx.	Cylindrical shank Ød1xL	Order No.	N	L	 approx.	Clamping screw  Order No. Description	 Order No. Description
20.8	50	U20 02100	105	140	0.6	32x60	U20 82100	105	134	0.58	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
20.9												
21.0												
21.1												
21.2												
21.3	50	U20 02150	110	145	0.6	32x60	U20 82150	110	139	0.59	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
21.4												
21.5												
21.6												
21.7	50	U20 02200	110	145	0.6	32x60	U20 82200	110	139	0.6	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
21.8												
21.9												
22.0												
22.1												
22.2	50	U20 02250	115	150	0.6	32x60	U20 82250	115	144	0.61	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
22.3												
22.4												
22.5												
22.6												
22.7	50	U20 02300	115	150	0.6	32x60	U20 82300	115	144	0.62	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
22.8												
22.9												
23.0												
23.1												
23.2	50	U20 02350	120	155	0.7	32x60	U20 82350	120	149	0.64	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
23.3												
23.4												
23.5												
23.6												
23.7	50	U20 02400	120	155	0.7	32x60	U20 82400	120	149	0.65	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
23.8												
23.9												
24.0												
24.1												
24.2												



Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 21.0 mm, coating BK84,  
Order No.: H60 21000.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

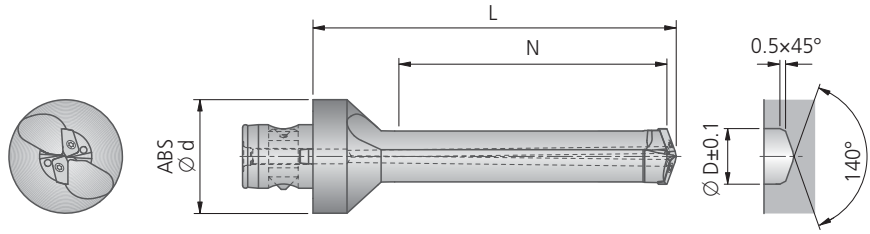
Basic recommendation		alternative for ...						Basic recommendation					
Insert		for workpiece material		higher cutting speed	greater strength			Insert					
ISO-Code enter carbide	Order No.								ISO-Code enter carbide	Order No.			
		BK8440	BK2715	BK84	BK8125	BK2740	BK8140				BK7710		
XOHX1003-20.8....	H60 20800. ...								XOHX1003-20.8-62...	H62 20800. ...			
XOHX1003-20.9....	H60 20900. ...								XOHX1003-20.9-62...	H62 20900. ...			
XOHX1003-21.0....	H60 21000. ...	8440	2715	84	8125	2740	8140		XOHX1003-21.0-62...	H62 21000. ...			7710
XOHX1003-21.1....	H60 21100. ...								XOHX1003-21.1-62...	H62 21100. ...			
XOHX1003-21.2....	H60 21200. ...								XOHX1003-21.2-62...	H62 21200. ...			
XOHX1003-21.3....	H60 21300. ...								XOHX1003-21.3-62...	H62 21300. ...			
XOHX1003-21.4....	H60 21400. ...								XOHX1003-21.4-62...	H62 21400. ...			
XOHX1003-21.5....	H60 21500. ...	8440	2715	84	8125	2740	8140		XOHX1003-21.5-62...	H62 21500. ...			7710
XOHX1003-21.6....	H60 21600. ...								XOHX1003-21.6-62...	H62 21600. ...			
XOHX1003-21.7....	H60 21700. ...								XOHX1003-21.7-62...	H62 21700. ...			
XOHX1003-21.8....	H60 21800. ...								XOHX1003-21.8-62...	H62 21800. ...			
XOHX1003-21.9....	H60 21900. ...								XOHX1003-21.9-62...	H62 21900. ...			
XOHX1003-22.0....	H60 22000. ...	8440	2715	84	8125	2740	8140		XOHX1003-22.0-62...	H62 22000. ...			7710
XOHX1003-22.1....	H60 22100. ...								XOHX1003-22.1-62...	H62 22100. ...			
XOHX1003-22.2....	H60 22200. ...								XOHX1003-22.2-62...	H62 22200. ...			
XOHX1003-22.3....	H60 22300. ...								XOHX1003-22.3-62...	H62 22300. ...			
XOHX1003-22.4....	H60 22400. ...								XOHX1003-22.4-62...	H62 22400. ...			
XOHX1003-22.5....	H60 22500. ...	8440	2715	84	8125	2740	8140		XOHX1003-22.5-62...	H62 22500. ...			7710
XOHX1003-22.6....	H60 22600. ...								XOHX1003-22.6-62...	H62 22600. ...			
XOHX1003-22.7....	H60 22700. ...								XOHX1003-22.7-62...	H62 22700. ...			
XOHX1003-22.8....	H60 22800. ...								XOHX1003-22.8-62...	H62 22800. ...			
XOHX1003-22.9....	H60 22900. ...								XOHX1003-22.9-62...	H62 22900. ...			
XOHX1003-23.0....	H60 23000. ...	8440	2715	84	8125	2740	8140		XOHX1003-23.0-62...	H62 23000. ...			7710
XOHX1003-23.1....	H60 23100. ...								XOHX1003-23.1-62...	H62 23100. ...			
XOHX1003-23.2....	H60 23200. ...								XOHX1003-23.2-62...	H62 23200. ...			
XOHX1003-23.3....	H60 23300. ...								XOHX1003-23.3-62...	H62 23300. ...			
XOHX1003-23.4....	H60 23400. ...								XOHX1003-23.4-62...	H62 23400. ...			
XOHX1003-23.5....	H60 23500. ...	8440	2715	84	8125	2740	8140		XOHX1003-23.5-62...	H62 23500. ...			7710
XOHX1003-23.6....	H60 23600. ...								XOHX1003-23.6-62...	H62 23600. ...			
XOHX1003-23.7....	H60 23700. ...								XOHX1003-23.7-62...	H62 23700. ...			
XOHX1003-23.8....	H60 23800. ...								XOHX1003-23.8-62...	H62 23800. ...			
XOHX1003-23.9....	H60 23900. ...								XOHX1003-23.9-62...	H62 23900. ...			
XOHX1003-24.0....	H60 24000. ...	8440	2715	84	8125	2740	8140		XOHX1003-24.0-62...	H62 24000. ...			7710
XOHX1003-24.1....	H60 24100. ...								XOHX1003-24.1-62...	H62 24100. ...			
XOHX1003-24.2....	H60 24200. ...								XOHX1003-24.2-62...	H62 24200. ...			



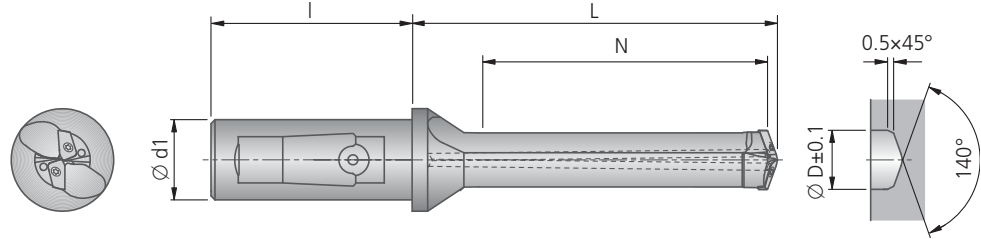
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ABS® connection

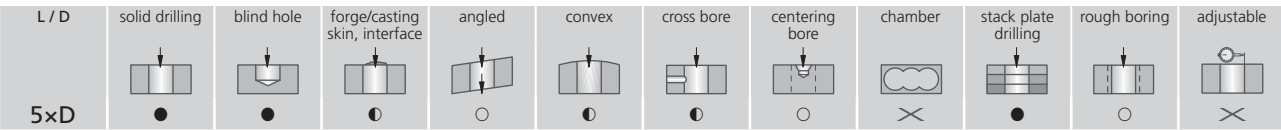


Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	kg approx.	Cylindrical shank Ød1xL	Order No.	N	L	kg approx.	Clamping screw Order No. Description	Screwdriver Order No. Description
24.3	50	U20 02450	125	160	0.7	32x60	U20 82450	125	154	0.67	N00 57630 S/M3x5.8-8IP 2.25 Nm	L05 00830 8IP
24.4												
24.5												
24.6												
24.7												
24.8	50	U20 02500	125	160	0.7	32x60	U20 82500	125	154	0.68	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
24.9												
25.0												
25.1												
25.2												
25.3	50	U20 02550	130	165	0.7	32x60	U20 82550	130	159	0.69	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
25.4												
25.5												
25.6												
25.7												
25.8	50	U20 02600	130	165	0.7	32x60	U20 82600	130	159	0.71	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
25.9												
26.0												
26.1												
26.2												
26.3	50	U20 02650	135	170	0.7	32x60	U20 82650	135	164	0.73	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
26.4												
26.5												
26.6												
26.7												
26.8	50	U20 02700	135	170	0.7	32x60	U20 82700	135	164	0.74	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
26.9												
27.0												
27.1												
27.2												
27.3	50	U20 02750	140	175	0.8	40x68	U20 92750	140	169	1.11	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
27.4												
27.5												
27.6												
27.7												

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ◐ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- ◐ alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 24.5 mm, coating BK84,  
Order No.: H60 24500.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

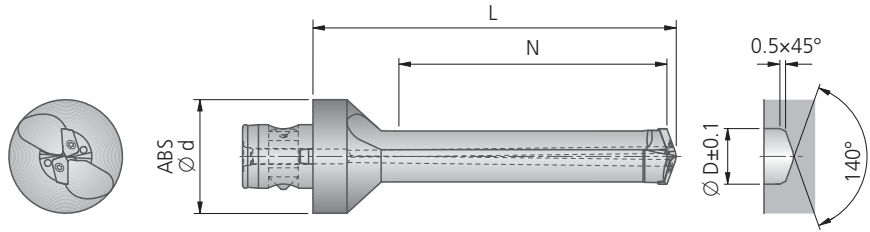
Basic recommendation				alternative for ...				Basic recommendation		
Insert		for workpiece material		higher cutting speed	greater strength			Insert		
ISO-Code <small>enter carbide</small>	Order No.							ISO-Code <small>enter carbide</small>	Order No.	
		BK8440	BK2715	BK84	BK8125	BK2740	BK8140			BK7710
XOHX1003-24.3....	H60 24300. ...							XOHX1003-24.3-62...	H62 24300. ...	
XOHX1003-24.4....	H60 24400. ...							XOHX1003-24.4-62...	H62 24400. ...	
XOHX1003-24.5....	H60 24500. ...	8440	2715	84	8125	2740	8140	XOHX1003-24.5-62...	H62 24500. ...	7710
XOHX1003-24.6....	H60 24600. ...							XOHX1003-24.6-62...	H62 24600. ...	
XOHX1003-24.7....	H60 24700. ...							XOHX1003-24.7-62...	H62 24700. ...	
XOHX12T3-24.8....	H60 24800. ...							XOHX12T3-24.8-62...	H62 24800. ...	
XOHX12T3-24.9....	H60 24900. ...							XOHX12T3-24.9-62...	H62 24900. ...	
XOHX12T3-25.0....	H60 25000. ...	8440	2715	84	8125	2740	8140	XOHX12T3-25.0-62...	H62 25000. ...	7710
XOHX12T3-25.1....	H60 25100. ...							XOHX12T3-25.1-62...	H62 25100. ...	
XOHX12T3-25.2....	H60 25200. ...							XOHX12T3-25.2-62...	H62 25200. ...	
XOHX12T3-25.3....	H60 25300. ...							XOHX12T3-25.3-62...	H62 25300. ...	
XOHX12T3-25.4....	H60 25400. ...							XOHX12T3-25.4-62...	H62 25400. ...	
XOHX12T3-25.5....	H60 25500. ...	8440	2715	84	8125	2740	8140	XOHX12T3-25.5-62...	H62 25500. ...	7710
XOHX12T3-25.6....	H60 25600. ...							XOHX12T3-25.6-62...	H62 25600. ...	
XOHX12T3-25.7....	H60 25700. ...							XOHX12T3-25.7-62...	H62 25700. ...	
XOHX12T3-25.8....	H60 25800. ...							XOHX12T3-25.8-62...	H62 25800. ...	
XOHX12T3-25.9....	H60 25900. ...							XOHX12T3-25.9-62...	H62 25900. ...	
XOHX12T3-26.0....	H60 26000. ...	8440	2715	84	8125	2740	8140	XOHX12T3-26.0-62...	H62 26000. ...	7710
XOHX12T3-26.1....	H60 26100. ...							XOHX12T3-26.1-62...	H62 26100. ...	
XOHX12T3-26.2....	H60 26200. ...							XOHX12T3-26.2-62...	H62 26200. ...	
XOHX12T3-26.3....	H60 26300. ...							XOHX12T3-26.3-62...	H62 26300. ...	
XOHX12T3-26.4....	H60 26400. ...							XOHX12T3-26.4-62...	H62 26400. ...	
XOHX12T3-26.5....	H60 26500. ...	8440	2715	84	8125	2740	8140	XOHX12T3-26.5-62...	H62 26500. ...	7710
XOHX12T3-26.6....	H60 26600. ...							XOHX12T3-26.6-62...	H62 26600. ...	
XOHX12T3-26.7....	H60 26700. ...							XOHX12T3-26.7-62...	H62 26700. ...	
XOHX12T3-26.8....	H60 26800. ...							XOHX12T3-26.8-62...	H62 26800. ...	
XOHX12T3-26.9....	H60 26900. ...							XOHX12T3-26.9-62...	H62 26900. ...	
XOHX12T3-27.0....	H60 27000. ...	8440	2715	84	8125	2740	8140	XOHX12T3-27.0-62...	H62 27000. ...	7710
XOHX12T3-27.1....	H60 27100. ...							XOHX12T3-27.1-62...	H62 27100. ...	
XOHX12T3-27.2....	H60 27200. ...							XOHX12T3-27.2-62...	H62 27200. ...	
XOHX12T3-27.3....	H60 27300. ...							XOHX12T3-27.3-62...	H62 27300. ...	
XOHX12T3-27.4....	H60 27400. ...							XOHX12T3-27.4-62...	H62 27400. ...	
XOHX12T3-27.5....	H60 27500. ...	8440	2715	84	8125	2740	8140	XOHX12T3-27.5-62...	H62 27500. ...	7710
XOHX12T3-27.6....	H60 27600. ...							XOHX12T3-27.6-62...	H62 27600. ...	
XOHX12T3-27.7....	H60 27700. ...							XOHX12T3-27.7-62...	H62 27700. ...	



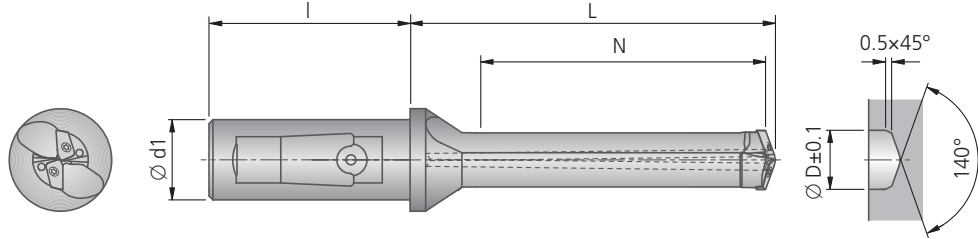
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ABS® connection

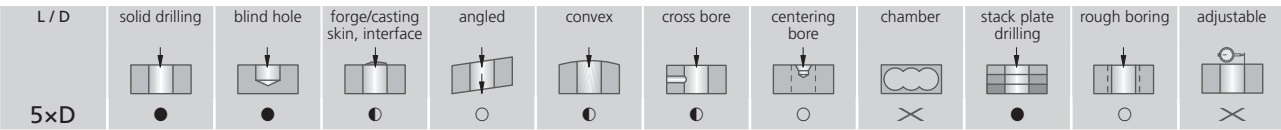


Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank				Assembly parts	Accessories	
	ABS Ø d	Order No.	N	L	 approx.	Cylindrical shank Ød1xL	Order No.	N	L	 approx.	Clamping screw  Order No. Description	 Order No. Description
27.8	50	U20 02800	140	175	0.8	40x68	U20 92800	140	169	1.12	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
27.9												
28.0												
28.1												
28.2												
28.3	50	U20 02850	145	180	0.8	40x68	U20 92850	145	174	1.14	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
28.4												
28.5												
28.6												
28.7	50	U20 02900	145	180	0.8	40x68	U20 92900	145	174	1.16	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
28.8												
28.9												
29.0												
29.1												
29.2	50	U20 02950	150	185	0.9	40x68	U20 92950	150	179	1.18	N00 57640 S/M3.5x6.9-10IP 2.8 Nm	L05 00850 10IP
29.3												
29.4												
29.5												
29.6												
29.7	50	U20 03000	150	185	0.9	40x68	U20 93000	150	179	1.20	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
29.8												
29.9												
30.0												
30.1												
30.2	50	U20 03050	155	190	0.9	40x68	U20 93050	155	184	1.22	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
30.3												
30.4												
30.5												
30.6												
30.7	50	U20 03100	155	190	0.9	40x68	U20 93100	155	184	1.24	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
30.8												
30.9												
31.0												
31.1												
31.2												

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 28.0 mm, coating BK84,  
Order No.: H60 28000.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

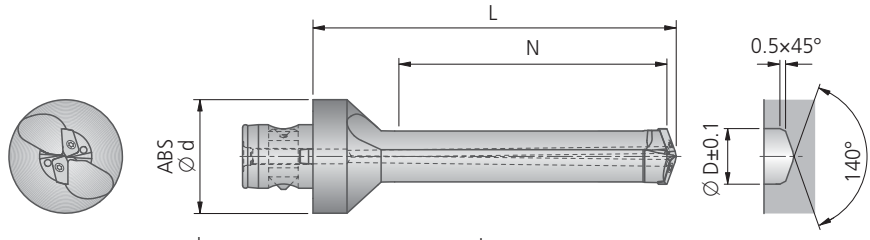
Basic recommendation				alternative for ...				Basic recommendation		
Insert		for workpiece material		higher cutting speed	greater strength			Insert		
ISO-Code <small>enter carbide</small>	Order No.							ISO-Code <small>enter carbide</small>	Order No.	
		BK8440	BK2715	BK84	BK8125	BK2740	BK8140			BK7710
XOHX12T3-27.8...	H60 27800. ...							XOHX12T3-27.8-62...	H62 27800. ...	
XOHX12T3-27.9...	H60 27900. ...							XOHX12T3-27.9-62...	H62 27900. ...	
XOHX12T3-28.0...	H60 28000. ...	8440	2715	84	8125	2740	8140	XOHX12T3-28.0-62...	H62 28000. ...	7710
XOHX12T3-28.1...	H60 28100. ...							XOHX12T3-28.1-62...	H62 28100. ...	
XOHX12T3-28.2...	H60 28200. ...							XOHX12T3-28.2-62...	H62 28200. ...	
XOHX12T3-28.3...	H60 28300. ...							XOHX12T3-28.3-62...	H62 28300. ...	
XOHX12T3-28.4...	H60 28400. ...							XOHX12T3-28.4-62...	H62 28400. ...	
XOHX12T3-28.5...	H60 28500. ...	8440	2715	84	8125	2740	8140	XOHX12T3-28.5-62...	H62 28500. ...	7710
XOHX12T3-28.6...	H60 28600. ...							XOHX12T3-28.6-62...	H62 28600. ...	
XOHX12T3-28.7...	H60 28700. ...							XOHX12T3-28.7-62...	H62 28700. ...	
XOHX12T3-28.8...	H60 28800. ...							XOHX12T3-28.8-62...	H62 28800. ...	
XOHX12T3-28.9...	H60 28900. ...							XOHX12T3-28.9-62...	H62 28900. ...	
XOHX12T3-29.0...	H60 29000. ...	8440	2715	84	8125	2740	8140	XOHX12T3-29.0-62...	H62 29000. ...	7710
XOHX12T3-29.1...	H60 29100. ...							XOHX12T3-29.1-62...	H62 29100. ...	
XOHX12T3-29.2...	H60 29200. ...							XOHX12T3-29.2-62...	H62 29200. ...	
XOHX12T3-29.3...	H60 29300. ...							XOHX12T3-29.3-62...	H62 29300. ...	
XOHX12T3-29.4...	H60 29400. ...							XOHX12T3-29.4-62...	H62 29400. ...	
XOHX12T3-29.5...	H60 29500. ...	8440	2715	84	8125	2740	8140	XOHX12T3-29.5-62...	H62 29500. ...	7710
XOHX12T3-29.6...	H60 29600. ...							XOHX12T3-29.6-62...	H62 29600. ...	
XOHX12T3-29.7...	H60 29700. ...							XOHX12T3-29.7-62...	H62 29700. ...	
XOHX1504-29.8...	H60 29800. ...							XOHX1504-29.8-62...	H62 29800. ...	
XOHX1504-29.9...	H60 29900. ...							XOHX1504-29.9-62...	H62 29900. ...	
XOHX1504-30.0...	H60 30000. ...	8440	2715	84	8125	2740	8140	XOHX1504-30.0-62...	H62 30000. ...	7710
XOHX1504-30.1...	H60 30100. ...							XOHX1504-30.1-62...	H62 30100. ...	
XOHX1504-30.2...	H60 30200. ...							XOHX1504-30.2-62...	H62 30200. ...	
XOHX1504-30.3...	H60 30300. ...							XOHX1504-30.3-62...	H62 30300. ...	
XOHX1504-30.4...	H60 30400. ...							XOHX1504-30.4-62...	H62 30400. ...	
XOHX1504-30.5...	H60 30500. ...	8440	2715	84	8125	2740	8140	XOHX1504-30.5-62...	H62 30500. ...	7710
XOHX1504-30.6...	H60 30600. ...							XOHX1504-30.6-62...	H62 30600. ...	
XOHX1504-30.7...	H60 30700. ...							XOHX1504-30.7-62...	H62 30700. ...	
XOHX1504-30.8...	H60 30800. ...							XOHX1504-30.8-62...	H62 30800. ...	
XOHX1504-30.9...	H60 30900. ...							XOHX1504-30.9-62...	H62 30900. ...	
XOHX1504-31.0...	H60 31000. ...	8440	2715	84	8125	2740	8140	XOHX1504-31.0-62...	H62 31000. ...	7710
XOHX1504-31.1...	H60 31100. ...							XOHX1504-31.1-62...	H62 31100. ...	
XOHX1504-31.2...	H60 31200. ...							XOHX1504-31.2-62...	H62 31200. ...	



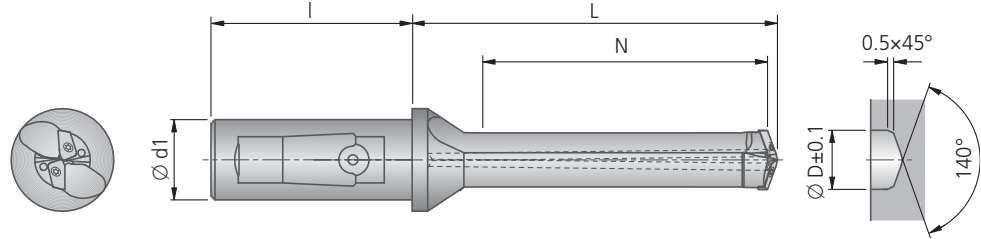
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ABS® connection

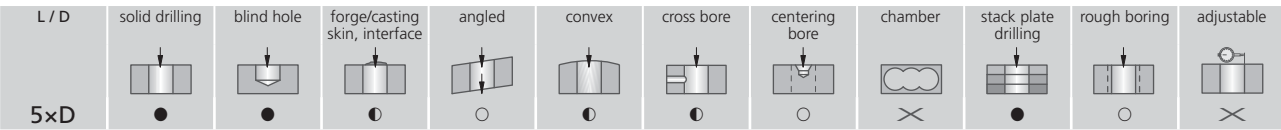


Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	kg approx.	Cylindrical shank Ød1xL	Order No.	N	L	kg approx.	Clamping screw Order No. Description	Screwdriver Order No. Description
31.3	50	U20 03150	160	195	0.9	40x68	U20 93150	160	189	1.27	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
31.4												
31.5												
31.6												
31.7												
31.8	50	U20 03200	160	195	0.9	40x68	U20 93200	160	189	1.28	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
31.9												
32.0												
32.1												
32.2	50	U20 03250	165	200	0.9	40x68	U20 93250	165	194	1.32	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
32.3												
32.4												
32.5												
32.6												
32.7	50	U20 03300	165	200	0.9	40x68	U20 93300	165	194	1.33	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
32.8												
32.9												
33.0												
33.1												
33.2	50	U20 03350	170	205	0.9	40x68	U20 93350	170	199	1.36	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
33.3												
33.4												
33.5												
33.6												
33.7	50	U20 03400	170	205	1.0	40x68	U20 93400	170	199	1.37	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
33.8												
33.9												
34.0												
34.1												
34.2	50	U20 03450	175	210	1.0	40x68	U20 93450	175	204	1.41	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
34.3												
34.4												
34.5												
34.6												
34.7												

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 32.0 mm, coating BK84,  
Order No.: H60 32000.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

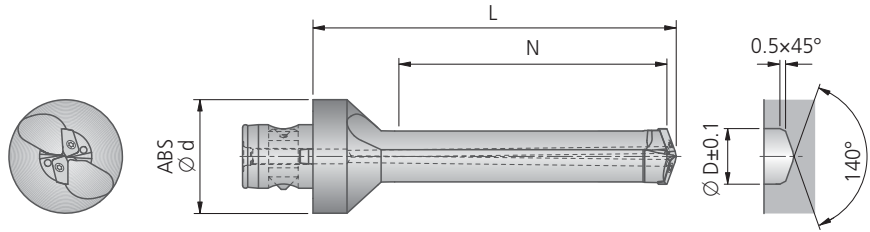
Basic recommendation				alternative for ...				Basic recommendation				
Insert		for workpiece material		higher cutting speed	greater strength			Insert				
ISO-Code <small>enter carbide</small>	Order No.							ISO-Code <small>enter carbide</small>	Order No.			
		BK8440	BK2715	BK84	BK8125	BK2740	BK8140			BK7710		
XOHX1504-31.3....	H60 31300. ...							XOHX1504-31.3-62...	H62 31300. ...			
XOHX1504-31.4....	H60 31400. ...							XOHX1504-31.4-62...	H62 31400. ...			
XOHX1504-31.5....	H60 31500. ...	8440	2715	84	8125	2740	8140	XOHX1504-31.5-62...	H62 31500. ...			7710
XOHX1504-31.6....	H60 31600. ...							XOHX1504-31.6-62...	H62 31600. ...			
XOHX1504-31.7....	H60 31700. ...							XOHX1504-31.7-62...	H62 31700. ...			
XOHX1504-31.8....	H60 31800. ...							XOHX1504-31.8-62...	H62 31800. ...			
XOHX1504-31.9....	H60 31900. ...							XOHX1504-31.9-62...	H62 31900. ...			
XOHX1504-32.0....	H60 32000. ...	8440	2715	84	8125	2740	8140	XOHX1504-32.0-62...	H62 32000. ...			7710
XOHX1504-32.1....	H60 32100. ...							XOHX1504-32.1-62...	H62 32100. ...			
XOHX1504-32.2....	H60 32200. ...							XOHX1504-32.2-62...	H62 32200. ...			
XOHX1504-32.3....	H60 32300. ...							XOHX1504-32.3-62...	H62 32300. ...			
XOHX1504-32.4....	H60 32400. ...							XOHX1504-32.4-62...	H62 32400. ...			
XOHX1504-32.5....	H60 32500. ...	8440	2715	84	8125	2740	8140	XOHX1504-32.5-62...	H62 32500. ...			7710
XOHX1504-32.6....	H60 32600. ...							XOHX1504-32.6-62...	H62 32600. ...			
XOHX1504-32.7....	H60 32700. ...							XOHX1504-32.7-62...	H62 32700. ...			
XOHX1504-32.8....	H60 32800. ...							XOHX1504-32.8-62...	H62 32800. ...			
XOHX1504-32.9....	H60 32900. ...							XOHX1504-32.9-62...	H62 32900. ...			
XOHX1504-33.0....	H60 33000. ...	8440	2715	84	8125	2740	8140	XOHX1504-33.0-62...	H62 33000. ...			7710
XOHX1504-33.1....	H60 33100. ...							XOHX1504-33.1-62...	H62 33100. ...			
XOHX1504-33.2....	H60 33200. ...							XOHX1504-33.2-62...	H62 33200. ...			
XOHX1504-33.3....	H60 33300. ...							XOHX1504-33.3-62...	H62 33300. ...			
XOHX1504-33.4....	H60 33400. ...							XOHX1504-33.4-62...	H62 33400. ...			
XOHX1504-33.5....	H60 33500. ...	8440	2715	84	8125	2740	8140	XOHX1504-33.5-62...	H62 33500. ...			7710
XOHX1504-33.6....	H60 33600. ...							XOHX1504-33.6-62...	H62 33600. ...			
XOHX1504-33.7....	H60 33700. ...							XOHX1504-33.7-62...	H62 33700. ...			
XOHX1504-33.8....	H60 33800. ...							XOHX1504-33.8-62...	H62 33800. ...			
XOHX1504-33.9....	H60 33900. ...							XOHX1504-33.9-62...	H62 33900. ...			
XOHX1504-34.0....	H60 34000. ...	8440	2715	84	8125	2740	8140	XOHX1504-34.0-62...	H62 34000. ...			7710
XOHX1504-34.1....	H60 34100. ...							XOHX1504-34.1-62...	H62 34100. ...			
XOHX1504-34.2....	H60 34200. ...							XOHX1504-34.2-62...	H62 34200. ...			
XOHX1504-34.3....	H60 34300. ...							XOHX1504-34.3-62...	H62 34300. ...			
XOHX1504-34.4....	H60 34400. ...							XOHX1504-34.4-62...	H62 34400. ...			
XOHX1504-34.5....	H60 34500. ...	8440	2715	84	8125	2740	8140	XOHX1504-34.5-62...	H62 34500. ...			7710
XOHX1504-34.6....	H60 34600. ...							XOHX1504-34.6-62...	H62 34600. ...			
XOHX1504-34.7....	H60 34700. ...							XOHX1504-34.7-62...	H62 34700. ...			



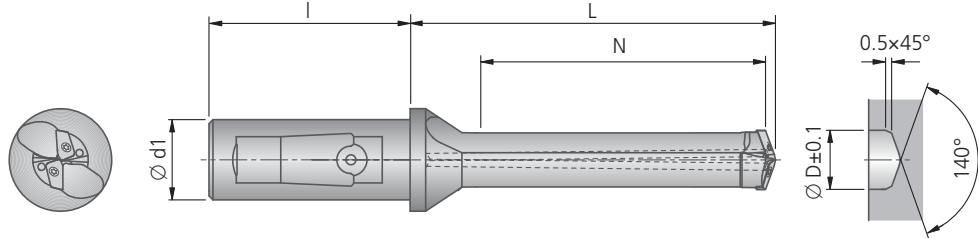
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ABS® connection



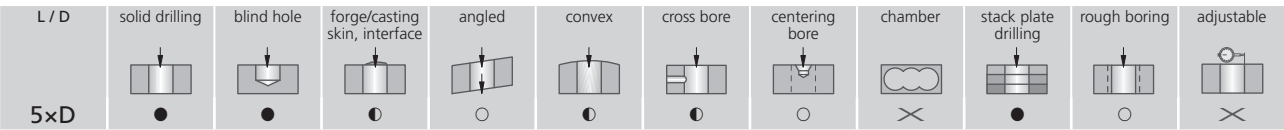
Cylindrical shank  
(combination shank)  
DIN 6535 HE  
(similar to DIN 1835 E)  
and DIN 6595



Ø D	ABS®					Cylindrical shank					Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	kg approx.	Cylindrical shank Ød1xL	Order No.	N	L	kg approx.	Clamping screw Order No. Description	Screwdriver Order No. Description
34.8	50	U20 03500	175	210	1.0	40x68	U20 93500	175	204	1.43	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
34.9												
35.0												
35.1												
35.2												
35.3	50	U20 03550	180	215	1.0	40x68	U20 93550	180	209	1.47	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
35.4												
35.5												
35.6												
35.7	50	U20 03600	180	215	1.0	40x68	U20 93600	180	209	1.49	N00 57650 S/M4x8.7-15IP 4.3 Nm	L05 00860 15IP
35.8												
35.9												
36.0												
36.1												
36.2	63	U20 13650	185	243	1.7	-	-	-	-	N00 57670 S/M5x10.4-20IP 6.25 Nm	L05 00870 20IP	
36.3												
36.4												
36.5												
36.6												
36.7	63	U20 13700	185	243	1.7	-	-	-	-	N00 57670 S/M5x10.4-20IP 6.25 Nm	L05 00870 20IP	
36.8												
36.9												
37.0												
37.1												
37.2	63	U20 13750	190	248	1.77	-	-	-	-	N00 57670 S/M5x10.4-20IP 6.25 Nm	L05 00870 20IP	
37.3												
37.4												
37.5												
37.6												
37.7	63	U20 13800	190	248	1.77	-	-	-	-	N00 57670 S/M5x10.4-20IP 6.25 Nm	L05 00870 20IP	
37.8												
37.9												
38.0												
38.1												
38.2												



Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✕ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 35.0 mm, coating BK84,  
Order No.: H60 35000.84

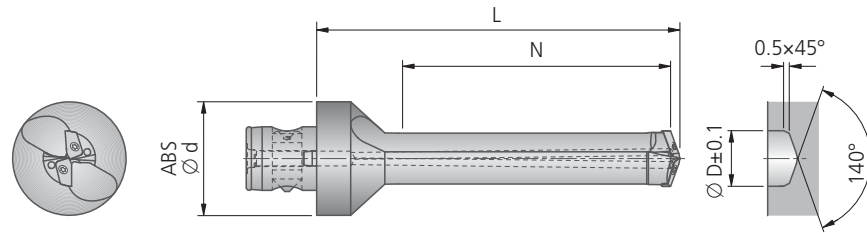
Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

Basic recommendation				alternative for ...				Basic recommendation		
Insert		for workpiece material		higher cutting speed	greater strength			Insert		
ISO-Code	Order No.							ISO-Code	Order No.	
enter carbide		BK8440	BK2715	BK84	BK8125	BK2740	BK8140	enter carbide		BK7710
XOHX1504-34.8...	H60 34800. ...							XOHX1504-34.8-62...	H62 34800. ...	
XOHX1504-34.9...	H60 34900. ...							XOHX1504-34.9-62...	H62 34900. ...	
XOHX1504-35.0...	H60 35000. ...	8440	2715	84	8125	2740	8140	XOHX1504-35.0-62...	H62 35000. ...	7710
XOHX1504-35.1...	H60 35100. ...							XOHX1504-35.1-62...	H62 35100. ...	
XOHX1504-35.2...	H60 35200. ...							XOHX1504-35.2-62...	H62 35200. ...	
XOHX1504-35.3...	H60 35300. ...							XOHX1504-35.3-62...	H62 35300. ...	
XOHX1504-35.4...	H60 35400. ...							XOHX1504-35.4-62...	H62 35400. ...	
XOHX1504-35.5...	H60 35500. ...	8440	2715	84	8125	2740	8140	XOHX1504-35.5-62...	H62 35500. ...	7710
XOHX1504-35.6...	H60 35600. ...							XOHX1504-35.6-62...	H62 35600. ...	
XOHX1504-35.7...	H60 35700. ...							XOHX1504-35.7-62...	H62 35700. ...	
XOHX1504-35.8...	H60 35800. ...							XOHX1504-35.8-62...	H62 35800. ...	
XOHX1504-35.9...	H60 35900. ...							XOHX1504-35.9-62...	H62 35900. ...	
XOHX1504-36.0...	H60 36000. ...	8440	2715	84	8125	2740	8140	XOHX1504-36.0-62...	H62 36000. ...	7710
XOHX1504-36.1...	H60 36100. ...							XOHX1504-36.1-62...	H62 36100. ...	
XOHX1504-36.2...	H60 36200. ...							XOHX1504-36.2-62...	H62 36200. ...	
XOHX2205-36.3...	H60 36300. ...							XOHX2205-36.3-62...	H62 36300. ...	
XOHX2205-36.4...	H60 36400. ...							XOHX2205-36.4-62...	H62 36400. ...	
XOHX2205-36.5...	H60 36500. ...	8440	2715	84	8125	2740	8140	XOHX2205-36.5-62...	H62 36500. ...	7710
XOHX2205-36.6...	H60 36600. ...							XOHX2205-36.6-62...	H62 36600. ...	
XOHX2205-36.7...	H60 36700. ...							XOHX2205-36.7-62...	H62 36700. ...	
XOHX2205-36.8...	H60 36800. ...							XOHX2205-36.8-62...	H62 36800. ...	
XOHX2205-36.9...	H60 36900. ...							XOHX2205-36.9-62...	H62 36900. ...	
XOHX2205-37.0...	H60 37000. ...	8440	2715	84	8125	2740	8140	XOHX2205-37.0-62...	H62 37000. ...	7710
XOHX2205-37.1...	H60 37100. ...							XOHX2205-37.1-62...	H62 37100. ...	
XOHX2205-37.2...	H60 37200. ...							XOHX2205-37.2-62...	H62 37200. ...	
XOHX2205-37.3...	H60 37300. ...							XOHX2205-37.3-62...	H62 37300. ...	
XOHX2205-37.4...	H60 37400. ...							XOHX2205-37.4-62...	H62 37400. ...	
XOHX2205-37.5...	H60 37500. ...	8440	2715	84	8125	2740	8140	XOHX2205-37.5-62...	H62 37500. ...	7710
XOHX2205-37.6...	H60 37600. ...							XOHX2205-37.6-62...	H62 37600. ...	
XOHX2205-37.7...	H60 37700. ...							XOHX2205-37.7-62...	H62 37700. ...	
XOHX2205-37.8...	H60 37800. ...							XOHX2205-37.8-62...	H62 37800. ...	
XOHX2205-37.9...	H60 37900. ...							XOHX2205-37.9-62...	H62 37900. ...	
XOHX2205-38.0...	H60 38000. ...	8440	2715	84	8125	2740	8140	XOHX2205-38.0-62...	H62 38000. ...	7710
XOHX2205-38.1...	H60 38100. ...							XOHX2205-38.1-62...	H62 38100. ...	
XOHX2205-38.2...	H60 38200. ...							XOHX2205-38.2-62...	H62 38200. ...	

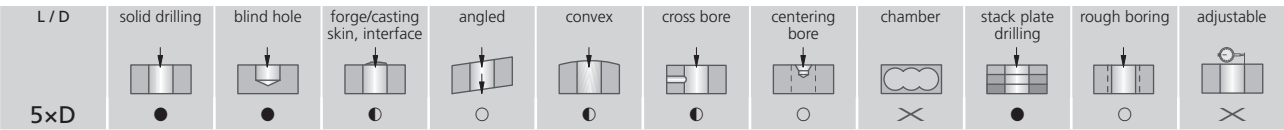


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Ø D	ABS®					kg approx.	Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	Order No. Description		Order No. Description	
38.3	63	U20 13850	195	253	1.84	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
38.4								
38.5								
38.6								
38.7								
38.8	63	U20 13900	195	253	1.84	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
38.9								
39.0								
39.1								
39.2								
39.3	63	U20 13950	200	258	1.91	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
39.4								
39.5								
39.6								
39.7								
39.8	63	U20 14000	200	258	1.91	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
39.9								
40.0								
40.1								
40.2								
40.3	63	U20 14050	205	263	1.99	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
40.4								
40.5								
40.6								
40.7								
40.8	63	U20 14100	205	263	1.99	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
40.9								
41.0								
41.1								
41.2								
41.3	63	U20 14150	210	268	2.08	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
41.4								
41.5								
41.6								
41.7								

Twin Cutting Drill with ABS® Connection, R.H. cutting



● very good ○ good ○ possible: see technical notes, page 168 ✗ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 39.0 mm, coating BK84,  
Order No.: H60 39000.84

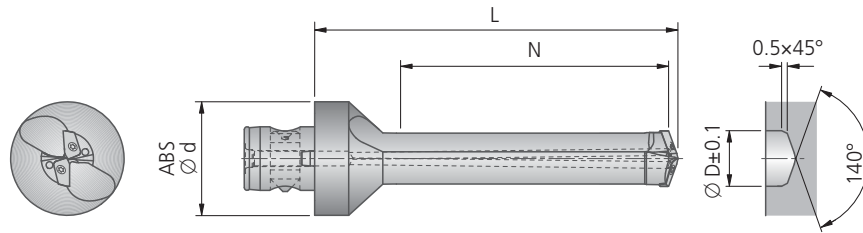
Supply includes:



KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

Basic recommendation		alternative for ...						Basic recommendation	
ISO-Code <small>enter carbide</small>	Order No.	for workpiece material		higher cutting speed	greater strength			ISO-Code <small>enter carbide</small>	Order No.
		<b>P</b> <b>K</b> <b>N</b>	<b>P</b> <b>K</b> <b>N</b>	<b>P</b> <b>K</b> <b>N</b>	<b>P</b> <b>K</b> <b>N</b>	<b>P</b> <b>K</b> <b>N</b>	<b>P</b> <b>K</b> <b>N</b>		
XOHX2205-38.3....	H60 38300. ...							XOHX2205-38.3-62...	H62 38300. ...
XOHX2205-38.4....	H60 38400. ...							XOHX2205-38.4-62...	H62 38400. ...
XOHX2205-38.5....	H60 38500. ...	8440	2715	84	8125	2740	8140	XOHX2205-38.5-62...	H62 38500. ...
XOHX2205-38.6....	H60 38600. ...							XOHX2205-38.6-62...	H62 38600. ...
XOHX2205-38.7....	H60 38700. ...							XOHX2205-38.7-62...	H62 38700. ...
XOHX2205-38.8....	H60 38800. ...							XOHX2205-38.8-62...	H62 38800. ...
XOHX2205-38.9....	H60 38900. ...							XOHX2205-38.9-62...	H62 38900. ...
XOHX2205-39.0....	H60 39000. ...	8440	2715	84	8125	2740	8140	XOHX2205-39.0-62...	H62 39000. ...
XOHX2205-39.1....	H60 39100. ...							XOHX2205-39.1-62...	H62 39100. ...
XOHX2205-39.2....	H60 39200. ...							XOHX2205-39.2-62...	H62 39200. ...
XOHX2205-39.3....	H60 39300. ...							XOHX2205-39.3-62...	H62 39300. ...
XOHX2205-39.4....	H60 39400. ...							XOHX2205-39.4-62...	H62 39400. ...
XOHX2205-39.5....	H60 39500. ...	8440	2715	84	8125	2740	8140	XOHX2205-39.5-62...	H62 39500. ...
XOHX2205-39.6....	H60 39600. ...							XOHX2205-39.6-62...	H62 39600. ...
XOHX2205-39.7....	H60 39700. ...							XOHX2205-39.7-62...	H62 39700. ...
XOHX2205-39.8....	H60 39800. ...							XOHX2205-39.8-62...	H62 39800. ...
XOHX2205-39.9....	H60 39900. ...							XOHX2205-39.9-62...	H62 39900. ...
XOHX2205-40.0....	H60 40000. ...	8440	2715	84	8125	2740	8140	XOHX2205-40.0-62...	H62 40000. ...
XOHX2205-40.1....	H60 40100. ...							XOHX2205-40.1-62...	H62 40100. ...
XOHX2205-40.2....	H60 40200. ...							XOHX2205-40.2-62...	H62 40200. ...
XOHX2205-40.3....	H60 40300. ...							XOHX2205-40.3-62...	H62 40300. ...
XOHX2205-40.4....	H60 40400. ...							XOHX2205-40.4-62...	H62 40400. ...
XOHX2205-40.5....	H60 40500. ...	8440	2715	84	8125	2740	8140	XOHX2205-40.5-62...	H62 40500. ...
XOHX2205-40.6....	H60 40600. ...							XOHX2205-40.6-62...	H62 40600. ...
XOHX2205-40.7....	H60 40700. ...							XOHX2205-40.7-62...	H62 40700. ...
XOHX2205-40.8....	H60 40800. ...							XOHX2205-40.8-62...	H62 40800. ...
XOHX2205-40.9....	H60 40900. ...							XOHX2205-40.9-62...	H62 40900. ...
XOHX2205-41.0....	H60 41000. ...	8440	2715	84	8125	2740	8140	XOHX2205-41.0-62...	H62 41000. ...
XOHX2205-41.1....	H60 41100. ...							XOHX2205-41.1-62...	H62 41100. ...
XOHX2205-41.2....	H60 41200. ...							XOHX2205-41.2-62...	H62 41200. ...
XOHX2205-41.3....	H60 41300. ...							XOHX2205-41.3-62...	H62 41300. ...
XOHX2205-41.4....	H60 41400. ...							XOHX2205-41.4-62...	H62 41400. ...
XOHX2205-41.5....	H60 41500. ...	8440	2715	84	8125	2740	8140	XOHX2205-41.5-62...	H62 41500. ...
XOHX2205-41.6....	H60 41600. ...							XOHX2205-41.6-62...	H62 41600. ...
XOHX2205-41.7....	H60 41700. ...							XOHX2205-41.7-62...	H62 41700. ...



1



Ø D	ABS®					kg approx.	Assembly parts	Accessories
	ABS Ø d	Order No.	N	L	kg approx.		Clamping screw  Order No. Description	Screwdriver  Order No. Description
41.8	63	U20 14200	210	268	2.08	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
41.9								
42.0								
42.1								
42.2								
42.3	63	U20 14250	215	273	0.17	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
42.4								
42.5								
42.6								
42.7								
42.8	63	U20 14300	215	273	0.17	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
42.9								
43.0								
43.1								
43.2								
43.2	63	U20 14350	220	278	2.23	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
43.4								
43.5								
43.6								
43.7								
43.8	63	U20 14400	220	278	2.23	N00 57670 S/M5×10.4-20IP 6.25 Nm	L05 00870 20IP	
43.9								
44.0								
44.1								
44.2								

Twin Cutting Drill with ABS® Connection, R.H. cutting

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
5xD											

● very good ○ good ○ possible: see technical notes, page 168 ✕ not possible

Areas of use:

- P** high tensile strength steels, heat treated steels and tool steels
- K** grey cast iron, SG cast iron
- N** cast aluminium alloys, brass and bronze which produce short chips
- main use
- alternative cutting material

Intermediate dimensions can be supplied on request.

**Order example insert:**  
for Ø 42.0 mm, coating BK84,  
Order No.: H60 42000.84

Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

Basic recommendation				alternative for ...				Basic recommendation		
Insert		for workpiece material		higher cutting speed	greater strength			Insert		
ISO-Code enter carbide	Order No.							ISO-Code enter carbide	Order No.	
XOHX2205-41.8....	H60 41800. ...							XOHX2205-41.8-62...	H62 41800. ...	
XOHX2205-41.9....	H60 41900. ...							XOHX2205-41.9-62...	H62 41900. ...	
XOHX2205-42.0....	H60 42000. ...	8440	2715	84	8125	2740	8140	XOHX2205-42.0-62...	H62 42000. ...	7710
XOHX2205-42.1....	H60 42100. ...							XOHX2205-42.1-62...	H62 42100. ...	
XOHX2205-42.2....	H60 42200. ...							XOHX2205-42.2-62...	H62 42200. ...	
XOHX2205-42.3....	H60 42300. ...							XOHX2205-42.3-62...	H62 42300. ...	
XOHX2205-42.4....	H60 42400. ...							XOHX2205-42.4-62...	H62 42400. ...	
XOHX2205-42.5....	H60 42500. ...	8440	2715	84	8125	2740	8140	XOHX2205-42.5-62...	H62 42500. ...	7710
XOHX2205-42.6....	H60 42600. ...							XOHX2205-42.6-62...	H62 42600. ...	
XOHX2205-42.7....	H60 42700. ...							XOHX2205-42.7-62...	H62 42700. ...	
XOHX2205-42.8....	H60 42800. ...							XOHX2205-42.8-62...	H62 42800. ...	
XOHX2205-42.9....	H60 42900. ...							XOHX2205-42.9-62...	H62 42900. ...	
XOHX2205-43.0....	H60 43000. ...	8440	2715	84	8125	2740	8140	XOHX2205-43.0-62...	H62 43000. ...	7710
XOHX2205-43.1....	H60 43100. ...							XOHX2205-43.1-62...	H62 43100. ...	
XOHX2205-43.2....	H60 43200. ...							XOHX2205-43.2-62...	H62 43200. ...	
XOHX2205-43.3....	H60 43300. ...							XOHX2205-43.3-62...	H62 43300. ...	
XOHX2205-43.4....	H60 43400. ...							XOHX2205-43.4-62...	H62 43400. ...	
XOHX2205-43.5....	H60 43500. ...	8440	2715	84	8125	2740	8140	XOHX2205-43.5-62...	H62 43500. ...	7710
XOHX2205-43.6....	H60 43600. ...							XOHX2205-43.6-62...	H62 43600. ...	
XOHX2205-43.7....	H60 43700. ...							XOHX2205-43.7-62...	H62 43700. ...	
XOHX2205-43.8....	H60 43800. ...							XOHX2205-43.8-62...	H62 43800. ...	
XOHX2205-43.9....	H60 43900. ...							XOHX2205-43.9-62...	H62 43900. ...	
XOHX2205-44.0....	H60 44000. ...	8440	2715	84	8125	2740	8140	XOHX2205-44.0-62...	H62 44000. ...	7710
XOHX2205-44.1....	H60 44100. ...							XOHX2205-44.1-62...	H62 44100. ...	
XOHX2205-44.2....	H60 44200. ...							XOHX2205-44.2-62...	H62 44200. ...	

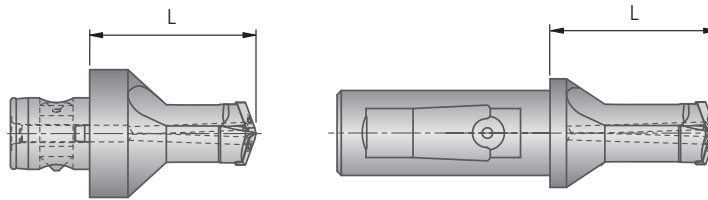




Guideline values for solid drilling				v <sub>C</sub> Cutting speed v <sub>C</sub> ft/min (m/min)	Max. feed f in/rev (mm/rev)				
Material group	Strength R <sub>m</sub> (lb <sub>f</sub> /in <sup>2</sup> )	Hardness HB	Material		Material example, material code AISI/SAE	5xD			
				Ø 0.681 – 0.815 (Ø 17.3 – 20.7)		Ø 0.816 – 1.169 (Ø 20.8 – 29.7)	Ø 1.170– 1.425 (Ø 29.8 – 36.2)	1.423 – 1.740 (Ø 36.3 – 44.2)	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	-	-	-	-	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	460 (140)	0.006 (0.15)	0.008 (0.20)	0.009 (0.22)	0.010 (0.25)
	2.1	<72500	Lead alloy	12L13	520 (160)	0.006 (0.15)	0.008 (0.20)	0.009 (0.22)	0.010 (0.25)
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	390 (120)	0.006 (0.15)	0.008 (0.20)	0.010 (0.25)	0.012 (0.30)
	4.0	>130000	Tool steels	H13 H21	330 (100)	0.006 (0.15)	0.007 (0.18)	0.008 (0.20)	0.010 (0.25)
4.1			HSS		-	-	-	-	
S	5.0		250 Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	-	-	-	-	
	5.1	58000	titanium, titanium alloys	AMS R54520	-	-	-	-	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	-	-	-	-	
	6.1	<130000	Stainless steels	630	-	-	-	-	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	-	-	-	-	
K	8.0		180 Grey cast iron	No 35 B No 50 B	460 (140)	0.012 (0.30)	0.016 (0.40)	0.020 (0.50)	0.022 (0.55)
	8.1		250 Alloy grey cast iron	A436 Type 2	330 (100)	0.008 (0.20)	0.012 (0.30)	0.016 (0.40)	0.020 (0.50)
	9.0	≤87000	130 Nodular cast iron ferritic	60-40-18	390 (120)	0.010 (0.25)	0.014 (0.35)	0.018 (0.45)	0.020 (0.50)
	9.1		230 Nodular cast iron ferritic / pearlitic	80-55-06	330 (100)	0.008 (0.20)	0.012 (0.30)	0.016 (0.40)	0.018 (0.45)
	10.0	>87000	250 Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	390 (120)	0.008 (0.20)	0.012 (0.30)	0.016 (0.40)	0.018 (0.45)
	10.1		200 Alloyed nodular cast iron	A43D2	330 (100)	0.010 (0.25)	0.014 (0.35)	0.018 (0.45)	0.020 (0.50)
	10.2		300 Vermicular cast iron		260 (80)	0.008 (0.20)	0.012 (0.30)	0.014 (0.35)	0.016 (0.40)
N	12.0		90 Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	590 (180)	0.012 (0.30)	0.016 (0.40)	0.018 (0.45)	0.020 (0.50)
	12.1		100 Copper alloy, Brass, Bronze: average cut		-	-	-	-	
	13.0		60 Wrought alumi- num alloy	GD-AISI12	1970 (600)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.012 (0.30)
	13.1		75 Aluminum alloy: Si content <10% Magnesium alloy		1640 (500)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.012 (0.30)
14.0		100 Aluminum alloy: Si content >10%	A360.2	1150 (350)	0.008 (0.20)	0.008 (0.20)	0.010 (0.25)	0.012 (0.30)	
H	15.0	203000	Hardened steels < 45 HRC		-	-	-	-	
	16.0	261000	Hardened steels > 45 HRC		-	-	-	-	

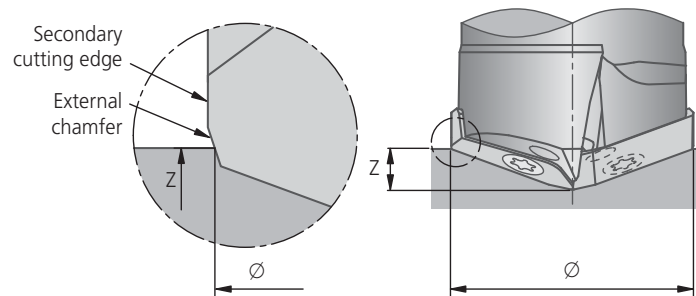
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!

Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting  
for pre-centering from drilling depth > 5xD



**Application notes for pre-centering**

- from drilling depth > 5 × D (tools to customer requirement)
- where drilling starts on surfaces which are angled or have not been pre-machined
- where there are unstable conditions because of large tool overhang



**Method 1:**

Determining the center depth Z

Size	Center depth Z
1	0.106" (2.7 mm)
2	0.130" (3.3 mm)
3	0.157" (4.0 mm)
4	0.185" (4.7 mm)
5	0.256" (6.5 mm)

**Method 2:**

Determining the center dia.

Size	Center dia.
1	0.697" (17.3 mm)
2	0.819" (20.8 mm)
3	0.976" (24.8 mm)
4	1.173" (29.8 mm)
5	1.437" (36.5 mm)

(..) = mm

Size	for bore-Ø	Nominal-Ø	L	Connection	Order No.	Insert
1	0.687 – 0.818 (17.3 – 20.7)	0.689 (17.5)	1.880 (47.75)	ABS50	U22 21750	H60 17500.. (XOHX0802..)
			1.447 (36.75)	25x56	U22 71750	
2	0.819 – 0.975 (20.8 – 24.7)	0.827 (21)	2.016 (51.2)	ABS50	U22 22100	H60 21000.. (XOHX1003..)
			1.583 (40.2)	32x60	U22 82100	
3	0.976 – 1.172 (24.8 – 29.7)	0.984 (25)	2.171 (55.14)	ABS50	U22 22500	H60 25000.. (XOHX12T3..)
			1.738 (44.14)	32x60	U22 82500	
4	1.173 – 1.413 (29.8 – 36.2)	1.181 (30)	2.362 (60)	ABS50	U22 23000	H60 30000.. (XOHX1504..)
			1.929 (49)	40x68	U22 93000	
5	1.414 – 1.740 (36.3 – 44.2)	1.437 (36.5)	3.720 (94.5)	ABS63	U22 43650	H60 36500.. (XOHX2205..)

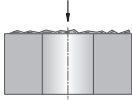
Short spot drills for KUB Duon® are fitted with standard H60... inserts.


**General note:** Drill until the chamfer can be seen at the external bore diameter

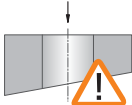
Technical Notes


1

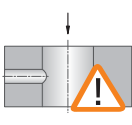


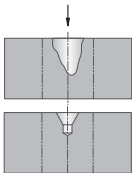
1.  **Starting on uneven surfaces (cast surfaces)**
- possible in principle
  - reduce feed rate when starting bore

2.  **Starting on angled surfaces**
- spot face surface before starting bore
  - avoid chips jams

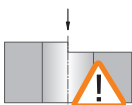
3.  **Angled bore exit**
- possible under certain conditions
  - reduce feed rate if necessary

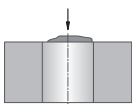
4.  **Starting on cambered surfaces**
- centered boring can be started with reduced feed rate
  - spot facing is required if the point for starting the bore is outside the radius centre

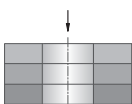
5.  **Drilling through a cross bore**
- halve feed rate at interruption
  - cross bore max. 1/3 of bore diameter
  - off-centre cross bore not possible

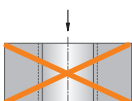
6.  **Starting on a groove or large centering bore**
- possible under certain conditions
  - reduce feed rate if necessary
  - face beforehand where centre is particularly large

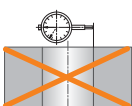
7.  **Drilling a chamber**
- not possible

8.  **Starting on an edge**
- start point must be flat

9.  **Starting on a welded seam**
- reduce feed rate when starting bore
  - face beforehand if necessary

10.  **Drilling through stacked plates**
- possible in principle
  - avoid large spaces between elements

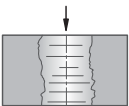
11.  **Roughing**
- not possible

12.  **adjustable**
- not possible
  - dimensional adjustment of diameter by means of inserts



**Short tool life** types of wear on inserts

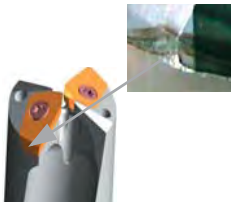
- cutting speed too high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability
- run-out error → check tool, adaptor and spindle

**Bad surface finish**

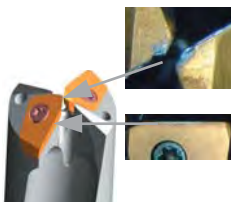
- chip jam on external cutting edge
- improve cutting parameters: increase cutting speed reduce feed
- check cutting parameters: reduce feed rate when starting bore

**Friction marks on tool shank**

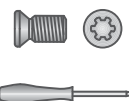
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts

**Wear**

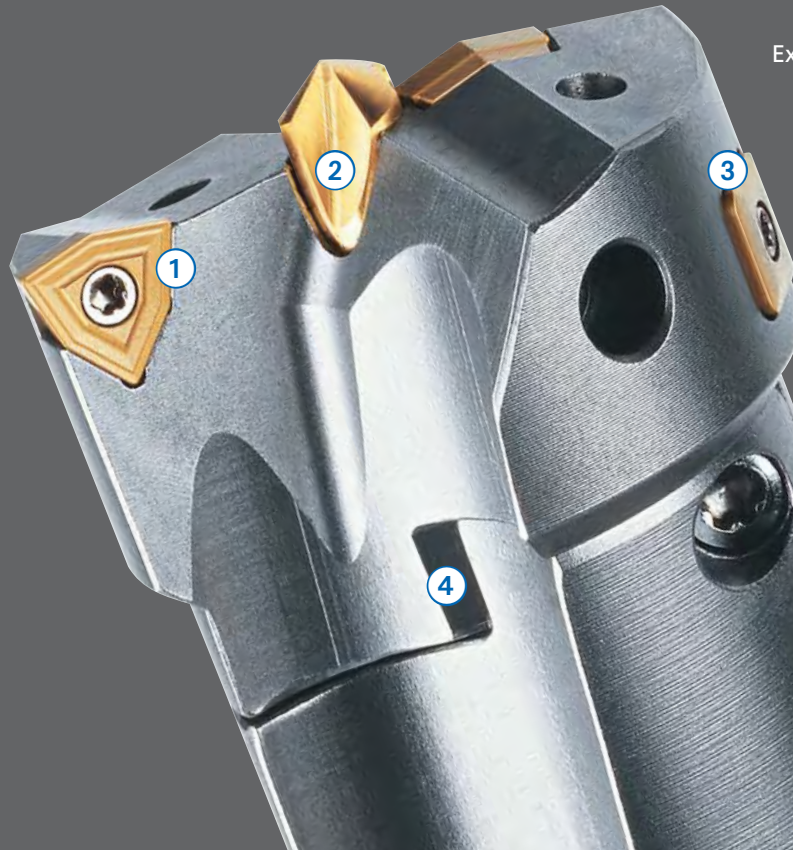
- cutting material not sufficiently wear resistant → better wear resistant material
- cutting speed too high → reduce cutting speed
- run-out error → check tool, adaptor and spindle

**Wear, micro fractures**

- cutting material too hard → use tougher cutting material with higher tensile strength
- feed rate not reduced when starting bore → reduce feed rate when starting bore and drilling out
- run-out error → check tool, adaptor and spindle

**Securing the inserts**

- wrong screwdriver used → only use Torx Plus screws and screwdriver
- starting torque too low → Check starting torques. Optimum starting torques only possible with Torx Plus



Extremely high performance data matched by a very high level of process reliability for drilling depths of up to  $9 \times D$ .

The KOMET KUB Centron® can be used to reliably machine virtually all materials.

#### ① Inserts

New cutting materials and geometries guarantee maximum tool life and reliable machining. The internal and external inserts are identical. This prevents confusion.

#### ② Central drill bit

The central drill bit guides the solid drill precisely in the bore axis. This means dimensional stability even at bore depths of up to  $9 \times D$ .

Optimised concentricity properties for the whole system mean the central drill bit and for the inserts have a noticeably longer life.

#### ③ Guide pads

The carbide guide pads prevent the drill from deflecting at the bore exit and reduce narrowing to a minimum (see "Setting the guide pads..."). The screw connection allows easy changing and setting on site by the user over the whole diameter range. Optimal guide control and high wear resistance through top quality coatings.

⑤



#### BENEFITS for you:

- High production reliability for boring depths up to 9xD
- Short process times from high performance parameters
- Long tool life means low operating costs
- Modular design gives high flexibility
- Reliable machining in almost any materials
- Suitable for rotating and stationary applications and for vertical and horizontal applications
- Combination options reduce tool costs

### KOMET KUB Centron® Page

#### ABS® Connection

R.H. cutting	
Drilling depth 4xD - 9xD – Ø 0.812 - 2.500 inch	172 – 173
Drilling depth 4xD - 9xD – Ø 20 - 81 mm	174 – 177

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### KOMET KUB® V464

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R.H. cutting	
Drilling depth 6xD – Ø 80 - 155 mm	

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#### Assembly parts / accessories 187

#### ④ Connection point

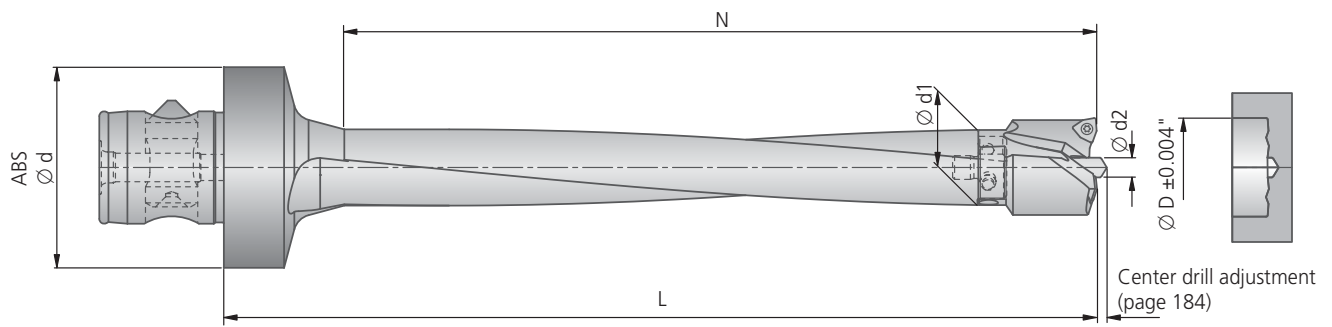
The new-style connection point allows high torques to be transferred.

Central positioning is produced by means of an accurately fitting centering spigot. Two tapered screws which act in the direction of the torque pull the drill head onto large drive pins, producing a precise and stable connection between the drill head and the basic element.

#### ⑤ Basic element

The newly designed chip channels improve chip removal and at the same time increase the rigidity of the tool body. The modular design is service-friendly and increases flexibility because of the bore diameters which are available.

With the tried and tested ABS connection, the KUB Centron® has no connection problems.



Drill Head			Basic recommendation				Assembly parts	Accessories
Ø D	Order No.	lbs	Insert		Qty	for workpiece material	Clamping screw	Screwdriver
			Order No. ▽▽ Size	ISO-Code		P M K N S H	Order No. Description	Order No. Description
0.812	V46 52060	0.09	W29 10010.048425	WOEX 030204-01 BK8425	2	● ● ● ● ● ●	N00 56041 S/M2×43-6IP 5.5 in-lbs	L05 00810 6IP
0.875	V46 52220	0.09	W29 10010.047930	WOEX 030204-01 BK7930				
			W29 10010.047615	WOEX 030204-01 BK7615				
1.000	V46 52540	0.11	W29 10110.0477	WOEX 030204-11 BK77				
1.125	V46 52860	0.13	W29 18010.048425	WOEX 040304-01 BK8425	2	● ● ● ● ● ●	N00 57553 S/M2.2×5.5-6IP 8.9 in-lbs	L05 00810 6IP
			W29 18010.047930	WOEX 040304-01 BK7930				
			W29 18010.047615	WOEX 040304-01 BK7615				
1.250	V46 53180	0.15	W29 18110.0477	WOEX 040304-11 BK77				
1.375	V46 53490	0.20	W29 24010.048425	WOEX 05T304-01 BK8425	2	● ● ● ● ● ●	N00 57511 S/M2.5×7.2-8IP 11.0 in-lbs	L05 00830 8IP
			W29 24010.047930	WOEX 05T304-01 BK7930				
			W29 24010.047615	WOEX 05T304-01 BK7615				
1.500	V46 53810	0.24	W29 24110.0477	WOEX 05T304-11 BK77				
1.625	V46 54130	0.35	W29 24010.048425	WOEX 05T304-01 BK8425	2	● ● ● ● ● ●	N00 57511 S/M2.5×7.2-8IP 11.0 in-lbs	L05 00830 8IP
			W29 24010.047930	WOEX 05T304-01 BK7930				
			W29 24010.047615	WOEX 05T304-01 BK7615				
1.750	V46 54450	0.35	W29 24110.0477	WOEX 05T304-11 BK77				
1.875	V46 54760	0.42	W29 34010.048425	WOEX 06T304-01 BK8425	2	● ● ● ● ● ●	N00 57521 S/M3.5×7.3-10IP 25.0 in-lbs	L05 00850 10IP
			W29 34010.047930	WOEX 06T304-01 BK7930				
			W29 34010.047615	WOEX 06T304-01 BK7615				
2.000	V46 55080	0.49	W29 34110.0477	WOEX 06T304-11 BK77				
2.250	V46 55720	0.68	W29 42010.048425	WOEX080404-01 BK8425	2	● ● ● ● ● ●	N00 57531 S/M4.5×9-15IP 55.3 in-lbs	L05 00860 15IP
2.375	V46 56030	0.73	W29 42010.047930	WOEX080404-01 BK7930				
			W29 42010.047615	WOEX080404-01 BK7615				
2.500	V46 56350	0.82	W29 42110.0477	WOEX080404-11 BK77				

Further diameters on request.

**Supply includes:** Basic element with assembly parts. Drill head with mounting parts.

Please order insert, central drill bit and accessories separately.

For assembly parts and accessories, see page 180.

Insert Drill (drill head/basic element) with ABS® Connection, R.H. cutting



L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4-9xD											
	●	●	●	○	○	○	○	○	✗	✗	✗

● very good ● good ○ possible: see technical notes, page 182 ✗ not possible

Central drill bit				Basic element							
Order No.	Coating	Ø d2	for workpiece material P M K N S H	ABS Ø d	L/D* ~	Order No.	Ø d1	N	L	lbs	
											V95 10012.0089 V95 10012.0090 V95 10310.8450
				50	6xD	V47 40201	0.748	5.905	7.283	1.21	
				50	8xD	V47 60201	0.748	7.874	9.251	1.39	
V95 10022.0089 V95 10022.0090 V95 10320.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	0.236		50	4xD	V47 20261	0.984	5.118	6.299	1.46	
				50	6xD	V47 40261	0.984	6.889	8.267	1.70	
				50	8xD	V47 60261	0.984	9.055	10.240	1.98	
V95 10022.0089 V95 10022.0090 V95 10320.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	0.236		50	4xD	V47 20331	1.260	6.299	7.677	2.05	
				50	6xD	V47 40331	1.260	8.464	10.040	2.49	
				50	8xD	V47 60331	1.260	11.420	12.990	3.09	
V95 10032.0089 V95 10032.0090 V95 10330.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	0.315		63	4xD	V47 20401	1.516	7.283	9.252	3.70	
				63	6xD	V47 40401	1.516	10.240	12.200	4.59	
				63	8xD	V47 60401	1.516	13.390	15.350	5.51	
V95 10042.0089 V95 10042.0090 V95 10340.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	0.394		80	4xD	V47 20461	1.752	8.464	11.200	7.30	
				80	6xD	V47 40461	1.752	12.200	14.760	8.75	
				80	8xD	V47 60461	1.752	16.340	18.900	10.63	
V95 10042.0089 V95 10042.0090 V95 10340.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	0.394		80	4xD	V47 20551	2.106	10.240	12.800	9.48	
				80	6xD	V47 40551	2.106	14.560	17.130	11.95	
				80	8xD	V47 60551	2.106	19.490	22.050	14.73	

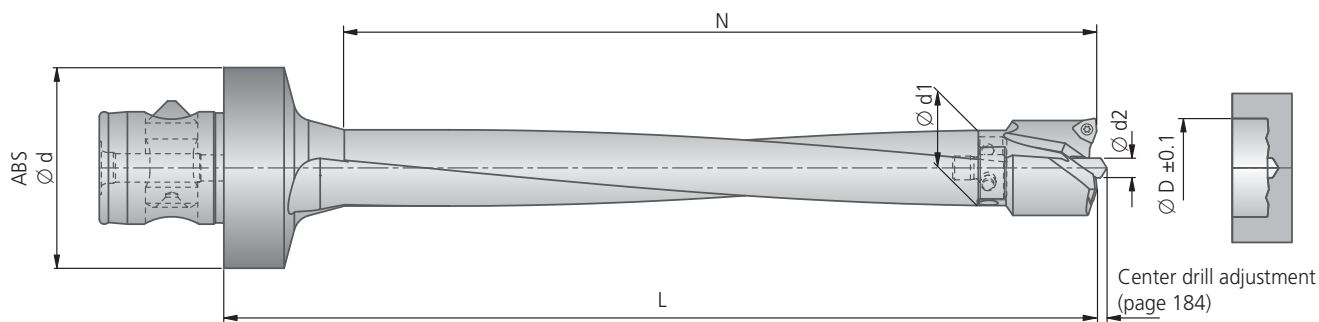
\* The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.



Note re. insert radius:

The nominal dimension Ø is only achieved with the appropriate standardized insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Guideline values for solid drilling: page 178 / alternative inserts: page 179.



Drill Head			Basic recommendation					Assembly parts	Accessories
Ø D	Order No.	Kg	Insert		Piece	for	Clamping screw	Screwdriver	
			Order No.	ISO-Code		workpiece material			Order No.
			▽▽ Size			P M K N S H	Description	Description	
20.0	V46 50200	0.03	W29 10010.048425 W29 10010.047930 W29 10010.0462 W29 10110.0477	WOEX 030204-01 BK8425 WOEX 030204-01 BK7930 WOEX 030204-01 BK62 WOEX 030204-11 BK77	2	● ● ● ● ● ●	N00 56041 S/M2×4.3-6IP 0.62 Nm	L05 00810 6IP	
21.0	V46 50210	0.04							
22.0	V46 50220	0.04							
23.0	V46 50230	0.04							
24.0	V46 50240	0.05							
25.0	V46 50250	0.05	W29 18010.048425 W29 18010.047930 W29 18010.0462 W29 18110.0477	WOEX 040304-01 BK8425 WOEX 040304-01 BK7930 WOEX 040304-01 BK62 WOEX 040304-11 BK77	2	● ● ● ● ● ●	N00 57553 S/M2.2×5.5-6IP 8.9 in-lbs	L05 00810 6IP	
26.0	V46 50260	0.05							
27.0	V46 50270	0.06							
28.0	V46 50280	0.06							
29.0	V46 50290	0.06							
30.0	V46 50300	0.07	W29 24010.048425 W29 24010.047930 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	2	● ● ● ● ● ●	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP	
31.0	V46 50310	0.07							
32.0	V46 50320	0.07							
33.0	V46 50330	0.09							
34.0	V46 50340	0.09							
35.0	V46 50350	0.09	W29 24010.048425 W29 24010.047930 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	2	● ● ● ● ● ●	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP	
36.0	V46 50360	0.10							
37.0	V46 50370	0.10							
38.0	V46 50380	0.11							
39.0	V46 50390	0.11							
40.0	V46 50400	0.13	W29 34010.048425 W29 34010.047930 W29 34010.047615 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	2	● ● ● ● ● ●	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP	
41.0	V46 50410	0.16							
42.0	V46 50420	0.16							
43.0	V46 50430	0.16							
44.0	V46 50440	0.16							
45.0	V46 50450	0.16	W29 34010.048425 W29 34010.047930 W29 34010.047615 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	2	● ● ● ● ● ●	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP	
46.0	V46 50460	0.18							
47.0	V46 50470	0.18							
48.0	V46 50480	0.19							
49.0	V46 50490	0.20							
50.0	V46 50500	0.21	W29 34010.048425 W29 34010.047930 W29 34010.047615 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	2	● ● ● ● ● ●	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP	
51.0	V46 50510	0.22							
52.0	V46 50520	0.22							
53.0	V46 50530	0.23							
54.0	V46 50540	0.24							

Further diameters on request.

**Supply includes:** Basic element with assembly parts. Drill head with mounting parts.

Please order insert, central drill bit and accessories separately.

For assembly parts and accessories, see page 180.

Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patent applications (KUB Centron)

Insert Drill (drill head/basic element) with ABS® Connection, R.H. cutting



L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4-9xD											

● very good ● good ○ possible: see technical notes, page 182 ✕ not possible

Central drill bit				Basic element						
Order No.	Coating	Ø d2	for workpiece material P M K N S H	Basic element						
				ABS Ø d	L/D* ~	Order No.	Ø d1	N	L	kg
V95 10012.0089 V95 10012.0090 V95 10310.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	5		50	4xD	V47 20201	19	113	145	0.52
				50	6xD	V47 40201	19	150	185	0.55
				50	8xD	V47 60201	19	200	235	0.63
V95 10022.0089 V95 10022.0090 V95 10320.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	6		50	4xD	V47 20261	25	130	160	0.66
				50	6xD	V47 40261	25	175	210	0.77
				50	8xD	V47 60261	25	230	260	0.90
V95 10022.0089 V95 10022.0090 V95 10320.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	6		50	4xD	V47 20331	32	160	195	0.93
				50	6xD	V47 40331	32	215	255	1.13
				50	8xD	V47 60331	32	290	330	1.4
V95 10032.0089 V95 10032.0090 V95 10330.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	8		63	4xD	V47 20401	38.5	185	235	1.68
				63	6xD	V47 40401	38.5	260	310	2.08
				63	8xD	V47 60401	38.5	340	390	2.50
V95 10042.0089 V95 10042.0090 V95 10340.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	10		80	4xD	V47 20461	44.5	215	280	3.31
				80	6xD	V47 40461	44.5	310	375	3.97
				80	8xD	V47 60461	44.5	415	480	4.82

\* The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.

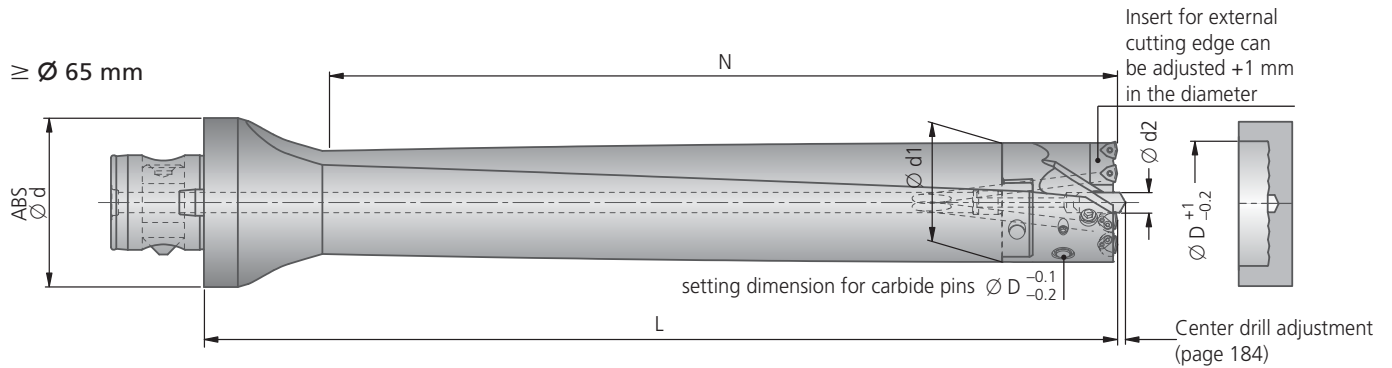
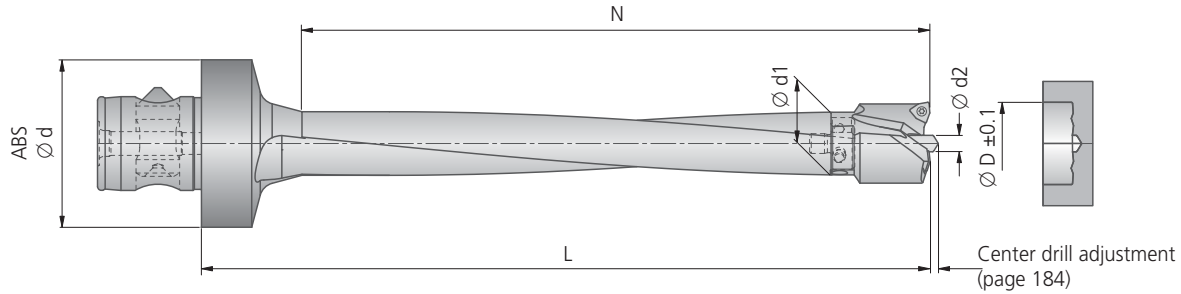


**Note re. insert radius:**

The nominal dimension Ø is only achieved with the appropriate standardised insert radius. Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Guideline values for solid drilling: page 178 / alternative inserts: page 179.

1



Drill Head			Basic recommendation				Assembly parts	Accessories
Ø D	Order No.	kg	Insert		Piece	for workpiece material	Clamping screw	Screwdriver
			Order No. ▽▽ Size	ISO-Code			Order No. Description	Order No. Description
55.0	V46 50550	0.29	W29 42010.048425 W29 42010.047930 W29 42010.047615 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK7615 WOEX 080404-11 BK77	2		 N00 57531 S/M4.5x9-15IP 6.25 Nm	 L05 00860 15IP
56.0	V46 50560	0.30						
57.0	V46 50570	0.31						
58.0	V46 50580	0.31						
59.0	V46 50590	0.32						
60.0	V46 50600	0.33						
61.0	V46 50610	0.34						
62.0	V46 50620	0.35						
63.0	V46 50630	0.36						
64.0	V46 50640	0.37						
65.0	V46 50650	0.49	W29 24010.048425 W29 24010.047930 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	4		 N00 57511 S/M2.5x7.2-8IP 1.28 Nm	 L05 00830 8IP
66.0	V46 50660	0.51						
67.0	V46 50670	0.43						
68.0	V46 50680	0.54						
69.0	V46 50690	0.55						
70.0	V46 50700	0.56						
71.0	V46 50710	0.57	W29 24010.048425 W29 24010.047930 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	4		 at N00 57511 S/M2.5x7.2-8IP 1.28 Nm	 L05 00830 8IP
72.0	V46 50720	0.93						
73.0	V46 50730	0.93						
74.0	V46 50740	0.93						
75.0	V46 50750	0.93						
76.0	V46 50760	0.93						
77.0	V46 50770	0.93						
78.0	V46 50780	0.93						
79.0	V46 50790	0.93						
80.0	V46 50800	0.93						
81.0	V46 50810	0.93						



Insert Drill (drill head/basic element) with ABS® Connection, R.H. cutting

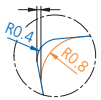


L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4-9xD											
	●	●	●	○	○	○	○	○	✗	✗	✗

● very good ● good ○ possible: see technical notes, page 182 ✗ not possible

**Supply includes:** Basic element with assembly parts. Drill head with mounting parts.  
Please order insert, central drill bit and accessories separately.  
For assembly parts and accessories, see pages 180-181.

\* The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.



**Note re. insert radius:**

The nominal dimension Ø is only achieved with the appropriate standardised insert radius.  
Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Central drill bit				Basic element											
Order No.	Coating	Ø d2	for workpiece material						ABS Ø d	L/D* ~	Order No.	Ø d1	N	L	kg
			P	M	K	N	S	H							
V95 10042.0089 V95 10042.0090 V95 10340.8450	HSS TiN HSS TiAlN VHM TiAlN/TiN	10	●	●	●	●	●	80	4xD	V47 20551	53.5	260	325	4.30	
								80	6xD	V47 40551	53.5	370	435	5.42	
								80	8xD	V47 60551	53.5	495	560	6.68	
V95 10050.0089 V95 10050.0090	HSS TiN HSS TiAlN	12	●	●	●	●	●	80	4xD	V47 20651	63.5	295	375	5.80	
								80	6xD	V47 40651	63.5	420	500	7.52	
								80	8xD	V47 60651	63.5	560	640	9.46	
V95 10050.0089 V95 10050.0090	HSS TiN HSS TiAlN	12	●	●	●	●	●	100	4xD	V47 20721	70.5	325	405	8.59	
								100	6xD	V47 40721	70.5	460	540	10.8	
								100	8xD	V47 60721	70.5	610	690	13.5	



Guideline values for solid drilling				Max. feed f in/rev (mm/rev) · Cutting Speed vc ft/min (m/mm)																			
Material group	Strength Rm (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Ø0.787–0.984		Ø1.024–1.260			Ø1.299–1.772			Ø1.811–2.126			Ø2.165–2.520			Ø2.560-2.795		Ø2.835-3.189		
					(Ø20–25)		(Ø26–32)			(Ø33–45)			(Ø46–54)			(Ø55–64)			(Ø65–71)		(Ø72–81)		
					f	vc	HSS	Solid carbide	f	vc	vc	f	vc	vc	f	vc	vc	f	vc	vc	f	vc	f
P	1.0	≤72500	non-alloy steels	A570.36 1213 A573.81	0.003 (0.08)	520 (160)	820 (250)	0.003 (0.08)	560 (170)	820 (250)	0.004 (0.10)	660 (200)	820 (250)	0.005 (0.12)	590 (180)	820 (250)	0.006 (0.14)	590 (180)	820 (250)	0.004 (0.10)	690 (210)	0.005 (0.12)	690 (210)
	2.0	72500-130000	non-alloy / low alloy steels	5120 1055 5115	0.004 (0.10)	520 (160)	660 (200)	0.005 (0.12)	560 (170)	660 (200)	0.005 (0.12)	660 (200)	660 (200)	0.006 (0.14)	590 (180)	660 (200)	0.006 (0.16)	590 (180)	660 (200)	0.005 (0.12)	690 (210)	0.006 (0.14)	690 (210)
	2.1	<72500	lead alloys	12L13	0.005 (0.12)	520 (160)	820 (250)	0.006 (0.14)	560 (170)	820 (250)	0.006 (0.14)	660 (200)	820 (250)	0.006 (0.14)	590 (180)	820 (250)	0.006 (0.16)	590 (180)	820 (250)	0.006 (0.14)	690 (210)	0.006 (0.16)	690 (210)
	3.0	>130000	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	4140 1064	0.005 (0.12)	460 (140)	590 (180)	0.006 (0.14)	560 (170)	590 (180)	0.006 (0.14)	590 (180)	590 (180)	0.006 (0.14)	590 (180)	590 (180)	0.006 (0.16)	590 (180)	590 (180)	0.006 (0.14)	590 (180)	0.006 (0.16)	590 (180)
	4.0	>130000	high alloy steels	H13 H21	0.003 (0.08)	390 (120)	520 (160)	0.004 (0.10)	520 (160)	520 (160)	0.004 (0.10)	520 (160)	520 (160)	0.006 (0.14)	520 (160)	520 (160)	0.006 (0.14)	520 (160)	520 (160)	0.004 (0.10)	520 (160)	0.005 (0.12)	520 (160)
	4.1		HSS		0.003 (0.07)	260 (80)	260 (80)	0.003 (0.07)	260 (80)	260 (80)	0.003 (0.07)	260 (80)	260 (80)	0.003 (0.08)	260 (80)	260 (80)	0.004 (0.10)	260 (80)	260 (80)	0.003 (0.08)	260 (80)	0.004 (0.10)	260 (80)
S	5.0		special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel® 718 Nimonic® 80A	-			-			-			-			-			-			
	5.1	58000	titanium, titanium alloys	AMS R54520	-			-			-			-			-			-			
M	6.0	≤87000	stainless steels	304L 316	0.003 (0.07)	230 (70)	590 (180)	0.004 (0.10)	230 (70)	590 (180)	0.004 (0.10)	300 (90)	590 (180)	0.004 (0.10)	300 (90)	590 (180)	0.005 (0.12)	300 (90)	590 (180)	0.004 (0.10)	330 (100)	0.005 (0.12)	330 (100)
	6.1	<130000	stainless steels	630	0.004 (0.10)	230 (70)	520 (160)	0.005 (0.12)	230 (70)	520 (160)	0.005 (0.12)	300 (90)	520 (160)	0.005 (0.12)	300 (90)	520 (160)	0.006 (0.14)	300 (90)	520 (160)	0.005 (0.12)	330 (100)	0.006 (0.14)	330 (100)
	7.0	>130000	stainless / fireproof steels	420 403	0.003 (0.08)	230 (70)	390 (120)	0.004 (0.10)	230 (70)	390 (120)	0.004 (0.10)	300 (90)	390 (120)	0.004 (0.10)	300 (90)	390 (120)	0.005 (0.12)	300 (90)	390 (120)	0.004 (0.10)	330 (100)	0.005 (0.12)	330 (100)
K	8.0		gray cast iron	No 35 B No 50 B	0.006 (0.14)	330 (100)	660 (200)	0.006 (0.16)	360 (110)	660 (200)	0.006 (0.16)	390 (120)	660 (200)	0.007 (0.18)	390 (120)	660 (200)	0.010 (0.25)	390 (120)	660 (200)	0.006 (0.16)	460 (140)	0.008 (0.20)	460 (140)
	8.1		alloy gray cast iron	A436 Type 2	0.005 (0.12)	330 (100)	520 (160)	0.006 (0.14)	360 (110)	520 (160)	0.006 (0.14)	390 (120)	520 (160)	0.006 (0.15)	390 (120)	520 (160)	0.008 (0.20)	390 (120)	520 (160)	0.006 (0.16)	460 (140)	0.008 (0.20)	460 (140)
	9.0	≤87000	spheroidal graphite cast iron, ferritic	60-40-18	0.005 (0.12)	330 (100)	520 (160)	0.006 (0.14)	360 (110)	520 (160)	0.006 (0.14)	390 (120)	520 (160)	0.007 (0.18)	390 (120)	520 (160)	0.010 (0.25)	390 (120)	520 (160)	0.006 (0.16)	460 (140)	0.008 (0.20)	460 (140)
	9.1		spheroidal graphite cast iron, ferritic / perlitic	80-55-06	0.005 (0.12)	330 (100)	460 (140)	0.006 (0.14)	360 (110)	460 (140)	0.006 (0.14)	390 (120)	460 (140)	0.007 (0.18)	390 (120)	460 (140)	0.010 (0.25)	390 (120)	460 (140)	0.006 (0.16)	460 (140)	0.006 (0.16)	460 (140)
	10.0	>87000	spheroidal graphite cast iron, perlitic malleable iron	100-70-03 70003	0.005 (0.12)	330 (100)	390 (120)	0.006 (0.14)	360 (110)	390 (120)	0.006 (0.14)	390 (120)	390 (120)	0.007 (0.18)	390 (120)	390 (120)	0.010 (0.25)	390 (120)	390 (120)	0.006 (0.16)	390 (120)	0.006 (0.16)	390 (120)
	10.1		alloyed spheroidal graphite cast iron	A43D2	0.004 (0.10)	330 (100)	330 (100)	0.005 (0.12)	330 (100)	330 (100)	0.005 (0.12)	330 (100)	330 (100)	0.006 (0.15)	330 (100)	330 (100)	0.008 (0.20)	330 (100)	330 (100)	0.005 (0.12)	330 (100)	0.006 (0.14)	330 (100)
	10.2		vermicular cast iron		0.004 (0.10)	260 (80)	260 (80)	0.005 (0.12)	260 (80)	260 (80)	0.005 (0.12)	260 (80)	260 (80)	0.006 (0.15)	260 (80)	260 (80)	0.008 (0.20)	260 (80)	260 (80)	0.005 (0.12)	260 (80)	0.006 (0.14)	260 (80)
N	12.0		copper alloy, brass, lead-alloy bronze, lead bronze: good cut	UNS C36000	0.006 (0.14)	660 (200)	660 (200)	0.006 (0.16)	660 (200)	660 (200)	0.006 (0.16)	660 (200)	660 (200)	0.008 (0.20)	660 (200)	660 (200)	0.010 (0.25)	660 (200)	660 (200)	0.006 (0.16)	660 (200)	0.008 (0.20)	660 (200)
	12.1		copper alloy, brass, bronze: average cut		0.003 (0.08)	820 (250)	820 (250)	0.003 (0.08)	820 (250)	820 (250)	0.004 (0.10)	820 (250)	820 (250)	0.005 (0.12)	820 (250)	820 (250)	0.006 (0.15)	820 (250)	820 (250)	0.003 (0.08)	820 (250)	0.004 (0.10)	820 (250)
	13.0		wrought aluminium alloys	GD-ALSi12	0.003 (0.07)	1150 (350)	1150 (350)	0.003 (0.07)	1150 (350)	1150 (350)	0.003 (0.07)	1150 (350)	1150 (350)	0.004 (0.10)	1150 (350)	1150 (350)	0.005 (0.12)	1150 (350)	1150 (350)	0.003 (0.08)	1150 (350)	0.004 (0.10)	1150 (350)
	13.1		cast alum. alloy: Si-content <10% magnesium alloy		0.004 (0.10)	820 (250)	820 (250)	0.005 (0.12)	820 (250)	820 (250)	0.006 (0.14)	820 (250)	820 (250)	0.007 (0.18)	820 (250)	820 (250)	0.010 (0.25)	820 (250)	820 (250)	0.006 (0.14)	820 (250)	0.006 (0.16)	820 (250)
	14.0		cast alum.alloy: Si-content >10%	A360.2	0.005 (0.12)	660 (200)	660 (200)	0.006 (0.14)	660 (200)	660 (200)	0.006 (0.14)	660 (200)	660 (200)	0.006 (0.15)	660 (200)	660 (200)	0.008 (0.20)	660 (200)	660 (200)	0.005 (0.12)	660 (200)	0.006 (0.14)	660 (200)
H	15.0	203000	hardened steels < 45 HRC		-			-			-			-			-			-			
	16.0	261000	hardened steels > 45 HRC		-			-			-			-			-			-			

\* Cutting values shown are maximum values relating on the nominal diameter of the drill head using the respective central drill bit. Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patent applications (KUB Centron)



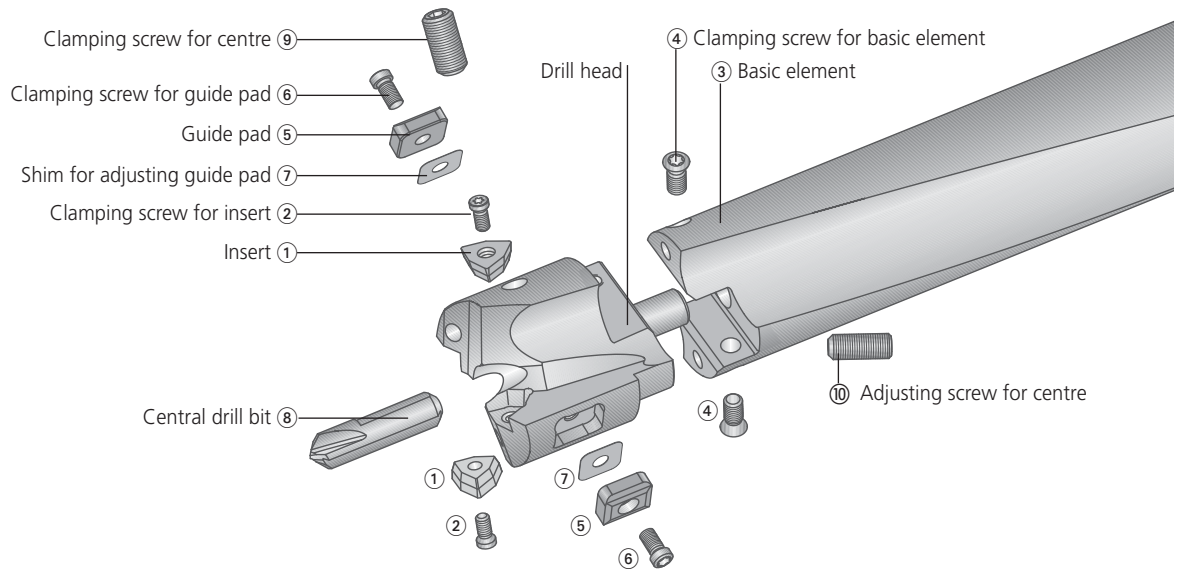
Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
for better chip control			
	W29 10030.048425	WOEX 030204-03 BK8425	
	W29 10030.046425	WOEX 030204-03 BK6425	
	W29 18030.048425	WOEX 040304-03 BK8425	
	W29 18030.046425	WOEX 040304-03 BK6425	
	W29 24130.048425	WOEX 05T304-13 BK8425	
	W29 24030.046425	WOEX 05T304-03 BK6425	
	W29 24130.047935	WOEX 05T304-13 BK7935	
	W29 34130.048425	WOEX 06T304-13 BK8425	
	W29 34030.046425	WOEX 06T304-03 BK6425	
	W29 34130.047935	WOEX 06T304-13 BK7935	
	W29 42130.048425	WOEX 080404-13 BK8425	
W29 42030.046425	WOEX 080404-03 BK6425		
W29 42130.047935	WOEX 080404-13 BK7935		
W29 24130.048425	WOEX 05T304-13 BK8425		
W29 24030.046425	WOEX 05T304-03 BK6425		
W29 24130.047935	WOEX 05T304-13 BK7935		

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
for higher cutting speed			
	W29 10010.0472	WOEX 030204-01 BK72	
	W29 10130.047325	WOEX 030204-13 BK7325	
	W29 10110.0450	WOEX 030404-11 BK50	
	W29 18010.0472	WOEX 040304-01 BK72	
	W29 18130.047325	WOEX 040304-13 BK7325	
	W29 18110.0450	WOEX 040304-11 BK50	
	W29 24010.0472	WOEX 05T304-01 BK72	
	W29 24130.047325	WOEX 05T304-13 BK7325	
	W29 24110.0450	WOEX 05T304-11 BK50	
	W29 34010.0472	WOEX 06T304-01 BK72	
	W29 34130.047325	WOEX 06T304-13 BK7325	
W29 34110.0450	WOEX 06T304-11 BK50		
W29 42010.0472	WOEX 080404-01 BK72		
W29 42130.047325	WOEX 080404-13 BK7325		
W29 42110.0450	WOEX 080404-11 BK50		
W29 24010.0472	WOEX 05T304-01 BK72		
W29 24110.0450	WOEX 05T304-11 BK50		

ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
for greater strength			
	W29 10010.047930	WOEX 030204-01 BK7930	
	W29 10010.0404	WOEX 030204-01 P40	
	W29 10010.0421	WOEX 030204-01 K10	
	W29 10110.0421	WOEX 030204-11 K10	
	W29 18010.047930	WOEX 040304-01 BK7930	
	W29 18010.0404	WOEX 040304-01 P40	
	W29 18010.0421	WOEX 040304-01 K10	
	W29 18110.0421	WOEX 040304-11 K10	
	W29 24010.047930	WOEX 05T304-01 BK7930	
	W29 24010.0404	WOEX 05T304-01 P40	
	W29 24010.0421	WOEX 05T304-01 K10	
W29 24110.0421	WOEX 05T304-11 K10		
W29 34010.047930	WOEX 080404-01 BK7930		
W29 34010.0404	WOEX 080404-01 P40		
W29 34010.0421	WOEX 080404-01 K10		
W29 34110.0421	WOEX 080404-11 K10		
W29 42010.047930	WOEX 080404-01 BK7930		
W29 42010.0404	WOEX 080404-01 P40		
W29 42010.0421	WOEX 080404-01 K10		
W29 42000.0421	WOEX 080404-00 K10		
W29 24010.047930	WOEX 05T304-01 BK7930		
W29 24010.0404	WOEX 05T304-01 P40		
W29 24010.0421	WOEX 05T304-01 K10		
W29 24110.0421	WOEX 05T304-11 K10		

# KOMET KUB Centron® Assembly Parts / Accessories

Ø 0.787 – 2.520 inch  
(Ø 20 – 64 mm)

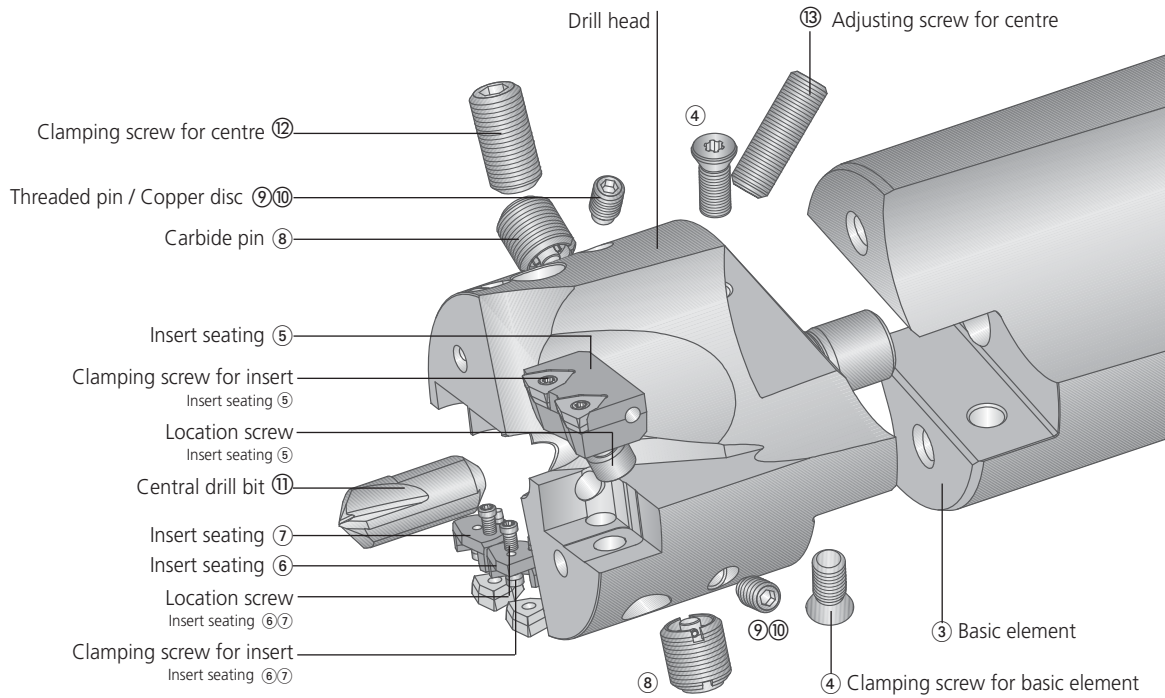


(..) = mm

Ø D	Inserts ①					Basic element ③				
	Assembly parts			Accessories		Assembly parts			Accessories	
	Clamping screw ② for inserts			Screwdriver		Clamping screw ④ for basic element			Screwdriver	
	Description	Order No.	in-lbs	Description	Order No.	Description	Order No.	Nm	Description	Order No.
0.787–0.984 (20–25)	S/M2×4.3-6IP	N00 56041	5.5	6IP	L05 00810	S2564-8IP	N00 57480	1.28	8IP	L05 00830
1.024–1.260 (26–32)	S/M2.2×5.5-6IP	N00 57553	8.9	6IP	L05 00810	S3074-8IP	N00 57490	2.25	8IP	L05 00830
1.299–1.535 (33–39)	S/M2.5×7.2-8IP	N00 57511	11.3	8IP	L05 00830	S4089-15IP	N00 57440	4.3	15IP	L05 00860
1.575–1.772 (40–45)	S/M2.5×7.2-8IP	N00 57511	11.3	8IP	L05 00830	S45105-20IP	N00 57500	6.25	20IP	L05 00870
1.811–2.126 (46–54)	S/M3.5×7.3-10IP	N00 57521	25	10IP	L05 00850	S50115-20IP	N00 57450	6.25	20IP	L05 00870
2.165–2.520 (55–64)	S/M4.5×9-15IP	N00 57531	55.3	15IP	L05 00860	S55140-20IP	N00 57460	6.25	20IP	L05 00870

Ø D	Guide pads ⑤								
	Assembly parts			Accessories			Assembly parts		
	Clamping screw ⑥ for guide pads			Screwdriver			Shim ⑦ for adjusting guide pads		
	Guide pads ⑤ Order No.	Description	Order No.	in-lbs	Description	Order No.	Order No. Set of foils	t (mm)	Qty.
0.787–0.866 (20–22)	L01 03990	S2542-8IP	N00 57211	11.3	8IP	L05 00830	L01 04190	0.025	4
0.906–1.142 (23–29)	L01 04000	M2.5×4.5-8IP	N00 55581	11.3	8IP	L05 00830		0.050	2
1.181–1.417 (30–36)	L01 04010	M2.5×4.5-8IP	N00 55581	11.3	8IP	L05 00830		0.075	2
1.457–1.772 (37–45)	L01 04020	M2.5×4.5-8IP	N00 55581	11.3	8IP	L05 00830		0.100	2
1.811–2.126 (46–54)	L01 04150	M3.5×5-8IP	N00 55701	20	8IP	L05 00830	L01 04240	0.025	4
2.165–2.520 (55–64)	L01 04160	M3.5×5-8IP	N00 55701	20	8IP	L05 00830		0.050	2
								0.075	2
								0.100	2

Ø D	Central drill bit ⑧										
	Ø	Accessories					Assembly parts				
		Central drill bit ⑧					Clamping screw ⑨ for central drill bit			Adjusting screw ⑩ for central drill bit	
		Order No. HSS TiAIN coated	Order No. HSS TiN coated	Order No. VHM TiAIN/TiN coated	Description	SW	Torque lbf/ft	Order No.	Description	Order No.	
0.787 (20)	5	V95 10012.0090	V95 10012.0089	V95 10310.8450	M4×6	2	1.11	N00 70910	M3×8	5505103008	
0.827–0.984 (21–25)	5	V95 10012.0090	V95 10012.0089	V95 10310.8450	M4×8	2	1.11	N00 70920	M3×8	5505103008	
1.024–1.260 (26–32)	6	V95 10022.0090	V95 10022.0089	V95 10320.8450	M5×10	2.5	1.84	N00 70930	M4×10	5505104010	
1.299–1.535 (33–39)	6	V95 10022.0090	V95 10022.0089	V95 10320.8450	M5×12	2.5	1.84	N00 70940	M4×10	5505104010	
1.575–1.772 (40–45)	8	V95 10032.0090	V95 10032.0089	V95 10330.8450	M6×12	3	3.69	N00 70950	M5×10	5505105010	
0.811–2.126 (46–54)	10	V95 10042.0090	V95 10042.0089	V95 10340.8450	M8×16	4	5.90	N00 70960	M5×10	5505105010	
2.165–2.520 (55–64)	10	V95 10042.0090	V95 10042.0089	V95 10340.8450	M8×16	4	5.90	N00 70960	M5×8	5505105008	



Ø D	Basic element ③				Carbide pin ⑧					
	Assembly parts			Accessories		Assembly parts				
	Clamping screw ④ for drill head			Screwdriver		Carbide pin ⑧	Key for ⑧	Threaded pin ⑨	Copper disc ⑩	
	Description	Order No.	Nm	Description	Order No.	Order No.	Order No.	Order No. Description	Order No. Description	
65 – 81	S60160-20IP	N00 57470	6,25	20IP	L05 00870	L01 04310	L01 04370	5505106008 M6x8	L01 04450 Ø4.5x1.5	

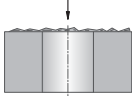
Ø D	Insert seating ⑤				Insert seating ⑥ and ⑦					
	Assembly parts			Accessories	Assembly parts					Accessories
	Insert seating ⑤	Location screw	Clamping screw for inserts	Screw-driver for clamping screw	Insert seating ⑥	Insert seating ⑦	Stift	Location screw	Clamping screw for inserts	Screw-driver for clamping screw
	Order No.	Order No.	Order No. Description	Order No. Description	Order No.	Order No.	Order No.	Order No.	Order No. Description	Order No. Description
65 – 71	D53 53200	N10 11510	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	-	-	-	-	-
72 – 75	D53 53220	5501105012			D50 50290	D50 55090	N00 52000	N00 55571	N00 57571 S/M2.5x6.3-8IP 1.28 Nm	L05 00830 8IP
76 – 78	D53 53230				D50 50290	D50 55090	N00 52000	N00 55571	N00 57571 S/M2.5x6.3-8IP 1.28 Nm	L05 00830 8IP
79 – 81	D53 53240				D50 50290	D50 55090	N00 52000	N00 55571	N00 57571 S/M2.5x6.3-8IP 1.28 Nm	L05 00830 8IP


Ø D	Central drill bit ⑪								
	Accessories				Assembly parts				
	Central drill bit ⑪				Clamping screw ⑫ for central drill bit			Adjusting screw ⑬ for central drill bit	
	Ø	Order No. HSS TiAlN coated	Order No. HSS TiN coated	Description	SW	Torque	Order No.	Description	Order No.
65 – 71	12	V95 10050.0090	V95 10050.0089	M10x20	5	16 Nm	N00 70970	M8x10	5505108010
72 – 81				M10x20	5	16 Nm	N00 70970	M8x25	5505108025

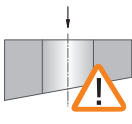
## Technical Notes

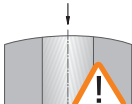
1

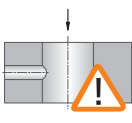


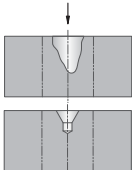
1.  **Starting on uneven surfaces (cast surfaces)**
- possible in principle
  - reduce feed rate when starting bore

2.  **Starting on angled surfaces**
- surface for starting bore must be spot faced beforehand
  - avoid chip jams on drill shank


3.  **Angled bore exit**
- possible under certain conditions
  - reduce feed rate if necessary
  - drilling angle max. 3°

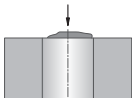
4.  **Starting on cambered surfaces**
- centered boring can be started with reduced feed rate
  - spot facing is required if the point for starting the bore is outside the radius centre

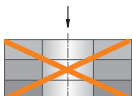
5.  **Drilling through a cross bore**
- halve feed rate at interruption
  - cross bore max. 1/3 of bore diameter
  - off-centre cross bore not possible

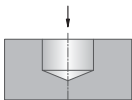
6.  **Starting on a groove or large centering bore**
- possible under certain conditions
  - reduce feed rate if necessary
  - face beforehand where centre is particularly large
  - central drill bit basic adjustment optimize if necessary

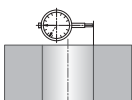
7.  **Drilling a chamber**
- not possible

8.  **Starting on an edge**
- surface for starting bore must be spot faced beforehand
  - avoid chip jams on drill shank


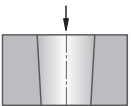
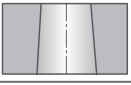

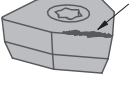
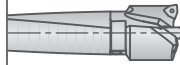
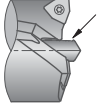



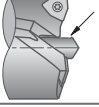
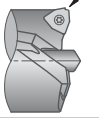

9.  **Starting on a welded seam**
- reduce feed rate when starting bore
  - face beforehand if necessary

10.  **Drilling through stacked plates**
- not possible

11.  **Blind hole**
- possible
  - set guide pads 0.5 mm below actual  $\varnothing$

12.  **adjustable**
- can be adjusted from 65 mm diameter



Rotating and stationary use	 <p><b>Short tool life</b> types of wear on inserts</p> <ul style="list-style-type: none"> <li>• cutting speed too high → select correct cutting speed</li> <li>• cutting material with too little wear resistance → select grade with higher wear resistance</li> <li>• tool overhang too great → if possible use shorter tool</li> <li>• damaged insert seating → check tool, change if necessary</li> <li>• clamping device not stable enough → improve stability</li> </ul>
	 <p><b>Bore narrows at bottom</b></p> <ul style="list-style-type: none"> <li>• chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary</li> <li>• material very soft → increase cutting speed, reduce feed. Use positive chip geometry</li> <li>• axial adjustment of central drill bit not the best &gt; adjust setting as shown on setting sheet in operating instructions</li> </ul>
	 <p><b>Bore widens at bottom</b></p> <ul style="list-style-type: none"> <li>• chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary</li> </ul>
	 <p><b>Bad surface finish</b></p> <ul style="list-style-type: none"> <li>• bad chip removal → improve cutting parameters: increase cutting speed reduce feed</li> </ul>
	 <p><b>Bild up on cutting edge</b></p> <ul style="list-style-type: none"> <li>• cutting speed too low → increase cutting speed</li> <li>• insert too negative → use positive geometry</li> <li>• coating not suitable → select correct coating</li> </ul>
	 <p><b>Friction marks on tool shank</b></p> <ul style="list-style-type: none"> <li>• bore diameter too small → check setting</li> <li>• chip removal problems → improve cutting parameters, check geometry of inserts</li> <li>• cutting edge corner radius too large → use correct cutting edge radius</li> <li>• chip jams on support element, fractured support element &gt; where basic element &lt; 6 × D use of support element can be dispensed with</li> </ul>
Stationary use	 <p><b>Heavy wear on one side on central drill bit</b></p> <ul style="list-style-type: none"> <li>• tool not central → tool turret/holder may have shifted - readjust machine</li> </ul>
	 <p><b>Withdrawal groove on one side</b></p> <ul style="list-style-type: none"> <li>• tool not central → tool turret/holder may have shifted - readjust machine</li> </ul>
	 <p><b>Fracture on external cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• interrupted cut → change to tougher insert grade</li> <li>• cutting edge corner radius too small → use insert with larger cutting edge radius</li> </ul>
	 <p><b>Bore too small/ too large</b></p> <ul style="list-style-type: none"> <li>• machine not at X-0 position → move axis to correct position</li> <li>• machine axis shifted → readjust machine</li> </ul>
Rotating use	 <p><b>Heavy wear on one side on central drill bit</b></p> <ul style="list-style-type: none"> <li>• insufficient guiding → check length setting on central drill bit</li> </ul>
	 <p><b>Fracture on external cutting edge</b></p> <ul style="list-style-type: none"> <li>• feed rate too high → reduce feed rate</li> <li>• interrupted cut → change to tougher insert grade</li> <li>• cutting edge corner radius too small → use insert with larger cutting edge radius</li> </ul>
	 <p><b>Bore too small/ too large</b> with adjustable tool</p> <ul style="list-style-type: none"> <li>• wrong cutting edge radius used → use correct cutting edge radius</li> <li>• setting wrong → correct setting</li> </ul>

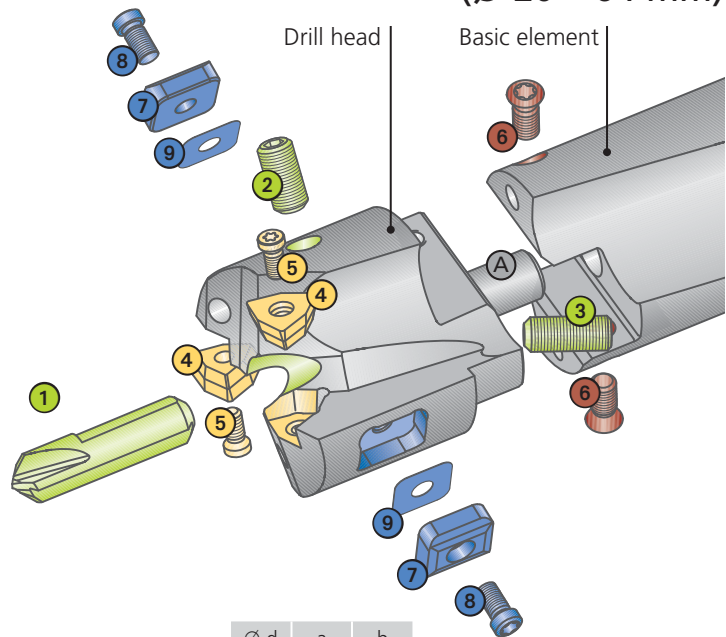
## Mounting Instructions

Ø 0.787 – 2.520 inch  
(Ø 20 – 64 mm)

1



- 1 Central drill bit
- 2 Clamping screw for central drill bit
- 3 Adjusting screw for central drill bit
- 4 Indexable inserts
- 5 Clamping screw for indexable inserts
- 6 Clamping screw for basic element
- 7 Guide pad
- 8 Clamping screw for guide pad
- 9 Shim for adjusting guide pad

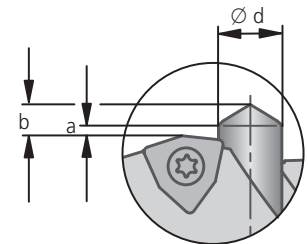


### Fitting central drill bit ① / indexable inserts ④:

- Insert central drill bit ① in drill head with clamping surface toward clamping screw ② and clamp.
- Insert indexable inserts ④ and tighten clamping screw ⑤ with recommended torque. The bore diameters of the drill heads were produced for a corner radius of 0.4 mm. Ensure proper seating at contact surface and circumference when installing indexable insert ④.

**Length adjustment central drill bit ①:** In principle there is no need to adjust the length of the central drill bit (preset at works). However, if an alternative length setting is required, this can be achieved by applying the adjusting screw ③ (→ table).

Ø d	a	b
0.197 (5)	0.039 (1.0)	0.089 (2.25)
0.236 (6)	0.043 (1.1)	0.104 (2.65)
0.315 (8)	0.049 (1.25)	0.133 (3.38)
0.394 (10)	0.049 (1.25)	0.152 (3.86)
0.472 (12)	0.057 (1.45)	0.184 (4.67)
0.630 (16)	0.071 (1.8)	0.228 (5.78)
0.787 (20)	0.098 (2.5)	0.311 (7.91)



### Fitting drill head:

- Insert drill head in basic element and measure diameter at outside indexable insert.
- Remove drill head again, turn by 180° and insert in basic element again. Measure diameter again.
- Production tolerances can result in different diameters. Always select position with largest measured diameter.
- Screw in both clamping screws ⑥ and alternately fasten them slightly. Then tighten with recommended torque.

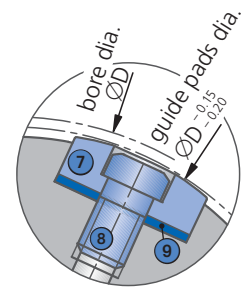
### Changing the guide pads ⑦:

The guide pads can be changed if worn or damaged. When using new guide pads check these are correctly aligned. (→ Setting Guide Pads).

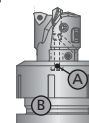
### Setting guide pads for through holes:

The bore diameters for the drill heads are quoted for inserts with corner radius of R0.4 mm. On delivery the guide pads are arranged for use with blind bores and lie a minimum of 0.25 mm below the bore diameter.

For through holes we recommend the use of our shim sets to adjust the guide pads.

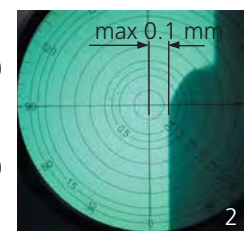
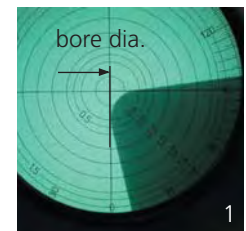


If the overall length (complete tool) exceeds the measurement range of the presetter, locate drill head on centering pin ① in chuck ②.



### Procedure:

- Measure ACTUAL diameter of drill head with indexable insert installed (Figure 1).
- Determine diameter of guide pads individually and adjust to recommended value (Figure 2).



### Example:

Drill Head dia. = 1.380"

Guide pads dia. = 1.380"  $-0.006 = 1.374$  inch  
 $-0.008 = 1.372$  inch

Guide pad diameter must be between 1.374" and 1.372".

### Shims ⑨ for through holes

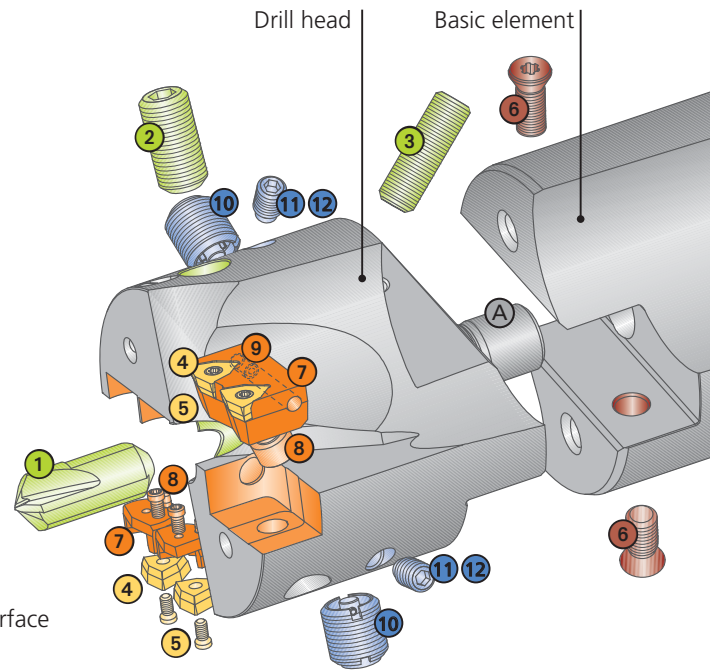
Set 1: for Ø 0.787"-1.772", Order No. L01 04190  
consisting of: 4x t = 0.001 inch, 2x t = 0.002 inch  
2x t = 0.003 inch, 2x t = 0.004 mm

Set 2: for Ø 1.811"-2.520", Order No. L01 04240  
consisting of: 4x t = 0.001 inch, 2x t = 0.002 inch  
2x t = 0.003 inch, 2x t = 0.004 mm





- ① Central drill bit
- ② Clamping screw for central drill bit
- ③ Adjusting screw for central drill bit
- ④ Indexable inserts
- ⑤ Clamping screw for indexable inserts
- ⑥ Clamping screw for basic element
- ⑦ Insert seating
- ⑧ Location screw for insert seating
- ⑨ Adjusting screw for insert seating
- ⑩ Carbide pin
- ⑪ Threaded pin
- ⑫ Copper disc



**Fitting central drill bit ① / indexable inserts ④:**

- Insert central drill bit ① in drill head with clamping surface toward clamping screw ② and clamp.
- Insert indexable inserts ④ in insert seatings ⑦ and tighten clamping screw ⑤ with recommended torque. The bore diameters of the drill heads were produced for a corner radius of 0.4 mm. Ensure proper seating at contact surface and circumference when installing indexable insert ④.
- Insert indexable insert seatings ⑦ in drill head and tighten location screws ⑧ with recommended torque.

Length adjustment central drill bit ①: see page 184

Fitting drill head: see page 184

**Set bore diameter:**

- The external insert seating can be set 1 mm in the diameter.
- Loosen the location screw ⑧ and refasten slightly.
- Using adjusting screw ⑨ set the required diameter.
- Fully tighten location screw ⑧.

**Setting guide elements (carbide pin):**

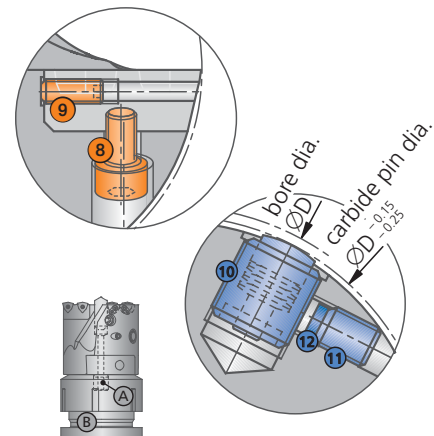
- Loosen threaded pin ⑪.
- Adjust carbide pin ⑩ with key L01 04370 to diameter (see section).
- Using threaded pin ⑪ clamp carbide pin ⑩.

**Please note:** Before the tool is used, the threaded pin ⑪ must be checked for firm seating due to possible settling of the copper disc ⑫.

If the overall length (complete tool) exceeds the measurement range of the presetter, locate drill head on centering pin A in chuck B.

**Procedure:**

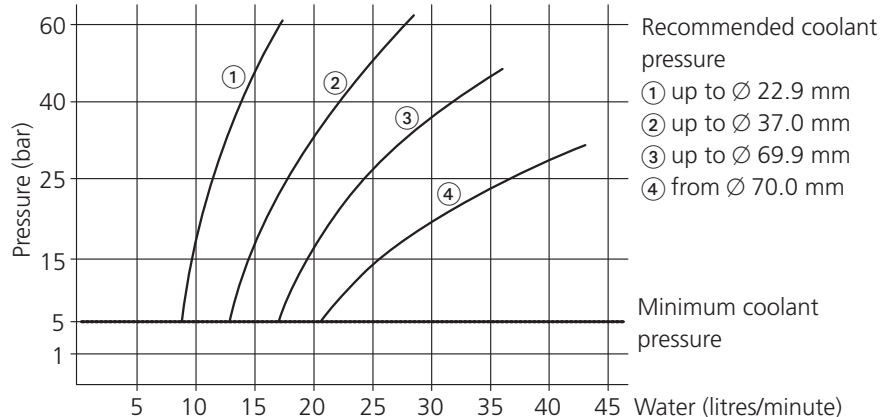
- Measure ACTUAL diameter of drill head with indexable insert installed (Figure 1, page 184).
- Determine diameter of carbide pins individually and adjust to recommended value (Figure 2, page 184).



**Example:**

Drill Head dia. = 72.06 mm  
 Carbide pin dia. =  $72.06 \begin{matrix} -0.15 \\ -0.25 \end{matrix} = \begin{matrix} 71.91 \\ 71.81 \end{matrix}$  mm  
 Carbide pin diameter must be between 71.91 and 71.81 mm.

**Coolant Flow / Coolant Pressure**



The coolant is supplied centrally onto the cutting edges through the basic element or the drill head by means of ground coolant channels in the central drill bit and on the drill head face. It is essential for central coolant supply to be used. The coolant helps produce the best possible chip formation and chip removal. Coolant pressure should not be less than the minimum 5 bar. Increasing the coolant pressure to 10–20 bar improves the boring process.

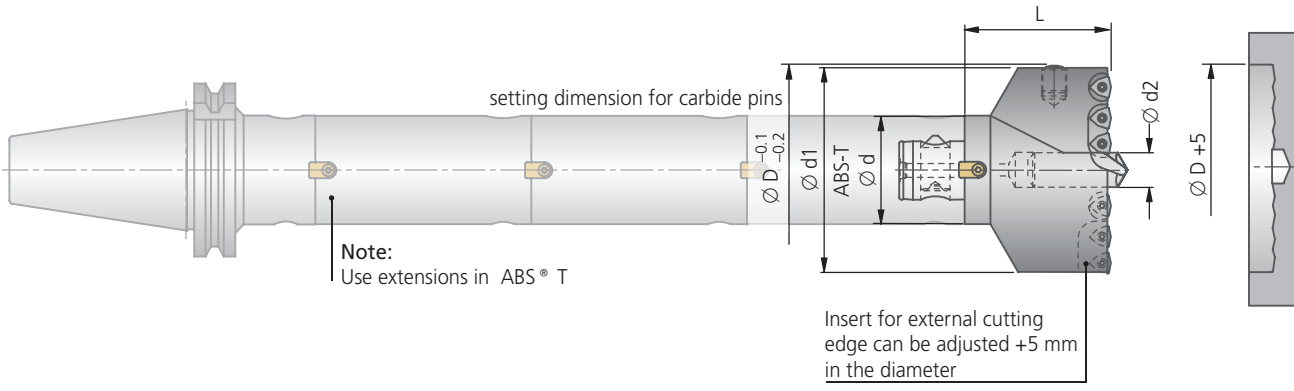
Important: See chapter 8 for more application details and safety notes!

## Insert Drill (drill head) with ABS® T Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
6xD											
	●	●	●	○	○	○	○	○	✗	✗	●

● very good ○ good ○ possible: see technical notes, page 182 ✗ not possible

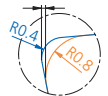


Drill Head						Basic recommendation				Assembly parts	Accessories					
Ø D +5mm	ABS-T Ø d	Order No.	Ø d1	L	kg	Insert		Piece	for workpiece material						Order No. Description	Order No. Description
						Order No. ▽Size	ISO-Code		P	M	K	N	S	H		
80	50	V46 40801	78.5	75	1.75	W29 34010.048425	WOEX 06T304-01 BK8425	4	●	●	●	●	●	●	N00 57521	L05 00850
85	50	V46 40851	83.5	75	1.80	W29 34010.047930	WOEX 06T304-01 BK7930	4	●	●	●	●	●	●	S/M3.5x7.3-10IP	L05 00850
90	50	V46 40901	87.5	75	2.06	W29 34010.0462	WOEX 06T304-01 BK62	4	●	●	●	●	●	●	2.8 Nm	10IP
95	50	V46 40951	92.5	75	2.16	W29 34110.0477	WOEX 06T304-11 BK77	4	●	●	●	●	●	●	2.8 Nm	10IP
100	63	V46 41001	97.2	85	3.12	W29 42010.048425	WOEX 080404-01 BK8425	4	●	●	●	●	●	●	N00 57531	L05 00860
105	63	V46 41051	102.5	85	2.92	W29 42010.047930	WOEX 080404-01 BK7930	4	●	●	●	●	●	●	S/M4.5x9-15IP	L05 00860
110	63	V46 41101	107.5	85	3.20	W29 42010.0462	WOEX 080404-01 BK62	4	●	●	●	●	●	●	6.25 Nm	15IP
115	63	V46 41151	112.5	85	3.35	W29 42110.0477	WOEX 080404-11 BK77	4	●	●	●	●	●	●	6.25 Nm	15IP
120	63	V46 41201	118.5	85	3.60	W29 34010.048425	WOEX 06T304-01 BK8425	6	●	●	●	●	●	●	N00 57521	L05 00850
125	63	V46 41251	123.5	85	3.82	W29 34010.047930	WOEX 06T304-01 BK7930	6	●	●	●	●	●	●	S/M3.5x7.3-10IP	L05 00850
130	80	V46 41301	127.5	90	5.62	W29 34010.0462	WOEX 06T304-01 BK62	6	●	●	●	●	●	●	2.8 Nm	10IP
135	80	V46 41351	132.5	90	5.52	W29 34110.0477	WOEX 06T304-11 BK77	6	●	●	●	●	●	●	2.8 Nm	10IP
140	80	V46 41401	137.5	90	5.79	W29 34010.048425	WOEX 06T304-01 BK8425	6	●	●	●	●	●	●	2.8 Nm	10IP
145	80	V46 41451	142.5	90	5.95	W29 42010.048425	WOEX 080404-01 BK8425	6	●	●	●	●	●	●	N00 57531	L05 00860
150	80	V46 41501	147.5	90	6.08	W29 42010.047930	WOEX 080404-01 BK7930	6	●	●	●	●	●	●	S/M4.5x9-15IP	L05 00860
155	80	V46 41551	152.5	90	6.50	W29 42010.0462	WOEX 080404-01 BK62	6	●	●	●	●	●	●	6.25 Nm	15IP
						W29 42110.0477	WOEX 080404-11 BK77	6	●	●	●	●	●	●	6.25 Nm	15IP

**Supply includes:**  
 Drill head with mounting parts. Please order insert, central drill bit and accessories separately.  
 For assembly parts and accessories, see page 187.

For torsional dampeners we recommend the use of appropriate reducers (available on request).

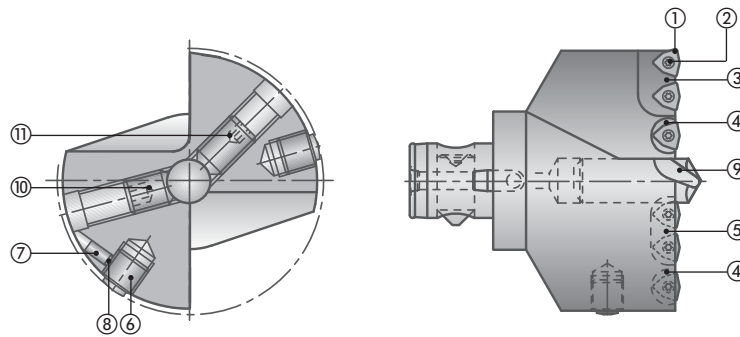
		Central drill bit				for workpiece material					
Ø D	Order No.	Coating	Ø d2	P	M	K	N	S	H		
80 - 110	V95 10063.0089 V95 10063.0090	HSS TiN HSS TiAlN	16	●	●	●	●	●	●		
115 - 155	V95 10213.0089 V95 10213.0090	HSS TiN HSS TiAlN	20	●	●	●	●	●	●		



**Note re. insert radius:**  
 The nominal dimension Ø is only achieved with the appropriate standardised insert radius.  
 Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)



Boring range Ø 80-155 mm



Ø D	Inserts ①					Carbide pin ⑥			
	Assembly parts			Accessories		Assembly parts			
	Clamping screw ② for inserts			Screwdriver		Carbide pin ⑥	Key for ⑥	Threaded pin ⑦	Copper disc ⑧
Description	Order No.	Nm	Description	Order No.	Order No.	Order No.	Order No. Description	Order No. Description	
80 – 95	S/M3.5×7.3-10IP	N00 57521	2.8	10IP	L05 00850	L01 04300	L01 04350	55051 06008 M6×8	L01 04450 Ø4.5×1.5
100–115	S/M4.5×9-15IP	N00 57531	6.25	15IP	L05 00860				
120–125	S/M3.5×7.3-10IP	N00 57521	2.8	10IP	L05 00850				
130–140	S/M3.5×7.3-10IP	N00 57521	2.8	10IP	L05 00850				
145–155	S/M4.5×9-15IP	N00 57531	6.25	15IP	L05 00860				

Ø D	Insert seating ③, ④ and ⑤										
	Assembly parts										
	Insert seating ③		Location screw for ③		Insert seating ④		Insert seating ⑤		Pin for ④+⑤	Location screw for ④+⑤	
Order No.	Qty.	Order No.	Description	Order No.	Qty.	Order No.	Qty.	Order No.	Description	Order No.	Description
80	D53 53360	1	55011 05012 M5×12	–		D53 53350	1	N00 52000 1.8/2×4.5	N00 55701 M3.5×5-8IP		
85	D53 53370	1	55011 05012 M5×12	D50 55100	1	D50 50300	1	N00 52000 1.8/2×4.5	N00 55701 M3.5×5-8IP		
90	D53 53380	1									
95	D53 53390	1									
100	D53 53400	1	55011 05012 M5×12	D50 55110	1	D50 50310	1	N00 52010 3/4×5.5	N00 55821 M4.5×9-10IP		
105	D53 53410	1									
110	D53 53420	1									
115	D53 53430	1									
120	D53 53360	1	55011 05012 M5×12	D50 55100	3	D53 53350	1	N00 52000 1.8/2×4.5	N00 55701 M3.5×5-8IP		
125	D53 53360	1								D50 55100	3
130	D53 53380	1	55011 05012 M5×12	D50 55100	3	D50 50300	1	N00 52000 1.8/2×4.5	N00 55701 M3.5×5-8IP		
135	D53 53380	1									
140	D53 53390	1									
145	D53 53400	1	55011 05012 M5×12	D50 55110	3	D50 50310	1	N00 52010 3/4×5.5	N00 55821 M4.5×9-10IP		
150	D53 53400	1									
155	D53 53400	1									

Ø D	Central drill bit ⑨									
	Accessories				Assembly parts					
	Central drill bit ⑨				Clamping screw ⑩ for central drill bit			Adjusting screw ⑪ for central drill bit		
Ø	Order No.	Order No.	Description	SW	Torque	Order No.	Description	Order No.		
HSS TiAlN coated	HSS TiN coated									
80	V95 10063.0090	V95 10063.0089	M12×16	6	25 Nm	N00 70370	M12×16	5505212016		
85–110	V95 10063.0090	V95 10063.0089	M12×20	6	25 Nm	N00 70380	M12×20	5505212020		
115–155	V95 10213.0090	V95 10213.0089	M16×20	8	35 Nm	N00 70460	M16×22	N00 70800		

Technical Notes



Guideline values for solid drilling					KUB® V464					
Material group	Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code / DIN	Max. feed f (mm/rev) · Cutting speed v <sub>C</sub> (m/min)					
					Ø 80 – 99		Ø 100 – 119		Ø 120 – 159	
					f mm/U	HSS v <sub>C</sub> m/min	f mm/rev	HSS v <sub>C</sub> m/min	f mm/rev	HSS v <sub>C</sub> m/min
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	0.10	200	0.12	200	0.12	200
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	0.12	180	0.14	180	0.16	180
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	0.12	200	0.14	200	0.16	200
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	0.12	160	0.14	160	0.16	160
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	0.12	140	0.14	140	0.16	140
	4.1		HSS		0.10	60	0.12	60	0.14	60
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	–		–		–	
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	–		–		–	
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	0.10	100	0.12	100	0.14	160
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	0.12	100	0.14	100	0.14	140
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	0.12	100	0.14	100	0.14	100
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	0.16	180	0.16	180	0.25	180
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	0.14	140	0.16	140	0.20	140
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	0.14	140	0.16	140	0.20	140
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	0.14	120	0.16	120	0.20	120
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	0.12	100	0.14	100	0.18	100
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	0.12	80	0.14	80	0.16	80
	10.2	300	vermicular cast iron	GGV Ti < 0,2, GGV Ti > 0,2	0.12	80	0.14	80	0.16	80
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	0.16	180	0.20	180	0.25	180
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	0.08	200	0.10	200	0.12	200
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	0.08	300	0.10	300	0.12	300
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	0.14	200	0.16	200	0.16	200
	14.0	100	cast alum. alloy: Si-content >10%	G-AlSi10Mg / 3.2381	0.12	160	0.14	160	0.14	160
H	15.0	1400	hardened steels < 45 HRC		–		–		–	
	16.0	1800	hardened steels > 45 HRC		–		–		–	

\* Cutting values shown are maximum values relating on the nominal diameter of the drill head using the respective central drill bit. Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patents



Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
80 – 99	W29 34130.048425	WOEX 06T304-13 BK8425	●
	W29 34030.046425	WOEX 06T304-03 BK6425	● ●
	W29 34130.047935	WOEX 06T304-13 BK7935	● ●
100 – 119	W29 42130.048425	WOEX 080404-13 BK8425	●
	W29 42030.046425	WOEX 080404-03 BK6425	● ●
	W29 42130.047935	WOEX 080404-13 BK7935	● ●
120 – 144	W29 34130.048425	WOEX 06T304-13 BK8425	●
	W29 34030.046425	WOEX 06T304-03 BK6425	● ●
	W29 34130.047935	WOEX 06T304-13 BK7935	● ●
145 – 159	W29 42130.048425	WOEX 080404-13 BK8425	●
	W29 42030.046425	WOEX 080404-03 BK6425	● ●
	W29 42130.047935	WOEX 080404-13 BK7935	● ●

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
80 – 99	W29 34010.0472	WOEX 06T304-01 BK72	●
	W29 34110.0450	WOEX 06T304-11 BK50	●
100 – 119	W29 42010.0472	WOEX 080404-01 BK72	●
	W29 42110.0450	WOEX 080404-11 BK50	●
120 – 144	W29 34010.0472	WOEX 06T304-01 BK72	●
	W29 34110.0450	WOEX 06T304-11 BK50	●
145 – 159	W29 42010.0472	WOEX 080404-01 BK72	●
	W29 42110.0450	WOEX 080404-11 BK50	●

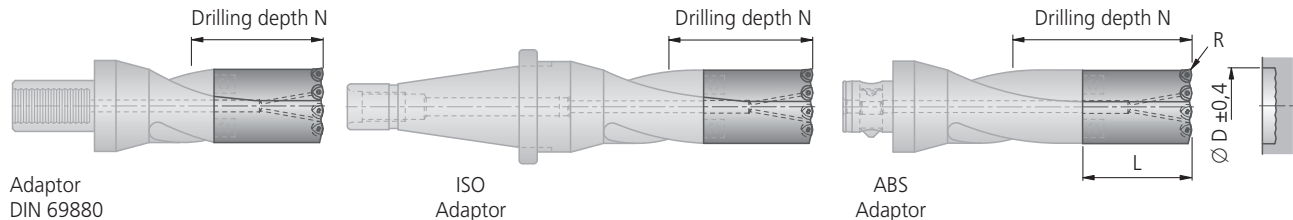
80 – 99	W29 34010.047930	WOEX 06T304-01 BK7930	●
	W29 34010.0404	WOEX 06T304-01 P40	● ●
	W29 34010.0421	WOEX 06T304-01 K10	● ● ●
	W29 34110.0421	WOEX 06T304-11 K10	● ● ●
100 – 119	W29 42010.047930	WOEX 080404-01 BK7930	●
	W29 42010.0404	WOEX 080404-01 P40	● ●
	W29 42010.0421	WOEX 080404-01 K10	● ● ●
	W29 42110.0421	WOEX 080404-11 K10	● ● ●
120 – 144	W29 34010.047930	WOEX 06T304-01 BK7930	●
	W29 34010.0404	WOEX 06T304-01 P40	● ●
	W29 34010.0421	WOEX 06T304-01 K10	● ● ●
	W29 34110.0421	WOEX 06T304-11 K10	● ● ●
145 – 159	W29 42010.047930	WOEX 080404-01 BK7930	●
	W29 42010.0404	WOEX 080404-01 P40	● ●
	W29 42010.0421	WOEX 080404-01 K10	● ● ●
	W29 42110.0421	WOEX 080404-11 K10	● ● ●

## Drill Head with ABS® Connection, Taper or VDI Shank, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
4xD	●	●	●	○	○	○	○	○	✗	✗	✗

● very good   ● good   ○ possible   ✗ not possible



Drill Head				Basic recommendation			Assembly parts	Accessories
Ø D	Order No.	for R0.8 L	kg	Insert		for workpiece material P M K N S H	Clamping screw Order No. Description	Screwdriver Order No. Description
				Order No. ∇∇ Size	ISO-Code			
83	V50 30830	120	2.35	W29 34010.088425 W29 34010.047930 W29 34010.0862	WOEX 06T308-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T308-01 BK62	● ● ● ● ● ●	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
88	V50 30880	120	2.56	W29 34110.0477	WOEX 06T304-11 BK77			
93	V50 30930	120	2.88	W29 42010.088425	WOEX 080408-01 BK8425	● ● ● ● ● ●	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
98	V50 30980	120	3.22	W29 42010.047930	WOEX 080404-01 BK7930			
103	V50 31030	120	3.56	W29 42010.0862	WOEX 080408-01 BK62			
108	V50 31080	120	3.94	W29 42110.0477	WOEX 080404-11 BK77	● ● ● ● ● ●	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
113	V50 31130	120	4.17	W29 50010.088425	WOEX 100508-01 BK8425			
118	V50 31180	120	4.71	W29 50010.047930	WOEX 100504-01 BK7930			
123	V50 31230	120	5.11	W29 50010.0862	WOEX 100508-01 BK62			
128	V50 31280	120	5.66	W29 50110.0477	WOEX 100504-11 BK77			

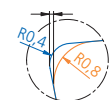
### Supply includes:

Drill head with assembly parts. Please order insert and accessories separately.

The KUB® drill basic elements can be supplied on request for boring depths N 1xD to 4xD with ABS® connection (from ABS100) and with adaptors to DIN 69880 (VDI 3425 B/2) from NC50 and all ISO adaptors from ISO50.

To process the enquiry, we require details of the type and size of connection and required boring depth.

Ø D	Assembly parts						
	Insert seating internal	Insert seating external	Clamping screw			Pin	
	Order No.	Order No.	Description	Nm	Order No.	Description	Order No.
83 – 88	D50 55300	D50 55100	M3.5x5-8IP	2.25	N00 55701	1.8/2x4.5	N00 52000
93 – 108	D50 55310	D50 55110	M4.5x9-10IP	4.3	N00 55821	3/4x5.5	N00 52010
113–128	D50 55320	D50 55120	M4.5x9-10IP	4.3	N00 55821	3/4x5.5	N00 52010



### Note re. insert radius:

The nominal dimension Ø is only achieved with the appropriate standardised insert radius.

Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)

Patent applied for inside and outside Germany (ABS)

Drill Head with ABS® Connection, Taper or VDI Shank, R.H. cutting



Guideline values for solid drilling				Material example, material code/DIN	Cutting speed v <sub>c</sub> (m/min)	Max. f (mm/rev)			
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			4xD	Ø 83 – 88	Ø 93 – 108	Ø 113 – 128
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	200	0.10	0.12	0.12	
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	180	0.12	0.14	0.16	
	2.1	<500	lead alloys	95MnPb28 / 1.0718	200	0.12	0.14	0.16	
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	160	0.12	0.14	0.16	
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	140	0.12	0.14	0.16	
S	4.1		HSS		60	0.10	0.12	0.14	
	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	-	-	-	-	
M	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	-	-	-	-	
	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	160	0.10	0.12	0.14	
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	140	0.12	0.14	0.14	
K	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	100	0.12	0.14	0.14	
	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	180	0.16	0.16	0.25	
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	140	0.14	0.16	0.20	
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	140	0.14	0.16	0.20	
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	120	0.14	0.16	0.20	
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	100	0.12	0.14	0.18	
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	80	0.12	0.14	0.16	
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	80	0.12	0.14	0.16	
	N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	180	0.16	0.20	0.25
		12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	200	0.08	0.10	0.12
13.0		60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	300	0.08	0.10	0.12	
13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	200	0.14	0.16	0.16	
14.0		100	cast alum. alloy: Si-content >10%	G-AlSi10Mg / 3.2381	160	0.12	0.14	0.14	
H	15.0	1400	hardened steels < 45 HRC		-	-	-	-	
	1800		hardened steels > 45 HRC		-	-	-	-	

ØD	Alternative Inserts		for workpiece material
	Insert	ISO-Code	
			<b>P M K N S H</b>
	Order No. ▽ Size		
for better chip control	83 – 88	W29 34130.048425 W29 34030.046425 W29 34130.047935	WOEX 06T304-13 BK8425 WOEX 06T304-03 BK6425 WOEX 06T304-13 BK7935
	83 – 108	W29 42130.048425 W29 42030.046425 W29 42130.047935	WOEX 080404-13 BK8425 WOEX 080404-03 BK6425 WOEX 080404-13 BK7935
	113 – 128	W29 50130.048425 W29 50030.046425 W29 50130.047935	WOEX 100504-13 BK8425 WOEX 100504-03 BK6425 WOEX 100504-13 BK7935
for higher cutting speed	83 – 88	W29 34010.0472 W29 34110.0450	WOEX 06T304-01 BK72 WOEX 06T304-11 BK50
	93 – 108	W29 42010.0472 W29 42110.0450	WOEX 080404-01 BK72 WOEX 080404-11 BK50
	113 – 128	W29 50010.0872 W29 50110.0450	WOEX 100508-01 BK72 WOEX 100504-11 BK50
for greater strength	83 – 88	W29 34010.047930 W29 34010.0404 W29 34010.0421 W29 34110.0421	WOEX 06T304-01 BK7930 WOEX 06T304-01 P40 WOEX 06T304-01 K10 WOEX 06T304-11 K10
	93 – 108	W29 42010.047930 W29 42010.0404 W29 42010.0421 W29 42110.0421	WOEX 080404-01 BK7930 WOEX 080404-01 P40 WOEX 080404-01 K10 WOEX 080404-11 K10
	113 – 128	W29 50010.047930 W29 50010.0804 W29 50010.0821 W29 50110.0421	WOEX 100504-01 BK7930 WOEX 100508-01 P40 WOEX 100508-01 K10 WOEX 100504-11 K10

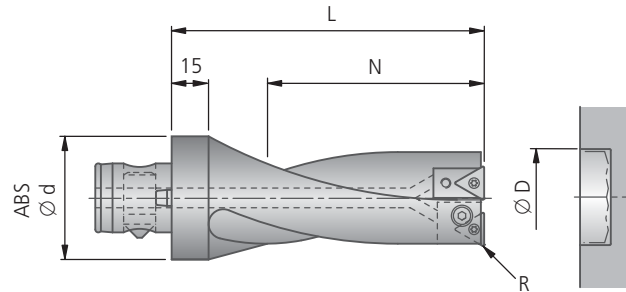
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

Flat Bottoming Tool with ABS® Connection, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD											
	×	○	×	×	×	×	×	×	×	●	●

● very good ○ good ◯ possible × not possible



**Please note!** The flat bottoming tool must not be connected to the M01 (ABS-MV) adjustable device but only to adaptors, reducers or extensions.

Adjustment range Ø D	ABS Ø d	Order No.	R	N	L	kg	Basic recommendation			Assembly parts	Accessories
							Order No. ▽▽Size	Insert ISO-Code	for workpiece material P M K N S H	Clamping screw Order No. Description	Screwdriver Order No. Description
37 – 43	50	V71 00200	0.5	111	161	1.18	W30 26660.058425 W30 26660.0503 W30 26660.0521 W30 26720.0521	TOHX 140305EN-G06 BK8425 TOHX 140305EN-G06 P25M TOHX 140305EN-G06 K10 TOHX140305FN-G12 K10		N00 56021 S/M3.5x6.2-10IP 2.8 Nm	L05 00850 10IP
43 – 48	50	V71 00210	0.5	129	179	1.49					
48 – 52	63	V71 00250	0.8	144	199	2.27	W30 44660.0803	TOHX22T308EN-G06 P25M		N00 56401 S/M5x9.4-20IP 6.25 Nm	L05 00870 20IP
52 – 58	63	V71 00260	0.8	156	211	2.51	W30 44660.0821	TOHX22T308EN-G06 K10			
58 – 64	80	V71 00330	0.8	174	229	4.12	W30 44720.0821	TOHX22T308FN-G12 K10			

**Supply includes:**

Flat bottoming tool with assembly parts. Please order insert and accessories separately.

**Rigid machine conditions are essential!**

The adjustable flat bottoming tool is primarily used for flat bottoming the the bottom face in blind bores. The external cutting edge is radially adjustable and the internal cutting edge axially adjustable for facing flat the bottom of the bore.

The flat bottoming tool will also remachine the bore diameter.

Ø D	Assembly parts							
	Insert seating internal	Insert seating external	Cylindrical screw DIN 7984		Screw		Threaded pin DIN 913	
	Order No.	Order No.	Description	Order No.	Description	Order No.	Description	Order No.
37 – 48	D53 05310	D53 05110	M4x8	55012 04008	VPS-M2.6x6	L02 30300	M3x8	55051 03008
48 – 64	D53 05320	D53 05120	M6x12	51247 06012		–	M4x8	55051 04008



Flat Bottoming Tool with ABS® Connection, R.H. cutting



Guideline values for flat bottoming					V <sub>C</sub>	Max. f (mm/rev)	
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN		Cutting speed v <sub>C</sub> (m/min)	3xD
							Ø 37 – 48
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	120	0.08	0.08
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	120	0.08	0.08
	2.1	<500	lead alloys	95MnPb28 / 1.0718	120	0.08	0.08
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	90	0.06	0.08
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	90	0.05	0.07
	4.1		HSS		-	-	-
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	-	-	-
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	-	-	-
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	60	0.07	0.09
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	60	0.07	0.09
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	60	0.07	0.09
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	120	0.12	0.14
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	120	0.12	0.14
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	90	0.10	0.12
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	90	0.10	0.12
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	90	0.10	0.12
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	90	0.10	0.12
	10.2	300	vermicular cast iron	GGV Ti < 0,2, GGV Ti > 0,2	90	0.10	0.12
	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	180	0.12	0.14
N	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	180	0.12	0.14
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	220	0.08	0.10
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	220	0.08	0.10
	14.0	100	cast alum. alloy: Si-content >10%	G-AlSi10Mg / 3.2381	220	0.10	0.12
H	15.0	1400	hardened steels < 45 HRC		-	-	-
	16.0	1800	hardened steels > 45 HRC		-	-	-

Ø	Alternative Inserts		for workpiece material
	Order No. ∇∇ Size	ISO-Code	
37 – 48	W30 26720.0503	TOHX 140305EN-G12 P25M	P M K N S H
48 – 64	W30 26660.0560	TOHX 140305EN-G06 BK60	P M K N S H
48 – 64	W30 44660.0860	TOHX 22T308EN-G06 BK60	P M K N S H
37 – 48	W30 26660.0503	TOHX 140605EN-G06 P25M	P M K N S H
48 – 64			P M K N S H

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

Trepanning tool with ABS® connection, taper or VDI shank, R.H. cutting



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
3xD	●	✗	●	●	●	●	●	●	✗	✗	✗

● very good ● good ○ possible ✗ not possible

The KUB® drill basic elements are available on request for drilling depths N 1xD to 3xD with ABS® connection (ABS100, ABS125) and adaptors to SK 50 and cylindrical shank DIN 69880 from NC 50.

For administration purposes, please provide details of the type and size of connection and the required drilling depth with the enquiry.

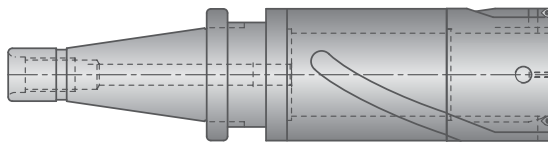
The KOMET® trepanning tool is used to enable recycling of residue when cutting particularly expensive materials or using this for verification. Because the tool only removes a ring of material, the amount of power required is very low, making it suitable for machining larger holes on less powerful machine tools.

With central coolant supply.

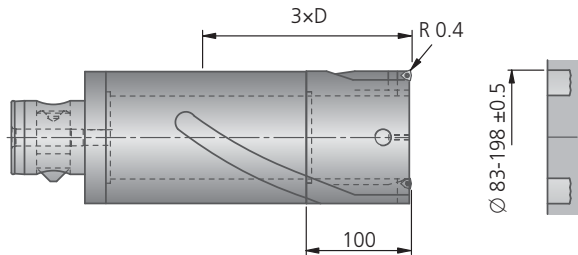


available on request

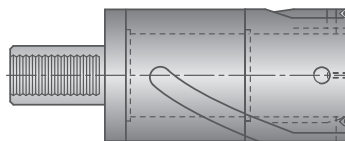
Taper shank



ABS Adaptor



Adaptor DIN 69880



Please note:

Trepanning tool must be removed manually. Cutting width 25 mm

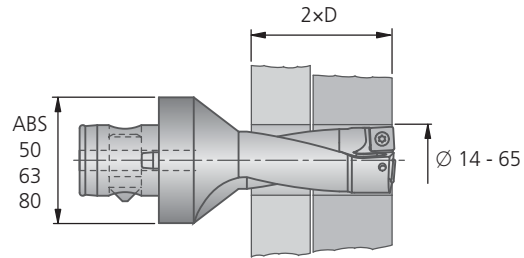
Assembly parts				
Insert seating external 	Insert seating middle 	Insert seating internal 	Cylindrical screw 	
Order No. D53 55500	Order No. D53 55600	Order No. D53 55700	Description M4x12	Order No. 5501104012

Stacked Plate Tool with ABS® connection, R.H. cutting

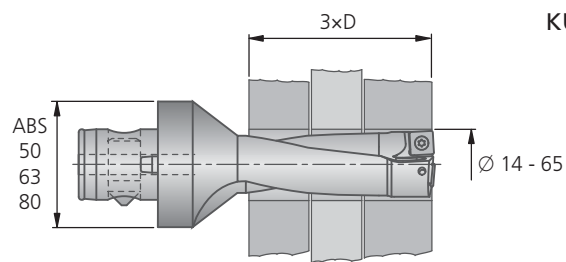


If workpieces are stacked close together, the disc produced would fall away during movement to the next workpiece and lie in front of the tool. This would destroy the inserts.

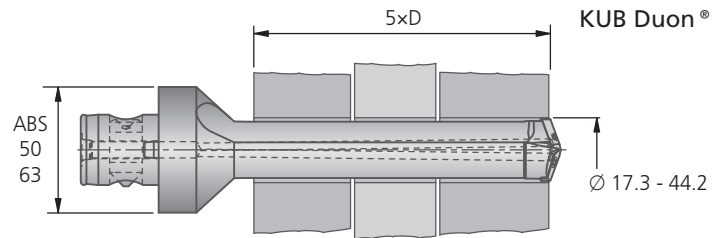
Because of the way their cutting edges are arranged, KUB® drills cut the material right up to the changeover point to the next workpiece.



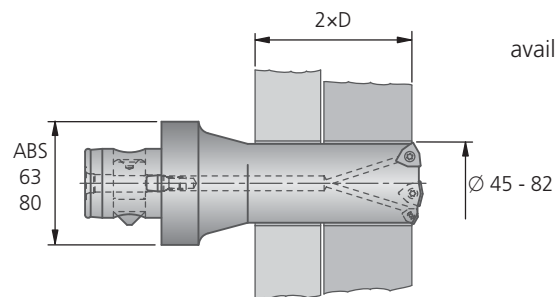
KUB Quatron®



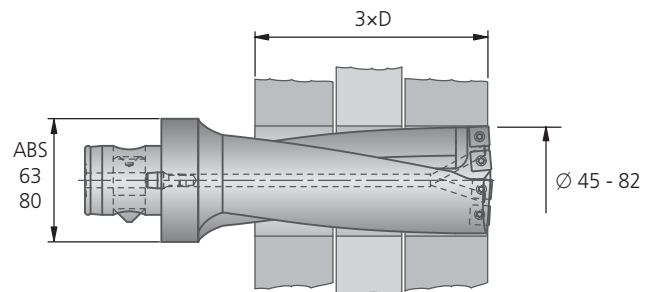
KUB Quatron®



KUB Duon®



KUB® Drill  
available on request





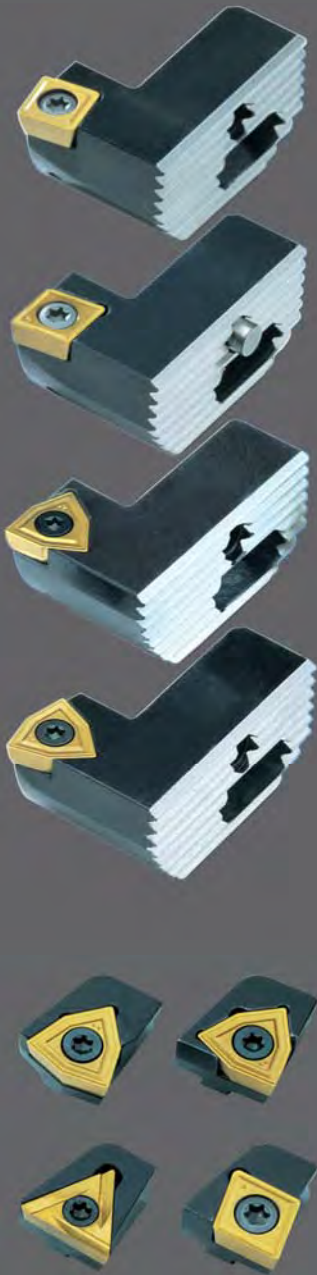
## Modules are the key!

The particular features of the innovative KOMET® twin cutter programme TwinKom® are a high level of efficiency and flexibility.

A large selection of different holders and inserts will solve every kind of application – even difficult machining tasks – with the right insert geometry.

### BENEFITS for you:

- Axially adjustable insert holder for constant division of cut between the two cutting edges
- Radially adjustable insert holder for full twin cutter effect
- Radially adjustable insert holders allow conversion to stepped tool for larger depth
- Compact tool design
- For deep roughing operations chip removal is by means of the spiral flutes
- With ABS® connection
- Application range from 24 to 215 mm diameter



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<b>CCMT inserts <math>\kappa = 90^\circ</math></b>	
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Countersinking tool (KWZ)	234 – 237
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Forward and Backward Chamfering tool	242 – 243

# Programme Summary – Roughing

## 5 Adaptors

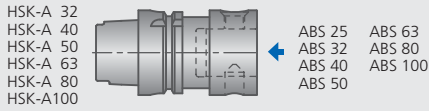
1

2

### HSK-A Adaptors

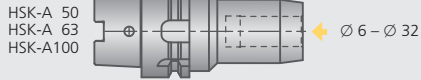
with ABS® connection

▶ 456



Expanding chuck

▶ 466-469



Adaptor sleeve Whistle Notch

▶ 460-461



Adaptor sleeve Weldon

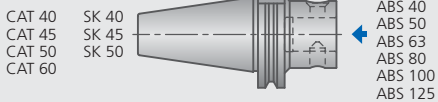
▶ 462-463



Taper shanks DIN 69871

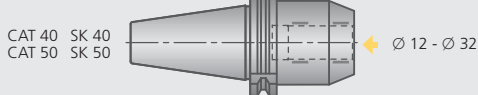
with ABS® connection

▶ 486 / 502 / 503



Expanding chuck

▶ 498-501 / 520-521



Adaptor sleeve Whistle Notch

▶ 518



Adaptor sleeve Weldon

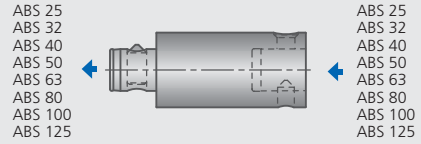
▶ 519



### ABS® Adaptors

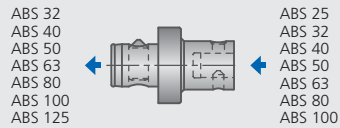
Extension

▶ 538



Reducer

▶ 536



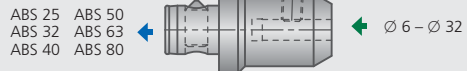
Expanding chuck

▶ 558



Adaptor sleeve Whistle Notch

▶ 544-545



Adaptor sleeve Weldon

▶ 548-549



Spindle adaptor flange

with ABS® connection

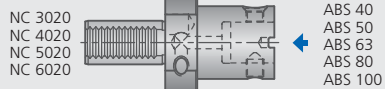
▶ 530



VDI Adaptor

with ABS® connection

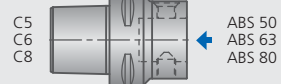
▶ 528



PSC Adaptors ISO 26622-1 / -2

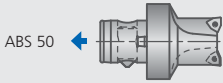
Polygonal shank taper with ABS® connection

▶ 532



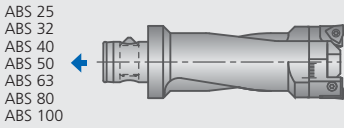
2 Tools for Roughing

with ABS® connection



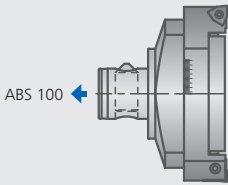
ABS 50

**Easy Special**  
 Ø 14 – 44 mm  
 ▶ Chapter 4



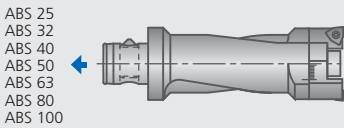
ABS 25  
 ABS 32  
 ABS 40  
 ABS 50  
 ABS 63  
 ABS 80  
 ABS 100

**TwinKom® G01**  
 Ø 24 – 215 mm  
 ▶ 206 – 213



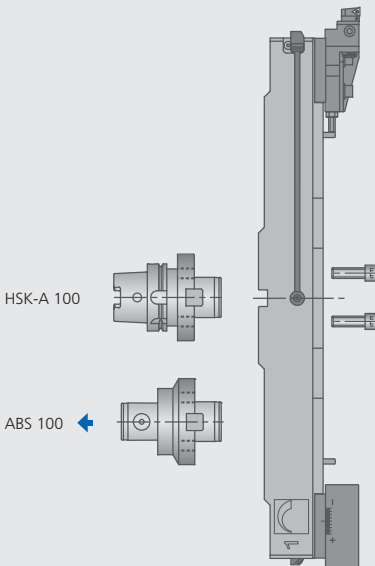
ABS 100

**TwinKom® G01**  
 Ø 196 – 401 mm  
 ▶ 214 – 215



ABS 25  
 ABS 32  
 ABS 40  
 ABS 50  
 ABS 63  
 ABS 80  
 ABS 100

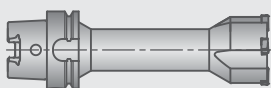
**TwinKom® G04**  
 Ø 1.181" – 8.031"  
 (Ø 30 – 204 mm)  
 ▶ 226 – 229



HSK-A 100

ABS 100

**TwinKom®**  
 Ø 365 – 2,000 mm  
 ▶ 230 - 231



**PreciKom**  
 Ø 32 – 61.99 mm  
 ▶ 232 – 233

with cylindrical shank



Ø 16  
 Ø 25  
 Ø 32

**Countersinking tool KWZ**  
 Ø 0.439" – 1.375"  
 ▶ 234 – 235  
 Ø 10 – 48 mm  
 ▶ 236 – 237



Ø 16  
 Ø 20

**Countersinking tool KWS**  
 Ø 0.748" – 1.457"  
 ▶ 238 – 239  
 Ø 16.5 – 37 mm  
 ▶ 240 – 241



**Forward and backward chamfering tool**  
 Ø 0.650" – 1.500"  
 ▶ 242 – 243

Key

- ➡ ABS® connection
- ➡ Cylindrical connection
- ➡ Whistle Notch connection
- ➡ Weldon connection

1

2



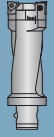
# KOMET® Tool Selection





## Help Table for Roughing

1



2

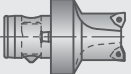


Ø (mm)	Machining									
	through hole	blind hole	uneven	angled start and drilling out, interrupted cut	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
14 – 44	●	●	●	●	●	●		●	80°	●
24 – 215	●	●	●	●	●	●	●	●	80°	●
30 – 204	●	●	●	●	●	●		●	80°	●
196 – 401	●	●	●	●	●	●		●	80°	●
365 – 2,000	●	●	●	●	●	●				●
10 – 48	●	●	●	●	●	●		●		
16.5 – 37										
32 – 101.99 larger dia. on request	 for producing the 90° and 60° countersinks	●	 for milling of trapezoidal slots	●	○	 for circular milling on machining centres	●	 for chamfering on machining centres	●	●



# KOMET® Tool Selection

## Help Table for Roughing

	Coolant				Material	Tool	Page	
	Emulsion		MQL					
	internal	external	internal	external				
	●	●	●	●*	Mild steel/tool steel Stainless and abrasion-resistant steel Grey cast iron, spheroidal cast iron Inconel Heat-resistant steels Hardened tool steel		Easy Special	▶ Chapter 4
	●	●	●	●*	● ● ● ●		TwinKom® G01	▶ 206 - 213
	●	●	●	●*	● ● ● ●		TwinKom® G04	▶ 226 - 229
	●	●	●	●*	● ● ● ●		TwinKom® G01	▶ 214 - 215
	●	●	●	●*	● ● ● ● ● ● ●		TwinKom® Lightweight twin cutter tool	▶ 230 - 231
	●	●	●	●*	● ● ● ● ● ● ●		Countersinking tool KWZ	▶ 234 - 237
					● ● ● ● ● ● ●		Countersinking tool KWS	▶ 238 - 241
					●		PreciKom Roughing / finishing tool	▶ 232 - 233



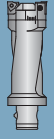
# KOMET TwinKom® G01 – High Performance and Flexibility

Adaptors with the same approach angle can be combined among each other

1

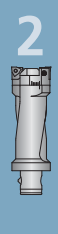


2



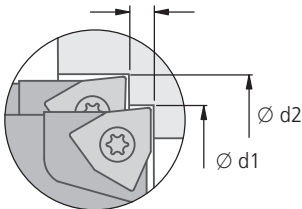
Machining	Roughing					Combination roughing
	$a_p = 1 - 9 \text{ mm}$ 2 cutting edge $f = 2 \times f_z$					
for machining allowance $a_p$ Feed $f$						$a_p = 2 - 18 \text{ mm}$ 1+1 cutting edge $f = f_z$
$\alpha$	90°	90°	80°	80°	90°	90°
Insert	WOEX	WOEX	WOEX	WOEX	SOEX	WOEX
adjustable	axially + radially	radially	axially + radially	radially	radially	axially + radially
Page	206	206	206	206	208	206
Basic body short long						
● 1 <sup>st</sup> choice ⦿ may be possible	Roughing with largemachining allowance and large axial offset ● ● ● ● ● ●					
	Roughing with extremely large allowance and large axial offset ⦿ ⦿ ● ● ● ●					
	Roughing with large allowance and long tool overhang ● ● ⦿ ⦿ ⦿ ●					

Machining	Semi-finishing / Finishing				Combination Semi-Finishing	Combination Finishing
	$a_p = 0.7 - 3 \text{ mm}$ 2 cutting edge $f = 2 \times f_z$		$a_p = 0.1 - 2 \text{ mm}$ 2 cutting edge $f = 2 \times f_z$			
$\alpha$	90°	90°	90°	90°	90°	90°
Insert	CCMT	CCMT	TOGX	TOGX	CCMT	WOEX + TOGX
adjustable	axially + radially	radially	axially + radially	radially	axially + radially	axially + radially
Page	210	210	212	212	210	206 + 212
Basic body short long						
● 1 <sup>st</sup> choice ⦿ may be possible	Light roughing, Semi-finishing with large axial offset ⦿ ⦿ ● ● ● ●					
	Light roughing, Semi-finishing with slight axial offset ● ● ● ● ● ●					
	Finishing with small to medium offset and slight axial offset ⦿ ⦿ ⦿ ⦿ ● ●					
	Finishing with small allowance and no axial offset ● ● ● ● ● ●					



$\kappa$	90°	90°	90°	90°	80°	90°	90°
Insert	WOEX	WOEX	WOEX	WOEX	WOEX	CCMT	CCMT
adjustable	axially + radially	axially + radially	axially + radially	axially + radially	axially + radially	axially + radially	axially + radially
Page	206	206	206	206	206	210	210
Basic body short long							
$\kappa$	90°	90°	90°	90°	80°	90°	90°
Insert	WOEX	CCMT	CCMT	TOGX	WOEX	CCMT	TOGX
adjustable	radially	axially + radially	radially	axially + radially	radially	radially	axially + radially
Page	206	210	210	212	206	210	212

### Combination roughing / Combination finishing



With combination roughing and combination finishing, division of the whole cutting width is produced by offsetting the cutting edge axially and radially. This should allow the ensuing cutting forces to be better distributed and produce an even cutting result.

With the roughing operation, this allows double the cutting width (using only a single feed rate  $f=f_z$ )

With the finishing operation, the cutting width is divided so that some of the intermediate machining can be omitted.

With long chipping materials, improved chip control is achieved by means of division between axial and radial cutting.

With long projection lengths, great operational smoothness is achieved.

- Axially adjustable insert holder for constant division of cut between the two cutting edges.
- Radially adjustable insert holder for full twin cutter effect.
- Radially adjustable insert holders allow conversion to stepped tool for larger depth.
- Compact tool design.
- For deep roughing operations chip removal is by means of the spiral flutes.
- With ABS connection.
- Application range from 24 to 215 mm diameter.

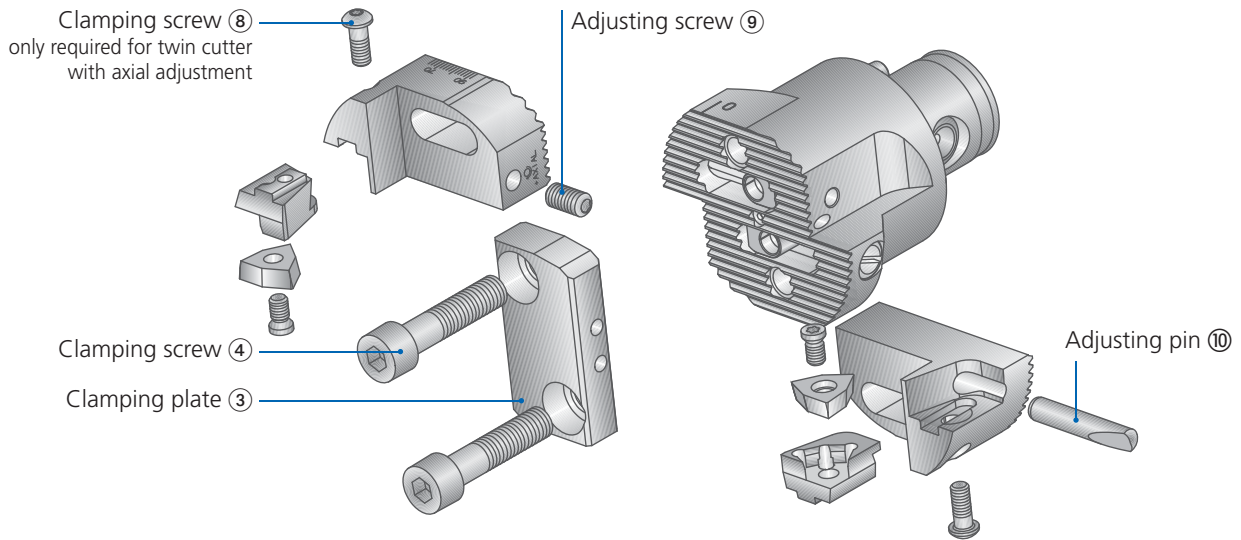


# KOMET TwinKom® G01

## Assembly Parts and Construction

1

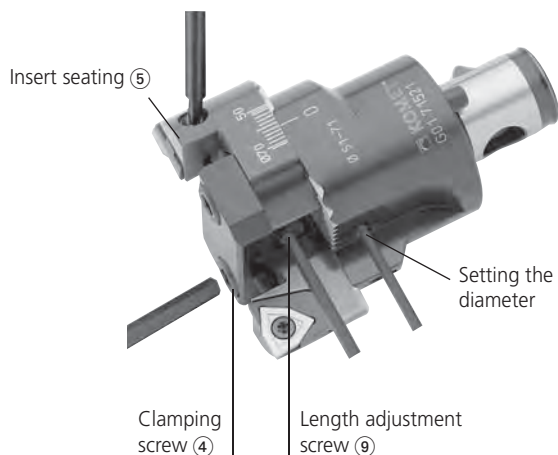
2



For further assembly parts see pages 206 - 213.

Boring range	Assembly parts								
	Clamping plate ③	Clamping screw DIN 912 ④		Clamping screw ⑧			Adjusting screw DIN 913 ⑨		Adjusting pin ⑩
Ø D min - max	Order No.	Description	Order No.	Description	Order No.	Nm	Description	Order No.	Order No.
24 - 32	G01 71050.12	M3x16	55011 03016	M2x4.5 / Tx6	N10 11200	0.62	M2.5x5 / SW1.3	55051 02505	G03 70010.11
30 - 41	G01 70521.12	M4x20	55011 04020	M2.5x5.3 / Tx8	N10 11300	1.25	M2.5x5 / SW1.3	55051 02505	G03 70020.11
39 - 53	G01 71011.12	M5x25	55011 05025	M2.5x7 / Tx8	N10 11310	1.25	M4x8 / SW2	55051 04008	G03 70030.11
51 - 71	G01 71511.12	M6x30	55011 06030	M3.5x9.4 / Tx10	N10 11400	2.1	M4x10 / SW2	55051 04010	G03 70040.11
64 - 91	G01 72011.12	M8x35	55011 08035	M4.5x10.5 / Tx15	N10 11500 for D54 60450	4	M6x12 / SW3	55051 06012	G03 70060.11
				M4.5x11.5 / Tx15	N10 11510	4			
83 - 124	G01 72511.12	M8x45	55011 08045	M5x12 / SW4	55011 05012	9	M6x20 / SW3	55051 06020	G03 70070.11
109 - 167	G01 73011.12	M10x50	55011 10050	M5x16 / SW4	55011 05016	9	M8x20 / SW4	55051 08020	G03 70080.11
139 - 215	G01 73511.12	M12x60	55011 12060	M6x20 / SW5	55011 06020	15	M10x20 / SW5	55051 10020	G03 70090.11

## Handling



### Setting the diameter

Loosen the clamping screw ④ on one side only. Set the diameter and tighten clamping screw ④ again. Repeat the same procedure on the second side.

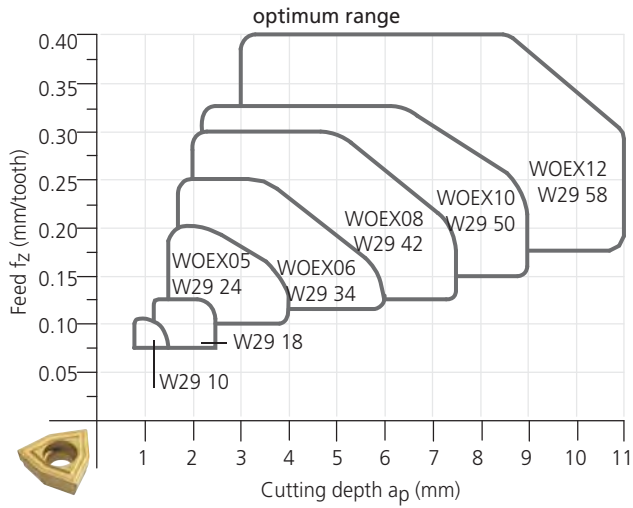
### Length adjustment

Loosen insert seating ⑤ and then tighten again slightly. Set length to 0.02 mm in front of required dimension using length adjustment screw ⑨, tighten insert seating ⑤ and set to required height with length adjustment screw ⑨. Repeat the same procedure on the second side.

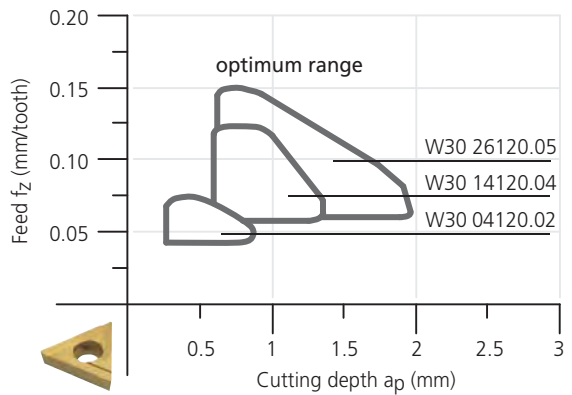
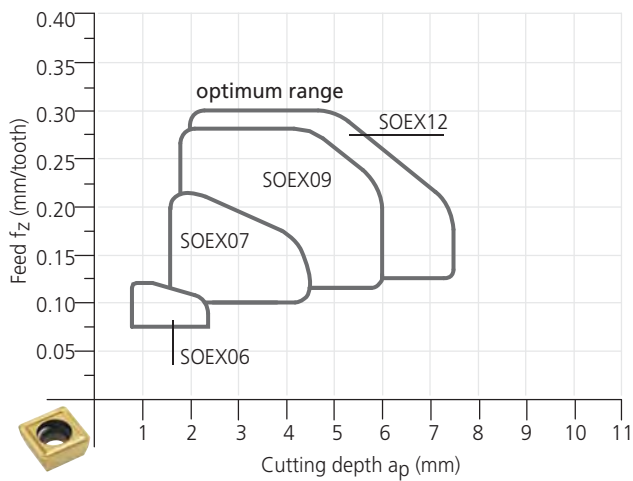
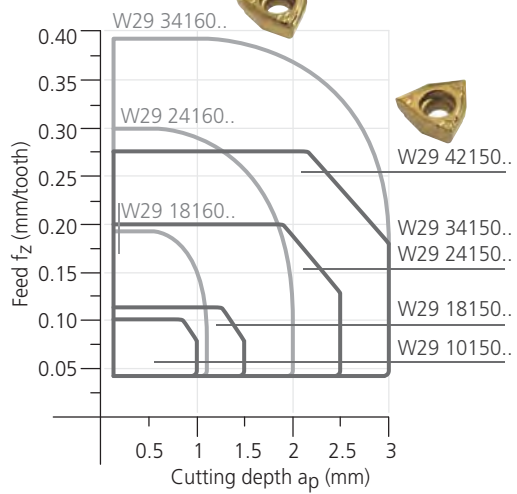


### Optimum cutting depth range

Guideline values for medium strength steels



### Geometry 15 and 16



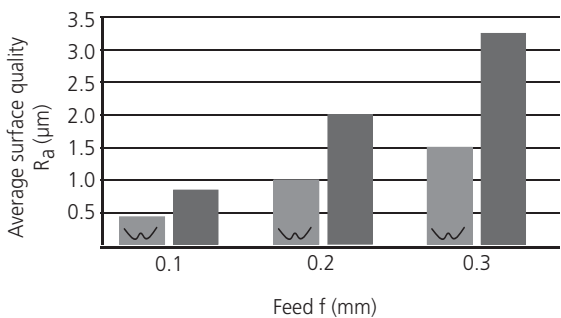
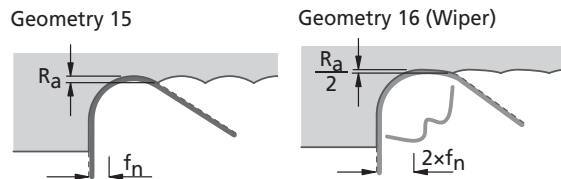
### Chip formation from various insert geometries

Tool: TwinKom® G01 twin cutter Ø 40 mm  
 Material: 42CrMo4V 1100 N/mm<sup>2</sup>  
 Cutting data: v<sub>c</sub> = 140 m/min f = 0.35 mm/rev



### Comparison of surface quality results

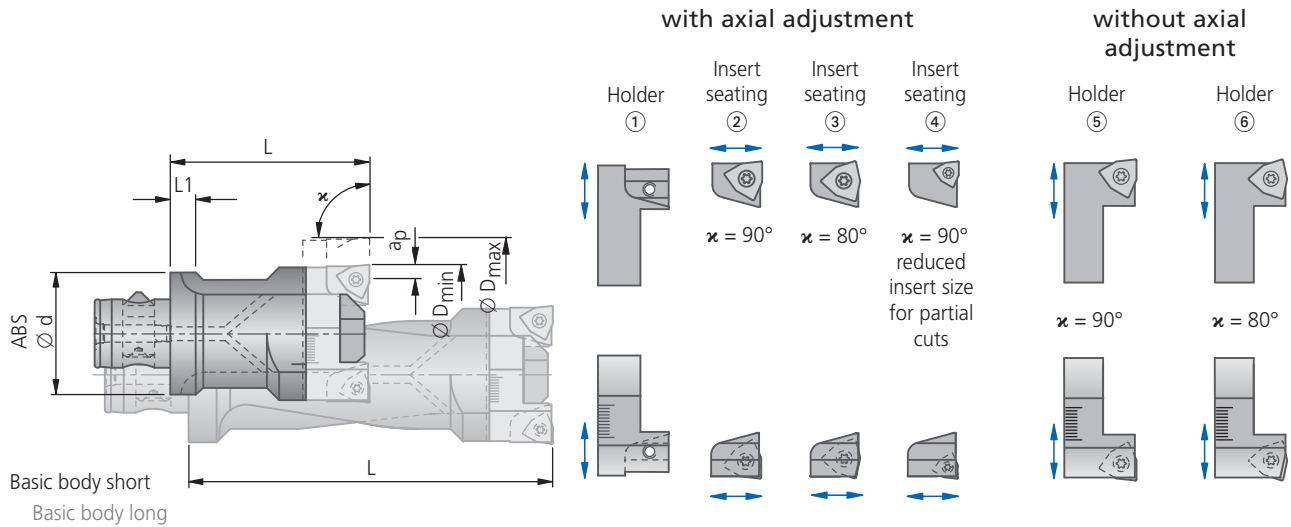
for "Wiper" R04 for α = 90°  
 (in X40Cr13 / 1.4034)



# KOMET TwinKom® G01

Ø 24 – 215 mm

Twin Cutter with ABS® Connection,  $\kappa = 90^\circ / 80^\circ$



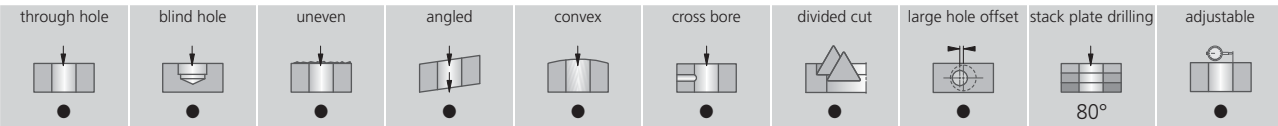
Ø D min-max	Basic body	ABS Ø d	L	L1	Holder ①	Insert seating ②	Insert seating ③	Insert seating ④	Holder ⑤	Holder ⑥
	Order No.				Order No.	Order No.	Order No.	Order No.	Order No.	
24 - 32	G01 70551 IT 0.11	25	45	6	G03 70011 IT 0.01	D54 60510 IT 0.002	D54 60610 IT 0.002		G03 70330 IT 0.012	G03 80310 IT 0.012
	G01 71071 IT 0.21	32	70	7		W29 10...	W29 10...			
30 - 41	G01 70561 IT 0.114	25	50	-	G03 70021 IT 0.016	D54 60520 IT 0.002	D54 60620 IT 0.002		G03 70141 IT 0.017	G03 80021 IT 0.018
	G01 71131 IT 0.293	32	85	7.5		W29 18...	W29 18...			
39 - 53	G01 71021 IT 0.286	32	60	-	G03 70031 IT 0.035	D54 60030 IT 0.004	D54 60130 IT 0.004		G03 70230 IT 0.039	G03 80090 IT 0.038
	G01 71621 IT 0.676	40	120	8		W29 24...	W29 24...			
51 - 71	G01 71521 IT 0.44	40	60	-	G03 70041 IT 0.067	D54 60040 IT 0.008	D54 60140 IT 0.008	D54 60540 IT 0.008	G03 70240 IT 0.077	G03 80100 IT 0.076
	G01 72121 IT 1.238	50	135	10		W29 34...	W29 34...	W29 24...		
64 - 91	G01 72021 IT 0.824	50	70	-	G03 70061 IT 0.128	D54 60050 IT 0.014	D54 60150 IT 0.014	D54 60550 IT 0.017	G03 70250 IT 0.145	G03 80110 IT 0.143
	G01 72621 IT 2.25	63	155	13		W29 42...	W29 42...	W29 24...		
83 - 124	G01 72521 IT 1.351	63	70	-	G03 70071 IT 0.247	D54 60060 IT 0.026	D54 60160 IT 0.026	D54 60560 IT 0.033	G03 70260 IT 0.277	G03 80120 IT 0.272
	G01 73121 IT 3.805	80	155	16.5		W29 50...	W29 50...	W29 24...		
109 - 167	G01 73031 IT 3.055	80	90	-	G03 70081 IT 0.486	D54 60060 IT 0.026	D54 60160 IT 0.026	D54 60560 IT 0.033		
	G01 73041 IT 6.21	80	175	-		W29 50...	W29 50...	W29 24...		
139 - 215	G01 73561 IT 6.47	100	125	-	G03 70091 IT 1.082	D54 60070 IT 0.049	D54 60170 IT 0.049	D54 60570 IT 0.062		
	G01 73571 IT 13.25	100	240	-		W29 58...	W29 58...	W29 24...		



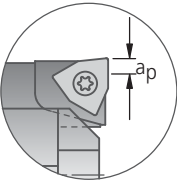
WOEX

# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection



● very good ● good ○ possible: see technical notes, page 224 ✗ not possible



### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

Supply includes basic body:

Clamping plate with adjusting screw and clamping screw.

Supply includes insert seating/holder: with clamping screw.

Please order inserts and accessories separately.

Order example:

Basic body short	G01 70551
Holder 2x	G03 70011
Insert seating 90° 2x	D54 60510
Insert 2x	W29 10010.048425

Basic recommendation				Assembly parts		Accessories	
appropriate insert	Insert		for workpiece material P M K N S H	max. cutting depth $a_p$	Clamping screw	Screwdriver	
	Order No. ▽▽ size	ISO-Code			Order No. Description	Order No. Description	
W29 10...	W29 10010.048425	WOEX 030204-01 BK8425	● ● ● ● ● ●	1.5	N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP	
	W29 10010.047930	WOEX 030204-01 BK7930		1.0			
	W29 10010.0462	WOEX 030204-01 BK62		1.5			
	W29 10110.0477	WOEX 030204-11 BK77		2.0			
W29 18...	W29 18010.048425	WOEX 040304-01 BK8425	● ● ● ● ● ●	2.5	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	
	W29 18010.047930	WOEX 040304-01 BK7930		1.5			
	W29 18010.0462	WOEX 040304-01 BK62		3.0			
	W29 18110.0477	WOEX 040304-11 BK77		3.0			
W29 24...	W29 24010.048425	WOEX 05T304-01 BK8425	● ● ● ● ● ●	4.5	for insert seating D54: N00 57571 S/M2.5x6.3-8IP 1.28 Nm	for holder G03: N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
	W29 24010.047930	WOEX 05T304-01 BK7930		3.5			
	W29 24010.047615	WOEX 05T304-01 BK7615		5.0			
	W29 24110.0477	WOEX 05T304-11 BK77		5.0			
W29 34...	W29 34010.048425	WOEX 06T304-01 BK8425	● ● ● ● ● ●	6.0	for insert seating D54: N00 57611 S/M3.5x6.6-10IP 2.8 Nm	for holder G03: N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
	W29 34010.047930	WOEX 06T304-01 BK7930		4.0			
	W29 34010.047615	WOEX 06T304-01 BK7615		6.0			
	W29 34110.0477	WOEX 06T304-11 BK77		6.0			
W29 42...	W29 42010.048425	WOEX 080404-01 BK8425	● ● ● ● ● ●	7.5	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	
	W29 42010.047930	WOEX 080404-01 BK7930		6.0			
	W29 42010.047615	WOEX 080404-01 BK7615		7.5			
	W29 42110.0477	WOEX 080404-11 BK77		7.5			
W29 50...	W29 50010.088425	WOEX 100508-01 BK8425	● ● ● ● ● ●	9.0	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	
	W29 50010.047930	WOEX 100504-01 BK7930		9.0			
	W29 50010.087615	WOEX 100508-01 BK7615		9.0			
	W29 50110.0477	WOEX 100504-11 BK77		9.0			
W29 58...	W29 58010.088425	WOEX 120608-01 BK8425	● ● ● ● ● ●	9.0	N00 57541 S/M5.5x11-20IP 6.25 Nm	L05 00870 20IP	
	W29 58010.087930	WOEX 120608-01 BK7930		9.0			
	W29 58010.087615	WOEX 120608-01 BK7615		9.0			
	W29 58000.0821	WOEX 120608-00 K10		9.0			



# KOMET TwinKom® G01

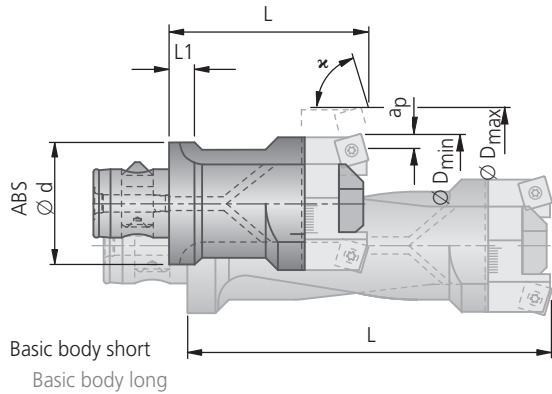
Ø 24 – 215 mm

Twin Cutter with ABS® Connection,  $\kappa = 80^\circ$

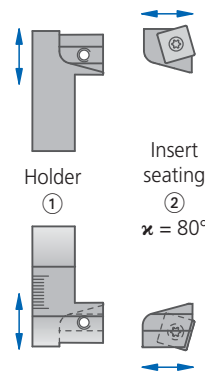
1



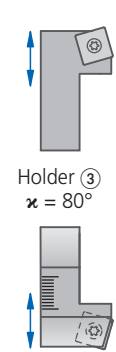
2



with axial adjustment



without axial adjustment



Ø D min-max	Basic body   Order No.	ABS Ø d	L	L1	Holder ①  Order No.	Insert seating ②  $\kappa=80^\circ$ Order No. appropriate insert	Holder ③ $\kappa=80^\circ$  Order No. appropriate insert																																																																																
24 - 32	G01 70551 <small>0.11</small>	25	45	6	G03 70011 <small>0.01</small>	D54 60710 <small>0.002</small> ⊗ W83 13...	G03 80030 <small>0.010</small> ⊗ W83 18...																																																																																
	G01 71071 <small>0.21</small>	32	70	7				30 - 41	G01 70561 <small>0.114</small>	25	50	–	G03 70021 <small>0.016</small>	D54 60720 <small>0.002</small> ⊗ W83 13...	G03 80040 <small>0.017</small> ⊗ W83 23...	G01 71131 <small>0.293</small>	32	85	7.5	39 - 53	G01 71021 <small>0.286</small>	32	60	–	G03 70031 <small>0.035</small>	D54 60730 <small>0.004</small> ⊗ W83 18...	G03 80050 <small>0.036</small> ⊗ W83 32...	G01 71621 <small>0.676</small>	40	120	8	51 - 71	G01 71521 <small>0.44</small>	40	60	–	G03 70041 <small>0.067</small>	D54 60740 <small>0.008</small> ⊗ W83 23...	G03 80060 <small>0.072</small> ⊗ W83 32...	G01 72121 <small>1.238</small>	50	135	10	64 - 91	G01 72021 <small>0.824</small>	50	70	–	G03 70061 <small>0.128</small>	D54 60750 <small>0.016</small> ⊗ W83 32...	G03 80070 <small>0.136</small> ⊗ W83 44...	G01 72621 <small>2.25</small>	63	155	13	83 - 124	G01 72521 <small>1.351</small>	63	70	–	G03 70071 <small>0.247</small>	D54 60760 <small>0.024</small> ⊗ W83 44...	G03 80080 <small>0.268</small> ⊗ W83 44...	G01 73121 <small>3.805</small>	80	155	16.5	109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...		G01 73041 <small>6.21</small>	80	175	–	139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...	
30 - 41	G01 70561 <small>0.114</small>	25	50	–	G03 70021 <small>0.016</small>	D54 60720 <small>0.002</small> ⊗ W83 13...	G03 80040 <small>0.017</small> ⊗ W83 23...																																																																																
	G01 71131 <small>0.293</small>	32	85	7.5				39 - 53	G01 71021 <small>0.286</small>	32	60	–	G03 70031 <small>0.035</small>	D54 60730 <small>0.004</small> ⊗ W83 18...	G03 80050 <small>0.036</small> ⊗ W83 32...	G01 71621 <small>0.676</small>	40	120	8	51 - 71	G01 71521 <small>0.44</small>	40	60	–	G03 70041 <small>0.067</small>	D54 60740 <small>0.008</small> ⊗ W83 23...	G03 80060 <small>0.072</small> ⊗ W83 32...	G01 72121 <small>1.238</small>	50	135	10	64 - 91	G01 72021 <small>0.824</small>	50	70	–	G03 70061 <small>0.128</small>	D54 60750 <small>0.016</small> ⊗ W83 32...	G03 80070 <small>0.136</small> ⊗ W83 44...	G01 72621 <small>2.25</small>	63	155	13	83 - 124	G01 72521 <small>1.351</small>	63	70	–	G03 70071 <small>0.247</small>	D54 60760 <small>0.024</small> ⊗ W83 44...	G03 80080 <small>0.268</small> ⊗ W83 44...	G01 73121 <small>3.805</small>	80	155	16.5	109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...		G01 73041 <small>6.21</small>	80	175	–	139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...		G01 73571 <small>13.25</small>	100	240	–								
39 - 53	G01 71021 <small>0.286</small>	32	60	–	G03 70031 <small>0.035</small>	D54 60730 <small>0.004</small> ⊗ W83 18...	G03 80050 <small>0.036</small> ⊗ W83 32...																																																																																
	G01 71621 <small>0.676</small>	40	120	8				51 - 71	G01 71521 <small>0.44</small>	40	60	–	G03 70041 <small>0.067</small>	D54 60740 <small>0.008</small> ⊗ W83 23...	G03 80060 <small>0.072</small> ⊗ W83 32...	G01 72121 <small>1.238</small>	50	135	10	64 - 91	G01 72021 <small>0.824</small>	50	70	–	G03 70061 <small>0.128</small>	D54 60750 <small>0.016</small> ⊗ W83 32...	G03 80070 <small>0.136</small> ⊗ W83 44...	G01 72621 <small>2.25</small>	63	155	13	83 - 124	G01 72521 <small>1.351</small>	63	70	–	G03 70071 <small>0.247</small>	D54 60760 <small>0.024</small> ⊗ W83 44...	G03 80080 <small>0.268</small> ⊗ W83 44...	G01 73121 <small>3.805</small>	80	155	16.5	109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...		G01 73041 <small>6.21</small>	80	175	–	139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...		G01 73571 <small>13.25</small>	100	240	–																				
51 - 71	G01 71521 <small>0.44</small>	40	60	–	G03 70041 <small>0.067</small>	D54 60740 <small>0.008</small> ⊗ W83 23...	G03 80060 <small>0.072</small> ⊗ W83 32...																																																																																
	G01 72121 <small>1.238</small>	50	135	10				64 - 91	G01 72021 <small>0.824</small>	50	70	–	G03 70061 <small>0.128</small>	D54 60750 <small>0.016</small> ⊗ W83 32...	G03 80070 <small>0.136</small> ⊗ W83 44...	G01 72621 <small>2.25</small>	63	155	13	83 - 124	G01 72521 <small>1.351</small>	63	70	–	G03 70071 <small>0.247</small>	D54 60760 <small>0.024</small> ⊗ W83 44...	G03 80080 <small>0.268</small> ⊗ W83 44...	G01 73121 <small>3.805</small>	80	155	16.5	109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...		G01 73041 <small>6.21</small>	80	175	–	139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...		G01 73571 <small>13.25</small>	100	240	–																																
64 - 91	G01 72021 <small>0.824</small>	50	70	–	G03 70061 <small>0.128</small>	D54 60750 <small>0.016</small> ⊗ W83 32...	G03 80070 <small>0.136</small> ⊗ W83 44...																																																																																
	G01 72621 <small>2.25</small>	63	155	13				83 - 124	G01 72521 <small>1.351</small>	63	70	–	G03 70071 <small>0.247</small>	D54 60760 <small>0.024</small> ⊗ W83 44...	G03 80080 <small>0.268</small> ⊗ W83 44...	G01 73121 <small>3.805</small>	80	155	16.5	109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...		G01 73041 <small>6.21</small>	80	175	–	139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...		G01 73571 <small>13.25</small>	100	240	–																																												
83 - 124	G01 72521 <small>1.351</small>	63	70	–	G03 70071 <small>0.247</small>	D54 60760 <small>0.024</small> ⊗ W83 44...	G03 80080 <small>0.268</small> ⊗ W83 44...																																																																																
	G01 73121 <small>3.805</small>	80	155	16.5				109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...		G01 73041 <small>6.21</small>	80	175	–	139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...		G01 73571 <small>13.25</small>	100	240	–																																																								
109 - 167	G01 73031 <small>3.055</small>	80	90	–	G03 70081 <small>0.486</small>	D54 60760 <small>0.024</small> ⊗ W83 44...																																																																																	
	G01 73041 <small>6.21</small>	80	175	–				139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...		G01 73571 <small>13.25</small>	100	240	–																																																																				
139 - 215	G01 73561 <small>6.47</small>	100	125	–	G03 70091 <small>1.082</small>	D54 60770 <small>0.055</small> ⊗ W83 44...																																																																																	
	G01 73571 <small>13.25</small>	100	240	–																																																																																			



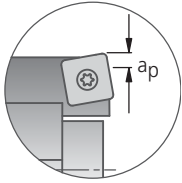


SOEX

# KOMET TwinKom® G01 Twin Cutter with ABS® Connection

through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
●	✗	●	●	●	●	●	●	80°	●

● very good ● good ○ possible: see technical notes, page 224 ✗ not possible



### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

Supply includes basic body:

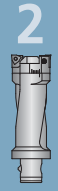
Clamping plate with adjusting screw and clamping screw.

Supply includes insert seating/holder: with clamping screw.

Please order inserts and accessories separately.

### Order example:

Basic body short	G01 70551
Holder 2x	G03 70011
Insert seating 80° 2x	D54 60710
Insert 2x	W83 13010.048425

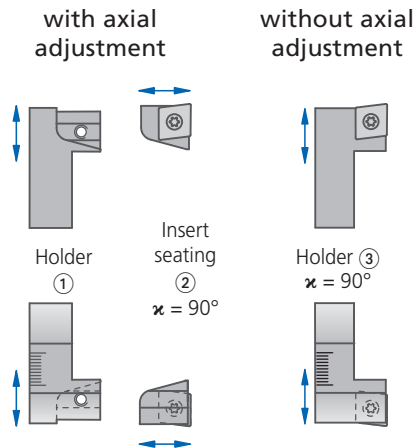
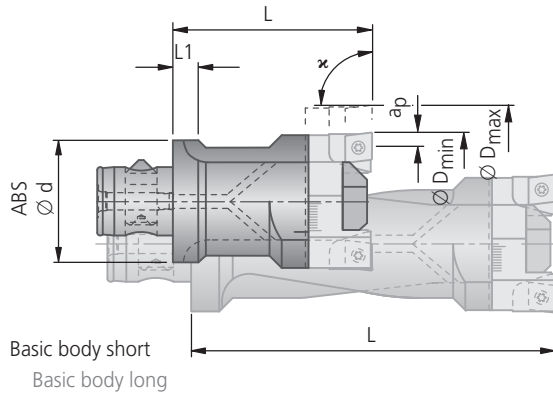


Basic recommendation				max. cutting depth		Assembly parts	Accessories
appropriate insert	Insert  Order No. ▽▽ size	ISO-Code	for workpiece material P M K N S H	$a_p$		Clamping screw  Order No. Description	Screwdriver  Order No. Description
⊗ W83 13...	W83 13010.048425 W83 13000.017935 W83 13000.017615 W83 13010.048425	SOEX 050204-01 BK8425 SOEX 050204-01 BK7935 SOEX 050204-01 BK7615 SOEX 050204-01 BK8425		2.5 1.5 3.0 3.0		N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP
⊗ W83 18...	W83 18010.068425 W83 18000.097935 W83 18000.097615 W83 18010.068425	SOEX 060306-01 BK8425 SOEX 060306-01 BK7935 SOEX 060306-01 BK7615 SOEX 060306-01 BK8425		2.5 1.5 3.0 3.0		N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP
⊗ W83 23...	W83 23010.088425 W83 23000.017935 W83 23000.017615 W83 23010.088425	SOEX 07T308-01 BK8425 SOEX 07T308-01 BK7935 SOEX 07T308-01 BK7615 SOEX 07T308-01 BK8425		4.5 3.5 5.0 5.0		N00 57571 S/M2.5x6.3-8IP 1.28 Nm	L05 00830 8IP
⊗ W83 32...	W83 32010.088425 W83 32000.157935 W83 32000.157615 W83 32010.088425	SOEX 090408-01 BK8425 SOEX 090408-01 BK7935 SOEX 090408-01 BK7615 SOEX 090408-01 BK8425		∅ 39-53 4.5 3.5 5.0 5.0	∅ 51-71 6.0 4.0 6.0 6.0	N00 57261 S3575-15IP 2.8 Nm	L05 00860 15IP
⊗ W83 44...	W83 44010.088425 W83 44000.187935 W83 44000.187615 W83 44010.088425	SOEX 120508-01 BK8425 SOEX 120508-01 BK7935 SOEX 120508-01 BK7615 SOEX 120508-01 BK8425		∅ 64-91 7.5 6.0 7.5 7.5	∅ 83-124 9.0 9.0 9.0 9.0	N00 57301 S45100-20IP 6.25 Nm	L05 00870 20IP

# KOMET TwinKom® G01

Ø 24 – 215 mm

Twin Cutter with ABS® Connection,  $\kappa = 90^\circ$



Ø D min-max	Basic body  Order No.	ABS Ø d	L	L1	Holder ①  Order No.	Insert seating ②  $\kappa = 90^\circ$ Order No. appropriate insert	Holder ③ $\kappa = 90^\circ$  Order No. appropriate insert
24 - 32	G01 70551 0.11	25	45	6			G03 70150 0.011 ☉ C85 18...
	G01 71071 0.21	32	70	7			
30 - 41	G01 70561 0.114	25	50	–			G03 70160 0.018 ☉ C85 18...
	G01 71131 0.293	32	85	7.5			
39 - 53	G01 71021 0.286	32	60	–	G03 70031 0.035	D54 60430 0.005 ☉ C85 18...	G03 70170 0.036 ☉ C85 32...
	G01 71621 0.676	40	120	8			
51 - 71	G01 71521 0.44	40	60	–	G03 70041 0.067	D54 60440 0.008 ☉ C85 32...	G03 70180 0.073 ☉ C85 32...
	G01 72121 1.238	50	135	10			
64 - 91	G01 72021 0.824	50	70	–	G03 70061 0.128	D54 60450 0.016 ☉ C85 32...	G03 70190 0.138 ☉ C85 44...
	G01 72621 2.25	63	155	13			
83 - 124	G01 72521 1.351	63	70	–	G03 70071 0.247	D54 60460 0.024 ☉ C85 44...	G03 70200 0.268 ☉ C85 44...
	G01 73121 3.805	80	155	16.5			
109 - 167	G01 73031 3.055	80	90	–	G03 70081 0.486	D54 60460 0.024 ☉ C85 44...	
	G01 73041 6.21	80	175	–			
139 - 215	G01 73561 6.47	100	125	–	G03 70091 1.082	D54 60470 0.055 ☉ C85 44...	
	G01 73571 13.25	100	240	–			

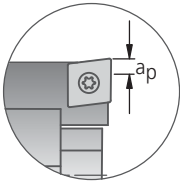


# KOMET TwinKom® G01 Twin Cutter with ABS® Connection

CCMT

through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
●	●	●	●	●	●	●	●	80°	●

● very good ● good ○ possible: see technical notes, page 224 ✗ not possible



### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

Supply includes basic body:

Clamping plate with adjusting screw and clamping screw.

Supply includes insert seating/holder: with clamping screw.

Please order inserts and accessories separately.

Order example:

Basic body short	G01 71021
Holder 2x	G03 70031
Insert seating 90° 2x	D54 60430
Insert 2x	C85 18010.047525

Basic recommendation					Assembly parts	Accessories
appropriate insert	Insert -05 Order No. ▽▽ size	ISO-Code	for workpiece material <b>P M K N S H</b>	max. cutting depth  $a_p$	Clamping screw  Order No. Description	Screwdriver  Order No. Description
☉ C85 18...	C85 18010.047525 C85 18010.047525 C85 18050.047610 C85 18120.0423	CCMT 060204-01 BK7520 CCMT 060204-01 BK7520 CCMT 060204-05 BK7610 CCGT 060204-12 K10		1.0 0.7 1.5 1.5	N00 57221 S2553-7IP 0.9 Nm	L05 00820 7IP
☉ C85 32...	C85 32010.047525 C85 32010.047525 C85 32050.047610 C85 32120.0423	CCMT 09T304-01 BK7520 CCMT 09T304-01 BK7520 CCMT 09T304-05 BK7610 CCGT 09T304-12 K10		1.5 1.0 2.0 2.0	N00 57261 S3575-15IP 2.8 Nm	L05 00860 15IP
☉ C85 44...	C85 44010.047525 C85 44010.047525 C85 44050.047610 C85 44120.0423	CCMT 120404-01 BK7520 CCMT 120404-01 BK7520 CCMT 120404-05 BK7610 CCGT 120404-12 K10		2.5 2.0 3.0 3.0	N00 57301 S45100-20IP 6.25 Nm	L05 00870 20IP

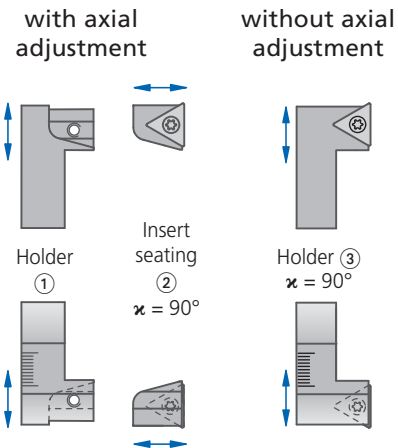
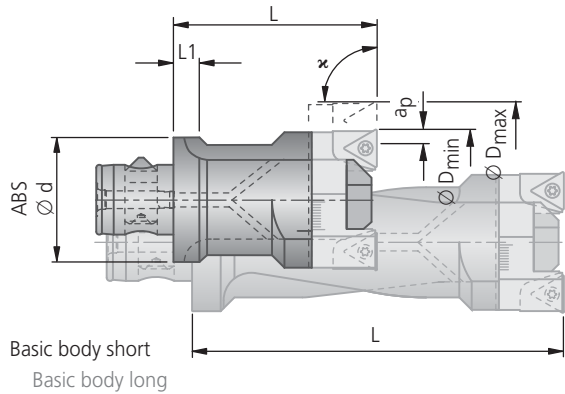
Guideline values for roughing: page 222.



# KOMET TwinKom® G01

Ø 24 – 215 mm

Twin Cutter with ABS® Connection,  $\kappa = 90^\circ$



Ø D min-max	Basic body			Holder ①	Insert seating ②		Holder ③ $\kappa=90^\circ$
	Order No.	ABS Ø d	L		L1	Order No. appropriate insert	
24 - 32	G01 70551 Ⓜ 0.11	25	45	6	G03 70031 Ⓜ 0.035	D54 60330 Ⓜ 0.005	G03 70210 Ⓜ 0.012 ▽ W57 04... ▽ W30 04...
	G01 71071 Ⓜ 0.21	32	70	7		▽ W57 14... ▽ W30 14...	
30 - 41	G01 70561 Ⓜ 0.114	25	50	–	G03 70041 Ⓜ 0.067	D54 60340 Ⓜ 0.008	G03 70220 Ⓜ 0.018 ▽ W57 14... ▽ W30 14...
	G01 71131 Ⓜ 0.293	32	85	7.5		▽ W57 26... ▽ W30 26...	
39 - 53	G01 71021 Ⓜ 0.286	32	60	–	G03 70061 Ⓜ 0.128	D54 60350 Ⓜ 0.016	
	G01 71621 Ⓜ 0.676	40	120	8		▽ W57 26... ▽ W30 26...	
51 - 71	G01 71521 Ⓜ 0.44	40	60	–	G03 70071 Ⓜ 0.247	D54 60360 Ⓜ 0.032	
	G01 72121 Ⓜ 1.238	50	135	10		▽ W57 26... ▽ W30 26...	
64 - 91	G01 72021 Ⓜ 0.824	50	70	–	G03 70081 Ⓜ 0.486	D54 60360 Ⓜ 0.032	
	G01 72621 Ⓜ 2.25	63	155	13		▽ W57 26... ▽ W30 26...	
83 - 124	G01 72521 Ⓜ 1.351	63	70	–	G03 70091 Ⓜ 1.082	D54 60380 Ⓜ 0.06	D54 60370 Ⓜ 0.056 ▽ W30 44...
	G01 73121 Ⓜ 3.805	80	155	16.5		▽ W57 26... ▽ W30 26...	
109 - 167	G01 73031 Ⓜ 3.055	80	90	–		D54 60370 Ⓜ 0.056	
	G01 73041 Ⓜ 6.21	80	175	–		▽ W57 26... ▽ W30 26...	
139 - 215	G01 73561 Ⓜ 6.47	100	125	–		D54 60370 Ⓜ 0.056	
	G01 73571 Ⓜ 13.25	100	240	–		▽ W57 26... ▽ W30 26...	

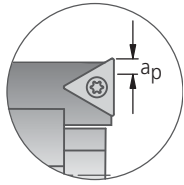


# KOMET TwinKom® G01 Twin Cutter with ABS® Connection

TOGX

through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
●	●	●	●	●	●	●	●	● 80°	●

● very good ● good ○ possible: see technical notes, page 224 ✗ not possible



### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

Supply includes basic body:

Clamping plate with adjusting screw and clamping screw.

Supply includes insert seating/holder: with clamping screw.

Please order inserts and accessories separately.

Order example:

Basic body short	G01 71021
Holder 2x	G03 70031
Insert seating 90° 2x	D54 60330
Insert 2x	W57 14140.028430

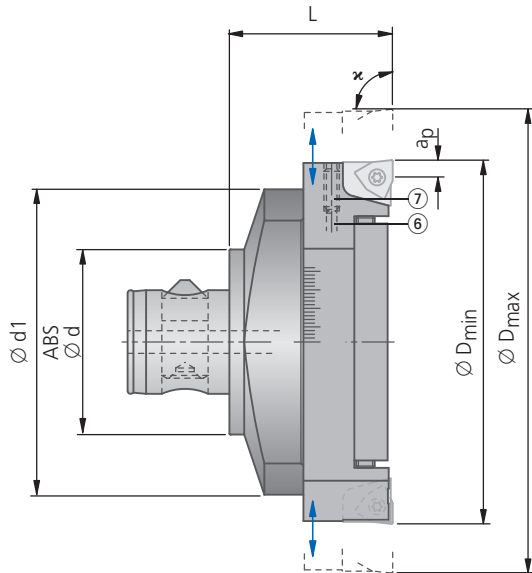
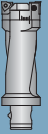


Basic recommendation			for workpiece material	max. cutting depth	Assembly parts	Accessories
appropriate insert	Insert	ISO-Code				
	W30 -12 -14			$a_p$	Clamping screw  Order No. Description	Screwdriver  Order No. Description
▼ W57 04... ▼ W30 04...	W57 04140.028430 W30 04060.037615 W57 04120.0223	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK7615 TOGX 06T102FN-12 K10		0.15 0.1 0.4	N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
▼ W57 14... ▼ W30 14...	W57 14140.028430 W30 14060.047615 W57 14120.0423	TOGX 090202EN-14 BK8430 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		0.4 0.3 0.5	N00 57221 S2553-7IP 0.9 Nm	L05 00820 7IP
▼ W57 26... ▼ W30 26...	W57 26140.028430 W30 26060.047615 W57 26120.0423	TOGX 140302EN-14 BK8430 TOHX 140304EL-G06 BK7615 TOGX 140304FN-12 K10		0.6 0.6 1.0	N00 56201 S/M3.5x6.2-10IP 2.8 Nm	L05 00850 10IP
▼ W30 44...	W30 44060.088425 W30 44600.087615	TOHX 22T308EL-G06 BK8425 TOHX 22T308EN BK7615		1.0 0.8	N00 56401 S/M5x9.4-20IP 6.25 Nm	L05 00870 20IP

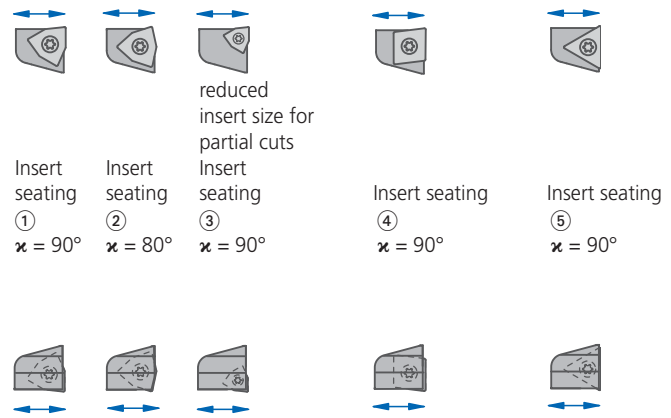
1



2



with axial adjustment



Ø D min-max	Twin Cutter Tool (basic body + pair of holders) Order No.	ABS Ø d	Ø d1	L	Assembly parts		Accessories					Assembly parts	
					Holder Order No.	Insert seating ① $\kappa=90^\circ$ Order No. appropriate insert	Insert seating ② $\kappa=80^\circ$ Order No. appropriate insert	Insert seating ③ $\kappa=90^\circ$ Order No. appropriate insert	Insert seating ④ $\kappa=90^\circ$ Order No. appropriate insert	Insert seating ⑤ $\kappa=90^\circ$ Order No. appropriate insert	Axial adjust- ment pin ⑥	Threaded pin ⑦ DIN913	
196–271	G01 63531 9.15	100	165	88	G03 10281 1.335	D54 60070 0.049	D54 60170 0.049	D54 60570 0.062	D54 60470 0.055	D54 60370 0.056	G03 10281.13	55051 05020 M5x20	
261–335	G01 63541 11.04	100	230	88	G03 10291 1.733	W29 58...	W29 58...	W29 24...	C85 44...	W30 44...			
326–401	G01 63551 13.94	100	295	88	G03 10301 1.983								

### Features:

- The 90° design has radially arranged cutters and can therefore be operated with the same cutting edge overhang with double feed rate (feed distribution).
- The 80° design offers greater cutting widths through arrow-shaped cutter arrangement and particularly good tool guidance. Connection, excluding extensions, where possible only directly onto taper shank or spindle adaptor flange.
- The tool has internal coolant supply to each cutter.

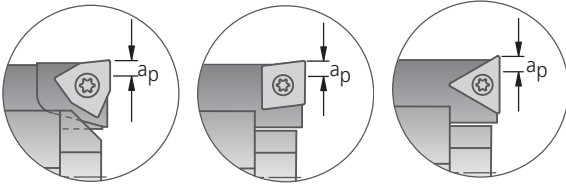


# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection

through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable

● very good ● good ○ possible: see technical notes, page 224 ✗ not possible



Supply includes twin cutter tool:

Basic body, clamping plate, adjusting screw and clamping screw, holder with axial adjustment pin and threaded pin.

Supply includes insert seating: with clamping screw.

Please order inserts and accessories separately.

### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

### Order example:

Twin cutter tool	G01 63531
Insert seating 90° 2x	D54 60070
Insert 2x	W29 58010.088425

Basic recommendation			for workpiece material	max. cutting depth	Assembly parts	Accessories
appropriate insert	Insert Order No. ▽▽ size	ISO-Code		$a_p$	Clamping screw Order No. Description	Screwdriver Order No. Description
W29 24...	W29 24010.048425 W29 24010.047930 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77		4.5 3.5 5.0 5.0	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
W29 58...	W29 58010.088425 W29 58010.087930 W29 58010.087615 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7930 WOEX 120608-01 BK7615 WOEX 120608-00 K10		9.0 9.0 9.0 9.0	N00 57541 S/M5.5x11-20IP 6.25 Nm	L05 00870 20IP

Basic recommendation			for workpiece material	max. cutting depth	Assembly parts	Accessories
appropriate insert	Insert Order No. ▽▽ size	ISO-Code		$a_p$	Clamping screw Order No. Description	Screwdriver Order No. Description
C85 44...	C85 44010.047525 C85 44010.047525 C85 44050.047610 C85 44120.0423	CCMT 120404-01 BK7520 CCMT 120404-01 BK7520 CCMT 120404-05 BK7610 CCGT 120404-12 K10		2.5 2.0 3.0 3.0	N00 57301 S45100-20IP 6.25 Nm	L05 00870 20IP

Basic recommendation			for workpiece material	max. cutting depth	Assembly parts	Accessories
appropriate insert	Insert Order No. ▽▽ size	ISO-Code		$a_p$	Clamping screw Order No. Description	Screwdriver Order No. Description
W30 44...	W30 44060.088425 W30 44600.087615	TOHX22T308EL-G06 BK8425 TOHX 22T308EN BK7615		1.0 0.8	N00 56401 S/M5x9.4-20IP 6.25 Nm	L05 00870 20IP



WOEX

## Technical Notes

Guideline values for roughing					V <sub>c</sub>	Max. feed f <sub>z</sub> (mm/tooth)								
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN		Cutting speed v <sub>c</sub> (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	200	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.30	0.30
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	200	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.30	0.30
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	180	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.30	0.30
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	140	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.30	0.30
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	120	0.06	0.10	0.12	0.15	0.20	0.20	0.25	0.25	0.25
4.1			HSS		-	-	-	-	-	-	-	-	-	-
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.05	0.08	0.10	0.12	0.12	0.15	0.15	0.20	0.20
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	50	0.06	0.08	0.10	0.12	0.12	0.15	0.15	0.20	0.20
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	120	0.07	0.09	0.12	0.12	0.15	0.20	0.20	0.20	0.20
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	120	0.07	0.09	0.12	0.12	0.15	0.20	0.20	0.20	0.20
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	90	0.05	0.07	0.10	0.10	0.12	0.15	0.15	0.15	0.15
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	180	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	140	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	140	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	120	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.35	0.35
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	100	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.35	0.35
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	100	0.10	0.12	0.15	0.20	0.25	0.30	0.30	0.35	0.35
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	90	0.12	0.15	0.25	0.30	0.30	0.35	0.35	0.35	0.35
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	250	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	250	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	250	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	200	0.12	0.15	0.25	0.25	0.30	0.35	0.35	0.35	0.35
H	15.0	1400	hardened steels < 45 HRC		-	-	-	-	-	-	-	-	-	-
	1800		hardened steels > 45 HRC		-	-	-	-	-	-	-	-	-	-



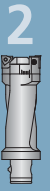
# KOMET TwinKom® G01 / G04

## Alternative Inserts



Alternative Inserts				for workpiece material
appropriate insert	Insert			P M K N S H
	ap	Order No. ▽ Size	ISO-Code	
for better chip control	W29 10...	< 0.8	W29 10150.0484 WOGX030204-15 BK84	●
		0.8-2.5	W29 10030.048425 WOEX030204-03 BK8425	●
		0.8-2.5	W29 10130.048425 WOEX030204-13 BK8425	●
	W29 18...	0.8-1.5	W29 10130.047935 WOEX030204-13 BK7935	●
		...1.5	W01 10120.0421 WOEX030204FL-G12 K10	● ● ●
		< 0.8	W29 18150.0484 WOGX040304-15 BK84	●
	W29 24...	0.8-2.5	W29 18030.048425 WOEX040304-03 BK8425	●
		0.8-2.5	W29 18130.048425 WOEX040304-13 BK8425	●
		0.8-1.5	W29 18130.047935 WOEX040304-13 BK7935	●
	W29 34...	...1.5	W01 18120.0421 WOEX040304FL-G12 K10	● ● ●
		< 1.5	W29 24150.0484 WOGX05T304-15 BK84	●
		1.0-4.5	W29 24030.048425 WOEX05T304-03 BK8425	●
W29 42...	1.0-4.5	W29 24020.046440 WOEX05T304-02 BK6440	●	
	1.5-4.5	W29 24130.048425 WOEX05T304-13 BK8425	●	
	1.0-3.5	W29 24130.047935 WOEX05T304-13 BK7935	●	
W29 50...	...5.0	W01 24120.0421 WOEX05T304FL-G12 K10	● ● ●	
	< 1.5	W29 34150.0484 WOGX06T304-15 BK84	●	
	1.0-6.0	W29 34030.048425 WOEX06T304-03 BK8425	●	
W29 58...	1.0-6.0	W29 34020.046440 WOEX06T304-02 BK6440	●	
	2.5-6.0	W29 34130.048425 WOEX06T304-13 BK8425	●	
	1.5-4.0	W29 34130.047935 WOEX06T304-13 BK7935	●	
for greater strength	W29 10...	...6.0	W01 34120.0421 WOEX06T304FL-G12 K10	● ● ●
		< 1.5	W29 42150.0484 WOGX080404-15 BK84	●
		1.0-6.0	W29 42030.048425 WOEX080404-03 BK8425	●
	W29 18...	1.0-6.0	W29 42020.046440 WOEX080404-02 BK6440	●
		2.5-6.0	W29 42130.048425 WOEX080404-13 BK8425	●
		1.5-4.0	W29 42130.047935 WOEX080404-13 BK7935	●
	W29 24...	...6.0	W01 42120.0421 WOEX080404FL-G12 K10	● ● ●
		2.5-9.0	W29 50030.048425 WOEX100504-03 BK8425	●
		2.5-9.0	W29 50020.046440 WOEX100504-02 BK6440	●
	W29 34...	2.5-9.0	W29 50130.048425 WOEX100504-13 BK8425	●
		2.5-9.0	W29 50130.047935 WOEX100504-13 BK7935	●
		...7.5	W01 50120.0421 WOEX100504FL-G12 K10	● ● ●
W29 42...	3.0-9.0	W29 58030.088425 WOEX120608-03 BK8425	●	
	3.0-9.0	W29 58020.086440 WOEX120608-02 BK6440	●	
	3.0-9.0	W29 58130.0879 WOEX120608-13 BK7935	●	
for higher cutting speed	W29 10...	△ For cutting depths ap < 3.0 mm use smaller cartridge D54 60170		
		W29 10010.047930 WOEX030204-01 BK7930	● ● ●	
		W29 10010.0404 WOEX030204-01 P40	● ● ●	
	W29 18...	W29 10010.0421 WOEX030204-01 K10	● ● ●	
		W29 10110.0421 WOEX030204-11 K10	● ● ●	
		W01 10120.0421 WOEX030204FL-G12 K21	● ● ●	
	W29 24...	W29 18010.047930 WOEX040304-01 BK7930	● ● ●	
		W29 18010.0404 WOEX040304-01 P40	● ● ●	
		W29 18010.0421 WOEX040304-01 K10	● ● ●	
	W29 34...	W29 18110.0421 WOEX040304-11 K10	● ● ●	
		W01 18120.0421 WOEX040304FL-G12 K21	● ● ●	
		W29 24010.047930 WOEX05T304-01 BK7930	● ● ●	
W29 42...	W29 24010.0404 WOEX05T304-01 P40	● ● ●		
	W29 24010.0421 WOEX05T304-01 K10	● ● ●		
	W29 24110.0421 WOEX05T304-11 K10	● ● ●		
W29 50...	W01 24120.0421 WOEX05T304FL-G12 K21	● ● ●		
	W29 34010.047930 WOEX06T304-01 BK7930	● ● ●		
	W29 34010.0404 WOEX06T304-01 P40	● ● ●		
W29 58...	W29 34010.0421 WOEX06T304-01 K10	● ● ●		
	W29 34110.0421 WOEX06T304-11 K10	● ● ●		
	W01 34120.0421 WOEX06T304FL-G12 K21	● ● ●		
for better surface finish	W29 10...	W29 42010.047930 WOEX080404-01 BK7930	● ● ●	
		W29 42010.0404 WOEX080404-01 P40	● ● ●	
		W29 42010.0421 WOEX080404-01 K10	● ● ●	
	W29 18...	W29 42110.0421 WOEX080404-11 K10	● ● ●	
		W01 42120.0421 WOEX080404FL-G12 K21	● ● ●	
		W29 50010.047930 WOEX100504-01 BK7930	● ● ●	
	W29 24...	W29 50010.0404 WOEX100504-01 P40	● ● ●	
		W29 50010.0421 WOEX100504-01 K10	● ● ●	
		W29 50110.0421 WOEX100504-11 K10	● ● ●	
	W29 34...	W01 50120.0421 WOEX100504FL-G12 K21	● ● ●	
		W29 58010.087930 WOEX120608-01 BK7930	● ● ●	
		W29 58010.0804 WOEX120608-01 P40	● ● ●	
W29 58010.0821 WOEX120608-01 K10	● ● ●			

Alternative Inserts				for workpiece material
appropriate insert	Insert			P M K N S H
	Order No. ▽ Size	ISO-Code		
for higher cutting speed	W29 10...	W29 10130.047325 WOEX030204-13 BK7325	● ● ●	
		W29 10150.0473 WOGX030204-15 BK73	● ● ●	
		W29 10010.0472 WOEX030204-01 BK72	● ● ●	
	W29 18...	W01 10060.047615 WOEX030204FL-G06 BK7675	● ● ●	
		W29 10110.0450 WOEX030204-11 BK50	● ● ●	
		W29 18130.047325 WOEX040304-13 BK7325	● ● ●	
	W29 24...	W29 18150.047325 WOGX040304-15 BK7325	● ● ●	
		W29 18010.0472 WOEX040304-01 BK72	● ● ●	
		W01 18060.047615 WOEX040304FL-G06 BK7615	● ● ●	
	W29 34...	W29 24130.047325 WOEX05T304-13 BK7325	● ● ●	
		W29 24150.047325 WOGX05T304-15 BK7325	● ● ●	
		W29 24010.0472 WOEX05T304-01 BK72	● ● ●	
W29 42...	W29 24010.046115 WOEX05T304-01 BK6115	● ● ●		
	W29 24020.046425 WOEX05T304-02 BK6425	● ● ●		
	W01 24940.0457 WOGX05T304F CBN57	● ● ●		
W29 50...	W01 24600.0845 WOEX05T304F PKD55	● ● ●		
	W01 24940.0455 WOGX05T304F PKD55	● ● ●		
	W29 24110.0450 WOEX05T304-11 BK50	● ● ●		
W29 58...	W29 34130.047325 WOEX06T304-13 BK7325	● ● ●		
	W29 34150.047325 WOGX06T304-15 BK7325	● ● ●		
	W29 34010.0472 WOEX06T304-01 BK72	● ● ●		
for better surface finish	W29 10...	W29 34010.046115 WOEX06T304-01 BK6115	● ● ●	
		W29 34020.046425 WOEX06T304-02 BK6425	● ● ●	
		W01 34940.0457 WOGX06T304F CBN57	● ● ●	
	W29 18...	W01 34940.0455 WOGX06T304F PKD55	● ● ●	
		W29 34110.0450 WOEX06T304-11 BK50	● ● ●	
		W29 42130.04735 WOEX080404-13 BK7325	● ● ●	
	W29 24...	W29 42150.047325 WOGX080404-15 BK7325	● ● ●	
		W29 42010.0472 WOEX080404-01 BK72	● ● ●	
		W29 42010.046115 WOEX080404-01 BK6115	● ● ●	
	W29 34...	W01 42940.0457 WOGX080404F CBN57	● ● ●	
		W01 42940.0455 WOGX080404F PKD55	● ● ●	
		W29 42110.0450 WOEX080404-11 BK50	● ● ●	
W29 42...	W29 50130.04735 WOEX100504-13 BK7325	● ● ●		
	W29 50010.0472 WOEX100504-01 BK72	● ● ●		
	W29 50010.046115 WOEX100504-01 BK6115	● ● ●		
W29 58...	W29 50110.0450 WOEX100504-11 BK50	● ● ●		
	W29 58130.087935 WOEX120608-13 BK7935	● ● ●		
	W29 58010.0872 WOEX120608-01 BK72	● ● ●		
W29 10...	W29 18160.0484 WOGX040304-16 BK84	● ● ●		
	W29 18160.047325 WOGX040304-16 BK7325	● ● ●		
	W29 18160.046425 WOGX040304-16 BK6425	● ● ●		
W29 24...	W29 24160.0484 WOGX05T304-16 BK84	● ● ●		
	W29 24160.047325 WOGX05T304-16 BK7325	● ● ●		
	W29 24160.046425 WOGX05T304-16 BK6425	● ● ●		
W29 34...	W29 34160.0484 WOGX06T304-16 BK84	● ● ●		
	W29 34160.047325 WOGX06T304-16 BK7325	● ● ●		
	W29 34160.046425 WOGX06T304-16 BK6425	● ● ●		









		Guideline values for roughing			v <sub>c</sub>	Max. feed f <sub>z</sub> (mm/tooth)							
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN		Cutting speed v <sub>c</sub> (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	200	0.12	0.14	0.20	0.25	0.30	0.35	0.40	0.40
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	200	0.12	0.14	0.20	0.25	0.30	0.35	0.40	0.40
	2.1	<500	lead alloys	95MnPb28 / 1.0718	180	0.12	0.14	0.20	0.25	0.30	0.35	0.40	0.40
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	140	0.12	0.14	0.20	0.25	0.30	0.35	0.40	0.40
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	120	0.10	0.12	0.15	0.20	0.25	0.25	0.30	0.30
	4.1		HSS		-	-	-	-	-	-	-	-	-
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	-	-	-	-	-	-	-	-	-
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	-	-	-	-	-	-	-	-	-
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	120	0.10	0.12	0.15	0.20	0.25	0.25	0.30	0.30
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	120	0.10	0.12	0.15	0.20	0.25	0.25	0.30	0.30
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	90	0.10	0.12	0.15	0.20	0.25	0.25	0.30	0.30
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	180	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	140	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	140	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	120	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	100	0.12	0.15	0.20	0.20	0.25	0.30	0.40	0.40
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	100	0.12	0.15	0.20	0.20	0.25	0.30	0.40	0.40
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	90	0.15	0.20	0.20	0.25	0.30	0.35	0.40	0.40
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	250	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	250	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	250	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	200	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.50
H	15.0	1400	hardened steels < 45 HRC		-	-	-	-	-	-	-	-	-
	1800		hardened steels > 45 HRC		-	-	-	-	-	-	-	-	-

# KOMET TwinKom® G01

## Alternative Inserts



Alternative Inserts				
	Insert		for workpiece material	
	 -01	 -13	 -21	
	Order No. ▽ Size	ISO-Code	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	
for better chip control	W83 13...	W83 13130.048425	SOEX 050204-13 BK8425	
		W83 13210.042730	SOEX 050204-21 BK2730	
		W83 13000.0279	SOEX 050204-13 BK7935	
		W83 13210.047710	SOEX 050204-21 BK7710	
	W83 18...	W83 18130.068425	SOEX 060306-13 BK8425	
		W83 18210.062730	SOEX 060306-21 BK2730	
		W83 18000.1079	SOEX 060306-13 BK7935	
		W83 18210.067710	SOEX 060306-21 BK7710	
	W83 23...	W83 23130.088425	SOEX 07T308-13 BK8425	
		W83 23210.082730	SOEX 07T308-21 BK2730	
		W83 23000.0279	SOEX 07T308-13 BK7935	
		W83 23210.087710	SOEX 07T308-21 BK7710	
W83 32...	W83 32130.088425	SOEX 090408-13 BK8425		
	W83 32210.082730	SOEX 090408-21 BK2730		
	W83 32000.1779	SOEX 090408-13 BK7935		
	W83 32210.087710	SOEX 090408-21 BK7710		
W83 44...	W83 44130.088425	SOEX 120508-13 BK8425		
	W83 44210.082730	SOEX 120508-21 BK2730		
	W83 44000.1979	SOEX 120508-13 BK7935		
	W83 44210.087710	SOEX 120508-21 BK7710		

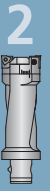
Alternative Inserts				
	Insert		for workpiece material	
	 -01	 -13	 -21	
	Order No. ▽ Size	ISO-Code	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	
for higher cutting speed	W83 13...	W83 13010.046420	SOEX 050204-01 BK6420	
		W83 13000.0174	SOEX 050204-01 BK74	
		W83 13000.016115	SOEX 050204-01 BK6115	
		W83 18010.066420	SOEX 060306-01 BK6420	
	W83 18...	W83 18000.0974	SOEX 060306-01 BK74	
		W83 18000.096115	SOEX 060306-01 BK6115	
		W83 23010.086420	SOEX 07T308-01 BK6420	
		W83 23000.0174	SOEX 07T308-01 BK74	
	W83 23...	W83 23000.016115	SOEX 07T308-01 BK6115	
		W83 32010.086420	SOEX 090408-01 BK6420	
		W83 32000.1574	SOEX 090408-01 BK74	
		W83 32000.156115	SOEX 090408-01 BK6115	
W83 32...	W83 44010.086420	SOEX 120508-01 BK6420		
	W83 44000.1874	SOEX 120508-01 BK74		
	W83 44000.186115	SOEX 120508-01 BK6115		
	W83 13000.017935	SOEX 050204-01 BK7935		
for greater strength	W83 13...	W83 13010.046420	SOEX 050204-01 BK6420	
		W83 18000.097935	SOEX 060306-01 BK7935	
		W83 18010.066420	SOEX 060306-01 BK6420	
		W83 23000.017935	SOEX 07T308-01 BK7935	
	W83 18...	W83 23010.086420	SOEX 07T308-01 BK6420	
		W83 32000.157935	SOEX 090408-01 BK7935	
		W83 32010.086420	SOEX 090408-01 BK6420	
		W83 44000.187935	SOEX 120508-01 BK7935	
	W83 23...	W83 44010.086420	SOEX 120508-01 BK6420	



TOGX

		Guideline values for roughing			Material example, material code/DIN	v <sub>c</sub> Cutting speed v <sub>c</sub> (m/min)	Max. feed f <sub>z</sub> (mm/tooth)							
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Ø 24 – 32			Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215	Ø 196 – 401
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	200	0.06	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	200	0.06	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
	2.1	<500	lead alloys	95MnPb28 / 1.0718	180	0.07	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	140	0.07	0.10	0.10	0.12	0.12	0.12	0.15	0.15	
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	120	0.05	0.08	0.08	0.08	0.08	0.08	0.15	0.15	
	4.1		HSS		90	0.04	0.04	0.04	0.08	0.08	0.08	0.08	0.15	0.15
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	-	-	-	-	-	-	-	-	-	
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	-	-	-	-	-	-	-	-	-	
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	120	0.06	0.08	0.08	0.10	0.10	0.10	0.15	0.15	
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	120	0.06	0.08	0.08	0.10	0.10	0.10	0.15	0.15	
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	90	0.05	0.06	0.06	0.08	0.08	0.08	0.15	0.15	
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	180	0.10	0.15	0.15	0.20	0.20	0.20	0.25	0.25	
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	140	0.10	0.15	0.15	0.20	0.20	0.20	0.25	0.25	
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	140	0.07	0.15	0.15	0.20	0.20	0.20	0.25	0.25	
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	120	0.07	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	100	0.07	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	100	0.07	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	90	0.08	0.10	0.10	0.15	0.15	0.15	0.20	0.20	
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	250	0.12	0.15	0.15	0.25	0.25	0.25	0.30	0.30	
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.12	0.15	0.15	0.25	0.25	0.25	0.30	0.30	
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	250	0.10	0.15	0.15	0.25	0.25	0.25	0.30	0.30	
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	250	0.10	0.15	0.15	0.25	0.25	0.25	0.30	0.30	
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	200	0.10	0.15	0.15	0.25	0.25	0.25	0.30	0.30	
H	15.0	1400	hardened steels < 45 HRC		-	-	-	-	-	-	-	-	-	
	1800		hardened steels > 45 HRC		-	-	-	-	-	-	-	-	-	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



# KOMET TwinKom® G01

## Alternative Inserts



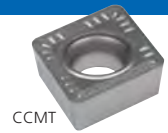
Alternative Inserts			
▽ Size	Insert	ISO-Code	for workpiece material <b>P M K N S H</b>
	W30..12 W57..12		
for better chip control W57 04 / W30 04	W30 04120.3232	TOHX 06T102EL-US12 CK32	●●
	W30 04120.3060	TOHX 06T100EL-G12 BK6425	●●
	W57 04120.0223	TOGX 06T102FN-12 K10	●●
W57 14 / W30 14	W30 14120.3232	TOHX 090202EL-US12 CK32	●●
	W30 14120.3060	TOHX 090200EL-G12 BK6425	●●
	W57 14120.0423	TOGX 090204FN-12 K10	●●
W57 26 / W30 26	W30 26120.3232	TOHX 140302EL-US12 CK32	●●
	W57 26120.0423	TOGX 140304FN-12 K10	●●
W30 44...			

Alternative Inserts			
▽ Size	Insert	ISO-Code	for workpiece material <b>P M K N S H</b>
	W57..12 W57..14 W30..12 W30..99		
for higher cutting speed W57 04 / W30 04	W57 04140.023210	TOGX 06T102EN-14 CK3210	●●
	W57 04140.0260	TOGX 06T102EN-14 BK6425	●●
	W30 04990.0357	TOGX 06T103TN CBN57	●●
	W30 04990.0355	TOGX 06T103FN PKD55	●●
W57 14 / W30 14	W30 14120.3232	TOHX 090202EL-US12 CK32	●●
	W30 14120.3060	TOHX 090200EL-G12 BK6425	●●
	W57 14120.0423	TOGX 090204FN-12 K10	●●
W57 26 / W30 26	W30 26120.3232	TOHX 140302EL-US12 CK32	●●
	W57 26120.0423	TOGX 140304FN-12 K10	●●
W30 44...	W30 44600.0821	TOHX 22T308 EN K10	●

for greater strength W57 04 / W30 04	W30 04120.316425	TOHX 06T102EL-UF12 BK6425	●●
	W30 04990.0357	TOGX 06T103TN CBN57	●●
	W30 04990.0355	TOGX 06T103FN PKD55	●●
	W30 04990.0240	TOGX 06T103TN CBN40	●●
W57 14 / W30 14	W30 14120.316425	TOHX 090202EL-UF12 BK6425	●●
	W30 14120.3060	TOHX 090200EL-G12 BK6425	●●
	W57 14120.0423	TOGX 090204FN-12 K10	●●
	W30 14990.0440	TOGX 090204TN CBN40	●●
W57 26 / W30 26	W30 26120.316425	TOHX140302EL-UF12 BK6425	●●
	W57 26120.0423	TOGX140304FN-12 K10	●●
	W30 26990.0440	TOGX140304TN CBN40	●●
W30 44...			

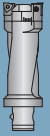
# KOMET TwinKom® G01

## Technical Notes



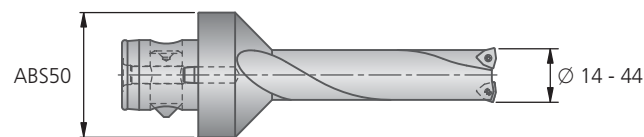
CCMT

Guideline values for roughing					V <sub>c</sub>	Max. feed f <sub>z</sub> (mm/tooth)								
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN		Cutting speed v <sub>c</sub> (m/min)	Ø 24 – 32	Ø 30 – 41	Ø 39 – 53	Ø 51 – 71	Ø 64 – 91	Ø 83 – 124	Ø 109 – 167	Ø 139 – 215
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	200	0.08	0.08	0.08	0.10	0.10	0.15	0.15	0.15	0.15
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	200	0.08	0.08	0.08	0.10	0.10	0.15	0.15	0.15	0.15
	2.1	<500	lead alloys	95MnPb28 / 1.0718	180	0.08	0.08	0.08	0.10	0.10	0.15	0.15	0.15	0.15
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	140	0.07	0.07	0.07	0.08	0.08	0.12	0.12	0.12	0.12
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	120	0.07	0.07	0.07	0.08	0.08	0.10	0.10	0.10	0.10
4.1			HSS		90	0.05	0.05	0.05	0.06	0.06	0.10	0.10	0.10	0.10
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	-	-	-	-	-	-	-	-	-	-
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	-	-	-	-	-	-	-	-	-	-
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	120	0.07	0.07	0.07	0.08	0.08	0.12	0.12	0.12	0.12
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	120	0.06	0.06	0.06	0.07	0.07	0.12	0.12	0.12	0.12
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	90	0.05	0.05	0.05	0.06	0.06	0.10	0.10	0.10	0.10
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	180	0.10	0.10	0.10	0.15	0.15	0.25	0.25	0.25	0.25
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	140	0.10	0.10	0.10	0.15	0.15	0.25	0.25	0.25	0.25
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	140	0.10	0.10	0.10	0.15	0.15	0.25	0.25	0.25	0.25
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	120	0.10	0.10	0.10	0.15	0.15	0.25	0.25	0.25	0.25
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	100	0.07	0.07	0.07	0.10	0.10	0.20	0.20	0.20	0.20
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	100	0.08	0.08	0.08	0.10	0.10	0.20	0.20	0.20	0.20
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	90	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	250	0.15	0.15	0.15	0.20	0.20	0.30	0.30	0.30	0.30
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.15	0.15	0.15	0.20	0.20	0.30	0.30	0.30	0.30
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	250	0.15	0.15	0.15	0.20	0.20	0.30	0.30	0.30	0.30
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	250	0.15	0.15	0.15	0.20	0.20	0.30	0.30	0.30	0.30
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	200	0.15	0.15	0.15	0.20	0.20	0.30	0.30	0.30	0.30
H	15.0	1400	hardened steels < 45 HRC		-	-	-	-	-	-	-	-	-	-
	1800		hardened steels > 45 HRC		-	-	-	-	-	-	-	-	-	-



## Easy Special tool

Diameter range from 14-44 mm  
(also intermediate sizes)  
for boring depths 2xD, 3xD and 4xD  
in ABS 50  
see chapter 4



## Special tools set standards

Special tools with KOMET's comprehensive knowledge  
and experience for economic cutting.

**The advantages of our Easy Special tools are  
obvious:**

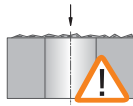
- High tech tools from planning to productive use
- Shortest delivery times - available within 3 weeks
- Parameters set for different tool models
- Optimum production tolerances
- Fixed prices at standard price level

**In short: time costs money.**

1



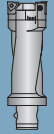
1.



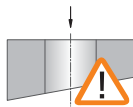
### Starting on uneven surfaces (cast surfaces)

- subject to the starting angle, the feed must be reduced when starting the bore.  
Rule of thumb:  $3^\circ = 30\%$ ;  $10^\circ = 40\%$ ;  $25^\circ = 60\%$
  - use tough insert
  - use stable corner radius
- 

2



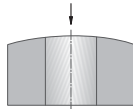
2.



### Angled bore exit

- from wear cut is interrupted reduce feed rate up to 50%
  - use tough insert
  - use stable corner radius
- 

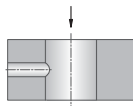
3.



### Starting on cambered surfaces

- no problems
  - reduce feed rate if necessary
- 

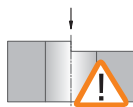
4.



### Roughing through a cross bore

- reduce feed rate 50% if necessary
  - watch for chip jamming around tool
  - use tough insert
  - use stable corner radius
- 

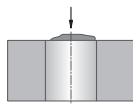
5.



### Starting on an edge

- reduce feed rate by 50%
  - use tough insert
  - use stable corner radius
- 

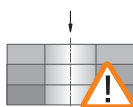
6.



### Starting on a welded seam

- reduce feed rate
  - use max.  $3 \times D$  tools
- 

7.



### Roughing through stacked plates

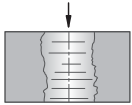
- use holder with  $80^\circ$  approach angle
  - good workpiece clamping required
  - max. gap = 1 mm
-





**Long chips**

- not optimum geometry
- select correct cutting depth
- select correct cutting values



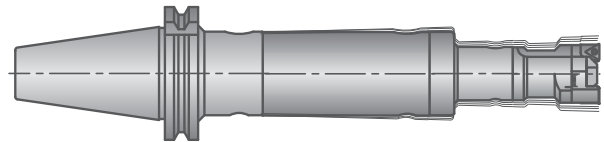
**Bad surface finish**

- feed rate too high → improve cutting parameters: increase cutting speed, reduce feed
- long chips



**Vibrations**

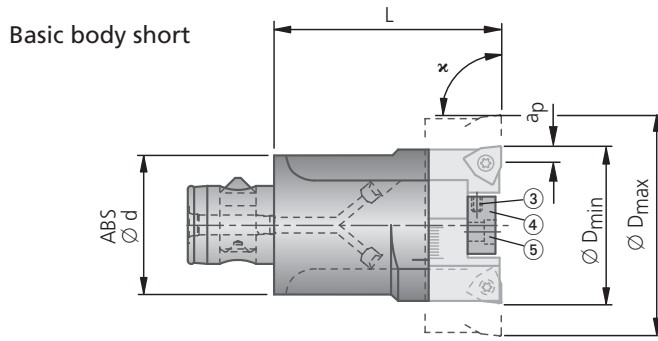
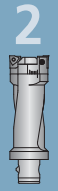
- feed rate too high
- cutting speed too high
- geometry too obtuse
- check axial / radial setting
- check tool assembly
- if required, use a damping element adaptor



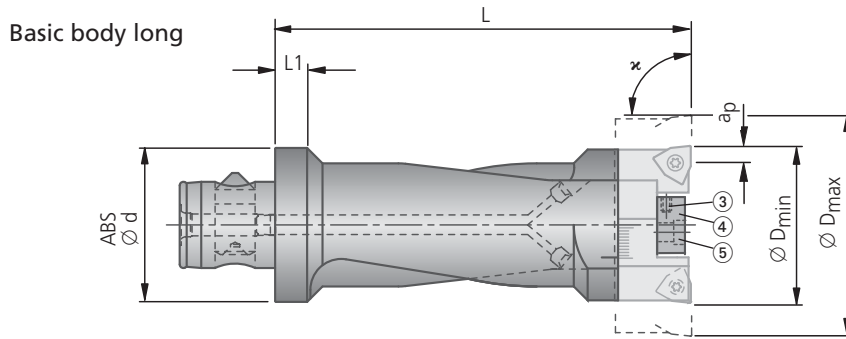
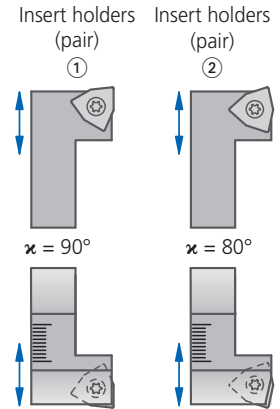
# KOMET TwinKom® G04

Twin Cutter with ABS® Connection,  $\kappa = 90^\circ / 80^\circ$

Ø 1.181 – 8.031 inch  
(Ø 30 – 204 mm)



without axial adjustment



(..) = mm

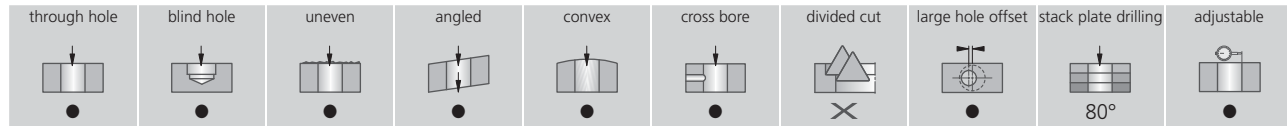
Ø D min-max	Basic body Order No.	ABS Ø d	L	L1	Pair of insert holders ① $\kappa=90^\circ$ Order No. appropriate insert	Pair of insert holders ② $\kappa=80^\circ$ Order No. appropriate insert	Assembly parts		
							Adjusting screw ③ DIN912 Order No. Description	Clamping plate ④ Order No.	Clamping screw ⑤ DIN912 Order No. article
1.181-1.614 (30-41)	G04 00500 0.29	25	1.969 (50)	-	G03 60410 [G03 60510] 0.08	G03 50410 [G03 50510] 0.08	55051 03010 M3x10	G04 01000.12	55011 04020 M4x20
	G04 01000 0.63	32	3.346 (85)	0.295 (7.5)	W29 24...	W29 24...			
1.535-2.008 (39 - 51)	G04 01010 0.63	32	2.362 (60)	-	G03 60420 [G03 60520] 0.17	G03 50420 [G03 50520] 0.17	55051 04010 M4x10	G04 01500.12	55011 05025 M5x25
	G04 01500 1.46	40	4.724 (120)	0.335 (8.5)	W29 34...	W29 34...			
1.929-2.795 (49 - 71)	G04 01510 0.94	40	2.362 (60)	-	G03 60430 [G03 60530] 0.34	G03 50430 [G03 50530] 0.34	55051 04016 M4x16	G04 01510.12	55011 06025 M6x25
	G04 02000 2.70	50	5.315 (135)	0.413 (10.5)	W29 34...	W29 34...			
2.520-3.853 (64 - 91)	G04 02010 1.79	50	2.756 (70)	-	G03 60440 [G03 60540] 0.64	G03 50440 [G03 50540] 0.64	55051 05025 M5x25	G04 02010.12	55011 08030 M8x30
	G04 02020 4.91	50	5.315 (135)	-	W29 42...	W29 42...			
3.268-4.764 (83 - 121)	G04 02500 2.95	63	2.756 (70)	-	G03 60450 [G03 60550] 1.22	G03 50450 [G03 50550] 1.22	55051 08035 M8x35	G04 02500.12	55011 10035 M10x35
	G04 02510 8.37	63	6.102 (155)	-	W29 50...	W29 50...			
4.291-6.181 (109 - 157)	G04 03000 6.69	80	3.543 (90)	-	G03 60460 [G03 60560] 2.26	G03 50460 [G03 50560] 2.23	55051 08055 M8x55	G04 03000.12	55011 12045 M12x45
	G04 03010 13.34	80	6.890 (175)	-	W29 50...	W29 50...			
5.472-8.031 (139 - 204)	G04 03500 13.72	100	4.921 (125)	-	G03 60470 [G03 60570] 4.99	G03 50470 [G03 50570] 4.96	55051 10080 M10x80	G04 03500.12	55011 16055 M16x55



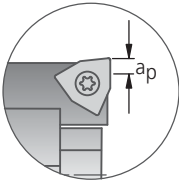
# KOMET TwinKom® G04

## Twin Cutter with ABS® Connection

WOEX



● very good ○ good ◯ possible ✕ not possible



### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

### Supply includes basic body:

Clamping plate with adjusting screw and clamping screw.

Supply includes pair of insert holders: with clamping screw.

Please order inserts and accessories separately.

### Order example:

Basic body short G04 00500  
 Pair of insert holders 90° G03 60510  
 Insert 2x W29 24010.048425

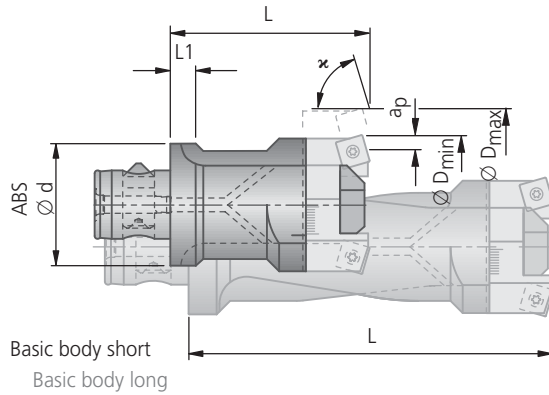
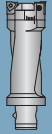
Basic recommendation					Assembly parts	Accessories
appropriate insert	Insert		for workpiece material P M K N S H	max. cutting depth $a_p$	Clamping screw	Screwdriver
	Order No. ▽▽ size	ISO-Code			Order No. Description	Order No. Description
W29 24...	W29 24010.048425 W29 24010.047930 W29 24010.047615 W29 24110.0477	WOEX 05T304-01 BK8425 WOEX 05T304-01 BK7930 WOEX 05T304-01 BK7615 WOEX 05T304-11 BK77	● ● ● ● ● ●	0.177 0.138 0.197 0.197	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
W29 34...	W29 34010.048425 W29 34010.047930 W29 34010.047615 W29 34110.0477	WOEX 06T304-01 BK8425 WOEX 06T304-01 BK7930 WOEX 06T304-01 BK7615 WOEX 06T304-11 BK77	● ● ● ● ● ●	0.236 0.157 0.236 0.236	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
W29 42...	W29 42010.048425 W29 42010.047930 W29 42010.047615 W29 42110.0477	WOEX 080404-01 BK8425 WOEX 080404-01 BK7930 WOEX 080404-01 BK7615 WOEX 080404-11 BK77	● ● ● ● ● ●	0.295 0.236 0.295 0.295	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
W29 50...	W29 50010.088425 W29 50010.047930 W29 50010.087615 W29 50110.0477	WOEX 100508-01 BK8425 WOEX 100504-01 BK7930 WOEX 100508-01 BK7615 WOEX 100504-11 BK77	● ● ● ● ● ●	0.354 0.354 0.354 0.354	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
W29 58...	W29 58010.088425 W29 58010.087930 W29 58010.087615 W29 58000.0821	WOEX 120608-01 BK8425 WOEX 120608-01 BK7930 WOEX 120608-01 BK7615 WOEX 120608-00 K10	● ● ● ● ● ●	0.354 0.354 0.354 0.354	N00 57541 S/M5.5x11-20IP 6.25 Nm	L05 00870 20IP

Twin Cutter with ABS® Connection,  $\alpha = 80^\circ$

1

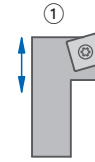


2



without axial adjustment

Insert holders (pair)



Ø D min-max	Basic body   Order No.	ABS Ø d	L	L1	Pair of insert holders ①  Order No. appropriate insert	Assembly parts		
						Adjusting screw  DIN912 Order No. Description	Clamping plate Order No.	Clamping screw  DIN912 Order No. Description
1.181 - 1.614	G04 00500 0.29	25	1.969	-	G03 80200	55051 03010 M3×10	G04 01000.12	55011 04020 M4×20
	G04 01000 0.63	32	3.346	0.295	W83 23...			
1.535 - 2.008	G04 01010 0.63	32	2.362	-	G03 80211	55051 04010 M4×10	G04 01500.12	55011 05025 M5×25
	G04 01500 1.46	40	4.724	0.335	W83 32...			
1.929 - 2.795	G04 01510 0.94	40	2.362	-	G03 80220	55051 04016 M4×16	G04 01510.12	55011 06025 M6×25
	G04 02000 2.70	50	5.315	0.413	W83 32...			
2.520 - 3.583	G04 02010 1.79	50	2.756	-	G03 80230	55051 05025 M5×25	G04 02010.12	55011 08030 M8×30
	G04 02020 4.91	50	5.315	-	W83 44...			
3.268 - 4.764	G04 02500 2.95	63	2.756	-	G03 80240	55051 08035 M8×35	G04 02500.12	55011 10035 M10×35
	G04 02510 8.37	63	6.102	-	W83 44...			
4.291 - 6.181	G04 03000 6.69	80	3.543	-	G03 80250	55051 08055 M8×55	G04 03000.12	55011 12045 M12×45
	G04 03010 13.34	80	6.890	-	W83 44...			
5.472 - 8.031	G04 03500 13.72	100	4.921	-	G03 80260 W83 44...	55051 10080 M10×80	G04 03500.12	55011 16055 M16×55

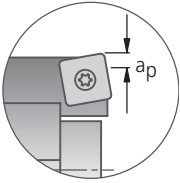


SOEX

# KOMET TwinKom® G04 Twin Cutter with ABS® Connection

through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
●	●	●	●	●	●	✗	●	80°	●

● very good ● good ○ possible ✗ not possible



### Supply includes basic body:

Clamping plate with adjusting screw and clamping screw.

Supply includes pair of insert holders: with clamping screw.

Please order inserts and accessories separately.

### Note!

For optimum cutting in the  $D_{min}$  area the cutting depth  $a_p$  should be reduced.

### Order example:

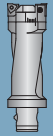
Basic body short G04 00500  
 Pair of insert holders 90° G03 80200  
 Insert 2x W83 23000.088425

Basic recommendation					Assembly parts	Accessories
appropriate insert	Insert Order No. ▽▽ size	ISO-Code	for workpiece material P M K N S H	max. cutting depth $a_p$	Clamping screw  Order No. Article	Screwdriver  Order No. Article
W83 23...	W83 23010.088425 W83 23000.017935 W83 23000.017615 W83 23010.088425	SOEX 07T308-01 BK8425 SOEX 07T308-01 BK7935 SOEX 07T308-01 BK7615 SOEX 07T308-01 BK8425		0.177 0.138 0.197 0.197	N00 57571 S/M2.5x6.3-8IP 11.3 in-lbs	L05 00830 8IP
W83 32...	W83 32010.088425 W83 32000.157935 W83 32000.157615 W83 32010.088425	SOEX 09T408-01 BK8425 SOEX 09T408-01 BK7935 SOEX 09T408-01 BK7615 SOEX 09T408-01 BK8425		0.236 0.157 0.236 0.236	N00 57561 S5375-15IP 25.0 in-lbs	L05 00860 15IP
W83 44...	W83 44010.088425 W83 44000.187935 W83 44000.187615 W83 44010.088425	SOEX 12T508-01 BK8425 SOEX 12T508-01 BK7935 SOEX 12T508-01 BK7615 SOEX 12T508-01 BK8425		0.354 0.354 0.354 0.354	N00 57301 S45100-20IP 55.3 in-lbs	L05 00870 20IP

1



2



## Lightweight dual cutter

A typical example of the ongoing further development of the KOMET® cutting tool range can be seen in the improved concept of the KOMET TwinKom® lightweight dual cutters – a concept which enables particularly cost-effective machining. The tools are extremely rigid, provide high transmissible torques and offer high cutting efficiency. KOMET TwinKom® dual cutters can be used for a variety of operations – as a dual cutter for roughing, with a single cutting edge for finishing, as a follow-on cutting tool and, by means of an adaptor, as a stepped tool. The tools are modular in design and are suitable for diameters from 365 to 2000 mm. The adjustment range is  $\pm 40$  mm (or 80 mm) in relation to the diameter.

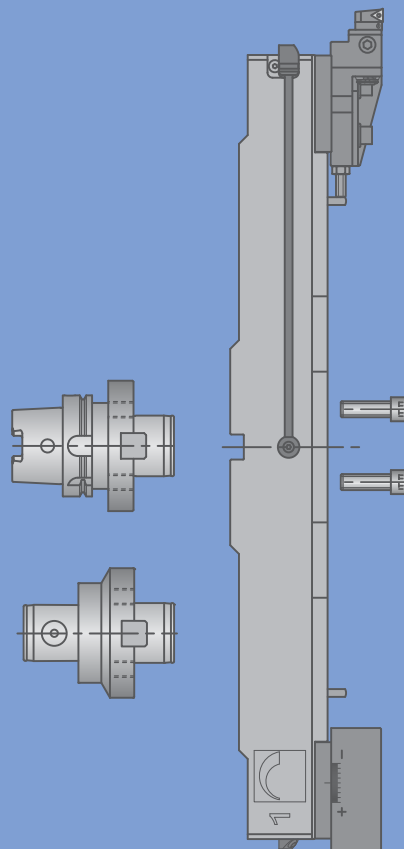
The size of the replaceable bridge is application-oriented and adapted to suit the hole diameter to be cut, which is why the bridge is made according to customer requirement. Due to standardisation, delivery times are relatively short.

The indexable insert holders can be easily exchanged, which allows a variety of different approach angles and the use of indexable inserts of various different shapes, sizes and geometries.

The tool blocks for roughing can be adjusted radially and axially, both for dual cutter use and for cut distribution. For finishing, the fine adjustment insert can be applied to the workpiece directly without clamping. Fine adjustment of 2  $\mu\text{m}$  by vernier is possible. A stop guarantees a high level of positional accuracy for the tool blocks. The measurements set after the first cut are maintained even after repeatedly exchanging the tool blocks.

Once diameters have been established, they are maintained even when the tool blocks are repositioned, and need not be established again. One and the same tool block can be used for roughing and finishing throughout all diameter ranges. When designing the adaptor plates for the tool blocks, sufficient space was allowed for attaching the magnetic holder of a dial gauge.

An internal coolant supply can be used on all replaceable bridges. An adjustable jet guarantees positionally accurate cooling of the cutting edge. Because DIN mill adaptors are used on the machine side to connect the tools, they can be adapted for all commonly used spindles.



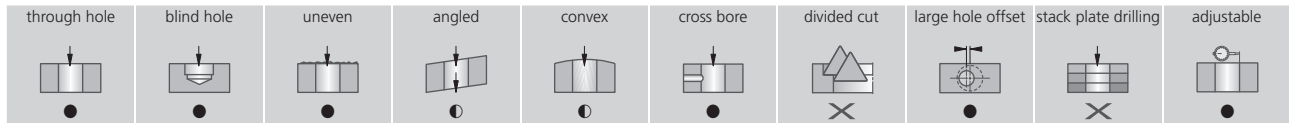
**Ø 365 - 2,000 mm**  
Lightweight replaceable bridge –  
optimally designed for your machining requirement



**BENEFITS for you:**

- High rigidity
- High cutting efficiency through double-sided roughing
- High transmissible torques
- Exchangeable tool blocks for roughing and finishing
- Can be used as a follow-on cutting tool and, by means of an adaptor, as a stepped tool
- External machining can also be performed with the standard components
- High level of flexibility thanks to modular design of system components
- Internal coolant supply
- Tool connection with standard mill adaptor according to DIN standard
- Cost-effective cutting thanks to the use of stock-type standard tool blocks and indexable inserts
- Wide selection of various indexable inserts, cutting tool materials and cutting geometries
- Easy-to-replace indexable insert holders
- Tool blocks can be exchanged without losing measurement settings
- Dial gauge can be fitted using a magnetic holder
- Optimised heat cycle, even when dry machining

Insert Technology  
for Roughing and Finishing in One Step



● very good ◐ good ○ possible ✕ not possible

1

2

The challenge which must be met by tools enabling roughing and finishing in a single process is to achieve the required roundness and concentricity, taking account of the high cutting performance and the associated forces. For this reason, such tools are normally fitted with guide pads; however, these can lead to problems during machining.

The newly developed roughing/finishing tools are based on an innovation in indexable insert technology, which makes it possible not only to bore, but to finish as well using economical, multi-bladed indexable inserts. Thanks to an innovative cutting head geometry with support land, previously commonplace guide rails are a thing of the past.

Due to the innovative fine adjustment of indexable inserts, it is possible to easily adjust every single indexable insert with µm accuracy.

The tools are specially manufactured for each application, with four to six cutting edges on a main body and for diameter ratios up to 3xD. With various cutting tool material/coating variants, they can also be ideally adapted to customer requirements for specific materials. For example, in GGG50 the new machine tools work to cutting depths from three to four millimetres (ap) whereby, bore tolerances to IT8 are possible.

**BENEFITS for you:**

- Two processes in one – roughing and finishing
- Uses economical inserts with four edges
- Interchangeability of the cutting heads reduces tool costs
- Precise adjustment with µm accuracy, thanks to the newly developed fine adjustment system for indexable inserts
- Maximum precision

Basic recommendation			for material		Assembly parts		Accessories	
Ø D	ISO-Code	Order No. <small>enter carbide</small>	BK 6110	BK 2710	Clamping screw	Wedge	Torque key	Replaceable blade
					Order No. Description	Order No.	Order No. Description	Order No. Description
32 – 34.99	LNHX 09T310-01	H80 32000.01....	6110	2710	N00 57251 S3076-8IP 2.25 Nm	L02 31990	L05 03311 2.25 Nm	L05 00730 8IP
35 – 37.49	LNHX 09T310-01	H80 35000.01....						
37.5 – 39.99	LNHX 09T310-01	H80 37500.01....						
40 – 41.99	LNHX 09T310-01	H80 40000.01....						
42 – 43.99	LNHX 120510-01	H80 42000.01....	6110	2710	N00 57411 S40101-15IP 4.3 Nm	L02 32000	L05 00961 4.3 Nm	L05 00760 15IP
44 – 45.99	LNHX 120510-01	H80 44000.01....						
46 – 47.99	LNHX 120510-01	H80 46000.01....						
48 – 49.99	LNHX 120510-01	H80 48000.01....						
50 – 51.99	LNHX 120510-01	H80 50000.01....						
52 – 53.99	LNHX 120510-01	H80 52000.01....						
54 – 55.99	LNHX 120510-01	H80 54000.01....						
56 – 57.99	LNHX 120510-01	H80 56000.01....						
58 – 59.99	LNHX 120510-01	H80 58000.01....						
60 – 61.99	LNHX 120510-01	H80 60000.01....						
62 – 66.99	LNHX 120510-01	H80 62000.01....						
67 – 71.99	LNHX 120510-01	H80 67000.01....						
72 – 76.99	LNHX 120510-01	H80 72000.01....						
77 – 81.99	LNHX 120510-01	H80 77000.01....						
82 – 86.99	LNHX 120510-01	H80 82000.01....						
87 – 91.99	LNHX 120510-01	H80 87000.01....						
92 – 96.99	LNHX 120510-01	H80 92000.01....						
97 – 101.99	LNHX 120510-01	H80 97000.01....						

Supply includes: Torque key without replaceable blade.

Patented design (PreciKom WSP-Verstellung)



Design your own tool!

Unique: Indexable insert technology for roughing and finishing in one step!

The tools are specially manufactured for each application, with four to six cutting edges on a basic body and for length/diameter ratios up to 3xD.

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

Company:

Contact:

Department:

E-Mail:

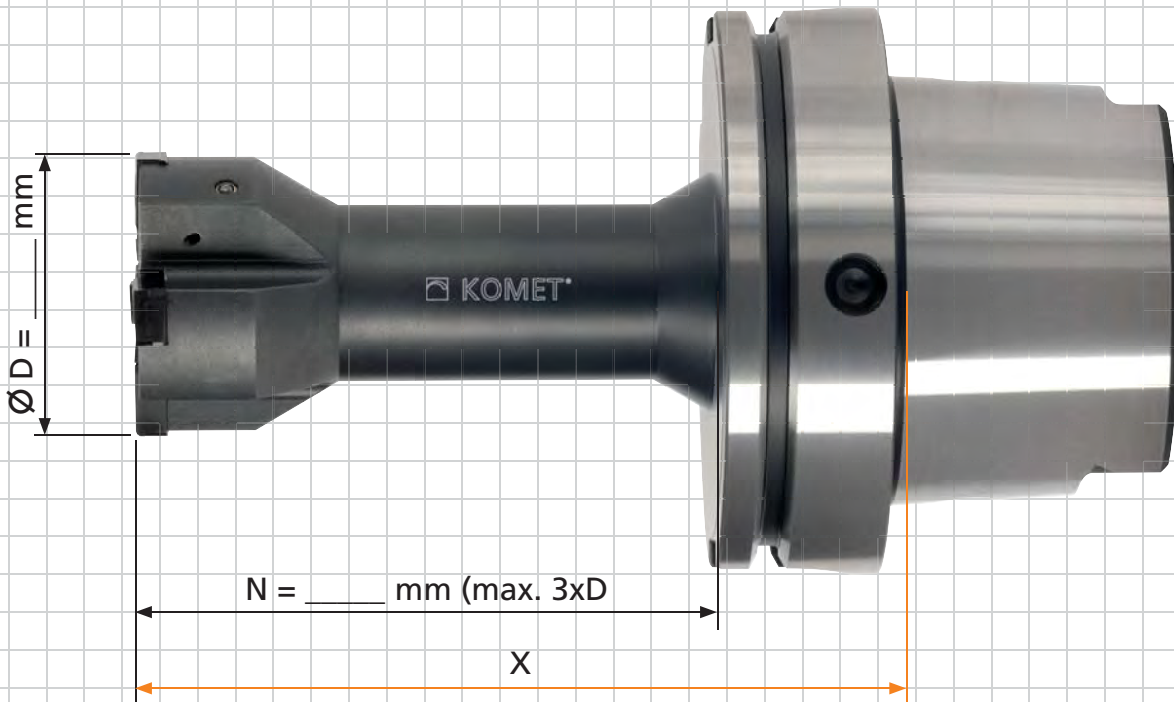
Telephone:

Customer-No.:

Fax:

Distributor:

Date:



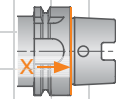
Material to be machined:

Holder / Adaptor (Type and size)

Machining method

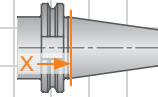
through hole

blind hole



HSK \_\_\_\_\_  
DIN 69893 A

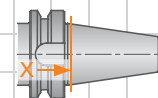
Length of bore:



SK \_\_\_\_\_  
DIN 69871 AD/B

Interrupted cut

yes  no



SK \_\_\_\_\_  
JIS B 6339 AD/B  
(MAS 403 BT)

Tolerance:

Required surface:

other adaptors on request

Allowance in Ø:

Required cutting material

BK6110

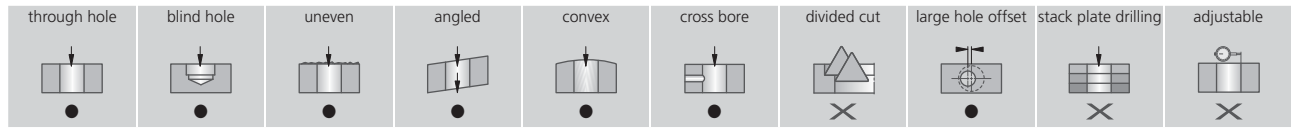
BK2710

1



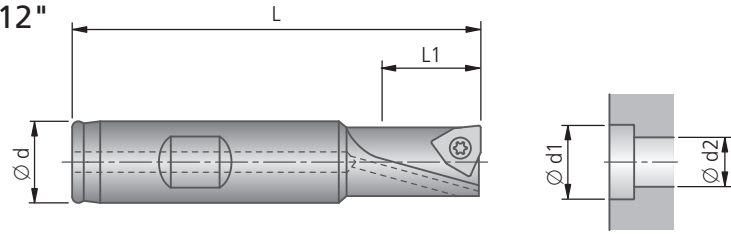
2





## Countersinking Tool Ø 0.439" - 0.812"

- central coolant supply from counterbore size F10 10040
- shank design to DIN 1835/B T1 A and B
- for producing 90° counterbores to DIN 974 T1 for cap head screws



y = number of inserts = 1

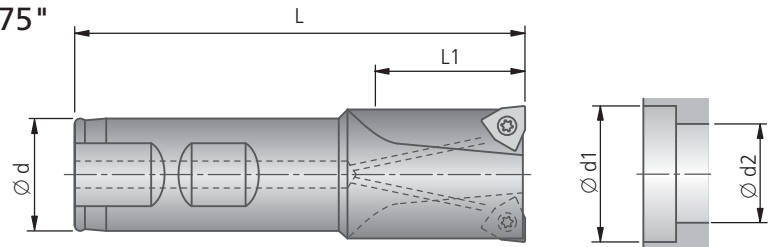
z = effective number of teeth for calculating  $v_f = 1$

Supply includes: Countersinking tool with clamping screw.  
Please order inserts and accessories separately.

Ød1	Order No. Description	Rough bore Ø Ød2 min	Ød	L	L1 max	countersink depth 	Basic recommendation		Assembly parts	Accessories	
							Insert 	for workpiece material 			
Order No. ▽▽ size	ISO-Code	Order No. Description		Order No. Description							
0.437	F10 30020 KWZ-1/4"-1	0.281	0.625	3.15	0.75	0.33	W28 17010.0464	WOEX 030204-01 BK64		N00 56041 M2x4.3-6IP 5.5 in-lbs	L05 00810 6IP
0.531	F10 30030 KWZ-5/16"-1	0.344	0.625	3.15	0.75	0.33	W28 17010.0421	WOEX 030204-01 K10		N00 55581 M2.5x4.5-8IP 11.3 in-lbs	L05 00830 8IP
0.625	F10 30040 KWZ-3/8"-1	0.406	0.625	3.15	0.75	0.33	W29 24010.048425 W29 24010.0421	WOEX 05T304-01 BK8425 WOEX 05T304-01 K10		N00 57511 S/M2.5x7.2-8IP 11.3 in-lbs	L05 00830 8IP
0.781	F10 30050 KWZ-7/16"-1	0.469	0.625	3.15	1.00	0.33	W29 24010.048425 W29 24010.0421	WOEX 05T304-01 BK8425 WOEX 05T304-01 K10			
0.812	F10 30060 KWZ-1/2"-1	0.531	1.000	3.94	1.25	0.77					

## Countersinking Tool Ø 1.000" - 1.375"

- central coolant supply
- shank design to DIN 1835/B T1 A and B
- for producing 90° counterbores to DIN 974 T1 for cap head screws



y = number of inserts = 2

z = effective number of teeth for calculating  $v_f = 2$












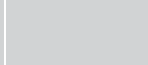
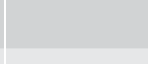





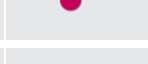


Supply includes: Countersinking tool with clamping screw.  
Please order inserts and accessories separately.

Ød1	Order No. Description	Rough bore Ø Ød2 min	Ød	L	L1 max	countersink depth 	Basic recommendation		Assembly parts	Accessories	
							Insert 	for workpiece material 			
Order No. ▽▽ size	ISO-Code	Order No. Description		Order No. Description							
1.000	F10 30070 KWZ-5/8"-K2	0.656	1.000	3.94	1.25	0.77	W29 24010.048425 W29 24010.0421	WOEX 05T304-01 BK8425 WOEX 05T304-01 K10		N00 57511 S/M2.5x7.2-8IP 11.3 in-lbs	L05 00830 8IP
1.187	F10 30080 KWZ-3/4"-K2	0.781	1.000	3.94	1.25	0.77	W29 34010.048425 W29 34010.0421	WOEX 06T304-01 BK8425 WOEX 06T304-01 K10		N00 57521 S/M3.5x7.3-10IP 25 in-lbs	L05 00850 10IP
1.375	F10 30090 KWZ-7/8"-K2	0.906	1.000	3.94	1.25	0.88	W29 42010.048425 W29 42010.0421	WOEX080404-01 BK8425 WOEX080404-01 K10		N00 57531 S/M4.5x9-15IP 55.3 in-lbs	L05 00860 15IP

# KOMET® Countersinking and Chamfering Tools

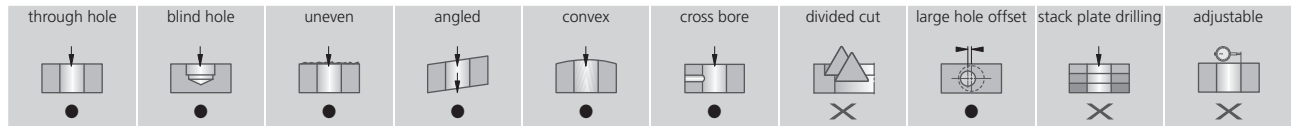
## Countersinking Tool (KWZ)

Guideline values for countersinking				$v_c$	Max. f (in/rev)			
Material group	Strength Rm (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Cutting speed $v_c$ (ft/min)			
						$\varnothing$ 0.437 - .531	$\varnothing$ 0.625 - .781	$\varnothing$ 0.812 - 1.375
P	1.0	$\leq 72500$	Unalloyed steel	A570.36 1213 A573.81	590-790	.002 - .004	.004 - .008	.006 - .010
	2.0	72500-130000	Low alloy steel	5120 1055 5115	590-790	.002 - .004	.004 - .008	.010 - .016
	2.1	$< 72500$	Lead alloy	12L13	530	.002 - .004	.008	.008 - .012
	3.0	$> 130000$	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	460	.002 - .004	.007	.008 - .014
	4.0	$> 130000$	Tool steels	H13 H21	390	.002 - .003	.006	.008 - .012
	4.1		HSS		-	-	-	-
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	.002	.004	.005
	5.1	58000	titanium, titanium alloys	AMS R54520	100	.002	.004	.005
M	6.0	$\leq 87000$	Stainless steel: austenitic 300 series	304L 316	390	.003	.006	.006
	6.1	$< 130000$	Stainless steels	630	390	.003	.006	.006
	7.0	$> 130000$	Stainless steel: martensitic/ferritic 400 series	420 403	330	.002	.004	.004
K	8.0		180	Grey cast iron	No 35 B No 50 B	.006	.010	.016
	8.1		250	Alloy grey cast iron	A436 Type 2	.006	.010	.012
	9.0	$\leq 87000$	130	Nodular cast iron ferritic	60-40-18	.006	.010	.012
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	.005	.008	.010
	10.0	$> 87000$	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	.004	.007	.010
	10.1		200	Alloyed nodular cast iron	A43D2	.004	.007	.008
N	10.2		300	Vermicular cast iron		.007	.006	.008
	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	.002	.004	.005
	12.1		100	Copper alloy, Brass, Bronze: average cut		.002	.004	.005
	13.0		60	Wrought aluminum alloy	GD-ALSi12	.002	.005	.006
	13.1		75	Aluminum alloy: Si content $< 10\%$ Magnesium alloy		.002	.006	.008
H	14.0		100	Aluminum alloy: Si content $> 10\%$	A360.2	.004	.008	.010
	15.0	203000		Hardened steels $< 45$ HRC		.002	.004	.006
	16.0	261000		Hardened steels $> 45$ HRC		.002	.004	.006

$\varnothing$	Alternative Inserts		for workpiece material
	Order No. ▽ Size	ISO-Code	
	 -01	 -03	 -11
			<b>P M K N S H</b>
for better chip control	1.187 - 1.375	WOEX 030204-03 BK6425	
	.437 - .531	WOEX 030204-11 BK77	
	.625 - .781	WOEX 05T304-03 BK6425	
	.812 - 1.000	WOEX 05T304-11 BK77	
	1.000	WOEX 06T304-03 BK6425	
	1.187 - 1.375	WOEX 06T304-11 BK77	
for higher cutting speed	1.187 - 1.375	WOEX 080404-03 BK6425	
	.437 - .531	WOEX 080404-11 BK77	
	.625 - .781	WOEX 05T304-01 BK6425	
	.812 - 1.000	WOEX 05T304-01 BK7615	
	1.000	WOEX 06T304-01 BK6425	
	1.187 - 1.375	WOEX 06T304-01 BK7615	
for greater strength	1.187 - 1.375	WOEX 080404-01 BK6425	
	.437 - .531	WOEX 080404-01 BK7615	
	.625 - .781	WOEX 05T304-01 BK7930	
	.812 - 1.000	WOEX 05T304-01 BK7930	
	1.000	WOEX 06T304-01 BK7930	
	1.187 - 1.375	WOEX 06T304-01 BK7930	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

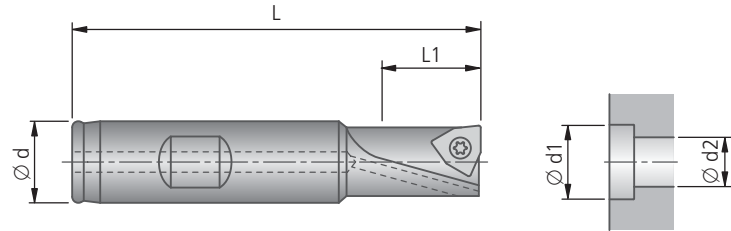




● very good ○ good ○ possible ✗ not possible

### Countersinking Tool Ø 10 - 20 mm

- central coolant supply from counterbore size F10 10040
- shank design to DIN 1835/B T1 A and B
- for producing 90° counterbores to DIN 974 T1 for cap head screws



y = number of inserts = 1

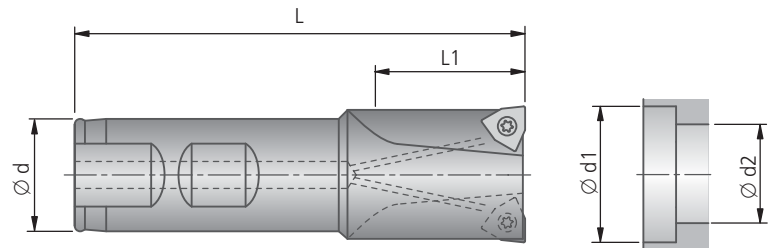
z = effective number of teeth for calculating  $v_f = 1$

Supply includes: Countersinking tool with clamping screw.  
Please order inserts and accessories separately.

Ød1	Order No. Description	Rough bore Ø		L	L1 max	countersink depth (kg)	Basic recommendation		Assembly parts	Accessories	
		Ød2 min	Ød				Insert	for workpiece material			
10	F10 10021 KWZ-M5K1	5.3	16	80	10	0.09	W29 10010.048425	WOEX 030204-01 BK8425		N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP
11	F10 10031 KWZ-M6K1	6.4	16	80	11	0.10	W29 10010.0421	WOEX 030204-01 K10			
15	F10 10040 KWZ-M8K1	8.4	16	80	15	0.10	W29 24010.048425	WOEX 05T304-01 BK8425		N00 55581 M2.5x4.5-8IP 1.28 Nm	L05 00830 8IP
18	F10 10050 KWZ-M10K1	10.4	16	80	18	0.11	W29 24010.048425	WOEX 05T304-01 BK8425			
20	F10 10060 KWZ-M12K1	13	25	100	20	0.28	W29 24010.0421	WOEX 05T304-01 K10		N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP

### Countersinking Tool Ø 24 - 48 mm

- central coolant supply
- shank design to DIN 1835/B T1 A and B
- for producing 90° counterbores to DIN 974 T1 for cap head screws



y = number of inserts = 2

z = effective number of teeth for calculating  $v_f = 2$

Supply includes: Countersinking tool with clamping screw.  
Please order inserts and accessories separately.

Ød1	Order No. Description	Rough bore Ø		L	L1 max	countersink depth (kg)	Basic recommendation		Assembly parts	Accessories	
		Ød2 min	Ød				Insert	for workpiece material			
24	F10 11070 KWZ-M14K2	15	25	100	24	0.29	W29 24010.048425	WOEX 05T304-01 BK8425		N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
26	F10 11080 KWZ-M16K2	17	25	100	26	0.31	W29 24010.0421	WOEX 05T304-01 K10			
30	F10 11090 KWZ-M18K2	19	25	100	30	0.34	W29 34010.048425	WOEX 06T304-01 BK8425		N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
33	F10 11100 KWZ-M20K2	21	25	100	33	0.36	W29 34010.0421	WOEX 06T304-01 K10			
36	F10 11110 KWZ-M22K2	21	25	100	36	0.39	W29 42010.048425	WOEX 080404-01 BK8425		N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
40	F10 11120 KWZ-M24K2	25	25	100	40	0.45	W29 42010.0421	WOEX 080404-01 K10			
48	F10 11130 KWZ-M30K2	28	32	120	48	0.85	W29 50010.048425	WOEX 100504-01 BK8425		N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
							W29 50010.0421	WOEX 100504-01 K10			

# KOMET® Countersinking and Chamfering Tools

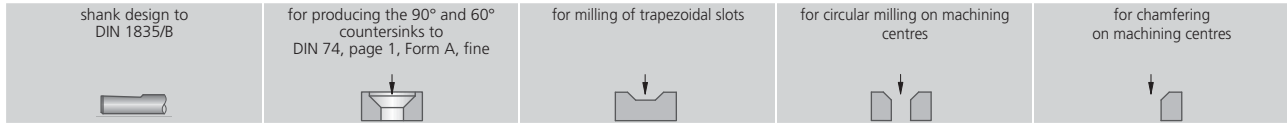
## Countersinking Tool (KWZ)

Guideline values for countersinking				$v_c$	Max. f (mm/rev)				
Material group	Strength Rm (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	Cutting speed $v_c$ (m/min)				
						$\varnothing$ 10 – 15	$\varnothing$ 18 – 20	$\varnothing$ 24 – 30	
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	180-240	0.06-0.12	0.12-0.20	0.15-0.25	
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	180-240	0.06-0.12	0.12-0.20	0.25-0.40	
	2.1	<500	lead alloys	95MnPb28 / 1.0718	160	0.06-0.12	0.20	0.20-0.40	
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	140	0.06-0.10	0.18	0.20-0.35	
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X15CrMoV12 / 1.2601	120	0.04-0.08	0.15	0.20-0.30	
4.1			HSS		-	-	-		
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	30	0.05	0.10	0.15	
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.05	0.10	0.15	
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	120	0.08	0.15	0.18	
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	120	0.08	0.15	0.16	
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	100	0.05	0.10	0.12	
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	160	0.15	0.30	0.40	
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	140	0.15	0.25	0.30	
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	140	0.15	0.25	0.35	
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050, GGG-55 / 0.7055, GTW-55 / 0.8055	120	0.12	0.20	0.25	
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060, GTS-65 / 0.8165	120	0.10	0.18	0.25	
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	120	0.10	0.18	0.20	
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	100	0.10	0.15	0.20	
	N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.05	0.10	0.15
		12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	300	0.05	0.10	0.15
		13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	300	0.05	0.12	0.15
13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	250	0.06	0.16	0.20	
14.0		100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	200	0.10	0.20	0.30	
H	15.0	1400	hardened steels < 45 HRC		50	0.05	0.10	0.15	
	16.0	1800	hardened steels > 45 HRC		50	0.05	0.10	0.15	

Alternative Inserts			
$\varnothing$	Insert		for workpiece material
	Order No. ▽ Size	ISO-Code	
for better chip control	10 – 11	W29 10030.046425 W29 10110.0477	WOEX 030204-03 BK6425 WOEX 030204-11 BK77
	15 – 26	W29 24030.046425 W29 24110.0477	WOEX 05T304-03 BK6425 WOEX 05T304-11 BK77
	30	W29 34030.046425 W29 34110.0477	WOEX 06T304-03 BK6425 WOEX 06T304-11 BK77
	33 – 40	W29 42030.046425 W29 42110.0477	WOEX 080404-03 BK6425 WOEX 080404-11 BK77
	48	W29 50030.046425 W29 50110.0477	WOEX 100504-03 BK6425 WOEX 100504-11 BK77
for higher cutting speed	10 – 11		
	15 – 26	W29 24010.046425 W29 24010.047615	WOEX 05T304-01 BK6425 WOEX 05T304-01 BK7615
	30	W29 34010.046425 W29 34010.047615	WOEX 06T304-01 BK6425 WOEX 06T304-01 BK7615
	33 – 40	W29 42010.046425 W29 42010.047615	WOEX 080404-01 BK6425 WOEX 080404-01 BK7615
for greater strength	10 – 11	W29 10010.047930	WOEX 05T304-01 BK7930
	15 – 26	W29 24010.047930	WOEX 05T304-01 BK7930
	30	W29 34010.047930	WOEX 06T304-01 BK7930
33 – 40	W29 42010.047930	WOEX 080404-01 BK7930	
48	W29 50010.047930	WOEX 100504-01 BK7930	

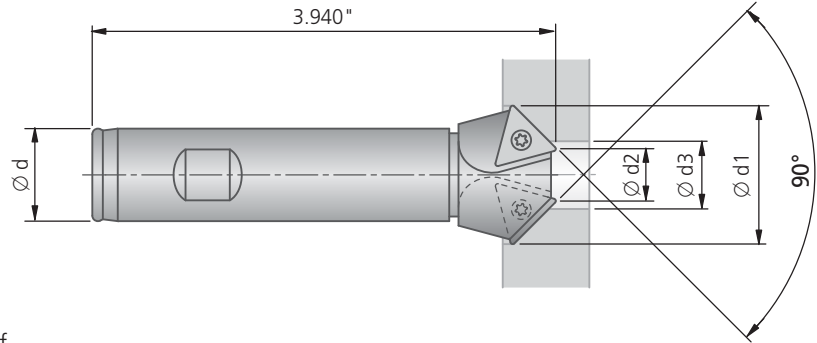
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes !





Countersinking Tool 90° Ø 0.748" - 1.457"

Supply includes:  
Countersinking tool with clamping screw. Please order inserts and accessories separately.



y = number of inserts  
z = effective number of teeth for calculating  $v_f$

Ød1	Ød2	Order No. Description	Rough bore Ø Ød3 min	Ød	y	z	lbs	Basic recommendation		Assembly parts	Accessories
								Order No. ▽ size	Insert ISO-Code		
0.748	0.276	F10 20151 KWS-M10-5/8"	0.374	0.625	2	2	0.44	W30 14660.338425	TOHX 090204EN-U8.77 BK8425	 N00 56111 S/M2.6x6.2-8IP 11.3 in-lbs	 L05 00830 8IP
0.906	0.433	F10 20161 KWS-M12-5/8"	0.472	0.625	2	2	0.44	W30 14660.3321	TOHX 090204EN-U8.77 K10		
1.024	0.433	F10 20171 KWS-M14-5/8"	0.472	0.625	2	1	0.44	W30 14720.048425	TOHX 090204EN-G10 BK8425	 N00 56111 S/M2.6x6.2-8IP 11.3 in-lbs	 L05 00830 8IP
1.181	0.472	F10 20181 KWS-M16-3/4"	0.472	0.75	2	2	0.66	W30 14720.0421	TOHX 090204FN-G12 K10		
1.339	0.630	F10 20191 KWS-M18-3/4"	0.669	0.750	2	2	0.77	W30 26720.057615	TOHX 140305EN-G12 BK7615	 N00 56211 S/M2.6x7.3-10IP 25.0 in-lbs	 L05 00850 10IP
1.457	0.748	F10 20201 KWS-M18-3/4"	0.787	0.750	2	2	0.77	W30 26720.0521	TOHX 140305FN-G12 K10		

# KOMET® Countersinking and Chamfering Tools

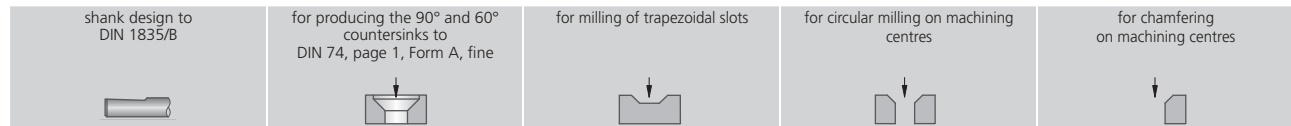
## Countersinking Tool (KWS)



Guideline values for countersinking					V <sub>C</sub>	Max. f (in/rev)	
Material group	Strength R <sub>m</sub> (lb <sub>f</sub> /in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Cutting speed v <sub>C</sub> (ft/min)	Ø 0.748 – 1.457	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	820	0.006	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	660	0.008	
	2.1	<72500	Lead alloy	12L13	820	0.012	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	490	0.008	
	4.0	>130000	Tool steels	H13 H21	390	0.006	
	4.1		HSS		330	0.007	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	160	0.005
	5.1	≤8000	titanium, titanium alloys	AMS R54520	330	0.008	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	520	0.006	
	6.1	<130000	Stainless steels	630	390	0.006	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	330	0.006	
	8.0		180	Grey cast iron	No 35 B No 50 B	490	0.016
K	8.1		250	Alloy grey cast iron	A436 Type 2	390	0.012
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	390	0.012
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	330	0.012
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	330	0.008
	10.1		200	Alloyed nodular cast iron	A43D2	260	0.008
	10.2		300	Vermicular cast iron		160	0.008
N	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	820	0.012
	12.1		100	Copper alloy, Brass, Bronze: average cut		820	0.008
	13.0		60	Wrought alumi- num alloy	GD-AISI12	820	0.008
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		490	0.012
	14.0		100	Aluminum alloy: Si content >10%	A360.2	390	0.010
H	15.0	203000		Hardened steels < 45 HRC		160	0.006
	16.0	261000		Hardened steels > 45 HRC		80	0.004

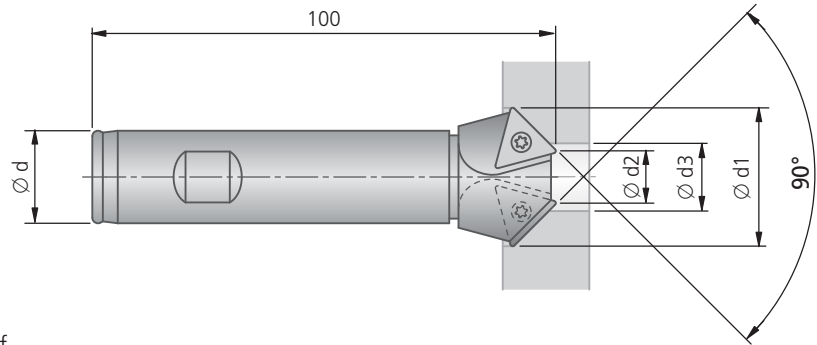
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes !

# KOMET® Countersinking and Chamfering Tools



## Countersinking Tool 90° Ø 19.0 - 37.0 mm

**Supply includes:**  
Countersinking tool with clamping screw. Please order inserts and accessories separately.

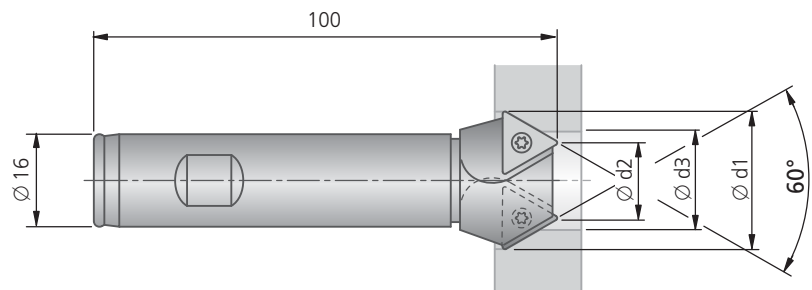


y = number of inserts  
z = effective number of teeth for calculating  $v_f$

Ød1	Ød2	Order No. Description	Rough bore Ø Ød3 min	Ød	y	z	kg	Basic recommendation		Assembly parts	Accessories
								Order No. ▽ size	Insert ISO-Code		
19	7	F10 00051 KWS-M10	9.5	16	2	2		W30 14660.338425	TOHX 090204EN-U8.77 BK8425	 Order No. N00 56111 S/M2.6x6.2-8IP 1.28 Nm	 Order No. L05 00830 8IP
23	11	F10 00061 KWS-M12	12	16	2	2		W30 14660.3321	TOHX 090204EN-U8.77 K10		
26	11	F10 00071 KWS-M14	12	16	2	1		W30 14720.048425 W30 14720.0421	TOHX 090204EN-G10 BK8425 TOHX 090204FN-G12 K10	 Order No. N00 56111 S/M2.6x6.2-8IP 1.28 Nm	 Order No. L05 00830 8IP
30	12	F10 00081 KWS-M16	13	20	2	2		W30 26720.057615 W30 26720.0521	TOHX 140605EN-G12 BK7615 TOHX 140605FN-G12 K10		
34	16	F10 00091 KWS-M18	17	20	2	2				 Order No. N00 56211 S/M2.6x7.3-10IP 2.8 Nm	 Order No. L05 00850 10IP
37	19	F10 00101 KWS-M20	20	20	2	2					

## Countersinking Tool 60° Ø 16.5 - 25.5 mm

**Supply includes:**  
Countersinking tool with clamping screw. Please order inserts and accessories separately.



y = number of inserts  
z = effective number of teeth for calculating  $v_f$

Ød1	Ød2	Order No. Description	Rough bore Ø Ød3 min	y	z	kg	Basic recommendation		Assembly parts	Accessories
							Order No. ▽ size	Insert ISO-Code		
16.5	8.1	F10 00350 KWS-M10/12-60	8.5	1	1	0.14			 Order No. N00 56111 S/M2.6x6.2-8IP 1.28 Nm	 Order No. L05 00830 8IP
20	11.6	F10 00370 KWS-M14-60	12	2	2	0.14	W30 14660.338425 W30 14660.3321	TOHX 090204EN-U8.77 BK8425 TOHX 090204EN-U8.77 K10		
22	13.6	F10 00380 KWS-M16-60	14	2	2	0.15			 Order No. N00 56111 S/M2.6x6.2-8IP 1.28 Nm	 Order No. L05 00830 8IP
23.5	15.1	F10 00390 KWS-M18-60	15.5	2	2	0.15	W30 14720.048425 W30 14720.0421	TOHX 090204EN-G10 BK8425 TOHX 090204FN-G12 K10		
25.5	17.1	F10 00400 KWS-M20-60	17.5	2	2	0.16				



# KOMET® Countersinking and Chamfering Tools

## Countersinking Tool (KWS)

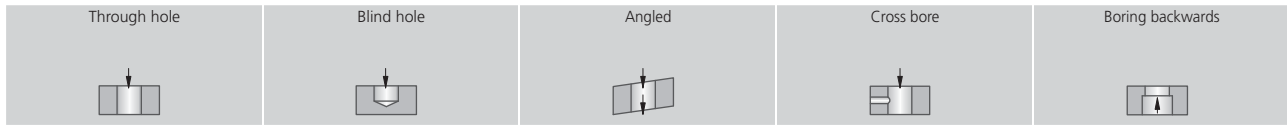


Guideline values for countersinking					$v_C$	Max. f (mm/rev)
Material group	Strength Rm (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	Cutting speed $v_C$ (m/min)	$\varnothing$ 16.5 – 37
P	1.0	$\leq 500$	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	250	0.16
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	200	0.20
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	250	0.30
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	150	0.20
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	120	0.15
	4.1		HSS		100	0.18
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.12
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	100	0.20
M	6.0	$\leq 600$	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	160	0.15
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	120	0.15
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	100	0.15
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	150	0.40
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	120	0.30
	9.0	$\leq 600$	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	120	0.30
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	100	0.30
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	100	0.20
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	80	0.20
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	50	0.20
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	250	0.30
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.20
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	250	0.20
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	150	0.30
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	120	0.25
H	15.0	1400	hardened steels < 45 HRC		50	0.15
	18.0		hardened steels > 45 HRC		25	0.10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes !

# KOMET® Forward and Backward Chamfering Tools $\varnothing$ 0.625 – 1.500 inch

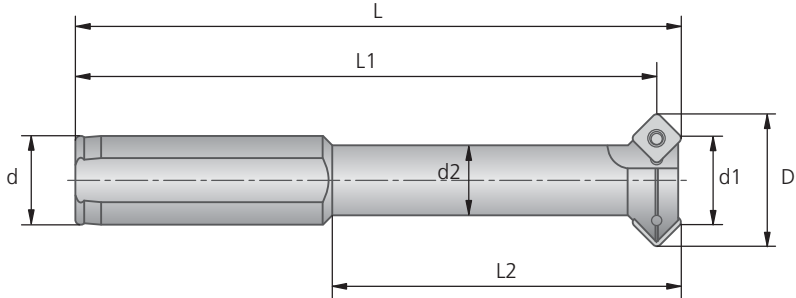
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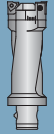
With cylindrical shank  $\alpha = 45^\circ$




Supply includes:

Chamfering tool with clamping screw. Please order inserts and accessories separately.



2



$\varnothing$ D	Order No. Description	Rough bore $\varnothing$	$\varnothing$ d	$\varnothing$ d1	$\varnothing$ d2	L	L1	L2	Basic recommendation			Assembly parts	Accessories	
									Insert 	for workpiece material <b>P M K N S H</b>	Clamping screw 	Screwdriver 		
									Order No. $\nabla$ size	ISO-Code		Order No. Description	Order No. Description	
0.625	F53 30010 0.625-45 F&B Tool	0.500	0.350	0.354	2.950	2.800	1.418	W83 13010.048425	SOEX 050204-01	BK8425	●		N00 56041 S/M2x4.3-6IP 5.5 in-lbs	L05 00810 6IP
								W83 13000.017935	SOEX 050204-01	BK7935		●		
								W83 13000.017615	SOEX 050204-01	BK7615		●		
								W83 13210.047710	SOEX 050204-21	BK7710		●		
0.687	F53 30060 0.687-45 F&B Tool	0.500	0.413	0.354	2.950	2.800	1.418	W83 13210.047710	SOEX 050204-21	BK7710		●		
								W83 13210.042730	SOEX 050204-21	BK2730		●		
0.750	F53 30020 0.750-45 F&B Tool	0.625	0.450	0.354	3.600	3.430	1.650	W83 18000.068425	SOEX 060306-01	BK8425	●		N00 57553 S/M2.2x5.5-6IP 8.9 in-lbs	L05 00810 6IP
								W83 18000.097935	SOEX 060306-01	BK7935		●		
								W83 18000.097615	SOEX 060306-01	BK7615		●		
								W83 18210.067710	SOEX 060306-21	BK7710		●		
0.812	F53 30070 0.815-45 F&B Tool	0.625	0.511	0.354	3.600	3.430	1.650	W83 18210.067710	SOEX 060306-21	BK7710		●		
								W83 18210.062730	SOEX 060306-21	BK2730		●		
0.875	F53 30080 0.875-45 F&B Tool	0.750	0.574	0.472	5.100	4.933	2.851	W83 23020.088425	SOEX 07T308-01	BK8425	●		N00 57571 S/M2.5x6.3-8IP 11.0 in-lbs	L05 00830 8IP
								W83 23000.017935	SOEX 07T308-01	BK7935		●		
								W83 23000.017615	SOEX 07T308-01	BK7615		●		
								W83 23210.087710	SOEX 07T308-21	BK7710		●		
1.000	F53 30090 1.000-45 F&B Tool	0.750	0.629	0.591	5.100	4.892	2.910	W83 23210.087710	SOEX 07T308-21	BK7710		●		
								W83 23210.082730	SOEX 07T308-21	BK2730		●		
1.125	F53 30030 1.125-45 F&B Tool	0.750	0.754	0.590	5.100	4.890	2.940	W83 23020.088425	SOEX 090408-01	BK8425	●		N00 57261 S3575-15IP 25.0 in-lbs	L05 00860 15IP
								W83 23000.017935	SOEX 090408-01	BK7935		●		
								W83 23000.017615	SOEX 090408-01	BK7615		●		
								W83 23210.087710	SOEX 090408-21	BK7710		●		
1.250	F53 30040 1.250-45 F&B Tool	0.750	0.791	0.709	5.450	5.120	3.150	W83 23210.087710	SOEX 090408-21	BK7710		●		
								W83 23210.082730	SOEX 090408-21	BK2730		●		
1.500	F53 30050 1.500-45 F&B Tool	1.000	0.863	0.787	5.600	5.260	3.240	W83 44010.088425	SOEX 120508-01	BK8425	●		N00 57301 S45100-20IP 40.0 in-lbs	L05 00870 20IP
								W83 44000.187935	SOEX 120508-01	BK7935		●		
								W83 44000.187615	SOEX 120508-01	BK7615		●		
								W83 44210.087710	SOEX 120508-21	BK7710		●		
								W83 44210.082730	SOEX 120508-21	BK2730		●		

# KOMET® Forward and Backward Chamfering Tools

Guideline values for chamfering					V <sub>C</sub>	Max. f (in/rev)					
Material group	Strength R <sub>m</sub> (lb <sub>f</sub> /in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		Cutting speed v <sub>C</sub> (ft/min)	Ø 0.625	Ø 0.750	Ø 1.125	Ø 1.250	Ø 1.500
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	820	0.005	0.005	0.006	0.006	0.006	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	660	0.006	0.006	0.008	0.008	0.01	
	2.1	<72500	Lead alloy	12L13	820	0.006	0.007	0.01	0.01	0.012	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	490	0.006	0.007	0.008	0.008	0.01	
	4.0	>130000	Tool steels	H13 H21	390	0.005	0.006	0.007	0.007	0.008	
	4.1		HSS		330	0.004	0.005	-	-	-	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	160	0.003	0.004	0.005	0.005	0.005
	5.1	≤8000	titanium, titanium alloys	AMS R54520	330	0.003	0.004	0.005	0.005	0.005	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	520	0.004	0.005	0.006	0.006	0.006	
	6.1	<130000	Stainless steels	630	390	0.003	0.005	0.006	0.006	0.008	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	330	0.003	0.004	0.005	0.005	0.006	
K	8.0		180	Grey cast iron	No 35 B No 50 B	490	0.006	0.01	0.012	0.012	0.012
	8.1		250	Alloy grey cast iron	A436 Type 2	390	0.006	0.007	0.008	0.008	0.01
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	390	0.006	0.007	0.008	0.008	0.01
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	330	0.006	0.007	0.009	0.009	0.01
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	330	0.006	0.007	0.009	0.009	0.01
	10.1		200	Alloyed nodular cast iron	A43D2	260	0.006	0.007	0.01	0.01	0.01
	10.2		300	Vermicular cast iron		160	0.005	0.006	0.008	0.008	0.01
N	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	820	0.006	0.006	0.008	0.008	0.01
	12.1		100	Copper alloy, Brass, Bronze: average cut		820	0.003	0.004	0.005	0.005	0.006
	13.0		60	Wrought aluminum alloy	GD-AISI12	820	0.003	0.004	0.005	0.005	0.005
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		490	0.005	0.006	0.006	0.006	0.008
	14.0		100	Aluminum alloy: Si content >10%	A360.2	390	0.005	0.006	0.008	0.008	0.012
H	15.0	203000		Hardened steels < 45 HRC		160	0.002	0.003	0.004	0.004	0.004
	16.0	261000		Hardened steels > 45 HRC		80	0.002	0.003	0.004	0.004	0.004

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes !



# KOMET® – Fine Boring

Modern batch production is characterised by the shortest machining times and the highest quality requirements.

To meet these demands, highly developed tools need to be used with the latest cutting materials and efficient coatings.

1



2



The KOMET GROUP offer excellent tools solutions for the fine boring area.



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1



2



3



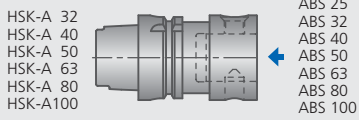
# Programme Summary – Fine Boring

## 5 Adaptors

### HSK-A Adaptors

with ABS® connection

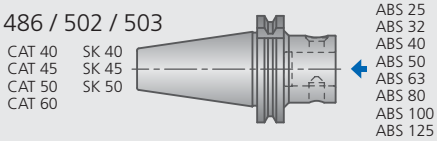
▶ 456



### Taper shanks DIN 69871

with ABS® connection

▶ 486 / 502 / 503



### Eccentric adjusting device with ABS® connection

▶ 489 / 506



### Torsional dampener with ABS® connection

▶ 507



### PSC Adaptors ISO 26622-1 / -2

Polygonal shank taper with ABS® connection

▶ 532



## 3 Fine Boring Tools

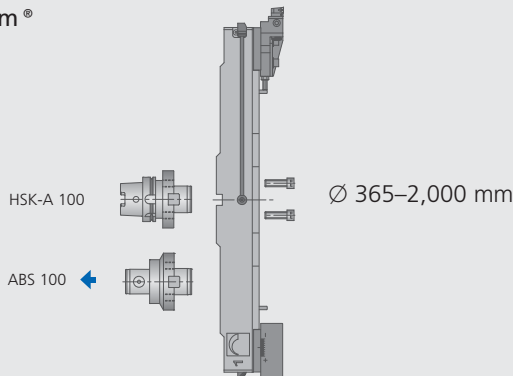
### MicroKom® M02

Micro-adjustable head



### TwinKom®

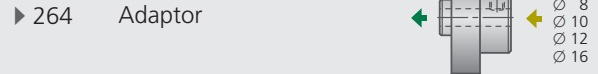
▶ 353



## 3 Fine Boring Tools

### MicroKom® hi.flex

Micro-adjustable head



### MicroKom® BluFlex®



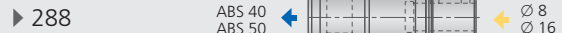
### MicroKom® M04

Micro-adjustable head



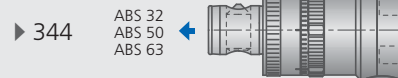
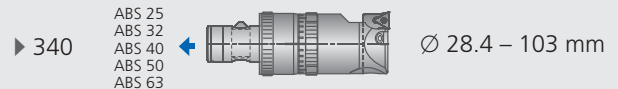
### MicroKom® M02

Micro-adjustable head

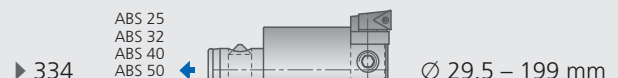


### MicroKom® M03Speed

Micro-adjustable head



Micro-adjustable head




TwinKom®  
Twin cutter tool




Further adaptors see chapter 5.

## 3 Fine Boring Tools


### MicroKom® *hi.flex*

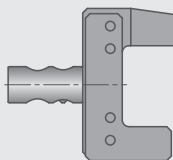
Boring bar  
 ▶ 258 / 272   $\varnothing 0.236 - 0.984"$   
 $\varnothing 6 - 25$  mm



Serrated body + Insert holder  
 ▶ 259 / 273   $\varnothing 0.984 - 2.480"$   
 $\varnothing 25 - 63$  mm

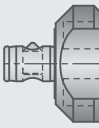
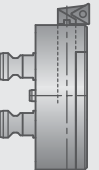
Insert holder  
 ▶ 260 / 274   $\varnothing 2.480 - 3.661"$   
 $\varnothing 63 - 93$  mm

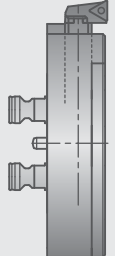
Bridge + Insert holder  
 ▶ 261 / 275   $\varnothing 3.543 - 8.465"$   
 $\varnothing 90 - 215$  mm

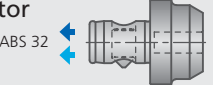
Bridge + Insert holder  
 ▶ 261 / 275   $\varnothing 3.543 - 8.465"$   
 $\varnothing 90 - 215$  mm

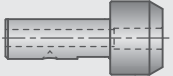
Mounting bridge for external machining  
 ▶ 265   $\varnothing 5 - 70$  mm


Adaptor  
 ▶ 282  ABS 32  Replaceable bridge  
 $\varnothing 38 - 63$  mm  
 ▶ 283 + 344

Adaptor  
 ▶ 282  ABS 32  Replaceable bridge  
 $\varnothing 62 - 103$  mm  
 ▶ 283 + 344

Adaptor  
  $\varnothing 100 - 206$  mm  
 ▶ 346

UniTurn® Adaptor  
 ▶ 316  ABS 32  $\varnothing 4$   
 $\varnothing 8$

UniTurn® Adaptor  
 ▶ 316  $\varnothing 16$    $\varnothing 4$   
 $\varnothing 8$

Adaptor  
 ▶ 294  ABS 32  $\varnothing 4$   
 $\varnothing 6$   
 $\varnothing 8$

Adaptor  
 ▶ 294  $\varnothing 16$    $\varnothing 4$   
 $\varnothing 6$   
 $\varnothing 8$   
 $\varnothing 10$   
 $\varnothing 12$

### Boring bars

▶ 295  $\varnothing 4$    $\varnothing 0.5 - 2.0$  mm

▶ 295  $\varnothing 8$    $\varnothing 3.0 - 9.0$  mm


▶ 300  $\varnothing 6$    $\varnothing 5.6$  mm  
 $\varnothing 6.9$  mm


▶ 296  $\varnothing 8$    $\varnothing 5.6 - 12$  mm


▶ 296  $\varnothing 16$    $\varnothing 8 - 24$  mm

▶ 300  $\varnothing 8$    $\varnothing 9$  mm  
 $\varnothing 11$  mm

▶ 298  $\varnothing 0.472$    $\varnothing 0.531 - 0.689"$   
 $\varnothing 0.591$   
 $\varnothing 0.630$

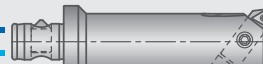
▶ 300  $\varnothing 12$    $\varnothing 13 - 17$  mm

▶ 300  $\varnothing 16$    $\varnothing 17 - 26$  mm


▶ 302 - 311  $\varnothing 0.250$    $\varnothing 0.220 - 1.250"$   
 $\varnothing 0.312$   
 $\varnothing 0.375$   
 $\varnothing 0.500$   
 $\varnothing 0.625$   
 $\varnothing 0.750$   
 $\varnothing 1.000$

▶ 320 ABS 25  ABS 32  
 ABS 40  $\varnothing 8 - 28$  mm

▶ 322 ABS 32   $\varnothing 11.9 - 30$  mm

▶ 324 ABS 32   $\varnothing 28 - 44$  mm

### Profiling bar

▶ 312 - 315  $\varnothing 0.375$    $\varnothing 0.500 - 1.625"$   
 $\varnothing 0.500$   
 $\varnothing 0.625$   
 $\varnothing 0.750$   
 $\varnothing 1.000$   
 $\varnothing 1.250$

### MicroKom® Boring bar

▶ 326  $\varnothing 16$    $\varnothing 15.9 - 26$  mm

### UniTurn®

#### Copying tool

▶ 317  $\varnothing 4$    $\varnothing 3 - 8$  mm  
 $\varnothing 8$








#### Boring tool

▶ 318  $\varnothing 4$    $\varnothing 3 - 8$  mm  
 $\varnothing 8$

#### with CBN

▶ 319  $\varnothing 8$    $\varnothing 2.7 - 7.5$  mm

### Key

-  ABS® connection
-  ABS® connection
-  Cylindrical connection
-  MicroKom® *hi.flex* / MicroKom *Bluflex*®
-  MicroKom® M03Speed connection
-  Adaptor connection
-  UniTurn® connection

1

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3

# KOMET® Tool Selection

## Help Table for Fine Boring

1











2



3







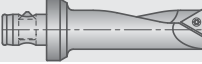





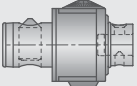
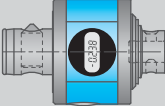
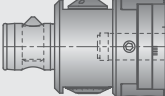
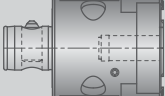

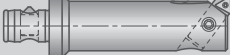

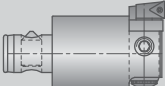

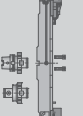
Ø (mm)	L / D Length/diameter ratio	Machining								
		through hole 	blind hole 	angled start and drilling out, interrupted cut 	cross bore 	reverse machining 	HRC > 54 through hole 	HRC > 54 blind hole 	vibration dampening 	
0.5 – 9.0	> 3.5xD	●	●	◐	◐				●	
3.0 – 8.0	> 3.5xD	●	●	◐	◐				●	
4.0 – 8.0	3xD	●	●	◐	◐		●	●	●	
5.6 – 24.0	3.5xD	●	●	◐	◐		●	●		
7.9 – 44.0	3.5xD	●	●	◐	◐		●	●		
11.9 – 30.0	3.5xD	●	●	◐	◐		●	●		
15.9 – 26.0	3xD	●	●	◐	◐		●	●		
0.531 – 0.689" 5.6 – 26.0	> 3.5xD	●	●	◐	◐		○	○	●	
0.220 – 1.250"	3.5xD	●	●	◐	◐	●	○	○	◐	
0.500 – 1.625"	3.5xD	●	●	◐	◐		○	○	◐	
0.5 – 103.0	3 – 6xD	●	●	◐	◐		●	●		
0.5 – 103.0	3 – 6xD	●	●	◐	◐	●	◐	◐		
6.0 – 215.0	3.5xD	●	●	◐	◐		◐	◐		
6.0 – 215.0	3.5xD	●	●	◐	◐		◐	◐		
24.8 – 206.0	> 3.5xD	●	●	◐	◐	●	●	●	●	
28.0 – 44.0	3.5xD	●	●	◐	◐		●	●	●	
20.0 – 175.0	> 3.5xD	●	●	◐	◐		●	●	●	
29.5 – 199.0	> 3.5xD	●	●	◐	◐		●	●	●	
196.0 – 401.0	3.5xD	●	●	◐	◐		●	●		
365 – 2,000	> 3.5xD	●	●	◐	◐					

● very good ◐ good ○ possible: see technical notes



# KOMET® Tool Selection

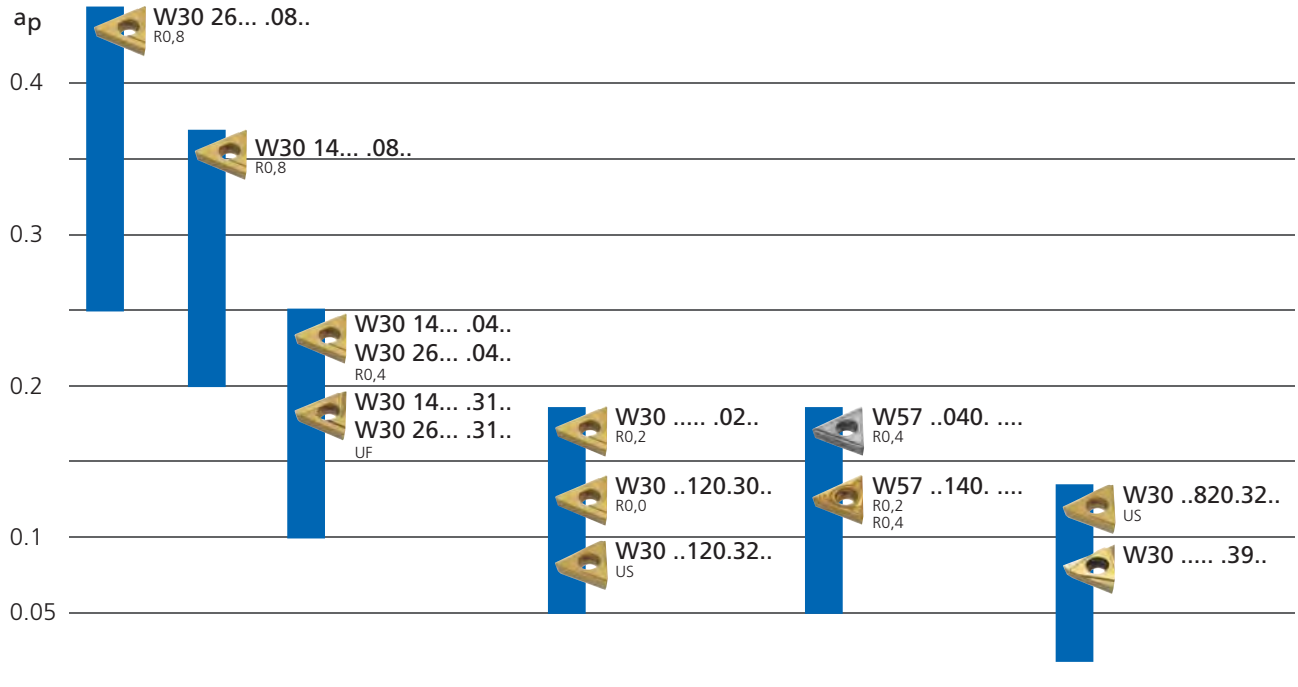
## Help Table for Fine Boring

	Coolant				IT area	Tool	Page
	Emulsion		MQL				
	internal	external	internal	external			
		●			subject to mounting in micro-adjustable head	 Boring bar	▶ 295
	●	●			subject to mounting in micro-adjustable head	 UniTurn®	▶ 317 - 318
		●	●	○	subject to mounting in micro-adjustable head	 UniTurn® with CBN	▶ 319
	●	●	●	○	subject to mounting in micro-adjustable head	 Boring bar	▶ 320 - 321
	●	●	●	○	subject to mounting in micro-adjustable head	 Boring bar	▶ 320 - 321
	●	●	●	○	subject to mounting in micro-adjustable head	 Boring bar	▶ 322 - 323
	●	●	●	○	IT 7	 MicroKom® M10 Boring bar	▶ 326 - 327
	●	●	●	○	subject to mounting in micro-adjustable head	 Low-vibration boring bar	▶ 298 - 301
	●	●	●	●	< IT 7	 Boring bar	▶ 302 - 311
	●	●	●	●	< IT 7	 Profiling bar	▶ 312 - 315
	●	●	●	●	< IT 7	 MicroKom® M02 Micro-adjustable head	▶ 288 - 291
	●	●	●	●	< IT 7	 MicroKom® M04 Micro-adjustable head	▶ 278 - 287
	●	●			> IT 7	 MicroKom® <i>hi.flex</i> Micro-adjustable head	▶ 252 - 265
	●	●	●	●		 MicroKom® <i>BluFlex</i> ® Micro-adjustable head	▶ 266 - 277
	●	●	●	●	< IT 7	 MicroKom® M03Speed Micro-adjustable head	▶ 338 - 349
	●	●	●	●	> IT 7	 Micro-adjustable head	▶ 324 - 325
	●	●	●	●	> IT 7	 Micro-adjustable head (FZ)	▶ 328 - 334
	●	●	●	●	> IT 7	 Micro-adjustable head (FF)	▶ 335 - 337
	●	●	●	●	< IT 7	 TwinKom® G01 Twin cutter tool	▶ 350 - 351
	●	●	●	●	< IT 7	 TwinKom® Lightweight twin cutter tool	▶ 352 - 353

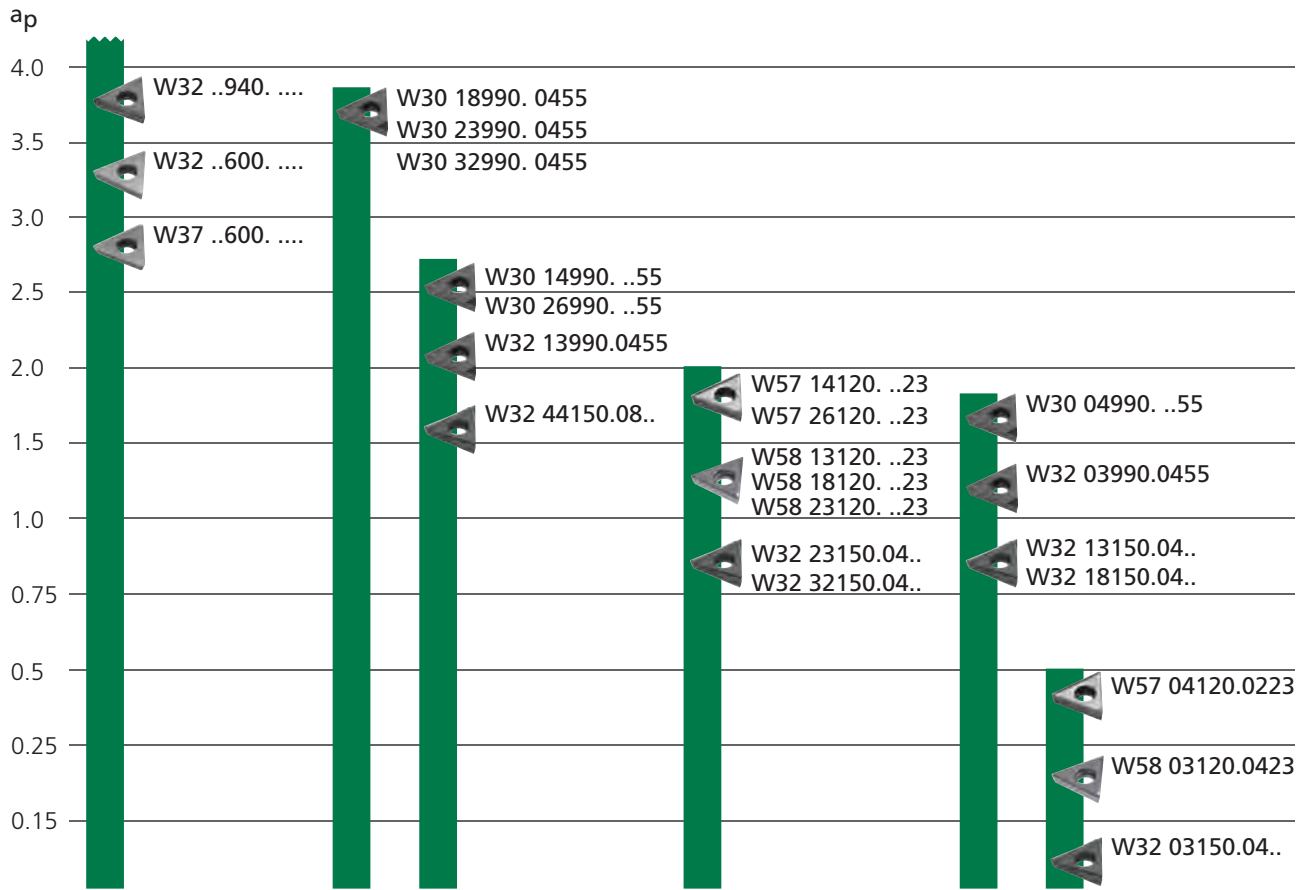


# KOMET® Insert geometry selection

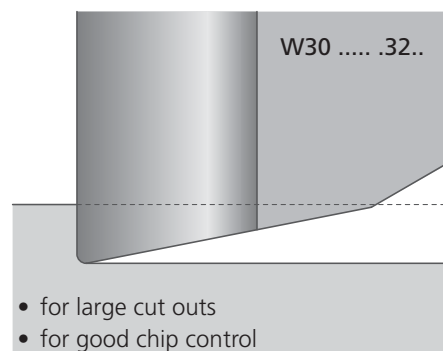
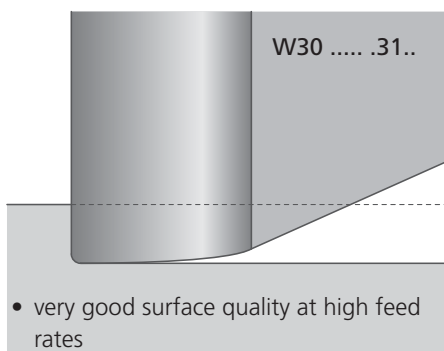
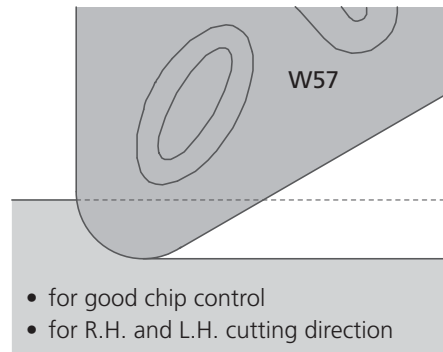
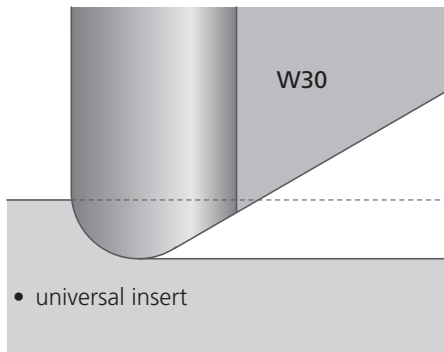
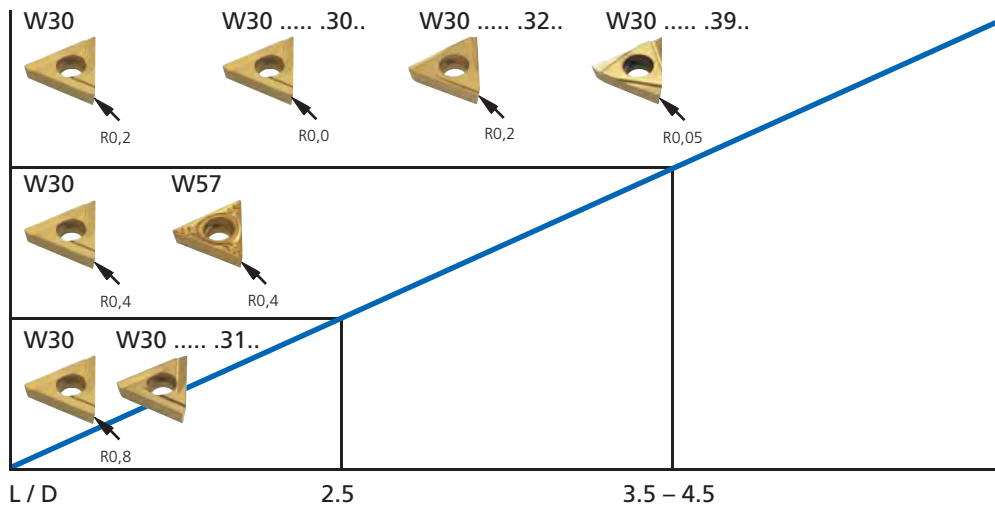
subject to cutting depth  $a_p$  in the radius – machining steel



subject to cutting depth  $a_p$  in the radius – machining aluminium



subject to length:diameter ratio L/D



# KOMET MicroKom® *hi.flex*

Fine Adjustment System for Diameters 0.019 to 8.464 inch (0.5 to 215 mm)

1



2



3



With the new MicroKom® *hi.flex* system KOMET has extended the range of products for MicroKom® micro adjustable heads. The system is particularly notable for high flexibility and covers diameter ranges from 0.019" to 8.464" (0.5 to 215 mm) fully with just one adjustable head, various boring bars and intelligently designed adaptor solutions.

The adjustable head offers an adjustment accuracy of 0.0004" (0.01 mm) per graduation on an easy-to-read disc scale and 0.0001" (0.002 mm) from a vernier, with an adjustment path of up to 0.197" (5 mm). The system is balanced in zero position and provides an internal coolant supply directly onto the cutting edge for all diameter ranges.

The standard set includes four boring bars for diameters 0.236" to 0.984" (6 to 25 mm). According to the individual combination, a serrated body, a bridge and two different holders for inserts provide for diameters up to 8.464" (215 mm).

The MicroKom® *hi.flex* is compatible with existing ABS® and cylindrical shank fine boring components. The set can be extended with established boring tools and UniTurn® products, for which the turning range starts at 0.020" (0.5 mm). Variable overhang lengths and a single key for clamping, adjusting and mounting bridges and insert holders illustrate how easy the new system is to handle.

## KOMET MicroKom® *hi.flex* Page

Fine Boring Set	
Micro-adjustable head with ABS® connection	257
Boring bar Ø 0.236 - 0.984 inch (Ø 6 - 25 mm)	258
Serrated body Ø 0.984 - 2.480 inch (Ø 25 - 63 mm)	259
Insert holder Ø 2.598 - 3.661 inch (Ø 66 - 93 mm)	260
Bridge / insert holder Ø 3.543 - 8.465 inch (Ø 90 - 215 mm)	261
Mounting bridge for external machining	265

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Guideline values for fine boring	262

Alternative Inserts	
	263

Adaptor	
MicroKom® <i>hi.flex</i> Adaptor	264
ABS® Adaptor	294
UniTurn® Adaptor	316

Boring Bar with Cylindrical Shank	
Ø 0.5 – 9.0 mm	295
Ø 5.6 – 24 mm	296
Ø 0.531 – 0.689 inch, low-vibration	298
Ø 5.6 – 26 mm, low-vibration	300
Ø 0.220 – 0.496 inch	302
Ø 0.812 – 1.250 inch	304
Ø 0.308 – 0.746 inch	306–309
Ø 0.362 – 0.854 inch	310

Profiling Bar with Cylindrical Shank	
Ø 0.500 – 1.625 inch, right-hand	320
Ø 0.500 – 1.250 inch, left-hand	322

Boring Bar with ABS® Connection	
Ø 8 – 28 mm	320
Ø 11.9 – 30 mm	322
Ø 28 – 44 mm	324

1



2



3



## Variation Options

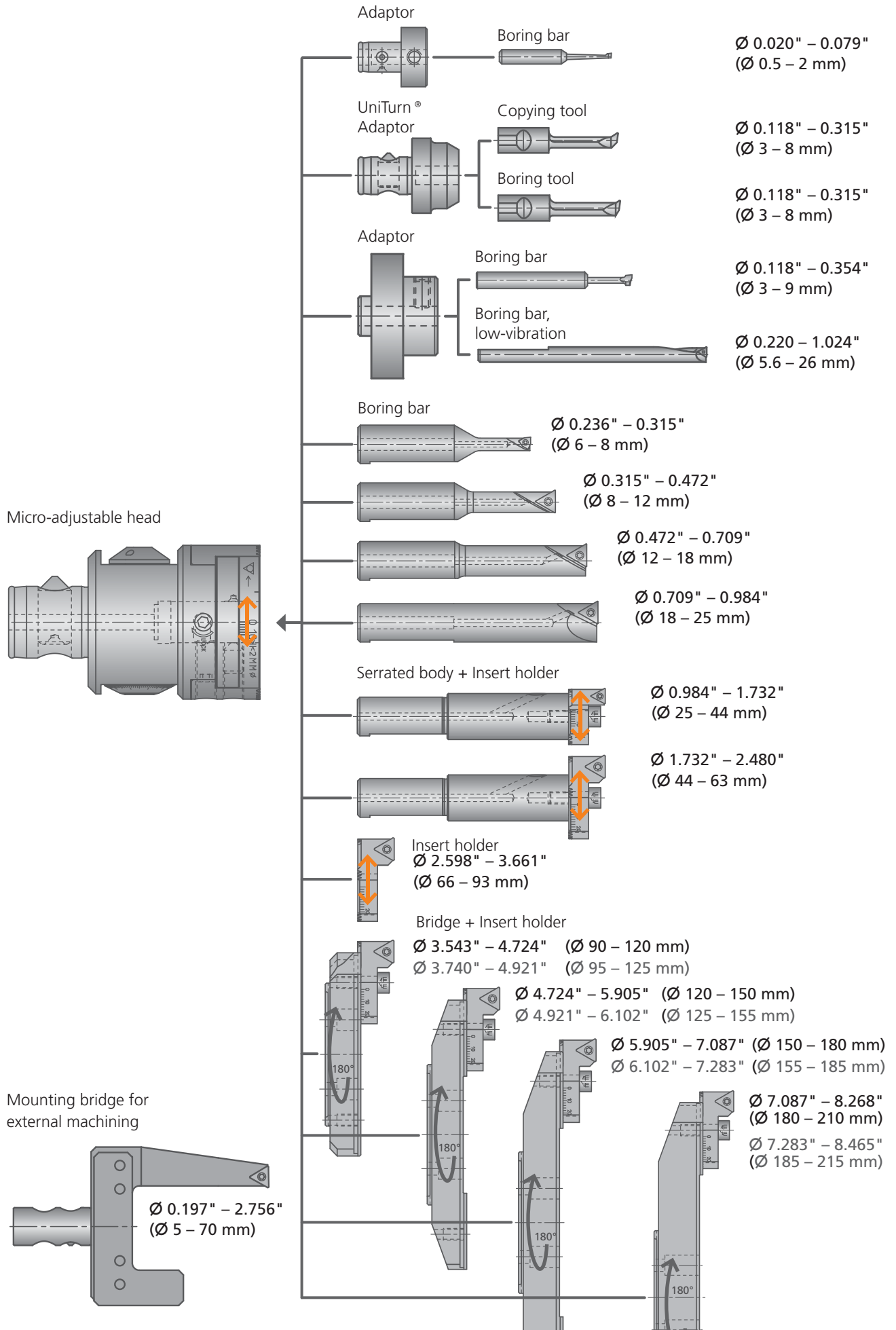
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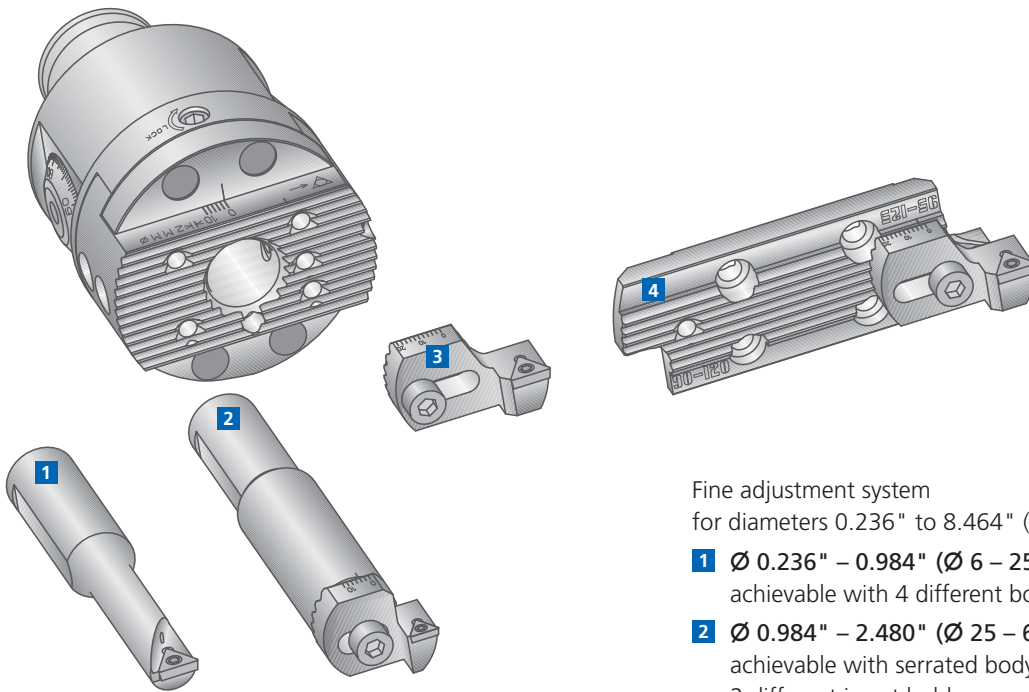


2



3





Fine adjustment system  
for diameters 0.236" to 8.464" (6 to 215 mm):

- 1** Ø 0.236" – 0.984" (Ø 6 – 25 mm)  
achievable with 4 different boring bars
- 2** Ø 0.984" – 2.480" (Ø 25 – 63 mm)  
achievable with serrated body and  
2 different insert holders
- 3** Ø 2.598" – 3.661" (Ø 66 – 93 mm)  
achievable with insert holder
- 4** Ø 3.543" – 8.464" (Ø 90 – 215 mm)  
achievable with bridge and insert holder



Adaptor with cylindrical tool holder

Mounting bridge for external machining up to 70 mm

# KOMET MicroKom® hi.flex

## Fine Boring Set

**A**       $\varnothing$  6 mm -  $\varnothing$  125 mm

**B**       $\varnothing$  0.236" -  $\varnothing$  4.921"



Fine boring set  $\varnothing$  6 – 125 mm  
Order No. M05 00010

Fine boring set  $\varnothing$  0.236" – 4.921"  
Order No. M05 00610

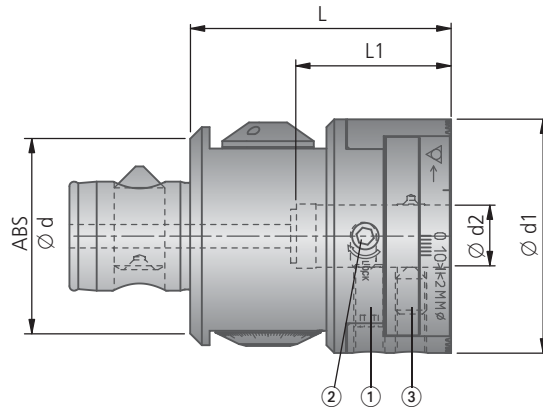
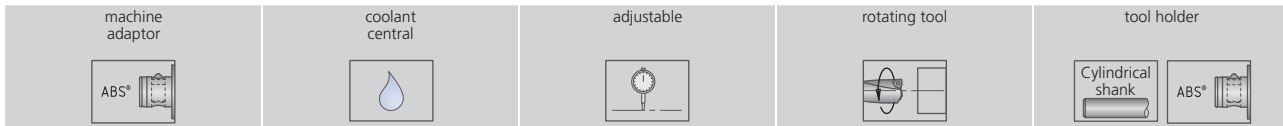
Contents of case			
	Order No.	Qty.	Description
①	M05 01000	1	Micro-adjustable head
②	M05 20101	1	Insert holder $\varnothing$ 25-44
③	M05 20151	1	Insert holder $\varnothing$ 44-125
④	M05 80101	1	Bridge
⑤	M05 90100	1	Serrated body
⑥	M05 90501	1	Packing piece
⑦	B05 20100	1	Boring bar $\varnothing$ 6-8
⑧	B05 20120	1	Boring bar $\varnothing$ 8-12
⑨	B05 20160	1	Boring bar $\varnothing$ 12-18
⑩	B05 20220	1	Boring bar $\varnothing$ 18-25
⑪	18050 10040	1	Allen key SW4
⑫	L05 01110	1	Flag key 5IP
	L05 01120	1	Flag key 6IP
	L05 01240	1	Flag key 8IP
⑬	55011 05016	5	Cylindrical screw M5x16
	W57 04140.026425	4	Insert BK6425
	W57 14140.046425	4	Insert BK6425
	W00 04120.016440	2	Insert BK6440

Contents of case			
	Order No.	Qty.	Description
①	M05 01600	1	Micro-adjustable head
②	M05 20600	1	Insert holder $\varnothing$ 0984"-1.732"
③	M05 20650	1	Insert holder $\varnothing$ 1.732"-4.921"
④	M05 80600	1	Bridge
⑤	M05 90600	1	Serrated body
⑥	M05 90501	1	Packing piece
⑦	B05 20600	1	Boring bar $\varnothing$ 0.236"-0.315"
⑧	B05 20620	1	Boring bar $\varnothing$ 0.315"-0.472"
⑨	B05 20660	1	Boring bar $\varnothing$ 0.472"-0.709"
⑩	B05 20720	1	Boring bar $\varnothing$ 0.709"-0.984"
⑪	A5210150 or A5210350	1	ABS50 CAT 50 or ABS50 CAT 40 Adapter
⑫	18050 10040	1	Allen key SW4
	L05 01110	1	Flag key 5IP
	L05 01120	1	Flag key 6IP
⑬	L05 01240	1	Flag key 8IP
	55011 05016	5	Cylindrical screw M5x16
⑭	W57 04140.026425	4	Insert BK6425
	W57 14140.046425	4	Insert BK6425
	W00 04120.016440	2	Insert BK6440



# KOMET MicroKom® hi.flex

## Micro-adjustable Head with ABS® Connection



(..) = mm

Description	Order No.	ABS Ø d	Ø d1	Ø d2	Adjust- ment S	L	L1		Assembly parts		
									Clamping screw ①  Order No. Description	Clamping screw ②  Order No. Description	Gripper screw ③  Order No. Description
ABS50/16	M05 01600 [M05 01000]	50	2.362 (60)	ABS32	0.197 (5)	2.638 (67)	1.575 (39.7)	1.225	55051 08120 M8x1x20	55051 08008 M8x8	N00 02062 ABS32-F1.1

[..] denotes metric scaled tools

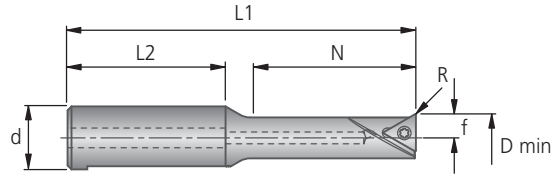
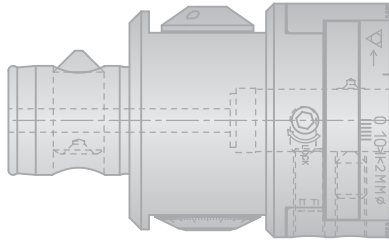
The micro-adjustable drilling head is balanced in the zero position.  
Adjustment must be in line with cutting parameters and spindle speed.

### Features :

- Diameter range 0.019" – 8.465" (0.5-215 mm) with existing KOMET standard tools
- Large adjustment range from -0.020" to +0.394" (-0.5 to +10 mm) on dia.
- Easy to use
- Adjustment per graduation = Ø 0.0004" (Ø 0.01 mm)
- Adjustment accuracy Ø 0.00008" (Ø 0.002 mm) with vernier
- Easy-to-read scale
- Use of existing ABS32 tools possible
- Internal coolant supply over whole range
- ABS32 spindle connection and 0.630" (6 mm) cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Head diameter: 2.362" (60 mm)

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ✗ not possible



$\varnothing D$ min	3.5xD							lbs	Basic recommendation		for workpiece material	Assembly parts	Accessories
	Order No.	$\varnothing d$	L1	L2	N	f	R		Order No.	ISO-Code		Clamping screw	Screwdriver
0.236 (6)	<b>B05 20600</b> [B05 20100]	0.63 (16)	2.823 (71.7)	1.575 (40)	0.872 (21)	0.118 (3)	0.004 (0.1)	0.14	W00 04120.018440 W00 04120.012710 W00 04120.0121	WOHX 02T001EL-G12 BK8440 WOHX 02T001EL-G12 BK2710 WOHX02T001FL-G12 K10		N00 56011 S/M1.8x2.9-5IP 0.38 Nm	L05 00800 5IP
0.315 (8)	<b>B05 20620</b> [B05 20120]	0.63 (16)	3.047 (77.4)	1.575 (40)	1.102 (28)	0.157 (4)	0.008 (0.2)	0.15	W57 04140.026425 W30 04060.032710 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK6425 TOHX 06T103EL-G06 BK2730 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40		N00 56021 S/M2x3.8-6IP 0.62 Nm	L05 00810 6IP
0.472 (12)	<b>B05 20660</b> [B05 20160]	0.63 (16)	3.472 (88.2)	1.575 (40)	1.654 (42)	0.236 (6)	0.008 (0.2)	0.19	W57 14140.046425 W30 14060.042710 W30 14060.046110	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK6110		N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP
0.709 (18)	<b>B05 20720</b> [B05 20220]	0.63 (16)	3.937 (100)	1.575 (40)	2.362 (60)	0.354 (9)	0.008 (0.2)	0.31	W57 14120.0423 W30 14990.0440	TOGX 090204FN-12 K10 TOGX 090204TN CBN40			

[..] denotes metric scaled tools

**Supply includes:**

Boring bar with clamping screw ①.

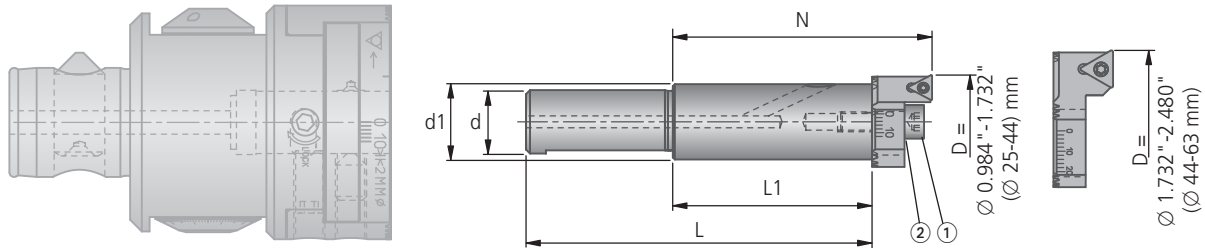
Please order inserts and accessories separately.

Ø 0.984 – 2.480 inch  
(Ø 25 – 63 mm)

KOMET MicroKom® *hi.flex*  
Serrated Body

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	●	✗	●	●	✗

● very good ● good ○ possible ✗ not possible



(..) = mm

Serrated body							Assembly parts	
							Location screw ①	Cup spring ②
Order No.	d	d1	N	L	L1			
							Order No. Description	Order No. Description
M05 90600 [M05 90100]	0.630 (16)	0.748 (19)	2.559 (65)	3.484 (88.5)	2.028 (51.5)	0.36	55011 05016 M5x16 ISO4762	56771 10053 A12.5 Ø 6.2x0.35

Supply includes serrated body: Serrated body with assembly parts.

Ø D	3.5xD		Basic recommendation			Assembly parts	Accessories
	Order No.		Insert	for workpiece material	Clamping screw		
			Order No. ▽ size	ISO-Code		Order No. Description	Order No. Description
0.984 - 1.732 (25 - 44)	M05 20600 [M05 20101]	0.04	W57 04140.026425 W30 04060.032710 W30 04060.037615 W57 04120.0223	TOGX 06T102EN-14 BK6425 TOHX 06T103EL-G06 BK2730 TOHX 06T103EL-G06 BK7615 TOGX 06T102FN-12 K10		N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
1.732 - 2.480 (44 - 63)	M05 20650 [M05 20151]	0.06	W57 14140.046425 W30 14060.042710 W30 14060.047615 W57 14120.0423	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP

[..] denotes metric scaled tools

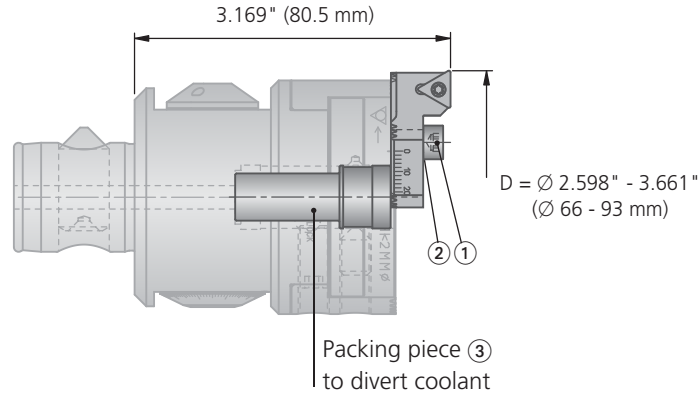
Supply includes insert holder:

Insert holder with assembly parts. Please order inserts and accessories separately.

Insert Holder

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible



(..) = mm

Ø D	3.5xD		Basic recommendation			Assembly parts	Accessories
			Insert		for workpiece material	Clamping screw	Screwdriver
Order No.	lbs						
Order No.	Order No.	Order No.	Order No.	ISO-Code	Order No.	Order No.	Order No.
[M05 20151]	▽ size	▽ size	▽ size	▽ size	Description	Description	Description
2.598 - 3.661 (66 - 93)	M05 20650 [M05 20151]	0.06	W57 14140.046425	TOGX 090204EN-14 BK6425		N00 56111	L05 00830
			W30 14060.042710	TOHX 090204EL-G06 BK2710		S/M2.6x6.2-8IP	8IP
			W30 14060.047615	TOHX 090204EL-G06 BK7615		1.28 Nm	
			W57 14120.0423	TOGX 090204FN-12 K10			

[..] denotes metric scaled tools

Supply includes insert holder:

Insert holder with clamping screw.

Please order inserts and accessories separately.

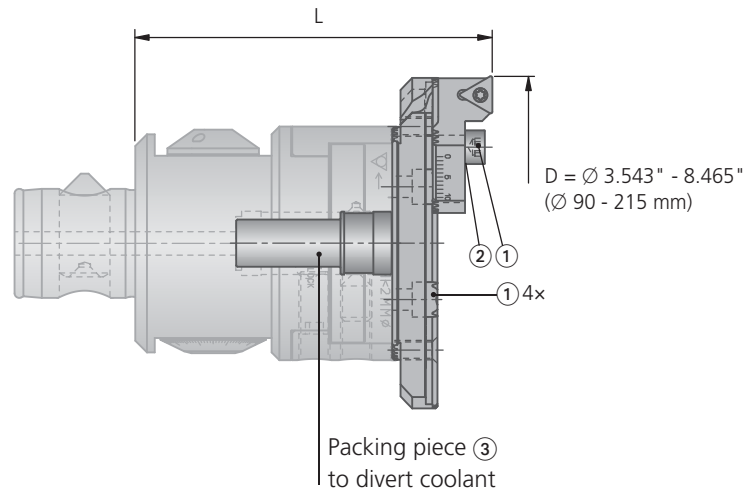
Accessories		
①	②	③
Location screw	Cup spring	Packing piece
Order No. Article	Order No.	Order No.
55011 05016 M5x16 ISO 4762	56771 10053	M05 90501

Ø 3.543 – 8.465 inch  
(Ø 90 – 215 mm)

KOMET MicroKom® *hi.flex*  
Bridge / Insert Holder

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	○	○	✗

● very good ○ good ○ possible ✗ not possible



(..) = mm

Ø D	L	Bridge Order No.	Insert holder Order No.	Basic recommendation		for workpiece material P M K N S H	Assembly parts Clamping screw Order No. Description	Accessories Screwdriver Order No. Description
				Insert Order No. ▽▽ size	Insert ISO-Code			
3.543-4.921 (90-125)	3.725 (94.62)	M05 80600 [M05 80101] 	M05 20650 [M05 20151] 	W30 14140.046425 W30 14060.042710 W30 14060.047615 W57 14120.0423	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
4.724-6.102 (120-155)	3.804 (96.62)	M05 80700 [M05 80200] 						
5.906-7.284 (150-185)	3.883 (98.62)	M05 80800 [M05 80300] 						
7.087-8.465 (180-215)	4.001 (101.62)	M05 80900 [M05 80400] 						

[..] denotes metric scaled tools

**Supply includes insert holder:**

Insert holder with clamping screw.

Please order inserts and accessories separately.

Accessories		
① Location screw  Order No. Article	② Cup spring  Order No.	③ Packing piece  Order No.
55011 05016 M5x16 ISO 4762	56771 10053	M05 90501

Guideline values for fine boring					V <sub>c</sub> Cutting speed v <sub>c</sub> ft/min (m/min)	Max. f in/rev (mm/rev)					
Material group	Strength R <sub>m</sub> (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		> 3.5×D					
					Ø 0.236 – 0.311 (Ø 6 – 7.9)	Ø 0.312 – 0.469 (Ø 8 – 11.9)	Ø 0.470 – 0.984 (Ø 12 – 25)	Ø 0.985 – 1.732 (Ø 25 – 44)	Ø 1.732 – 3.661 (Ø 44 – 93)	Ø 3.543 – 8.465 (Ø 90 – 215)	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980 (300)	0.002 (0.04)	0.003 (0.07)	0.004 (0.10)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820 (250)	0.002 (0.04)	0.002 (0.06)	0.005 (0.12)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)
	2.1	<72500	Lead alloy	12L13	980 (300)	0.002 (0.04)	0.003 (0.07)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	790 (240)	0.001 (0.03)	0.002 (0.06)	0.004 (0.10)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	4.0	>130000	Tool steels	H13 H21	660 (200)	0.001 (0.03)	0.002 (0.05)	0.004 (0.10)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)
	4.1		HSS		390 (120)	0.001 (0.02)	0.002 (0.04)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)
S	5.0		250 Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel* 718 Nimonic* 80A	110 (50)	0.0004 (0.01)	0.002 (0.04)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)
	5.1	58000	titanium, titanium alloys	AMS R54520	100 (30)	0.0004 (0.01)	0.002 (0.04)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	660 (200)	0.0004 (0.01)	0.002 (0.05)	0.004 (0.10)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	6.1	<130000	Stainless steels	630	590 (180)	0.0004 (0.01)	0.002 (0.05)	0.004 (0.10)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	390 (120)	0.0004 (0.01)	0.002 (0.04)	0.003 (0.08)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)
K	8.0		180 Grey cast iron	No 35 B No 50 B	790 (240)	0.002 (0.05)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)	0.008 (0.20)	0.008 (0.20)
	8.1		250 Alloy grey cast iron	A436 Type 2	660 (200)	0.002 (0.05)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)	0.008 (0.20)	0.008 (0.20)
	9.0	≤87000	130 Nodular cast iron ferritic	60-40-18	590 (180)	0.002 (0.04)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	9.1		230 Nodular cast iron ferritic / pearlitic	80-55-06	590 (180)	0.002 (0.04)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	10.0	>87000	250 Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	520 (160)	0.002 (0.04)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	10.1		200 Alloyed nodular cast iron	A43D2	460 (140)	0.001 (0.03)	0.003 (0.07)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
10.2		300 Vermicular cast iron		390 (120)	0.001 (0.03)	0.004 (0.10)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)	
N	12.0		90 Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	1310 (400)	0.001 (0.02)	0.002 (0.04)	0.003 (0.08)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	12.1		100 Copper alloy, Brass, Bronze: average cut		980 (300)	0.002 (0.05)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	13.0		60 Wrought alumi- num alloy	GD-AISI12	1640 (500)	0.001 (0.02)	0.002 (0.06)	0.004 (0.10)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)
	13.1		75 Aluminum alloy: Si content <10% Magnesium alloy		1150 (350)	0.002 (0.05)	0.003 (0.08)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	14.0		100 Aluminum alloy: Si content >10%	A360.2	980 (300)	0.002 (0.05)	0.003 (0.08)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
H	15.0	203000	Hardened steels < 45 HRC		390 (80)	-	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)
	16.0	261000	Hardened steels > 45 HRC		300 (600)	-	0.002 (0.05)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

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



Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽▽ Size	ISO-Code	
6 - 7.9	-	-	
8 - 11.9	W30 04120.3232	TOHX 06T102EL-US12 CK32	
	W30 04120.3977	TOHX 06T1ZZEL-39G12 BK77	
12 - 25	W30 14120.3232	TOHX 090202EL-US12 CK32	
	W30 14120.3977	TOHX 0902ZZEL-39G12 BK77	
25 - 44	W30 26120.3232	TOHX 140304-US12 CK32	
	W30 26120.3977	TOHX 1403ZZEL-39G12 BK77	
44 - 215	W30 14120.3232	TOHX 090202EL-US12 CK32	
	W30 14120.3977	TOHX 0902ZZEL-39G12 BK77	

for better chip control

Alternative Inserts			
ØD	Insert		for workpiece material
	Order No. ▽▽ Size	ISO-Code	
6 - 7.9	-	-	
8 - 11.9	W57 04140.023210	TOGX 06T102EN-14 CK3210	
	W30 04120.0238	TOHX 06T102EL-G12 CK38	
	W30 04990.0257	TOGX 06T102TN CBN57	
	W30 04990.0255	TOGX 06T102FN PKD55	
12 - 25	W57 14140.043210	TOGX 090204EN-14 CK3210	
	W30 14120.0238	TOHX 090202EL-G12 CK38	
	W30 14990.0457	TOGX 090204TN CBN57	
	W30 14990.0455	TOGX 090204FN PKD55	
25 - 44	W57 26140.043210	TOGX 140304EN-14 CK3210	
	W30 26120.0438	TOHX 140304EL-G12 CK38	
	W30 26990.0457	TOGX 140304TN CBN57	
	W30 26990.0455	TOGX 140304FN PKD55	
44 - 215	W57 14140.043210	TOGX 090204EN-14 CK3210	
	W30 14120.0238	TOHX 090202EL-G12 CK38	
	W30 14990.0457	TOGX 090204TN CBN57	
	W30 14990.0455	TOGX 090204FN PKD55	

for higher cutting speed

6 - 7.9	-	-	
8 - 1.9	W57 04140.023210	TOGX 06T102EN-14 CK3210	
	W30 04060.036110	TOHX 06T103EL-G06 BK6110	
	W30 04200.0321	TOHX 06T103FL-G20 K10	
	W30 04990.0255	TOGX 06T102FN PKD55	
12 - 25	W57 14140.043210	TOGX 090204EN-14 CK3210	
	W30 14060.046110	TOHX 090204EL-G06 BK6110	
	W30 14200.0421	TOHX 090204FL-G20 K10	
	W30 04990.0255	TOGX 090204FN PKD55	
25 - 44	W57 26140.043210	TOGX 140304EN-14 CK3210	
	W30 26060.046110	TOHX 140304EL-G06 BK6110	
	W30 26200.0521	TOHX 140305FL-G20 K10	
	W30 26990.0455	TOGX 140304FN PKD55	
44 - 215	W57 14140.043210	TOGX 090204EN-14 CK3210	
	W30 14060.046110	TOHX 090204EL-G06 BK6110	
	W30 14200.0421	TOHX 090204FL-G20 K10	
	W30 04990.0255	TOGX 090204FN PKD55	

for greater strength



# KOMET MicroKom® hi.flex

## Adaptor

- with cylindrical tool holder
- for clamping vibration dampened fine boring bars

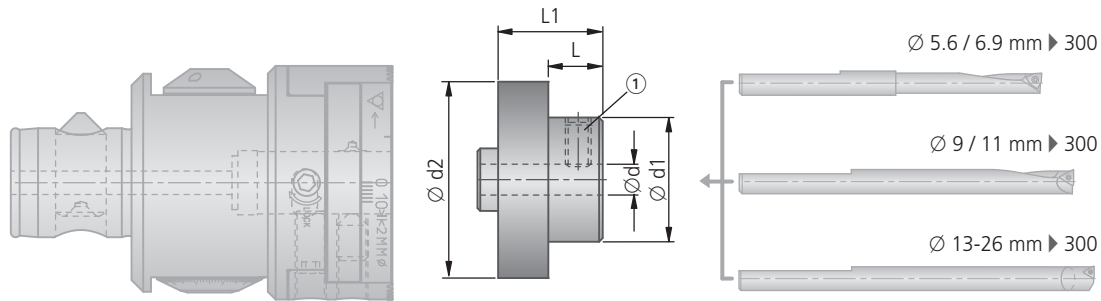
1



2



3

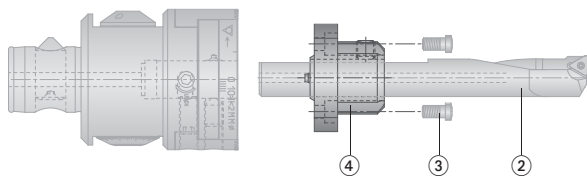


Order No.	Ø d	Ø d1	Ø d2	L	L1	kg	Assembly parts	
							Description	Order No.
M05 90200	6	31	–	16	–	0.112	M8×10	55051 08010
M05 90210	8	31	–	16	–	0.107	M8×10	55051 08010
M05 90220	10	31	46	15	25	0.155	M8×10	55051 08010
M05 90230	12	31	46	15	25	0.147	M8×10	55051 08010
M05 90240	16	31	46	20	30	0.146	M8×8	55051 08008

Supply includes: Adaptor complete.

Order (4) holding screws, (order no. 55011 05016), seperately.

### Instruction for adaptor M05 90240



#### Please note:

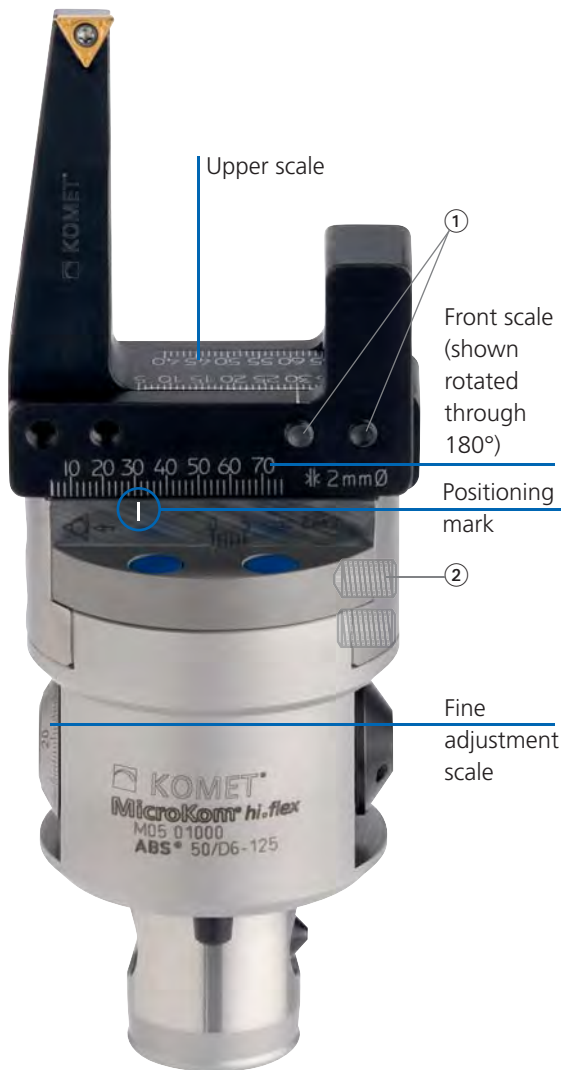
Before tightening the holding screw (3), centre the adaptor (4) with shank Ø for the boring bar (2) on the micro-adjustable head.





# KOMET MicroKom® hi.flex

## Mounting Bridge for External Machining $\varnothing 5 - 70$ mm

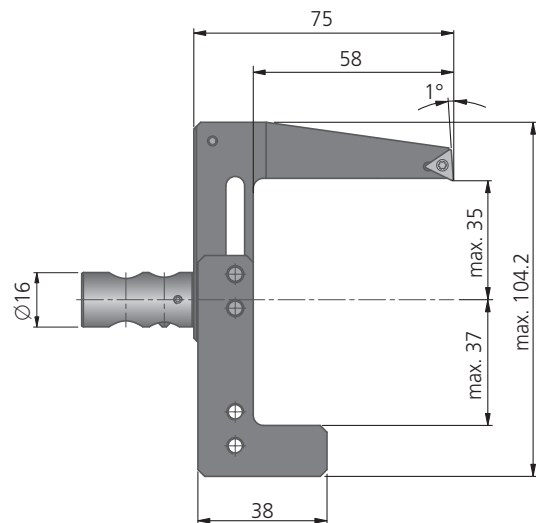






### Setting the diameter

- Position the mounting bridge on the micro-adjustable head.
- Set the coarse position on the upper scale, tighten screw ①. **Important note: check position of screw ① for required  $\varnothing$  range!**



- Align the front scale for the mounting bridge with the positioning mark on the adjustable head, tighten the pull stud ②.
- Carry out fine adjustment on the setting device using the scale on the micro-adjustable head.



$\varnothing D$	Order No.	Basic recommendation			for workpiece material	Assembly parts		Accessories
		Insert	Order No.	ISO-Code		Cylindrical screw ①	Clamping screw	Screwdriver
5 – 70	M05 90300 0.377	 -12  -14  W30	Order No. $\nabla\nabla$ size	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		Order No. Description 55011 05030 M5x30	Order No. Description N00 56101 S/M2,6x5.2-8IP 1.28 Nm	Order No. Description L05 00830 8IP

Supply includes: Mounting bridge with assembly parts.  
Please order inserts and accessories separately.

# KOMET MicroKom BluFlex® Precision Boring System with Bluetooth® Technology

1



2



3



Modern wireless networking is one of the benefits with which the new MicroKom *BluFlex*® fine adjustment head is equipped. Bluetooth® technology is developed for wirelessly networking devices over short distances. This technology has become standard for small mobile devices.

The introduction of Bluetooth® technology in the MicroKom *BluFlex*® tool system means that the display has been disconnected from the tool head, thereby making it easier and more convenient to read off the data. When adjusting the tool system, the user can move the display to suit the conditions on site, so that it is in his field of view. A specially designed adjustment key with integral Bluetooth® interface is part of the system.

With integral part balancing, the MicroKom *BluFlex*® can reach a rotational speed of up to 20,000 rpm.

The modular ABS® interface makes adjustment easier on both the spindle side and tool side.

#### BENEFITS for you:

- Higher speeds thanks to integral part balancing
- Universal ABS® interface
- External display makes reading off easier, thanks to the enlarged values
- The display and adjustment key can be used for any head
- As conventional batteries are used, this makes it easier to replace them
- The slide can be clamped in place

## KOMET MicroKom *BluFlex*® Page

### Precision Boring System

Micro-adjustable head with ABS® connection	270
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Insert holder Ø 2.598 - 3.701 inch (Ø 66 - 94 mm)	274
Bridge / insert holder Ø 3.543 - 8.464 inch (Ø 90 - 215 mm)	275

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1



2



3



# KOMET MicroKom *BluFlex*®

## Variation Options

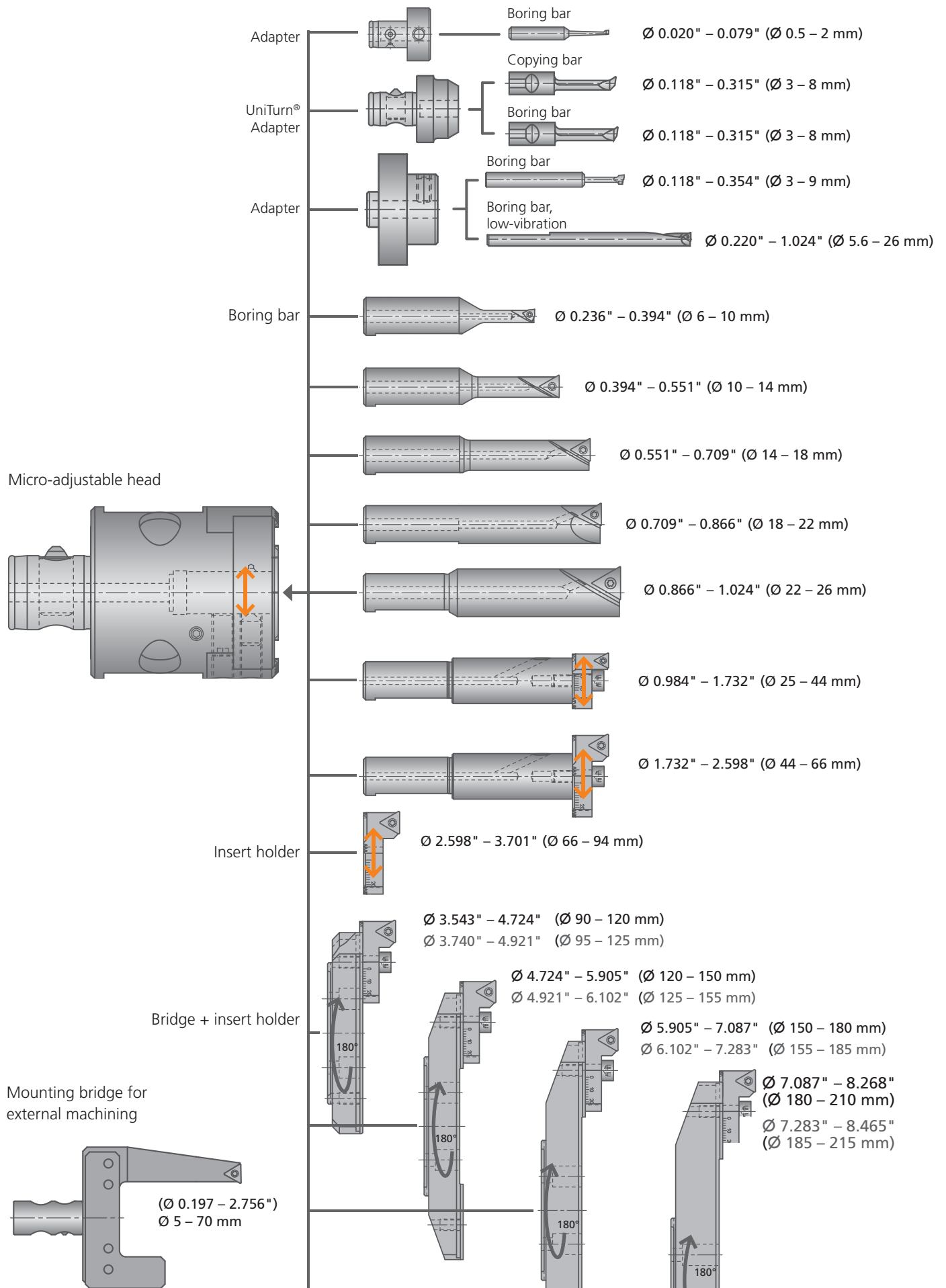
1



2



3



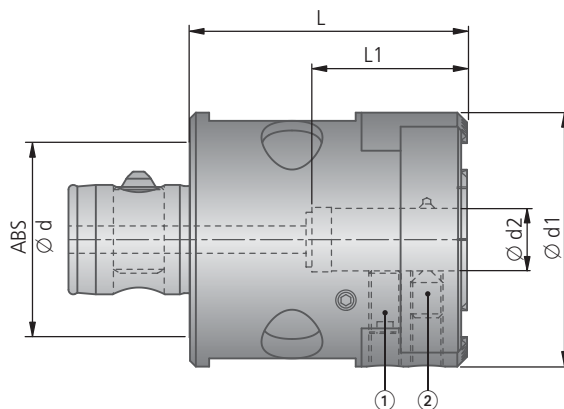
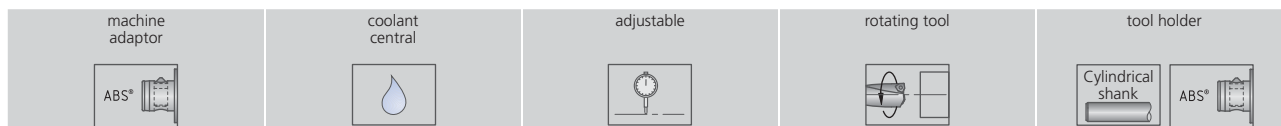


**Features:**

- Diameter range 0.020-8.465" (0.5-215 mm) with existing KOMET standard tools
- Adjustment range from -0.157 to 0.181" (-0.4 to +4.6 mm) on dia.
- Easy to use
- Use of existing ABS 32 tools possible
- Internal coolant supply over whole range
- ABS 32 spindle connection and 0.630" (16 mm) cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Head diameter: 2.559" (65 mm)
- MQL-compatible
- Maximum spindle speed 20,000 min<sup>-1</sup>
- Slider - can be clamped
- Display resolution 0.0001" (0.002 mm) in the diameter
- Display in mm or inches
- Can be switched between differential and absolute mode
- Energy saving function, automatically switches off after 30 seconds

# KOMET MicroKom *BluFlex*®

## Micro-adjustable Head with ABS® Connection



(..) = mm

Description	Order No.	ABS Ø d	Ø d1	Ø d2	Adjust- ment S	L	L1		Assembly parts	
									Clamping screw ① DIN913	Gripper screw ②
									Order No. Description	Order No. Description
ABS50/6-215	M04 10001	50	2.560 (65)	ABS32	0.090 (2.3)	2.795 (71)	1.563 (39.7)	3.2	55051 08120 M8x1x20	N00 02062 ABS32-F1.1

Adjustment must be in line with cutting parameters and spindle speed.

### Display unit



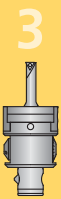
Display unit	Assembly parts	
	Rubber sleeve with clip ④	
Order No.	Order No.	
E51 00000	E51 00010	

### Adjustment key



Adjustment key	Assembly parts	
	Sleeve ⑤	
Order No.	Order No.	
E52 00000	E52 00000.13	

Order No. M04 10010  
 Components:  
 1× Micro-adjustable head  
 1× Display unit  
 1× Adjustment key  
 1× Operating instructions



**Ø 6 – 125 mm  
 Tool Set**

Tool set Ø 6 – 125 mm  
 Order No. M04 10020



		Components
	Qty	Description
M05 20101	1	Insert holder x 25-44
M05 20151	1	Insert holder x 44-125
M05 80101	1	Bridge x 90-125
M05 90100	1	Serrated body
M05 90501	1	Packing piece
B05 20100	1	Boring bar x 6-10
B05 20140	1	Boring bar x 10-14
B05 20180	1	Boring bar x 14-18
B05 20220	1	Boring bar x 18-22
B05 20260	1	Boring bar x 22-26
18050 10040	1	Allen key SW4
L05 01110	1	Flag key 5IP
L05 01120	1	Flag key 6IP
L05 01240	1	Flag key 8IP
L05 01260	1	Flag key 10IP
55011 05016	5	Cylindrical screw M5×16
W57 04140.0260	4	Insert BK60
W57 14140.0460	4	Insert BK60
W57 26140.0460	2	Insert BK60
W00 04120.018440	2	Insert BK8440

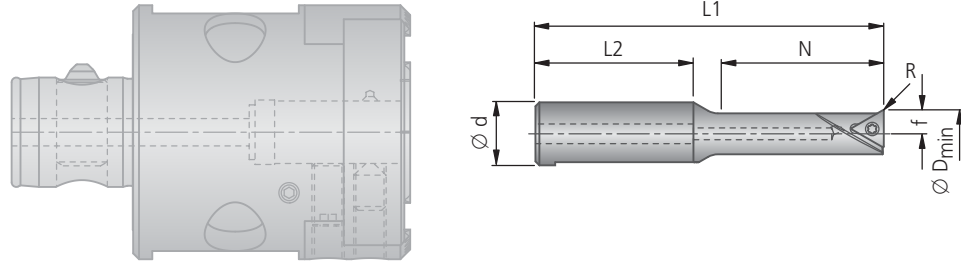
# KOMET MicroKom *BluFlex*®

Boring Bar with Cylindrical Shank,  $\kappa = 90^\circ$ , R.H. cutting

Ø 0.236 – 1.024 inch  
(Ø 6 – 26 mm)

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	○	○	✗

● very good ○ good ○ possible ✗ not possible



Ø D min	3.5xD								Basic recommendations			Assembly parts	Accessories
	Part No.	Ø d	L1	L2	N	f	R	lbs	Insert Part No. ▽ size	ISO Insert Description	for workpiece material P M K N S H	Clamping screw Part No. Description	Screwdriver Part No. Description
0.236 (6)	<b>B05 20600</b> [B05 20100]	0.630 (16)	2.823 (71.7)	1.575 (40)	0.827 (21)	0.118 (3)	0.004 (0.1)	0.13	 W00 04120.018440 W00 04120.012710 W00 04120.0121	WOHX 02T001EL-G12 BK8440 WOHX 02T001EL-G12 BK2710 WOHX02T001FL-G12 K10		N00 56011 S/M1.8x2.9-5IP 3.4 in-lbs	L05 00800 5IP
0.394 (10)	<b>B05 20640</b> [B05 20140]	0.630 (16)	3.220 (81.8)	1.575 (40)	1.338 (34)	0.197 (5)	0.008 (0.2)	0.18	 W57 14140.046425 W30 14060.042710 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40		N00 56101 S/M2.6x5.2-8IP 11.3 in-lbs	L05 00830 8IP
0.551 (14)	<b>B05 20680</b> [B05 20180]	0.630 (16)	3.716 (94.4)	1.575 (40)	1.968 (50)	0.275 (7)	0.008 (0.2)	0.22	 W57 26140.046425 W30 26060.042710 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK6425 TOHX 140304EL-G06 BK2710 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40		N00 56211 S/M3.5x7.3-10IP 24.8 in-lbs	L05 00850 10IP

[...] denotes metric scaled tools

## Supply includes:

Boring bar with with assembly parts. Please order inserts and accessories separately.

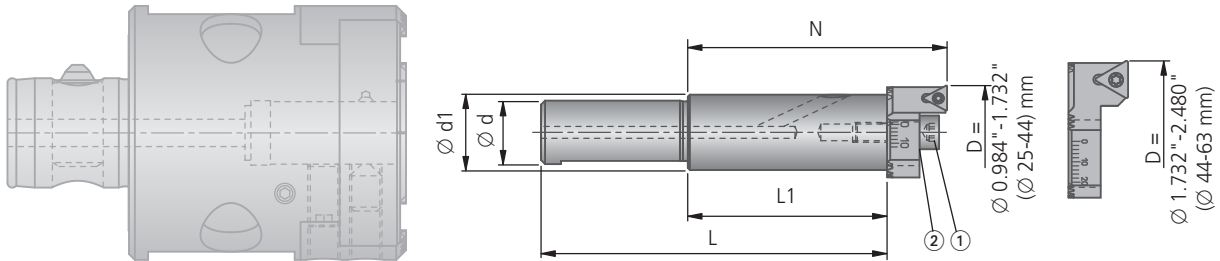


Ø 0.984 – 2.598 inch  
(Ø 25 – 66 mm)

KOMET MicroKom *BluFlex*®  
Serrated Body

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	●	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible



(..) = mm

Serrated body							Assembly parts	
							Location screw ①	Cup spring ②
Order No.	d	d1	N	L	L1		Order No. Description	Order No. Description
M05 90600 [M05 90100]	0.630 (16)	0.748 (19)	2.559 (65)	3.484 (88.5)	2.027 (51.5)	0.36	55011 05016 M5x16 ISO4762	56771 10053 A12.5 Ø 6.2x0.35

Supply includes serrated body: Serrated body with assembly parts.

Ø D	3.5xD		Basic recommendation			for workpiece material	Assembly parts	Accessories
			Insert	Order No.	ISO-Code		Clamping screw	Screwdriver
0.984 - 1.732 (25 - 44)	M05 20601 [M05 20101]	0.04		-12	W57 04140.026425 W30 04060.032710 W30 04060.037615 W57 04120.0223	TOGX 06T102EN-14 BK6425 TOHX 06T103EL-G06 BK2730 TOHX 06T103EL-G06 BK7615 TOGX 06T102FN-12 K10		
1.732 - 2.598 (44 - 66)	M05 20651 [M05 20151]	0.06		-14	W57 14140.046425 W30 14060.042710 W30 14060.047615 W57 14120.0423	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		

[..] denotes metric scaled tools

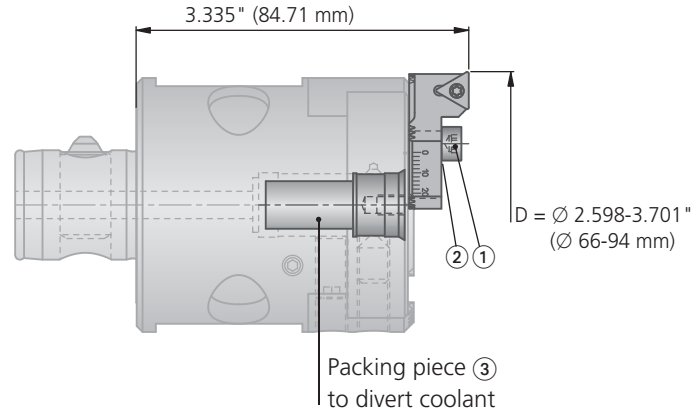
Supply includes insert holder:

Insert holder with assembly parts. Please order inserts and accessories separately.

### Insert Holder

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible



(..) = mm

Ø D	3.5xD		Basic recommendation			for workpiece material	Assembly parts	Accessories
	Order No.	lbs	Insert	W30	W57 -12		57 -14	Clamping screw
			Order No.	ISO-Code			Order No.	Order No.
			▽▽ size				Description	Description
2.598-3.701 (66 – 94)	M05 20651 [M05 20151]	0.06	W57 14140.046425	TOGX 090204EN-14 BK6425	●	N00 56111	L05 00830	
			W30 14060.042710	TOHX 090204EL-G06 BK2710	●	S/M2.6x6.2-8IP	8IP	
			W30 14060.047615	TOHX 090204EL-G06 BK7615	●	1.28 Nm		
			W57 14120.0423	TOGX 090204FN-12 K10	●			

[..] denotes metric scaled tools

Supply includes insert holder:

Insert holder with clamping screw.

Please order inserts and accessories separately.

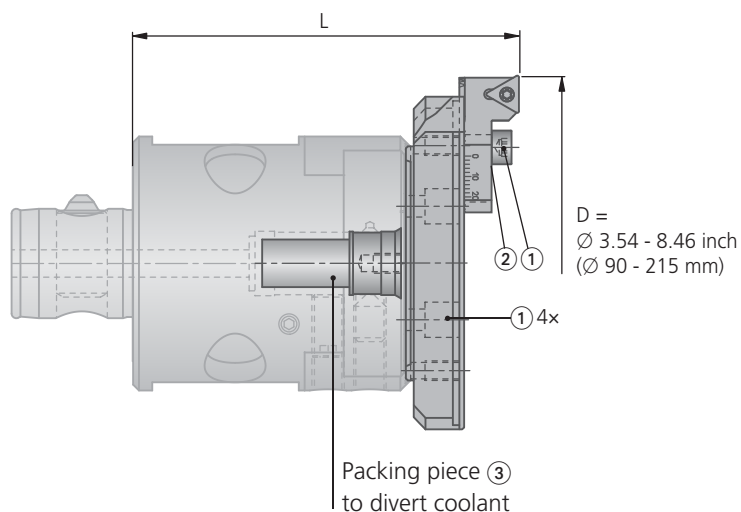
Accessories		
①	②	③
Location screw	Cup spring	Packing piece
Order No.	Order No.	Order No.
Description		
55011 05016 M5x16 ISO 4762	56771 10053	M05 90501

Ø 3.543 – 8.464 inch  
(Ø 90 – 215 mm)

KOMET MicroKom *BluFlex*®  
Bridge / Insert Holder

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	○	○	✗

● very good ○ good ○ possible ✗ not possible



(..) = mm

Ø D	L	Bridge Order No.	Insert holder Order No.	Basic recommendation		for workpiece material <b>P M K N S H</b>	Assembly parts	Accessories
				Insert Order No. ▽▽ size	Insert ISO-Code		Clamping screw Order No. Description	Screwdriver Order No. Description
3.543-4.921 (90-125)	3.887 (98.72)	M05 80101 0.32	M05 20651 [M05 20151] 0.57	W30 W57 14140.046425 W30 14060.042710 W30 14060.047615 W57 14120.0423	-12 -14 TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK2710 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
4.724-6.102 (120-155)	3.965 (100.72)	M05 80200 0.24						
5.906-7.284 (150-185)	4.044 (102.72)	M05 80300 0.33						
7.087-8.465 (180-215)	4.162 (105.72)	M05 80400 0.50						

[..] denotes metric scaled tools

Supply includes insert holder:

Insert holder with clamping screw.

Please order inserts and accessories separately.


Accessories		
①	②	③
Location screw 	Cup spring 	Packing piece 
Order No. Description	Order No.	Order No.
55011 05016 M5x16 ISO 4762	56771 10053	M05 90501


Guideline values for fine boring					V <sub>c</sub> Cutting speed v <sub>c</sub> ft/min (m/min)	Max. f in/rev (mm/rev)					
Material group	Strength R <sub>m</sub> (lb/ft <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE		> 3.5×D					
					0.236 – 0.311 (Ø 6 – 7.9)	0.312 – 0.468 (Ø 8 – 11.9)	0.469 – 0.984 (Ø 12 – 25)	0.984 – 1.732 (Ø 25 – 44)	1.732 – 3.701 (Ø 44 – 94)	3.543 – 8.464 (Ø 90 – 215)	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980 (300)	0.001 (0.04)	0.003 (0.07)	0.004 (0.10)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820 (250)	0.001 (0.04)	0.002 (0.06)	0.005 (0.12)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)
	2.1	<72500	Lead alloy	12L13	980 (300)	0.001 (0.04)	0.003 (0.07)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	785 (240)	0.001 (0.03)	0.002 (0.06)	0.004 (0.10)	0.003 (0.07)	0.004 (0.10)	0.004 (0.10)
	4.0	>130000	Tool steels	H13 H21	660 (200)	0.001 (0.03)	0.002 (0.05)	0.004 (0.10)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)
	4.1		HSS		390 (120)	0.0008 (0.02)	0.001 (0.04)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)
S	5.0	250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	165 (50)	0.0004 (0.01)	0.001 (0.04)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)
	5.1	58000	titanium, titanium alloys	AMS R54520	100 (30)	0.0004 (0.01)	0.001 (0.04)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	660 (200)	0.0004 (0.01)	0.002 (0.05)	0.004 (0.10)	0.003 (0.08)	0.004 (0.10)	0.004 (0.10)
	6.1	<130000	Stainless steels	630	590 (180)	0.0004 (0.01)	0.002 (0.05)	0.004 (0.10)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	390 (120)	0.0004 (0.01)	0.001 (0.04)	0.003 (0.08)	0.002 (0.06)	0.004 (0.10)	0.004 (0.10)
K	8.0	180	Grey cast iron	No 35 B No 50 B	785 (240)	0.002 (0.05)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)	0.008 (0.20)	0.008 (0.20)
	8.1	250	Alloy grey cast iron	A436 Type 2	660 (200)	0.002 (0.05)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)	0.008 (0.20)	0.008 (0.20)
	9.0	≤87000	Nodular cast iron ferritic	60-40-18	590 (180)	0.001 (0.04)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	9.1	230	Nodular cast iron ferritic / pearlitic	80-55-06	590 (180)	0.001 (0.04)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	10.0	>87000	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	520 (160)	0.001 (0.04)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	10.1	200	Alloyed nodular cast iron	A43D2	460 (140)	0.001 (0.03)	0.002 (0.07)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
10.2	300	Vermicular cast iron		390 (120)	0.001 (0.03)	0.004 (0.10)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)	
N	12.0	90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	1310 (400)	0.0008 (0.02)	0.001 (0.04)	0.003 (0.08)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	12.1	100	Copper alloy, Brass, Bronze: average cut		980 (300)	0.002 (0.05)	0.003 (0.08)	0.006 (0.15)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	13.0	60	Wrought alumi- num alloy	GD-AISI12	1640 (500)	0.0008 (0.02)	0.002 (0.06)	0.004 (0.10)	0.003 (0.08)	0.005 (0.12)	0.005 (0.12)
	13.1	75	Aluminum alloy: Si content <10% Magnesium alloy		1150 (350)	0.002 (0.05)	0.003 (0.08)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
	14.0	100	Aluminum alloy: Si content >10%	A360.2	980 (300)	0.002 (0.05)	0.003 (0.08)	0.005 (0.12)	0.004 (0.10)	0.006 (0.15)	0.006 (0.15)
H	15.0	203000	Hardened steels < 45 HRC		260 (80)	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)	0.003 (0.08)
	16.0	261000	Hardened steels > 45 HRC		195 (60)	0.002 (0.05)	0.002 (0.05)	0.003 (0.08)	0.002 (0.06)	0.003 (0.08)	0.003 (0.08)

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

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



Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽ Size	ISO-Code		
for better chip control				
	6 - 7.9	-		
	8 - 9.9	W30 04120.3232	TOHX 06T102EL-US12 CK32	
		W30 04120.3977	TOHX 06T1ZZEL-39G12 BK77	
	10 - 18	W30 14120.3232	TOHX 090202EL-US12 CK32	
		W30 14120.3977	TOHX 0902ZZEL-39G12 BK77	
	22	W30 26120.3232	TOHX 140304-US12 CK32	
		W30 26120.3977	TOHX 1403ZZEL-39G12 BK77	
	44 - 215	W30 14120.3232	TOHX 090202EL-US12 CK32	
		W30 14120.3977	TOHX 0902ZZEL-39G12 BK77	

Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽ Size	ISO-Code		
for higher cutting speed				
	6 - 7.9	-		
	8 - 9.9	W57 04140.023210	TOGX 06T102EN-14 CK3210	
		W30 04120.0238	TOHX 06T102EL-G12 CK38	
		W30 04990.0257	TOGX 06T102TN CBN57	
		W30 04990.0255	TOGX 06T102FN PKD55	
	10 - 18	W57 14140.043210	TOGX 090204EN-14 CK3210	
		W30 14120.0238	TOHX 090202EL-G12 CK38	
		W30 14990.0457	TOGX 090204TN CBN57	
		W30 14990.0455	TOGX 090204FN PKD55	
	22	W57 26140.043210	TOGX 140304EN-14 CK3210	
		W30 26120.0438	TOHX 140304EL-G12 CK38	
		W30 26990.0457	TOGX 140304TN CBN57	
		W30 26990.0455	TOGX 140304FN PKD55	
	44 - 215	W57 14140.043210	TOGX 090204EN-14 CK3210	
		W30 14120.0238	TOHX 090202EL-G12 CK38	
W30 14990.0457		TOGX 090204TN CBN57		
W30 14990.0455		TOGX 090204FN PKD55		

for greater strength	6 - 7.9	-		
	8 - 9.9	W57 04140.023210	TOGX 06T102EN-14 CK3210	
		W30 04060.036110	TOHX 06T103EL-G06 BK6110	
		W30 04200.0321	TOHX 06T103FL-G20 K10	
		W30 04990.0255	TOGX 06T102FN PKD55	
	10 - 18	W57 14140.043210	TOGX 090204EN-14 CK3210	
		W30 14060.046110	TOHX 090204EL-G06 BK6110	
		W30 14200.0421	TOHX 090204FL-G20 K10	
		W30 04990.0255	TOGX 090204FN PKD55	
	22	W57 26140.043210	TOGX 140304EN-14 CK3210	
		W30 26060.046110	TOHX 140304EL-G06 BK6110	
		W30 26200.0521	TOHX 140305FL-G20 K10	
		W30 26990.0455	TOGX 140304FN PKD55	
	44 - 215	W57 14140.043210	TOGX 090204EN-14 CK3210	
		W30 14060.046110	TOHX 090204EL-G06 BK6110	
		W30 14200.0421	TOHX 090204FL-G20 K10	
W30 04990.0255		TOGX 090204FN PKD55		



# KOMET MicroKom® M04

## Micro-adjustable Head with Direct Measuring System and Digital Display

1



2



3



Sturdy – Accurate – Easy to use

With the KOMET MicroKom® M04 micro-adjustable head, slide adjustment is still recorded directly by means of an electronic measurement system. The measurement result is evaluated by a microprocessor and displayed on an LCD display with a resolution of 1 µm. This reduces errors in adjustment and read-off to a minimum.

- **Sturdy design**  
By using new technology we have been able to make the new M04 even sturdier. With its water and dustproof design (IP67), it is not affected by either chips or coolant.
- **Direct measurement = accurate measurement**  
Even with the most highly accurate translation of adjustment sequences, other micro-adjustable drilling heads only show the adjustment value indirectly. Our M040 micro-adjustable head works directly in conjunction with the actual measurement process, making the operation considerably easier for the operator.
- **Easy to use**  
The head has been made even easier to use, switching from absolute to differential dimensions with only two keys and also allowing the differential to be set to zero. Concentricity or balanced position can be easily located again in the Absolute mode without need for a setting device.
- **Extended setting range**  
The adjustment value has been increased to 5 mm in the diameter.
- **Replaceable bridges**  
In conjunction with the new replaceable bridges it is possible to machine bores up to 103 mm. These replaceable bridges are in lightweight metal with hard surface coating and integral balancing.



Can be adapted for any machine tool with ABS® standard tool adaptors

Operating keys

Battery compartment

Digital display with position display energy saving function:

Display automatically switches off after 30 seconds



**BENEFITS for you:**

- Large adjustment range from -0.4 to +4.6 mm on dia.
- Easy to use with only 2 keys
- Waterproof and dustproof (IP67 standard)
- Direct measuring system on slide
- Display resolution 0.001 mm in the diameter
- Display in mm or inches
- Can be switched between differential and absolute mode
- Easy to read LCD display
- Energy saving function, i.e. M04 automatically switches off after 30 seconds
- Central coolant supply up to 50 bar
- ABS® 32 spindle connection – 16 mm cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Maximum spindle speed: 12,500 min<sup>-1</sup> (in central slide position)
- Head diameter: 70 mm

Adjustment is carried out manually with an hexagonal key; this allows the slide to be adjusted extremely accurately. One turn of the key equals to a diameter change of 70 µm.

**KOMET MicroKom® M04** Page

**Micro-adjustable head with ABS® connection**

with cylindrical tool holder	280
with ABS® connection	281
with replaceable bridge	283

Set in case	286
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**KOMET MicroKom® M02** Page

**Micro-adjustable head with ABS® connection**

with cylindrical tool holder	288
with ABS® connection	289

**Micro-adjustable head with taper shank**

with cylindrical tool holder	290
with ABS® connection	291

**BENEFITS for you:**

- Large adjustment range from 4 mm on diameter
- The fine adjustment increments are 0.002 mm in the diameter above vernier
- The micro-adjustable drilling head is balanced in the zero position
- ABS® on tool side or cylindrical shank connection



1



2




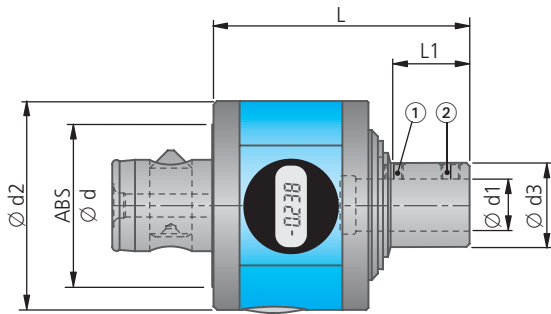
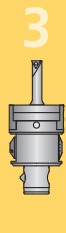
3



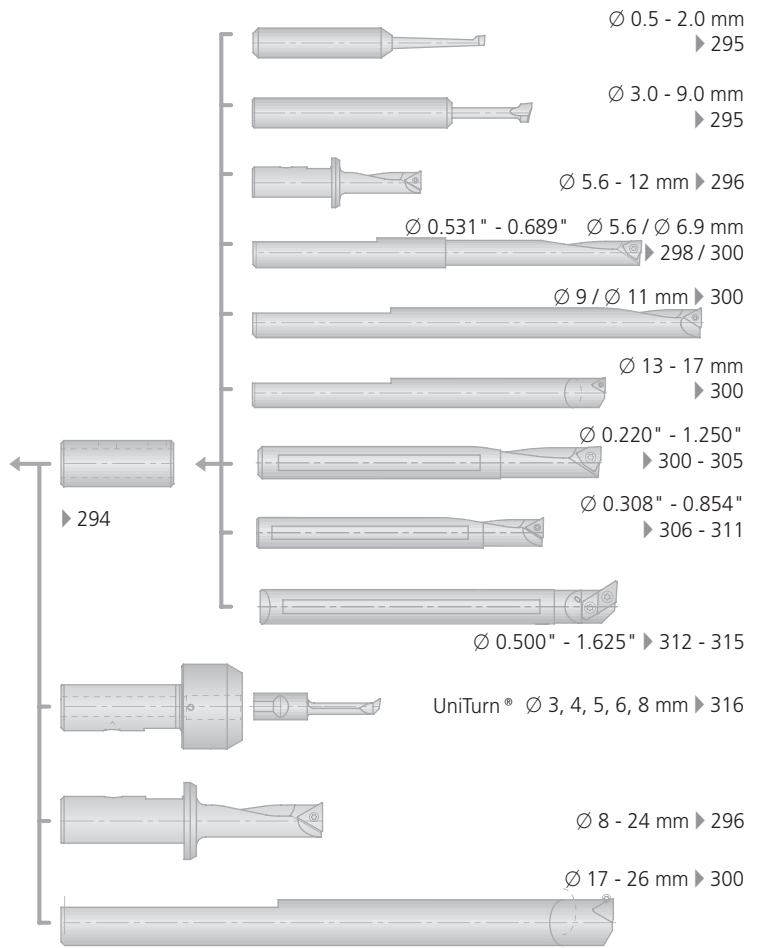
# KOMET MicroKom® M04

## Micro-adjustable Head with ABS® Connection

machine adaptor 	balancing note (chapter 8) pre-balanced Q6,3 12.500 min <sup>-1</sup>	coolant central up to 50 bar 	adjustable 	rotating tool 	tool holder Cylindrical shank 
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Display panel shown at 90° angle



Order No.	ABS Ø d	Ø d1	Ø d2	Ø d3	Adjustment	L	L1	kg
M04 00201	50	16	70	26	2.5	82	25	1.1

Assembly parts						
Battery	Battery spring	O-ring	Positioning pin	Battery cover	Clamping screw ①	Clamping screw ②
Order No.	Order No.	Order No.	Order No.	Order No.	DIN914 Order No. Description	similar DIN916 Order No. Description
75000 12150	52710 00053	52914 01615	N00 05480	M04 00150.11	N00 70900 M6x8	N00 70190 M6x6






Note: The micro-adjustable drilling head is balanced in the zero position.

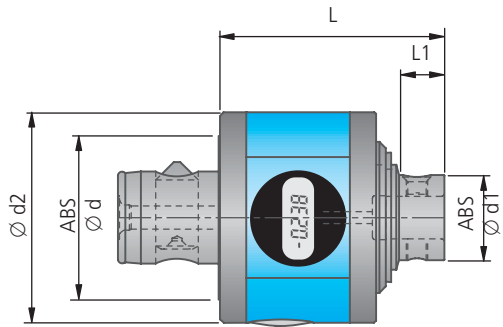
When setting the M04 00201, the balancing ring (page 292) may be used for higher spindle speeds or surface requirements.



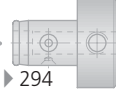















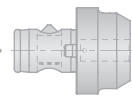

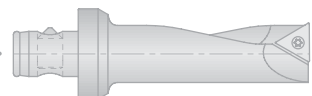
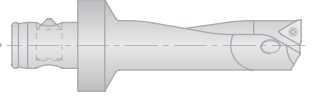

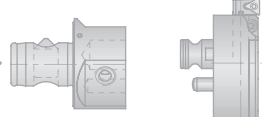
# KOMET MicroKom® M04


## Micro-adjustable Head with ABS® Connection

<p>machine adaptor</p> 	<p>balancing note (chapter 8)</p> <p>pre-balanced Q6,3 12.500 min<sup>-1</sup></p>	<p>coolant central up to 50 bar</p> 	<p>adjustable</p> 	<p>rotating tool</p> 	<p>tool holder</p> 
--	--	---	---	--	--



Display panel shown at 90° angle

	▶ 294		Ø 0.5 - 2.0 mm ▶ 295
			Ø 3.0 - 9.0 mm ▶ 295
			Ø 5.6 - 12 mm ▶ 296 Ø 0.531" - 0.689" Ø 5.6 / Ø 6.9 mm ▶ 298 ▶ 300
			Ø 9 / Ø 11 mm ▶ 300
			Ø 13 - 17 mm ▶ 300
			Ø 0.220" - 1.250" ▶ 300 - 305
			Ø 0.308" - 0.854" ▶ 306 - 311
			Ø 0.500" - 1.625" ▶ 312 - 315
			UniTurn® Ø 3, 4, 5, 6, 8 mm ▶ 316
			Ø 8 - 28 mm ▶ 320
			Ø 11.9 - 30 mm ▶ 322
			Ø 28 - 44 mm ▶ 324
			Ø 38 - 103 mm ▶ 282

Order No.	ABS Ø d	ABS Ø d1	Ø d2	L	L1	 kg	Assembly parts				
							Battery	Battery spring	O-ring	Positioning pin	Battery cover
Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
M04 00151	50	32	70	69	13.5	1.19	75000 12150	52710 00053	52914 01615	N00 05480	M04 00150.11

The micro-adjustable drilling head is balanced in the zero position.

# KOMET MicroKom® M04

## Intermediate Adaptor with ABS® Connection

1



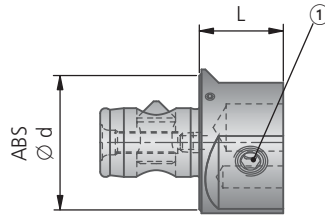
2



3

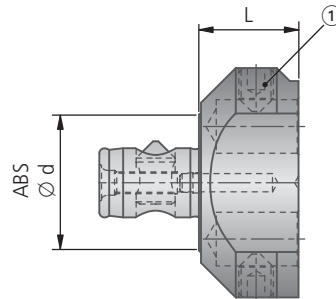


for Ø 38 – 63 mm



Order No.	ABS Ø d	L	kg	Assembly parts
				Clamping screw ①
Order No.				Order No.
M04 01310	32	19.5	0.135	M03 20090.15

for Ø 62 – 103 mm

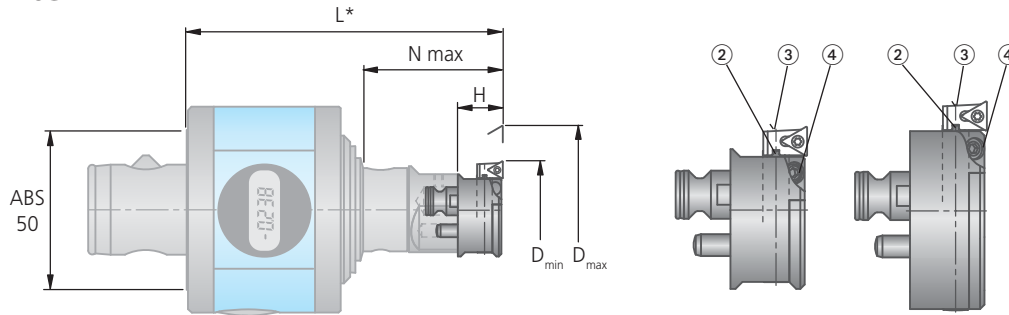


Order No.	ABS Ø d	L	kg	Assembly parts
				Clamping screw ①
Order No.				Order No.
M04 01320	32	23	0.286	M03 20090.15

**Supply includes:**  
Intermediate adaptor with clamping screw ① for replaceable bridge

# KOMET MicroKom® M04 Replaceable Bridge

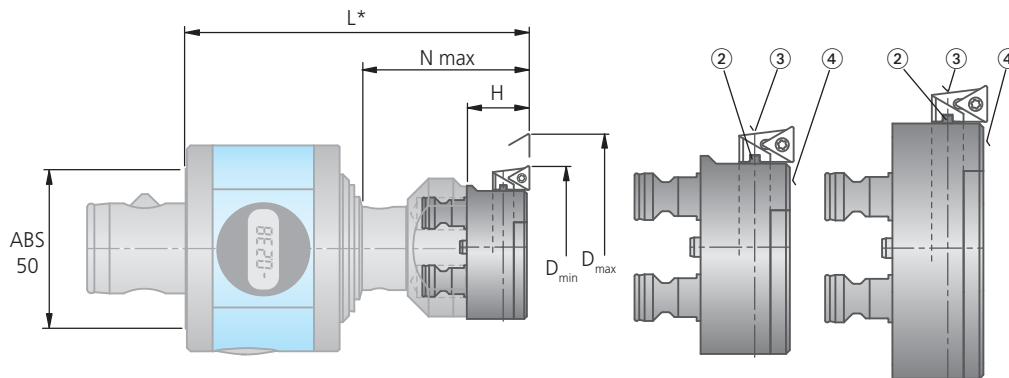
for  $\varnothing 38 - 63$  mm



\* For 'L' dimension see insert holder table on following page

$\varnothing D$ min - max	Order No.	H	N max		Assembly parts			
					Holder ② Order No.	Location screw ③ for insert holder		Clamping screw ④ for holder Order No.
38 - 51	M03 20180	17.5	50	0.06	M03 20180.16	S/M3.5x7.3-10IP	N00 56211	55051 04008
50 - 63	M03 20190	17.5	50	0.08	M03 20180.16	S/M3.5x7.3-10IP	N00 56211	55051 04008

for  $\varnothing 62 - 103$  mm



\* For 'L' dimension see insert holder table on following page

$\varnothing D$ min - max	Order No.	H	N max		Assembly parts			
					Holder ② Order No.	Location screw ③ for insert holder		Clamping screw ④ for holder Order No.
62 - 83	M03 20150	24	60	0.20	M03 20150.16	S/M3.5x7.3-10IP	N00 56211	55051 04008
82 - 103	M03 20160	24	60	0.24	M03 20150.16	S/M3.5x7.3-10IP	N00 56211	55051 04008

### Supply includes:

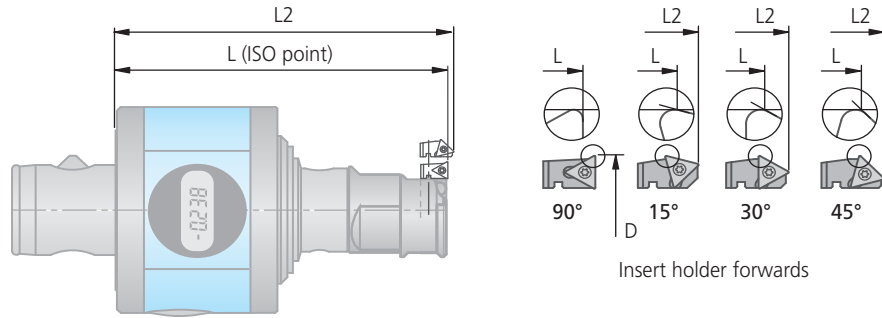
Replaceable bridge with location screw 3, holder 2 and clamping screw 4. Insert holder – please order as extra

**Note:** Use replaceable bridges with intermediate adaptor (see page 282)  
These replaceable bridges can also be used on the KOMET MicroKom® M03Speed micro-adjustable head (see page 344)

## Insert Holder for Replaceable Bridge

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3xD								
	●	●	○	○	●	○	○	×

● very good ○ good ○ possible × not possible





Micro-adjustable head	Insert holder forwards →						Basic recommendation			Assembly parts	Accessories
	ØD	Order No.	α	L	L2		Insert	for workpiece material	Clamping screw	Screwdriver	
							Order No. ▽▽ size	ISO-Code		Order No. Description	Order No. Description
M04 00151	38 – 63	M03 10033	90°	106	106	0.002	W57 04140.0260 W30 04060.037615 W57 04120.0223	TOGX 06T102EN-14 BK6425 TOHX 06T103EL-G06 BK7615 TOGX 06T102FN-12 K10		N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
		M03 11120	15°	101.5	107.7	0.002					
		M03 11220	30°	102.5	108	0.002					
		62 – 103	M03 10043	90°	116	116	0.005	W57 14140.0460 W30 14060.047615 W57 14120.0423	TOGX 090204EN-14 BK6425 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10		N00 56101 S/M2.6x5.2-8IP 1.28 Nm
	M03 11130	15°	109.5	117.9	0.005						
	M03 11230	30°	110.5	118	0.005						
	M03 11330	45°	112.8	118.9	0.005						

Supply includes insert holder:

Insert holder with assembly parts. Please order inserts and accessories separately.

Further inserts and approach angles available on request.

Guideline values for fine boring				Material example, material code/DIN	v <sub>c</sub> Cutting speed v <sub>c</sub> (m/min)	f (mm/rev)	
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed 3xD	
				Ø 38 – 63	Ø 62 – 103		
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.08	0.12
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.10	0.15
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.08	0.10
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.06	0.10
	4.1		HSS		120	0.06	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.06	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.06	0.08
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.08	0.10
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.06	0.10
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.06	0.10
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.15	0.20
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.15	0.20
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.10	0.15
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.10	0.15
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.10	0.15
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.10	0.15
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.10	0.15
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.10	0.15
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	270	0.10	0.15
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.08	0.12
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-ALMg5 / 3.3561, G-ALSi9Mg / 3.2373	350	0.10	0.15
	14.0	100	cast alum.alloy: Si-content >10%	G-ALSi10Mg / 3.2381	250	0.10	0.15
H	15.0	1400	hardened steels < 45 HRC		120	0.08	0.08
	16.0	1800	hardened steels > 45 HRC		90	0.06	0.08

Alternative Inserts				
ØD	Insert		for workpiece material	
	Order No. ▽▽ Size	ISO-Code		
				
				
for better chip control	38 – 63	W30 04120.3232 W30 04120.306425 W57 04120.0223	TOHX 06T102EL-US12 CK32 TOHX 06T100EL-G12 BK6425 TOGX 06T102FN-12 K10	
	62 – 103	W30 14120.3232 W30 14120.306425 W57 14120.0423	TOHX 090202EL-US12 CK32 TOHX 090200EL-G12 BK6425 TOGX 090204FN-12 K10	
		for higher cutting speed	38 – 63	W57 04140.023210 W57 04140.026425 W30 04990.0357 W30 04990.0355
62 – 103			W30 14120.3232 W30 14120.306425 W57 14120.0423	TOHX 090202EL-US12 CK32 TOHX 090200EL-G12 BK6425 TOGX 090204FN-12 K10
	for better surface finish		38 – 63	W30 04120.316425 W30 04990.0357 W30 04990.0355 W30 04990.0240
		62 – 103	W30 14120.316425 W30 14120.306425 W57 14120.0423 W30 14990.0440	TOHX 090202EL-UF12 BK6425 TOHX 090200EL-G12 BK6425 TOGX 090204FN-12 K10 TOGX 090204TN CBN40



Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

# KOMET MicroKom® M04

## Set in Case

**A**

**Ø 8 mm - Ø 44 mm**

Set in case complete  
Order No. M04 01230



**B**

**Ø 38 mm - Ø 103 mm**

Set in case complete  
Order No. M04 01240



	Qty.	Description	Order No.
①	1	Micro-adjustable head M040	M04 00151
②	1	Boring bar ABS32 Ø 7.9-12.9	B00 25610
③	1	Boring bar ABS32 Ø 11.9-16.9	B00 25630
④	1	Boring bar ABS32 Ø 15.9-20.9	B00 25650
⑤	1	Boring bar ABS32 Ø 19.9-24.9	B00 25671
⑥	1	Boring bar ABS32 Ø 23.9-28.9	B00 25691
⑦	1	Boring bar ABS32 Ø 27.9-44.0	B30 02020
⑧	5	Insert BK8430	W57 04140.028430
	5	Insert BK8430	W57 14140.028430
⑨	1 optional	Adaptor DIN 69871 ISO40AD/B-ABS50	A50 55150
		Adaptor DIN 69871 ISO50AD/B-ABS50	A50 55350
		Adaptor HSK-A63 ABS50	A06 30150
⑩	1	Hexagonal wrench SW4	18591 10040

	Qty.	Description	Order No.
①	1	Micro-adjustable head M040	M04 00151
②	1	Adaptor ABS32 Ø 38-63	M04 01310
③	1	Adaptor ABS32 Ø 62-103	M04 01320
④	1	Replaceable bridge Ø 38-51	M03 20180
⑤	1	Replaceable bridge Ø 50-63	M03 20190
⑥	1	Replaceable bridge Ø 62-83	M03 20150
⑦	1	Replaceable bridge Ø 82-103	M03 20160
⑧	2	Insert holder 90° forwards	M03 10033
⑨	2	Insert holder 90° forwards	M03 10043
⑩	5	Insert BK8430	W57 04140.028430
	5	Insert BK8430	W57 14140.028430
⑪	1 optional	Adaptor DIN 69871 ISO40AD/B-ABS50	A50 55150
		Adaptor DIN 69871 ISO50AD/B-ABS50	A50 55350
		Adaptor HSK-A63 ABS50	A06 30150
⑫	1	Hexagonal wrench SW4	18591 10040

# KOMET MicroKom® M04

## Variation Options

The possible combinations can be supplied in various additional options. Please ask our representative.



### B1

Basic set  
for machining  
Ø 38 - 63 mm  
Set in case  
Order No. M04 01241



Qty.	Description	Order No.
1	Micro-adjustable head M040	M04 00151
1	Adaptor ABS32 Ø 38-63	M04 01310
1	Replaceable bridge Ø 38-51	M03 20180
1	Replaceable bridge Ø 50-63	M03 20190
2	Insert holder 90° forwards	M03 10033
1 optional	Adaptor DIN 69871 ISO40AD/B-ABS50	A50 55150
	Adaptor DIN 69871 ISO50AD/B-ABS50	A50 55350
	Adaptor HSK-A63 ABS50	A06 30150

### B2

Basic set  
for machining  
Ø 62 - 103 mm  
Set in case  
Order No. M04 01242



Qty.	Description	Order No.
1	Micro-adjustable head M040	M04 00151
1	Adaptor ABS32 Ø 62-103	M04 01320
1	Replaceable bridge Ø 62-83	M03 20150
1	Replaceable bridge Ø 82-103	M03 20160
2	Insert holder 90° forwards	M03 10043
1 optional	Adaptor DIN 69871 ISO40AD/B-ABS50	A50 55150
	Adaptor DIN 69871 ISO50AD/B-ABS50	A50 55350
	Adaptor HSK-A63 ABS50	A06 30150

### B3

Extension set  
for machining  
Ø 38 - 63 mm  
Set in case  
Order No. M04 01243



Qty.	Description	Order No.
1	Adaptor ABS32 Ø 38-63	M04 01310
1	Replaceable bridge Ø 38-51	M03 20180
1	Replaceable bridge Ø 50-63	M03 20190
2	Insert holder 90° forwards	M03 10033

### B4

Extension set  
for machining  
Ø 62 - 103 mm  
Set in case  
Order No. M04 01244



Qty.	Description	Order No.
1	Adaptor ABS32 Ø 62-103	M04 01320
1	Replaceable bridge Ø 62-83	M03 20150
1	Replaceable bridge Ø 82-103	M03 20160
2	Insert holder 90° forwards	M03 10043

### B5

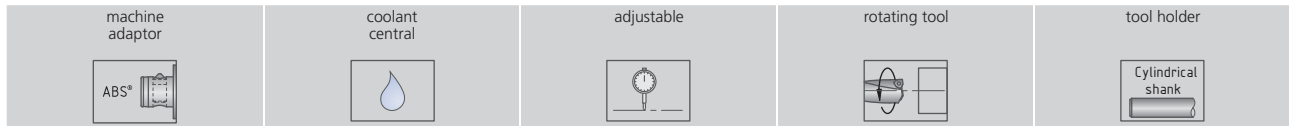
Extension set  
for machining  
Ø 38 - 103 mm  
Set in case  
Order No. M04 01245



Qty.	Description	Order No.
1	Adaptor ABS32 Ø 38-63	M04 01310
1	Adaptor ABS32 Ø 62-103	M04 01320
1	Replaceable bridge Ø 38-51	M03 20180
1	Replaceable bridge Ø 50-63	M03 20190
1	Replaceable bridge Ø 62-83	M03 20150
1	Replaceable bridge Ø 82-103	M03 20160
2	Insert holder 90° forwards	M03 10033
2	Insert holder 90° forwards	M03 10043

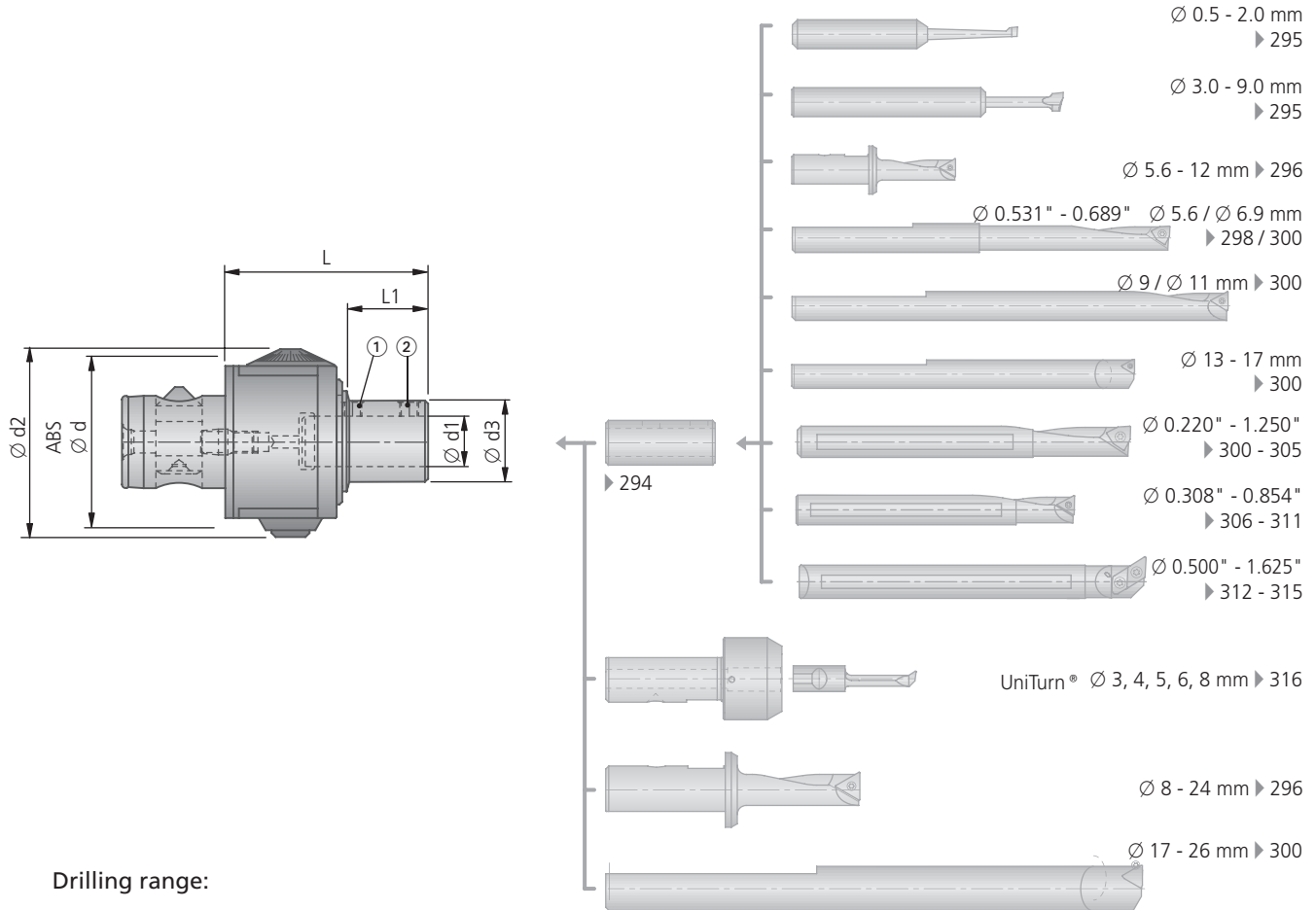
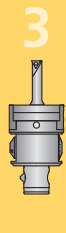
# KOMET MicroKom® M02

## Micro-adjustable Head with ABS® Connection



(ABS-KFK)

■ the fine adjustment increments are 0.0001" (0.002 mm) in the Ø above vernier



### Drilling range:

$$D_{min} = D$$

$$D_{max} = D1 (2 \times S)$$

(..) = mm

Description	Order No.	ABS $\varnothing d$	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	Adjust- ment	L	L1		Assembly parts	
										Clamping screw ①	Clamping screw ②
										DIN 914 Order No. Description	DIN 913 DIN 916 Order No. Description
ABS40KFK8-Z [ABS40KFK8]	M02 05100 [M02 01100]	40	0.315 (8)	1.575 (40)	0.622 (16)	0.039 (1)	2.047 (52)	0.591 (15)	0.76	M5x6 55052 05006	M5x5 55051 05005
ABS50KFK1-16-Z [ABS50KFK1-16]	M02 06201 [M02 01201]	50	0.630 (16)	2.756 (70)	1.024 (26)	0.157 (4)	2.953 (75)	1.063 (27)	3.95	M6x8 N00 70900	M6x6 N00 70190
ABS63KFK1-16-Z	M02 06211	63	0.630 (16)	2.756 (70)	1.024 (26)	0.157 (4)	2.953 (75)	1.181 (30)	5.50	M6x8 N00 70900	M6x6 N00 70190

[..] denotes metric scaled tools

The micro-adjustable drilling head is balanced in the zero position.

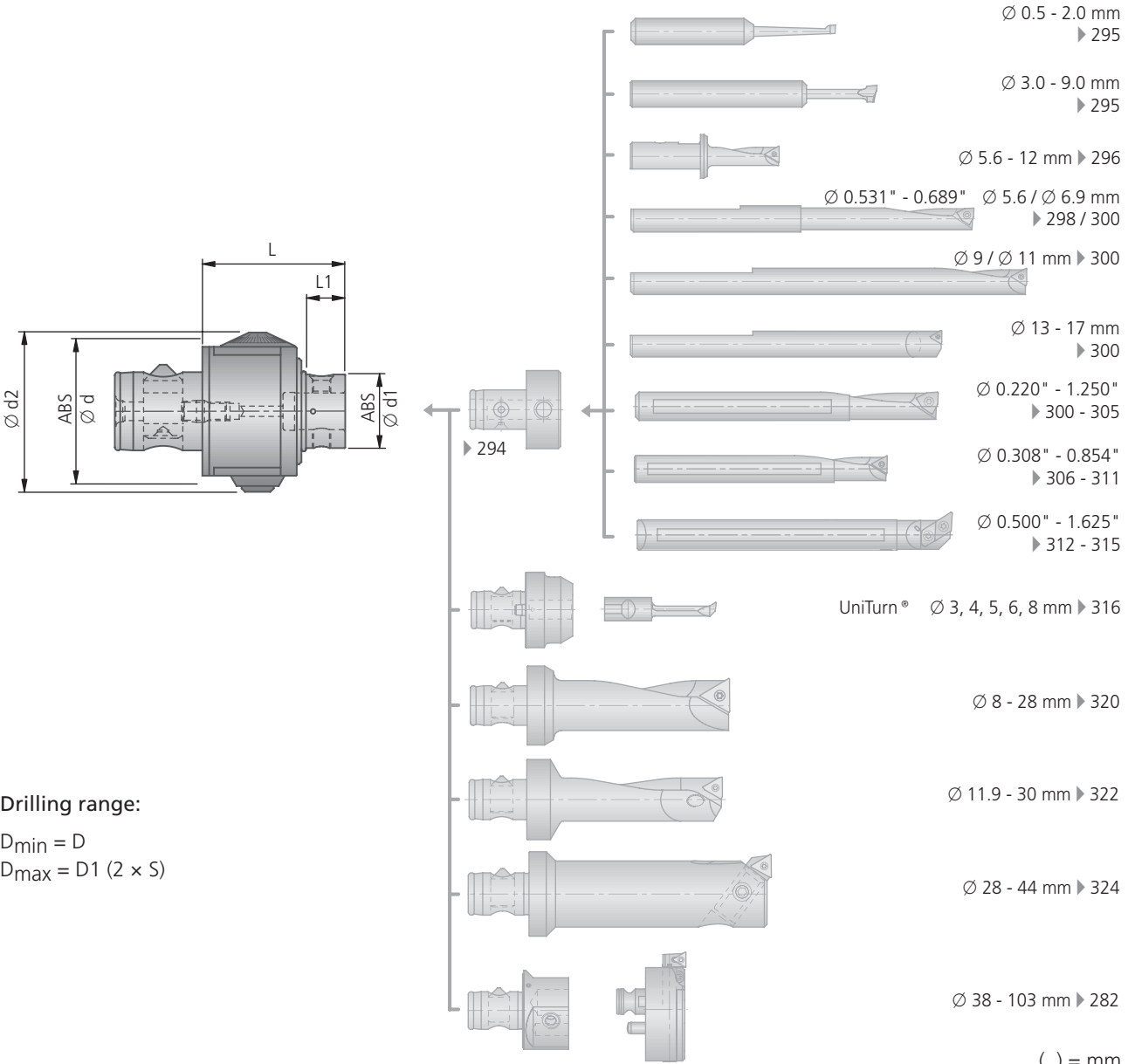
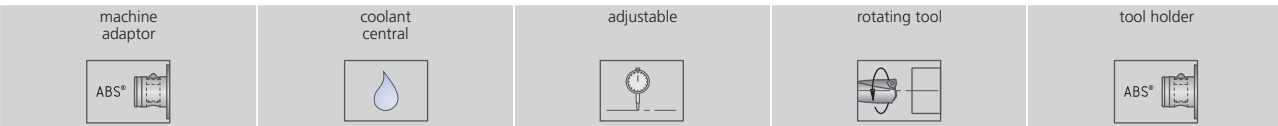
### Note:

When setting the M02 06201/M02 01201, the balancing ring (page 292) may be used for higher spindle speeds or surface requirements.



# KOMET MicroKom® M02

## Micro-adjustable Head with ABS® Connection



### Drilling range:

$$D_{\min} = D$$

$$D_{\max} = D1 (2 \times S)$$

(..) = mm

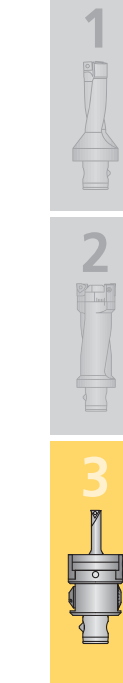
Description	Order No.	ABS $\varnothing d$	ABS $\varnothing d1$	$\varnothing d2$	Adjustment	L	L1	
ABS50/25KFK0-Z [ABS50/25KFK0-F]	M02 05000 <sup>1)2)</sup> [M02 00000] <sup>1)2)</sup>	50	25	2.205 (56)	0.118 (3)	2.165 (55)	0.512 (11.5)	1.85
ABS50/32KFK1-Z [ABS50/32KFK1-F]	M02 05201 <sup>2)</sup> [M02 00201] <sup>2)</sup>	50	32	2.756 (70)	0.157 (4)	2.441 (62)	0.748 (17)	2.77
ABS63/32KFK1-Z [ABS63/32KFK1-F]	M02 05211 [M02 00211]	63	32	2.756 (70)	0.157 (4)	2.441 (62)	0.748 (17)	3.01
ABS63/40KFK2-Z [ABS63/40KFK2-F]	M02 05401 [M02 00401]	63	40	3.858 (98)	0.236 (6)	2.638 (67)	0.748 (17)	5.74

[..] denotes metric scaled tools

The micro-adjustable drilling head is balanced in the zero position.

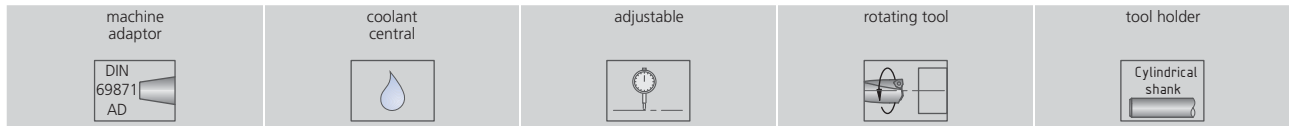
- Note:**
- <sup>1)</sup> A sealing disc cannot be used in the ABS® hole for micro-adjustable head M02 05000 or M02 00000
  - <sup>2)</sup> When adjusting the M02 05000/M02 00000/M02 05201/M02 00201, the balancing ring (page 292) can be used for higher spindle speeds or surface.

Patent applied for inside and outside Germany (ABS)



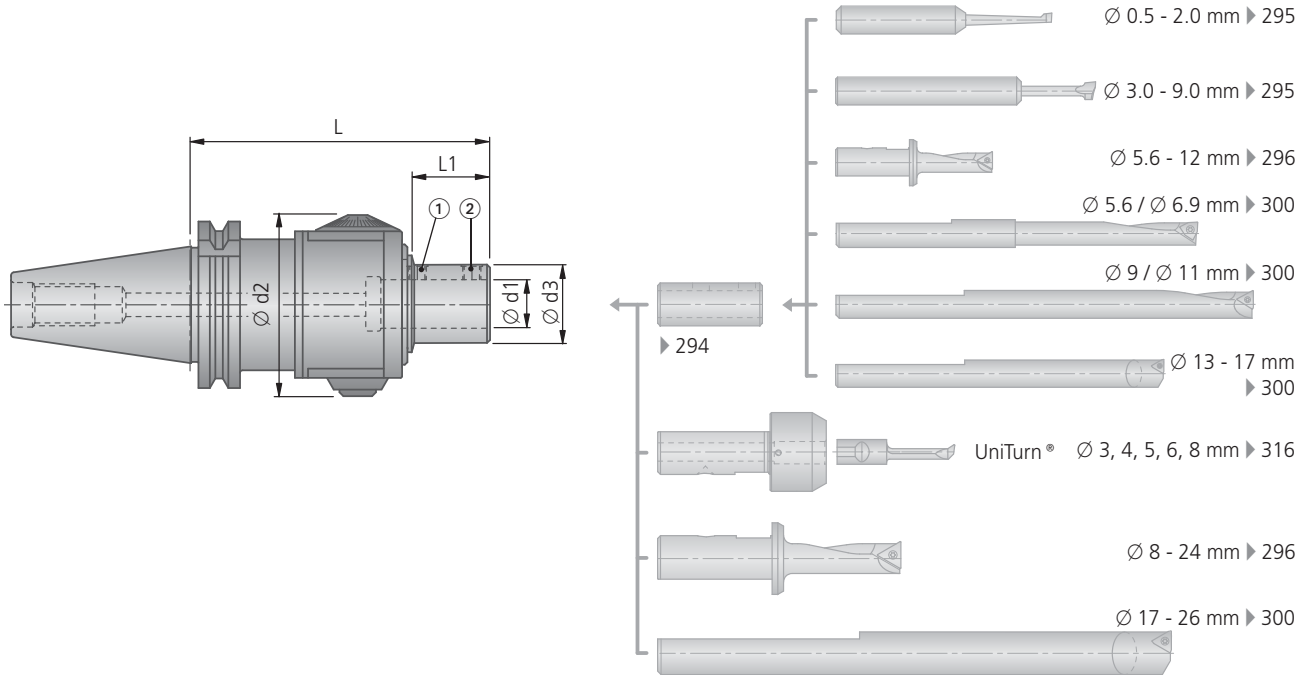
# KOMET MicroKom® M02

## Micro-adjustable Head with Taper Shank



(KFK)

■ the fine adjustment increments are 0.002 mm in the  $\varnothing$  above vernier



### Drilling range:

$$D_{\min} = D$$

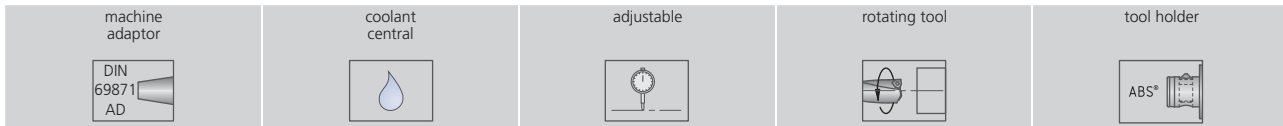
$$D_{\max} = D1 (2 \times S)$$

Description	Order No.	ISO	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	Adjustment	L	L1	kg	Assembly parts	
										Clamping screw ①	Clamping screw ②
										DIN 914 Order No. Description <b>N00 70900</b> M6x8	similar DIN 916 Order No. Description <b>N00 70190</b> M6x6
KFK1-ISO40-D16	M02 02360	40	16	70	26	4	108	27	2.08		

The micro-adjustable drilling head is balanced in the zero position.

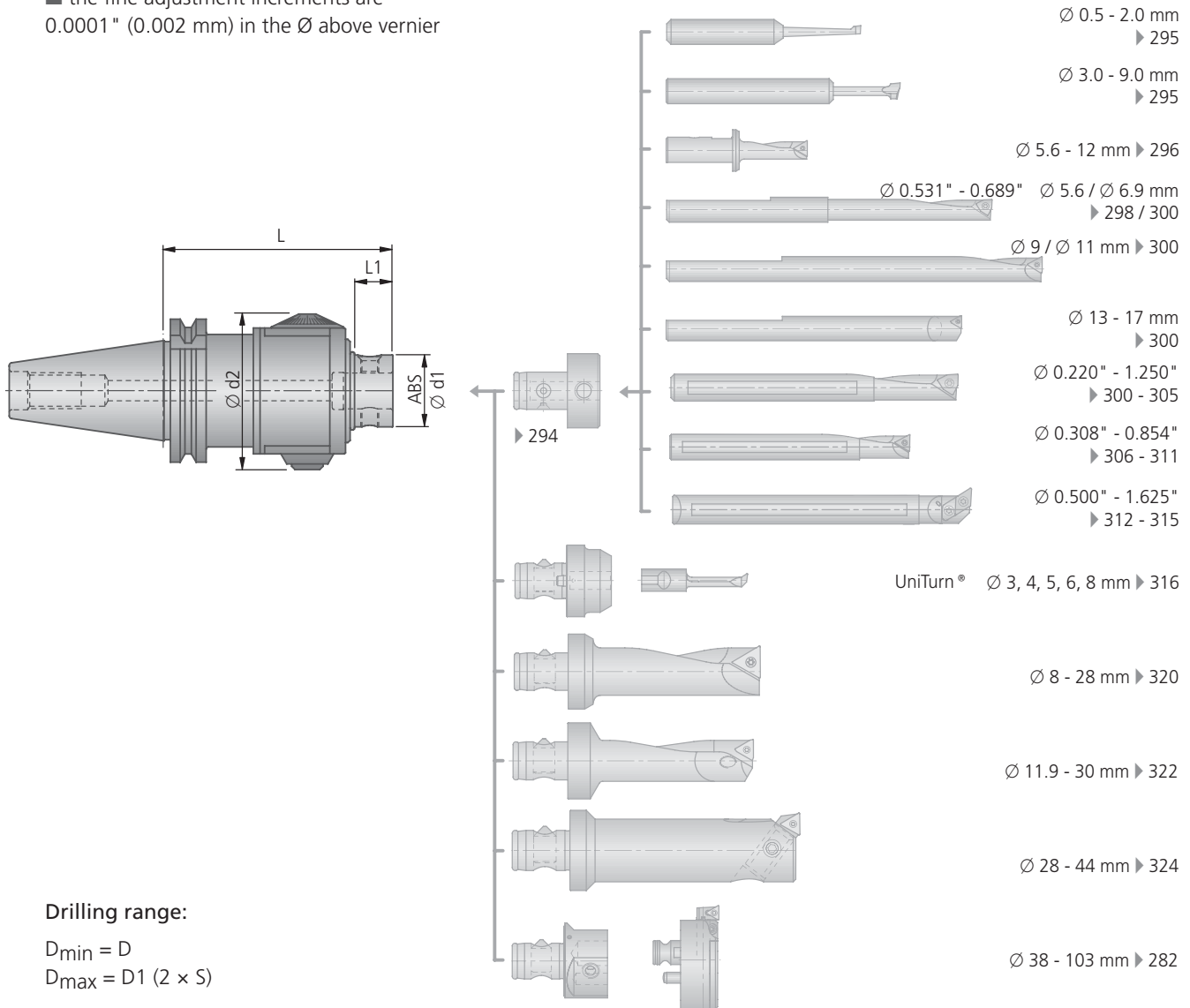
# KOMET MicroKom® M02

## Micro-adjustable Head with Taper Shank



(KFK)

■ the fine adjustment increments are 0.0001" (0.002 mm) in the Ø above vernier



### Drilling range:

$D_{min} = D$   
 $D_{max} = D1 (2 \times S)$

Description	Order No.	CAT	ABS Ø d1	Ø d2	Adjustment	L	L1
CAT 40 KFK1-Z-ABS 32	M02 07200	40	32	2.692"	0.157"	3.74"	0.635"
CAT 50 KFK1-Z-ABS 32	M02 07210	50	32	2.756"	0.157"	3.74"	0.635"

Description	Order No.	ISO	ABS Ø d1	Ø d2	Adjustment	L	L1	kg
KFK1-ISO40-ABS	M02 02260	40	32	70 mm	4 mm	95 mm	17 mm	2.17

The micro-adjustable drilling head is balanced in the zero position.

# KOMET® Balancing Ring

1



## Precision balancing on standard tools

At high speeds a loss of balance or imbalance produces a negative effect on machining results, particularly on tools for finish machining.

Standard precision balancing is particularly difficult to carry out on tools with adjustment in the diameter as the balance ratios shift with the change in machining diameter.

2



3



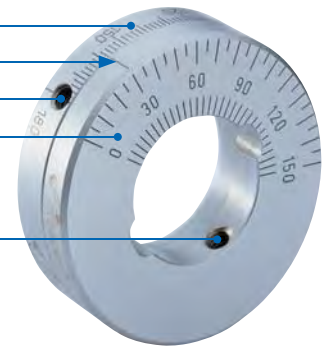
Balance scale ①

Setting mark ③


Clamping screw ④

Position scale ②

Clamping screw ⑤



(..) = mm

Order No.	Ød	ØD	h	 lbs
L01 15010	1.969 (50)	1.260 (32)	0.472 (12)	0.20
L01 15030	1.732 (44)	1.024 (26)	0.669 (17)	0.20
L01 15050	2.047 (52)	1.260 (32)	0.984 (25)	0.37
L01 15060	2.165 (55)	1.024 (26)	0.630 (16)	0.35

## What is imbalance ?

By imbalance we mean an uneven distribution of weight with reference to the axis of rotation. The larger the weight, the greater the imbalance and the further this occurs beyond the radius of the tool. The formula for this is as follows:

$$\text{Imbalance} = \text{Imbalanced weight (g)} \times \text{Radius (mm)}$$

Normally gmm is used as a unit of measurement.

During rotation the imbalance has an extremely negative effect as a result of the force of the imbalance (centrifugal force). This force is calculated as follows:

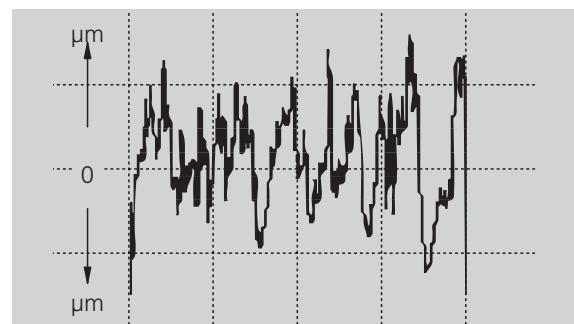
$$\text{Centrifugal force (N)} = \text{Imbalanced weight (kg)} \times \text{Radius (m)} \times \text{Angular velocity}^2 \text{ (1/sec)}^2$$

The balancing ring which can be fitted to all KOMET MicroKom® M02 and M04 micro-adjustable heads provides an extremely simple "Do It Yourself" method of balancing tools over their full adjustment range.

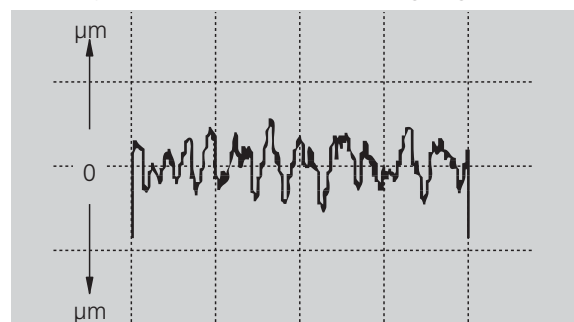
The values given in the table are only recommendations which will produce an improvement in any imbalance which occurs. Where there are particular requirements with regard to balance, adjustments should be carried out on a balancing machine.

For exact adjustment value, please see Operating Instruction for Balancing Ring.

Surface profile measured without balancing ring

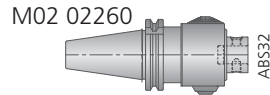
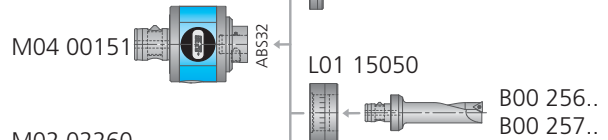
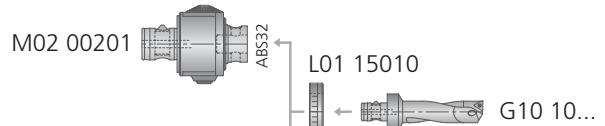
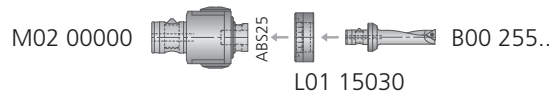
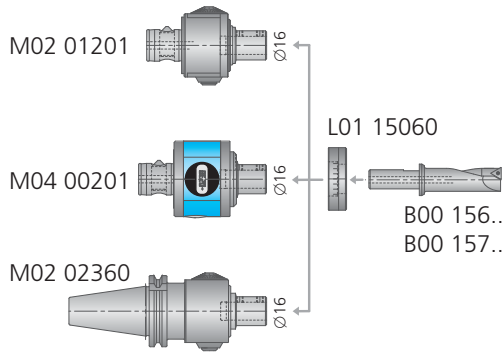


Surface profile measured with balancing ring



## Balancing ring

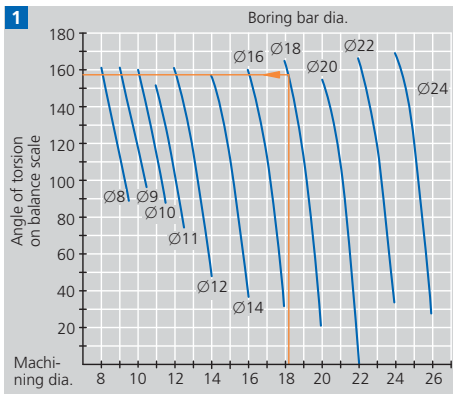
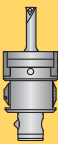
with micro-adjustable head in conjunction with boring bar



1

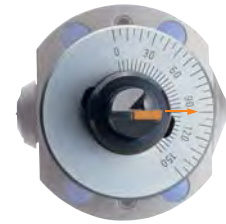
2

3



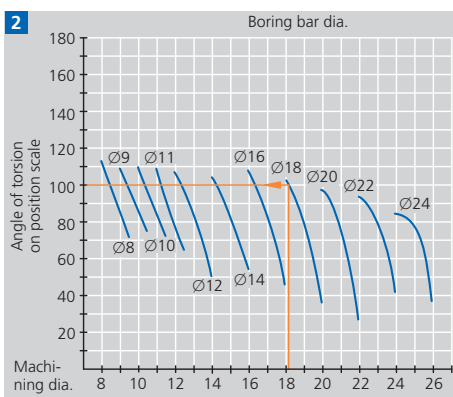
### Setting example for Ø 18.2 mm:

Micro-adjustable head M02 01201  
Boring bar B00 15660 Ø 18 mm



### First setting operation: Angle of torsion between rings

- Determine the machining diameter from table 1 (in this case 18.2 mm Ø).
- Trace a vertical line upwards until this crosses the contour line for the boring bar to be used.
- At the intersect point, trace a horizontal line and read off the torsion angle required (in this case 158°).
- Set the value determined to the setting mark ③ on the balancing scale ①.
- Clamp the two rings together with the clamping screw ④.



### Second setting operation:

#### Position of balancing ring in relation to the cutting edge

- Locate machining diameter 18.2 mm in table 2.
- Trace a vertical line to the contour line for the 18 mm diameter boring bar.
- At the intersect point, trace a horizontal line and read off the torsion angle (in this case 100°).
- Fit the ring on the micro-adjustable head.
- Position the ring according to the torsion angle which has been determined. For this the cutting edge or centre of the tool should be aligned with the appropriate graduation for 100°.
- Using the clamping screw ⑤, clamp the balancing ring to the tool. Only when using inserts W30...W32 will the setting values allow optimum balance to be achieved.

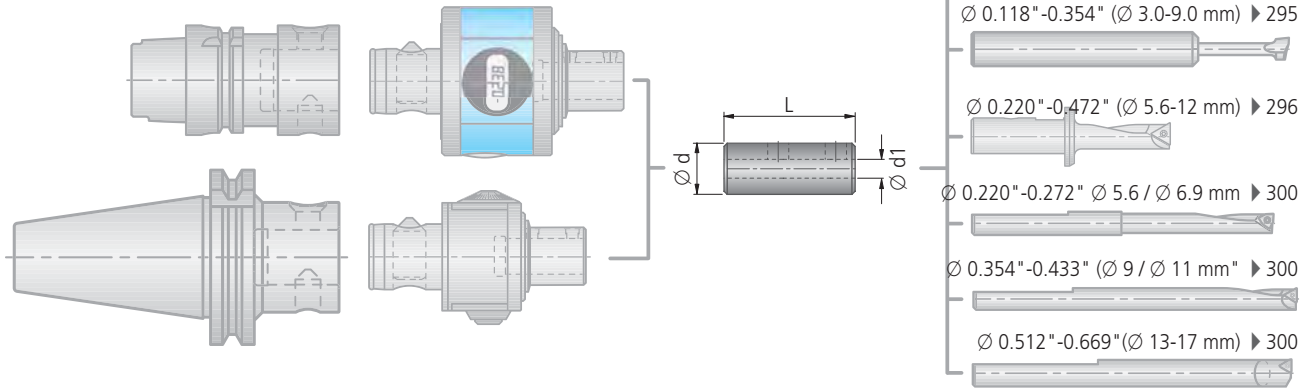
# KOMET® Adaptor

1

2

3

## Adaptor with cylindrical connection



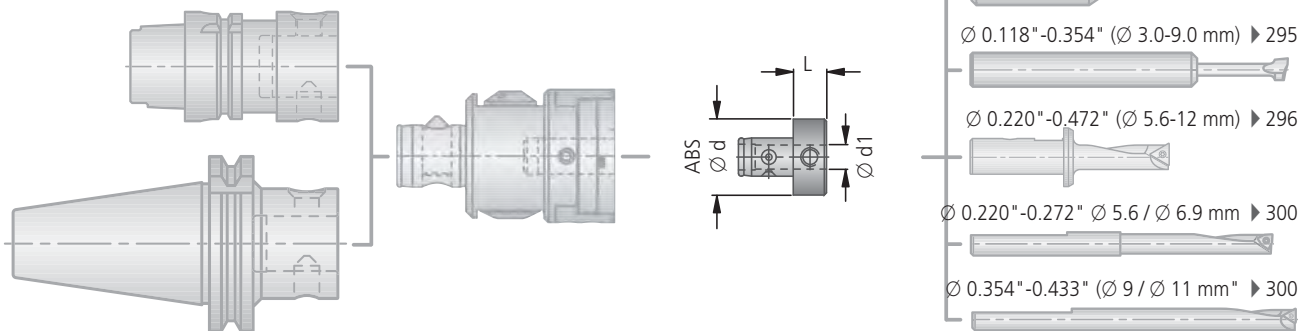
(..) = mm

Order No.	$\varnothing d$	$\varnothing d_1$	L	kg	Assembly parts			
					Clamping screw ①		Clamping screw ②	
					Description	Order No.	Description	Order No.
L01 10300	0.315 (8)	0.157 (4)	0.787 (20)	0.006		–		–
L01 10100	0.630 (16)	0.157 (4)	1.614 (41)	0.057	M6×12 DIN 914	55052 06012	M6×10 DIN 913	55051 06010
L01 10110	0.630 (16)	0.236 (6)	1.614 (41)	0.057	M6×12	55052 06012	M6×10	55051 06010
L01 10120	0.630 (16)	0.315 (8)	1.614 (41)	0.046	M6×12	55052 06012	M6×10	55051 06010
L01 10130	0.630 (16)	0.394 (10)	1.614 (41)	0.037	M6×10	55052 06010	M6×8	55051 06008
L01 10140	0.630 (16)	0.472 (12)	1.614 (41)	0.027	M6×10	55052 06010	M6×8	55051 06008

**Note:** To use reducing element L01 10100 - L01 10140 in micro-adjustable head M02 / M04, use the clamping screws ① and ②. Please order clamping screws separately.

**Supply includes:** Adaptor without clamping screws.

## Adaptor with ABS® connection



(..) = mm

Order No.	ABS $\varnothing d$	$\varnothing d_1$	L	kg
L01 10421	32	0.157 (4)	0.551 (14)	0.12
L01 10431	32	0.236 (6)	0.551 (14)	0.12
L01 10441	32	0.315 (8)	0.551 (14)	0.12

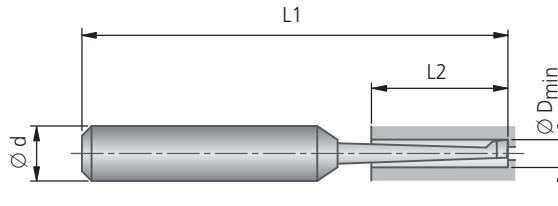
Patent applied for inside and outside Germany (ABS)

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration damping
> 3.5xD								
	●	●	○	○	✗	✗	✗	●

● very good ○ good ○ possible ✗ not possible

with Cylindrical Shank

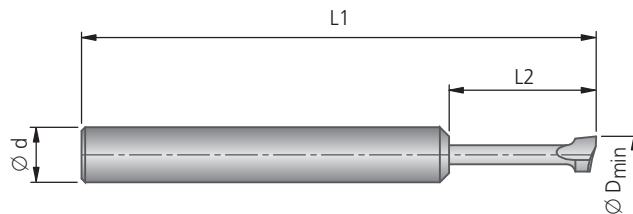
form F



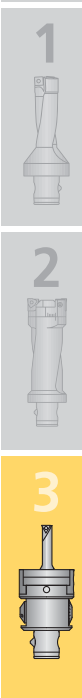
Ø D min	Description	Order No.	Ø d	L1	L2		Basic recommendation	
							Quality	for workpiece material
0.5	5K-F-K10	H15 11100.21	4	25	3	0.004	K10	P M K N S H
0.8	8K-F-K10	H15 11110.21	4	25	4	0.004		● ● ● ●
1.0	10K-F-K10	H15 11120.21	4	25	4	0.004		
1.2	12K-F-K10	H15 11130.21	4	25	6	0.004		
1.5	15K-F-K10	H15 11140.21	4	28	7	0.004		
1.7	17K-F-K10	H15 11150.21	4	28	7	0.004		
2.0	20K-F-K10	H15 11160.21	4	30	9	0.005		

with Cylindrical Shank

form F



Ø D min	Description	Order No.	Ø d	L1	L2		Basic recommendation	
							Quality	for workpiece material
3.0	B01F-P20	H15 21110.02	8	60	16	0.017	P20	● ●
	B01F-K10	H15 21110.21	8	60	16	0.017	K10	● ● ● ●
5.0	B02F-P20	H15 21120.02	8	60	19	0.018	P20	● ●
	B02F-K10	H15 21120.21	8	60	19	0.018	K10	● ● ● ●
7.0	B03F-P20	H15 21130.02	8	65	26	0.019	P20	● ●
	B03F-K10	H15 21130.21	8	65	26	0.019	K10	● ● ● ●
9.0	B04F-P20	H15 21140.02	8	70	45	0.026	P20	● ●
	B04F-K10	H15 21140.21	8	70	45	0.026	K10	● ● ● ●



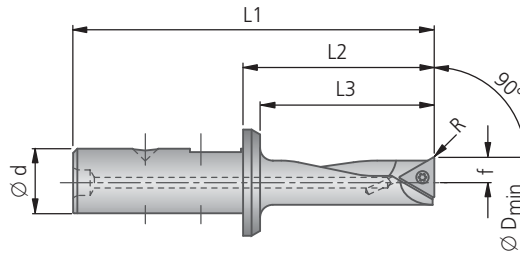
# KOMET® Boring Bar B001 / B003

with Cylindrical Shank,  $\kappa = 90^\circ$ , R.H. cutting

Ø 5.6 – 24 mm

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible



ØD min	3.5xD							Basic recommendation		for workpiece material	Assembly parts	Accessories		
	Order No.	Ød	L1	L2	L3	f	R	kg	Order No. $\nabla\nabla$ size		Insert	ISO-Code	Order No. Description	Order No. Description
5.6	B00 37010	8	48	26	22	2.75	0.1	0.04	W00 04120.016440	W00	WOHX 02T001EL-G12 BK6440	● ● ● ● ●	N00 56011	L05 00800
6.5	B00 37020	8	52	30	26	3.20	0.1	0.03	W00 04120.0121	W57	WOHX 02T001FL-G12 K10		S/M1.8x2.9-5IP	5IP
8	B00 15510	8	57	35	28	3.95	0.2	0.02	W57 04140.028430	W57	TOGX 06T102EN-14 BK8430	● ● ● ● ●	N00 56021	L05 00810
	B00 15610	16	75	35	30	3.95	0.2	0.08	W30 04060.036110	W57	TOHX 06T103EL-G06 BK6110		S/M2x3.8-6IP	6IP
10	B00 15620	16	80	40	35	4.95	0.2	0.08	W57 04120.0223	W30	TOGX 06T102FN-12 K10	● ● ● ● ●	0.62 Nm	
11	B00 15710	16	85	45	40	5.45	0.2	0.09	W30 04990.0240	W30	TOGX 06T102TN CBN40	● ● ● ● ●		
12	B00 15530	8	67	45	38	5.95	0.2	0.04				● ● ● ● ●		
	B00 15630	16	85	45	40	5.95	0.2	0.09						
14	B00 15640	16	90	50	45	6.95	0.2	0.11	W57 14140.048430	W57	TOGX 090204EN-14 BK8430	● ● ● ● ●	N00 56101	L05 00830
16	B00 15650	16	95	55	50	7.95	0.2	0.17	W30 14060.046110	W57	TOHX 090204EL-G06 BK6110		S/M2.6x5.2-8IP	8IP
18	B00 15661	16	100	60	55	8.95	0.2	0.14	W57 14120.0423	W57	TOGX 090204FN-12 K10	● ● ● ● ●	1.28 Nm	
19	B00 15751	16	105	65	60	9.45	0.2	0.16	W30 14990.0440	W30	TOGX 090204TN CBN40	● ● ● ● ●		
20	B00 15671	16	105	65	60	9.90	0.2	0.22						
22	B00 15681	16	105	65	60	10.90	0.2	0.19						
24	B00 15691	16	105	65	60	11.90	0.2	0.21						

Further diameters on request.

### Supply includes:

Boring bar with clamping screw. Please order inserts and accessories separately.



Guideline values for fine boring				Material example, material code/DIN	v <sub>C</sub> Cutting speed v <sub>C</sub> (m/min)	f (mm/rev)		
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed 3.5xD		
				Ø 5.6 – 6.5	Ø 8 – 10	Ø 11 – 24		
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.04	0.07	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.04	0.06	0.12
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.04	0.07	0.12
	3.0	>900	non alloy / low alloy steels; heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.03	0.06	0.10
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.03	0.05	0.10
	4.1		HSS		120	0.02	0.04	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.01	0.04	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.01	0.04	0.08
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.01	0.05	0.10
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.01	0.05	0.10
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.01	0.04	0.08
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.05	0.10	0.15
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.05	0.10	0.15
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.04	0.08	0.15
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.04	0.08	0.15
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.04	0.08	0.15
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.03	0.07	0.12
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.03	0.10	0.15
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	400	0.02	0.04	0.08
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	300	0.05	0.08	0.15
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.02	0.06	0.10
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-ALMg5 / 3.3561, G-ALSi9Mg / 3.2373	350	0.05	0.08	0.12
	14.0	100	cast alum.alloy: Si-content >10%	G-ALSi10Mg / 3.2381	300	0.05	0.08	0.12
H	15.0	1400	hardened steels < 45 HRC		80	-	0.05	0.08
	16.0	1800	hardened steels > 45 HRC		60	-	0.05	0.08

Alternative Inserts			
Ø	Insert W30 W57 PKD CBN .32.. .39..	for workpiece material	P M K N S H
for better chip control	5.6 – 6.5	-	
	8 – 10	W30 04120.3232 W30 04120.3977	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77
	11 – 24	W30 14120.3232 W30 14120.3977	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77
for higher cutting speed	5.6 – 6.5	-	
	8 – 10	W57 04140.023210 W30 04120.0238 W30 04990.0257 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOGX 06T102TN CBN57 TOGX 06T102FN PKD55
	11 – 24	W57 14140.043210 W30 14120.0238 W30 14990.0457 W30 14990.0455	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55
for better surface finish	5.6 – 6.5	-	
	8 – 10	W57 04140.023210 W30 04060.036110 W30 04200.0321 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOGX 06T102FN PKD55
	11 – 24	W57 14140.043210 W30 14060.046110 W30 14200.0421 W30 04990.0255	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

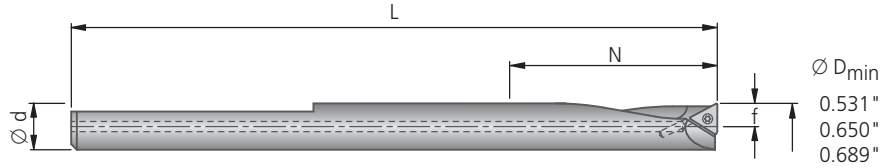


# KOMET® Low-vibration Boring Bar with Cylindrical Shank

Ø 0.531" – 0.689"

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	●	●	○	○	✗	○	○	●

● very good ○ good ○ possible ✗ not possible



3.5xD							Basic recommendation			Assembly parts	Accessories		
ØD min	Order No. <small>*carbide version ^around shank</small>	Ød	L	N max	f		Order No. ▽▽ size	Insert W57 -12 W57 -14 W30 CBN	for workpiece material <b>P M K N S H</b>	Clamping screw	Screwdriver		
										Order No. Description	Order No. Description		
0.531	B00 05630*^	0.472	7.087	-	0.266	0.66	W57 14140.048425 W30 14060.046110 W57 14120.0423 W30 14990.0240	TOGX 090204EN-14 BK8425 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090202TN CBN40					
0.650	B00 05640*^	0.591	7.087	-	0.325	0.95						N00 56101 S/M2.6x5.2-8IP 11.3 in-lbs	L05 00830 8IP
0.689	B00 05650*^	0.630	7.087	-	0.344	1.06							

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

Guideline values for finish boring				Material example, material code AISI / SAE	V <sub>C</sub> Cutting speed v <sub>c</sub> (ft/min)	Max. f (in/rev)			
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material			3.5xD			
					∅ 0.220 – 0.272	∅ 0.354 – 0.433	∅ 0.512 – 1.024		
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	390	0.002	0.003	0.004	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	490	0.002	0.002	0.005	
	2.1	<72500	Lead alloy	12L13	490	0.002	0.003	0.005	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	300	0.001	0.002	0.004	
	4.0	>130000	Tool steels	H13 H21	300	0.001	0.002	0.004	
	4.1	>130000	HSS		230	0.001	0.002	0.003	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.0004	0.002	0.003
	5.1	58000	titanium, titanium alloys	AMS R54520	70	0.0004	0.002	0.003	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	230	0.0004	0.002	0.004	
	6.1	<130000	Stainless steels	630	230	0.0004	0.002	0.004	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	230	0.0004	0.002	0.003	
K	8.0		180	Grey cast iron	No 35 B No 50 B	590	0.002	0.004	0.006
	8.1		250	Alloy grey cast iron	A436 Type 2	520	0.002	0.004	0.001
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	520	0.002	0.003	0.006
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	460	0.002	0.003	0.006
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	390	0.002	0.003	0.006
	10.1		200	Alloyed nodular cast iron	A43D2	390	0.001	0.003	0.005
N	10.2		300	Vermicular cast iron		330	0.001	0.004	0.006
	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	820	0.001	0.002	0.003
	12.1		100	Copper alloy, Brass, Bronze: average cut		820	0.002	0.003	0.006
	13.0		60	Wrought alumi- num alloy	GD-ALSi12	1310	0.001	0.002	0.004
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		890	0.002	0.003	0.005
H	14.0		100	Aluminum alloy: Si content >10%	A360.2	660	0.002	0.003	0.005
	15.0	203000		Hardened steels < 45 HRC		390	-	0.002	0.003
	16.0	261000		Hardened steels > 45 HRC		295	-	0.002	0.003

∅D	Alternative Inserts		for workpiece material <b>P M K N S H</b>
	Order No. ▽▽ size	ISO-Code	
0.220 – 0.272	-		
0.354 – 0.433	W30 04120.3232 W30 04120.3977	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	
0.512 – 1.024	W30 14120.3232 W30 14120.3977	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	
0.220 – 0.272	-		
0.354 – 0.433	W57 04140.023210 W30 04120.0238 W30 04990.0257 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOGX 06T102TN CBN57 TOGX 06T102FN PKD55	
0.512 – 1.024	W57 14140.043210 W30 14120.0238 W30 14990.0457 W30 14990.0455	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55	
0.220 – 0.272	-		
0.354 – 0.433	W57 04140.023210 W30 04060.036110 W30 04200.0321 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOGX 06T102FN PKD55	
0.512 – 1.024	W57 14140.043210 W30 14060.046110 W30 14200.0421 W30 04990.0255	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55	

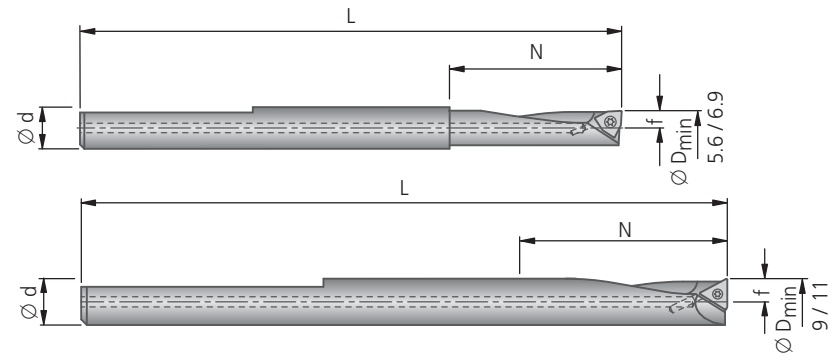


Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!

# KOMET® Low-vibration Boring Bar with Cylindrical Shank

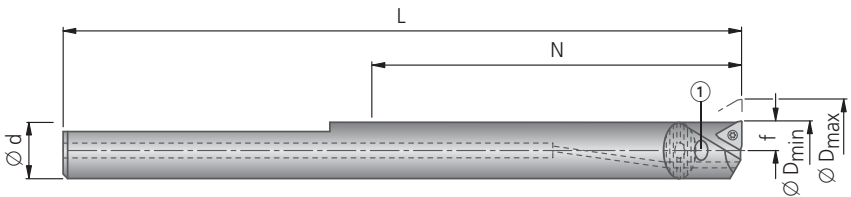
Ø 5.6 – 26 mm

L/D <b>&gt; 3.5xD</b>	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
● very good ○ good ○ possible ✗ not possible	●	●	○	○	✗	○	○	●



3.5xD						Basic recommendation			Assembly parts	Accessories
ØD min	Order No. *carbide version	Ød	L	N max	f	Order No. ▽▽ size	Insert ISO-Code	for workpiece material	Clamping screw	Screwdriver
5.6	B00 30280	6	65	22	2.8	W00 04120.016440 W00 04120.0121	W057 -12 W057 -14 W030 CBN		N00 56011 S/M1.8x2.9-5IP 0.38 Nm	L05 00800 5IP
6.9	B00 30290*	6	80	36	3.45					
9	B00 00680*	8	90	24	4.45	W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40		N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
11	B00 00690*	10	95	50	5.45					

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.



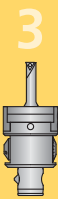
Turning head	Adaptor	Assembly parts			Accessories			Basic recommendation		Assembly parts	Accessories
		Location screw ①	Screwdriver for ①	Insert	for workpiece material	Clamping screw	Screwdriver				
ØD Order No.	Ød L N max f Order No.	Order No.	Order No.	Order No. Description	Order No. ISO-Code ▽▽ size	for workpiece material	Clamping screw	Screwdriver			
13-15 G10 12621 0.02	12 120 75 6.45 G10 12060 0.14	G10 10111.15	Tx10	W57 14140.048430 TOGX 090204EN-14 BK8430 W30 14060.046110 TOHX 090204EL-G06 BK6110 W57 14120.0423 TOGX 090204FN-12 K10 W30 14990.0440 TOGX 090204TN CBN40		N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP				
15-17 G10 12841 0.02	12 120 75 8.45 G10 12060 0.14	G10 10111.15	Tx10								
17-19 G10 12711 0.02	16 140 100 8.45 G10 12070 0.30	G10 10131.15	18050 00025 Tx25								
19-22 G10 12861 0.02	16 140 100 9.45 G10 12070 0.30	G10 10131.15	18050 00025 Tx25								
22-26 G10 12731 0.02	16 140 100 10.95 G10 12080 0.30	G10 10131.15	18050 00025 Tx25								

Supply turning head includes: with clamping screw. Please order inserts and accessories separately.  
Supply adaptor includes: with location screw.

Guideline values for fine boring				Material example, material code/DIN	v <sub>C</sub> Cutting speed v <sub>C</sub> (m/min)	f (mm/rev)		
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed 3.5×D		
				Ø 5.6 – 6.9	Ø 9 – 11	Ø 13 – 26		
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	120	0.04	0.07	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	150	0.04	0.06	0.12
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	150	0.04	0.07	0.12
	3.0	>900	non alloy / low alloy steels; heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	90	0.03	0.06	0.10
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	90	0.03	0.05	0.10
	4.1		HSS		70	0.02	0.04	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	30	0.01	0.04	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	20	0.01	0.04	0.08
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	70	0.01	0.05	0.10
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	70	0.01	0.05	0.10
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	70	0.01	0.04	0.08
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	180	0.05	0.10	0.15
	8.1		alloy gray cast iron	GG-NiCr202 / 0.6660	160	0.05	0.10	0.15
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	160	0.04	0.08	0.15
	9.1		spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	140	0.04	0.08	0.15
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	120	0.04	0.08	0.15
	10.1		alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	120	0.03	0.07	0.12
	10.2		vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	100	0.03	0.10	0.15
	12.0		copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	250	0.02	0.04	0.08
N	12.1		copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.05	0.08	0.15
	13.0		wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	400	0.02	0.06	0.10
	13.1		cast alum. alloy: Si-content <10% magnesium alloy	G-ALMg5 / 3.3561, G-ALSi9Mg / 3.2373	270	0.05	0.08	0.12
	14.0		cast alum.alloy: Si-content >10%	G-ALSi10Mg / 3.2381	200	0.05	0.08	0.12
H	15.0	1400	hardened steels < 45 HRC		120	-	0.05	0.08
	16.0		hardened steels > 45 HRC		90	-	0.05	0.08

Alternative Inserts				for workpiece material
Ø	Order No. ▽▽ size	ISO-Code		
				<b>P M K N S H</b>
for better chip control	5.6 – 6.9	-		
	9 – 11	W30 04120.3232 W30 04120.3977	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	
	13 – 26	W30 14120.3232 W30 14120.3977	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	
	5.6 – 6.9	-		
for higher cutting speed	9 – 11	W57 04140.023210 W30 04120.0238 W30 04990.0257 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOGX 06T102TN CBN57 TOGX 06T102FN PKD55	
	13 – 26	W57 14140.043210 W30 14120.0238 W30 14990.0457 W30 14990.0455	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55	
	5.6 – 6.9	-		
	9 – 11	W57 04140.023210 W30 04060.036110 W30 04200.0321 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOGX 06T102FN PKD55	
for better surface finish	13 – 26	W57 14140.043210 W30 14060.046110 W30 14200.0421 W30 04990.0255	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

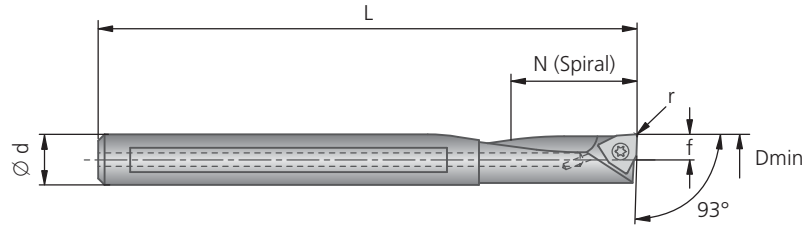


# KOMET® Boring Bar with Cylindrical Shank

Ø 0.220" – 0.496"

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	● very good	● good	○ possible	✗ not possible				

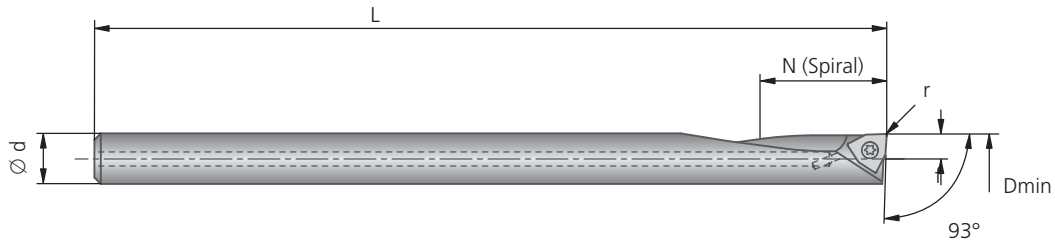
(SWUCR)



ØD min	3.5xD						Basic recommendation				Assembly parts	Accessories
	Order No. Description	Ød	L	N max	f	r	Insert Order No. ∇∇ size	Insert ISO-Code	for workpiece material P M K N S H	Clamping screw Order No. Description	Screwdriver Order No. Description	
0.220	B00 36100 S4A-SWUCR040W	0.250	2.362	0.394	0.110	0.004	W00 04120.016440 W00 04120.0121	WOHX02T001EL-G12 BK6440 WOHX02T001EL-G12 K10		N00 56011 S/M1.8x2.9-5IP	L05 00800 5IP	
0.281	B00 36111 S5A-SWUCR050W	0.312	2.750	0.750	0.141	0.008	W00 10120.026425 W00 10120.0221	WOHX03T102EL-G12 BK6425 WOHX03T102EL-G12 K10		N00 56021 S/M2x3.8-6IP	L05 00810 6IP	
0.308	B00 36121 S5A-SWUCR050W	0.312	3.250	0.875	0.154	0.008	W28 10000.026440 W28 10000.0221	WOEX03T102-00 BK6440 WOEX03T102-00 K10				
0.371	B00 36131 S6A-SWUCR050W	0.375	3.750	1.187	0.185	0.008						
0.496	B00 36140 S8A-SWUCR060W	0.500	4.500	1.625	0.248	0.016	W00 17120.026425 W00 17120.0221 W28 17000.046440 W28 17000.0421	WOHX040202EL-G12 BK6425 WOHX040202EL-G12 K10 WOEX040204-00 BK6440 WOEX040204-00 K10		N00 55561 M2.5x4-8IP	L05 00830 8IP	

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

## with carbide shank (SWUCR)



ØD min	3.5xD						Basic recommendation				Assembly parts	Accessories
	Order No. Description	Ød	L	N max	f	r	Insert Order No. ∇∇ size	Insert ISO-Code	for workpiece material P M K N S H	Clamping screw Order No. Description	Screwdriver Order No. Description	
0.335	B00 36320 C5C-SWUCR050W	0.312	5.000	0.787	0.141	0.008	W00 10120.026425 W00 10120.0221	WOHX03T102EL-G12 BK6425 WOHX03T102EL-G12 K10		N00 56021 S/M2x3.8-6IP	L05 00810 6IP	
0.398	B00 36330 C6D-SWUCR050W	0.375	6.000	0.866	0.185	0.008	W28 10000.026440 W28 10000.0221	WOEX03T102-00 BK6440 WOEX03T102-00 K10				

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

Guideline values for finish boring				V <sub>C</sub>	Max. f (in/rev)			
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Cutting speed v <sub>C</sub> (ft/min)	3.5xD		
						Ø 0.220	Ø 0.281 – 0.398	Ø 0.496
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	850	0.002	0.003	0.006
	2.0	72500-130000	Low alloy steel	5120 1055 5115	850	0.002	0.003	0.006
	2.1	<72500	Lead alloy	12L13	850	0.002	0.003	0.006
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	800	0.002	0.003	0.006
	4.0	>130000	Tool steels	H13 H21	450	0.002	0.003	0.006
	4.1		HSS		390	0.002	0.003	0.006
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	-	0.002 0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	100	-	0.002 0.004	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	450	0.002	0.003	0.006
	6.1	<130000	Stainless steels	630	500	0.002	0.003	0.006
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	300	0.002	0.003	0.004
K	8.0		180	Grey cast iron	No 35 B No 50 B	700	0.003	0.003 0.006
	8.1		250	Alloy grey cast iron	A436 Type 2	650	0.003	0.003 0.006
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	550	0.003	0.004 0.005
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	550	0.003	0.004 0.005
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	500	0.002	0.003 0.004
	10.1		200	Alloyed nodular cast iron	A43D2	450	0.002	0.003 0.004
	10.2		300	Vermicular cast iron		390	0.002	0.003 0.004
N	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.004	0.005 0.006
	12.1		100	Copper alloy, Brass, Bronze: average cut		1600	0.004	0.005 0.006
	13.0		60	Wrought aluminum alloy	GD-ALSi12	950	0.004	0.005 0.006
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		950	0.004	0.005 0.006
	14.0		100	Aluminum alloy: Si content >10%	A360.2	820	0.004	0.005 0.006
H	15.0	203000		Hardened steels < 45 HRC		390	-	0.002 0.004
	16.0	261000		Hardened steels > 45 HRC		390	-	0.002 0.004

Alternative Inserts			
Ø	Insert	for workpiece material	
		P M K N S H	
Order No. ∇∇ size	ISO-Code		
	 W28		
for better chip control	0.220	-	
		0.281 – 0.398	
	W28 10030.0263	WOEX03T102-03 BK63	
	0.496	W28 17030.0463	WOEX040204-03 BK63 
for higher cutting speed	0.220	-	
		0.281 – 0.398	
	0.496	W28 17010.047615	WOEX040204-01 BK7615 



Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

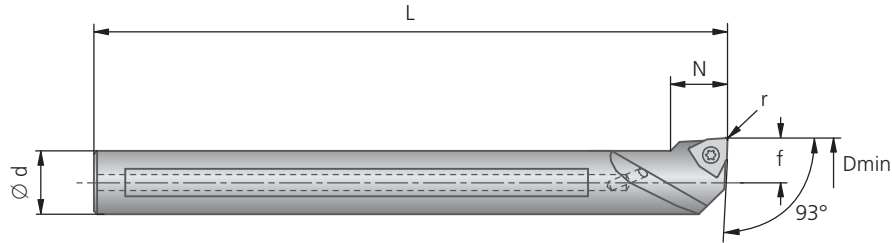
# KOMET® Boring Bar with Cylindrical Shank

Ø 0.812" – 1.250"

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	●	●	●	●	✗	○	○	●

● very good ○ possible ✗ not possible

(SI-SWUC R)



3.5xD							Basic recommendation			Assembly parts	Accessories
ØD min	Order No. Description	Ød	L	N max	f	r	Insert		for workpiece material P M K N S H	Clamping screw 	Screwdriver 
							Order No. ▽▽ size	ISO-Code			
0.812	D03 36520 SI-SWUCR 10-01	0.625	6.875	0.875	0.437	0.008	W00 34060.026425	WOHX060302EL-G06 BK6425			
1.000	D03 36530 SI-SWUCR 12-01	0.750	10.500	1.000	0.500	0.008	W00 34060.0221	WOHX060302EL-G06 K10		N00 55701 S/M3.5x5-8IP	L05 00830 8IP
1.250	D03 36540 SI-SWUCR 16-01	1.000	12.500	1.250	0.625	0.008	W28 34000.046425	WOEX060304-00 BK6425			
							W28 34000.0421	WOEX060304-00 K10			

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.



Guideline values for finish boring					V <sub>C</sub>	Max. f (in/rev)	
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Cutting speed v <sub>C</sub> (ft/min)	3.5×D	
						∅ 0.812 – 1.250	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	850	0.006	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	850	0.006	
	2.1	<72500	Lead alloy	12L13	850	0.006	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	800	0.006	
	4.0	>130000	Tool steels	H13 H21	450	0.006	
	4.1	>130000	HSS		390	0.006	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	100	0.004	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	450	0.006	
	6.1	<130000	Stainless steels	630	500	0.006	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	300	0.004	
K	8.0		180	Grey cast iron	No 35 B No 50 B	700	0.006
	8.1		250	Alloy grey cast iron	A436 Type 2	650	0.006
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	550	0.005
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	550	0.005
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	500	0.004
	10.1		200	Alloyed nodular cast iron	A43D2	450	0.004
	10.2		300	Vermicular cast iron		390	0.004
	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.006
N	12.1		100	Copper alloy, Brass, Bronze: average cut		1600	0.006
	13.0		60	Wrought alumi- num alloy	GD-AISI12	950	0.006
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		950	0.006
	14.0		100	Aluminum alloy: Si content >10%	A360.2	820	0.006
H	15.0	203000		Hardened steels < 45 HRC		390	0.004
	16.0	261000		Hardened steels > 45 HRC		390	0.004

Alternative Inserts			
∅D	Insert		for workpiece material
	W00	W28	
	Order No. ▽ size	ISO-Code	P M K N S H
for better chip control 0.812 – 1.250	W00 34120.026425	WOEX060302EL-G12 BK6425	
	W28 34030.0463	WOEX060304-03 BK63	
for higher cutting speed 0.812 – 1.250	W28 34000.047615	WOEX060304-00 BK7615	



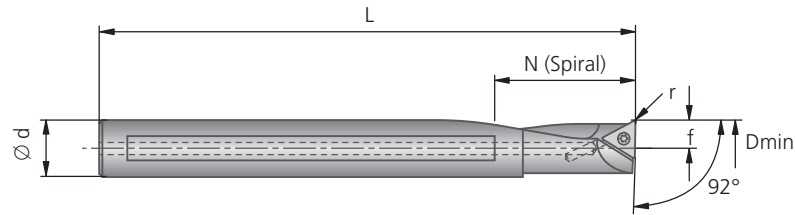
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!

# KOMET® Boring Bar with Cylindrical Shank

Ø 0.308" – 0.746"

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	● very good	● good	○ possible	✗ not possible				

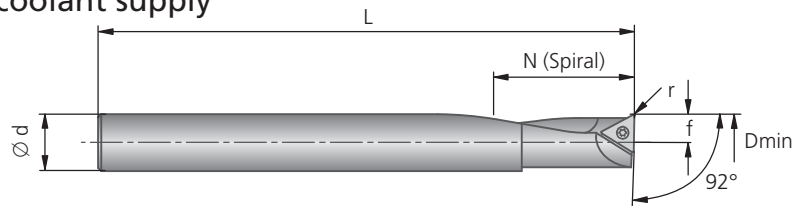
(S-STUC R)



ØD min	3.5xD						Basic recommendation				Assembly parts	Accessories				
	Order No. Description	Ød	L	N max	f	r	Order No. ∇∇ size	Insert ISO-Code	for workpiece material			Clamping screw	Screwdriver			
									P	M	K	N	S	H	Order No. Description	Order No. Description
0.308	<b>B00 06011</b> S5A STUCR040W	0.312	3.250	0.625	0.152	0.008	W57 04140.028425 W57 04120.0223 W30 04990.0240	TOGX06T102EN-14 BK8425 TOGX06T102FN-12 K10 TOGX06T102TN CBN40	●	●	●	●	●	●	N00 56021 S/M2x3.8-6IP	L05 00810 6IP
0.371	<b>B00 06021</b> S6A STUCR040W	0.375	3.750	0.750	0.183	0.008	W30 04060.036110	TOHX06T103EL-G06 BK6110	●		●	●	●	●	N00 56101 S/M2.6x5.2-8IP	L05 00830 8IP
0.496	<b>B00 06031</b> S8A STUCR060W	0.500	4.500	1.000	0.246	0.008	W57 14140.048425 W57 14120.0423 W30 14990.0440	TOGX090204EN-14 BK8425 TOGX090204FN-12 K10 TOGX090204TN CBN40	●	●	●	●	●	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP	
0.621	<b>B00 06041</b> S10C STUCR060W	0.625	5.000	1.250	0.307	0.008	W30 14060.046110	TOHX090204EL-G06 BK6110	●		●	●	●	●	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP
0.746	<b>B00 06051</b> S12D STUCR082W	0.75	6.000	1.500	0.37	0.008	W57 26140.048425 W57 26120.0423 W30 26990.0440 W30 26060.046110	TOGX140304EN-14 BK8425 TOGX140304FN-12 K10 TOGX140304TN CBN40 TOHX140304EL-G06 BK6110	●	●	●	●	●	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP	

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

without central coolant supply  
(UJ R)



ØD min	3.5xD						Basic recommendation				Assembly parts	Accessories				
	Order No. Description	Ød	L	N max	f	r	Order No. ∇∇ size	Insert ISO-Code	for workpiece material			Clamping screw	Screwdriver			
									P	M	K	N	S	H	Order No. Description	Order No. Description
0.308	<b>B00 06110</b> UJ .312 FR	0.312	3.250	0.625	0.152	0.008	W57 04140.028425 W57 04120.0223 W30 04990.0240	TOGX06T102EN-14 BK8425 TOGX06T102FN-12 K10 TOGX06T102TN CBN40	●	●	●	●	●	●	N00 56021 S/M2x3.8-6IP	L05 00810 6IP
0.371	<b>B00 06120</b> UJ .375 FR	0.375	3.750	0.750	0.183	0.008	W30 04060.036110	TOHX06T103EL-G06 BK6110	●		●	●	●	●	N00 56101 S/M2.6x5.2-8IP	L05 00830 8IP
0.496	<b>B00 06130</b> UJ .500 FR	0.500	4.500	1.000	0.246	0.008	W57 14140.048425 W57 14120.0423 W30 14990.0440	TOGX090204EN-14 BK8425 TOGX090204FN-12 K10 TOGX090204TN CBN40	●	●	●	●	●	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP	
0.621	<b>B00 06140</b> UJ .625FR	0.625	5.000	1.250	0.307	0.008	W30 14060.046110	TOHX090204EL-G06 BK6110	●		●	●	●	●	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP
0.746	<b>B00 06150</b> UJ .750FR	0.75	6.000	1.500	0.37	0.008	W57 26140.048425 W57 26120.0423 W30 26990.0440 W30 26060.046110	TOGX140304EN-14 BK8425 TOGX140304FN-12 K10 TOGX140304TN CBN40 TOHX140304EL-G06 BK6110	●	●	●	●	●	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP	

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

Guideline values for finish boring				Material example, material code AISI / SAE	V <sub>C</sub>	Max. f (in/rev)			
Material group	Strength R <sub>m</sub> (lb/ft <sup>2</sup> )	Hardness HB	Material			Cutting speed v <sub>C</sub> (ft/min)	3.5xD		
					∅ 0.308 – 0.371	∅ 0.496 – 0.621	∅ 0.746		
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980	0.003	0.004	0.006	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820	0.003	0.005	0.008	
	2.1	<72500	Lead alloy	12L13	980	0.004	0.006	0.010	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	790	0.003	0.004	0.008	
	4.0	>130000	Tool steels	H13 H21	660	0.002	0.004	0.006	
4.1			HSS		390	0.002	0.003	0.005	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.002	0.003	0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	100	0.002	0.003	0.004	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	660	0.003	0.004	0.006	
	6.1	<130000	Stainless steels	630	590	0.002	0.004	0.006	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	390	0.002	0.004	0.006	
K	8.0		180	Grey cast iron	No 35 B No 50 B	790	0.006	0.008	0.012
	8.1		250	Alloy grey cast iron	A436 Type 2	660	0.006	0.008	0.012
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	590	0.004	0.006	0.010
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	590	0.004	0.006	0.010
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	520	0.004	0.006	0.010
	10.1		200	Alloyed nodular cast iron	A43D2	460	0.004	0.006	0.010
	10.2		300	Vermicular cast iron		390	0.004	0.006	0.010
N	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.004	0.006	0.008
	12.1		100	Copper alloy, Brass, Bronze: average cut		980	0.004	0.006	0.008
	13.0		60	Wrought alumi- num alloy	GD-AISI12	1640	0.003	0.005	0.006
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		1150	0.004	0.006	0.008
H	14.0		100	Aluminum alloy: Si content >10%	A360.2	980	0.004	0.006	0.001
	15.0	203000		Hardened steels < 45 HRC		390	0.003	0.003	0.004
	16.0	261000		Hardened steels > 45 HRC		300	0.002	0.003	0.004

Alternative Inserts					
∅D	Insert		for workpiece material		
	Order No. ▽▽ size	ISO-Code			
			P M K N S H		
for better chip control	0.308 – 0.371	W30 04120.3232 W57 04140.0232	TOHX 06T102EL-US12 CK32 TOHX 06T102EN-14 CK32	●●	
	0.496 – 0.621	W30 14120.3232 W57 14140.0232	TOHX 090202EL-US12 CK32 TOHX 090202EN-14 CK32	●●	
	0.746	W30 24120.3232 W57 24140.0232	TOHX 140302EL-US12 CK32 TOHX 140302EN-14 CK32	●●	
	for higher cutting speed	0.308 – 0.371	W57 04140.0232 W30 04120.0238 W30 04990.0257	TOGX06T102EN-14 CK32 TOHX06T102EL-G12 CK38 TOGX06T102TN CBN57	●●● only GG25
		0.496 – 0.621	W57 14140.0432 W30 14120.0238 W30 14990.0457	TOGX090204EN-14 CK32 TOHX090202EL-G12 CK32 TOGX090204TN CBN57	●●● only GG25
0.746		W57 26140.0432 W30 26120.0238 W30 26990.0457	TOGX140304EN-14 CK32 TOHX140302EL-G12 CK32 TOGX140304TN CBN57	●●● only GG25	
for better surface finish	0.308 – 0.371	W30 04120.3130 W30 04990.0355	TOHX06T102EL-UF12 CK30 TOGX06T103FN PCD55	●●●	
	0.496 – 0.621	W30 14120.3130 W30 14990.0455	TOHX090202EL-UF12 CK30 TOGX090204FN PCD55	●●●	
	0.746	W30 26120.3130 W30 26990.0455	TOHX140302EL-UF12 CK30 TOGX140304FN PCD5	●●●	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!

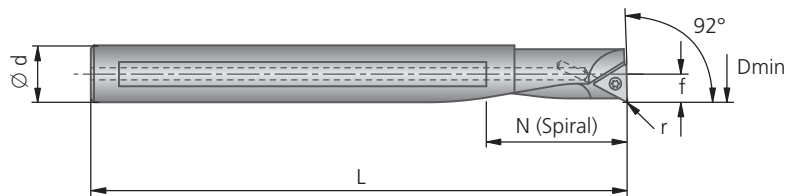


# KOMET® Boring Bar with Cylindrical Shank

Ø 0.308" – 0.746"

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	● very good	● good	○ possible	✗ not possible				

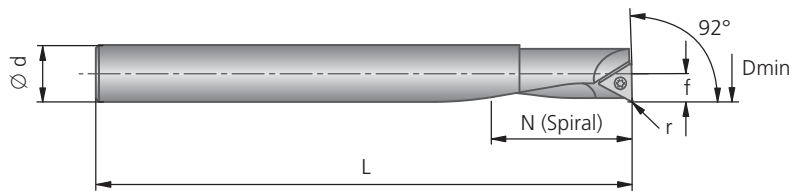
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ØD min	3.5xD							Basic recommendation			Assembly parts	Accessories	
	Order No. Description	Ød	L	N max	f	r	Order No. ∇∇ size	Insert	ISO-Code	for workpiece material	Clamping screw	Screwdriver	
0.308	B00 01011 S5A STUCL040W	0.312	3.250	0.625	0.152	0.008	W57 04140.028425 W57 04120.0223 W30 04990.0240		W30 CBN	TOGX06T102EN-14 BK8425 TOGX06T102FN-12 K10 TOGX06T102TN CBN40		N00 56021 S/M2x3.8-6IP	L05 00810 6IP
0.371	B00 01021 S6A STUCL040W	0.375	3.750	0.750	0.183	0.008	W57 14140.048425 W57 14120.0423 W30 14990.0440		W30 CBN	TOGX090204EN-14 BK8425 TOGX090204FN-12 K10 TOGX090204TN CBN40		N00 56101 S/M2.6x5.2-8IP	L05 00830 8IP
0.496	B00 01031 S8A STUCL060W	0.500	4.500	1.000	0.246	0.008	W57 26140.048425 W57 26120.0423 W30 26990.0440		W30 CBN	TOGX140304EN-14 BK8425 TOGX140304FN-12 K10 TOGX140304TN CBN40		N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP
0.621	B00 01041 S10C STUCL060W	0.625	5.000	1.250	0.307	0.008							
0.746	B00 01051 S12D STUCL082W	0.75	6.000	1.500	0.37	0.008							

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.






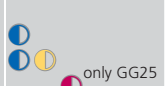
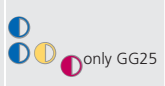




without central coolant supply  
(UJ L)



ØD min	3.5xD							Basic recommendation			Assembly parts	Accessories	
	Order No. Description	Ød	L	N max	f	r	Order No. ∇∇ size	Insert	ISO-Code	for workpiece material	Clamping screw	Screwdriver	
0.308	B00 01110 UJ .312 FL	0.312	3.250	0.625	0.152	0.008	W57 04140.028425 W57 04120.0223 W30 04990.0240		W30 CBN	TOGX06T102EN-14 BK8425 TOGX06T102FN-12 K10 TOGX06T102TN CBN40		N00 56021 S/M2x3.8-6IP	L05 00810 6IP
0.371	B00 01120 UJ .375 FL	0.375	3.750	0.750	0.183	0.008	W57 14140.048425 W57 14120.0423 W30 14990.0440		W30 CBN	TOGX090204EN-14 BK8425 TOGX090204FN-12 K10 TOGX090204TN CBN40		N00 56101 S/M2.6x5.2-8IP	L05 00830 8IP
0.496	B00 01130 UJ .500 FL	0.500	4.500	1.000	0.246	0.008	W57 26140.048425 W57 26120.0423 W30 26990.0440		W30 CBN	TOGX140304EN-14 BK8425 TOGX140304FN-12 K10 TOGX140304TN CBN40		N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP
0.621	B00 01140 UJ .625FL	0.625	5.000	1.250	0.307	0.008							
0.746	B00 01150 UJ .750FL	0.75	6.000	1.500	0.37	0.008							

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

Guideline values for finish boring				Material example, material code AISI / SAE	V <sub>C</sub> Cutting speed v <sub>C</sub> (ft/min)	Max. f (in/rev)		
Material group	Strength R <sub>m</sub> (lb/ft <sup>2</sup> )	Hardness HB	Material			3.5xD		
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980	0.003	0.004	0.005
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820	0.003	0.004	0.004
	2.1	<72500	Lead alloy	12L13	980	0.004	0.005	0.008
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	790	0.003	0.004	0.007
	4.0	>130000	Tool steels	H13 H21	660	0.002	0.004	0.005
	4.1	>130000	HSS		390	0.002	0.003	0.004
S	5.0	250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.002	0.003	0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	100	0.002	0.003	0.004
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	660	0.003	0.004	0.005
	6.1	<130000	Stainless steels	630	590	0.002	0.003	0.004
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	390	0.002	0.003	0.004
K	8.0	180	Grey cast iron	No 35 B No 50 B	790	0.005	0.007	0.010
	8.1	250	Alloy grey cast iron	A436 Type 2	660	0.005	0.007	0.010
	9.0	≤87000	Nodular cast iron ferritic	60-40-18	590	0.004	0.005	0.009
	9.1	230	Nodular cast iron ferritic / pearlitic	80-55-06	590	0.004	0.005	0.009
	10.0	>87000	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	520	0.004	0.005	0.009
	10.1	200	Alloyed nodular cast iron	A43D2	460	0.004	0.005	0.009
N	10.2	300	Vermicular cast iron		390	0.004	0.005	0.009
	12.0	90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.004	0.005	0.008
	12.1	100	Copper alloy, Brass, Bronze: average cut		980	0.004	0.005	0.008
	13.0	60	Wrought alumi- num alloy	GD-AISI12	1640	0.003	0.004	0.005
	13.1	75	Aluminum alloy: Si content <10% Magnesium alloy		980	0.004	0.005	0.007
H	14.0	100	Aluminum alloy: Si content >10%	A360.2	820	0.004	0.005	0.006
	15.0	203000	Hardened steels < 45 HRC		390	0.003	0.003	0.004
	16.0	261000	Hardened steels > 45 HRC		300	0.002	0.003	0.004

Alternative Inserts					
ØD	Insert		for workpiece material		
	Order No. ▽▽ size	ISO-Code			
for better chip control					
	0.308 - 0.371	W30 04120.3232 W57 04140.0232	TOHX 06T102EL-US12 CK32 TOHX 06T102EN-14 CK32		
	0.496 - 0.621	W30 14120.3232 W57 14140.0232	TOHX 090202EL-US12 CK32 TOHX 090202EN-14 CK32		
	0.746	W30 24120.3232 W57 24140.0232	TOHX 140302EL-US12 CK32 TOHX 140302EN-14 CK32		
	for higher cutting speed	0.308 - 0.371	W57 04140.0232 W30 04120.0238 W30 04990.0257	TOGX06T102EN-14 CK32 TOHX06T102EL-G12 CK38 TOGX06T102TN CBN57	 only GG25
		0.496 - 0.621	W57 14140.0432 W30 14120.0238 W30 14990.0457	TOGX090204EN-14 CK32 TOHX090202EL-G12 CK32 TOGX090204TN CBN57	 only GG25
0.746		W57 26140.0432 W30 26120.0238 W30 26990.0457	TOGX140304EN-14 CK32 TOHX140302EL-G12 CK32 TOGX140304TN CBN57	 only GG25	
for better surface finish	0.308 - 0.371	W30 04120.3130 W30 04990.0355	TOHX06T102EL-UF12 CK30 TOGX06T103FN PCD55		
	0.496 - 0.621	W30 14120.3130 W30 14990.0455	TOHX090202EL-UF12 CK30 TOGX090204FN PCD55		
	0.746	W30 26120.3130 W30 26990.0455	TOHX140302EL-UF12 CK30 TOGX140304FN PCD5		

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!

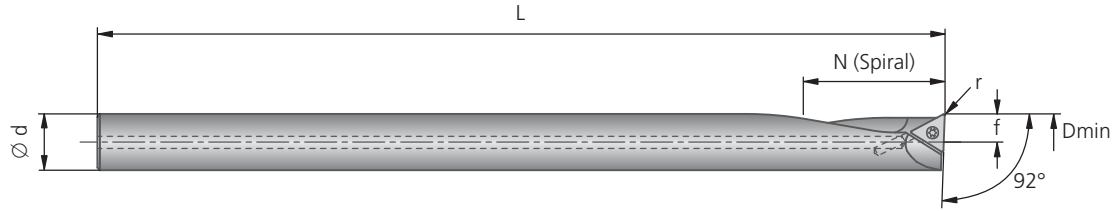


# KOMET® Boring Bar with Carbide Shank

Ø 0.362" – 0.854"

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	● very good	● good	○ possible	✗ not possible				

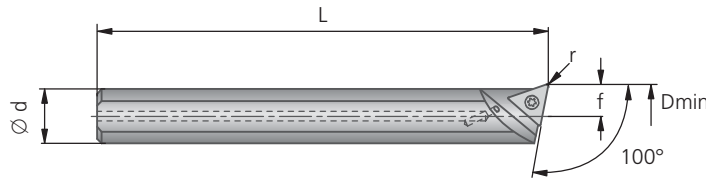
(S-STUC R)



ØD min	3.5xD						Basic recommendation				Assembly parts	Accessories
	Order No. Description	Ød	L	N max	f	r	Order No. ∇∇ size	Insert W30 W57 ISO-Code	for workpiece material P M K N S H			Clamping screw Order No. Description
0.362	<b>B00 05910</b> C5C STUCR040W	0.312	5.000	0.787	0.181	0.008	W57 04140.028425 W57 04120.0223 W30 04990.0240 W30 04060.036110	TOGX06T102EN-14 BK8425 TOGX06T102FN-12 K10 TOGX06T102TN CBN40 TOHX06T103EL-G06 BK6110	● ● ● ● ● ●	HRC <52 (-52)	N00 56021 S/M2x3.8-6IP	L05 00810 6IP
0.441	<b>B00 05920</b> C6D STUCR040W	0.375	6.000	0.866	0.221	0.008	W57 14140.048425 W57 14120.0423 W30 14990.0440 W30 14060.046110	TOGX090204EN-14 BK8425 TOGX090204FN-12 K10 TOGX090204TN CBN40 TOHX090204EL-G06 BK6110	● ● ● ● ● ●	HRC <52 (-52)	N00 56101 S/M2.6x5.2-8IP	L05 00830 8IP
0.531	<b>B00 05930</b> C8E STUCR060W	0.500	7.000	0.945	0.267	0.008	W57 26140.048425 W57 26120.0423 W30 26990.0440 W30 26060.046110	TOGX140304EN-14 BK8425 TOGX140304FN-12 K10 TOGX140304TN CBN40 TOHX140304EL-G06 BK6110	● ● ● ● ● ●	HRC <52 (-52)	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

(Z-IC R/L)



ØD min	3.5xD						Basic recommendation				Assembly parts	Accessories
	Order No. Description	Ød	L	f	r	Order No. ∇∇ size	Insert W30 W57 ISO-Code	for workpiece material P M K N S H			Clamping screw Order No. Description	Screwdriver Order No. Description
0.370	<b>D02 26111</b> Z-.312-ICR	0.312	4.000	0.187	0.012	W57 04140.028425 W57 04120.0223 W30 04990.0240 W30 04060.036110	TOGX06T102EN-14 BK8425 TOGX06T102FN-12 K10 TOGX06T102TN CBN40 TOHX06T103EL-G06 BK6110	● ● ● ● ● ●	HRC <52 (-52)	N00 56021 S/M2x3.8-6IP	L05 00810 6IP	
0.453	<b>D02 26121</b> Z-.375-ICR	0.375	5.000	0.218	0.016	W57 14140.048425 W57 14120.0423 W30 14990.0440 W30 14060.046110	TOGX090204EN-14 BK8425 TOGX090204FN-12 K10 TOGX090204TN CBN40 TOHX090204EL-G06 BK6110	● ● ● ● ● ●	HRC <52 (-52)	N00 56101 S/M2.6x5.2-8IP	L05 00830 8IP	
0.546	<b>D02 26131</b> Z-.500-ICR	0.500	5.000	0.281	0.016	W57 26140.048425 W57 26120.0423 W30 26990.0440 W30 26060.046110	TOGX140304EN-14 BK8425 TOGX140304FN-12 K10 TOGX140304TN CBN40 TOHX140304EL-G06 BK6110	● ● ● ● ● ●	HRC <52 (-52)	N00 56211 S/M3.5x7.3-10IP	L05 00850 10IP	

Supply includes: Boring bar with clamping screw. Please order inserts and accessories separately.

Guideline values for finish boring				Material example, material code AISI / SAE	V <sub>C</sub>	Max. f (in/rev)			
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material			Cutting speed v <sub>C</sub> (ft/min)	3.5xD		
					∅ 0.362 – 0.441	∅ 0.531 – 0.689	∅ 0.854		
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	980	0.003	0.004	0.006	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	820	0.003	0.005	0.008	
	2.1	<72500	Lead alloy	12L13	980	0.004	0.006	0.010	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	790	0.003	0.004	0.008	
	4.0	>130000	Tool steels	H13 H21	660	0.002	0.004	0.006	
	4.1		HSS		390	0.002	0.003	0.005	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.002	0.003	0.004
	5.1	58000	titanium, titanium alloys	AMS R54520	100	0.002	0.003	0.004	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	660	0.003	0.004	0.006	
	6.1	<130000	Stainless steels	630	590	0.002	0.004	0.006	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	390	0.002	0.004	0.006	
K	8.0		180	Grey cast iron	No 35 B No 50 B	790	0.006	0.008	0.012
	8.1		250	Alloy grey cast iron	A436 Type 2	660	0.006	0.008	0.012
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	590	0.004	0.006	0.010
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	590	0.004	0.006	0.010
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	520	0.004	0.006	0.010
	10.1		200	Alloyed nodular cast iron	A43D2	460	0.004	0.006	0.010
	10.2		300	Vermicular cast iron		390	0.004	0.006	0.010
N	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	980	0.004	0.006	0.008
	12.1		100	Copper alloy, Brass, Bronze: average cut		980	0.004	0.006	0.008
	13.0		60	Wrought alumi- num alloy	GD-AISI12	1640	0.003	0.005	0.006
	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		1150	0.004	0.006	0.008
H	14.0		100	Aluminum alloy: Si content >10%	A360.2	980	0.004	0.006	0.001
	15.0	203000		Hardened steels < 45 HRC		390	0.003	0.003	0.004
	16.0	261000		Hardened steels > 45 HRC		300	0.002	0.003	0.004

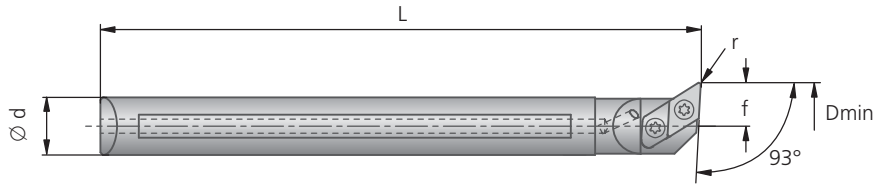
Alternative Inserts					
∅D	Insert		for workpiece material		
	Order No. ▽▽ size	ISO-Code			
			P M K N S H		
for better chip control	0.362 – 0.441	W30 04120.3232 W57 04140.0232	TOHX 06T102EL-US12 CK32 TOHX 06T102EN-14 CK32	●●	
	0.531 – 0.689	W30 14120.3232 W57 14140.0232	TOHX 090202EL-US12 CK32 TOHX 090202EN-14 CK32	●●●	
	0.854	W30 24120.3232 W57 24140.0232	TOHX 140302EL-US12 CK32 TOHX 140302EN-14 CK32	●●●	
	for higher cutting speed	0.362 – 0.441	W57 04140.0232 W30 04120.0238 W30 04990.0257	TOGX06T102EN-14 CK32 TOHX06T102EL-G12 CK38 TOGX06T102TN CBN57	●●●● ●●●● ●●●● only GG25
		0.531 – 0.689	W57 14140.0432 W30 14120.0238 W30 14990.0457	TOGX090204EN-14 CK32 TOHX090202EL-G12 CK32 TOGX090204TN CBN57	●●●●● ●●●●● ●●●●● only GG25
		0.854	W57 26140.0432 W30 26120.0238 W30 26990.0457	TOGX140304EN-14 CK32 TOHX140302EL-G12 CK32 TOGX140304TN CBN57	●●●●● ●●●●● ●●●●● only GG25
for better surface finish	0.362 – 0.441	W30 04120.3130 W30 04990.0355	TOHX06T102EL-UF12 CK30 TOGX06T103FN PCD55	●●●●●	
	0.531 – 0.689	W30 14120.3130 W30 14990.0455	TOHX090202EL-UF12 CK30 TOGX090204FN PCD55	●●●●●●	
	0.854	W30 26120.3130 W30 26990.0455	TOHX140302EL-UF12 CK30 TOGX140304FN PCD5	●●●●●●●	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!



L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	● very good	● good	○ possible	✗ not possible				

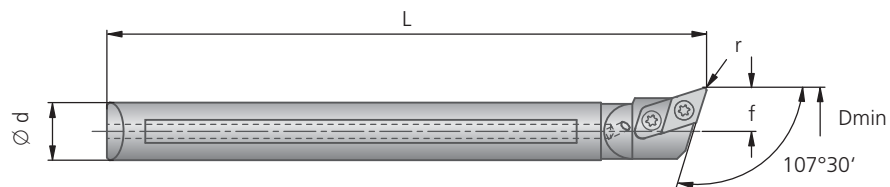
(IK-UR)



ØD min	3.5xD					Basic recommendation				Assembly parts		Accessories
	Order No. Description	Ød	L	f	r	Insert W60 Order No. ▽▽ size	W60 CBN ISO-Code	for workpiece material P M K N S H	Shim Order No.	Clamping screw Order No. Description	Screwdriver Order No. Description	
0.500	D02 16121 IK55-0.375-IC-UR	0.375	4.000	0.250	0.016				L01 11420			
0.687	D02 16131 IK55-0.500IC-UR	0.500	5.000	0.375	0.016	W60 18120.046425 W60 18120.0421 W60 18990.0440	DOHT070204EL-G12 BK6425 DOHT070204EL-G12 K10 DOGW070204TN CBN40		L01 12100	N00 56651 S2560-8IP	L05 00830 8IP	
0.750	D02 16141 IK55-0.625IC-UR	0.625	6.000	0.406	0.016				L01 12100			
1.000	D02 16151 IK55-0.750IC-UR	0.750	7.000	0.516	0.031				L01 12110			
1.250	D02 16161 IK55-1.000IC-UR	1.000	8.000	0.625	0.031	W60 32120.046425 W60 32120.0421 W60 32990.0440	DOHT11T304EL-G12 BK6425 DOHT11T304EL-G12 K10 DOGW11T304TN CBN40		L01 12110	N00 56751 S3574-10IP	L05 00850 10IP	
1.625	D02 16171 IK55-1.250IC-UR	1.250	10.000	0.875	0.031				L01 12110			

Supply includes: Profiling bar with clamping screw. Please order inserts and accessories separately.

(IK-ZR)









ØD min	3.5xD					Basic recommendation				Assembly parts		Accessories
	Order No. Description	Ød	L	f	r	Insert W60 Order No. ▽▽ size	W60 CBN ISO-Code	for workpiece material P M K N S H	Shim Order No.	Clamping screw Order No. Description	Screwdriver Order No. Description	
0.500	D02 16021 IK55-0.375-IC-ZR	0.375	4.000	0.250	0.016				L01 11420			
0.687	D02 16031 IK55-0.500IC-ZR	0.500	5.000	0.375	0.016	W60 18120.046425 W60 18120.0421 W60 18990.0440	DOHT070204EL-G12 BK6425 DOHT070204EL-G12 K10 DOGW070204TN CBN40		L01 12100	N00 56651 S2560-8IP	L05 00830 8IP	
0.750	D02 16041 IK55-0.625IC-ZR	0.625	6.000	0.406	0.016				L01 12100			
1.000	D02 16051 IK55-0.750IC-ZR	0.750	7.000	0.516	0.031				L01 12110			
1.250	D02 16061 IK55-1.000IC-ZR	1.000	8.000	0.625	0.031	W60 32120.046425 W60 32120.0421 W60 32990.0440	DOHT11T304EL-G12 BK6425 DOHT11T304EL-G12 K10 DOGW11T304TN CBN40		L01 12110	N00 56751 S3574-10IP	L05 00850 10IP	
1.625	D02 16071 IK55-1.250IC-ZR	1.250	10.000	0.875	0.031				L01 12110			

Supply includes: Profiling bar with clamping screw. Please order inserts and accessories separately.



Guideline values for finish boring					V <sub>C</sub>	Max. f (in/rev)		
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Cutting speed v <sub>C</sub> (ft/min)	3.5xD		
						∅ 0.500 – 0.750	∅ 1.000 – 1.625	
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	650	0.004	0.005	
	2.0	72500-130000	Low alloy steel	5120 1055 5115	650	0.004	0.005	
	2.1	<72500	Lead alloy	12L13	590	0.004	0.005	
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	460	0.004	0.005	
	4.0	>130000	Tool steels	H13 H21	390	0.002	0.003	
	4.1		HSS		-	-	-	
S	5.0		250	Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.002	0.003
	5.1	58000	titanium, titanium alloys	AMS R54520	160	0.002	0.003	
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	390	0.002	0.003	
	6.1	<130000	Stainless steels	630	390	0.002	0.003	
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	290	0.002	0.003	
	7.1							
K	8.0		180	Grey cast iron	No 35 B No 50 B	590	0.004	0.005
	8.1		250	Alloy grey cast iron	A436 Type 2	460	0.004	0.005
	9.0	≤87000	130	Nodular cast iron ferritic	60-40-18	460	0.004	0.005
	9.1		230	Nodular cast iron ferritic / pearlitic	80-55-06	390	0.003	0.004
	10.0	>87000	250	Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	320	0.003	0.004
	10.1		200	Alloyed nodular cast iron	A43D2	320	0.003	0.004
	10.2		300	Vermicular cast iron		290	0.003	0.004
	12.0		90	Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	820	0.003	0.004
	12.1		100	Copper alloy, Brass, Bronze: average cut		820	0.003	0.004
	13.0		60	Wrought alumi- num alloy	GD-AISI12	820	0.003	0.004
N	13.1		75	Aluminum alloy: Si content <10% Magnesium alloy		820	0.003	0.004
	14.0		100	Aluminum alloy: Si content >10%	A360.2	650	0.003	0.004
	15.0	203000		Hardened steels < 45 HRC		-	-	-
H	16.0	261000		Hardened steels > 45 HRC		-	-	-

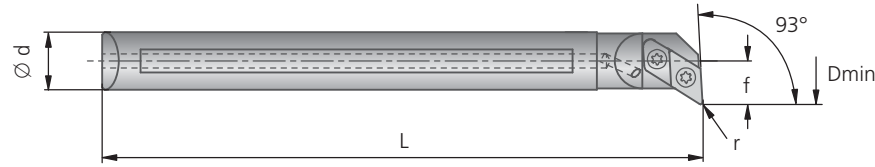
Alternative Inserts			
∅D	Insert		for workpiece material
	Order No. ▽▽ size	ISO-Code	P M K N S H
for better chip control 0.500 – 0.750	W79 		
	W79 18060.026425	DOHT070202-06 BK6425	
	W79 18060.0221	DOHT070202-06 K10	
	W79 32060.046425	DOHT11T304-06 BK6425	
for higher cutting speed 1.000 – 1.625	W79 32060.0421		DOHT11T304-06 K10
	W79 18060.047615	DOHT070204-06 BK7615	
	W79 32060.047615	DOHT11T304-06 BK7615	



Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	● very good	● good	○ possible	✗ not possible				

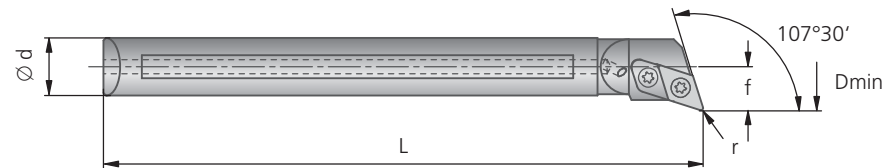
(IK-UL)



ØD min	3.5xD					Basic recommendation				Assembly parts		Accessories
	Order No. Description	Ød	L	f	r	Insert W60 W60 CBN	for workpiece material	Shim	Clamping screw	Screwdriver		
	Order No. Description	Ød	L	f	r	Order No. ∇ size	ISO-Code	P M K N S H	Order No.	Order No. Description	Order No. Description	
0.500	D02 11121 IK55-0.375-IC-UL	0.375	4.000	0.250	0.016				L01 11420			
0.687	D02 11131 IK55-0.500-IC-UL	0.500	5.000	0.375	0.016	W60 18120.046425 W60 18120.0421 W60 18990.0440	DOHT070204ER-G12 BK6425 DOHT070204FR-G12 K10 DOGW070204TN CBN40		L01 12100	N00 56651 S2560-8IP	L05 00830 8IP	
0.750	D02 11141 IK55-0.625-IC-UL	0.625	6.000	0.406	0.016				L01 12100			
1.000	D02 11151 IK55-0.750-IC-UL	0.750	7.000	0.516	0.031	W60 32120.046425 W60 32120.0421 W60 32990.0440	DOHT11T304ER-G12 BK6425 DOHT11T304FR-G12 K10 DOGW11T304TN CBN40		L01 12110	N00 56751 S3574-10IP	L05 00850 10IP	
1.250	D02 11161 IK55-1.000-IC-UL	1.000	8.000	0.625	0.031				L01 12110			

Supply includes: Profiling bar with clamping screw. Please order inserts and accessories separately.

(IK-ZL)



ØD min	3.5xD					Basic recommendation				Assembly parts		Accessories
	Order No. Description	Ød	L	f	r	Insert W60 W60 CBN	for workpiece material	Shim	Clamping screw	Screwdriver		
	Order No. Description	Ød	L	f	r	Order No. ∇ size	ISO-Code	P M K N S H	Order No.	Order No. Description	Order No. Description	
0.500	D02 11021 IK55-0.375-IC-ZL	0.375	4.000	0.250	0.016				L01 12100			
0.687	D02 11031 IK55-0.500-IC-ZL	0.500	5.000	0.375	0.016	W60 18120.046425 W60 18120.0421 W60 18990.0440	DOHT070204EL-G12 BK6425 DOHT070204EL-G12 K10 DOGW070204TN CBN40		L01 12100	N00 56651 S2560-8IP	L05 00830 8IP	
0.750	D02 11041 IK55-0.625-IC-ZL	0.625	6.000	0.406	0.016				L01 12100			
1.000	D02 11051 IK55-0.750-IC-ZL	0.750	7.000	0.516	0.031	W60 32120.046425 W60 32120.0421 W60 32990.0440	DOHT11T304EL-G12 BK6425 DOHT11T304EL-G12 K10 DOGW11T304TN CBN40		L01 12110	N00 56751 S3574-10IP	L05 00850 10IP	
1.250	D02 11061 IK55-1.000-IC-ZL	1.000	8.000	0.625	0.031				L01 12110			

Supply includes: Profiling bar with clamping screw. Please order inserts and accessories separately.

Guideline values for finish boring				V <sub>C</sub>	Max. f (in/rev)		
Material group	Strength R <sub>m</sub> (lbf/in <sup>2</sup> )	Hardness HB	Material	Material example, material code AISI / SAE	Cutting speed v <sub>C</sub> (ft/min)	3.5xD	
						Ø 0.500 – 0.750	Ø 1.000 – 1.625
P	1.0	≤72500	Unalloyed steel	A570.36 1213 A573.81	650	0.004	0.005
	2.0	72500-130000	Low alloy steel	5120 1055 5115	650	0.004	0.005
	2.1	<72500	Lead alloy	12L13	590	0.004	0.005
	3.0	>130000	High alloy steel heat resistant structural, heat treated, nitride steels	4140 1064	460	0.004	0.005
	4.0	>130000	Tool steels	H13 H21	390	0.002	0.003
	4.1		HSS		-	-	-
S	5.0		250 Special alloy: Inconel, Hastelloy, Nimonic, etc.	Inconel® 718 Nimonic® 80A	100	0.002	0.003
	5.1	58000	titanium, titanium alloys	AMS R54520	160	0.002	0.003
M	6.0	≤87000	Stainless steel: austenitic 300 series	304L 316	390	0.002	0.003
	6.1	<130000	Stainless steels	630	390	0.002	0.003
	7.0	>130000	Stainless steel: martensitic/ferritic 400 series	420 403	290	0.002	0.003
K	8.0		180 Grey cast iron	No 35 B No 50 B	590	0.004	0.005
	8.1		250 Alloy grey cast iron	A436 Type 2	460	0.004	0.005
	9.0	≤87000	130 Nodular cast iron ferritic	60-40-18	460	0.004	0.005
	9.1		230 Nodular cast iron ferritic / pearlitic	80-55-06	390	0.003	0.004
	10.0	>87000	250 Nodular cast iron pearlitic Malleable cast iron	100-70-03 70003	320	0.003	0.004
	10.1		200 Alloyed nodular cast iron	A43D2	320	0.003	0.004
N	10.2		300 Vermicular cast iron		290	0.003	0.004
	12.0		90 Copper alloy, brass, Lead alloy, Bronze, Lead bronze: good cut	UNS C36000	820	0.003	0.004
	12.1		100 Copper alloy, Brass, Bronze: average cut		820	0.003	0.004
	13.0		60 Wrought aluminum alloy	GD-AISI12	820	0.003	0.004
	13.1		75 Aluminum alloy: Si content <10% Magnesium alloy		820	0.003	0.004
H	14.0		100 Aluminum alloy: Si content >10%	A360.2	650	0.003	0.004
	15.0	203000 261000	Hardened steels < 45 HRC Hardened steels > 45 HRC		-	-	-

Alternative Inserts			
Ø	Insert		for workpiece material
	W79	W60 PCD	
Order No. ▽ size	ISO-Code		P M K N S H
for better chip control 0.500 – 0.750	W79 18060.026425 W79 18060.0221	DOHT070202-06 BK6425 DOHT070202-06 K10	
	W79 32060.046245 W79 32060.0421	DOHT11T304-06 BK6425 DOHT11T304-06 K10	
for higher cutting speed 0.500 – 0.750	W79 18060.047615	DOHT070204-06 BK7615	
	W79 32060.047615	DOHT11T304-06 BK7615	
for better surface finish 0.500 – 0.750	W60 18990.0255	DOGW070202FN PCD55	
	W60 32990.0455	DOGW011T304FN PCD55	



Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

1

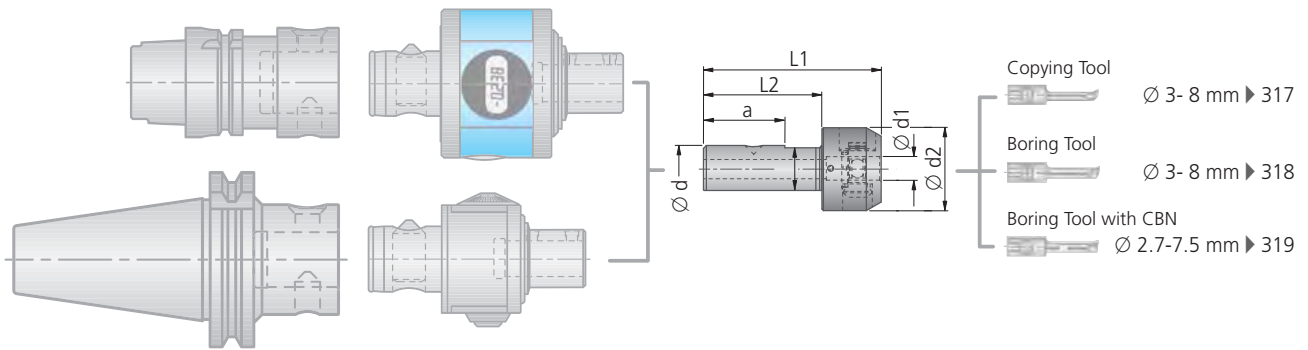



## Adaptor with cylindrical connection

2

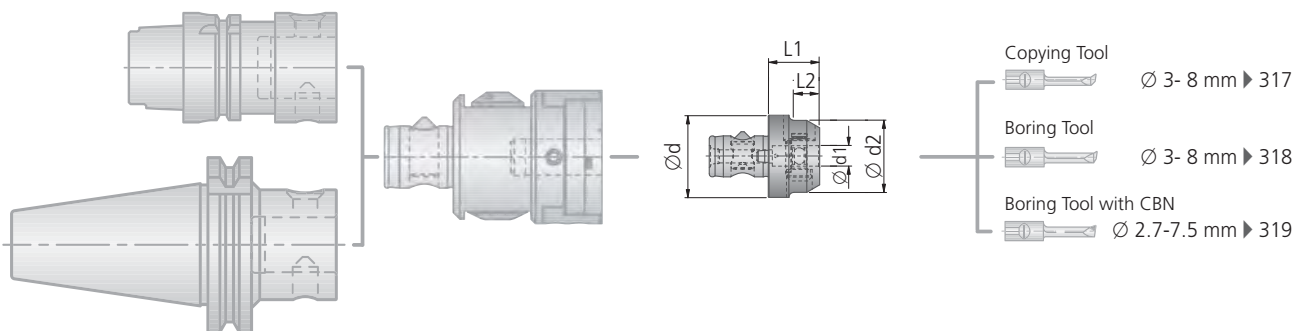



3



Order No.	$\varnothing d_{g6}$	$\varnothing d_1$	$\varnothing d_2$	L1	L2	a	b	
H50 21640	16	4	28	60	40	27.5	14.4	0.15
H50 21680	16	8	28	60	40	27.5	14.4	0.13

## Adaptor with ABS® connection

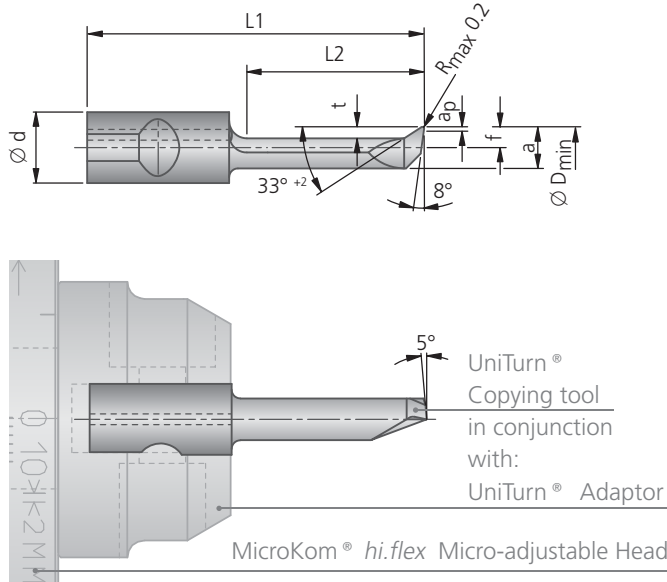


Order No.	ABS $\varnothing d$	$\varnothing d_1$	$\varnothing d_2$	L1	L2	
H50 23240	32	4	28	20	12	0.15
H50 23280	32	8	28	20	12	0.12

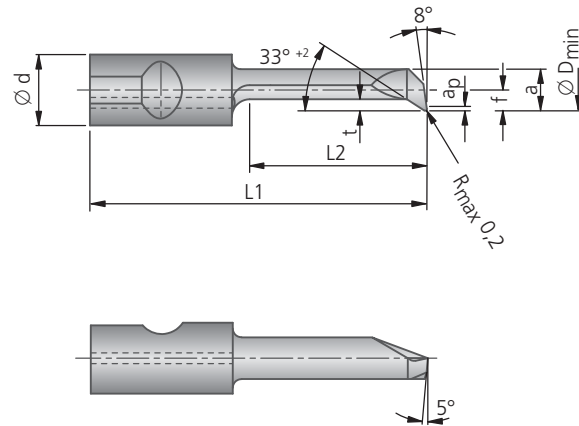
L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	●	●	○	○	✗	✗	✗	●

● very good ○ good ○ possible ✗ not possible

R.H. cutting form



L.H. cutting form



Ø D min	Cutting form		ap max	t max	f	a	Ø d	L1	L2	kg	Basic recommendation				
	R.H.	L.H.									Quality	for workpiece material			
	Order No.	Order No.											P	M	K
3	H51 32100.0182	H51 31100.0182	0.2	0.7	1.25	2.7	4	28	10	0.0032	BK82	●	●	●	●
	H51 32150.0182	H51 31150.0182	0.2	0.7	1.25	2.7	4	33	15	0.0035		●	●	●	●
	H51 32200.0182	H51 31200.0182	0.2	0.7	1.25	2.7	4	38	20	0.0037		●	●	●	●
4	H51 42100.0182	H51 41100.0182	0.3	0.8	1.75	3.7	4	28	10	0.0038	BK82	●	●	●	●
	H51 42150.0182	H51 41150.0182	0.3	0.8	1.75	3.7	4	33	15	0.0043		●	●	●	●
	H51 42200.0182	H51 41200.0182	0.3	0.8	1.75	3.7	4	38	20	0.0047		●	●	●	●
5	H51 52100.0282	H51 51100.0282	0.5	1.0	2.25	4.7	8	28	10	0.013	BK82	●	●	●	●
	H51 52150.0282	H51 51150.0282	0.5	1.0	2.25	4.7	8	33	15	0.013		●	●	●	●
	H51 52200.0282	H51 51200.0282	0.5	1.0	2.25	4.7	8	38	20	0.014		●	●	●	●
	H51 52250.0282	H51 51250.0282	0.5	1.0	2.25	4.7	8	43	25	0.015		●	●	●	●
	H51 52300.0282	H51 51300.0282	0.5	1.0	2.25	4.7	8	48	30	0.016		●	●	●	●
6	H51 62150.0282	H51 61150.0282	0.5	1.8	2.75	5.7	8	33	15	0.014	BK82	●	●	●	●
	H51 62200.0282	H51 61200.0282	0.5	1.8	2.75	5.7	8	38	20	0.015		●	●	●	●
	H51 62250.0282	H51 61250.0282	0.5	1.8	2.75	5.7	8	43	25	0.016		●	●	●	●
	H51 62300.0282	H51 61300.0282	0.5	1.8	2.75	5.7	8	48	30	0.017		●	●	●	●
	H51 62350.0282	H51 61350.0282	0.5	1.8	2.75	5.7	8	53	35	0.018		●	●	●	●
8	H51 82150.0282	H51 81150.0282	0.6	2.5	3.75	7.7	8	33	15	0.016	BK82	●	●	●	●
	H51 82200.0282	H51 81200.0282	0.6	2.5	3.75	7.7	8	38	20	0.018		●	●	●	●
	H51 82250.0282	H51 81250.0282	0.6	2.5	3.75	7.7	8	43	25	0.020		●	●	●	●
	H51 82300.0282	H51 81300.0282	0.6	2.5	3.75	7.7	8	48	30	0.022		●	●	●	●
	H51 82350.0282	H51 81350.0282	0.6	2.5	3.75	7.7	8	53	35	0.023		●	●	●	●
8	H51 82400.0282	H51 81400.0282	0.6	2.5	3.75	7.7	8	58	40	0.025	●	●	●	●	

Please note:

From Dmin. 5 mm, copying tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

EP 0 973 625, other patents and patent applications (UniTurn)

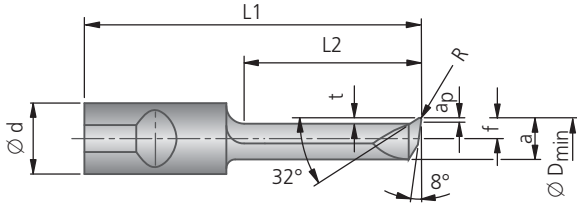


## Boring Tool

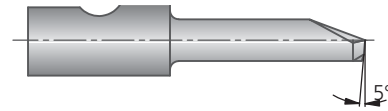
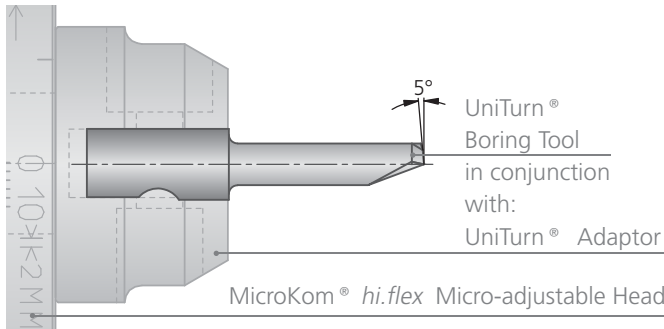
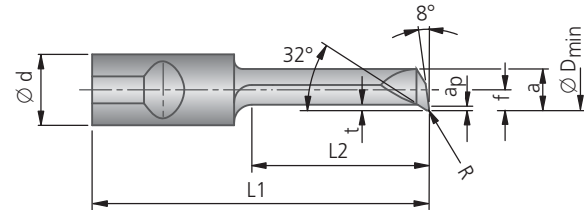
L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	●	●	○	○	✗	✗	✗	●

● very good ○ good ○ possible ✗ not possible

### R.H. cutting form



### L.H. cutting form



Guideline recommendation: feed  $f = 0,025-0,1$  mm

Ø D min	Cutting form		ap max	t max	f	a	Ø d	L1	L2	kg	Basic recommendation	
	R.H.	L.H.									Quality	for workpiece material
3	H55 32100.0182	H55 31100.0182	0.6	0.3	1.25	2.6	4	28	10	0.004	BK82	
	H55 32150.0182	H55 31150.0182	0.6	0.3	1.25	2.6	4	33	15	0.004		
4	H55 42150.0182	H55 41150.0182	0.8	0.3	1.75	3.6	4	33	15	0.005	BK82	
	H55 42200.0182	H55 41200.0182	0.8	0.3	1.75	3.6	4	38	20	0.006		
5	H55 52150.0282	H55 51150.0282	1.0	0.4	1.55	4.6	8	33	15	0.016	BK82	
	H55 52200.0282	H55 51200.0282	1.0	0.4	1.55	4.6	8	38	20	0.018		
	H55 52250.0282	H55 51250.0282	1.0	0.4	1.55	4.6	8	43	25	0.019		
6	H55 62200.0282	H55 61200.0282	1.1	0.4	1.55	5.4	8	38	20	0.020	BK82	
	H55 62300.0282	H55 61300.0282	1.1	0.4	1.55	5.4	8	48	30	0.023		
8	H55 82200.0282	H55 81200.0282	1.2	0.4	1.5	5.5	8	38	20	0.020	BK82	
	H55 82400.0282	H55 81400.0282	1.2	0.4	1.5	5.5	8	58	40	0.027		

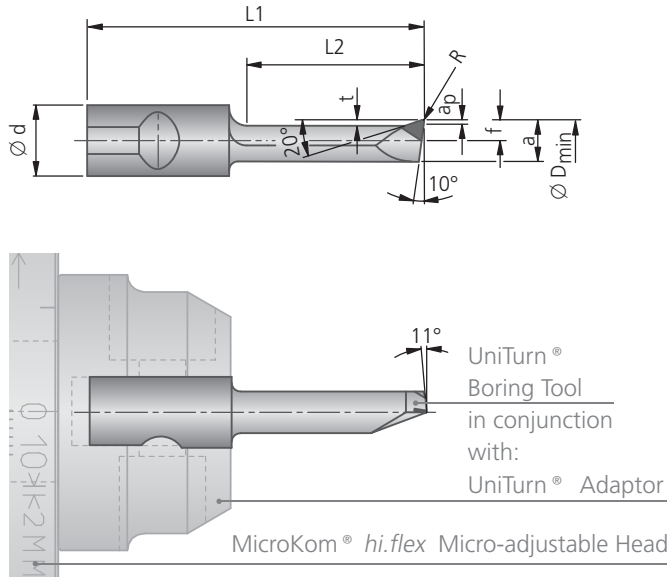
Please note:

From  $D_{min}$  5 mm, boring tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

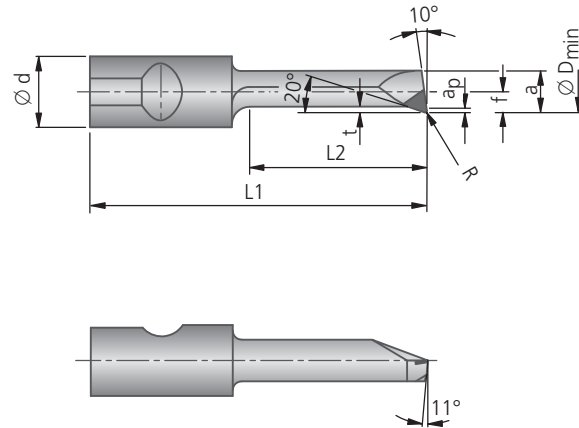
L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	●	●	●	●	✗	●	●	●

● very good ● good ○ possible ✗ not possible

R.H. cutting form



L.H. cutting form



Guideline recommendations:  $a_p = 0,05-0,07$  mm;  $f = 0,01-0,03$  mm;  $v_c = 70-90$  m/min

Ø D min	Cutting form		t	f	a	Ø d	L1	L2	kg	Basic recommendation	
	R.H. Order No.	L.H. Order No.								Quality	for workpiece material
2.7	H56 32100.0140	H56 31100.0140	0.2	1.35	2.5	4	27	9	0.004	CBN40	<b>P M K N S H</b> ● ≥52 HRC
3.8	H56 42121.0140	H56 41121.0140	0.2	1.9	3.6	8	30	12	0.015	CBN40	● ≥52 HRC
4.8	H56 52151.0140	H56 51151.0140	0.25	2.4	4.55	8	33	15	0.016	CBN40	● ≥52 HRC
5.4	H56 62201.0140	H56 61201.0140	0.3	2.7	5.2	8	38	20	0.019	CBN40	● ≥52 HRC
7.5	H56 82251.0140	H56 81251.0140	0.5	3.8	7.3	8	43	25	0.024	CBN40	● ≥52 HRC

Please note:

Boring tools have internal coolant supply.



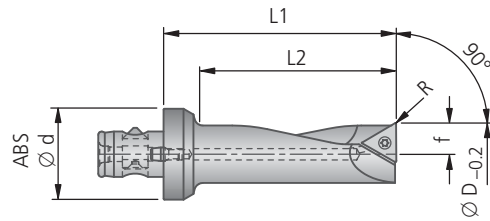
# KOMET® Boring Bar B002

with ABS® Connection,  $\kappa = 90^\circ$ , R.H. cutting

Ø 7.9 – 27.9 mm

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible



ØD min	3.5xD							Basic recommendation		Assembly parts	Accessories	
	Order No.	ABS Ød	L1	L2	f	R	kg	Insert	for workpiece material			Clamping screw
								Order No. ▽ size	ISO-Code	P M K N S H	Order No. Description	Order No. Description
	B00 25510	25	38	28	3.95	0.2	0.05					
7.9	B00 25610	32	42	28	3.95	0.2	0.10	W57 04140.028430	TOGX 06T102EN-14 BK8430		N00 56021	L05 00810
	B00 25810	40	45	28	3.95	0.2	0.18					
8.9	B00 25700	32	48	34	4.45	0.2	0.10	W57 04120.0223	TOGX 06T102FN-12 K10		S/M2x3.8-6IP	6IP
	B00 25620	32	48	34	4.95	0.2	0.11					
9.9	B00 25820	40	51	34	4.95	0.2	0.19					
10.9	B00 25710	32	57	43	5.45	0.2	0.11					
	B00 25530	25	53	43	5.95	0.2	0.07					
11.9	B00 25630	32	57	43	5.95	0.2	0.12					
	B00 25830	40	60	43	5.95	0.2	0.20					
	B00 25540	25	60	50	6.95	0.2	0.08					
13.9	B00 25640	32	64	50	6.95	0.2	0.14	W57 14140.048430	TOGX 090204EN-14 BK8430		N00 56101	L05 00830
	B00 25840	40	67	50	6.95	0.2	0.22					
	B00 25650	32	72	58	7.95	0.2	0.15	W57 14120.0423	TOGX 090204FN-12 K10		S/M2.6x5.2-8IP	8IP
15.9	B00 25850	40	75	58	7.95	0.2	0.24					
	B00 25661	32	72	59	8.95	0.2	0.36					
17.9	B00 25861	40	75	59	8.95	0.2	0.15					
	B00 25671	32	82	70	9.9	0.2	0.21					
19.9	B00 25871	40	85	70	9.9	0.2	0.30					
21.9	B00 25681	32	82	70	10.9	0.2	0.23					
23.9	B00 25691	32	82	70	11.9	0.2	0.26					
27.9	B00 25911	40	85	70	13.9	0.2	0.42					

Further diameters on request.

### Supply includes:

Boring bar with clamping screw. Please order inserts and accessories separately.



Guideline values for fine boring				Material example, material code/DIN	v <sub>c</sub> Cutting speed v <sub>c</sub> (m/min)	f (mm/rev)	
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed 3.5xD	
				Ø 7.9 – 9.9	Ø 10.9 – 27.9		
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.07	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050. C55 / 1.0525. 16MnCr5 / 1.7131	250	0.06	0.12
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.07	0.12
	3.0	>900	non alloy / low alloy steels; heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225. CK60 / 1.1221	240	0.06	0.10
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341. X165CrMoV12 / 1.2601	200	0.05	0.10
	4.1		HSS		120	0.04	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668. Nimonic 80A / 2.4631	50	0.04	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.04	0.08
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306. X5CrNiMo1810 / 1.4401	200	0.05	0.10
	6.1	<900	stainless steels	X8CrNb17 / 1.4511. X10CrNiMoTi1810 / 1.4571	180	0.05	0.10
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713. X8CrS-38-18 / 1.4862	120	0.04	0.08
K	8.0	180	gray cast iron	GG-25 / 0.6025. GG-35 / 0.6035	240	0.10	0.15
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.10	0.15
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.08	0.15
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.08	0.15
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.08	0.15
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.07	0.12
	10.2	300	vermicular cast iron	GGV Ti < 0.2 GGV Ti > 0.2	120	0.10	0.15
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182. G-CuPb155n / 2.1182	400	0.04	0.08
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550. E-Cu57 / 2.0060	300	0.08	0.15
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315. AlMnCu / 3.0517	500	0.06	0.10
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561. G-AlSi9Mg / 3.2373	350	0.08	0.12
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	300	0.08	0.12
H	15.0	1400	hardened steels < 45 HRC		80	0.05	0.08
	16.0	1800	hardened steels > 45 HRC		60	0.05	0.08

ØD	Alternative Inserts		for workpiece material
	Order No. ▽▽ size	ISO-Code	
7.9 – 9.9	W30 04120.3232 W30 04120.3977	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	
	W30 14120.3232 W30 14120.3977	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	
7.9 – 9.9	W57 04140.023210 W30 04120.0238 W30 04990.0257 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOGX 06T102TN CBN57 TOGX 06T102FN PKD55	
	W57 14140.043210 W30 14120.0238 W30 14990.0457 W30 14990.0455	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55	
	W57 04140.023210 W30 04060.036110 W30 04200.0321 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOGX 06T102FN PKD55	
10.9 – 27.9	W57 14140.043210 W30 14060.046110 W30 14200.0421 W30 04990.0255	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

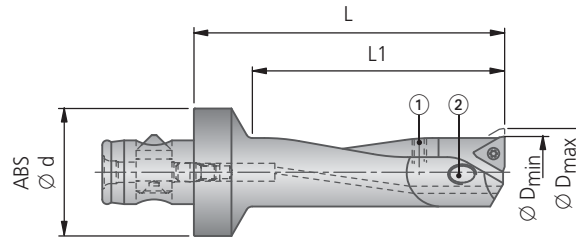


# KOMET® Boring Bar G10 with ABS® Connection

Ø 11.9 – 30 mm

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible



ØD min-max	3.5xD					Basic recommendation		for workpiece material	Assembly parts Clamping screw  Order No. Description N00 56101 S/M2.6x5.2-8IP 1.28 Nm	Accessories Screwdriver  Order No. Description L05 00830 8IP
	Order No. Description	ABS Ød	L	L1	kg	Order No. ▽ size	ISO-Code			
11.9 - 14	G10 10111 ABS32-VE12U	32	57	43.3	0.13	 W30 W57 -12 W57 -14 W30 CBN	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40			
13.9 - 16	G10 10121 ABS32-VE14U	32	64	49	0.14					
15.9 - 18	G10 10131 ABS32-VE16U	32	71	56	0.16					
17.9 - 20	G10 10141 ABS32-VE18U	32	78	63	0.19					
19.9 - 24	G10 10151 ABS32-VE20U	32	85	70	0.23					
23.8 - 30	G10 10161 ABS32-VE24U	32	99	84	0.32					

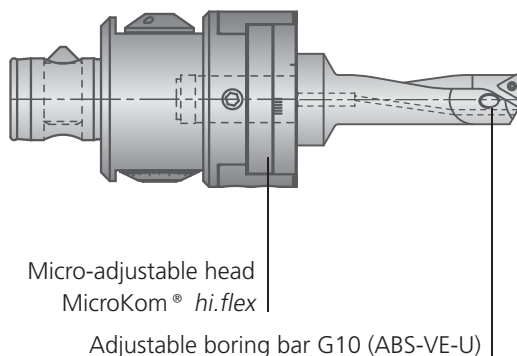
Note: When inserts with different centre radii are fitted, the D<sub>min</sub>/D<sub>max</sub> ranges alter.

### Supply includes:

Boring bar with assembly parts.  
Please order inserts and accessories separately.

The adjustable boring bar G10 (ABS-VE-U) allows coarse adjustment with minimum dimensional deflection by means of precision adjustment with the micro-adjustable head.

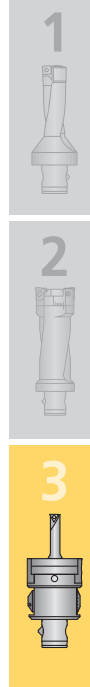
For finish machining, the boring bar G10 (ABS-VE-U) is provided with a triangular insert.



for	Assembly parts			Accessories
	Turning head  Order No.	Adjusting screw ①  Order No.	Location screw ②  Order No.	Screwdriver for ②  Order No. Description
..VE12	G10 10611	N00 70080	G10 10111.15	Tx10
..VE14	G10 10621	N00 70080	G10 10121.15	Tx20
..VE16	G10 10631	N00 70090	G10 10131.15	18050 00025 Tx25
..VE18	G10 10641	N00 70140	G10 10141.15	18050 00025 Tx25
..VE20	G10 10651	N00 70140	G10 10151.15	18050 00025 Tx25
..VE24	G10 10661	N00 70190	G10 10161.15	18050 00030 Tx30

Guideline values for fine boring				$v_c$	$f$ (mm/rev)	
Material group	Strength $R_m$ (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	Cutting speed $v_c$ (m/min)	max. feed
						$3.5 \times D$
						$\varnothing 11.9 - 30$
P	1.0	$\leq 500$	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050. C55 / 1.0525. 16MnCr5 / 1.7131	250	0.12
	2.1	$< 500$	lead alloys	9SMnPb28 / 1.0718	300	0.12
	3.0	$> 900$	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225. CK60 / 1.1221	240	0.10
	4.0	$> 900$	high alloy steels	X6CrMo4 / 1.2341. X165CrMoV12 / 1.2601	200	0.10
	4.1		HSS		120	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	Inconel 718 / 2.4668. Nimonic 80A / 2.4631	50	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.08
M	6.0	$\leq 600$	stainless steels	X2CrNi189 / 1.4306. X5CrNiMo1810 / 1.4401	200	0.10
	6.1	$< 900$	stainless steels	X8CrNb17 / 1.4511. X10CrNiMoTi1810 / 1.4571	180	0.10
	7.0	$> 900$	stainless / fireproof steels	X10CrAl7 / 1.4713. X8CrS-38-18 / 1.4862	120	0.08
K	8.0	180	gray cast iron	GG-25 / 0.6025. GG-35 / 0.6035	240	0.15
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.15
	9.0	$\leq 600$	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.15
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.15
	10.0	$> 600$	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.15
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.12
	10.2	300	vermicular cast iron	GGV Ti $< 0.2$ GGV Ti $> 0.2$	120	0.15
	N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182. G-CuPb15Sn / 2.1182	400
12.1		100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550. E-Cu57 / 2.0060	300	0.15
13.0		60	wrought aluminium alloys	AlMg1 / 3.3315. AlMnCu / 3.0517	500	0.10
13.1		75	cast alum. alloy: Si-content $< 10\%$ magnesium alloy	G-AlMg5 / 3.3561. G-AlSi9Mg / 3.2373	350	0.12
14.0		100	cast alum.alloy: Si-content $> 10\%$	G-AlSi10Mg / 3.2381	300	0.12
H	15.0	1400	hardened steels $< 45$ HRC		80	0.08
	16.0	1800	hardened steels $> 45$ HRC		60	0.08

Alternative Inserts			
$\varnothing D$	Insert		for workpiece material
	Order No. $\nabla \nabla$ size	ISO-Code	
for better chip control 11.9 - 30			
	W30 14120.3232 W30 14120.3977	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	
for higher cutting speed 11.9 - 30			
	W57 14140.043210 W30 14120.0238 W30 14990.0457 W30 14990.0455	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55	
for better surface finish 11.9 - 30			
	W57 14140.043210 W30 14060.046110 W30 14200.0421 W30 04990.0255	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55	



Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

# KOMET® Boring Bar B300

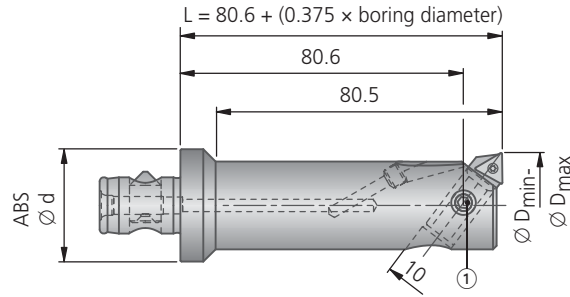
with ABS® Connection,  $\kappa = 90^\circ$ , R.H. cutting

Ø 28 – 44 mm



L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 52 through hole	HRC > 52 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	○	○	✗

● very good ○ good ○ possible ✗ not possible



Ø D min-max	Order No.	ABS Ø d	Basic recommendation		Assembly parts	Accessories	Assembly parts		
			Insert W30 W57 W57 -12 -14	for workpiece material P M K N S H	Clamping screw 	Screwdriver 	Fine boring cartridge 	Clamping screw ① 	Hexagonal key 
			Order No. ISO-Code ▽▽ size		Order No. Description	Order No. Description	Order No.	Order No. Description	Order No. Description
28 - 44	B30 02020 	32	W57 14140.048430 TOGX 090204EN-14 BK8430 W30 14060.046110 TOHX 090204EL-G06 BK6110 W57 14120.0423 TOGX 090204FN-12 K10 W30 14990.0440 TOGX 090204TN CBN40		N00 56111 S/M2.6x6.2- 8IP 1.28 Nm	L05 00830 8IP	D20 10620 	55051 06008 M6x8	18591 10030 SW3

### Supply includes:

Boring bar with fine boring cartridge and assembly parts.

Please order inserts and accessories separately.

Guideline values for fine boring				$v_c$	$f$ (mm/rev)	
Material group	Strength $R_m$ (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	max. feed 3.5×D Ø 28 – 44	
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050. C55 / 1.0525. 16MnCr5 / 1.7131	250	0.12
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.12
	3.0	>900	non alloy / low alloy steels; heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225. CK60 / 1.1221	240	0.10
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341. X165CrMoV12 / 1.2601	200	0.10
	4.1		HSS		120	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668. Nimonic 80A / 2.4631	50	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.08
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306. X5CrNiMo1810 / 1.4401	200	0.10
	6.1	<900	stainless steels	X8CrNb17 / 1.4511. X10CrNiMoTi1810 / 1.4571	180	0.10
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713. X8CrS-38-18 / 1.4862	120	0.08
K	8.0	180	gray cast iron	GG-25 / 0.6025. GG-35 / 0.6035	240	0.15
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.15
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.15
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.15
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.15
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.12
	10.2	300	vermicular cast iron	GGV Ti < 0.2 GGV Ti > 0.2	120	0.15
	N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182. G-CuPb15Sn / 2.1182	400
12.1		100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550. E-Cu57 / 2.0060	300	0.15
13.0		60	wrought aluminium alloys	AlMg1 / 3.3315. AlMnCu / 3.0517	500	0.10
13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561. G-AlSi9Mg / 3.2373	350	0.12
14.0		100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	300	0.12
H	15.0	1400	hardened steels < 45 HRC		80	0.08
	16.0	1800	hardened steels > 45 HRC		60	0.08

ØD	Alternative Inserts		for workpiece material
	Order No. ▽▽ size	ISO-Code	
28 – 44			
	<b>W30 14120.3232</b> <b>W30 14120.3977</b>	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77	
	for better chip control		
28 – 44			
	<b>W57 14140.043210</b> <b>W30 14120.0238</b> <b>W30 14990.0457</b> <b>W30 14990.0455</b>	TOGX 090204EN-14 CK3210 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55	only GG25
	for higher cutting speed		
28 – 44			
	<b>W57 14140.043210</b> <b>W30 14060.046110</b> <b>W30 14200.0421</b> <b>W30 04990.0255</b>	TOGX 090204EN-14 CK3210 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55	
	for better surface finish		

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!



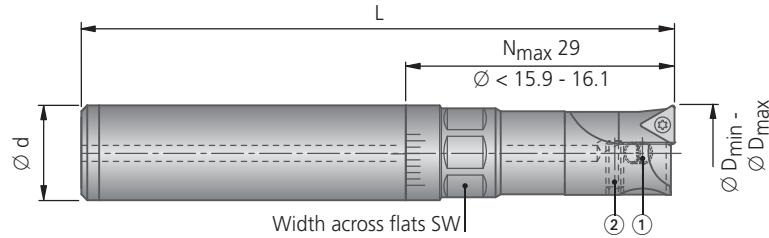
# KOMET MicroKom® Boring Bar M10 with Cylindrical Shank

Ø 15.9 – 26 mm

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible

- The smallest adjustment steps are 0.02 mm by: per graduation in the diameter.
- For drilling diameter 15.9 – 16.1 mm the max. drilling depth is limited to 29 mm.



ØD min-max	3xD					Basic recommendation		Assembly parts	Accessories	
	Order No. Description	Ød	L	SW	kg	Insert Order No. ▽ size	ISO-Code	for workpiece material P M K N S H	Clamping screw Order No. Description	Screwdriver Order No. Description
15.9 - 20	M10 50011	16	100	14	0.13	W30 04140.028430 W57 04120.0223	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110		 N00 56021 S/M2×3.8-6IP 0.62 Nm	 L05 00810 6IP
19 - 23	M10 50021	16	105	14	0.20	W57 04120.0223 W30 04990.0240	TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40			
22 - 26	M10 50031	16	110	18	0.23					

## Supply includes:

Boring bar with assembly parts.  
Please order inserts and accessories separately.





for	Assembly parts			Accessories
	Insert holder  Order No.	Clamping screw  Order No.	Adjusting screw  Order No.	Hook spanner  Order No.
M10 50011	M10 50010.15	M10 50010.16	M10 50010.18	18589 00014
M10 50021	M10 50020.15	M10 50010.16	M10 50020.18	18589 00014
M10 50031	M10 50030.15	M10 50010.16	M10 50030.18	18589 00018

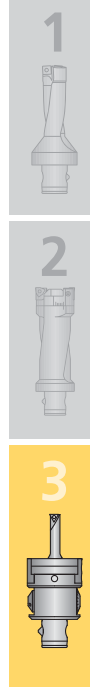
## BENEFITS for you:

- Three sizes for drilling diameters from 15.9 to 26 mm
- Internal coolant supply
- Suitable for high spindle speeds
- Cylindrical shank
- Fine adjustment range 0.3 mm in the diameter
- Extensive range of inserts with positive cutter geometry and wear-resistant coatings
- Inserts available with special cutter geometries to produce short, rolled chips for precision machining steel materials which produce long chips



Guideline values for fine boring				$v_c$	$f$ (mm/rev)	
Material group	Strength $R_m$ (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	Cutting speed $v_c$ (m/min)	max. feed
						$3 \times D$
						$\varnothing 15.9 - 26$
P	1.0	$\leq 500$	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.07
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.06
	2.1	$< 500$	lead alloys	9SMnPb28 / 1.0718	300	0.07
	3.0	$> 900$	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.06
	4.0	$> 900$	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.05
	4.1		HSS		120	0.04
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.04
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.04
M	6.0	$\leq 600$	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.05
	6.1	$< 900$	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.05
	7.0	$> 900$	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.04
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.10
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.10
	9.0	$\leq 600$	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.08
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.08
	10.0	$> 600$	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.08
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.07
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.10
	N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	400
12.1		100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	300	0.08
13.0		60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.06
13.1		75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	350	0.08
14.0		100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	300	0.08
H	15.0	1400	hardened steels < 45 HRC		120	0.05
	1800		hardened steels > 45 HRC		90	0.05

$\varnothing D$	Alternative Inserts		for workpiece material
	Order No. $\nabla \nabla$ size	ISO-Code	
for better chip control 15.9 - 26	 W30 W57 W30 PKD CBN .32. .39.		
	W30 04120.3232 W30 04120.3977	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77	
for higher cutting speed 15.9 - 26	W57 04140.023210 W30 04120.0238 W30 04990.0257 W30 04990.0255	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-G12 CK38 TOGX 06T102TN CBN57 TOGX 06T102FN PKD55	
for better surface finish 15.9 - 26	W30 04140.0232 W30 04060.036110 W30 04200.0321 W30 04990.0255	TOGX 06T102EN-14 CK32 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOGX 06T102FN PKD55	



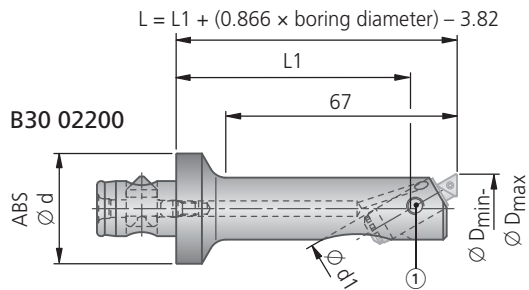
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

# KOMET® Micro-adjustable Head FZ

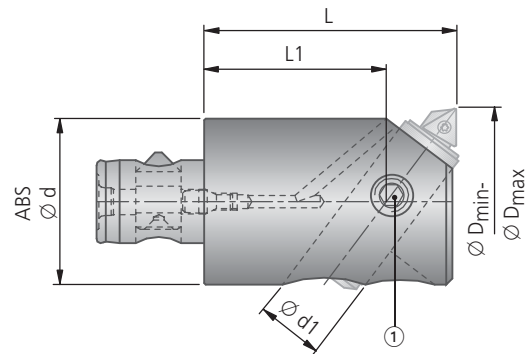
Ø 20 – 175 mm

## Boring Bar with ABS® Connection

(ABS-FZ)



$L = L1 + (0.375 \times \text{boring dia.})$   
 for B30 01220:  $L = L1 + (0.866 \times \text{boring dia.}) - 3.92$



Drilling range <sup>1)</sup>			Boring bar					Assembly parts		Fine Boring Cartridge		
① Ø D min	② Ø D max	③ Ø D max	Order No. Description	ABS Ø d	Ø d1	L1	kg	Clamping screw ① DIN 913 Order No. Description	Hexagonal key Order No. Description	complete (Housing + Boring tool) Order No. Description	Housing Order No. Description	Boring tool Order No. Description
20	22	26	<b>B30 02200</b> ABS32/20-FZ10-5	32	10	68	0.19	55051 05005 M5x5	18591 10025 SW 2.5	M30 04111 FZ10-20-5	M30 04011 FZ10-20-5	M30 54011 U10-Z5-803K
26	30	33	<b>B30 01220</b> ABS25-FZ10-5	25	10	39.7	0.13	55051 05005 M5x5	18591 10025 SW 2.5	M30 04121 FZ10-31-5	M30 00031 FZ10-31-1	M30 54021 U10-Z5-803
28	34.4	38	<b>B30 01010</b> ABS25-FZ10-3	25	10	40	0.20	55051 06008 M6x8	18591 10030 SW 3	M30 02231 FZ10-28-3	M30 02031 FZ10-28-3	M30 52021 U10-Z3-803
32	38.4	44								M30 02241 FZ10-32-3	M30 02041 FZ10-32-3	
36	44	48	<b>B30 02010</b> ABS32-FZ12-3	32	12	47	0.36	55051 08010 M8x10	18591 10040 SW 4	M30 02251 FZ12-36-3	M30 02051 FZ12-36-3	M30 52031 U12-Z3-803
40	48	55								M30 02261 FZ12-40-3	M30 02061 FZ12-40-3	
45	54.6	60	<b>B30 03010</b> ABS40-FZ16-3	40	16	44	0.55	55051 10012 M10x12	18591 10050 SW 5	M30 02271 FZ16-45-3	M30 02071 FZ16-45-3	M30 52041 U16-Z3-804
50	59.6	68								M30 02281 FZ16-50-3	M30 02081 FZ16-50-3	
56	68	78	<b>B30 04010</b> ABS50-FZ20-3	50	20	49.5	1.02	55051 12016 M12x16	18591 10060 SW 6	M30 02291 FZ20-56-3	M30 02091 FZ20-56-3	M30 52051 U20-Z3-804
64	76	90								M30 02301 FZ20-64-3	M30 02101 FZ20-64-3	
72	88	100	<b>B30 05010</b> ABS63-FZ25-3	63	25	63.5	2.06	55051 16020 M16x20	18591 10080 SW 8	M30 02311 FZ25-72-3	M30 02111 FZ25-72-3	M30 52061 U25-Z3-805
80	96	114								M30 02321 FZ25-80-3	M30 02121 FZ25-80-3	
90	114	126	<b>B30 06010</b> ABS80-FZ32-3	80	32	77	4.06	55051 20020 M20x20	18591 10100 SW 10	M30 02331 FZ32-90-3	M30 02131 FZ32-90-3	M30 52071 U32-Z3-805
100	124	140								M30 02341 FZ32-100-3	M30 02141 FZ32-100-3	
110	134	150	<b>B30 07010</b> ABS100-FZ32-3	100	32	84.5	7.65	55051 20025 M20x25	18591 10100 SW 10	M30 02351 FZ32-110-3	M30 02151 FZ32-110-3	M30 52071 U32-Z3-805
125	149	175								M30 02361 FZ32-125-3	M30 02161 FZ32-125-3	

<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

- fast, accurate setting of tool simply by using adjusting spindle
- central coolant supply onto cutters
- maximum setting accuracy by adjusting tool while clamped

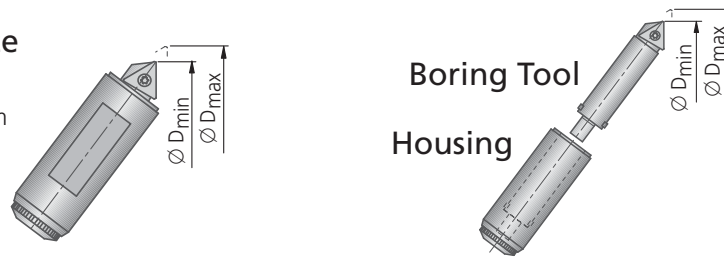


L / D  > 3.5xD	through hole 	blind hole 	angled 	cross bore 	reverse machining 	HRC > 52 through hole 	HRC > 52 blind hole 	vibration dampening 
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● very good ○ good ○ possible ✕ not possible

### Fine Boring Cartridge Complete

- Fine boring cartridge with reduced reverse play < 0.03 mm and radial play < 0.04 mm
- The smallest adjustment increment is 0.002 mm in the Ø above vernier



Order No. ▽ Size	Basic recommendation		Assembly parts	Accessories	
	Insert W30 W57 W57 W30 -12 -14 CBN	for workpiece material P M K N S H		Clamping screw  Order No. Description	Screwdriver  Order No. Description
W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40		N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	L05 01020 R2/N1
W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40		N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP	L05 01020 R2/N1
W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40		N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP	L05 01030 R2a/N1
W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40		N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP	L05 01040 N3
W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40		N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP	L05 01050 R4/N4
W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40		N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP	L05 01060 ZV25
W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40		N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP	L05 01070 R5/N5
W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40		N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP	L05 01070 R5/N5

Supply boring bar includes: Boring bar complete with clamping screw and hexagonal key, but does not include cartridge.

Supply fine boring cartridge complete includes: Fine boring cartridge with clamping screw.

Supply housing includes: Housing without boring tool.

Supply boring tool includes: with clamping screw.

Please order inserts and accessories separately.

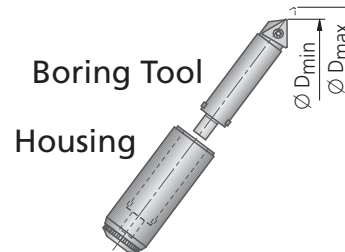
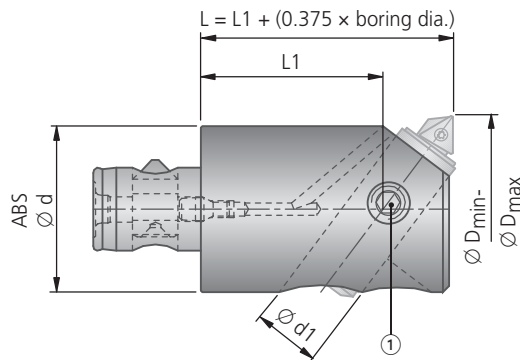
Guideline values for fine boring and alternative inserts: pages 332.



## Boring Bar with ABS® Connection

(ABS-FZ)

- **N** for machining aluminium
- Insert tilt of +5° over cutting edge
- The smallest adjustment increment is 0.002 mm in the Ø above vernier











Drilling range <sup>1)</sup>			Boring bar					Assembly parts		Fine Boring Cartridge	
① Ø D min	② Ø D max	③ Ø D max	Order No. Description	ABS Ø d	Ø d1	L1	kg	Clamping screw ①  DIN 913 Order No. Description	Hexagonal key  Order No. Description	Housing  Order No. Description	Boring tool  Order No. Description
28	34.4	38	B30 01010 ABS25-FZ10-3	25	10	40	0.20	55051 06008 M6x8	18591 10030 SW 3	M30 02031 FZ10-28-3	M30 52421 U10-Z3-T06
32	38.4	44								M30 02041 FZ10-32-3	
36	44	48	B30 02010 ABS32-FZ12-3	32	12	47	0.36	55051 08010 M8x10	18591 10040 SW 4	M30 02051 FZ12-36-3	M30 52431 U12-Z3-T06
40	48	55								M30 02061 FZ12-40-3	
45	54.6	60	B30 03010 ABS40-FZ16-3	40	16	44	0.55	55051 10012 M10x12	18591 10050 SW 5	M30 02071 FZ16-45-3	M30 52441 U16-Z3-T09
50	59.6	68								M30 02081 FZ16-50-3	





<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge  
 Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

- fast, accurate setting of tool simply by using adjusting spindle
- central coolant supply onto cutters
- maximum setting accuracy by adjusting tool while clamped



L / D  > 3.5×D	through hole 	blind hole 	angled 	cross bore 	reverse machining 	HRC > 52 through hole 	HRC > 52 blind hole 	vibration dampening 
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● very good ● good ○ possible ✕ not possible

Order No. ▽ Size	Basic recommendation		Assembly parts	Accessories	
	Insert 	for workpiece material 		Clamping screw 	Screwdriver 
W58 03120.0423	TPGX 060104FN-12 K10	●	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	L05 01020 R2/N1
W58 03120.0423	TPGX 060104FN-12 K10	●	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	L05 01030 R2a/N1
W58 13120.0423	TPGX 090204FN-12 K10	●	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	L05 01040 N3

Supply boring bar includes: Boring bar complete with clamping screw and hexagonal key, but does not include cartridge.






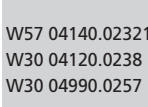



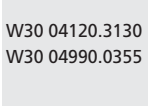




Supply housing includes: Housing without boring tool.

Supply boring tool includes: with clamping screw.

Please order inserts and accessories separately.

## Technical Notes

Guideline values for fine boring				Material example, material code/DIN	v <sub>c</sub> (m/min)	f (mm/rev)		
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed 3.5×D		
				Cutting speed v <sub>c</sub> (m/min)	Ø 20 – 48	Ø 45 – 76	Ø 72 – 175	
P	1.0	≤500	non-alloy steels		St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.08	0.12	0.20
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.10	0.15	0.25
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.08	0.10	0.20
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.06	0.10	0.15
	4.1		HSS		120	0.06	0.08	0.12
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.06	0.08	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.06	0.08	0.10
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.08	0.10	0.15
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.06	0.10	0.15
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.06	0.10	0.15
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.15	0.20	0.30
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.15	0.20	0.30
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.10	0.15	0.25
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.10	0.15	0.25
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.10	0.15	0.25
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.10	0.15	0.25
N	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.10	0.15	0.25
	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.10	0.15	0.20
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	300	0.10	0.15	0.20
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.08	0.12	0.15
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.10	0.15	0.20
	14.0	100	cast alum. alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.10	0.15	0.20
H	15.0	1400	hardened steels < 45 HRC		120	0.08	0.08	0.10
	1800		hardened steels > 45 HRC		90	0.06	0.08	0.10

Alternative Inserts					
ØD	Insert	for workpiece material	P M K N S H		
				Order No. ▽ size	ISO-Code
for better chip control					
				20 – 48	W30 04120.3232 TOHX 06T102EL-US12 CK32 W57 04140.023210 TOGX 06T102EN-14 CK3210
	45 – 76	W30 14120.3232 TOHX 090202EL-US12 CK32 W57 14140.023210 TOGX 090202EN-14 CK3210			
	72 – 149	W30 26120.3232 TOHX 140302EL-US12 CK32 W57 26140.023210 TOGX 140302EN-14 CK3210			
	for higher cutting speed				
					20 – 48
45 – 76					W57 14140.043210 TOGX 090204EN-14 CK3210 W30 14120.0238 TOHX 090202EL-G12 CK38 W30 14990.0457 TOGX 090204TN CBN57
72 – 149		W57 26140.043210 TOGX 140304EN-14 CK3210 W30 26120.0238 TOHX 140302EL-G12 CK38 W30 26990.0457 TOGX 140304TN CBN57	 only GG25		
for better surface finish					
					20 – 48
	45 – 76	W30 14120.3130 TOHX 090202EL-UF12 CK30 W30 14990.0455 TOGX 090204FN PKD55			
	72 – 149	W30 26120.3130 TOHX 140302EL-UF12 CK30 W30 14990.0455 TOGX 140304FN PKD55			

Guideline values for fine boring				Material example, material code/DIN	v <sub>C</sub> Cutting speed v <sub>C</sub> (m/min)	f (mm/rev)	
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed 3.5xD	
					Ø 28 – 48	Ø 45 – 68	
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	-	-	
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	-	-	
	2.1	<500	lead alloys	95MnPb28 / 1.0718	-	-	
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	-	-	
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	-	-	
4.1			HSS				
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	-	-	
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	-	-	
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	-	-	
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	-	-	
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8Cr5-38-18 / 1.4862	-	-	
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	-	-	
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	-	-	
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	-	-	
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	-	-	
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	-	-	
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	-	-	
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	-	-	
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	270	0.1 0.15	
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	250	0.10 0.15	
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	400	0.08 0.12	
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.10 0.15	
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.10 0.15	
H	15.0	1400	hardened steels < 45 HRC		-	-	
	16.0	1800	hardened steels > 45 HRC		-	-	

ØD	Alternative Inserts		for workpiece material
	Order No. ▽▽ size	ISO-Code	
20 – 48	Insert PKD	-P15	P M K N S H
	W32 03150.0421	TPHX 060104FL-P15 K10	
45 – 59.6	W32 13150.0421	TPHX 090204FL-P15 K10	
	W32 03990.0455 W32 03150.0450	TPHB 060104FN PKD55 TPHX 060104FL-P15 BK50	
45 – 59.6	W32 13990.0455	TPHB 090204FN PKD55	
	W32 03990.0455 W32 03150.0450	TPHB 060104FN PKD55 TPHX 060104FL-P15 BK50	
45 – 59.6	W32 13990.0455	TPHB 090204FN PKD55	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!



# KOMET® Micro-adjustable Head FF

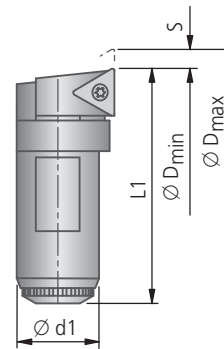
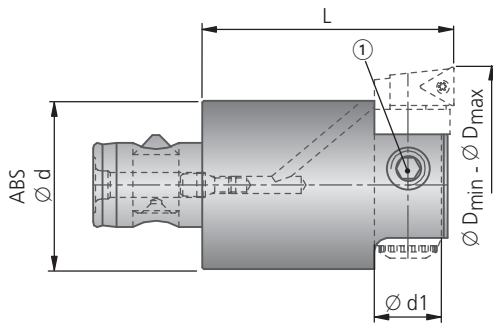
## Boring Bar with ABS® Connection

(ABS-FF)

Ø 29.5 – 199 mm

## Fine Boring Cartridge

- The smallest adjustment increment is 0.002 mm in the Ø above vernier



Ø D min - max	Boring bar					Assembly parts		Fine Boring Cartridge				
	Order No. Description	ABS Ø d	Ø d1	L	kg	Clamping screw ① DIN 913 Order No. Description	Hexagonal key Order No. Description	Order No. Description	Ø d1	L1	S	kg
29.5 - 36	B30 11010 ABS25-FF-29.5	25	10	50	0.17	55051 06006 M6x6	18591 10030 SW 3	M30 20011 FF10-30	10	28.5	3.5	0.06
35.5 - 42	B30 11020 ABS25-FF-35.5	25	10	50	0.18							
39 - 45	B30 12010 ABS32-FF-39	32	12	60	0.35	55051 08008 M8x8	18591 10040 SW 4	M30 20021 FF12-39	12	37.5	3.5	0.03
44 - 50	B30 12020 ABS32-FF-44	32	12	60	0.35	55051 08010 M8x10						
47 - 57	B30 13010 ABS40-FF-47	40	16	60	0.52	55051 10010 M10x10	18591 10050 SW 5	M30 20031 FF16-47	16	45	5	0.06
56 - 66	B30 13020 ABS40-FF-56	40	16	60	0.53							
58 - 71	B30 14010 ABS50-FF-58	50	20	70	0.97	55051 12012 M12x12	18591 10060 SW 6	M30 20041 FF20-58	20	56	7	0.12
70 - 83	B30 14020 ABS50-FF-70	50	20	70	1.00							
79 - 94	B30 15010 ABS63-FF-79	63	25	70	1.58	55051 16016 M16x16	18591 10080 SW 8	M30 20051 FF25-79	25	77.5	8	0.27
93 - 108	B30 15020 ABS63-FF-93	63	25	70	1.61							
100 - 121	B30 16010 ABS80-FF-100	80	32	90	3.33	55051 20020 M20x20	18591 10100 SW 10	M30 20061 FF32-100	32	97	11	0.55
120 - 141	B30 16020 ABS80-FF-120	80	32	90	3.37							
138 - 159	B30 17010 ABS100-FF-138	100	32	90	6.56	55051 20030 M20x30	18591 10100 SW 10	M30 20071 FF32-138	32	131	11	0.76
158 - 179	B30 17020 ABS100-FF-158	100	32	90	6.80	55051 20020 M20x20						
178 - 199	B30 17030 ABS100-FF-178	100	32	90	6.61	55051 20030 M20x30						

- radial mounting of micro-adjustable cartridge.
- adjustment of cartridge while clamped, providing optimum setting accuracy.
- central coolant supply onto cutting edge.



L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 52 through hole	HRC > 52 blind hole	vibration dampening
> 3.5xD								
	●	●	○	○	✗	●	●	●

● very good ○ good ○ possible ✗ not possible

Basic recommendation		Assembly parts	Accessories
Order No. ▽▽ Size	Insert	Clamping screw  Order No. Description	Screwdriver  Order No. Description
	for workpiece material		
	ISO-Code		
W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40	 N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP
W57 04140.028430 W30 04060.036110 W57 04120.0223 W30 04990.0240	TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40	 N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP
W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40	 N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP
W57 14140.048430 W30 14060.046110 W57 14120.0423 W30 14990.0440	TOGX 090204EN-14 BK8430 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40	 N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40	 N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40	 N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
W57 26140.048430 W30 26060.046110 W57 26120.0423 W30 26990.0440	TOGX 140304EN-14 BK8430 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40	 N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP

Supply boring bar includes: Boring bar complete with clamping screw and hexagonal key, but does not include cartridge.  
Supply fine boring cartridge includes: Fine boring cartridge with clamping screw.  
Please order inserts and accessories separately.

Technical Notes

1



2



3



Guideline values for fine boring					v <sub>C</sub>	f (mm/rev)		
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN		Cutting speed v <sub>C</sub> (m/min)	max. feed 3.5×D	
					Ø 29.5 – 50		Ø 47 – 83	Ø 79 – 199
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10	0.15
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.08	0.12	0.20
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.10	0.15	0.25
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.08	0.10	0.20
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.06	0.10	0.15
	4.1		HSS		120	0.06	0.08	0.12
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.06	0.08	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.06	0.08	0.10
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.08	0.10	0.15
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.06	0.10	0.15
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.06	0.10	0.15
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.15	0.20	0.30
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.15	0.20	0.30
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.10	0.15	0.25
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.10	0.15	0.25
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.10	0.15	0.25
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.10	0.15	0.25
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.10	0.15	0.25
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.10	0.15	0.20
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	300	0.10	0.15	0.20
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.08	0.12	0.15
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-ALMg5 / 3.3561, G-ALSi9Mg / 3.2373	300	0.10	0.15	0.20
	14.0	100	cast alum.alloy: Si-content >10%	G-ALSi10Mg / 3.2381	250	0.10	0.15	0.20
H	15.0	1400	hardened steels < 45 HRC		120	0.08	0.08	0.10
	16.0	1800	hardened steels > 45 HRC		90	0.06	0.08	0.10



Alternative Inserts					
ØD	Insert		for workpiece material		
	Order No. ▽ size	ISO-Code			
for better chip control	29.5 – 50	W30 04120.3232	TOHX 06T102EL-US12 CK32	●●	
		W57 04140.023210	TOGX 06T102EN-14 CK3210	●●	
	47 – 83	W30 14120.3232	TOHX 090202EL-US12 CK32	●●	
		W57 14140.023210	TOGX 090202EN-14 CK3210	●●	
	79 – 199	W30 26120.3232	TOHX 140302EL-US12 CK32	●●	
		W57 26140.023210	TOGX 140302EN-14 CK3210	●●	
	for higher cutting speed	29.5 – 50	W57 04140.023210	TOGX 06T102EN-14 CK3210	●●
			W30 04120.0238	TOHX 06T102EL-G12 CK38	●●
			W30 04990.0257	TOGX 06T102TN CBN57	●●
47 – 83		W57 14140.043210	TOGX 090204EN-14 CK3210	●●	
		W30 14120.0238	TOHX 090202EL-G12 CK38	●●	
		W30 14990.0457	TOGX 090204TN CBN57	●● only GG25	
79 – 199		W57 26140.043210	TOGX 140304EN-14 CK3210	●●	
		W30 26120.0238	TOHX 140302EL-G12 CK38	●●	
		W30 26990.0457	TOGX 140304TN CBN57	●● only GG25	
for better surface finish	29.5 – 50	W30 04120.3130	TOHX 06T102EL-UF12 CK30	●●	
		W30 04990.0355	TOGX 06T103FN PKD55	●●	
	47 – 83	W30 14120.3130	TOHX 090202EL-UF12 CK30	●●	
		W30 14990.0455	TOGX 090204FN PKD55	●●	
	79 – 199	W30 26120.3130	TOHX 140302EL-UF12 CK30	●●	
		W30 14990.0455	TOGX 140304FN PKD55	●●	



# KOMET MicroKom® M03Speed

## Micro-adjustable Head for High-precision Fine Adjustment with Balancing

1



The demands on fine boring tools are primarily increasing improvements to surface finishes and at the same time higher cutting speeds for short machining times.

2



Fine machining is a demanding bore machining operation. With MicroKom® M03Speed micro-adjustable heads KOMET® has provided a tried and tested tool system which, with its high precision adjustment mechanism, from the rough adjustment for the rotating clamping holder to the graduation collar on the external diameter, allows fine adjustment steps of up to 0.002 millimeters in the diameter.

3



The fine adjustment for wear compensation or after measurement is then carried out extremely accurately directly on the machine spindle. There is no need for clamping during and after this fine adjustment, which means that the dimension can be perfectly maintained.

Balancing: when the insert position is changed, there is an automatic balancing adjustment by means of a moveable balancing weight which lies diametrically opposite. This is a balancing operation on the adjustment plane for the insert.

This is based on six tool bodies to cover diameters from 24.8 to 206 millimeters. Maximum changeover accuracy is guaranteed with ABS® connections (25, 32, 40, 50 and 63).

Diameters from 38 to 206 are provided for by means of three adaptable and replaceable bridges.

Just like the whole production range, the bridges – which are in a lightweight material with a hard surface coating – allow high machining speeds to be achieved.

Flexibility with replaceable insert holders: the replaceable insert holders are special feature of the new product range.

The user has the facility to carry out forward and reverse machining with one tool with different approach angles. Using a specially designed connection, the changeover is fast, uncomplicated and safe.



### Construction

- 1 Insert holder with KOMET® geometry
- 2 Holder
- 3 Connection insert holder – holder
- 4 Holding screw insert holder – holder
- 5 Holding screw holder – micro-adjustable head
- 6 Adjusting screw for coarse adjustment of insert holder
- 7 Slide with weight compensation
- 8 Internal coolant directed onto insert
- 9 All scales have matt chrome finish
- 10 High resolution gives easy read-off **without** vernier
- 11 ABS® connection for maximum changeover accuracy

BENEFITS for you:

- Unique: our micro-adjustable head with automatic balancing in the slide
- Micro-adjustment steps per graduation of 0.002 mm in the diameter
- Geometrically the same as previous M03Speed design – and therefore compatible
- Micro-adjustment without the need for clamping

The modular tool range

- For diameters over 206 millimeters KOMET® offers bridging tools.
- In a modular design, these consist of standard elements and elements adjusted to length to customer specification.

KOMET MicroKom® M03Speed Page

Micro-adjustable head with ABS® connection

Micro-adjustable head and insert holder for	
Ø 24.8 - 39 mm	340 – 341
Ø 38.0 - 103 mm	342 – 343
Micro-adjustable head / replaceable bridge and insert holder for	
Ø 38.0 - 103 mm	344 – 345
Ø 100 - 206 mm	346 – 347

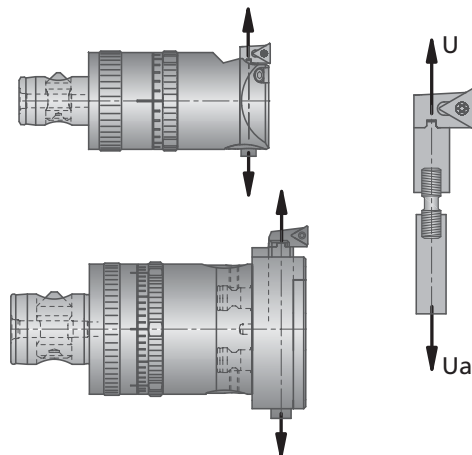
Technical notes 348

Guideline values for fine boring  
Alternative inserts

Set in case 349



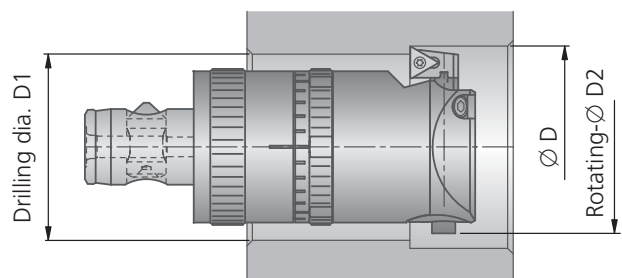
Dynamic weight balance on the slide guarantees optimum balance in any position



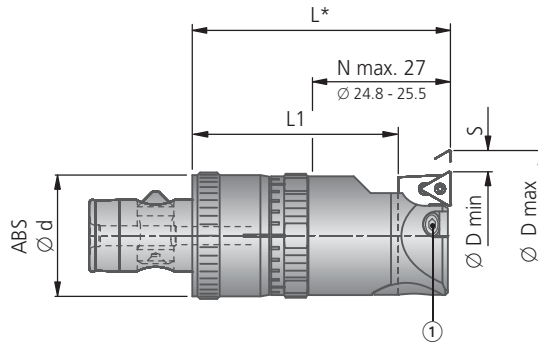
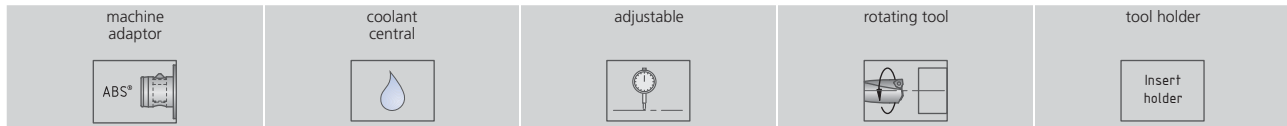
Calculation for reverse machining

- D1 = Drilling dia.
- D2 = Rotating dia.
- D = Machining dia. generally

$$D1 = \frac{D2 + D}{2} + 0.5$$



## Micro-adjustable Head with ABS® Connection



\* dimension L see insert holder table on following page.

1) **Note:** from 25.5 mm diameters, the effective length N corresponds to tool length L.

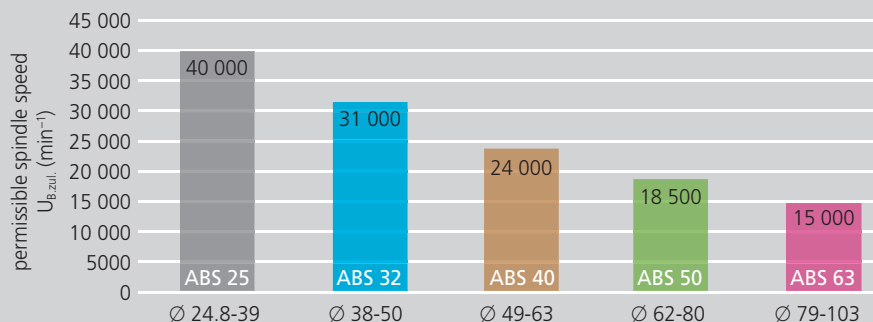
Ø D <sup>1)</sup> min - max	Rotating diameter Ø D2	Order No.	ABS Ø d	L1	Coarse adjustment path S	Fine adjustment in diameter	permissible spindle speed min <sup>-1</sup>	kg	Assembly parts
									Clamping screw ① for holder  Order No. Description
24.8 - 33	24.5	M03 00115	25	39.9	4.5	0.25	40 000	0.15	55051 04504 M4x0.5x4
29 - 39	26	M03 00515	25	39.9	5.0	0.40	40 000	0.17	55051 04504 M4x0.5x4

### Supply includes:

Micro-adjustable drilling head with clamping screw ①. Please order insert holder and insert separately.

### Maximum spindle speed

when using different ABS® sizes  
Ø 24.8 - 103.0 mm  
(MicroKom® M03Speed  
without replaceable bridges)

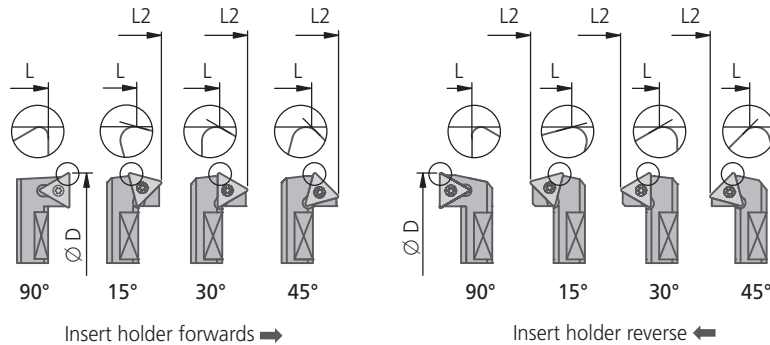
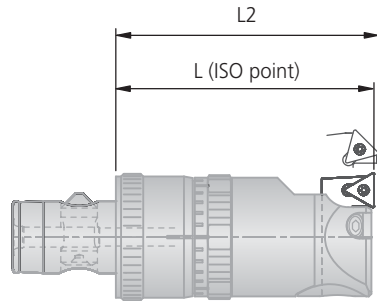


> 3.5 × D

# KOMET MicroKom® M03Speed Insert Holder

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5×D								
	●	●	○	○	●	●	●	●

● very good ○ good ○ possible ✕ not possible



Micro-adjustable head	Insert holder forwards →						Basic recommendation		Assembly parts	Accessories	
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material			
M03 00115	24.8 – 33	M03 10011	90°	50	–	0.004	W57 04140.026425	TOGX 06T102EN-14 BK6425			
		M03 11110	15°	44.4	50.3	0.004	W30 04060.036110	TOHX 06T103EL-G06 BK6110			
		M03 11210	30°	45.4	50.7	0.004	W57 04120.0223	TOGX 06T102FN-12 K10			
		M03 11310	45°	46.4	50.7	0.004	W30 04990.0240	TOGX 06T102TN CBN40			
M03 00515	29 – 39	M03 10021	90°	50	–	0.005	W57 04140.026425	TOGX 06T102EN-14 BK6425			
		M03 11100	15°	44.4	50.3	0.005	W30 04060.036110	TOHX 06T103EL-G06 BK6110			
		M03 11200	30°	45.4	50.7	0.005	W57 04120.0223	TOGX 06T102FN-12 K10			
		M03 11300	45°	46.4	50.7	0.005	W30 04990.0240	TOGX 06T102TN CBN40			

Micro-adjustable head	Insert holder reverse ←						Basic recommendation		Assembly parts	Accessories	
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material			
M03 00115	24.8 – 33	M03 12010	90°	35.8	–	0.004	W57 04140.026425	TOGX 06T102EN-14 BK6425			
		M03 12110	15°	41.4	35.45	0.004	W30 04420.0362	TOHX 06T103ER-G12 BK62			
		M03 12210	30°	40.4	35.1	0.004	W57 04120.0223	TOGX 06T102FN-12 K10			
		M03 12310	45°	39.4	35.1	0.004	W30 04990.0240	TOGX 06T102TN CBN40			
M03 00515	29 – 39	M03 12000	90°	35.8	–	0.005	W57 04140.026425	TOGX 06T102EN-14 BK6425			
		M03 12100	15°	41.4	35.4	0.005	W30 04420.0362	TOHX 06T103ER-G12 BK62			
		M03 12200	30°	40.4	35.1	0.005	W57 04120.0223	TOGX 06T102FN-12 K10			
		M03 12300	45°	39.4	35.1	0.005	W30 04990.0240	TOGX 06T102TN CBN40			

**Supply includes:**

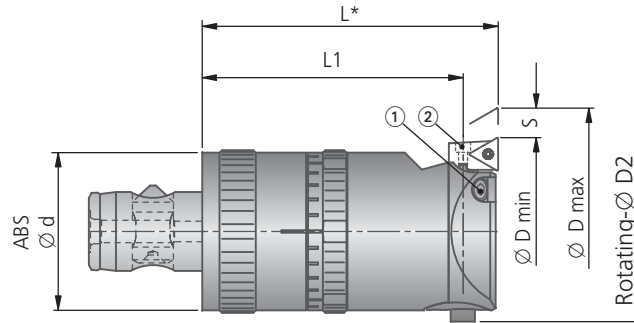
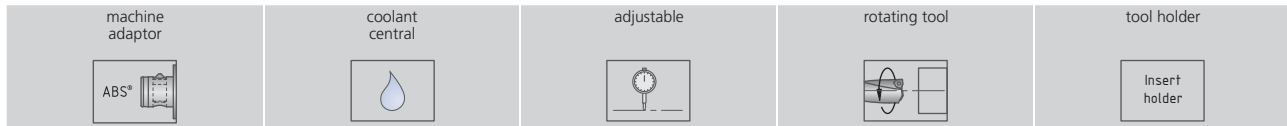
Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: page 348.

# KOMET MicroKom® M03Speed

## Micro-adjustable Head with ABS® Connection

Ø 38 – 103 mm



\* dimension L see insert holder table on following page.

Ø D min - max	Rotating diameter Ø D2	Order No.	ABS Ø d	L1	Coarse adjustment path S	Fine adjustment in diameter	permissible spindle speed min <sup>-1</sup>	kg	Assembly parts	
									Clamping screw ① for holder	Holding screw ②
								Order No. Description	Order No. Description	
38 - 42	33	M03 01025	32	52.9	6.0	0.40	31 000	0.35	55051 04504 M4x0.5x4	N00 56211 S/M3.5x7.3-10IP
42 - 50	Ø D - 8									
49 - 63	41	M03 01535	40	60	7.0	0.40	24 000	0.63	55051 05506 M5x0.5x6	N00 56211 S/M3.5x7.3-10IP
62 - 80	51	M03 02045	50	65	9.0	0.60	18 500	1.12	55051 06008 M6x8	N00 56401 S/M5x9.4-20IP
79 - 95	65	M03 02555	63	66	12.0	0.60	15 000	1.91		
95 - 103	Ø D - 30									

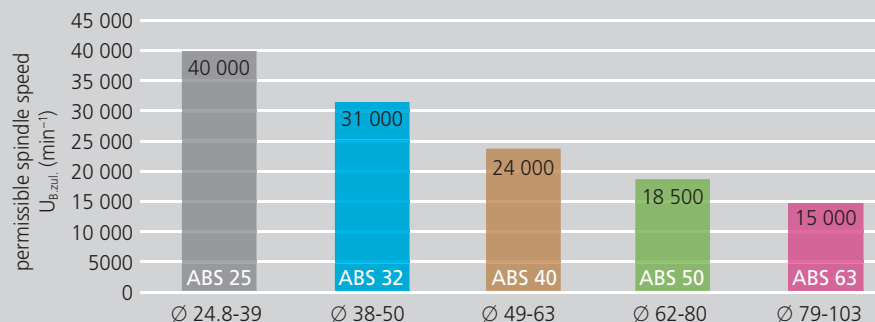
### Supply includes:

Micro-adjustable drilling head with clamping screw ① and holder with holding screw ②.

Please order insert holder and insert separately.

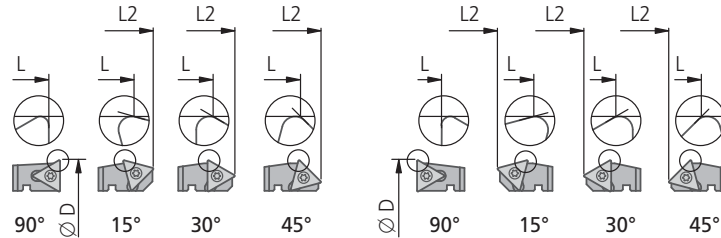
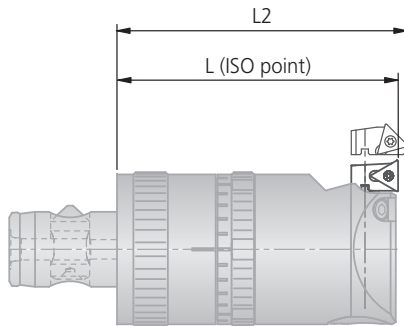
### Maximum spindle speed

when using different ABS® sizes  
Ø 24.8 - 103 mm  
(MicroKom® M03Speed  
without replaceable bridges)



L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5xD								
	●	●	●	●	●	●	●	●

● very good ● good ○ possible ✕ not possible



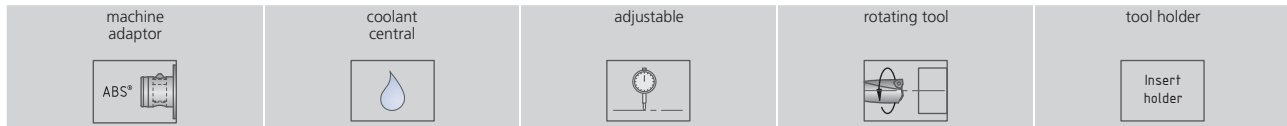
Insert holder forwards →

Insert holder reverse ←

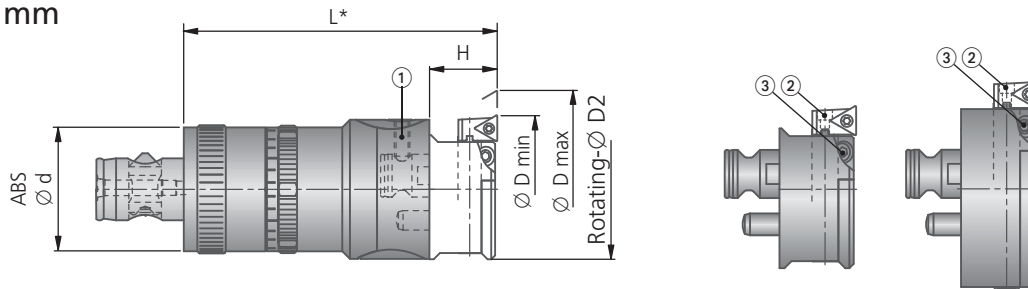
Micro-adjustable head	Insert holder forwards →						Basic recommendation			Assembly parts	Accessories
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material	Clamping screw	Screwdriver	
							Order No. ∇∇ size	ISO-Code	P M K N S H	Order No. Description	Order No. Description
M03 01025 ABS 32	38 – 50	M03 10033	90°	60	–	0.002	W57 04140.026425	TOGX 06T102EN-14 BK6425		N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
		M03 11120	15°	55.5	61.7	0.002	W30 04060.036110	TOHX 06T103EL-G06 BK6110			
		M03 11220	30°	56.5	62	0.002	W57 04120.0223	TOGX 06T102FN-12 K10			
		M03 11320	45°	57.5	62	0.002	W30 04990.0240	TOGX 06T102TN CBN40			
M03 01535 ABS 40	49 – 63	M03 10043	90°	70	–	0.005					
		M03 11130	15°	63.5	71.9	0.005					
		M03 11230	30°	64.5	72	0.005					
		M03 11330	45°	66.8	72.9	0.005					
M03 02045 ABS 50	62 – 80	M03 10043	90°	75	–	0.005	W57 14140.046425	TOGX 090204EN-14 BK6425		N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP
		M03 11130	15°	68.5	76.9	0.005	W30 14060.046110	TOHX 090204EL-G06 BK6110			
		M03 11230	30°	69.5	77	0.005	W57 14120.0423	TOGX 090204FN-12 K10			
		M03 11330	45°	71.8	77.9	0.005	W30 14990.0440	TOGX 090204TN CBN40			
M03 02555 ABS 63	79 – 103	M03 10063	90°	80	–	0.009					
		M03 11150	15°	71	79.7	0.009					
		M03 11250	30°	73	80.7	0.009					
		M03 11350	45°	75	81.3	0.009					
Micro-adjustable head	Insert holder reverse ←						Basic recommendation			Assembly parts	Accessories
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material	Clamping screw	Screwdriver	
							Order No. ∇∇ size	ISO-Code	P M K N S H	Order No. Description	Order No. Description
M03 01025 ABS 32	38 – 50	M03 12020	90°	45.8	–	0.002	W57 04140.026425	TOGX 06T102EN-14 BK6425		N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
		M03 12120	15°	50.4	44.2	0.002	W30 04420.0362	TOHX 06T103ER-G12 BK62			
		M03 12220	30°	49.4	43.9	0.002	W57 04120.0223	TOGX 06T102FN-12 K10			
		M03 12320	45°	48.4	43.9	0.002	W30 04990.0240	TOGX 06T102TN CBN40			
M03 01535 ABS 40	49 – 63	M03 12030	90°	50	–	0.005					
		M03 12130	15°	56.5	48.1	0.005					
		M03 12230	30°	55.5	48	0.005					
		M03 12330	45°	53	46.9	0.005					
M03 02045 ABS 50	62 – 80	M03 12030	90°	55	–	0.005	W57 14140.046425	TOGX 090204EN-14 BK6425		N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP
		M03 12130	15°	61.5	53.1	0.005	W30 14420.0462	TOHX 090204ER-G12 BK62			
		M03 12230	30°	60.5	53	0.005	W57 14120.0423	TOGX 090204FN-12 K10			
		M03 12330	45°	58	51.9	0.005	W30 14990.0440	TOGX 090204TN CBN40			
M03 02555 ABS 63	79 – 103	M03 12050	90°	52	–	0.009					
		M03 12150	15°	61	52.6	0.009					
		M03 12250	30°	59	51.5	0.009					
		M03 12350	45°	57	50.9	0.009					

Supply includes: Insert holder with assembly parts. Please order inserts and accessories separately.  
Guideline values for fine boring and alternative inserts: page 348.





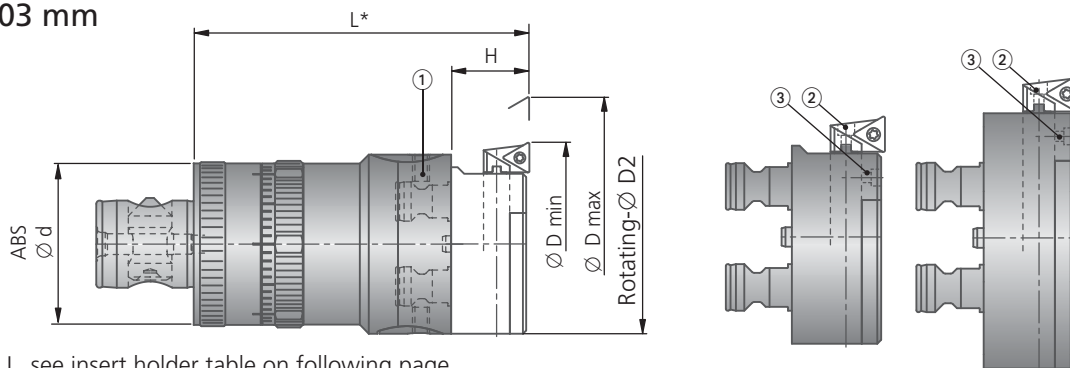
### Ø 38 – 63 mm



\* dimension L see insert holder table on following page.

Replaceable bridge						Assembly parts		Micro-adjustable head			Assembly parts
Drilling diameter Ø D min - max	Rotating diameter Ø D2	Order No.	H	permissible spindle speed min <sup>-1</sup>	kg	Location screw ② for insert holder	Clamping screw ③ for holder	Order No.	ABS Ø d	kg	Clamping screw ① for replaceable bridge
						Order No. Description	Order No. Description				Order No. Description
38 - 51	Ø D – 3.2	M03 20180	17.5	31 000	0.06	N00 56211	55051 04008	M03 20170	32	0.35	M03 20090.15
50 - 63	Ø D – 3.5	M03 20190	17.5	24 000	0.08	S/M3.5x7.3-10IP	M4x8 (1.5 Nm)				M8x10

### Ø 62 – 103 mm



\* dimension L see insert holder table on following page.

Replaceable bridge						Assembly parts		Micro-adjustable head			Assembly parts
Ø D min - max	Rotating diameter Ø D2	Order No.	H	permissible spindle speed min <sup>-1</sup>	kg	Location screw ② for insert holder	Clamping screw ③ for holder	Order No.	ABS Ø d	kg	Clamping screw ① for replaceable bridge
						Order No. Description	Order No. Description				Order No. Description
62 - 83	55	M03 20150	24	18 500	0.20	N00 56211	55051 04008	M03 20140	50	1.3	M03 20090.15
82 - 103	71	M03 20160	24	15 000	0.24	S/M3.5x7.3-10IP	M4x8 (1.5 Nm)				M8x10

Supply includes micro-adjustable drilling head:

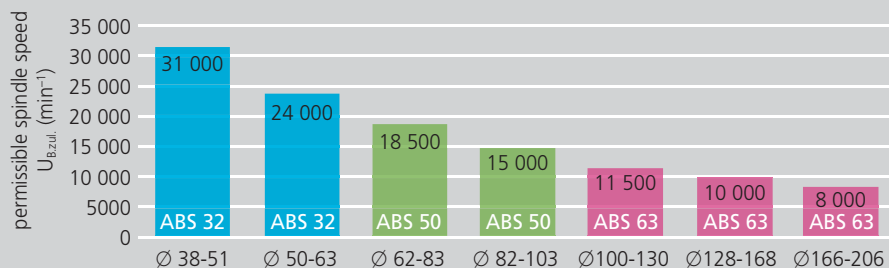
Micro-adjustable drilling head with clamping screw 1. Please order replaceable bridge separately.

Supply includes replaceable bridge:

Replaceable bridge with holding screw 2 and clamping screw 3. Please order insert holder separately.

#### Maximum spindle speed

when using different ABS® sizes  
Ø 24.8 - 103 mm  
(MicroKom® M03Speed  
with replaceable bridges)



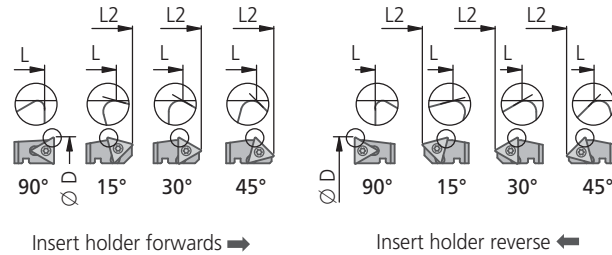
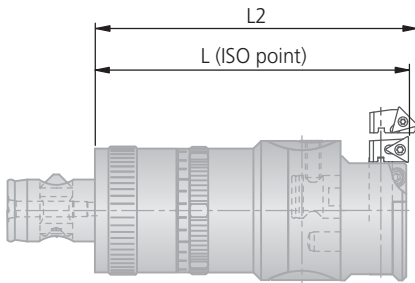


> 3.5 × D

# KOMET MicroKom® M03Speed Insert Holder

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5×D								
	●	●	○	○	●	●	●	●

● very good ○ good ○ possible ✕ not possible



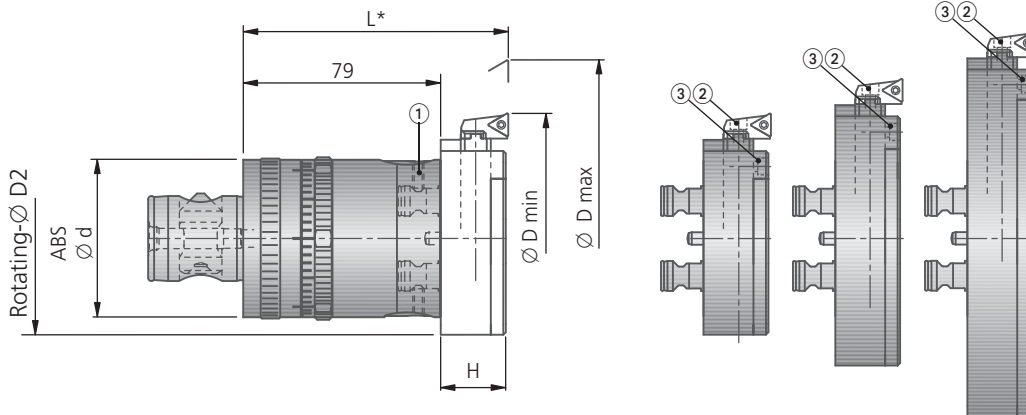
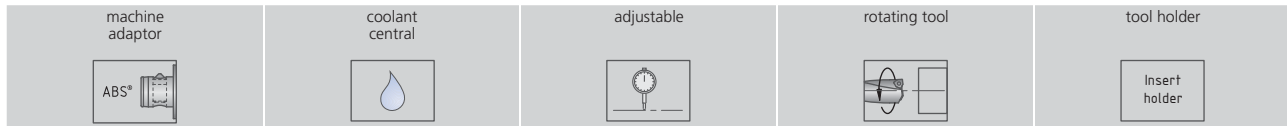
Micro-adjustable head	Insert holder forwards →						Basic recommendation			Assembly parts	Accessories	
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material	Clamping screw	Screwdriver		
							Order No. ∇∇ size	ISO-Code		Order No. Description	Order No. Description	
M03 20170 ABS 32	38 – 63	M03 10033	90°	81	–	0.002	W57 04140.026425	TOGX 06T102EN-14 BK6425			N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
		M03 11120	15°	76.5	82.7	0.002	W30 04060.036110	TOHX 06T103EL-G06 BK6110				
		M03 11220	30°	77.5	83	0.002	W57 04120.0223	TOGX 06T102FN-12 K10				
		M03 11320	45°	78.5	83	0.002	W30 04990.0240	TOGX 06T102TN CBN40				
M03 20140 ABS 50	62 – 103	M03 10043	90°	103	–	0.005	W57 14140.046425	TOGX 090204EN-14 BK6425			N00 56101 S/M2.6×5.2- 8IP 1.28 Nm	L05 00830 8IP
		M03 11130	15°	96.5	104.9	0.005	W30 14060.046110	TOHX 090204EL-G06 BK6110				
		M03 11230	30°	97.5	105	0.005	W57 14120.0423	TOGX 090204FN-12 K10				
		M03 11330	45°	99.8	105.9	0.005	W30 14990.0440	TOGX 090204TN CBN40				

Micro-adjustable head	Insert holder reverse ←						Basic recommendation			Assembly parts	Accessories	
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material	Clamping screw	Screwdriver		
							Order No. ∇∇ size	ISO-Code		Order No. Description	Order No. Description	
M03 20170 ABS 32	38 – 63	M03 12020	90°	66.8	–	0.002	W57 04140.026425	TOGX 06T102EN-14 BK6425			N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
		M03 12120	15°	71.4	65.2	0.002	W30 04420.0362	TOHX 06T103ER-G12 BK62				
		M03 12220	30°	70.4	64.9	0.002	W57 04120.0223	TOGX 06T102FN-12 K10				
		M03 12320	45°	69.4	64.9	0.002	W30 04990.0240	TOGX 06T102TN CBN40				
M03 20140 ABS 50	62 – 103	M03 12030	90°	83	–	0.005	W57 14140.046425	TOGX 090204EN-14 BK6425			N00 56101 S/M2.6×5.2- 8IP 1.28 Nm	L05 00830 8IP
		M03 12130	15°	89.5	81.1	0.005	W30 14420.0462	TOHX 090204ER-G12 BK62				
		M03 12230	30°	88.5	81	0.005	W57 14120.0423	TOGX 090204FN-12 K10				
		M03 12330	45°	86	79.9	0.005	W30 14990.0440	TOGX 090204TN CBN40				

**Supply includes:**

Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: page 348.



\* dimension L see insert holder table on following page.

Replaceable bridge						Assembly parts		Micro-adjustable head			Assembly parts
Ø D min - max	Rotating diameter Ø D2	Order No.	H	permissible spindle speed min <sup>-1</sup>	kg	Location screw ② for insert holder	Clamping screw ③ for holder	Order No.	ABS Ø d	kg	Clamping screw ① for replaceable bridge
						Order No. Description	Order No. Description				Order No. Description
100 - 130	85	M03 20100	26	11 500	0.39	N00 56401 S/M5x9.4-20IP	55051 04008 M4x8 (1.5 Nm)	M03 20090	63	1.82	M03 20090.15 M8x10
128 - 168	109	M03 20110	26	10 000	0.49						
166 - 206	146	M03 20120	26	8 000	0.59						

Supply includes micro-adjustable drilling head:

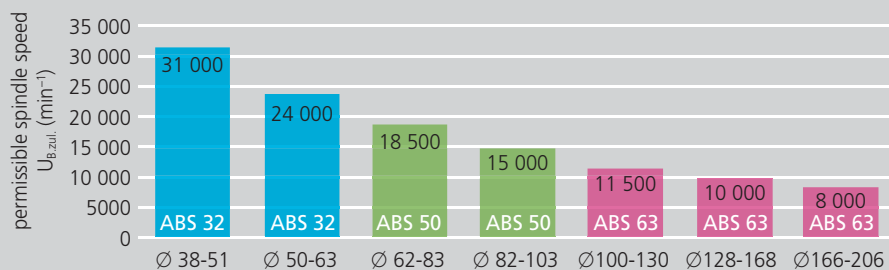
Micro-adjustable drilling head with clamping screw 1. Please order replaceable bridge separately.

Supply includes replaceable bridge:

Replaceable bridge with holding screw 2 and clamping screw 3. Please order insert holder separately.

### Maximum spindle speed

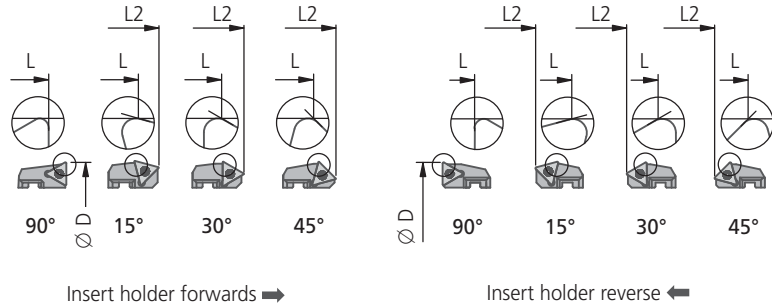
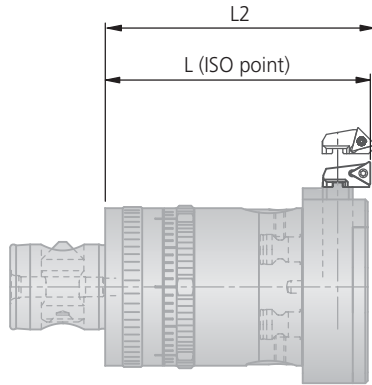
when using different ABS® sizes  
Ø 24.8 - 103 mm  
(MicroKom® M03Speed  
with replaceable bridges)



> 3.5 × D

# KOMET MicroKom® M03Speed Insert Holder

L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
> 3.5×D								
	● very good	● good	○ possible	✗ not possible				



Micro-adjustable head	Insert holder forwards →						Basic recommendation			Assembly parts	Accessories
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material	Clamping screw	Screwdriver	
							Order No. ∇∇ size	ISO-Code	<b>P M K N S H</b>	Order No. Description	Order No. Description
M03 20090 ABS 63	100 – 206	M03 10070	90°	106	–	0.01	W57 14140.046425	TOGX 090204EN-14 BK6425		N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP
		M03 11160	15°	97	105.9	0.01	W30 14060.046110	TOHX 090204EL-G06 BK6110			
		M03 11260	30°	99	107	0.01	W57 14120.0423	TOGX 090204FN-12 K10			
		M03 11360	45°	101	107.5	0.01	W30 14990.0440	TOGX 090204TN CBN40			

Micro-adjustable head	Insert holder reverse ←						Basic recommendation			Assembly parts	Accessories
	∅ D	Order No.	α	L	L2	kg	Insert	for workpiece material	Clamping screw	Screwdriver	
							Order No. ∇∇ size	ISO-Code	<b>P M K N S H</b>	Order No. Description	Order No. Description
M03 20090 ABS 63	100 – 206	M03 12060	90°	80	–	0.01	W57 14140.046425	TOGX 090204EN-14 BK6425		N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP
		M03 12160	15°	89	80.6	0.01	W30 14420.0462	TOHX 090204ER-G12 BK62			
		M03 12260	30°	87	79.5	0.01	W57 14120.0423	TOGX 090204FN-12 K10			
		M03 12360	45°	85	78.9	0.01	W30 14990.0440	TOGX 090204TN CBN40			

**Supply includes:**

Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: page 348.

# KOMET MicroKom® M03Speed

## Technical Notes

- ① without replaceable bridge
- ② with replaceable bridge

Guideline values for fine boring				Material example, material code/DIN	v <sub>c</sub> Cutting speed v <sub>c</sub> (m/min)	f (mm/rev)	
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material			max. feed > 3.5xD	
					① Ø 24.8-50	② Ø 38-63	
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 95Mn28 / 1.0715; St44-2 / 1.0044	300	0.08	0.10
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.08	0.12
	2.1	<500	lead alloys	95MnPb28 / 1.0718	300	0.10	0.15
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.08	0.10
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.06	0.10
	4.1		HSS		120	0.06	0.08
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.06	0.08
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.06	0.08
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.08	0.10
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.06	0.10
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.06	0.10
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.15	0.20
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.15	0.20
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.10	0.15
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.10	0.15
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.10	0.15
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.10	0.15
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.10	0.15
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.10	0.15
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	270	0.10	0.15
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.08	0.12
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	300	0.10	0.15
	14.0	100	cast alum. alloy: Si-content >10%	G-AlSi10Mg / 3.2381	250	0.10	0.15
H	15.0	1400	hardened steels < 45 HRC		120	0.08	0.08
	16.0	1800	hardened steels > 45 HRC		90	0.06	0.08

Ø	Alternative Inserts		for workpiece material
	Order No. ▽ Size	ISO-Code	
for better chip control	① Ø 24.8 - 50 / ② Ø 38 - 63	W57 04140.023210 only for insert holder forwards → : W30 04120.3232	TOGX 06T102EN-14 CK3210 TOHX 06T102EL-US12 CK32
	① Ø 24.8 - 206 / ② Ø 62 - 206	W57 14140.023210 only for insert holder forwards → : W30 14120.3232	TOGX 090202EN-14 CK3210 TOHX 090202EL-US12 CK32
	① Ø 49 - 103 / ② Ø 62 - 206	W57 14140.023210 only for insert holder forwards → : W30 14120.3232	TOGX 090202EN-14 CK3210 TOHX 090202EL-US12 CK32
for higher cutting speed	① Ø 24.8 - 50 / ② Ø 38 - 63	W57 04140.023210 W30 04990.0257 only for insert holder forwards → : W30 04120.0238	TOGX 06T102EN-14 CK3210 TOGX 06T102TN CBN57 TOHX 06T102EL-G12 CK38
	① Ø 24.8 - 206 / ② Ø 62 - 206	W57 14140.043210 W30 14990.0457 only for insert holder forwards → : W30 14120.0238	TOGX 090204EN-14 CK3210 TOGX 090204TN CBN57 TOHX 090202EL-G12 CK38
	① Ø 49 - 103 / ② Ø 62 - 206	W57 14140.043210 W30 14990.0457 only for insert holder forwards → : W30 14120.0238	TOGX 090204EN-14 CK3210 TOGX 090204TN CBN57 TOHX 090202EL-G12 CK38
for better surface finish	① Ø 24.8 - 50 / ② Ø 38 - 63	W30 04990.0355 only for insert holder forwards → : W30 04120.3130	TOGX 06T103FN PKD55 TOHX 06T102EL-UF12 CK30
	① Ø 24.8 - 206 / ② Ø 62 - 206	W30 14990.0455 only for insert holder forwards → : W30 14120.3130	TOGX 090204FN PKD55 TOHX 090202EL-UF12 CK30
	① Ø 49 - 103 / ② Ø 62 - 206	W30 14990.0455 only for insert holder forwards → : W30 14120.3130	TOGX 090204FN PKD55 TOHX 090202EL-UF12 CK30

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given. Important: See chapter 8 for more application details and safety notes!

# KOMET MicroKom® M03Speed Set in Case

## A Ø 38 mm - Ø 63 mm, ABS® 32



Set in case complete  
Order No. M03 20230

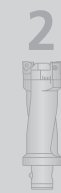
	Qty.	Description	Order No.
①	1	Replaceable bridge Ø 38-51	M03 20180
②	1	Replaceable bridge Ø 50-63	M03 20190
③	1	Micro-adjustable head ABS32	M03 20170
④	2	Insert holder 90° forwards	M03 10033
⑤	1	Allen key SW 4	18591 10040

## B Ø 62 mm - Ø 103 mm, ABS® 50



Set in case complete  
Order No. M03 20240

	Qty.	Description	Order No.
①	1	Replaceable bridge Ø 62-83	M03 20180
②	1	Replaceable bridge Ø 82-103	M03 20190
③	1	Micro-adjustable head ABS50	M03 20170
④	2	Insert holder 90° forwards	M03 10033
⑤	1	Allen key SW 4	18591 10040

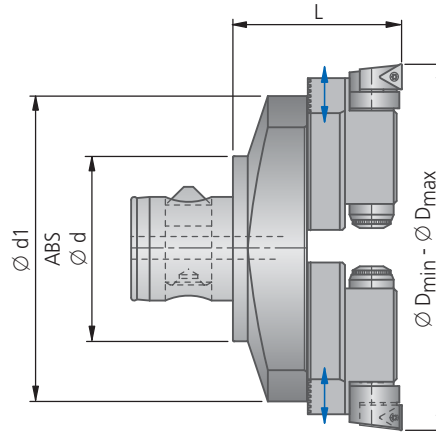


## Twin Cutter with ABS® Connection, $\kappa = 90^\circ$

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
3.5xD								
	●	●	○	○	✗	●	●	✗

● very good ○ good ○ possible ✗ not possible

(ABS-VDF)



ØD min-max	3,5xD					Basic recommendation		for workpiece material	Assembly parts	Accessories	
	Order No. Description	ABS Ød	d1	L	kg	Insert Order No. ▽ size	Insert ISO-Code		Clamping screw	Screwdriver	
196 - 271	G01 23510 ABS100VDF165	100	165	88	7.7	W30 W57 -12	W57 -14	W30 CBN			
261 - 335	G01 23520 ABS100VDF230	100	230	88	8.8	W57 26140.046425	TOGX 140304EN-14 BK6425				
326 - 401	G01 23530 ABS100VDF295	100	295	88	10.4	W30 26060.046110	TOHX 140304EL-G06 BK6110				
						W57 26120.0423	TOGX 140304FN-12 K10				
						W30 26990.0440	TOGX 140304TN CBN40				

### Supply includes:

Basic body with pair of toolholder, insert seatings and clamping screws.

Please order inserts and accessories separately.

for	Assembly parts		
Description	Pair of toolholders with pair of insert seatings	Order No.	Insert seating
G01 23510			
G01 23520	VDF165-295	G01 23600	M30 20051
G01 23530			

### Important features:

This tool not only halves the fine boring time and also the costs but guarantees good cylindrical shape even for long and large diameter bores. This is because by dividing the feed the contact time between cutter and workpiece is halved and the dimensional stability is guaranteed for the cutters to a better degree than with single cutter tools.

Guideline values for fine boring					V <sub>C</sub>	f (mm/rev)
Material group	Strength R <sub>m</sub> (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	Cutting speed v <sub>C</sub> (m/min)	max. feed
						3.5xD
						Ø 196 – 401
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	300	0.15
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	250	0.20
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	300	0.25
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	240	0.20
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	200	0.15
	4.1		HSS		120	0.12
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	50	0.10
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	30	0.10
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	200	0.15
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	180	0.15
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	120	0.15
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	240	0.30
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	200	0.30
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	180	0.25
	9.1	230	spheroidal graphite cast iron, ferritic / perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	180	0.25
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	160	0.25
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	140	0.25
	10.2	300	vermicular cast iron	GGV Ti < 0,2 GGV Ti > 0,2	120	0.25
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182	300	0.08
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	300	0.20
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	500	0.15
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-ALMg5 / 3.3561, G-ALSi9Mg / 3.2373	300	0.20
	14.0	100	cast alum.alloy: Si-content >10%	G-ALSi10Mg / 3.2381	250	0.20
H	15.0	1400	hardened steels < 45 HRC		120	0.10
	16.0	1800	hardened steels > 45 HRC		90	0.10

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.  
Important: See chapter 8 for more application details and safety notes!

1



2



3



1



2



3



## Lightweight dual cutter

A typical example of the ongoing further development of the KOMET® cutting tool range can be seen in the improved concept of the KOMET TwinKom® lightweight dual cutters – a concept which enables particularly cost-effective machining. The tools are extremely rigid, provide high transmissible torques and offer high cutting efficiency. KOMET TwinKom® dual cutters can be used for a variety of operations – as a dual cutter for roughing, with a single cutting edge for finishing, as a follow-on cutting tool and, by means of an adaptor, as a stepped tool. The tools are modular in design and are suitable for diameters from 365 to 2000 mm. The adjustment range is  $\pm 40$  mm (or 80 mm) in relation to the diameter.

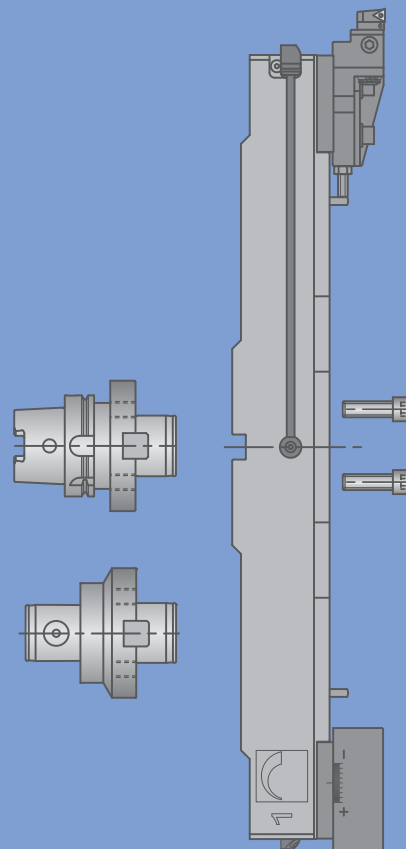
The size of the replaceable bridge is application-oriented and adapted to suit the hole diameter to be cut, which is why the bridge is made according to customer requirement. Due to standardisation, delivery times are relatively short.

The indexable insert holders can be easily exchanged, which allows a variety of different approach angles and the use of indexable inserts of various different shapes, sizes and geometries.

The tool blocks for roughing can be adjusted radially and axially, both for dual cutter use and for cut distribution. For finishing, the fine adjustment insert can be applied to the workpiece directly without clamping. Fine adjustment of 2  $\mu\text{m}$  by vernier is possible. A stop guarantees a high level of positional accuracy for the tool blocks. The measurements set after the first cut are maintained even after repeatedly exchanging the tool blocks.

Once diameters have been established, they are maintained even when the tool blocks are repositioned, and need not be established again. One and the same tool block can be used for roughing and finishing throughout all diameter ranges. When designing the adaptor plates for the tool blocks, sufficient space was allowed for attaching the magnetic holder of a dial gauge.

An internal coolant supply can be used on all replaceable bridges. An adjustable jet guarantees positionally accurate cooling of the cutting edge. Because DIN mill adaptors are used on the machine side to connect the tools, they can be adapted for all commonly used spindles.





**Ø 365 - 2,000 mm**  
Lightweight replaceable bridge –  
optimally designed for your machining requirement



1



2



3



#### BENEFITS for you:

- High rigidity
- High cutting efficiency through double-sided roughing
- High transmissible torques
- Exchangeable tool blocks for roughing and finishing
- Can be used as a follow-on cutting tool and, by means of an adaptor, as a stepped tool
- External machining can also be performed with the standard components
- High level of flexibility thanks to modular design of system components
- Internal coolant supply
- Tool connection with standard mill adaptor according to DIN standard
- Cost-effective cutting thanks to the use of stock-type standard tool blocks and indexable inserts
- Wide selection of various indexable inserts, cutting tool materials and cutting geometries
- Easy-to-replace indexable insert holders
- Tool blocks can be exchanged without losing measurement settings
- Dial gauge can be fitted using a magnetic holder
- Optimised heat cycle, even when dry machining



# KOMET KomTronic® u-axis-systems

The U-axis for Tool Change

1



UAS-125-Z-12



UAS-125-Z-12			
Order No.	Description/type	Ø d	L
E11 10050	UAS-125-HSK63-E-Z-12-1a	HSK 63	166
E16 10080	UAS-125-SK40-E-Z-12-1a	SK 40	159
E16 10090	UAS-125-CAT40-E-Z-12-1a	CAT 40	159
E16 10100	UAS-125-BT40-E-Z-12-1a	BT 40	166

2



UAS-160-Z-22



UAS-160-Z-22			
Order No.	Description/type	Ø d	L
E21 31010	UAS-160-HSK100-E-Z-22-1	HSK 100	203.5
E21 33010	UAS-160-SK50-E-Z-22-1	SK 50	193.5
E21 35010	UAS-160-CAT50-E-Z-22-1	CAT 50	193.5
E21 37010	UAS-160-BT50-E-Z-22-1	BT 50	211.5

3



UAS-160-Z-50



UAS-160-Z-50			
Order No.	Description/type	Ø d	L
E21 31020	UAS-160-HSK100-E-Z-50-1	HSK 100	217.5
E21 33020	UAS-160-SK50-E-Z-50-1	SK 50	207.5
E21 35020	UAS-160-CAT50-E-Z-50-1	CAT 50	207.5
E21 37020	UAS-160-BT50-E-Z-50-1	BT 50	225.5

Together with KOMET® front tooling and KOMET® inserts, the KomTronic® tool opens up machining possibilities which until now would have been unthinkable on a machining center.

Using these possibilities for turning, undercutting, chamfering and generation of NC controlled contours, workpieces can be completely machined with high precision and cycle time savings.



Thanks to their low weight and minimal size and the relatively large adjustment path for the tool, the new generation of KOMET KomTronic® U-axis systems already represents the latest level of development. With a modular system, we are now offering a new supplemental direct encoder. In comparison with the normal indirect encoder, this offers significantly improved repeat accuracy, which also characterises the mechatronic tool systems by KOMET® as state-of-the-art products.

The mechatronic KOMET KomTronic® U-axis systems essentially consist of a compact facing head with single slide that is driven by a servo motor and threaded spindle. The power and data are transmitted contact-free and inductively to the U-axis head via a segment-shaped stator that is fitted to the spindle. This transmission occurs independently from the spindle speed. The mechatronic U-axis systems are therefore automatically exchangeable NC axes. The movement of the steel blade is interpolated with the Z axis. This enables contour machining and longitudinal turning on parts that are not rotationally symmetrical. Through the combined use of customised snap-on tools and optimally selected indexable inserts, it is possible to machine contours in bores as well as external contours. The mechatronic tool systems enable a significant shortening of production times, better surface quality, and improved dimensional accuracy. In addition, fewer different tools are required and there is no need to procure moulding tools.

### Flexibility straight from the toolbox

The KomTronic® U-axis systems are mainly based on the technology project KomTronic® HPS (High-Precision Systems) for high-speed machining. Here, the main aim is to increase speed, which requires - among other things - compact designs with lower weights. The UAS-115 from the new KomTronic® generation weighs only 6.4 kilogrammes and enables an impressive stroke of  $\pm 11$  millimetres with a head diameter of just 115 millimetres.

The adjustment mechanism is integrated into the compact drive unit. The current facing slide module is adapted in line with this. Along the same lines, there are HSK100 versions in addition to the HSK63 variant. The modular system means that these two head sizes enable the realisation of several U-axis variants with different sizes and weights and different radial strokes of 22 or 50 millimetres.

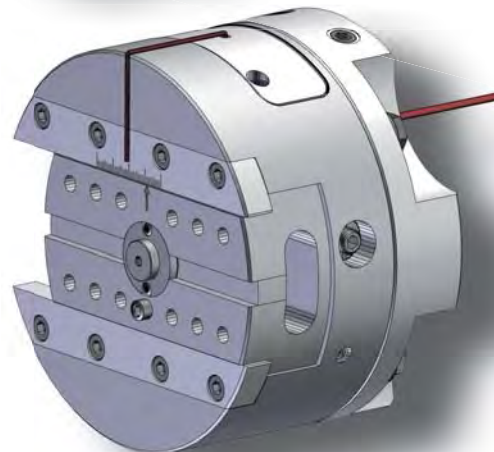
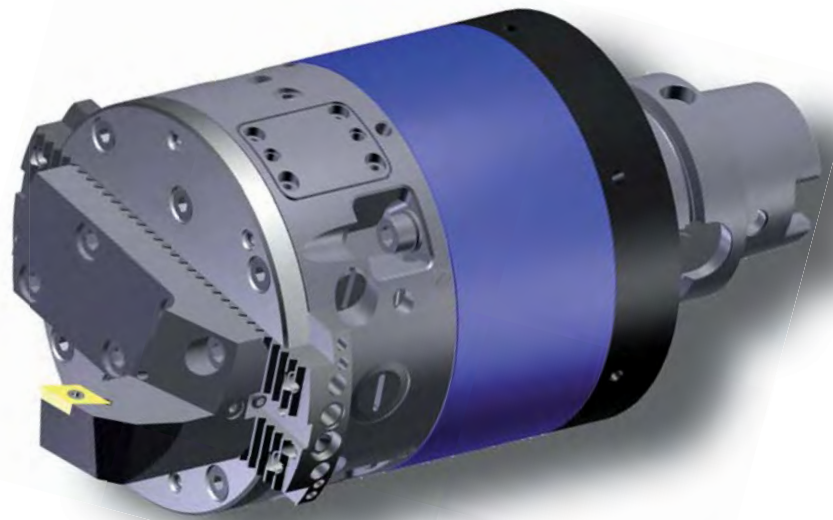
### 1:1 position measurement on slider

Otherwise, the mechatronic tooling systems work with an indirect encoder. The new direct encoder also takes into account interferences to mechanical elements. Thanks to the direct encoder on the slider, the control can be used to react immediately. Although precision was already high, this still constitutes yet another significant improvement in repeat accuracy. The fact that this optional method of position measurement can be chosen by customers on request is another advantage of the consistent modular philosophy, a mindset which is applied to the standard range of KomTronic® U-axis systems. Examined from this point of view, the modular nature of these mechatronic tool systems can also be said to be a state-of-the-art characteristic.

#### BENEFITS for you:

- Direct encoder
- Higher level of positioning accuracy for even more precise machining
- Head diameter 115 mm
- Stroke  $\pm 11$  mm
- Weight 6.4 kg

Patented design



1



2



3



## Design your own tool!

Is there no solution in the standard range?  
 Are the dimensions not what you require?  
 Easy Special makes it possible for you create your own combination of standard modules in the widest variety of dimensions. Select the basic type, define the effective length and choose the desired adapter for the tool.  
 We check you specifications for technical feasibility and you receive a prompt reply.

### BENEFITS for you:

- High tech tools from planning to productive use
- Shortest delivery times - available within 5 weeks
- Parameters set for different tool models
- Optimum production tolerances
- Fixed prices at standard price level



**KOMET® Easy Special™** KUB Quatron® Ø 14 – 44,5 mm

Insert Drill with ABS® Connection, R.H. cutting

Drilling depth: 2x2  
 with two chamfered cutting edges

Version 2.2, 2.1, 1.1, 1.2

Drilling diameter	Drilling length	Material	Speed	Feed	Chip
14.0	11.0	2 x 0.5	Nx 35	0.083	1.0
17.0	11.0	2 x 0.5	Nx 35	0.083	1.0
19.0	11.0	2 x 0.5	Nx 35	0.083	1.0
21.0	11.0	2 x 0.5	Nx 35	0.083	1.0
23.0	11.0	2 x 0.5	Nx 35	0.083	1.0
25.0	11.0	2 x 0.5	Nx 35	0.083	1.0
27.0	11.0	2 x 0.5	Nx 35	0.083	1.0
29.0	11.0	2 x 0.5	Nx 35	0.083	1.0
31.0	11.0	2 x 0.5	Nx 35	0.083	1.0
33.0	11.0	2 x 0.5	Nx 35	0.083	1.0
35.0	11.0	2 x 0.5	Nx 35	0.083	1.0
37.0	11.0	2 x 0.5	Nx 35	0.083	1.0
39.0	11.0	2 x 0.5	Nx 35	0.083	1.0
41.0	11.0	2 x 0.5	Nx 35	0.083	1.0
43.0	11.0	2 x 0.5	Nx 35	0.083	1.0

Fax to +49 7143 373577

**T. Gross**

Company: **Weker Sold** (1)  
 Address: **Street 1a**  
 Phone: **11111**  
 Fax: **33333**

Contact: **Thomas Gross**  
 Department: **11111**  
 E-Mail: **33333**

Order:  Enquiry:  Quantity: **2**

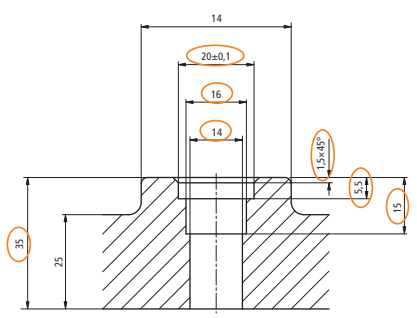
Material to be machined: **41CrM4 ~ 1000 N/mm²**

Drill: **D2 = 15**  
 N: **50**  
 D(D1): **27**  
 L1: **45**  
 a1: **45**  
 D2: **40**  
 L2: **47**  
 a2: **40**  
 XX12: **1**

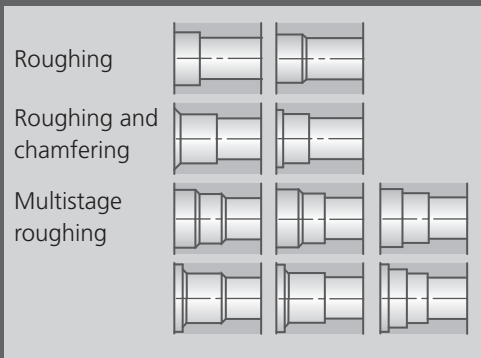
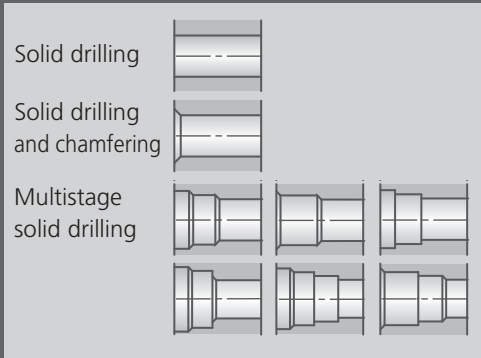
Delivery consists of: **Basic tool body Insert not included.**

### Example of a completed fax inquiry

- ①: State sender/contact name
- ②: Enter required dimensions
- ③: Component sketch or drawing section with dimensions marked



Possible applications



Index Page

Programme summary 358 – 359

Tool selection 360 – 361

Solid drilling Ø 0.472 – 1.752 inch (Ø 12 – 44.5 mm)

KUB Quatron®	362 – 364
KUB Trigon®	374 – 376
KUB® drill	382 – 384
KUB Trigon® with chamfering insert	378 – 380
KUB Quatron® with a stepped cutting edge	366 – 368
KUB® drill with a stepped cutting edge	386 – 390
KUB Quatron® with 2 stepped cutting edges	370 – 372
KUB® drill with 2 stepped cutting edges	392 – 396
KUB® drill with 3 stepped cutting edges	398 – 400

Roughing Ø 0.551 – 1.969 inch (Ø 14 – 50 mm)

TwinKom® Twin cutter	402 – 408
with chamfering insert	410 – 412
with a stepped cutting edge	414 – 416
with two stepped cutting edges	418 – 424

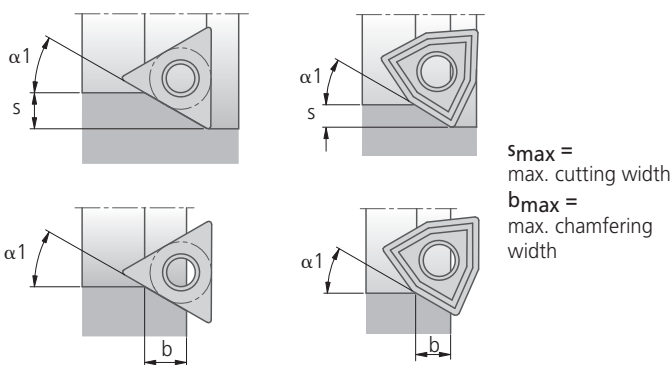
Fine boring Ø 0.315 – 1.575 inch (Ø 8 – 40 mm)

with ABS® connection	
Boring bar	426 + 430
Boring bar with chamfering insert	434 + 438
with cylindrical shank	
Boring bar	428 + 432
Boring bar with chamfering insert	436 + 440

Adaptors

with HSK-A	442
with taper shank	444
with ABS®	446

Maximum cutting and chamfering widths



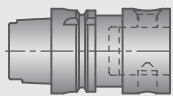
Insert	α1 90°		α1 75°		α1 60°		α1 45°		α1 30°		α1 15°		
	s	b	s	b	s	b	s	b	s	b	s	b	
W29 10...	0.12 (3.0)	0.11 (2.8)	0.02 (0.6)	0.10 (2.5)	0.05 (1.2)	0.08 (2.1)	0.06 (1.6)	0.06 (1.5)	0.08 (2.0)	0.03 (0.7)	0.09 (2.3)		
W29 18...	0.16 (4.0)	0.15 (3.8)	0.03 (0.8)	0.13 (3.4)	0.06 (1.6)	0.11 (2.8)	0.09 (2.3)	0.08 (2.0)	0.11 (2.8)	0.04 (1.0)	0.12 (3.1)		
W29 24...	0.20 (5.0)	0.19 (4.8)	0.04 (1.1)	0.17 (4.3)	0.08 (2.1)	0.14 (3.5)	0.12 (3.0)	0.10 (2.5)	0.15 (3.7)	0.05 (1.2)	0.16 (4.1)		
W29 34...	0.24 (6.2)	0.23 (5.9)	0.06 (1.5)	0.21 (5.3)	0.11 (2.8)	0.17 (4.3)	0.16 (4.0)	0.12 (3.1)	0.19 (4.9)	0.06 (1.6)	0.22 (5.5)		
W59 18...	0.39 (10.0)	0.38 (9.6)	0.09 (2.3)	0.34 (8.6)	0.18 (4.5)	0.28 (7.0)	0.25 (6.3)	0.20 (5.0)	0.30 (7.7)	0.10 (2.5)	0.34 (8.6)		



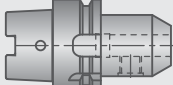
## 5 Adaptors

### HSK-A Adaptors

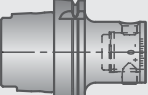
with ABS® connection

- ▶ 456
- |          |         |
|----------|---------|
| HSK-A 32 | ABS 25  |
| HSK-A 40 | ABS 32  |
| HSK-A 50 | ABS 40  |
| HSK-A 63 | ABS 50  |
| HSK-A 80 | ABS 63  |
| HSK-A100 | ABS 80  |
|          | ABS 100 |
- 

### Adaptor sleeve Weldon

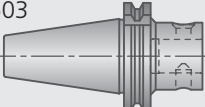
- ▶ 460-461
- |          |            |
|----------|------------|
| HSK-A 50 | Ø 6 – Ø 32 |
| HSK-A 63 |            |
| HSK-A100 |            |
- 

### Eccentric Adjusting Device with ABS® connection

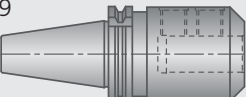
- ▶ 458
- |          |        |
|----------|--------|
| HSK-A 63 | ABS 50 |
| HSK-A100 |        |
- 

### Taper shanks DIN 69871

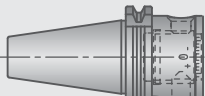
with ABS® connection

- ▶ 486 / 502 / 503
- |        |       |         |         |
|--------|-------|---------|---------|
| CAT 40 | SK 40 | ABS 25  |         |
| CAT 45 | SK 45 |         | ABS 32  |
| CAT 50 | SK 50 |         | ABS 40  |
|        |       |         | ABS 50  |
|        |       |         | ABS 63  |
|        |       |         | ABS 80  |
|        |       |         | ABS 100 |
|        |       | ABS 125 |         |
- 

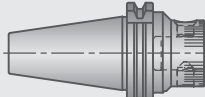
### Adaptor sleeve Weldon / cylindrical shank (combination shank)

- ▶ 516 / 519
- |       |            |
|-------|------------|
| SK 40 | Ø 6 – Ø 40 |
| SK 50 |            |
- 

### Eccentric Adjusting Device with ABS® connection


- ▶ 489 / 506
- |        |       |        |        |
|--------|-------|--------|--------|
| CAT 40 | SK 40 | ABS 50 |        |
| CAT 45 | SK 45 |        | ABS 63 |
| CAT 50 | SK 50 |        |        |
- 

### Torsional dampener with ABS® connection

- ▶ 507
- |       |        |        |
|-------|--------|--------|
| SK 40 | ABS 50 |        |
| SK 50 |        | ABS 63 |
|       |        | ABS 80 |
- 

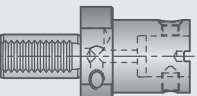
### Spindle adaptor flange

with ABS® connection

- ▶ 530
- |          |         |        |
|----------|---------|--------|
| DIN 2079 | ABS 32  |        |
| ISO 30   |         | ABS 40 |
| ISO 40   |         | ABS 50 |
| ISO 50   |         | ABS 63 |
|          |         | ABS 80 |
|          | ABS 100 |        |
- 

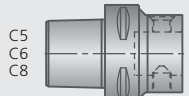
### VDI Adaptor

with ABS® connection

- ▶ 528
- |         |        |         |
|---------|--------|---------|
| NC 3020 | ABS 40 |         |
| NC 4020 |        | ABS 50  |
| NC 5020 |        | ABS 63  |
| NC 6020 |        | ABS 80  |
|         |        | ABS 100 |
- 

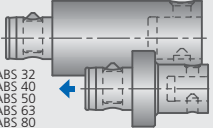
### PSC Adaptors ISO 26622-1 / -2

Polygonal shank taper with ABS® connection

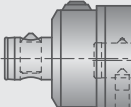
- ▶ 532
- |    |        |        |
|----|--------|--------|
| C5 | ABS 50 |        |
| C6 |        | ABS 63 |
| C8 |        | ABS 80 |
- 

### ABS® Adaptors

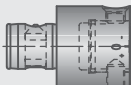
Extension / Reducer

- ▶ 536-539
- |         |        |         |
|---------|--------|---------|
| ABS 25  | ABS 25 |         |
| ABS 32  |        | ABS 32  |
| ABS 40  |        | ABS 40  |
| ABS 50  |        | ABS 50  |
| ABS 63  |        | ABS 63  |
| ABS 80  |        | ABS 80  |
| ABS 100 |        | ABS 100 |
|         |        | ABS 125 |
|         |        | ABS 150 |
|         |        | ABS 200 |
|         |        | ABS 250 |
|         |        | ABS 315 |
|         |        | ABS 400 |
|         |        | ABS 500 |
- 

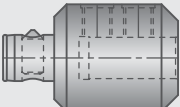
Adjustment device

- ▶ 533
- |        |        |
|--------|--------|
| ABS 50 | ABS 50 |
| ABS 63 |        |
- 

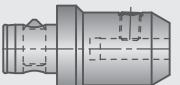
Eccentric Adjusting Device

- ▶ 534
- |        |        |
|--------|--------|
| ABS 50 | ABS 50 |
| ABS 63 |        |
- 

Adaptor sleeve Weldon

- ▶ 548-549
- |        |            |
|--------|------------|
| ABS 50 | Ø 6 – Ø 32 |
| ABS 63 |            |
| ABS 80 |            |
- 

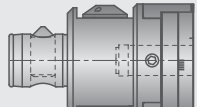
Adaptor sleeve Whistle Notch

- ▶ 544-545
- |        |        |            |
|--------|--------|------------|
| ABS 25 | ABS 50 | Ø 6 – Ø 32 |
| ABS 32 | ABS 63 |            |
| ABS 40 | ABS 80 |            |
|        |        |            |
- 

## 3 Adaptors

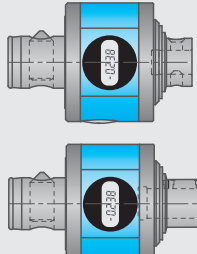
### MicroKom® hi.flex

Micro-adjustable head

- ▶ 217
- |        |               |
|--------|---------------|
| ABS 50 | ABS 32 / Ø 16 |
|        |               |
- 

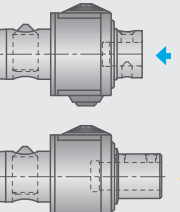
### MicroKom® M04

Micro-adjustable head

- ▶ 280-281
- |        |        |
|--------|--------|
| ABS 50 | ABS 32 |
|        |        |
| ABS 50 | Ø 16   |
|        |        |
- 

### MicroKom® M02

Micro-adjustable head


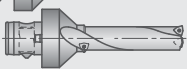
- ▶ 288-289
- |        |        |
|--------|--------|
| ABS 50 | ABS 25 |
| ABS 63 |        |
|        | ABS 40 |
|        |        |
| ABS 40 | Ø 8    |
| ABS 50 |        |
- 

Further adaptors see chapter 5.

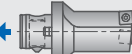


4 Easy Special Tools

Solid drilling  $\varnothing$  0.472 - 1.752 inch  
( $\varnothing$  12 - 44.5 mm)





KUB Trigon®

- ABS 50  ▶ 374
- with chamfering insert  ▶ 378





KUB Quatron®

- ABS 50  ▶ 362
- with a stepped cutting edge  ▶ 366
- with two stepped cutting edges  ▶ 370


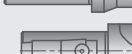


KUB® Drill

- ABS 50  ▶ 382
- with a stepped cutting edge  ▶ 386
- with two stepped cutting edges  ▶ 392
- with three stepped cutting edges  ▶ 398





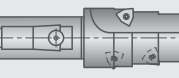
KUB Trigon®

- $\varnothing$  20  ▶ 376
- $\varnothing$  25  ▶ 376
- $\varnothing$  32  ▶ 376
- with chamfering insert  ▶ 380



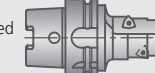
KUB Quatron®

- $\varnothing$  25  ▶ 364
- $\varnothing$  32  ▶ 364
- with a stepped cutting edge  ▶ 368
- with two stepped cutting edges  ▶ 372

KUB® Drill






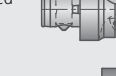
- $\varnothing$  25  ▶ 384
- $\varnothing$  32  ▶ 384
- with a stepped cutting edge  ▶ 390
- with two stepped cutting edges  ▶ 396
- with three stepped cutting edges  ▶ 400


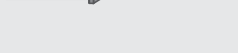

HSK-A Adaptors

- HSK-A 63  ▶ 388
- with a stepped cutting edge  ▶ 388
- with two stepped cutting edges  ▶ 394

Roughing  $\varnothing$  0.551 - 1.969 inch  
( $\varnothing$  14 - 50 mm)

Twinkom®

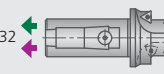
- ABS 50  ▶ 402
- ABS 50  ▶ 406
- with chamfering insert  ▶ 410
- with a stepped cutting edge  ▶ 414
- with two stepped cutting edges  ▶ 418
- with two stepped cutting edges  ▶ 422

- $\varnothing$  20  ▶ 404
- $\varnothing$  25  ▶ 404
- $\varnothing$  32  ▶ 404

- $\varnothing$  25  ▶ 408
- $\varnothing$  32  ▶ 408


- with chamfering insert  ▶ 412

- with a stepped cutting edge  ▶ 416






- with two stepped cutting edges  $\varnothing$  32  ▶ 420

- with two stepped cutting edges  $\varnothing$  32  ▶ 424

HSK-A Adaptors




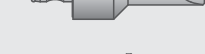

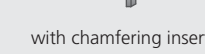




- HSK-A 63  ▶ 406

Key




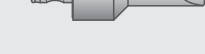

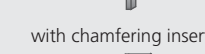




-  ABS® connection
-  ABS® connection
-  Cylindrical connection
-  Whistle Notch connection
-  Weldon connection

Fine boring  $\varnothing$  0.315 - 1.575 inch  
( $\varnothing$  8 - 40 mm)

Boring bars for machining steel

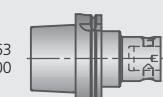







- ABS 25  ▶ 426
- ABS 32  ▶ 426
- ABS 40  ▶ 426
- with chamfering insert  ▶ 434
- ABS 25  ▶ 428
- ABS 32  ▶ 428
- ABS 40  ▶ 428
- $\varnothing$  16  ▶ 428
- with chamfering insert  ▶ 436
- $\varnothing$  16  ▶ 436

Boring bars for machining aluminium

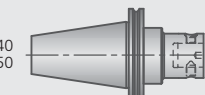
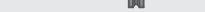






- ABS 25  ▶ 430
- ABS 32  ▶ 430
- ABS 40  ▶ 430
- with chamfering insert  ▶ 438
- ABS 25  ▶ 432
- ABS 32  ▶ 432
- ABS 40  ▶ 432
- $\varnothing$  16  ▶ 432
- with chamfering insert  ▶ 440
- $\varnothing$  16  ▶ 440

Adaptors

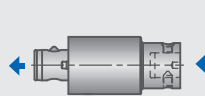
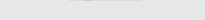
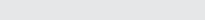
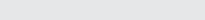
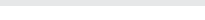

HSK-A Adaptors

- with ABS® connection ▶ 442
- HSK-A 63  ▶ 442
- HSK-A100  ▶ 442
- ABS 25  ▶ 442
- ABS 32  ▶ 442
- ABS 40  ▶ 442
- ABS 50  ▶ 442
- ABS 63  ▶ 442
- ABS 80  ▶ 442

Taper shanks DIN 69871

- with ABS® connection ▶ 444
- SK 40  ▶ 444
- SK 50  ▶ 444
- ABS 25  ▶ 444
- ABS 32  ▶ 444
- ABS 40  ▶ 444
- ABS 50  ▶ 444
- ABS 63  ▶ 444
- ABS 80  ▶ 444

ABS® Adaptors

- Extension / Reducer ▶ 446
- ABS 25  ▶ 446
- ABS 32  ▶ 446
- ABS 40  ▶ 446
- ABS 50  ▶ 446
- ABS 63  ▶ 446
- ABS 80  ▶ 446



# KOMET® Tool Selection

## Help Table for Solid Drilling, Roughing and Fine Boring with Easy Special

1



2



3



4



Solid Drilling		Machining										
Ø (mm)	L / D Length/ diameter ratio	solid drilling	blind hole	forge/ casting skin. interface	angled start and drilling out. interrupted cut	convex	cross bore	centering bore. seam	chamber	stack plate drilling	rough boring	adjustable
14.0 – 44.5 ±0.2	2xD	●	●	●	●	●	●	●	●	●	●	●
14.0 – 44.5 ±0.2	2xD	●	●	●	●	●	●	●	●	●	●	●
14.0 – 44.5 ±0.2	2xD	●	●	●	●	●	●	●	●	●	●	●
12.0 – 44.0 ±0.1	2xD	●	●	●	●	●	●	●	●	●	●	●
12.0 – 44.0 ±0.1	3xD	●	●	●	●	●	●	●	●	●	○	●
12.0 – 44.0 ±0.1	4xD	●	●	○	○	○	○	○	○	○	○	●
14.0 – 44.0 ±0.1	2xD	●	●	●	●	●	●	●	●	●	●	●
14.0 – 44.0 ±0.1	2xD	●	●	●	●	●	●	●	●	●	●	●
14.0 – 44.0 ±0.1	2xD	●	●	●	●	●	●	●	●	●	●	●
14.0 – 44.0 ±0.1	2xD	●	●	●	●	●	●	●	●	●	●	●



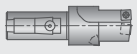

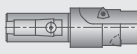

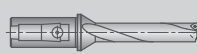
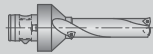
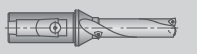

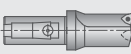


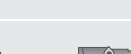



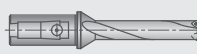

















Roughing		through hole	blind hole	uneven	angled start and drilling out. interrupted cut	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
14.0 – 50.0 ±0.1	2 – 4xD	●	●	●	●	●	●	●	●	80°	●
14.0 – 50.0 ±0.1	2xD	●	●	●	●	●	●	●	●	80°	●
14.0 – 50.0 ±0.1	2xD	●	●	●	●	●	●	●	●	80°	●
14.0 – 50.0 ±0.1	2xD	●	●	●	●	●	●	●	●	80°	●
14.0 – 50.0 ±0.1	2xD	●	●	●	●	●	●	●	●	80°	●
14.0 – 50.0 ±0.1	2xD	●	●	●	●	●	●	●	●	80°	●

Fine Boring		through hole	blind hole	angled start and drilling out, interrupted cut	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
8,0 – 40,0 -0,1	4xD	●	●	●	●	●	●	●	●
8,0 – 24,0 -0,1	4xD	●	●	●	●	●	●	●	●
8,0 – 40,0 -0,1	3xD	●	●	●	●	●	●	●	●
8,0 – 24,0 -0,1	3,5xD	●	●	●	●	●	●	●	●

● very good ● good ○ possible



## Help Table for Solid Drilling, Roughing and Fine Boring with Easy Special

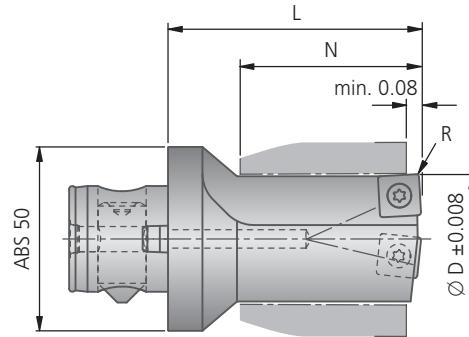
Coolant		Material		Tool		Page					
Emulsion	MQL	Mild steel/ tool steel	Stainless and acid- resistant steel	Grey cast iron and steel cast iron	Non-ferrous metals	Heat-resistant steels	Hardened tool steel				
								internal	external		internal
●	○	●	○	●	○	●	○			KUB Quatron® ABS® connection Cylindrical shank (combination shank)	▶ 362 ▶ 364
●	○	●	○	●	○	●	○			KUB Quatron® with a stepped cutting edge ABS® connection Cylindrical shank (combination shank)	▶ 366 ▶ 368
●	○	●	○	●	○	●	○			KUB Quatron® with two stepped cutting edges ABS® connection Cylindrical shank (combination shank)	▶ 370 ▶ 372
●	○	●	○	●	○	●	○			KUB Trigon® ABS® connection Cylindrical shank (combination shank)	▶ 374 ▶ 376
●	○	●	○	●	○	●	○			KUB Trigon® with chamfering insert ABS® connection Cylindrical shank (combination shank)	▶ 378 ▶ 380
●	○	●	○	●	○	●	○			KUB® Drill ABS® connection Cylindrical shank (combination shank)	▶ 382 ▶ 384
●	○	●	○	●	○	●	○			KUB® Drill with a stepped cutting edge ABS® connection Cylindrical shank (combination shank) HSK-A connection	▶ 386 ▶ 390 ▶ 388
●	○	●	○	●	○	●	○			KUB® Drill with two stepped cutting edges ABS® connection Cylindrical shank (combination shank) HSK-A connection	▶ 392 ▶ 396 ▶ 394
●	○	●	○	●	○	●	○			KUB® Drill with three stepped cutting edges ABS® connection Cylindrical shank (combination shank)	▶ 398 ▶ 400
●	○	●	○	●	○	●	○			TwinKom® ABS® connection Cylindrical shank (combination shank)	▶ 402 ▶ 404
●	○	●	○	●	○	●	○			TwinKom® ABS® connection Cylindrical shank (combination shank) HSK-A connection	▶ 406 ▶ 408 ▶ 406
●	○	●	○	●	○	●	○			TwinKom® with chamfering insert ABS® connection Cylindrical shank (combination shank)	▶ 410 ▶ 412
●	○	●	○	●	○	●	○			TwinKom® with a stepped cutting edge ABS® connection Cylindrical shank (combination shank)	▶ 414 ▶ 416
●	○	●	○	●	○	●	○			TwinKom® with two stepped cutting edges ABS® connection Cylindrical shank (combination shank)	▶ 418 ▶ 420
●	○	●	○	●	○	●	○			TwinKom® with two stepped cutting edges ABS® connection Cylindrical shank (combination shank)	▶ 422 ▶ 424
●	○	●	○	●	○	●	○			Boring bar for machining steel	▶ 426 – 428
●	○	●	○	●	○	●	○			Boring bar with chamfering insert for machining steel	▶ 434 – 436
●	○	●	○	●	○	●	○			Boring bar for machining aluminium	▶ 430 – 432
●	○	●	○	●	○	●	○			Boring bar with chamfering insert for machining aluminium	▶ 438 – 440



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	○	○

● very good ○ good ○ possible ✕ not possible

■ drilling depth 2xD



N420270000

(..) = mm

Solid drilling step (min/max dimension)				
Drilling examples				
Drilling range Ø D min - max	Drilling depth N max	L	Insert	R
0.551 - 0.690 (14.0 - 17.5)	2 x D	N + 1.378 (N + 35)	W83 13...	0.016 (0.4)
0.691 - 0.848 (17.6 - 21.5)	2 x D	N + 1.378 (N + 35)	W83 18...	0.024 (0.6)
0.849 - 1.064 (21.6 - 27.0)	2 x D	N + 1.378 (N + 35)	W83 23...	0.031 (0.8)
1.065 - 1.301 (27.1 - 33.0)	2 x D	N + 1.575 (N + 40)	W83 32...	0.031 (0.8)
1.302 - 1.752 (33.1 - 44.5)	2 x D	N + 1.575 (N + 40)	W83 44...	0.031 (0.8)

Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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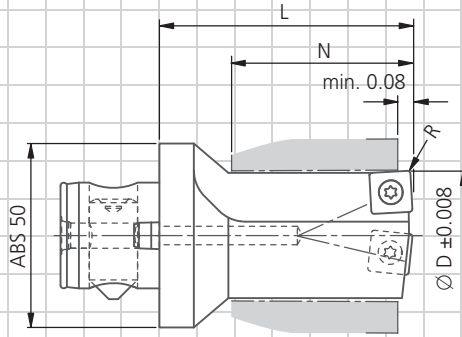
Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_

N = \_\_\_\_\_



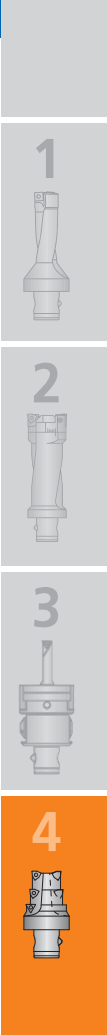
XV02...

N420270000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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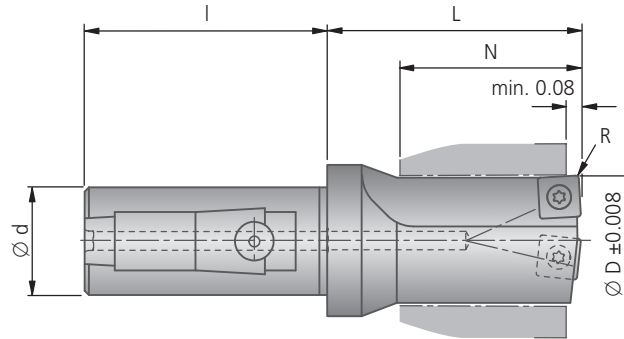


Insert Drill with Cylindrical Shank (Combination Shank),  
R.H. cutting

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	●	○	○

● very good ○ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD



N420271000

(..) = mm

Solid drilling step (min/max dimension)						
Drilling range $\varnothing D$ min - max	Drilling depth $N$ max	$L$	Insert	$R$	Cylindrical shank $\varnothing d \times l$	
					(25x56)	(32x60)
0.551 - 0.690 (14.0 - 17.5)	2 x D	N + 0.945 (N + 24)	W83 13...	0.016 (0.4)	●	●
0.691 - 0.848 (17.6 - 21.5)	2 x D	N + 0.945 (N + 24)	W83 18...	0.024 (0.6)	●	●
0.849 - 1.064 (21.6 - 27.0)	2 x D	N + 1.142 (N + 29)	W83 23...	0.031 (0.8)	●	●
1.065 - 1.301 (27.1 - 33.0)	2 x D	N + 1.142 (N + 29)	W83 32...	0.031 (0.8)		●
1.302 - 1.752 (33.1 - 44.5)	2 x D	N + 1.142 (N + 29)	W83 44...	0.031 (0.8)		●

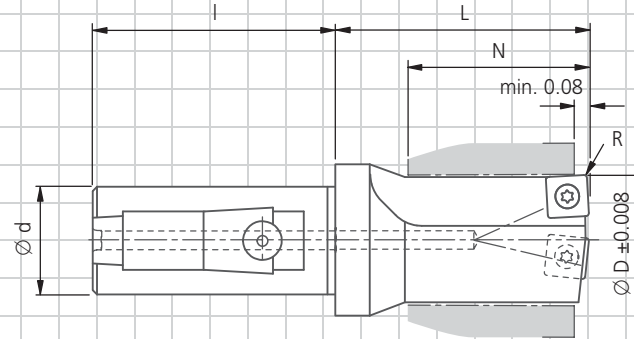
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined: \_\_\_\_\_

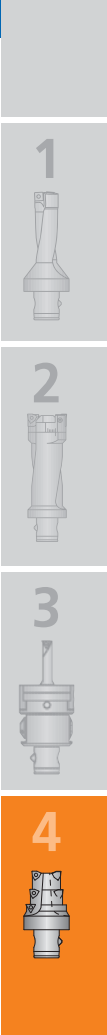
∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_



XV85...      N420271000

Please provide workpiece sketch !

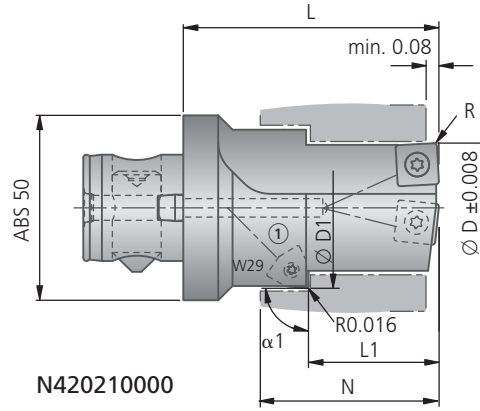
Delivery consists of: Basic tool body. Insert not included.



L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	✗	●	●	●

● very good ○ good ✗ not possible

- drilling depth 2xD
- with a stepped cutting edge

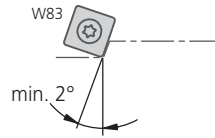


N420210000

Version 1:



Version 2:



(..) = mm

Solid drilling step (min/max dimension)				
Drilling range Ø D min - max	Drilling depth N max	L	Insert	R
0.551 - 0.690 (14.0 - 17.5)	2 x D	N + 1.378 (N + 35)	W83 13...	0.016 (0.4)
0.691 - 0.848 (17.6 - 21.5)	2 x D	N + 1.378 (N + 35)	W83 18...	0.024 (0.6)
0.849 - 1.064 (21.6 - 27.0)	2 x D	N + 1.378 (N + 35)	W83 23...	0.031 (0.8)
1.065 - 1.301 (27.1 - 33.0)	2 x D	N + 1.575 (N + 40)	W83 32...	0.031 (0.8)
1.302 - 1.752 (33.1 - 44.5)	2 x D	N + 1.575 (N + 40)	W83 44...	0.031 (0.8)

Step ① (min/max dimension)						
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert	
0.689 - 0.983 (17.5 - 24.9)	Version 1	0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 10...	W83 13...
0.984 - 1.180 (25.0 - 29.9)	W29/W59: 90°-15°	0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 18...	W83 18...
1.181 - 1.376 (30.0 - 34.9)	Version 2	0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 24...	W83 23...
1.377 - 1.969 (35.0 - 50.0)	W83: 88°-15°	0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 34...	W83 32...
1.181 - 1.969 (30.0 - 50.0)		0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W59 18...	W83 44...

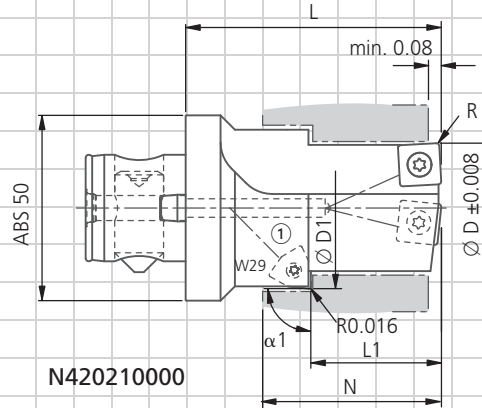
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_

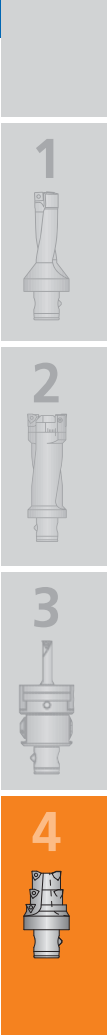


XV12...

N420210000

Please provide workpiece sketch !

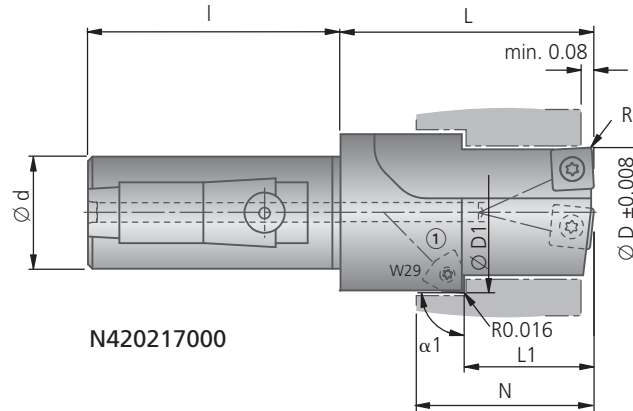
Delivery consists of: Basic tool body. Insert not included.



L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	✗	●	●	●

● very good ● good ○ possible ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with a stepped cutting edge

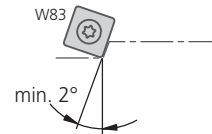


N420217000

Version 1:



Version 2:



(..) = mm

Solid drilling step (min/max dimension)						
Drilling examples	Drilling depth N		Insert	R	Cylindrical shank Ø d x l	
Drilling range Ø D	min	max			(25x56)	(32x60)
0.551 - 0.690 (14.0 - 17.5)	2 x D	N + 0.945 (N + 24)	W83 13...	0.016 (0.4)	●	●
0.691 - 0.848 (17.6 - 21.5)	2 x D	N + 0.945 (N + 24)	W83 18...	0.024 (0.6)	●	●
0.849 - 1.064 (21.6 - 27.0)	2 x D	N + 1.142 (N + 29)	W83 23...	0.031 (0.8)	●	●
1.065 - 1.301 (27.1 - 33.0)	2 x D	N + 1.142 (N + 29)	W83 32...	0.031 (0.8)		●
1.302 - 1.752 (33.1 - 44.5)	2 x D	N + 1.142 (N + 29)	W83 44...	0.031 (0.8)		●

Step ① (min/max dimension)						
Drilling examples	α1		L1	L	Insert	
Drilling range Ø D1	max	min	min		Version 1	Version 2
0.689 – 0.983 (17.5 – 24.9)	Version 1 W29/W59: 90°-15°	0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 10...	W83 13...
0.984 – 1.180 (25.0 – 29.9)					W29 18...	W83 18...
1.181 – 1.376 (30.0 – 34.9)	Version 2 W83: 88°-15°	0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 24...	W83 23...
1.377 – 1.969 (35.0 – 50.0)					W29 34...	W83 32...
1.181 – 1.969 (30.0 – 50.0)					W59 18...	W83 44...



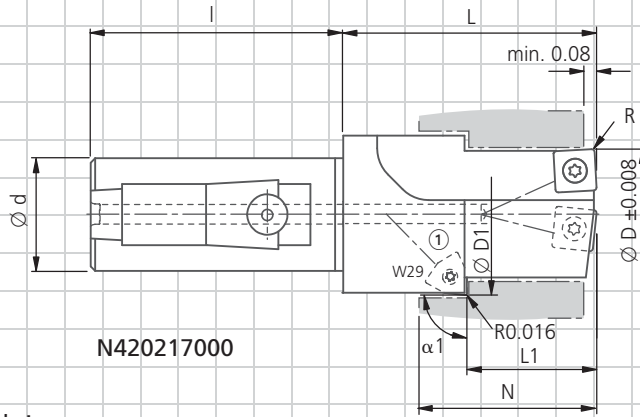
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_

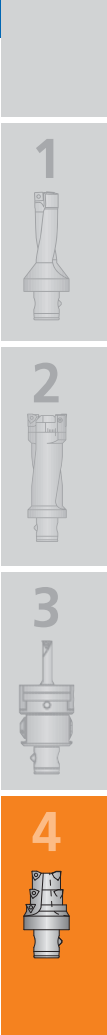


XV85...      N420217000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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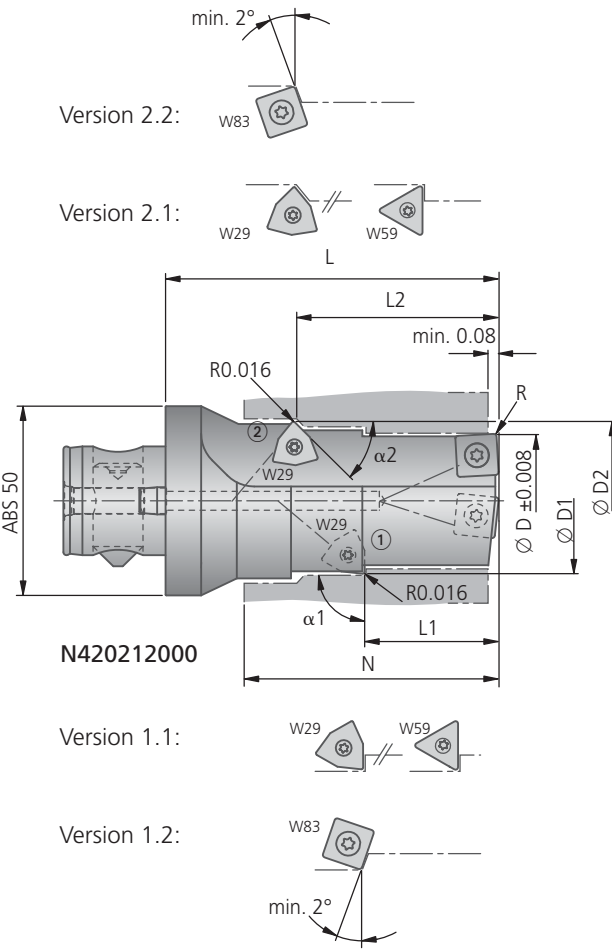
L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	✗	●	●	●

● very good ○ good ✗ not possible

■ drilling depth 2xD

■ with two stepped cutting edges

(..) = mm



Solid drilling step (min/max dimension)				
Drilling examples				
Drilling range Ø D min - max	Drilling depth N max	L	Insert	R
0.551 - 0.690 (14.0 - 17.5)	2 x D	N + 1.378 (N + 35)	W83 13...	0.016 (0.4)
0.691 - 0.848 (17.6 - 21.5)	2 x D	N + 1.378 (N + 35)	W83 18...	0.024 (0.6)
0.849 - 1.064 (21.6 - 27.0)	2 x D	N + 1.378 (N + 35)	W83 23...	0.031 (0.8)
1.065 - 1.301 (27.1 - 33.0)	2 x D	N + 1.575 (N + 40)	W83 32...	0.031 (0.8)
1.302 - 1.752 (33.1 - 44.5)	2 x D	N + 1.575 (N + 40)	W83 44...	0.031 (0.8)

Step ① (min/max dimension)						
Drilling examples						
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert	
					Version 1.1	Version 1.2
0.689 - 0.983 (17.5 - 24.9)		0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 10...	W83 13...
0.984 - 1.180 (25.0 - 29.9)	Version 1.1 W29/W59: 90°-15°	0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 18...	W83 18...
1.181 - 1.376 (30.0 - 34.9)	Version 1.2 W83: 88°-15°	0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 24...	W83 23...
1.377 - 1.969 (35.0 - 50.0)		0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 34...	W83 32...
1.181 - 1.969 (30.0 - 50.0)		0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W59 18...	W83 44...

Step ② (min/max dimension)						
Drilling examples						
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert	
					Version 2.1	Version 2.2
0.689 - 0.983 (17.5 - 24.9)		L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29 10...	W83 13...
0.984 - 1.180 (25.0 - 29.9)	Version 2.1 W29/W59: 90°-15°	L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29 18...	W83 18...
1.181 - 1.376 (30.0 - 34.9)	Version 2.2 W83: 88°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29 24...	W83 23...
1.377 - 1.969 (35.0 - 50.0)		L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29 34...	W83 32...
1.181 - 1.969 (30.0 - 50.0)		L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W59 18...	W83 44...

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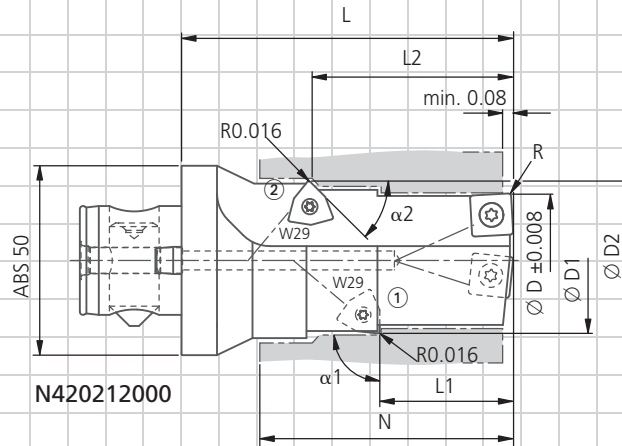
Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 $\alpha 1$  = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 $\alpha 2$  = \_\_\_\_\_

XV12...



Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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# KOMET® Easy Special

# KUB Quatron® Ø 0.551 – 1.752 inch

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

## (Ø 14 – 44.5 mm)

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	✗	●	●	●

● very good ○ good ✗ not possible

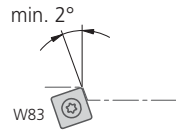
■ cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595

(..) = mm

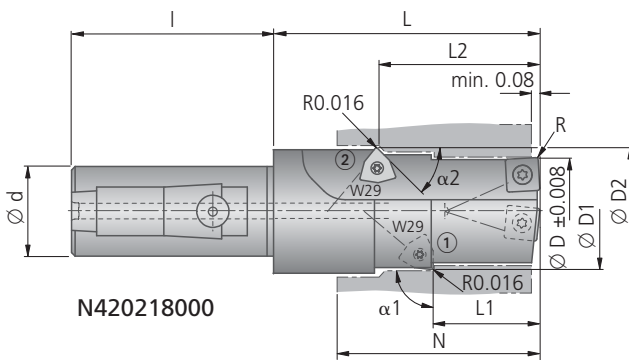
■ drilling depth 2xD

■ with two stepped cutting edges

Version 2.2:



Version 2.1:

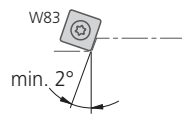


N420218000

Version 1.1:



Version 1.2:



### Solid drilling step (min/max dimension)

Drilling examples						
Drilling range Ø D	Drilling depth N	L	Insert	R	Cylindrical shank Ø d x l	
min - max	max				(25x56)	(32x60)
0.551 - 0.690 (14.0 - 17.5)	2 x D	N + 0.945 (N + 24)	W83 13...	0.016 (0.4)	●	●
0.691 - 0.848 (17.6 - 21.5)	2 x D	N + 0.945 (N + 24)	W83 18...	0.024 (0.6)	●	●
0.849 - 1.064 (21.6 - 27.0)	2 x D	N + 1.142 (N + 29)	W83 23...	0.031 (0.8)	●	●
1.065 - 1.301 (27.1 - 33.0)	2 x D	N + 1.142 (N + 29)	W83 32...	0.031 (0.8)		●
1.302 - 1.752 (33.1 - 44.5)	2 x D	N + 1.142 (N + 29)	W83 44...	0.031 (0.8)		●

### Step ① (min/max dimension)

Drilling examples						
Drilling range Ø D1	α1	L1 min	L1 max	L	Insert	
min - max	max - min				Version 1.1	Version 1.2
0.689 - 0.983 (17.5 - 24.9)		0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 10...	W83 13...
0.984 - 1.180 (25.0 - 29.9)	Version 1.1 W29/W59: 90°-15°	0.394 (10)	1.5 x D	N + 1.378 (N + 35)	W29 18...	W83 18...
1.181 - 1.376 (30.0 - 34.9)	Version 1.2 W83: 88°-15°	0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 24...	W83 23...
1.377 - 1.969 (35.0 - 50.0)		0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W29 34...	W83 32...
1.181 - 1.969 (30.0 - 50.0)		0.591 (15)	1.5 x D	N + 1.575 (N + 40)	W59 18...	W83 44...

### Step ② (min/max dimension)

Drilling examples						
Drilling range Ø D2	α2	L2 min	L2 max	L	Insert	
min - max	max - min				Version 2.1	Version 2.2
0.689 - 0.983 (17.5 - 24.9)		L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29 10...	W83 13...
0.984 - 1.180 (25.0 - 29.9)	Version 2.1 W29/W59:	L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29 18...	W83 18...
1.181 - 1.376 (30.0 - 34.9)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29 24...	W83 23...
1.377 - 1.969 (35.0 - 50.0)	Version 2.2 W83: 88°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29 34...	W83 32...
1.181 - 1.969 (30.0 - 50.0)		L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W59 18...	W83 44...

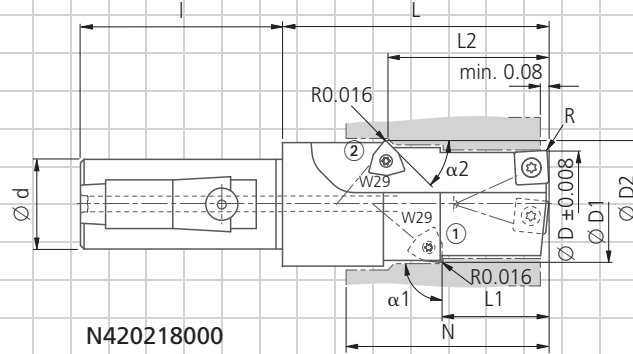
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

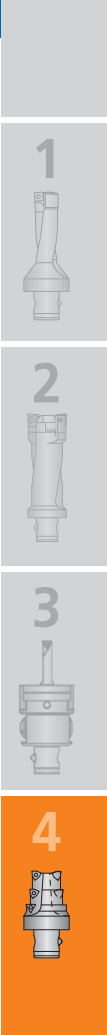
∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_  
 XV85...



Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

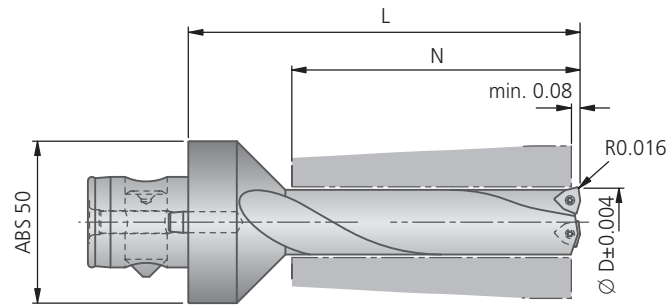
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L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	×	●	●
3xD	●	●	●	●	●	●	●	●	×	○	●
4xD	●	●	●	○	○	○	○	○	×	×	○

● very good ● good ○ possible × not possible

■ drilling depth 2xD, 3xD, 4xD



N420001000

(..) = mm

Solid drilling step (min/max dimension)					
Drilling range Ø D min - max	Drilling depth N			L	Insert
	2xD	3xD	4xD		
0.551 – 0.786 (14.0 – 19.9)	●	●		N + 1.378 (N + 35)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	●	●	●	N + 1.378 (N + 35)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	●	●	●	N + 1.378 (N + 35)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	●	●	●	N + 1.575 (N + 40)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	●	●	●	N + 1.969 (N + 50)	W29 34...

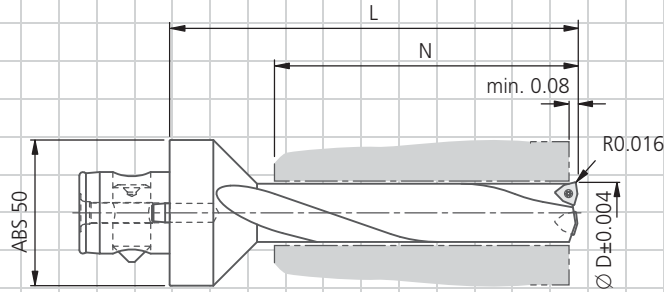
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

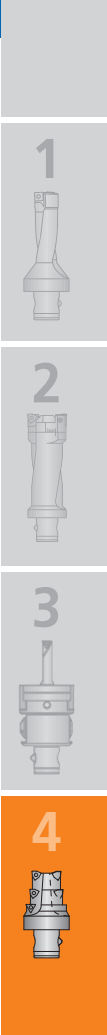
∅ D = \_\_\_\_\_  
 N =  2xD  
        3xD  
        4xD



XV02...      N420001000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

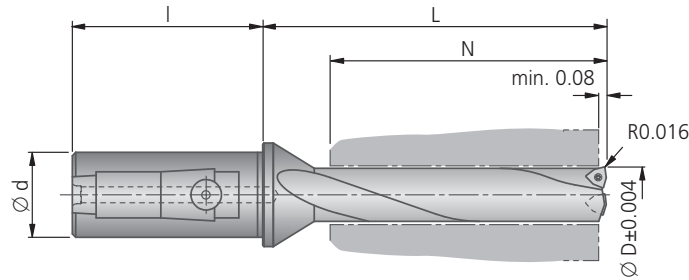


## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	×	●	●
3xD	●	●	●	●	○	●	●	●	×	○	●
4xD	●	●	○	○	○	○	○	○	×	×	○

● very good ○ good ○ possible × not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD, 3xD, 4xD



N420002000

(..) = mm

Solid drilling step (min/max dimension)								
Drilling range Ø D min - max	Drilling depth N			L	Insert	Cylindrical shank Ø d × l		
	2xD	3xD	4xD			(20x50)	(25x56)	(32x60)
0.472 – 0.550 (12.0 – 13.9)	●	●		N + 0.945 (N + 24)	W29 04...	●		
0.551 – 0.786 (14.0 – 19.9)	●	●	●	N + 0.945 (N + 24)	W29 10...	●	●	●
0.787 – 0.983 (20.0 – 24.9)	●	●	●	N + 0.945 (N + 24)	W29 18...	●	●	●
0.984 – 1.180 (25.0 – 29.9)	●	●	●	N + 0.945 (N + 24)	W29 24...		●	●
1.181 – 1.456 (30.0 – 36.9)	●	●	●	N + 1.142 (N + 29)	W29 24...			●
1.457 – 1.732 (37.0 – 44.0)	●	●	●	N + 1.535 (N + 39)	W29 34...			●



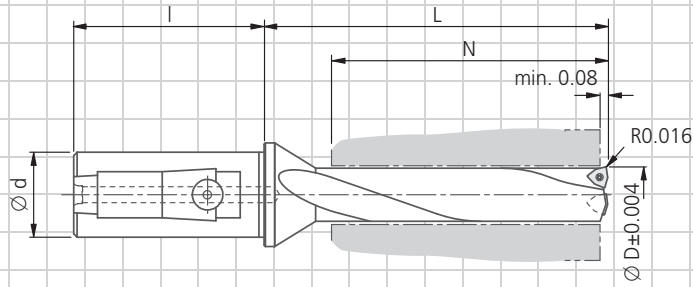
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company:	Contact:
Address:	Department:
	Phone:
	Fax:
	E-Mail:

Order     
  Enquiry     
 Quantity:

Material to be machined:

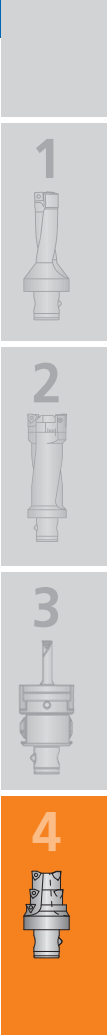
Ø D =  
 N =  2xD  
        3xD  
        4xD  
 Ø d =



XV85...                      N420002000

Please provide workpiece sketch !

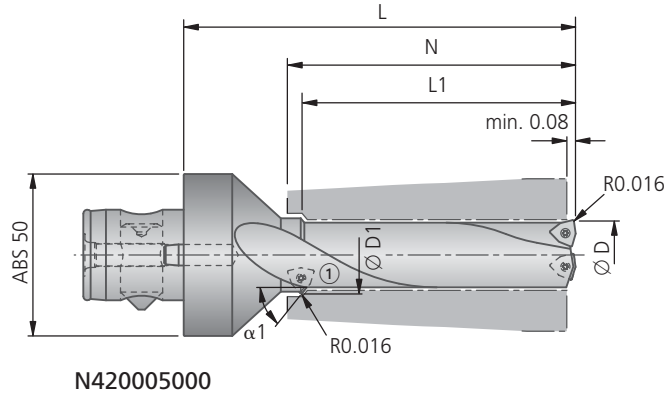
Delivery consists of: Basic tool body. Insert not included.



L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	×	●	●
3xD	●	●	●	●	●	●	●	●	×	○	●
4xD	●	●	●	○	○	○	○	○	×	×	●

● very good ● good ○ possible × not possible

- drilling depth 2xD, 3xD, 4xD
- with chamfering insert



(..) = mm

Solid drilling step (min/max dimension)		
Drilling examples		
Drilling range Ø D min - max	L	Insert
0.551 – 0.786 (14.0 – 19.9)	N + 1.575 (N + 40)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	N + 1.575 (N + 40)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	N + 1.575 (N + 40)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	N + 1.772 (N + 45)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	N + 2.165 (N + 55)	W29 34...

Chamfering step ① (min/max dimension)							
Drilling examples							
Drilling range Ø D1 min - max	α1 max - min	2xD	3xD	4xD	N min	Drilling depth N max	Insert
0.787 – 0.983 (20.0 – 24.9)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 34...

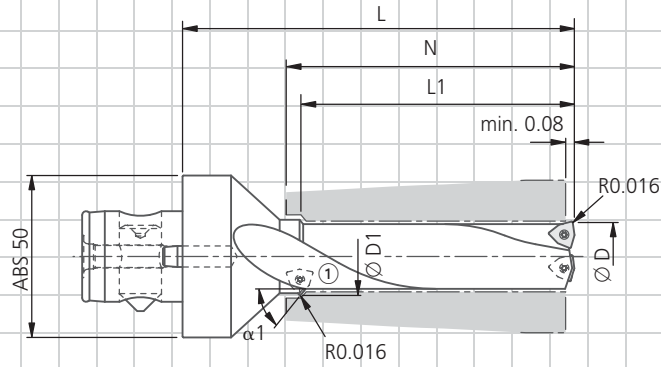
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

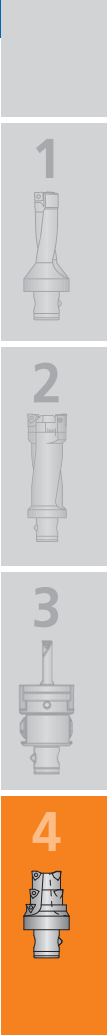
$\varnothing D =$  \_\_\_\_\_  
 $\varnothing D1 =$  \_\_\_\_\_  
 $L1 =$    $2 \times D$   
  $3 \times D$   
  $4 \times D$   
 $\alpha 1 =$  \_\_\_\_\_



XV12...      N420005000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

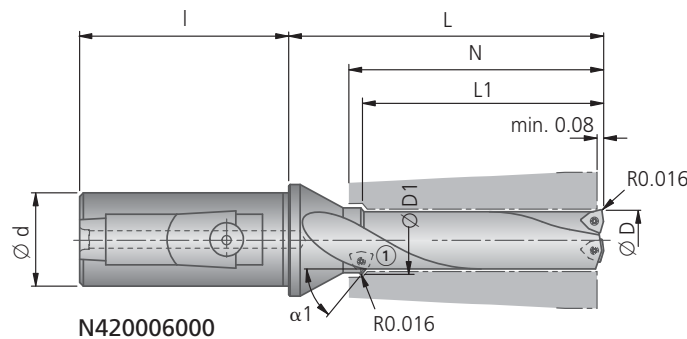


Insert Drill with Cylindrical Shank (Combination Shank),  
R.H. cutting

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	×	●	●
3xD	●	●	●	●	●	●	●	●	×	○	●
4xD	●	●	●	○	○	○	○	○	×	×	●

● very good ● good ○ possible × not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD, 3xD, 4xD
- with chamfering insert



(..) = mm

Solid drilling step (min/max dimension)					
Drilling examples					
Drilling range Ø D min - max	L	Insert	Cylindrical shank Ø d x l		
			(20x50)	(25x56)	(32x60)
0.551 – 0.786 (14.0 – 19.9)	N + 1.142 (N + 29)	W29 10...	●	●	●
0.787 – 0.983 (20.0 – 24.9)	N + 1.142 (N + 29)	W29 18...	●	●	●
0.984 – 1.180 (25.0 – 29.9)	N + 1.142 (N + 29)	W29 24...		●	●
1.181 – 1.456 (30.0 – 36.9)	N + 1.339 (N + 34)	W29 24...			●
1.457 – 1.732 (37.0 – 44.0)	N + 1.732 (N + 44)	W29 34...			●

Chamfering step ① (min/max dimension)							
Drilling examples							
Drilling range Ø D1 min - max	α1 max - min	Drilling depth			N min	N max	Insert
		2xD	3xD	4xD			
0.787 – 0.983 (20.0 – 24.9)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	90° - 15°	●	●	●	L1	L1+0.197 (L1+5)	W29 34...

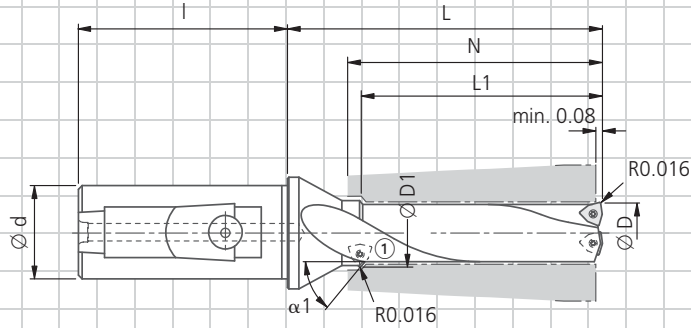
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

$\varnothing D =$  \_\_\_\_\_  
 $\varnothing D1 =$  \_\_\_\_\_  
 L1 =  2xD  
        3xD  
        4xD  
 $\alpha 1 =$  \_\_\_\_\_  
 $\varnothing d =$  \_\_\_\_\_

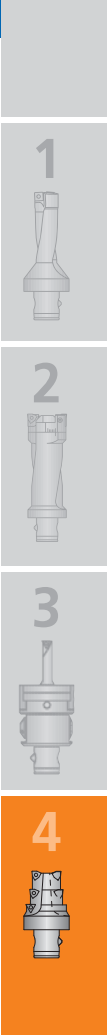


XV85...      N420006000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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# KOMET® Easy Special

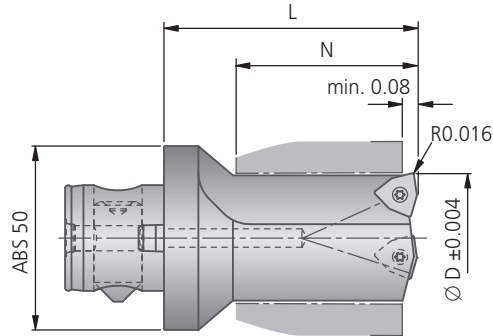
## Insert Drill with ABS® Connection, R.H. cutting

KUB® Ø 0.551 – 1.732 inch  
(Ø 14 – 44 mm)

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	○	●

● very good ○ good ○ possible ✗ not possible

■ drilling depth 2xD



N420070000

(..) = mm

Solid drilling step (min/max dimension)				
Drilling range D min - max	Drilling depth		L	Insert
	N min	N max		
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	2 × D	N + 1.378 (N + 35)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	2 × D	N + 1.378 (N + 35)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	0.591 (15)	2 × D	N + 1.378 (N + 35)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	2 × D	N + 1.575 (N + 40)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	2 × D	N + 1.575 (N + 40)	W29 34...

Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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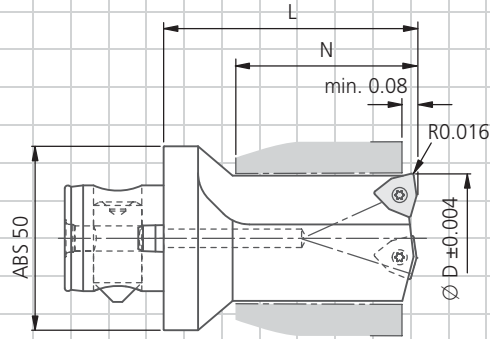
Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_

N = \_\_\_\_\_



XV02...

N420070000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

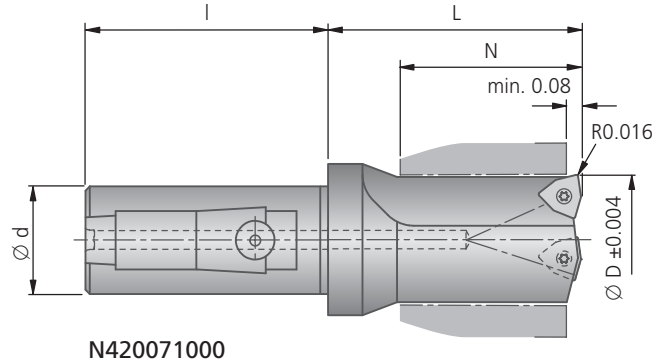


Insert Drill with Cylindrical Shank (Combination Shank),  
R.H. cutting

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●

● very good ○ good ○ possible ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD



(..) = mm

Solid drilling step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	Insert	Cylindrical shank Ø d x l (25x56) (32x60)	
	N min	N max			●	●
0.551 – 0.786 (14.0 – 19.9)	0.394 (10)	2 x D	N + 0.945 (N + 24)	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)	0.394 (10)	2 x D	N + 0.945 (N + 24)	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)	0.394 (10)	2 x D	N + 1.142 (N + 29)	W29 24...	●	●
1.181 – 1.456 (30.0 – 36.9)	0.591 (15)	2 x D	N + 1.142 (N + 29)	W29 24...		●
1.457 – 1.732 (37.0 – 44.0)	0.591 (15)	2 x D	N + 1.142 (N + 29)	W29 34...		●



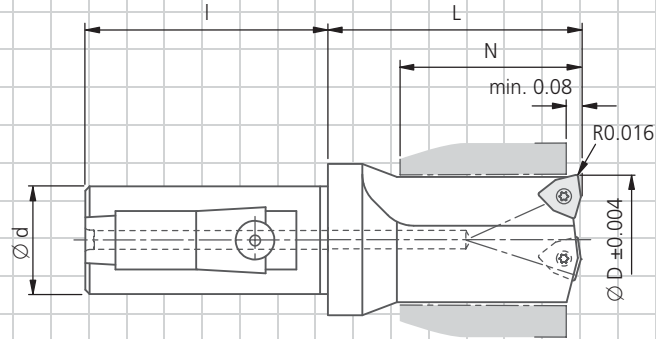
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

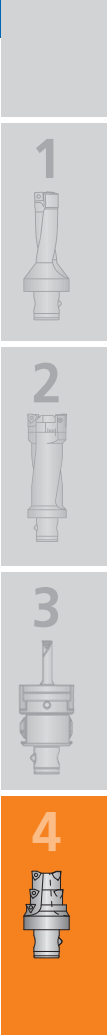
∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_



XV85...      N420071000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

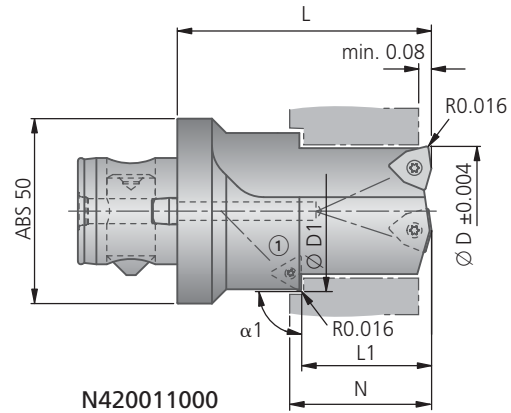
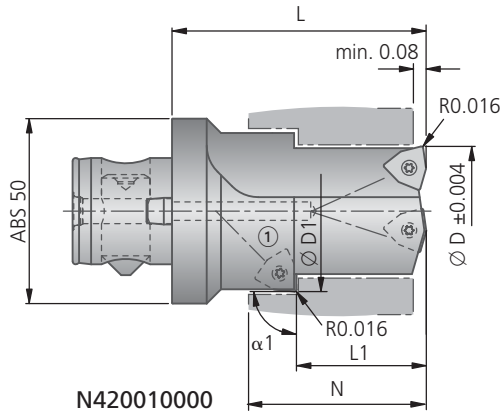
## Insert Drill with ABS® Connection, R.H. cutting

KUB® Ø 0.551 – 1.732 inch  
(Ø 14 – 44 mm)

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●

● very good ○ good ○ possible ✗ not possible

- drilling depth 2xD
- with a stepped cutting edge



(..) = mm

Solid drilling step (min/max dimension)			
Drilling examples			
Drilling range Ø D min - max	N min	Drilling depth N max	Insert
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L1+(1.5xD1)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L1+(1.5xD1)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L1+(1.5xD1)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L1+(1.5xD1)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L1+(1.5xD1)	W29 34...

Step ① (min/max dimension)					
Drilling examples					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1,5 × D	N + 1.378 (N + 35)	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1,5 × D	N + 1.378 (N + 35)	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1,5 × D	N + 1.575 (N + 40)	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	0.591 (15)	1,5 × D	N + 1.575 (N + 40)	W29 34...
1.181 – 1.969 (30.0 – 50.0)	90°-15°	0.591 (15)	1,5 × D	N + 1.575 (N + 40)	W59 18...

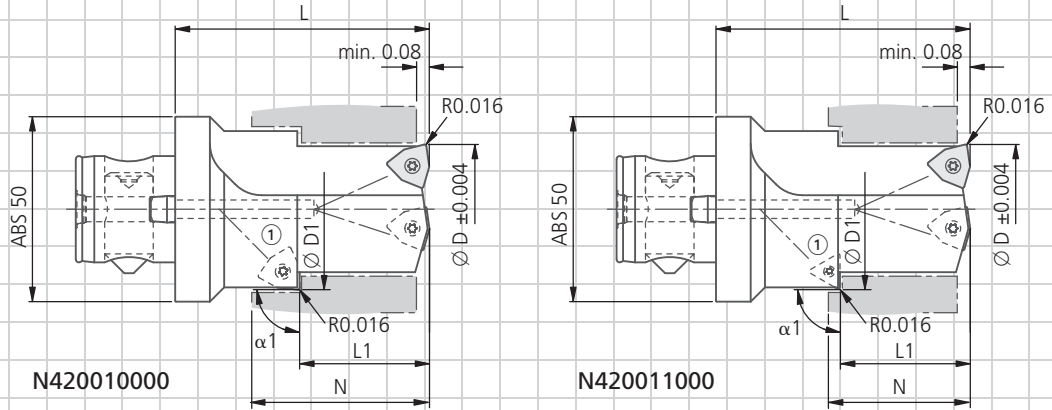
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_



XV12...

N420010000

N420011000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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# KOMET® Easy Special

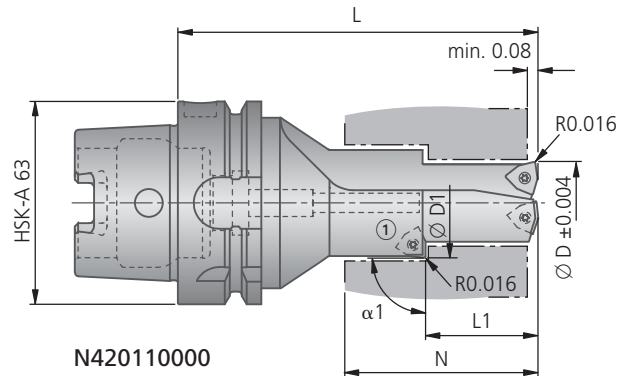
## Insert Drill with HSK-A Connection, R.H. cutting

KUB® Ø 0.551 – 1.732 inch  
(Ø 14 – 44 mm)

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●

● very good ○ good ✗ not possible

- HSK-A connection to ISO 12164-1
- drilling depth 2xD
- with a stepped cutting edge



(..) = mm

Solid drilling step (min/max dimension)			
Drilling examples			
Drilling range Ø D min - max	Drilling depth N min max		Insert
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L1+(1.5xD1)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L1+(1.5xD1)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L1+(1.5xD1)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L1+(1.5xD1)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L1+(1.5xD1)	W29 34...

Step ① (min/max dimension)					
Drilling examples					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1.5 × D	N + 2.216 (N + 54)	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 × D	N + 2.216 (N + 54)	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 × D	N + 2.323 (N + 59)	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	0.591 (15)	1.5 × D	N + 2.323 (N + 59)	W29 34...
1.181 – 1.969 (30.0 – 50.0)	90°-15°	0.591 (15)	1.5 × D	N + 2.323 (N + 59)	W59 18...

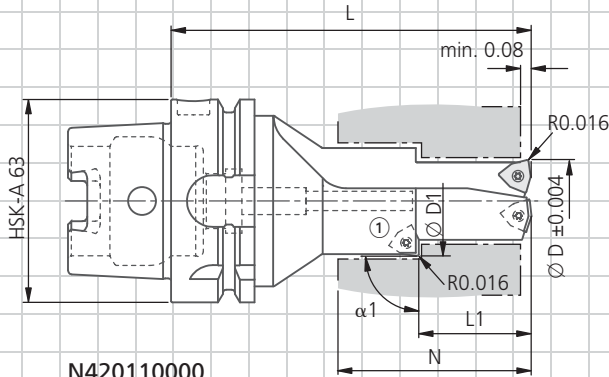
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_

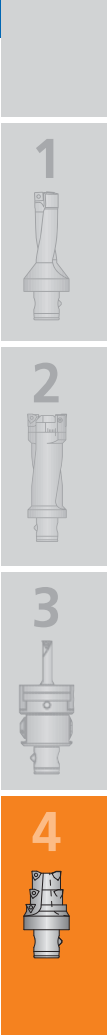


XV77...

N420110000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

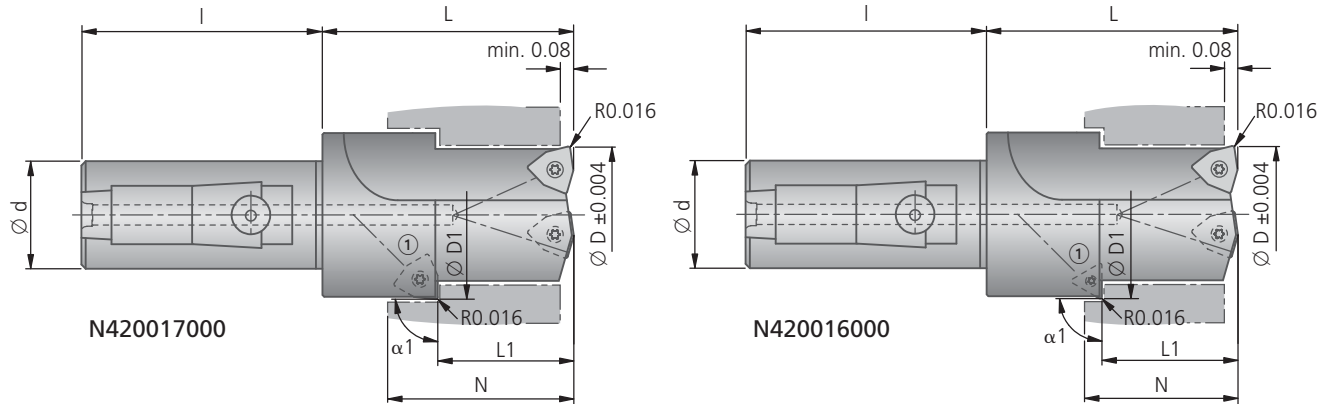


Insert Drill with Cylindrical Shank (Combination Shank),  
R.H. cutting

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●

● very good ○ good ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with a stepped cutting edge



(..) = mm

**Solid drilling step (min/max dimension)**

Drilling examples

Drilling range Ø D min - max	Drilling depth		Insert	Cylindrical shank Ø d x l (25x56) (32x60)	
	N min	N max		●	●
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L1+(1.5xD1)	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L1+(1.5xD1)	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L1+(1.5xD1)	W29 24...	●	●
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L1+(1.5xD1)	W29 24...		●
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L1+(1.5xD1)	W29 34...		●

**Step ① (min/max dimension)**

Drilling examples

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1.5 x D	N + 0.945 (N + 24)	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 x D	N + 0.945 (N + 24)	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 x D	N + 1.142 (N + 29)	W29 24...
1.377 – 1.732 (35.0 – 44.0)	90°-15°	0.591 (15)	1.5 x D	N + 1.142 (N + 29)	W29 34...
1.181 – 1.732 (30.0 – 44.0)	90°-15°	0.591 (15)	1.5 x D	N + 1.142 (N + 29)	W59 18...

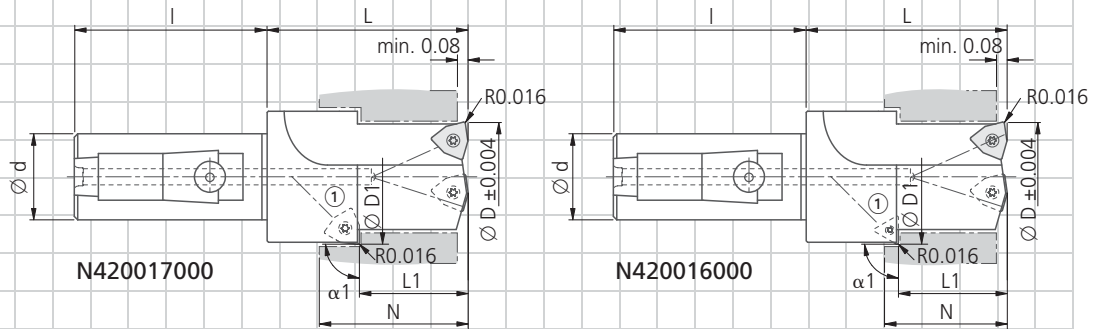
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_



XV85...

N420017000

N420016000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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# KOMET® Easy Special

## Insert Drill with ABS® Connection, R.H. cutting

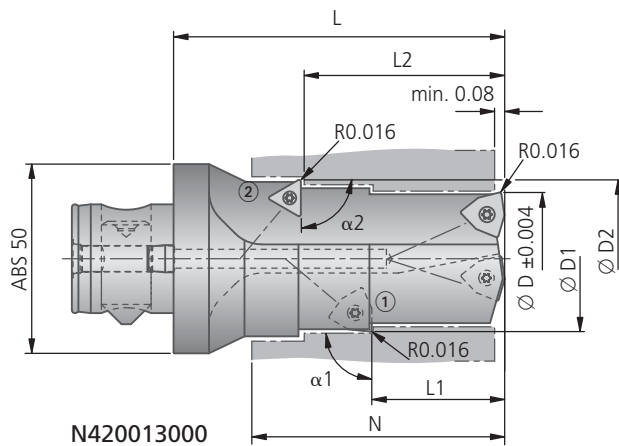
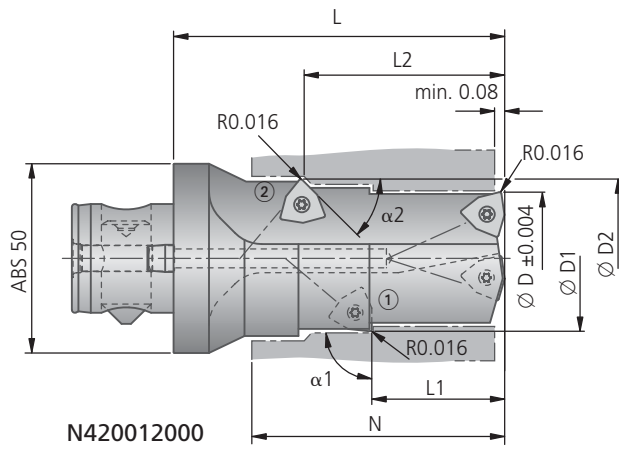
KUB® Ø 0.551 – 1.732 inch  
(Ø 14 – 44 mm)

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	○	●

● very good ○ good ✗ not possible

- drilling depth 2xD
- with two stepped cutting edges

(..) = mm



### Solid drilling step (min/max dimension)

Drilling range Ø D min - max	Drilling depth		Insert
	N min	N max	
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L2 + (1.5xD2)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L2 + (1.5xD2)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L2 + (1.5xD2)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L2 + (1.5xD2)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L2 + (1.5xD2)	W29 34...

### Step ① (min/max dimension)

Drilling range Ø D1 min - max	α1 max - min	L1		L	Insert
		L1 min	L1 max		
0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1.5 × D	N + 54	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 × D	N + 54	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 × D	N + 59	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	0.591 (15)	1.5 × D	N + 59	W29 34...

### Step ② (min/max dimension)

Drilling range Ø D2 min - max	α2 max - min	L2		L	Insert
		L2 min	L2 max		
0.689 – 0.983 (17.5 – 24.9)	90°-15°	L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29 34...
1.181 – 1.969 (30.0 – 50.0)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W59 18...



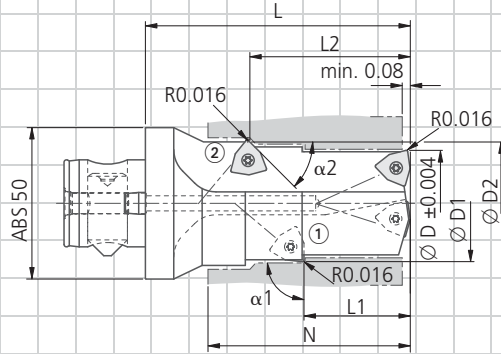
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
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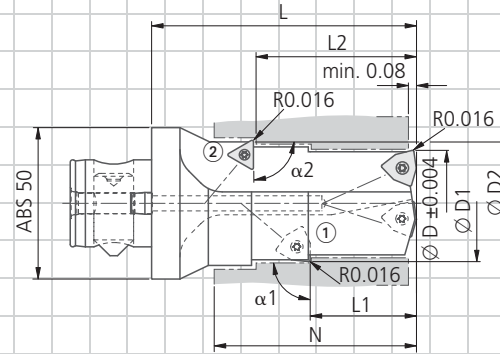
Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_



N420012000



N420013000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

This purchase order underlie the terms and conditions of sale by KOMET of America, Inc.



# KOMET® Easy Special

## Insert Drill with HSK-A Connection, R.H. cutting

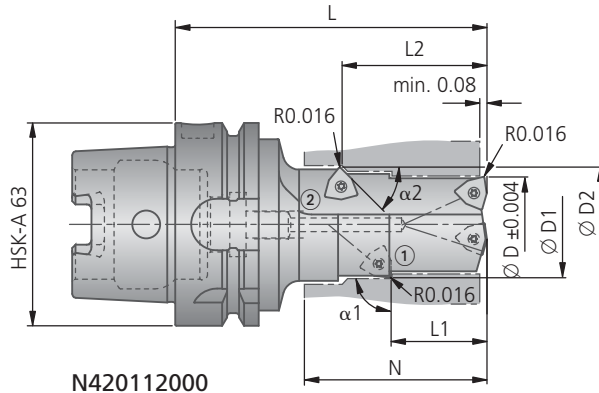
KUB® Ø 0.551 – 1.732 inch  
(Ø 14 – 44 mm)

L / D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●

● very good ○ good ✗ not possible

- HSK-A connection to ISO 12164-1
- drilling depth 2xD
- with two stepped cutting edges

(..) = mm



### Solid drilling step (min/max dimension)

Drilling range Ø D min - max	Drilling depth		Insert
	N min	N max	
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L2 + (1.5xD2)	W29 10...
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L2 + (1.5xD2)	W29 18...
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L2 + (1.5xD2)	W29 24...
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L2 + (1.5xD2)	W29 24...
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L2 + (1.5xD2)	W29 34...

### Step ① (min/max dimension)

Drilling range Ø D1 min - max	α1 max - min	L1		L	Insert
		L1 min	L1 max		
0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1.5 x D	N + 54	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 x D	N + 54	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 x D	N + 59	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	0.591 (15)	1.5 x D	N + 59	W29 34...

### Step ② (min/max dimension)

Drilling range Ø D2 min - max	α2 max - min	L2		L	Insert
		L2 min	L2 max		
0.689 – 0.983 (17.5 – 24.9)	90°-15°	L1	L1+(1.5xD1)	N + 2.216 (N + 54)	W29...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	L1	L1+(1.5xD1)	N + 2.216 (N + 54)	W29...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	L1	L1+(1.5xD1)	N + 2.323 (N + 59)	W29...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	L1	L1+(1.5xD1)	N + 2.323 (N + 59)	W29...

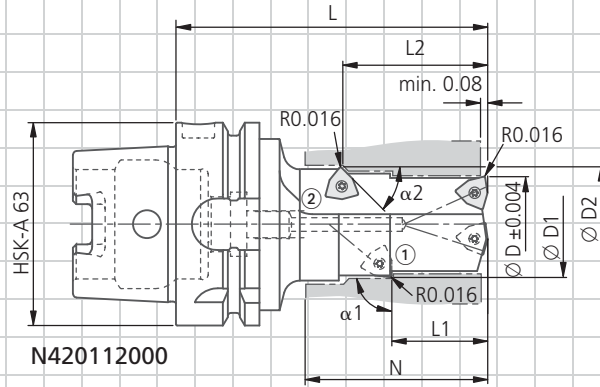
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_

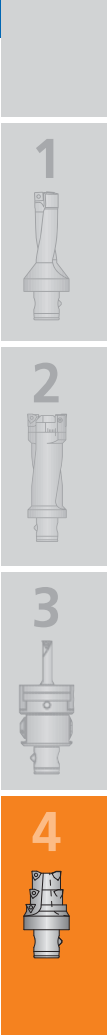


XV77...

N420112000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



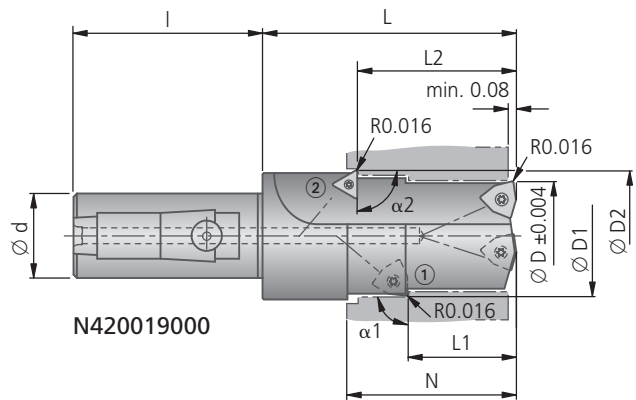
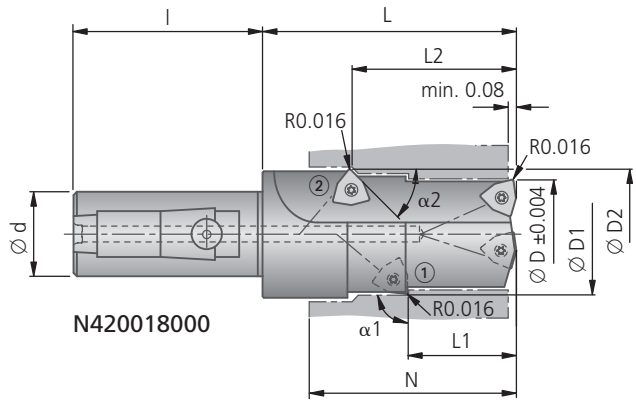
## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	○	●

● very good ○ good ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with two stepped cutting edges

(..) = mm



### Solid drilling step (min/max dimension)

Drilling range Ø D min - max	Drilling depth N		Insert	Cylindrical shank Ø d x l (25x56) (32x60)	
	min	max		●	●
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L2+(1.5xD2)	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L2+(1.5xD2)	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L2+(1.5xD2)	W29 24...	●	●
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L2+(1.5xD2)	W29 24...	●	●
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L2+(1.5xD2)	W29 34...	●	●

### Step ① (min/max dimension)

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	L	Insert
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 x D	N + 54	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 x D	N + 59	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	0.591 (15)	1.5 x D	N + 59	W29 34...

### Step ② (min/max dimension)

Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	L	Insert
0.984 – 1.180 (25.0 – 29.9)	90°-15°	L1	L1+(1.5xD1)	N + 1.378 (N + 35)	W29...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29...
1.377 – 1.969 (35.0 – 50.0)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W29...
1.181 – 1.969 (30.0 – 50.0)	90°-15°	L1	L1+(1.5xD1)	N + 1.575 (N + 40)	W59 18...

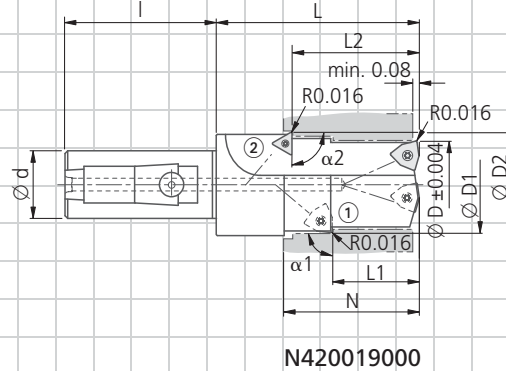
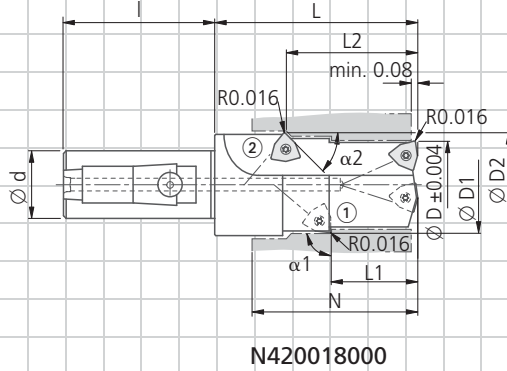
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_  
 XV85...



Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

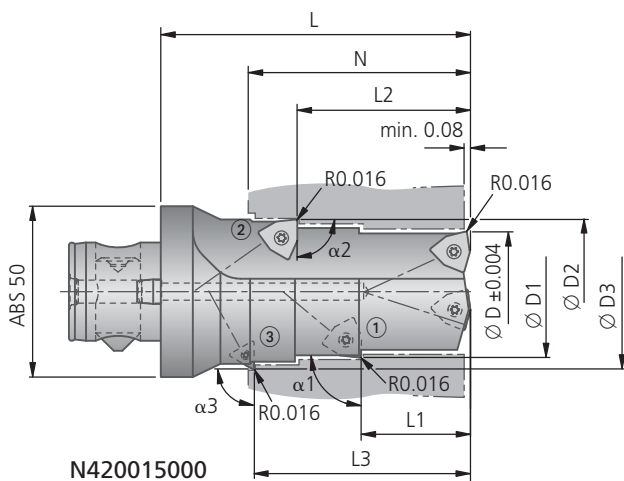
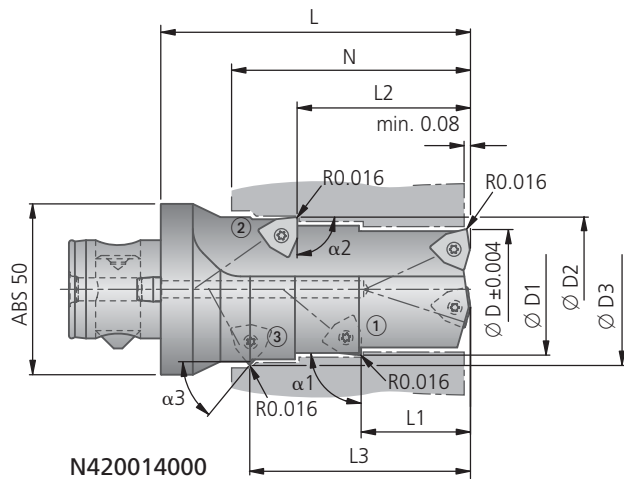


L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	✗	●	●

● very good ○ good ✗ not possible

- drilling depth 2xD
- with three stepped cutting edges

(..) = mm



### Solid drilling step (min/max dimension)

Drilling examples				
	Drilling range Ø D min - max	Drilling depth N min max		Insert
	0.551 – 0.786 (14.0 – 19.9)	1.181 (30)	L3 + (1.5xD3)	W29 10...
	0.787 – 0.983 (20.0 – 24.9)	1.181 (30)	L3 + (1.5xD3)	W29 18...
	0.984 – 1.180 (25.0 – 29.9)	1.575 (40)	L3 + (1.5xD3)	W29 24...
	1.181 – 1.456 (30.0 – 36.9)	1.575 (40)	L3 + (1.5xD3)	W29 24...
	1.457 – 1.732 (37.0 – 44.0)	1.575 (40)	L3 + (1.5xD3)	W29 34...

### Step ① (min/max dimension)

Drilling examples					
	Drilling range Ø D1 min - max	α1 max - min	L1 min	L1 max	Insert
	0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1.5 × D	W29 10...
	0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 × D	W29 18...
	1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 × D	W29 24...
	1.377 – 1.969 (35.0 – 50.0)	90°-15°	0.591 (15)	1.5 × D	W29 34...

### Step ② (min/max dimension)

Drilling examples					
	Drilling range Ø D2 min - max	α2 max - min	L2 min	L2 max	Insert
	0.689 – 0.983 (17.5 – 24.9)	90°-15°	L1	L1 + (1.5xD1)	W29...
	0.984 – 1.180 (25.0 – 29.9)	90°-15°	L1	L1 + (1.5xD1)	W29...
	1.181 – 1.376 (30.0 – 34.9)	90°-15°	L1	L1 + (1.5xD1)	W29...
	1.377 – 1.969 (35.0 – 50.0)	90°-15°	L1	L1 + (1.5xD1)	W29...

### Step ③ (min/max dimension)

Drilling examples						
	Drilling range Ø D3 min - max	α3 max - min	L3 min	L2 max	L	Insert
	0.689 – 0.983 (17.5 – 24.9)	90°-15°	L2	L2+(1.5xD2)	N + 1.378 (N + 35)	W29...
	0.984 – 1.180 (25.0 – 29.9)	90°-15°	L2	L2+(1.5xD2)	N + 1.378 (N + 35)	W29...
	1.181 – 1.376 (30.0 – 34.9)	90°-15°	L2	L2+(1.5xD2)	N + 1.575 (N + 40)	W29...
	1.377 – 1.969 (35.0 – 50.0)	90°-15°	L2	L2+(1.5xD2)	N + 1.575 (N + 40)	W29...
	1.181 – 1.969 (30.0 – 50.0)	90°-15°	L2	L2+(1.5xD2)	N + 1.575 (N + 40)	W59 18...

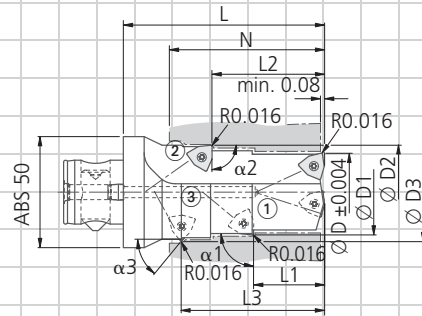
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
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 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

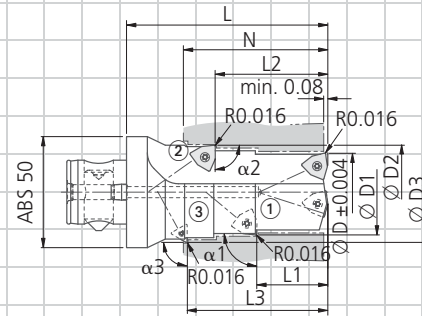
Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 $\alpha 1 =$  \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 $\alpha 2 =$  \_\_\_\_\_  
 ∅ D3 = \_\_\_\_\_  
 L3 = \_\_\_\_\_  
 $\alpha 3 =$  \_\_\_\_\_



XV12... N420014000

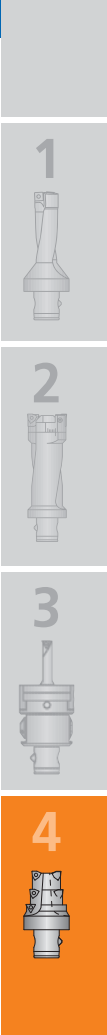


N420015000

Please provide workpiece sketch !

Blank grid area for providing a workpiece sketch.

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

KUB® Ø 0.551 – 1.732 inch  
(Ø 14 – 44 mm)

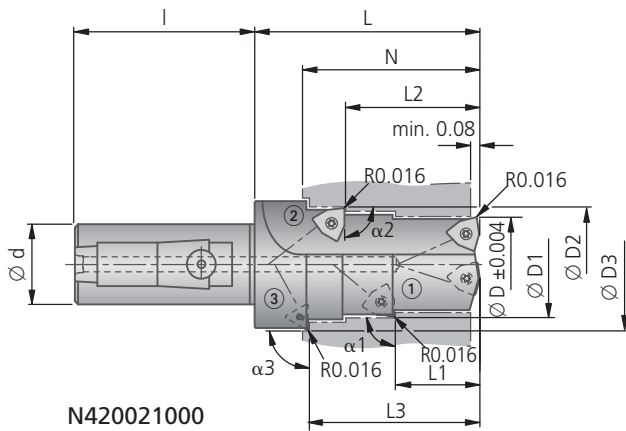
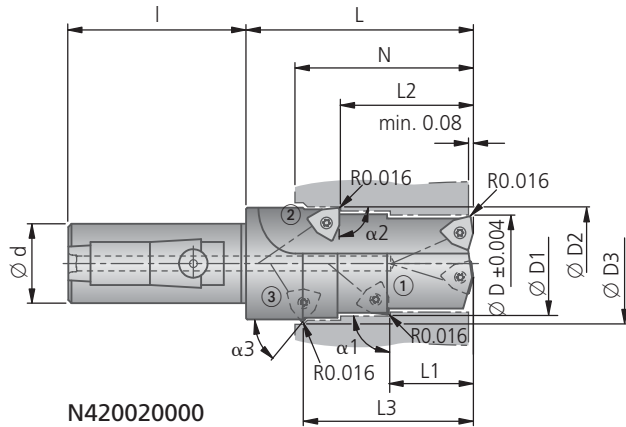
## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

L/D	solid drilling	blind hole	forge/casting skin, interface	angled	convex	cross bore	centering bore	chamber	stack plate drilling	rough boring	adjustable
2xD	●	●	●	●	●	●	●	●	×	●	●

● very good ○ good ○ possible × not possible

(..) = mm

- cylindrical shank (combination shank)  
DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with three stepped cutting edges



### Solid drilling step (min/max dimension)

Drilling range Ø D min - max	Drilling depth N		Insert	Cylindrical shank Ø d x l	
	min	max		(25x56)	(32x60)
0.551 – 0.786 (14.0 – 19.9)	0.591 (15)	L3+(1.5xD3)	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)	0.591 (15)	L3+(1.5xD3)	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)	0.787 (20)	L3+(1.5xD3)	W29 24...	●	●
1.181 – 1.456 (30.0 – 36.9)	0.787 (20)	L3+(1.5xD3)	W29 24...	●	●
1.457 – 1.732 (37.0 – 44.0)	0.787 (20)	L3+(1.5xD3)	W29 34...	●	●

### Step ① (min/max dimension)

Drilling range Ø D1 min - max	α1	L1	L1	Insert
	max - min	min	max	
0.689 – 0.983 (17.5 – 24.9)	90°-15°	0.394 (10)	1.5 x D	W29 10...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.394 (10)	1.5 x D	W29 18...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	0.591 (15)	1.5 x D	W29 24...
1.377 – 1.732 (35.0 – 44.0)	90°-15°	0.591 (15)	1.5 x D	W29 34...

### Step ② (min/max dimension)

Drilling range Ø D2 min - max	α2	L2	L2	Insert
	max - min	min	max	
0.689 – 0.983 (17.5 – 24.9)	90°-15°	L1	L1 + (1.5xD1)	W29...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	L1	L1 + (1.5xD1)	W29...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	L1	L1 + (1.5xD1)	W29...
1.377 – 1.732 (35.0 – 44.0)	90°-15°	L1	L1 + (1.5xD1)	W29...

### Step ③ (min/max dimension)

Drilling range Ø D3 min - max	α3	L3	L2	L	Insert
	max - min	min	max		
0.689 – 0.983 (17.5 – 24.9)	90°-15°	L2	L2+(1.5xD2)	N + 0.945 (N + 24)	W29...
0.984 – 1.180 (25.0 – 29.9)	90°-15°	L2	L2+(1.5xD2)	N + 0.945 (N + 24)	W29...
1.181 – 1.376 (30.0 – 34.9)	90°-15°	L2	L2+(1.5xD2)	N + 1.142 (N + 29)	W29...
1.377 – 1.732 (35.0 – 44.0)	90°-15°	L2	L2+(1.5xD2)	N + 1.142 (N + 29)	W29...
1.181 – 1.732 (30.0 – 44.0)	90°-15°	L2	L2+(1.5xD2)	N + 1.142 (N + 29)	W59 18...



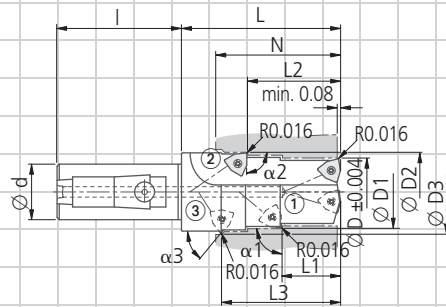
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

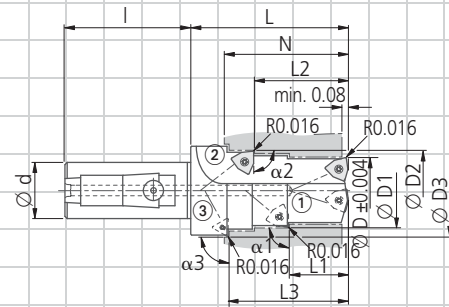
Material to be machined:

- ∅ D = \_\_\_\_\_
- N = \_\_\_\_\_
- ∅ D1 = \_\_\_\_\_
- L1 = \_\_\_\_\_
- α1 = \_\_\_\_\_
- ∅ D2 = \_\_\_\_\_
- L2 = \_\_\_\_\_
- α2 = \_\_\_\_\_
- ∅ D3 = \_\_\_\_\_
- L3 = \_\_\_\_\_
- α3 = \_\_\_\_\_
- ∅ d = \_\_\_\_\_



XV85...

N420020000

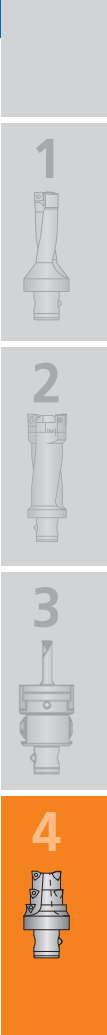


N420021000

Please provide workpiece sketch !

Blank grid area for providing a workpiece sketch.

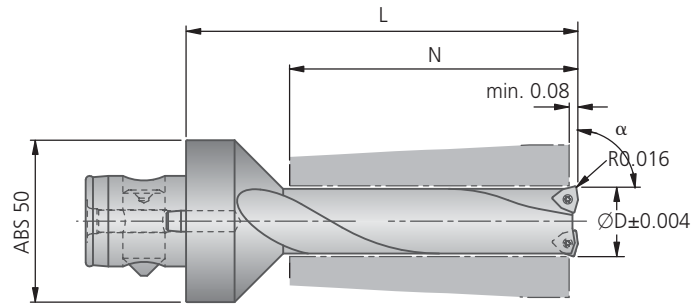
Delivery consists of: Basic tool body. Insert not included.



L / D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	×	●	80°	×
3xD	●	●	●	●	●	●	×	●	80°	×
4xD	●	●	●	●	●	●	×	●	80°	×

● very good ○ good ○ possible × not possible

■ drilling depth 2xD, 3xD, 4xD



N420022000

(..) = mm

Roughing step (min/max dimension)						
Drilling examples						
Drilling range Ø D min - max	Drilling depth N			L	α max - min	Insert
	2xD	3xD	4xD			
0.551 – 0.786 (14.0 – 19.9)	●	●	●	N + 1.378 (N + 35)	90° - 15°	W29 10...
0.787 – 0.983 (20.0 – 24.9)	●	●	●	N + 1.378 (N + 35)	90° - 15°	W29 18...
0.984 – 1.180 (25.0 – 29.9)	●	●	●	N + 1.378 (N + 35)	90° - 15°	W29 24...
1.181 – 1.456 (30.0 – 36.9)	●	●	●	N + 1.575 (N + 40)	90° - 15°	W29 24...
1.457 – 1.732 (37.0 – 44.0)	●	●	●	N + 1.969 (N + 50)	90° - 15°	W29 34...

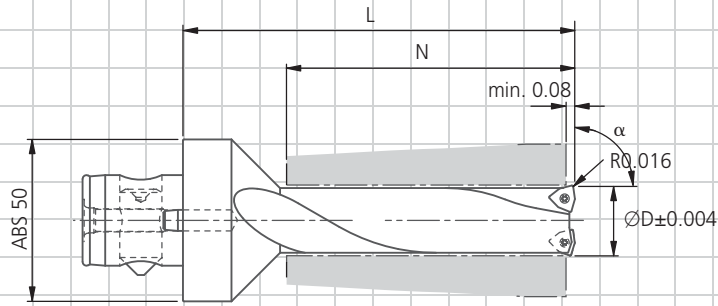
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N =  2×D  
        3×D  
        4×D



XB86...      N420022000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

TwinKom® Ø 0.551 – 1.732 inch

Twin Cutter with Cylindrical Shank (Combination Shank),  
R.H. cutting

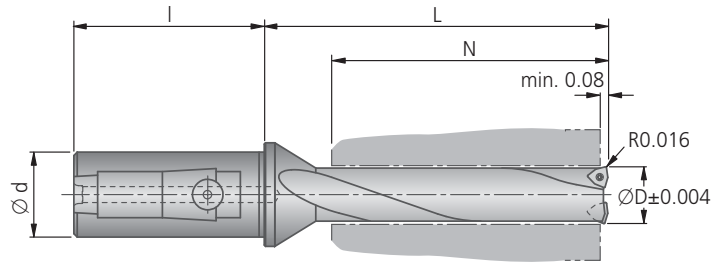
(Ø 14 – 44 mm)

L / D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	×	●	80°	×
3xD	●	●	●	●	●	●	×	●	80°	×
4xD	●	●	●	●	●	●	×	●	80°	×

● very good ○ good ○ possible × not possible

■ cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595

■ drilling depth 2xD, 3xD, 4xD



N420023000

(..) = mm

Roughing step (min/max dimension)								
Drilling range Ø D min - max	Drilling depth N			L	Insert	Cylindrical shank Ø d x l		
	2xD	3xD	4xD			(20x50)	(25x56)	(32x60)
0.551 – 0.786 (14.0 – 19.9)	●	●	●	N + 0.945 (N + 24)	W29 10...	●	●	●
0.787 – 0.983 (20.0 – 24.9)	●	●	●	N + 0.945 (N + 24)	W29 18...	●	●	●
0.984 – 1.180 (25.0 – 29.9)	●	●	●	N + 0.945 (N + 24)	W29 24...		●	●
1.181 – 1.456 (30.0 – 36.9)	●	●	●	N + 1.142 (N + 29)	W29 24...			●
1.457 – 1.732 (37.0 – 44.0)	●	●	●	N + 1.535 (N + 39)	W29 34...			●

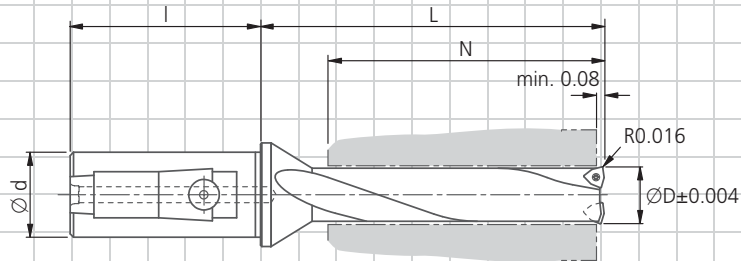
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined: \_\_\_\_\_

∅ D = \_\_\_\_\_  
 N =  2×D  
        3×D  
        4×D  
 ∅ d = \_\_\_\_\_

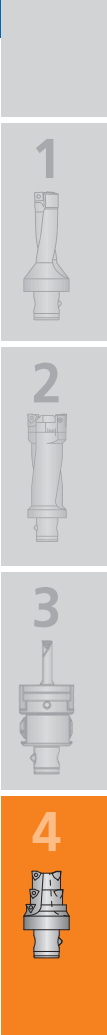


XB97...      N420023000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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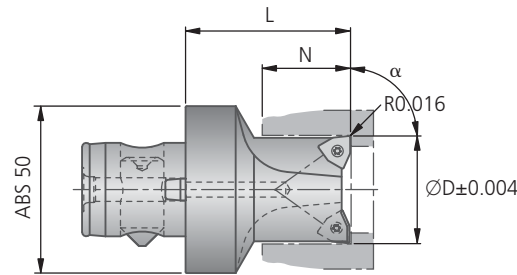


L/D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD										
	●	●	●	●	●	●	×	●	80°	×

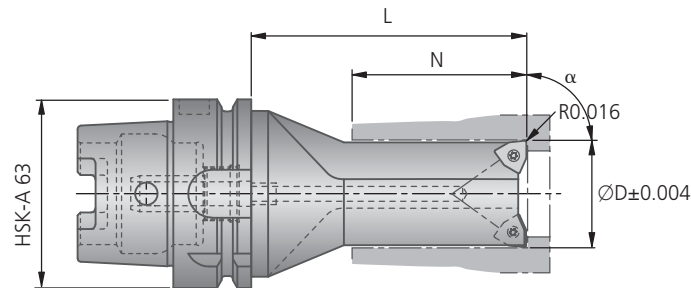
● very good ○ good ○ possible × not possible

■ HSK-A connection to ISO 12164-1

■ drilling depth 2xD



N420022000



N420122000

(..) = mm

Roughing step (min/max dimension)						
Drilling range		Drilling depth		ABS	HSK	Insert
min	max	N min	N max	L	L	
0.551 – 0.786	(14.0 – 19.9)	0.197 (5)	2 × D	N + 1.378 (N + 35)	N + 2.216 (N + 54)	W29 10...
0.787 – 0.983	(20.0 – 24.9)	0.197 (5)	2 × D	N + 1.378 (N + 35)	N + 2.216 (N + 54)	W29 18...
0.984 – 1.180	(25.0 – 29.9)	0.197 (5)	2 × D	N + 1.378 (N + 35)	N + 2.216 (N + 54)	W29 24...
1.181 – 1.969	(30.0 – 50.0)	0.197 (5)	2 × D	N + 1.575 (N + 40)	N + 2.323 (N + 59)	W29 34...

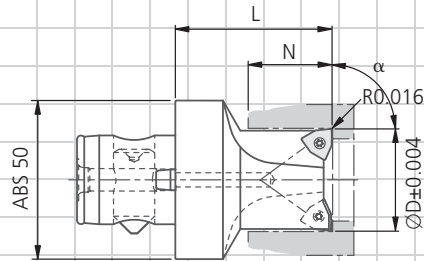
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

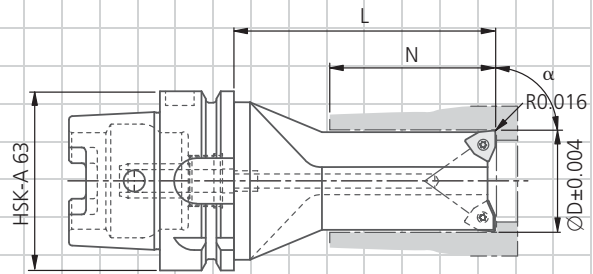
Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ABS 50   
 HSK-A 63



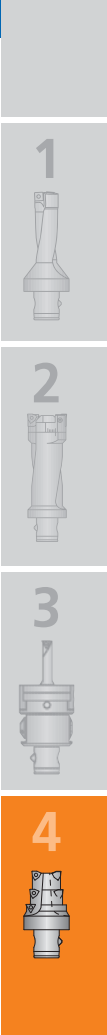
XB86.../XB83...      N420022000



N420122000

Please provide workpiece sketch !

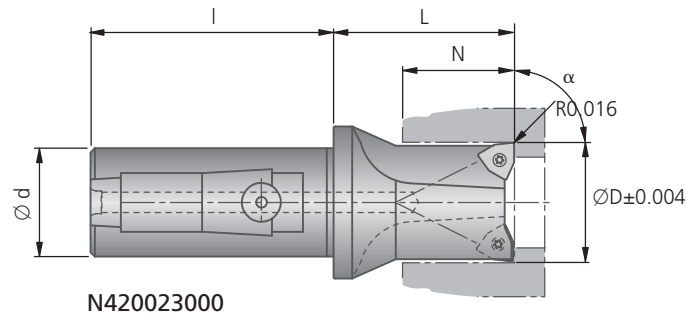
Delivery consists of: Basic tool body. Insert not included.



L / D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	✗	●	80°	✗

● very good ○ good ○ possible ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD



(..) = mm

Roughing step (min/max dimension)							
Drilling range Ø D min - max	α max - min	Drilling depth		L	Insert	Cylindrical shank Ø d x l (25x56) (32x60)	
		N min	N max			●	●
0.551 – 0.786 (14.0 – 19.9)	90°-15°	0.197 (5)	2 x D	N + 0.945 (N + 24)	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)	90°-15°	0.197 (5)	2 x D	N + 0.945 (N + 24)	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)	90°-15°	0.197 (5)	2 x D	N + 0.945 (N + 24)	W29 24...	●	●
1.181 – 1.732 (30.0 – 44.0)	90°-15°	0.197 (5)	2 x D	N + 1.142 (N + 29)	W29 34...		●



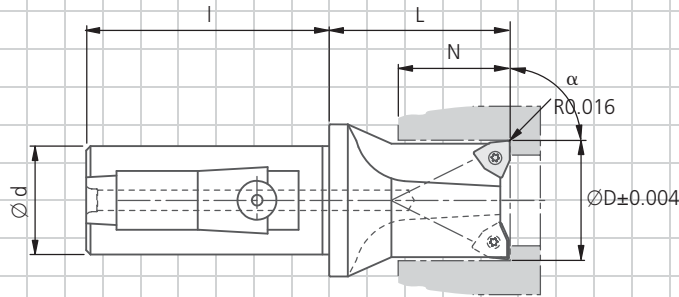
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_



XV97...      N420023000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

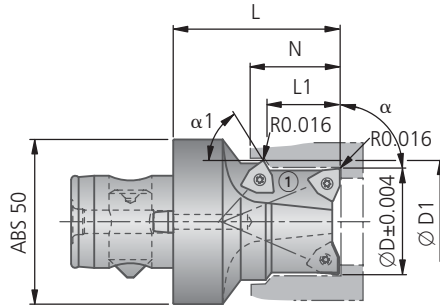
## Twin Cutter with ABS® Connection, R.H. cutting

TwinKom® Ø 0.551 – 1.969 inch  
(Ø 14 – 50 mm)

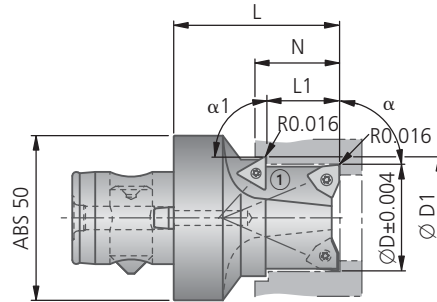
L/D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	✗	●	80°	✗

● very good ○ good ◯ possible ✗ not possible

- drilling depth 2xD
- with chamfering insert



N420025000



N420027000

(..) = mm

Roughing step (min/max dimension)					
Drilling range Ø D min - max	Drilling depth for		N max	α max - min	Insert
	N420025000 N min	N420027000 N min			
0.551 – 0.786 (14.0 – 19.9)	0.394 (10)	L1	2 × D	90° - 15°	W29 10...
0.787 – 0.983 (20.0 – 24.9)	0.394 (10)	L1	2 × D	90° - 15°	W29 18...
0.984 – 1.180 (25.0 – 29.9)	0.394 (10)	L1	2 × D	90° - 15°	W29 24...
1.181 – 1.969 (30.0 – 50.0)	0.394 (10)	L1	2 × D	90° - 15°	W29 34...

Chamfering step ① (min/max dimension)					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
0.906 – 1.180 (23.0 - 29.9)	75° - 15°	0.394 (10)	≤ N	N + 1.378 (N + 35)	W29 24...
1.181 – 1.376 (30.0 - 34.9)	75° - 15°	0.591 (15)	≤ N	N + 1.575 (N + 40)	W29 24...
1.377 – 1.969 (35.0 - 50.0)	75° - 15°	0.591 (15)	≤ N	N + 1.575 (N + 40)	W29 34...
1.181 – 1.969 (30.0 - 50.0)	90° - 15°	0.591 (15)	2xD	N + 1.575 (N + 40)	W59 18...

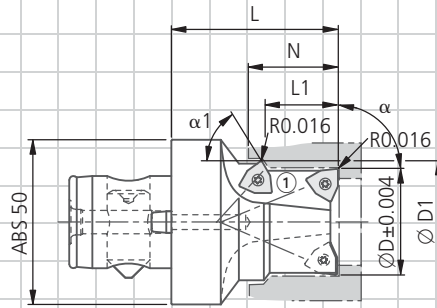
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

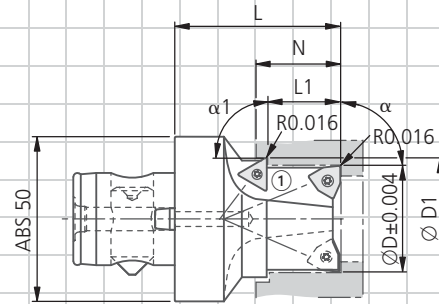
Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_



N420025000

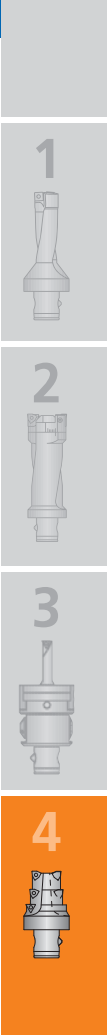


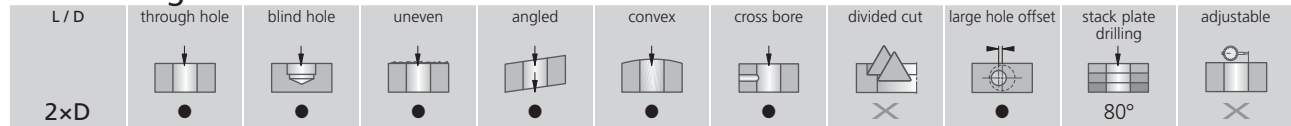
N420027000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

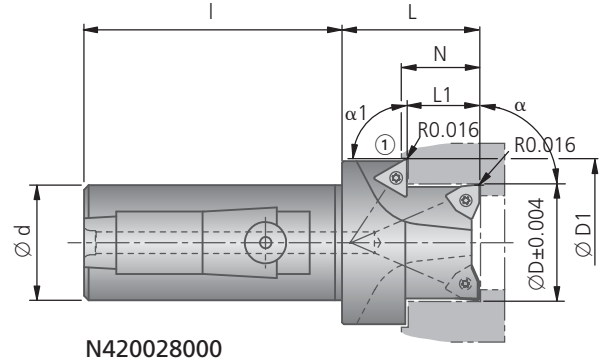
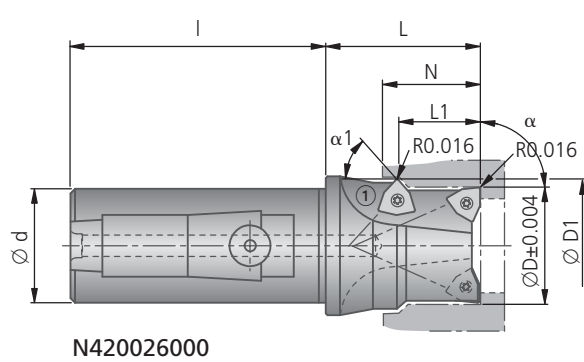
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● very good ○ good ◐ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with chamfering insert



(..) = mm

Roughing step (min/max dimension)								
Drilling range Ø D min - max		α max - min	Drilling depth N min max		L	Insert	Cylindrical shank Ø d x l (25x56) (32x60)	
0.551 – 0.786 (14.0 – 19.9)		90°-15°	0.394 (10)	2 x D	N + 0.945 (N + 24)	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)		90°-15°	0.394 (10)	2 x D	N + 0.945 (N + 24)	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)		90°-15°	0.394 (10)	2 x D	N + 0.945 (N + 24)	W29 24...	●	●
1.181 – 1.732 (30.0 – 44.0)		90°-15°	0.394 (10)	2 x D	N + 1.142 (N + 29)	W29 34...	●	●

Chamfering step ① (min/max dimension)						
Drilling range Ø D1 min - max		α1 max - min	L1 min	L1	L	Insert
0.669 – 0.905 (17.0 – 22.9)		75° - 15°	0.394 (10)	≅ N	N + 1.378 (N + 35)	W29 10...
0.906 – 1.180 (23.0 – 29.9)		75° - 15°	0.394 (10)	≅ N	N + 1.378 (N + 35)	W29 24...
1.181 – 1.376 (30.0 – 34.9)		75° - 15°	0.591 (15)	≅ N	N + 1.575 (N + 40)	W29 24...
1.377 – 1.969 (35.0 – 50.0)		75° - 15°	0.591 (15)	≅ N	N + 1.575 (N + 40)	W29 34...
1.181 – 1.969 (30.0 – 50.0)		90° - 15°	0.591 (15)	2xD	N + 1.575 (N + 40)	W59 18...

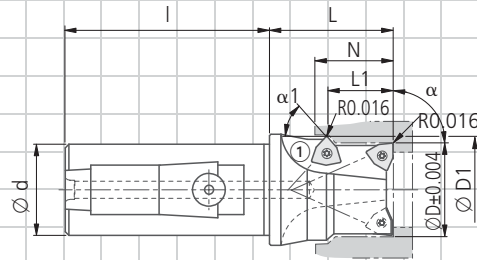
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

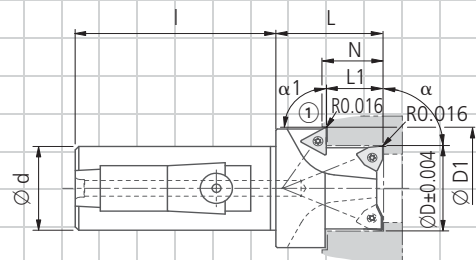
Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_



N420026000

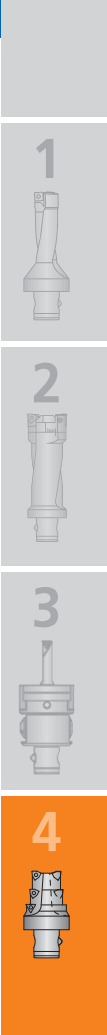


N420028000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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# KOMET® Easy Special

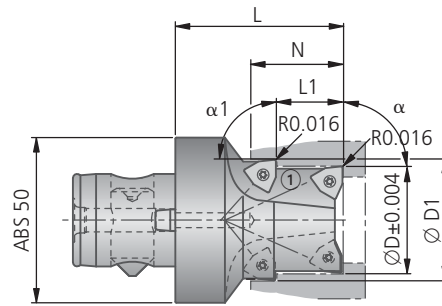
## Twin Cutter with ABS® Connection, R.H. cutting

TwinKom® Ø 0.551 – 1.969 inch  
(Ø 14 – 50 mm)

L/D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD										
	●	●	●	●	●	●	✗	●	80°	✗

● very good ● good ○ possible ✗ not possible

- drilling depth 2xD
- with a stepped cutting edge



N420060000

(..) = mm

Roughing step (min/max dimension)				
Drilling range Ø D min - max	Drilling depth		α max - min	Insert
	N min	N max		
0.551 – 0.786 (14.0 – 19.9)	> L1	2 × D	90° - 15°	W29 10...
0.787 – 0.983 (20.0 – 24.9)	> L1	2 × D	90° - 15°	W29 18...
0.984 – 1.180 (25.0 – 29.9)	> L1	2 × D	90° - 15°	W29 24...
1.181 – 1.969 (30.0 – 50.0)	> L1	2 × D	90° - 15°	W29 34...

Step ① (min/max dimension)					
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
0.906 – 1.180 (23.0 - 29.9)	90° - 15°	0.394 (10)	≅ N	N + 1.378 (N + 35)	W29 24...
1.181 – 1.376 (30.0 - 34.9)	90° - 15°	0.591 (15)	≅ N	N + 1.575 (N + 40)	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90° - 15°	0.591 (15)	≅ N	N + 1.575 (N + 40)	W29 34...

Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company:

Address:

Contact:

Department:

Phone:

Fax:

E-Mail:

Order

Enquiry

Quantity:

Material to be machined:

$\varnothing D =$

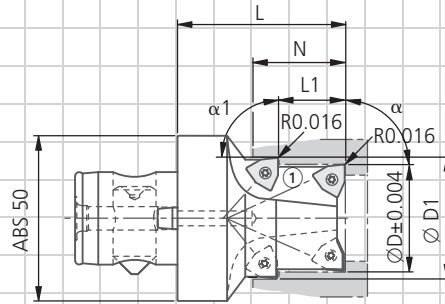
$\alpha =$

$N =$

$\varnothing D1 =$

$L1 =$

$\alpha 1 =$



XB86...

N420060000

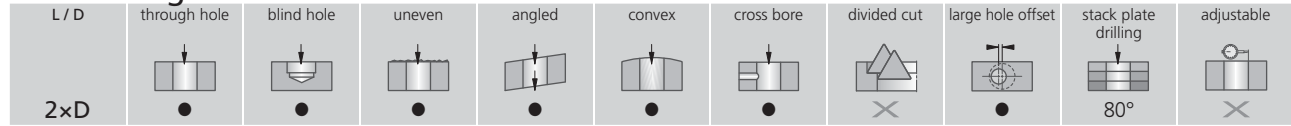
Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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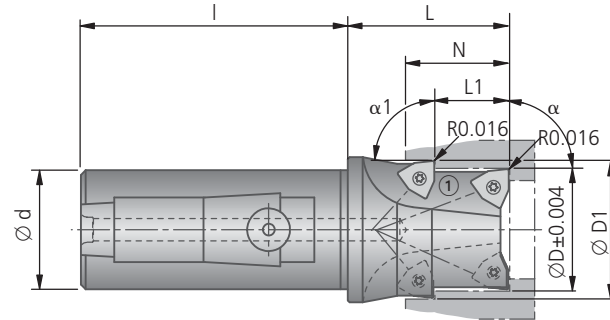


Twin Cutter with Cylindrical Shank (Combination Shank),  
R.H. cutting



● very good ● good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with a stepped cutting edge



N420061000

(..) = mm

**Roughing step (min/max dimension)**

Drilling examples

Drilling range Ø D min - max	α max - min	Drilling depth		Insert	Cylindrical shank Ø d x l	
		N min	N max		(25x56)	(32x60)
0.551 – 0.786 (14.0 – 19.9)	90° - 15°	> L1	2 x D	W29 10...	●	●
0.787 – 0.983 (20.0 – 24.9)	90° - 15°	> L1	2 x D	W29 18...	●	●
0.984 – 1.180 (25.0 – 29.9)	90° - 15°	> L1	2 x D	W29 24...	●	●
1.181 – 1.732 (30.0 – 44.0)	90° - 15°	> L1	2 x D	W29 34...		●

**Step ① (min/max dimension)**

Drilling examples

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	L	Insert
0.669 – 0.905 (17.0 – 22.9)	90° - 15°	0.394	< N	N + 0.945 (N + 24)	W29 10...
0.906 – 1.180 (23.0 – 29.9)	90° - 15°	0.394	< N	N + 0.945 (N + 24)	W29 24...
1.181 – 1.376 (30.0 – 34.9)	90° - 15°	0.591	< N	N + 1.142 (N + 29)	W29 24...
1.377 – 1.732 (35.0 – 44.0)	90° - 15°	0.591	< N	N + 1.142 (N + 29)	W29 34...



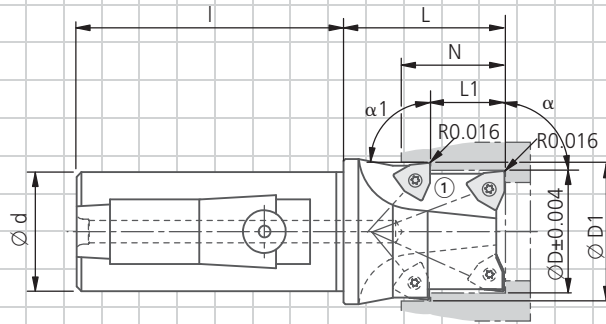
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_



XB97...      N420061000

Please provide workpiece sketch !

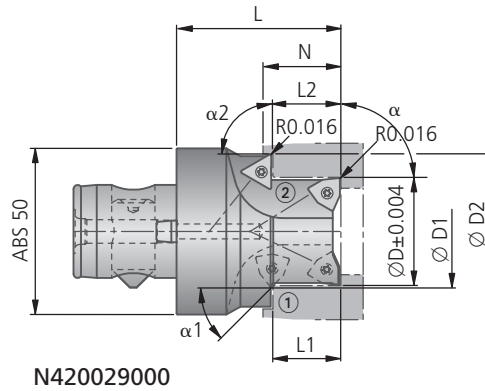
Delivery consists of: Basic tool body. Insert not included.



L/D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	✗	●	80°	✗

● very good ○ good ✗ not possible

- drilling depth 2xD
- with two stepped cutting edges



(..) = mm

**Roughing step (min/max dimension)**

Drilling examples

Drilling range Ø D min - max	N min	N max	α max - min	Insert
0.551 – 0.786 (14.0 – 19.9)	L2	L2 + 2	90° - 15°	W29 10...
0.787 – 0.983 (20.0 – 24.9)	L2	L2 + 2	90° - 15°	W29 18...
0.984 – 1.180 (25.0 – 29.9)	L2	L2 + 2	90° - 15°	W29 24...
1.181 – 1.969 (30.0 – 50.0)	L2	L2 + 2	90° - 15°	W29 34...

**Step ① (min/max dimension)**

Drilling examples

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	Insert
0.669 – 0.905 (17.0 – 22.9)	90° - 15°	0.394 (10)	≅ L2	W29 10...
0.906 – 1.180 (23.0 – 29.9)	90° - 15°	0.394 (10)	≅ L2	W29 24...
1.181 – 1.376 (30.0 – 34.9)	90° - 15°	0.591 (15)	≅ L2	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90° - 15°	0.591 (15)	≅ L2	W29 34...

**Step ② (min/max dimension)**

Drilling examples

Drilling range Ø D2 min - max	α2 max - min	L2 min	L2	L	Insert
1.181 – 1.969 (30.0 – 50.0)	90° - 15°	L1	2 x D	N + 1.575 (N + 40)	W59 18...

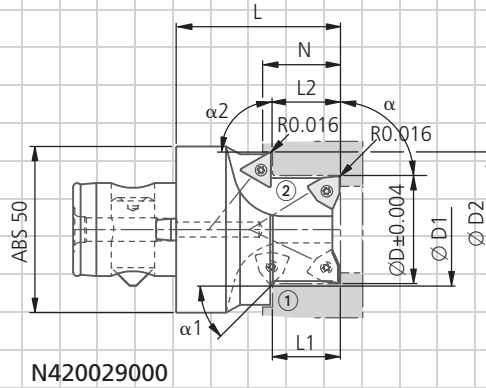
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

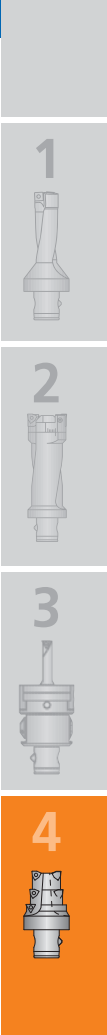
Material to be machined:

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 α = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_  
 XB86...



Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

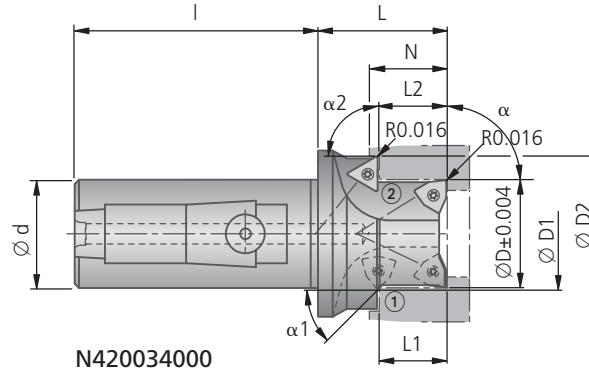


Twin Cutter with Cylindrical Shank (Combination Shank),  
R.H. cutting

L / D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD										
	●	●	●	●	●	●	✗	●	80°	✗

● very good ○ good ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with two stepped cutting edges



(..) = mm

**Roughing step (min/max dimension)**

Drilling examples

Drilling range Ø D min - max	α max - min	Drilling depth		Insert	Cylindrical shank Ø d × l (32×60)
		N min	N max		
0.551 – 0.786 (14.0 – 19.9)	90° - 15°	L2	L2 + 2	W29 10...	●
0.787 – 0.983 (20.0 – 24.9)	90° - 15°	L2	L2 + 2	W29 18...	●
0.984 – 1.180 (25.0 – 29.9)	90° - 15°	L2	L2 + 2	W29 24...	●
1.181 – 1.732 (30.0 – 44.0)	90° - 15°	L2	L2 + 2	W29 34...	●

**Step ① (min/max dimension)**

Drilling examples

Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	Insert
0.906 – 1.180 (23.0 – 29.9)	90° - 15°	0.394 (10)	≤ L2	W29 24...
1.181 – 1.376 (30.0 – 34.9)	90° - 15°	0.591 (15)	≤ L2	W29 24...
1.377 – 1.732 (35.0 – 44.0)	90° - 15°	0.591 (15)	≤ L2	W29 34...

**Step ② (min/max dimension)**

Drilling examples

Drilling range Ø D2 min - max	α2 max - min	L2 min	L2	L	Insert

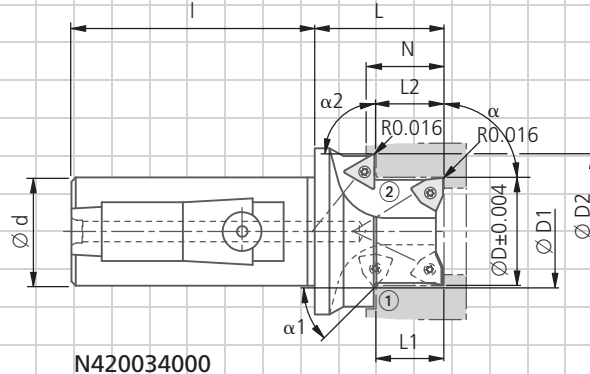
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

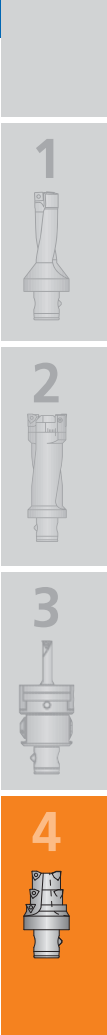
∅ D = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_  
 ∅ d = \_\_\_\_\_  
 XB97...



N420034000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



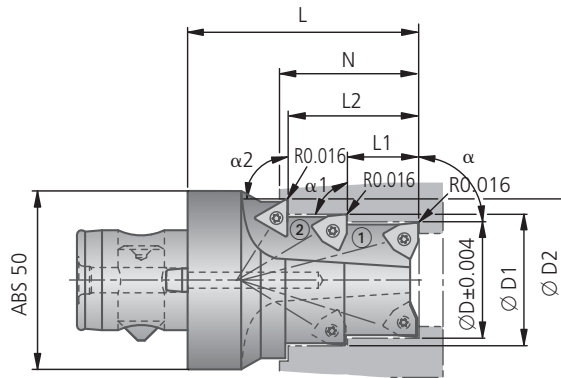
# KOMET® Easy Special Twin Cutter with ABS® Connection, R.H. cutting

TwinKom® Ø 0.551 – 1.969 inch  
(Ø 14 – 50 mm)

L/D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	✗	●	80°	✗

● very good ○ good ✗ not possible

- drilling depth 2xD
- with two stepped cutting edges



N420062000

(..) = mm

Roughing step (min/max dimension)				
Drilling examples				
Drilling range Ø D min - max	Drilling depth N min max		α max - min	Insert
0.551 – 0.786 (14.0 – 19.9)	> L2	L2 + 2	90° - 15°	W29 10...
0.787 – 0.983 (20.0 – 24.9)	> L2	L2 + 2	90° - 15°	W29 18...
0.984 – 1.180 (25.0 – 29.9)	> L2	L2 + 2	90° - 15°	W29 24...
1.181 – 1.969 (30.0 – 50.0)	> L2	L2 + 2	90° - 15°	W29 34...

Step ① (min/max dimension)				
Drilling examples				
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	Insert
0.669 – 0.905 (17.0 – 22.9)	90° - 15°	0.394 (10)	L2 – 0.394 (L2 – 10)	W29 10...
0.906 – 1.180 (23.0 – 29.9)	90° - 15°	0.394 (10)	L2 – 0.394 (L2 – 10)	W29 24...
1.181 – 1.376 (30.0 – 34.9)	90° - 15°	0.591 (15)	L2 – 0.394 (L2 – 10)	W29 24...
1.377 – 1.969 (35.0 – 50.0)	90° - 15°	0.591 (15)	L2 – 0.394 (L2 – 10)	W29 34...

Step ② (min/max dimension)					
Drilling examples					
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2	L	Insert
1.181 – 1.969 (30.0 – 50.0)	90° - 15°	L1 + 15	2 x D	N + 1.575 (N + 40)	W59 18...

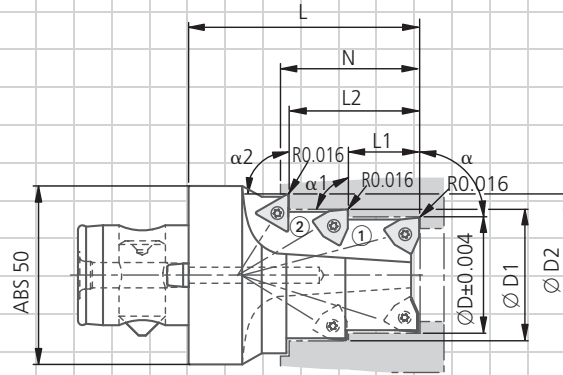
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

∅ D = \_\_\_\_\_  
 L = \_\_\_\_\_  
 α = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 L1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_  
 ∅ D2 = \_\_\_\_\_  
 L2 = \_\_\_\_\_  
 α2 = \_\_\_\_\_



XB86...

N420062000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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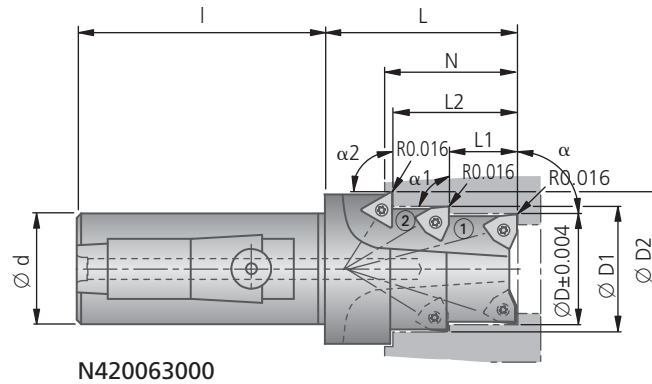


## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

L/D	through hole	blind hole	uneven	angled	convex	cross bore	divided cut	large hole offset	stack plate drilling	adjustable
2xD	●	●	●	●	●	●	✗	●	80°	✗

● very good ○ good ✗ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2xD
- with two stepped cutting edges



(..) = mm

Roughing step (min/max dimension)					
Drilling examples					
Drilling range Ø D min - max	α max - min	Drilling depth N min max		Insert	Cylindrical shank Ø d × l (32×60)
0.551 – 0.786 (14.0 – 19.9)	90° - 15°	> L2	L2 + 2	W29 10...	●
0.787 – 0.983 (20.0 – 24.9)	90° - 15°	> L2	L2 + 2	W29 18...	●
0.984 – 1.180 (25.0 – 29.9)	90° - 15°	> L2	L2 + 2	W29 24...	●
1.181 – 1.732 (30.0 – 44.0)	90° - 15°	> L2	L2 + 2	W29 34...	●

Step ① (min/max dimension)				
Drilling examples				
Drilling range Ø D1 min - max	α1 max - min	L1 min	L1	Insert
0.669 – 0.905 (17.0 – 22.9)	90° - 15°	0.394 (10)	L2 – 10	W29 10...
0.906 – 1.180 (23.0 – 29.9)	90° - 15°	0.394 (10)	L2 – 10	W29 24...
1.181 – 1.376 (30.0 – 34.9)	90° - 15°	0.591 (15)	L2 – 10	W29 24...
1.377 – 1.732 (35.0 – 44.0)	90° - 15°	0.591 (15)	L2 – 10	W29 34...

Step ② (min/max dimension)					
Drilling examples					
Drilling range Ø D2 min - max	α2 max - min	L2 min	L2	L	Insert
1.181 – 1.732 (30.0 – 44.0)	90° - 15°	L1 + 15	2 × D	N + 1.142 (N + 29)	W59 18...



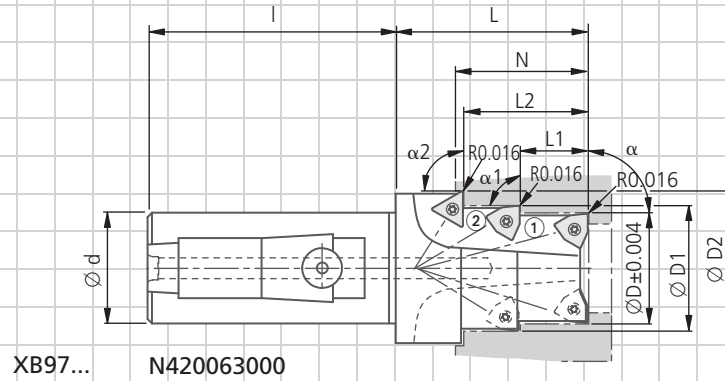
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

Material to be machined:

- ∅ D = \_\_\_\_\_
- L = \_\_\_\_\_
- α = \_\_\_\_\_
- N = \_\_\_\_\_
- ∅ D1 = \_\_\_\_\_
- L1 = \_\_\_\_\_
- α1 = \_\_\_\_\_
- ∅ D2 = \_\_\_\_\_
- L2 = \_\_\_\_\_
- α2 = \_\_\_\_\_
- ∅ d = \_\_\_\_\_



Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

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# KOMET® Easy Special

Boring Bar with ABS® Connection, R.H. cutting

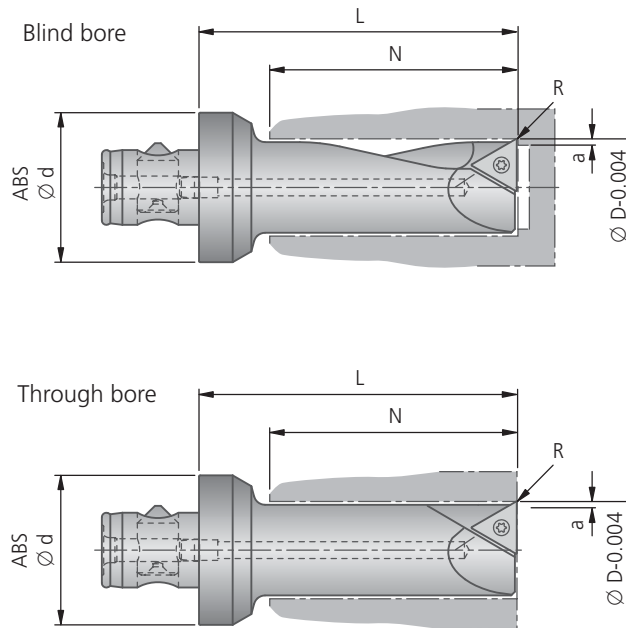
Ø 0.315 – 1.575 inch  
(Ø 8 – 40 mm)

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	● very good	● good	○ possible	✗ not possible		● up to 2xD	● up to 2xD	✗

■ for machining steel

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® hi.flex



N420030000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	ABS Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W30 04...	25
0.472 – 0.551 (12.0 – 14.0)					W30 14...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W30 04...	32
0.472 – 1.260 (12.0 – 32.0)					W30 14...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.787 (N + 20)	0.012 (0.3)	W30 04...	40
0.472 – 1.575 (12.0 – 40.0)					W30 14...	

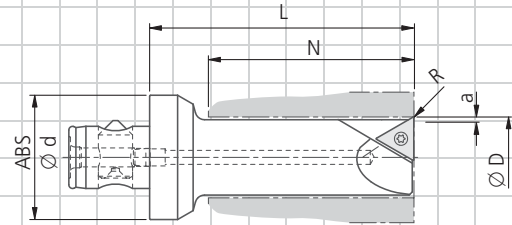
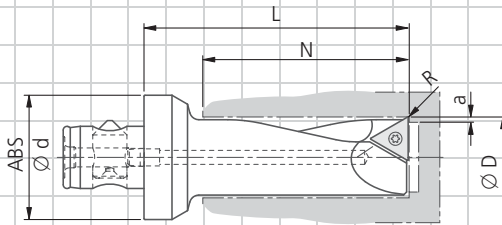
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining steel  
 Material to be machined:

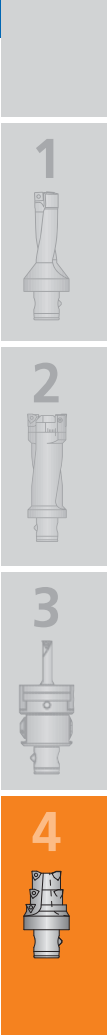
- ∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ d =  ABS 25  
 ABS 32  
 ABS 40



XB00...      N42003000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

Boring Bar with Cylindrical Shank (KFK-UJ), R.H. cutting

Ø 0.315 – 0.945 inch  
(Ø 8 – 24 mm)

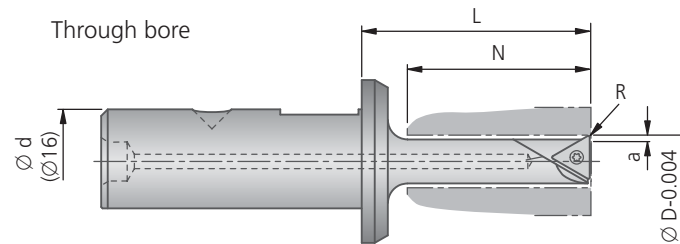
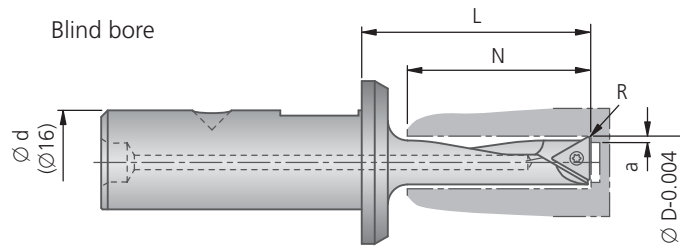
L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	●	●	○	○	×	● up to 2xD	● up to 2xD	×

● very good ○ good ○ possible × not possible

■ for machining steel

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)



N420031000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 × D	N + 0.354 (N + 9)	0.012 (0.3)	W30 04...	0.630 (16)
0.472 – 0.945 (12.0 – 24.0)					W30 14...	

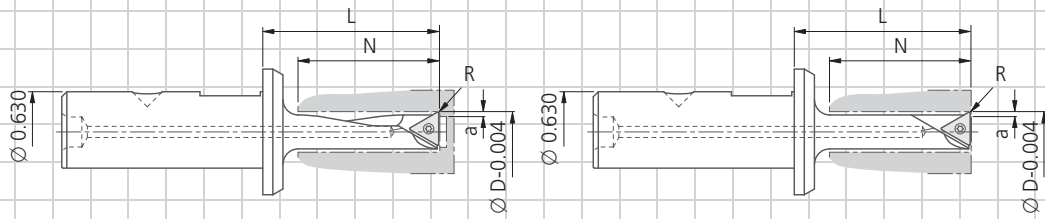
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining steel  
 Material to be machined: \_\_\_\_\_

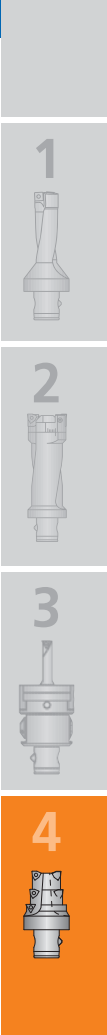
∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_



XB00...      N420031000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

Boring Bar with ABS® Connection, R.H. cutting

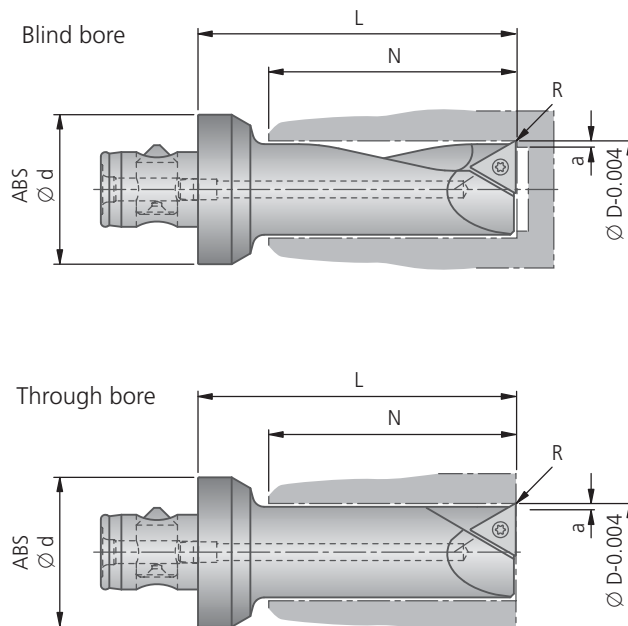
Ø 0.315 – 1.575 inch  
(Ø 8 – 40 mm)

L / D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	● very good	● good	○ possible	✗ not possible		● up to 2xD	● up to 2xD	✗

■ **N** for machining aluminium

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex*



N420030000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	ABS Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W32 03...	25
0.472 – 0.551 (12.0 – 14.0)					W32 13...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W32 03...	32
0.472 – 1.260 (12.0 – 32.0)					W32 13...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.787 (N + 20)	0.012 (0.3)	W32 03...	40
0.472 – 1.575 (12.0 – 40.0)					W32 13...	

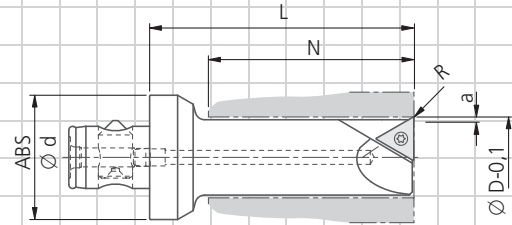
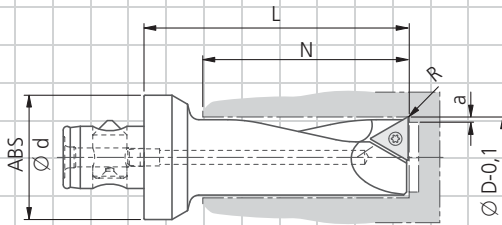
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining aluminium  
 Material to be machined:

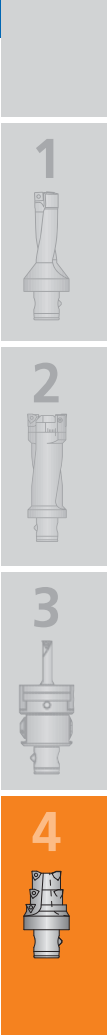
- ∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ d =  ABS 25  
 ABS 32  
 ABS 40



XB00...      N42003000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

Boring Bar with Cylindrical Shank (KFK-UJ), R.H. cutting

Ø 0.315 – 0.945 inch  
(Ø 8 – 24 mm)

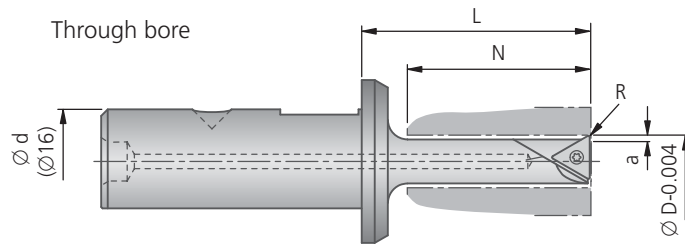
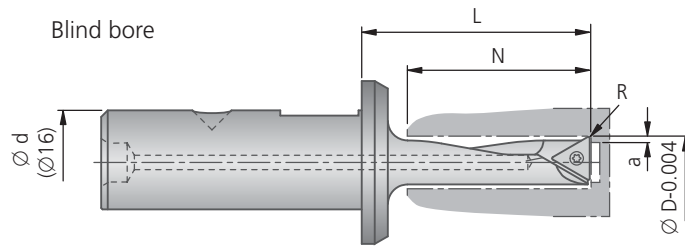
L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	●	●	○	○	×	● up to 2xD	● up to 2xD	×

● very good ○ good ○ possible × not possible

■ **N** for machining aluminium

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)



N420031000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 × D	N + 0.354 (N + 9)	0.012 (0.3)	W32 03...	0.630 (16)
0.472 – 0.945 (12.0 – 24.0)					W32 13...	



Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company:

Address:

Contact:

Department:

Phone:

Fax:

E-Mail:

Order

Enquiry

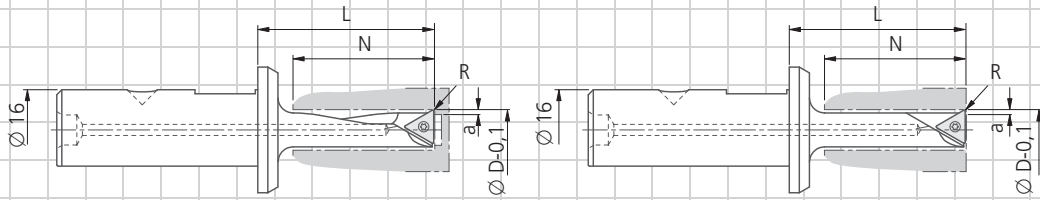
Quantity:

for machining aluminium

Material to be machined:

∅ D =

N =



XB00...

N420031000

Please provide workpiece sketch !

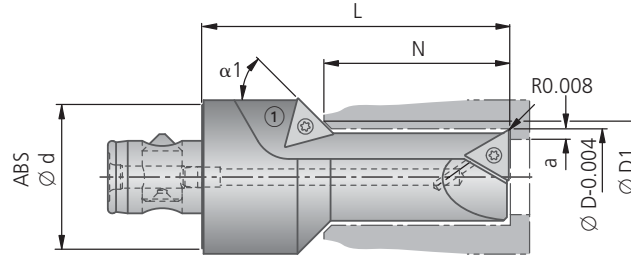
Delivery consists of: Basic tool body. Insert not included.



L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	●	●	○	○	✗	● up to 2xD	● up to 2xD	✗

● very good ● good ○ possible ✗ not possible

- for machining steel
- drilling depth 4xD
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® hi.flex
- with chamfering insert



N420032000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	ABS Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W30 04...	25
0.472 – 0.551 (12.0 – 14.0)					W30 14...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W30 04...	32
0.472 – 0.945 (12.0 – 24.0)					W30 14...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.787 (N + 20)	0.012 (0.3)	W30 04...	40
0.472 – 1.102 (12.0 – 28.0)					W30 14...	

Step ① can only be used for chamfering the rough boring step.

Chamfering step ① (min/max dimension)					
Drilling range Ø D1 min - max	α1 max - min	Drilling depth		L	Insert
		N min	N max		
0.315 – 0.393 (8.0 – 9.9)	75° - 50°	0.591 (15)	4xD	N + 1.063 (N + 27)	W30 04...
0.394 – 0.590 (10.0 – 14.9)	75° - 45°				
0.591 – 0.747 (15.0 – 18.9)	75° - 30°				
0.748 – 1.102 (19.0 – 28.0)	75° - 15°				

Drilling range 0.315 – 1.102 inch (Ø 8 – 28 mm)					
α1	75°	60°	45°	30°	15°
s max	0.051 (1.3)	0.047 (1.2)	0.039 (1.0)	0.024 (0.6)	0.012 (0.3)
b max	0.012 (0.3)	0.024 (0.6)	0.039 (1.0)	0.047 (1.2)	0.051 (1.3)

s<sub>max</sub> = max. cutting width

b<sub>max</sub> = max. chamfering width

Patent applied for inside and outside Germany (ABS)

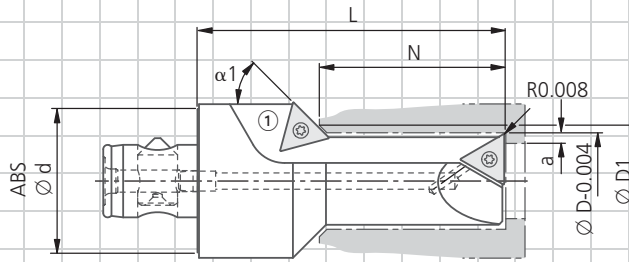
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining steel  
 Material to be machined:

- ∅ D = \_\_\_\_\_
- N = \_\_\_\_\_
- ∅ D1 = \_\_\_\_\_
- α1 = \_\_\_\_\_
- ∅ d =  ABS 25
- ABS 32
- ABS 40



XB85...      N420032000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



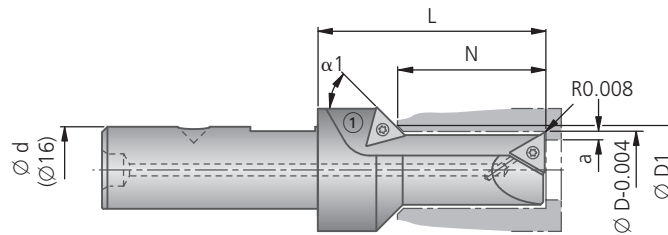
L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	● very good	● good	○ possible	✗ not possible		up to 2xD	up to 2xD	✗

■ for machining steel

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)

■ with chamfering insert



N420033000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.354 (N + 9)	0.012 (0.3)	W30 04...	0.630 (16)
0.472 – 0.945 (12.0 – 24.0)						

Step ① can only be used for chamfering the rough boring step.

Chamfering step ① (min/max dimension)					
Drilling range Ø D1 min - max	α1 max - min	Drilling depth		L	Insert
		N min	N max		
0.315 – 0.393 (8.0 – 9.9)	75° - 50°	0.591 (15)	4xD	N + 1.063 (N + 27)	W30 04...
0.394 – 0.590 (10.0 – 14.9)	75° - 45°				
0.591 – 0.747 (15.0 – 18.9)	75° - 30°				
0.748 – 1.102 (19.0 – 28.0)	75° - 15°				

Drilling range 0.315 – 1.102 inch (Ø 8 – 28 mm)					
α1	75°	60°	45°	30°	15°
s max	0.051 (1.3)	0.047 (1.2)	0.039 (1.0)	0.024 (0.6)	0.012 (0.3)
b max	0.012 (0.3)	0.024 (0.6)	0.039 (1.0)	0.047 (1.2)	0.051 (1.3)

s<sub>max</sub> = max. cutting width

b<sub>max</sub> = max. chamfering width

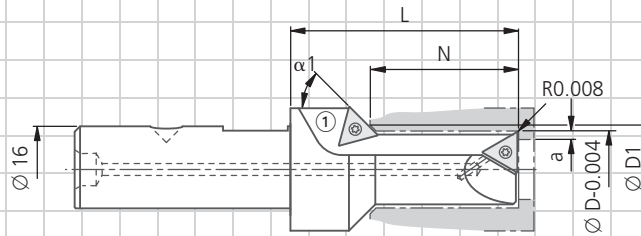
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining steel  
 Material to be machined:

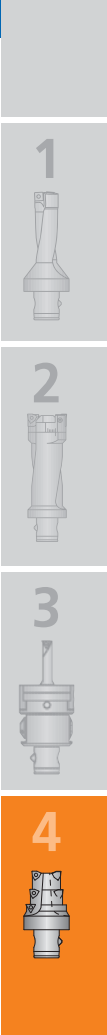
∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_



XB98...      N420033000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	●	●	○	○	✗	● up to 2xD	● up to 2xD	✗

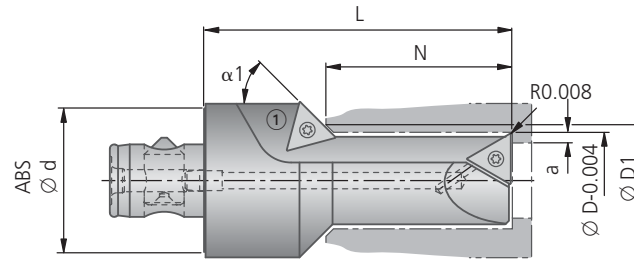
● very good ○ good ○ possible ✗ not possible

■ **N** for machining aluminium

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® hi.flex

■ with chamfering insert



N420032000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	ABS Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W32 03...	25
0.472 – 0.551 (12.0 – 14.0)					W32 13...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.669 (N + 17)	0.012 (0.3)	W32 03...	32
0.472 – 0.945 (12.0 – 24.0)					W32 13...	
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 x D	N + 0.787 (N + 20)	0.012 (0.3)	W32 03...	40
0.472 – 1.102 (12.0 – 28.0)					W32 13...	

Step ① can only be used for chamfering the rough boring step.

Chamfering step ① (min/max dimension)					
Drilling range Ø D1 min - max	α1 max - min	Drilling depth		L	Insert
		N min	N max		
0.315 – 0.393 (8.0 – 9.9)	75° - 50°	0.591 (15)	4xD	N + 1.063 (N + 27)	W32 03...
0.394 – 0.590 (10.0 – 14.9)	75° - 45°				
0.591 – 0.747 (15.0 – 18.9)	75° - 30°				
0.748 – 1.102 (19.0 – 28.0)	75° - 15°				

Drilling range 0.315 – 1.102 inch (Ø 8 – 28 mm)					
α1	75°	60°	45°	30°	15°
s max	0.051 (1.3)	0.047 (1.2)	0.039 (1.0)	0.024 (0.6)	0.012 (0.3)
b max	0.012 (0.3)	0.024 (0.6)	0.039 (1.0)	0.047 (1.2)	0.051 (1.3)

s<sub>max</sub> = max. cutting width

b<sub>max</sub> = max. chamfering width

Patent applied for inside and outside Germany (ABS)

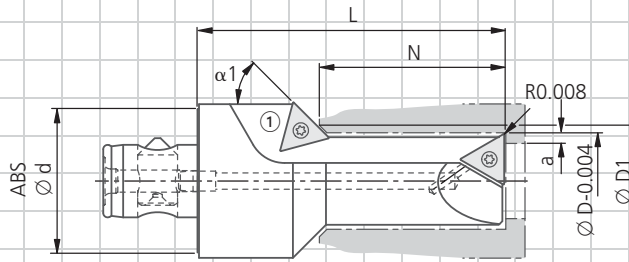
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining aluminium  
 Material to be machined:

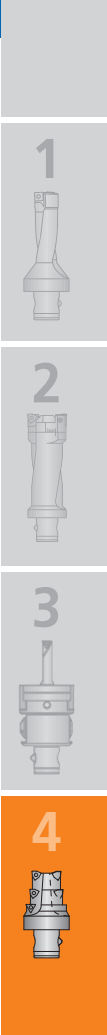
- ∅ D = \_\_\_\_\_
- N = \_\_\_\_\_
- ∅ D1 = \_\_\_\_\_
- α1 = \_\_\_\_\_
- ∅ d =  ABS 25
- ABS 32
- ABS 40



XB85...      N420032000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.



L/D	through hole	blind hole	angled	cross bore	reverse machining	HRC > 54 through hole	HRC > 54 blind hole	vibration dampening
4xD								
	●	●	○	○	×	● up to 2xD	● up to 2xD	×

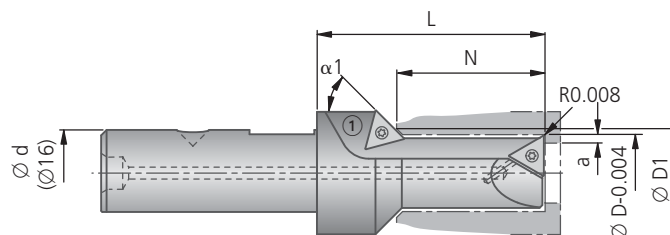
● very good ○ good ○ possible × not possible

■ **N** for machining aluminium

■ drilling depth 4xD

■ use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)

■ with chamfering insert



N420033000

(..) = mm

Fine boring step (min/max dimension)						
Drilling range Ø D min - max	Drilling depth		L	a max	Insert	Ø d
	N min	N max				
0.315 – 0.471 (8.0 – 11.9)	0.591 (15)	4 × D	N + 0.354 (N + 9)	0.012 (0.3)	W32 03...	0.630
0.472 – 0.945 (12.0 – 24.0)						(16)

Step ① can only be used for chamfering the rough boring step.

Chamfering step ① (min/max dimension)					
Drilling range Ø D1 min - max	α1 max - min	Drilling depth		L	Insert
		N min	N max		
0.315 – 0.393 (8.0 – 9.9)	75° - 50°	0.591 (15)	4xD	N + 1.063 (N + 27)	W32 03...
0.394 – 0.590 (10.0 – 14.9)	75° - 45°				
0.591 – 0.747 (15.0 – 18.9)	75° - 30°				
0.748 – 1.102 (19.0 – 28.0)	75° - 15°				

### Drilling range 0.315 – 1.102 inch (Ø 8 – 28 mm)

α1	75°	60°	45°	30°	15°
s max	0.051 (1.3)	0.047 (1.2)	0.039 (1.0)	0.024 (0.6)	0.012 (0.3)
b max	0.012 (0.3)	0.024 (0.6)	0.039 (1.0)	0.047 (1.2)	0.051 (1.3)

s<sub>max</sub> = max. cutting width

b<sub>max</sub> = max. chamfering width



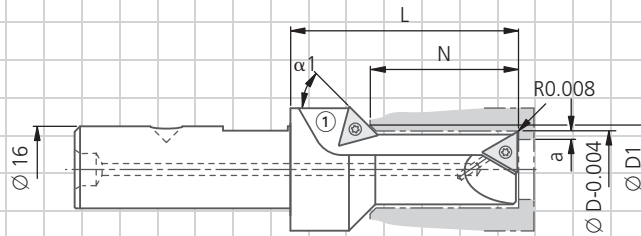
Order No. / Order date	Please state Customer No.	Signature	KOMET internal

Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

for machining aluminium  
 Material to be machined: \_\_\_\_\_

∅ D = \_\_\_\_\_  
 N = \_\_\_\_\_  
 ∅ D1 = \_\_\_\_\_  
 α1 = \_\_\_\_\_

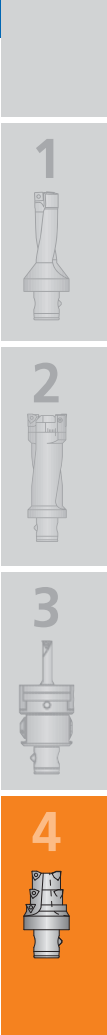


XB98...      N420033000

Please provide workpiece sketch !

Delivery consists of: Basic tool body. Insert not included.

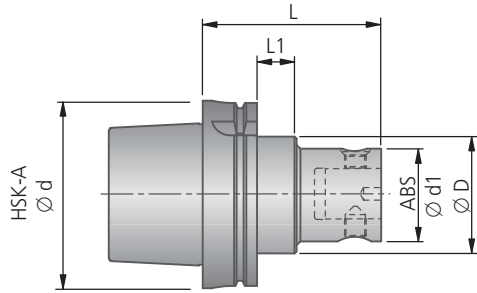
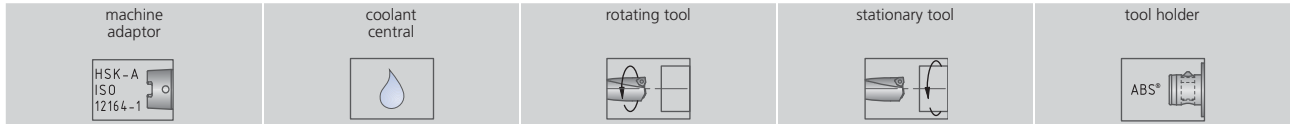
This purchase order underlie the terms and conditions of sale by KOMET of America, Inc.



# KOMET® Easy Special

## HSK-A Adaptor with ABS® Connection

ISO 12164-1



N410004...

Adaptor (min/max dimension)

No.	HSK Ø d	ABS Ø d1	Ø D max	L min	L max
N41 0004000	63	25 · 32 · 40 · 50 · 63	3.307 (84)	1xD	7.283 (185)
N41 0004100	100	25 · 32 · 40 · 50 · 63 · 80	3.937 (100)	1xD	7.874 (200)

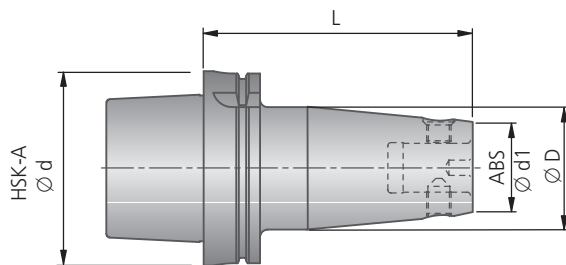
**Note:** For facing for HSK gripper collar see standard sheet HSK DIN 69893 A.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Also possible:  $L1_{max} = L$  and  $d = D$



conical version



N410001...

Adaptor (min/max dimension)

No.	HSK Ø d	ABS Ø d1	Ø D max	L min	L max
N41 0001000	63	25 · 32 · 40 · 50 · 63	3.307 (84)	1xD	7.480 (190)
N41 0001100	100	25 · 32 · 40 · 50 · 63 · 80	3.937 (100)	1xD	7.874 (200)

**Note:** For facing for HSK gripper collar see standard sheet HSK DIN 69893 A.

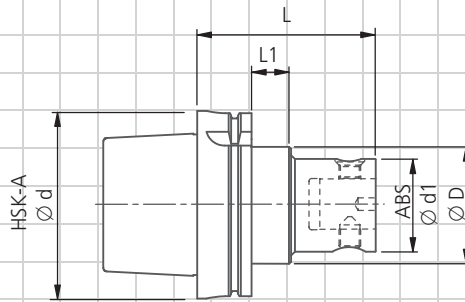
Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Order No. / Order date	Please state Customer No.	Signature	KOMET internal
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Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

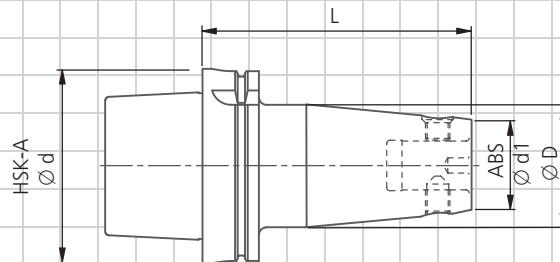
Order       Enquiry      Quantity: \_\_\_\_\_

$\varnothing d$  =  HSK 63 (N410004000)  
 HSK100 (N410004100)  
 $\varnothing d1$  = ABS  
 $\varnothing D$  = \_\_\_\_\_  
 L = \_\_\_\_\_  
 L1 = \_\_\_\_\_



XA... N410004...

$\varnothing d$  =  HSK 63 (N410001000)  
 HSK100 (N410001100)  
 $\varnothing d1$  = ABS  
 $\varnothing D$  = \_\_\_\_\_  
 L = \_\_\_\_\_



XA... N410001...

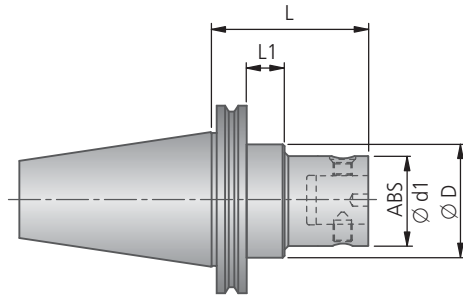
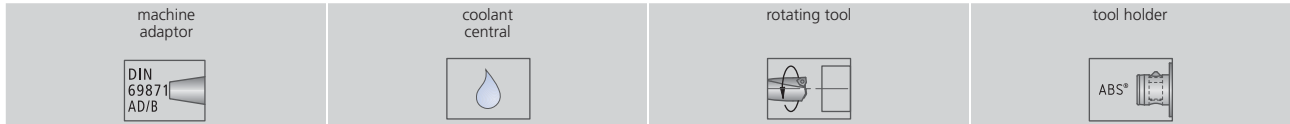
Delivery consists of: Basic tool body. Insert not included.



# KOMET® Easy Special

## Taper Shank with ABS® Connection

ISO 7388/1 AD/B



N410005...

### Adaptor (min/max dimension)

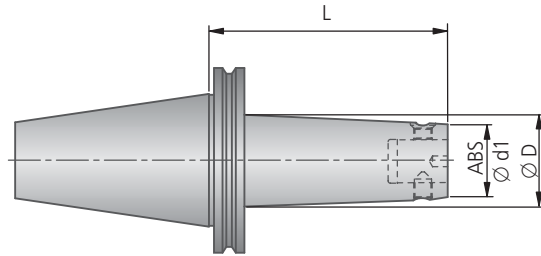
No.	ISO	ABS Ø d1	Ø D max	L min	L max
N41 0005000	40	25 · 32 · 40 · 50 · 63	2.480 (63)	1×D	7.087 (180)
N41 0005100	50	25 · 32 · 40 · 50 · 63 · 80	3.150 (80)	1×D	7.874 (200)

**Note:** For facing for gripper groove see standard sheet DIN 69871 AD/B.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Also possible:  $L1_{max} = L$  and  $d = D$

conical version



N410002...

### Adaptor (min/max dimension)

No.	ISO	ABS Ø d1	Ø D max	L min	L max
N41 0002000	40	25 · 32 · 40 · 50 · 63	2.480 (63)	1×D	7.087 (180)
N41 0002100	50	25 · 32 · 40 · 50 · 63 · 80	3.150 (80)	1×D	7.874 (200)

**Note:** For facing for gripper groove see standard sheet DIN 69871 AD/B.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Order No. / Order date	Please state Customer No.	Signature	KOMET internal
------------------------	---------------------------	-----------	----------------

Company:

Address:

Contact:

Department:

Phone:

Fax:

E-Mail:

Order

Enquiry

Quantity:

ISO40 (N410005000)

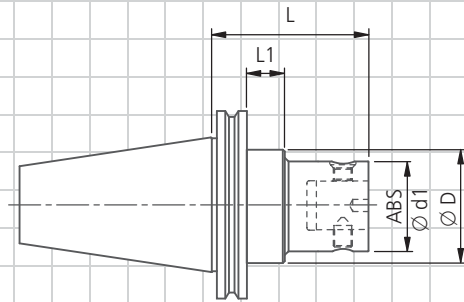
ISO50 (N410005100)

Ø d1 = ABS

Ø D =

L =

L1 =



XA... N410005...

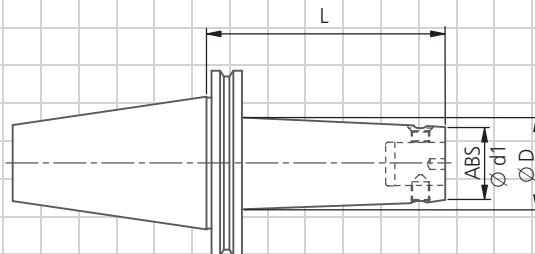
ISO40 (N410002000)

ISO50 (N410002100)

Ø d1 = ABS

Ø D =

L =



XA... N410002...

Delivery consists of: Basic tool body. Insert not included.

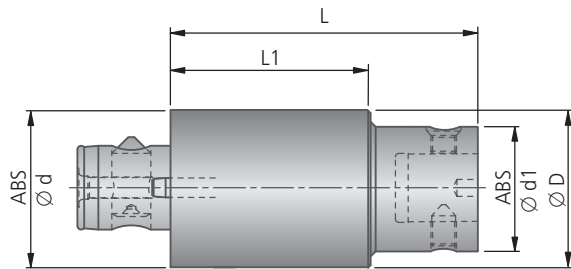
This purchase order underlie the terms and conditions of sale by KOMET of America, Inc.



# KOMET® Easy Special

## Extension / Reducer with ABS® Connection

ABS®



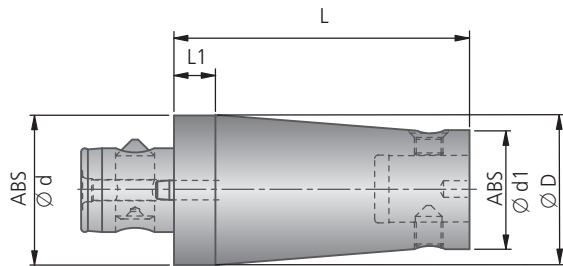
N410006...

Adaptor (min/max dimension)					
No.	ABS Ø d	ABS Ø d1	Ø D max	L1 min	L max
N41 0006000	25	25	1.339 (34)	0.394 (10)	4.134 (105)
N41 0006100	32	25 · 32	1.929 (49)	0.472 (12)	4.528 (115)
N41 0006200	40	25 · 32 · 40	2.323 (59)	0.472 (12)	4.724 (120)
N41 0006300	50	25 · 32 · 40 · 50	2.913 (74)	0.591 (15)	6.890(175)
N41 0006400	63	25 · 32 · 40 · 50 · 63	3.307 (84)	0.787 (20)	7.087 (180)
N41 0006500	80	25 · 32 · 40 · 50 · 63 · 80	3.307 (84)	0.984 (25)	7.874 (200)

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Also possible:  $L1_{max} = L$  and  $d = D$

conical version



N410003...

Adaptor (min/max dimension)					
No.	ABS Ø d	ABS Ø d1	Ø D max	L1 min	L max
N41 0003000	25	25	1.339 (34)	0.394 (10)	4.134 (105)
N41 0003100	32	25 · 32	1.929 (49)	0.472 (12)	4.528 (115)
N41 0003200	40	25 · 32 · 40	2.323 (59)	0.472 (12)	4.724 (120)
N41 0003300	50	25 · 32 · 40 · 50	2.913 (74)	0.591 (15)	6.890(175)
N41 0003400	63	25 · 32 · 40 · 50 · 63	3.307 (84)	0.787 (20)	7.087 (180)
N41 0003500	80	25 · 32 · 40 · 50 · 63 · 80	3.307 (84)	0.984 (25)	7.874 (200)

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

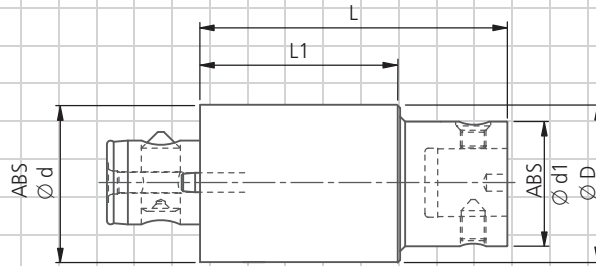
Order No. / Order date	Please state Customer No.	Signature	KOMET internal
------------------------	---------------------------	-----------	----------------

Company: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_ Department: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Order       Enquiry      Quantity: \_\_\_\_\_

- ABS25 (N410006000)
- ABS32 (N410006100)
- ABS40 (N410006200)
- ABS50 (N410006300)
- ABS63 (N410006400)
- ABS80 (N410006500)

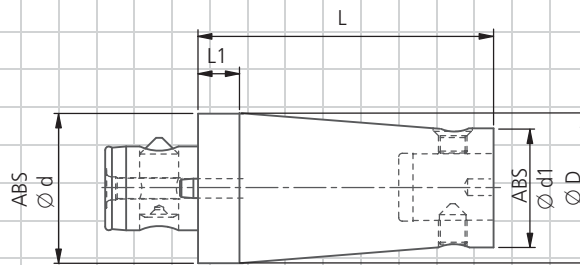
Ø d1 = ABS  
 Ø D = \_\_\_\_\_  
 L = \_\_\_\_\_  
 L1 = \_\_\_\_\_



XA... N410006...

- ABS25 (N410003000)
- ABS32 (N410003100)
- ABS40 (N410003200)
- ABS50 (N410003300)
- ABS63 (N410003400)
- ABS80 (N410003500)

Ø d1 = ABS  
 Ø D = \_\_\_\_\_  
 L = \_\_\_\_\_  
 L1 = \_\_\_\_\_



XA... N410003...

Delivery consists of: Basic tool body. Insert not included.



1



2



3



4



With our comprehensive programme of tool adaptors we have the right answer for every requirement.

Adaptors with connections specified by manufacturers available on request.

BENEFITS for you:

- Maximum tool change accuracy
- Perfect static rigidity
- High radial rigidity
- Short tool change times
- Ideal dimensions
- Low weight




**KOMET® Adaptors** Page

 HSK-A Adaptors ISO 12164-1 454 – 483

 PSC Adaptors ISO 26623 532

 Taper Shanks 484 – 525

 Spindle adaptor flange 478 / 530

 VDI Adaptors 528 – 529

 ABS® Adaptors 526 – 563

 Shrink fit technology **THERMOGRIP®** 564 – 583

 Easy Special Adaptors Chapter 4
**1**

**2**

**3**

**4**

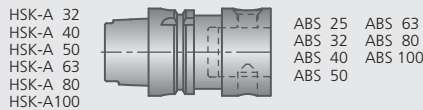
**5**


# Programme Summary – Adaptors

## 5 HSK-A Adaptors ISO 12164-1

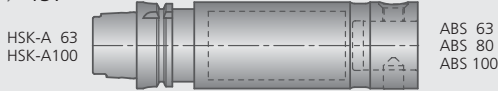
with ABS® connection

▶ 456



Lightweight adaptor with ABS® connection

▶ 457



Eccentric adjusting device with ABS® connection

▶ 458



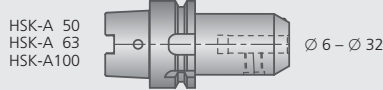
Torsional dampener with ABS® connection

▶ 459



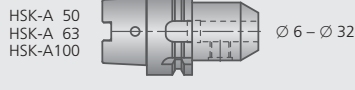
Adaptor sleeve Whistle Notch

▶ 460-461



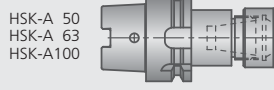
Adaptor sleeve Weldon

▶ 462-463



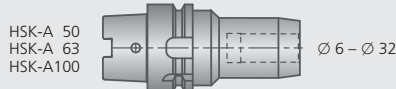
Collet holder

▶ 464



Expanding chuck

▶ 466-469



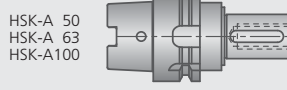
Milling cutter arbor

▶ 470



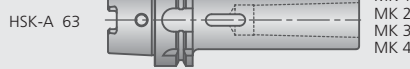
Combination milling cutter arbor

▶ 471



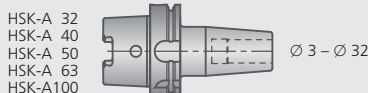
Morse taper

▶ 472



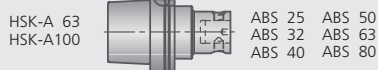
Thermal expansion chuck **THERMOGRIP®**

▶ 566-570



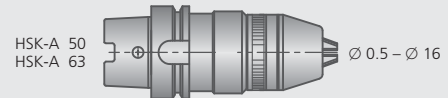
Easy Special

▶ Chapter 4



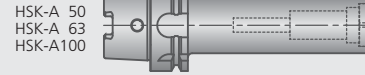
Short drill chuck

▶ 473



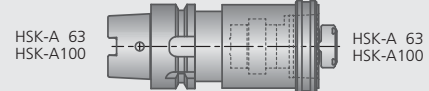
Test arbor

▶ 474



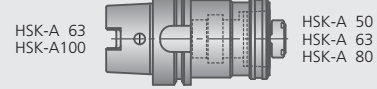
Extension with KomLoc® HSK clamping system

▶ 476



Reducer with KomLoc® HSK clamping system

▶ 477



Semi-finished head

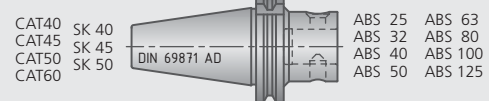
▶ Chapter 6



## 5 Taper Shanks

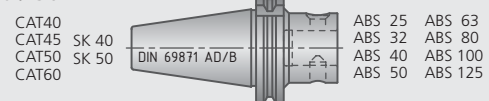
with ABS® connection

▶ 486 / 502 / 503



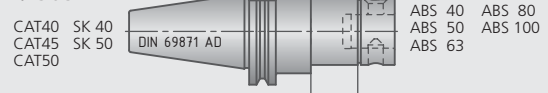
with ABS® -N connection

▶ 488 / 504



with ABS® connection

▶ 487 / 505



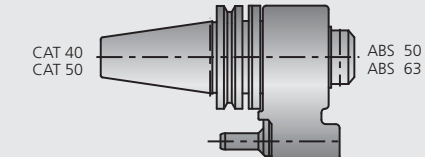
Eccentric adjusting device with ABS® connection

▶ 489 / 506



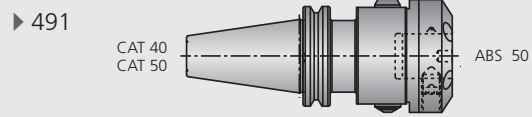
CAT / BT taper shank with coolant inducer

▶ 490

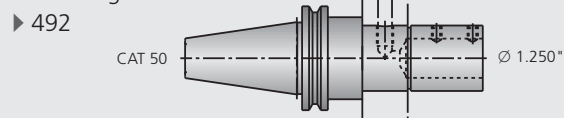




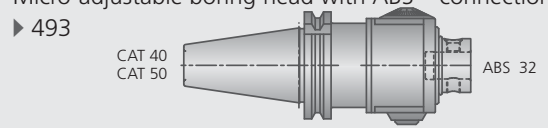
with ABS® connection



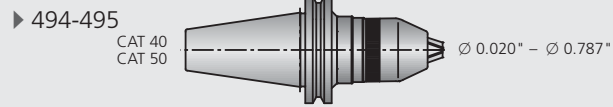
with straight shank connection



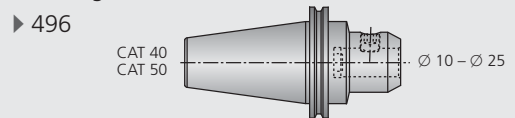
Micro-adjustable boring head with ABS® connection



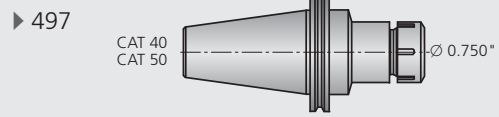
Mill drill chuck



for straight shank connection



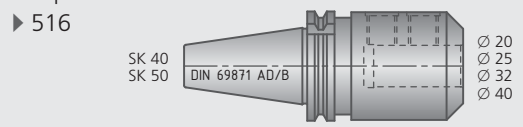
with collet holder



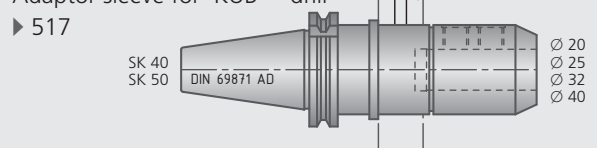
Torsional dampener with ABS® connection



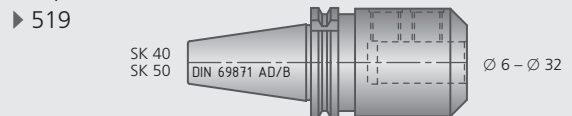
Adaptor sleeve for KUB® drill



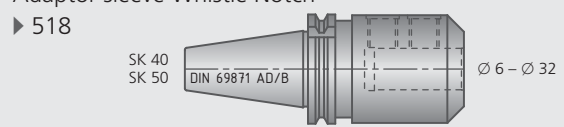
Adaptor sleeve for KUB® drill



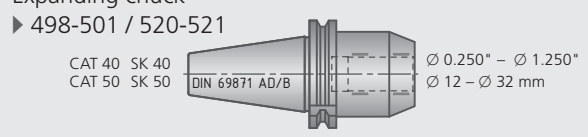
Adaptor sleeve Weldon



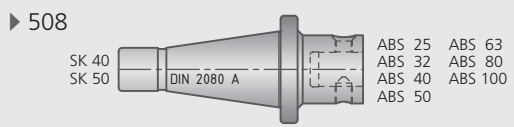
Adaptor sleeve Whistle Notch



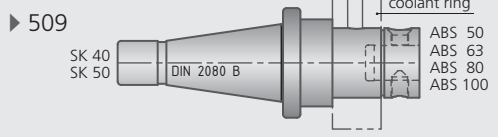
Expanding chuck



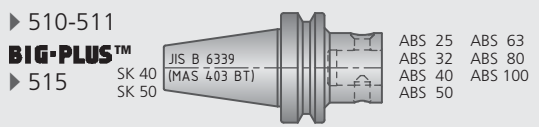
with ABS® connection



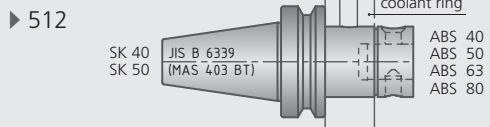
with ABS® connection



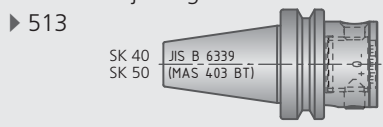
with ABS® connection



with ABS® connection



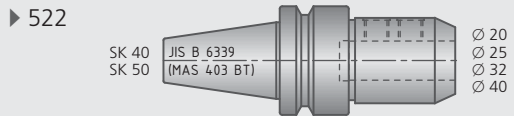
Eccentric adjusting device with ABS® connection



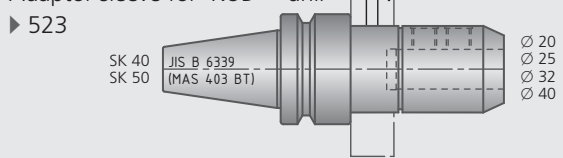
Torsional dampener with ABS® connection



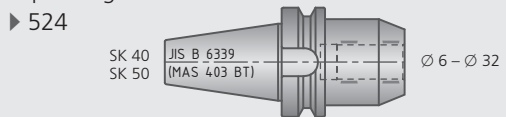
Adaptor sleeve for KUB® drill



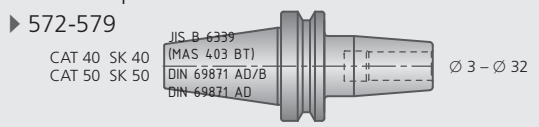
Adaptor sleeve for KUB® drill



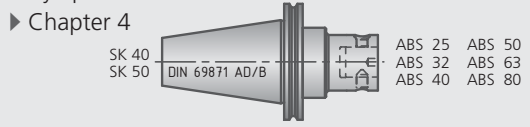
Expanding chuck



Thermal expansion chuck **THERMOGRIP®**



Easy Special

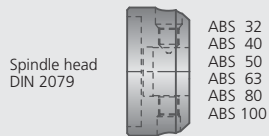


# Programme Summary – Adaptors

## 5 Spindle Adaptor Flanges

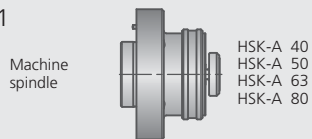
Spindle adaptor flange with ABS® connection

► 530



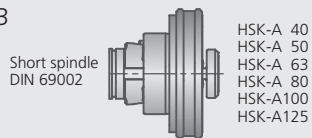
Spindle adaptor flange with KomLoc® HSK clamping system

► 478-481



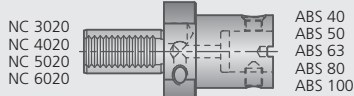
Built-in flange with KomLoc® HSK clamping system

► 482-483



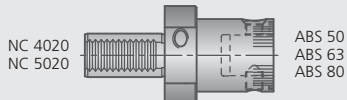
VDI adaptor with ABS® connection

► 528



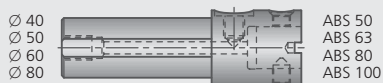
VDI torsional dampener with ABS® connection

► 529



TC adaptor with ABS® connection

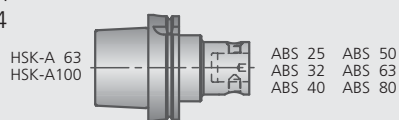
► 531



## 4 Easy Special Adaptors

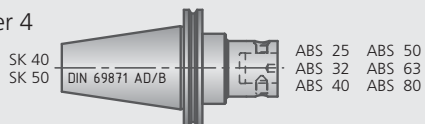
HSK-A adaptor

► Chapter 4



Taper shank

► Chapter 4



ABS® adaptor

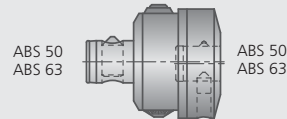
► Chapter 4



## 5 ABS® Adaptors

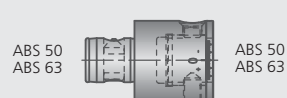
Adjustment device

► 533



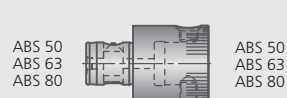
Eccentric adjusting device

► 534



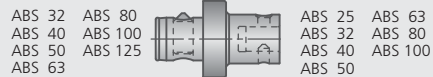
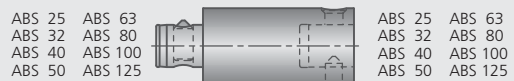
Torsional dampener

► 535



Extension / Reducer

► 536-539



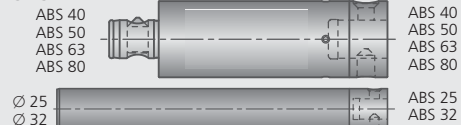
Lightweight Extension / Reducer

► 540-541



Damping element

► 542-543



Adaptor sleeve Whistle Notch

► 544-545



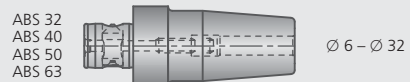
Expanding chuck

► 558



Thermal expansion chuck

► 580



## 5 PSC Adaptors ISO 26622-1 / -2

Polygonal shank taper with ABS® connection

► 532



## 5 ABS® Adaptors

### Adaptor sleeve Weldon

#### ► 548-549



### Adaptor HTR

#### ► 550



### Adaptor HMK

#### ► 551



### Tapping chuck GWF

#### ► 552



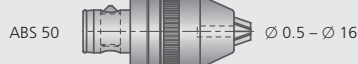
### Collet holder SZV

#### ► 554



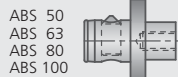
### Short drill chuck NCB

#### ► 560



### Milling cutter arbor FA

#### ► 561



### Milling cutter arbor FAM

#### ► 562



### Combination milling cutter arbor FAK

#### ► 563



### Semi-finished head

#### ► Chapter 6



### Easy Special™

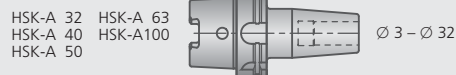
#### ► Chapter 4



## 5 Shrink Fit Technology THERMOGRIP®

### HSK-A Adaptor

#### ► 566-569



### HSK-E Adaptor

#### ► 570



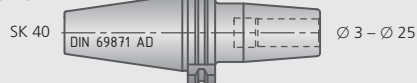
### Extension / Reducer

#### ► 571



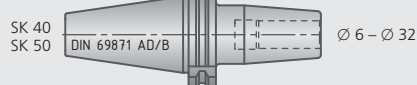
### Taper shank DIN 69871-1 AD

#### ► 574-575



### Taper shank DIN 69871-1 AD/B

#### ► 576-577



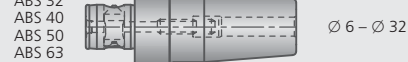
### Taper shank JIS B 6339 (MAS 403 BT)

#### ► 578-579















### ABS® Adaptor

#### ► 580



### Symbols

	<b>Machine adaptor</b> Connection on machine side p.ex. taper shank DIN 69871 AD/B; HSK-A ISO 12164-1		<b>Vibration dampening</b> p.ex. torsion damping bending vibration
	<b>Balancing note</b> Balance as despatched		<b>adjustable</b> p.ex. radially axially
	<b>Coolant</b> Coolant supply p.ex. central		<b>System K</b> <b>KomLoc® HSK clamping system</b> p.ex. system K
	<b>Concentricity</b> p.ex. $\leq 5\mu\text{m}$		<b>Tool holder</b> Connection on tool side p.ex. Whistle Notch Weldon ABS®
	<b>Lightweight</b>		<b>Tool rotating stationary</b>
	<b>Tool rotating stationary</b>		<b>ABS®</b>

1

2

3

4

5

KOMET®

HSK-A Adaptors to ISO 12164-1

1



2



3



4



5



**BENEFITS for you:**

- The modern connection between machine spindle and tool is the hollow taper shank system (HSK)
- HSK is standardised under ISO 12164
- The HSK-A version is used for automatic tool change on machining centres, turning/milling centres, milling machines and other machine tools
- HSK-A can also be used on machines with manual tool change
- Other HSK versions can of course be supplied by KOMET on request (see chapter 8)
- Chip bore 10x4.5 included in the standard

The main feature of HSK is the taper and face connection.

This gives important advantages:

- maximum tool change accuracy
- high static rigidity
- high radial rigidity
- small dimensions
- low weights
- use at high spindle speeds
- shorter tool change times because of lower weights
- higher machine acceleration

**KOMET® HSK-A Adaptors** Page

with ABS® / ABS® N connection 456

Lightweight adaptor 457

Eccentric adjusting device 458

Torsional dampener 459

Adaptor sleeve Whistle Notch 460 – 461

Adaptor sleeve Weldon 462 – 463

Collet holder 464 – 465

Expanding chuck 466 – 469

Milling cutter arbor 470

Combination milling cutter arbor 471

Morse taper 472

Short drill chuck NCB 473

Test arbor 474

**KomLoc® HSK clamping system**

Extension 476

Reducer 477

Adaptor flange 478

Adaptor flange, adjustable 480

Built-in flange 482

**1**

**2**

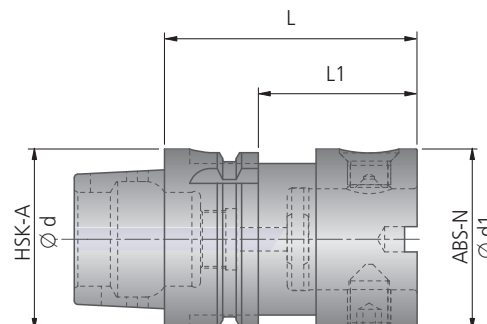
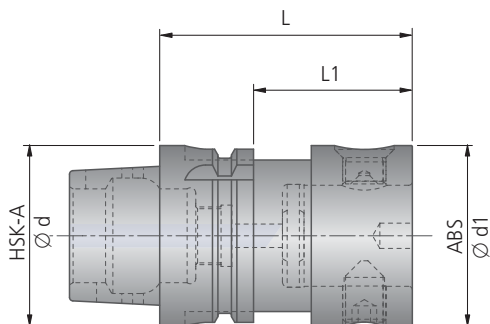
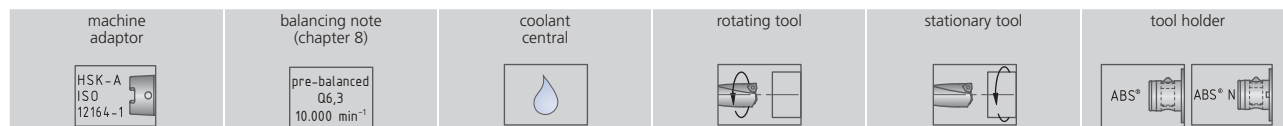
**3**

**4**

**5**


# KOMET® ISO 12164-1

## HSK-A Adaptor with ABS® / ABS® N Connection



HSK-A DIN 69893 T1 ABS®

Description	Order No.	HSK-A Ø d	ABS Ø d1	L	L1	kg
HSK-A32-ABS25	A06 00120	32	25	40	20	0.16
HSK-A32-ABS32	A06 00130	32	32	55	35	0.25
HSK-A40-ABS25	A06 10120	40	25	45	25	0.25
HSK-A40-ABS32	A06 10130	40	32	45	25	0.30
HSK-A40-ABS40	A06 10140	40	40	55	–	0.40
HSK-A50-ABS25	A06 20121	50	25	50	24	0.45
HSK-A50-ABS32	A06 20131	50	32	50	24	0.50
HSK-A50-ABS40	A06 20141	50	40	60	34	0.64
HSK-A50-ABS50	A06 20151	50	50	70	–	0.79
HSK-A63-ABS25	A06 30120	63	25	50	24	0.70
HSK-A63-ABS32	A06 30130	63	32	50	24	0.75
HSK-A63-ABS40	A06 30140	63	40	60	34	1.00
HSK-A63-ABS50	A06 30150	63	50	70	44	1.22
HSK-A63-ABS50*	A06 30220	63	50	42	–	0.77
HSK-A63-ABS63	A06 30160	63	63	80	–	1.64
HSK-A63-ABS80	A06 30170	63	80	100	–	2.50
HSK-A80-ABS40	A06 40140	80	40	65	39	1.36
HSK-A80-ABS50	A06 40150	80	50	75	49	1.60
HSK-A80-ABS63	A06 40160	80	63	85	59	2.20
HSK-A80-ABS80	A06 40170	80	80	95	–	2.99
HSK-A100-ABS25	A06 50120	100	25	60	31	2.20
HSK-A100-ABS32	A06 50130	100	32	60	31	2.30
HSK-A100-ABS40	A06 50140	100	40	80	51	2.45
HSK-A100-ABS50	A06 50150	100	50	80	51	2.68
HSK-A100-ABS63	A06 50160	100	63	80	51	3.01
HSK-A100-ABS80	A06 50170	100	80	90	61	3.70
HSK-A100-ABS100	A06 50180	100	100	100	–	4.75

HSK-A DIN 69893 T1 ABS® N

Description	Order No.	HSK-A Ø d	ABS-N Ø d1	L	L1	kg
HSK-A63-ABS50N	A06 30050	63	50	70	44	1.22
HSK-A63-ABS63N	A06 30060	63	63	80	–	1.64
HSK-A63-ABS80N	A06 30070	63	80	100	–	2.50
HSK-A100-ABS50N	A06 50050	100	50	80	51	2.68
HSK-A100-ABS63N	A06 50060	100	63	80	51	3.01
HSK-A100-ABS80N	A06 50070	100	80	90	61	3.70

\* for fineboring only

Supply includes:

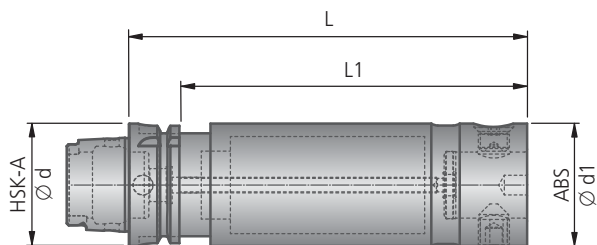
Adaptor fitted complete. Please order coolant supply connection and key separately (chapter 8).


Patent applied for inside and outside Germany (ABS)



# KOMET® ISO 12164-1

## HSK-A Lightweight Adaptor with ABS® Connection



HSK-A DIN 69893 T1 ABS®						
Description	Order No.	HSK-A Ø d	ABS Ø d1	L	L1	
HSK-A63-ABS63-LB	A06 30360	63	63	205	–	3.00
HSK-A100-ABS63-LB	A06 50360	100	63	205	176	4.20
HSK-A100-ABS80-LB	A06 50370	100	80	215	186	5.90
HSK-A100-ABS100-LB	A06 50380	100	100	260	–	8.90

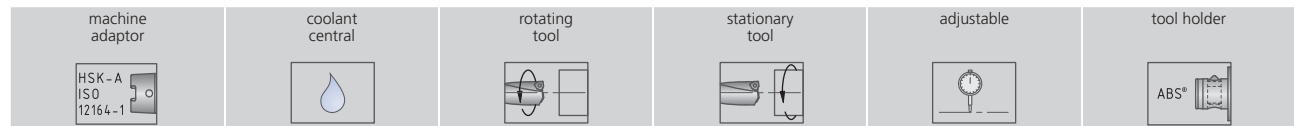
### Supply includes:

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

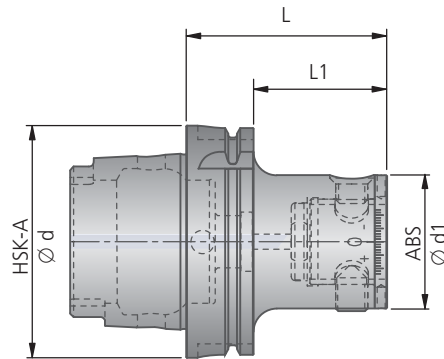


# KOMET® ISO 12164-1

## HSK-A Eccentric Adjusting Device with ABS® Connection



■ adjustment path  $\pm 0.25$  mm in the diameter

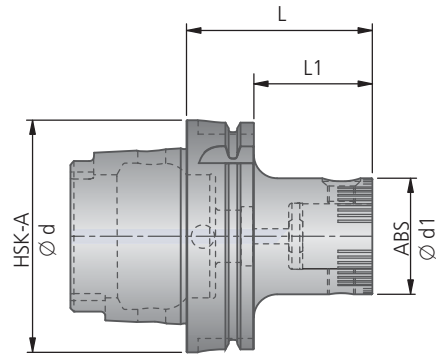
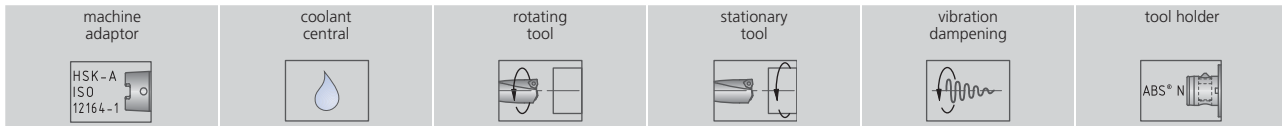



HSK-A DIN 69893 T1 ABS® EXZ							Assembly parts
Description	Order No.	HSK-A $\varnothing d$	ABS $\varnothing d1$	L	L1	kg	Order No.
HSK-A63 ABS50 EXZ	A06 36730	63	50	70	39.5	1.13	18043 00028
HSK-A63 ABS63 EXZ.	A06 36740	63	63	80	54	1.50	18043 00028
HSK-A100 ABS50 EXZ	A06 56730	100	50	80	46.5	2.60	18043 00028
HSK-A100 ABS63 EXZ	A06 56740	100	63	80	51	2.80	18043 00028

### Supply includes:

Adaptor with adjusting key. Please order coolant supply connection and key separately (see chapter 8).

HSK-A Torsional Dampener with ABS® Connection



HSK-A DIN 69893 T1 ABS® TSD							Assembly parts
Description	Order No.	HSK-A Ø d	ABS Ø d1	L	L1		Order No.
HSK-A63-ABS50-TSD	A06 30251	63	50	70	44	1.10	L01 02041
HSK-A63-ABS63-TSD	A06 30261	63	63	80	–	1.45	L01 02051
HSK-A63-ABS80-TSD	A06 30270	63	80	100	–	2.34	L01 02061
HSK-A100-ABS50-TSD	A06 50251	100	50	80	51	2.70	L01 02041
HSK-A100-ABS63-TSD	A06 50261	100	63	80	51	2.85	L01 02051
HSK-A100-ABS80-TSD	A06 50270	100	80	90	61	3.64	L01 02061

**Supply includes:**

Adaptor fitted complete. Please order coolant supply connection and key separately (see chapter 8).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use:

...-ABS50-TSD for drill Ø 14 - 44 mm

...-ABS63-TSD for drill Ø 45 - 54 mm



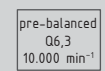


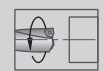
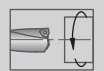
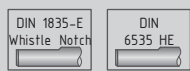
...-ABS80-TSD for drill Ø 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

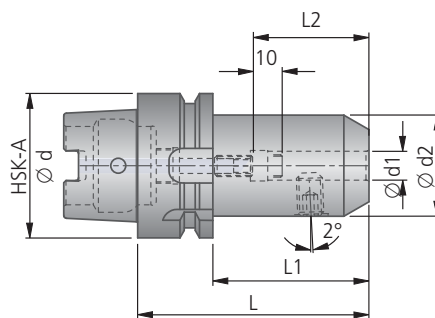



# KOMET® ISO 12164-1

## HSK-A Adaptor Sleeve Whistle Notch

<b>machine adaptor</b> 	<b>location</b> 	<b>balancing note (Chapter 8)</b> 	<b>concentricity</b> 	<b>coolant central</b> 	<b>rotating tool</b> 	<b>stationary tool</b> 	<b>tool holder</b> 
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- short design
- the 2° tilt of the clamping screws prevents the tool from pulling out

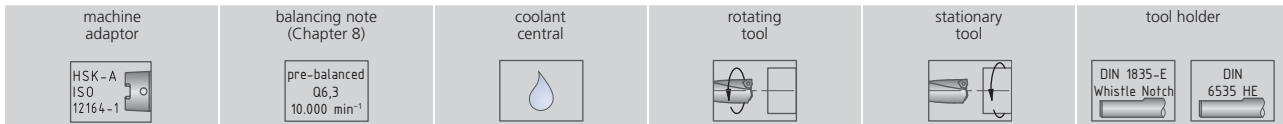


HSK-A DIN 69893 T1 FWD									Assembly parts		
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L	L1	L2		Clamping screw		Adjusting screw
									Order No.	Piece	Order No.
HSK-A50-FWD06	A06 20601	50	6	25	80	54	36	0.80	51050 06010	1	N00 71000
HSK-A50-FWD08	A06 20801	50	8	28	80	54	36	0.90	51050 08010	1	N00 71050
HSK-A50-FWD10	A06 21001	50	10	35	80	54	40	0.90	51050 10012	1	51049 08016
HSK-A50-FWD12	A06 21201	50	12	42	90	64	45	1.00	51050 12016	1	51049 10020
HSK-A50-FWD14	A06 21401	50	14	44	90	64	45	1.04	51050 12016	1	51049 10020
HSK-A50-FWD16	A06 21601	50	16	48	90	64	48	1.12	51050 14016	1	51049 12025
HSK-A50-FWD18	A06 21801	50	18	50	90	64	48	1.12	51050 14016	1	51049 12025
HSK-A50-FWD20	A06 22001	50	20	52	100	74	50	1.28	51050 16016	1	51049 16025
HSK-A63-FWD06	A06 30600	63	6	25	80	54	36	0.82	51050 06010	1	N00 71000
HSK-A63-FWD08	A06 30800	63	8	28	80	54	36	0.90	51050 08010	1	N00 71050
HSK-A63-FWD10	A06 31000	63	10	35	80	54	40	0.99	51050 10012	1	N00 71120
HSK-A63-FWD12	A06 31200	63	12	42	90	64	45	1.20	51050 12016	1	N00 71270
HSK-A63-FWD14	A06 31400	63	14	44	90	64	45	1.20	51050 12016	1	N00 71270
HSK-A63-FWD16	A06 31600	63	16	48	100	74	48	1.56	51050 14016	1	N00 71420
HSK-A63-FWD18	A06 31800	63	18	50	100	74	48	1.60	51050 14016	1	N00 71420
HSK-A63-FWD20	A06 32000	63	20	52	100	74	50	1.67	51050 16016	1	N00 71510
HSK-A63-FWD25	A06 32500	63	25	65	110	84	56	2.30	51050 18220	2	N00 71510
HSK-A63-FWD32	A06 33200	63	32	72	110	84	60	2.32	51050 20220	2	N00 71510
HSK-A100-FWD06	A06 50600	100	6	25	90	61	36	2.18	51050 06010	1	N00 71000
HSK-A100-FWD08	A06 50800	100	8	28	90	61	36	2.24	51050 08010	1	N00 71050
HSK-A100-FWD10	A06 51000	100	10	35	90	61	40	2.45	51050 10012	1	N00 71120
HSK-A100-FWD12	A06 51200	100	12	42	100	71	45	2.70	51050 12016	1	N00 71270
HSK-A100-FWD14	A06 51400	100	14	44	100	71	45	2.70	51050 12016	1	N00 71270
HSK-A100-FWD16	A06 51600	100	16	48	100	71	48	2.86	51050 14016	1	N00 71420
HSK-A100-FWD18	A06 51800	100	18	50	100	71	48	2.90	51050 14016	1	N00 71420
HSK-A100-FWD20	A06 52000	100	20	52	110	81	50	2.95	51050 16016	1	N00 71510
HSK-A100-FWD25	A06 52500	100	25	65	120	91	56	3.85	51050 18220	2	N00 71510
HSK-A100-FWD32	A06 53200	100	32	72	120	91	60	4.32	51050 20220	2	N00 71510

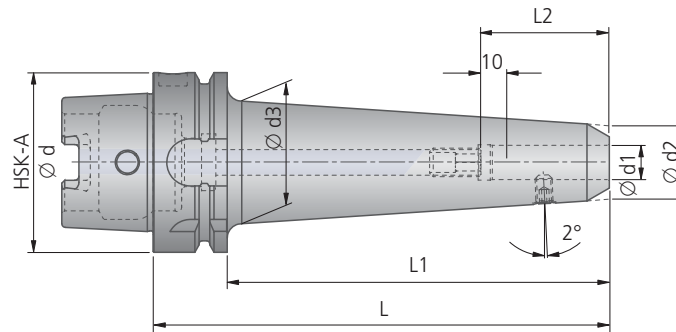
Further HSK-sizes on request

**Supply includes:** Adaptor sleeve complete with clamping screw and adjusting screw. Please order coolant supply connection and key separately (chapter 8).

## HSK-A Adaptor Sleeve Whistle Notch



long design ■  
the 2° tilt of the clamping screws prevents the tool from pulling out ■



HSK-A DIN 69893 T1 FWD										Assembly parts		
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	kg	Clamping screw		Adjusting screw
										Order No.	Piece	Order No.
HSK-A63-FWD06-160	A06 34060	63	6	22	33	160	134	36	1.30	N00 70200	1	N00 71000
HSK-A63-FWD08-160	A06 34080	63	8	24	35	160	134	36	1.34	51050 06010	1	N00 71050
HSK-A63-FWD10-160	A06 34100	63	10	25	39	160	134	40	1.44	51050 06010	1	N00 71120
HSK-A63-FWD12-160	A06 34120	63	12	26	43	160	134	45	1.60	51050 06010	1	N00 71270
HSK-A63-FWD14-160	A06 34140	63	14	28	44	160	134	45	1.60	51050 08010	1	N00 71270
HSK-A63-FWD16-160	A06 34160	63	16	30	45	160	134	48	1.70	51050 08010	1	N00 71420
HSK-A63-FWD18-160	A06 34180	63	18	32	46	160	134	48	1.70	51050 08010	1	N00 71420
HSK-A63-FWD20-160	A06 34200	63	20	34	50	160	134	50	1.90	51050 08010	1	N00 71510
HSK-A63-FWD25-160	A06 34250	63	25	65	65	160	134	56	3.65	51050 18220	2	N00 71510
HSK-A63-FWD32-160	A06 34320	63	32	72	72	160	134	60	4.24	51050 20220	2	N00 71510
HSK-A100-FWD06-160	A06 54060	100	6	22	33	160	131	36	2.60	N00 70200	1	N00 71000
HSK-A100-FWD08-160	A06 54080	100	8	24	35	160	131	36	2.60	51050 06010	1	N00 71050
HSK-A100-FWD10-160	A06 54100	100	10	25	39	160	131	40	2.80	51050 06010	1	N00 71120
HSK-A100-FWD12-160	A06 54120	100	12	26	43	160	131	45	2.83	51050 06010	1	N00 71270
HSK-A100-FWD14-160	A06 54140	100	14	28	44	160	131	45	2.90	51050 08010	1	N00 71270
HSK-A100-FWD16-160	A06 54160	100	16	30	45	160	131	48	2.97	51050 08010	1	N00 71420
HSK-A100-FWD18-160	A06 54180	100	18	32	46	160	131	48	3.10	51050 08010	1	N00 71420
HSK-A100-FWD20-160	A06 54200	100	20	34	50	160	131	50	3.20	51050 08010	1	N00 71510
HSK-A100-FWD25-160	A06 54250	100	25	65	65	160	131	56	4.98	51050 18220	2	N00 71510
HSK-A100-FWD32-160	A06 54320	100	32	72	72	160	131	60	5.60	51050 20220	2	N00 71510

Further HSK-sizes on request

**Supply includes:** Adaptor sleeve complete with clamping screw and adjusting screw. Please order coolant supply connection and key separately (chapter 8).

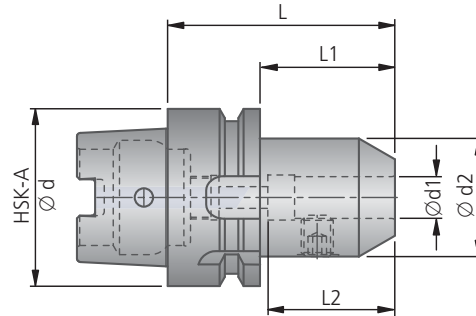


# KOMET® ISO 12164-1

## HSK-A Adaptor Sleeve Weldon

machine adaptor 	location DIN 69882-4	balancing note (Chapter 8) pre-balanced Q6,3 10.000 min <sup>-1</sup>	concentricity $\leq 5 \mu\text{m}$	coolant central 	rotating tool 	stationary tool 	tool holder DIN 1835-B Weldon DIN 6535 HB
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■ short design



HSK-A DIN 69893 T1 HWD									Assembly parts	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L	L1	L2		Clamping screw	
									Order No.	Piece
HSK-A50-HWD06	A06 23301	50	6	25	65	39	37	0.50	51050 06010	1
HSK-A50-HWD08	A06 23311	50	8	28	65	39	37	0.55	51050 08010	1
HSK-A50-HWD10	A06 23321	50	10	35	65	39	41	0.62	51050 10012	1
HSK-A50-HWD12	A06 23331	50	12	42	80	54	46	0.89	51050 12016	1
HSK-A50-HWD14	A06 23341	50	14	44	80	54	46	0.91	51050 12016	1
HSK-A50-HWD16	A06 23351	50	16	48	80	54	49	0.97	51050 14016	1
HSK-A50-HWD18	A06 23361	50	18	50	80	54	49	0.99	51050 14016	1
HSK-A50-HWD20	A06 23371	50	20	52	80	54	51	1.00	51050 16016	1
HSK-A63-HWD06	A06 33300	63	6	25	65	39	40	0.58	51050 06010	1
HSK-A63-HWD08	A06 33310	63	8	28	65	39	40	0.63	51050 08010	1
HSK-A63-HWD10	A06 33320	63	10	35	65	39	45	0.73	51050 10012	1
HSK-A63-HWD12	A06 33330	63	12	42	80	54	49	1.03	51050 12016	1
HSK-A63-HWD14	A06 33340	63	14	44	80	54	49	1.03	51050 12016	1
HSK-A63-HWD16	A06 33350	63	16	48	80	54	52	1.12	51050 14016	1
HSK-A63-HWD18	A06 33360	63	18	50	80	54	52	1.12	51050 14016	1
HSK-A63-HWD20	A06 33370	63	20	52	80	54	54	1.21	51050 16016	1
HSK-A63-HWD25	A06 33380	63	25	65	110	84	59	2.28	51050 18220	2
HSK-A63-HWD32	A06 33390	63	32	72	110	84	63	2.55	51050 20220	2
HSK-A100-HWD06	A06 53300	100	6	25	80	51	40	2.13	51050 06010	1
HSK-A100-HWD08	A06 53310	100	8	28	80	51	40	2.20	51050 08010	1
HSK-A100-HWD10	A06 53320	100	10	35	80	51	45	2.50	51050 10012	1
HSK-A100-HWD12	A06 53330	100	12	42	80	51	49	2.50	51050 12016	1
HSK-A100-HWD14	A06 53340	100	14	44	80	51	49	2.50	51050 12016	1
HSK-A100-HWD16	A06 53350	100	16	48	100	71	52	2.88	51050 14016	1
HSK-A100-HWD18	A06 53360	100	18	50	100	71	52	3.00	51050 14016	1
HSK-A100-HWD20	A06 53370	100	20	52	100	71	54	3.00	51050 16016	1
HSK-A100-HWD25	A06 53380	100	25	65	100	71	59	3.43	51050 18220	2
HSK-A100-HWD32	A06 53390	100	32	72	100	71	63	3.77	51050 20220	2





Further HSK sizes on request

Supply includes:

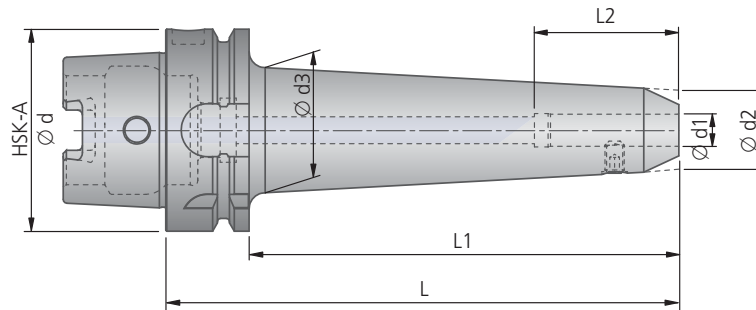
Adaptor sleeve complete with clamping screw. Please order coolant supply connection and key separately (chapter 8).


# KOMET® ISO 12164-1

## HSK-A Adaptor Sleeve Weldon

<b>machine adaptor</b> 	<b>balancing note (Chapter 8)</b> pre-balanced Q6,3 10.000 min <sup>-1</sup>	<b>coolant central</b> 	<b>rotating tool</b> 	<b>stationary tool</b> 	<b>tool holder</b> DIN 1835-B Weldon DIN 6535 HB
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long design ■



HSK-A DIN 69893 T1 HWD										Assembly parts	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	 kg	Clamping screw	
										Order No.	Piece
HSK-A63-HWD06-160	A06 34400	63	6	22	33	160	134	40	1.23	51050 06010	1
HSK-A63-HWD08-160	A06 34410	63	8	24	35	160	134	40	1.30	51050 06010	1
HSK-A63-HWD10-160	A06 34420	63	10	25	39	160	134	45	1.42	51050 06010	1
HSK-A63-HWD12-160	A06 34430	63	12	26	43	160	134	49	1.56	51050 06010	1
HSK-A63-HWD14-160	A06 34440	63	14	28	44	160	134	49	1.62	51050 08010	1
HSK-A63-HWD16-160	A06 34450	63	16	30	45	160	134	52	1.68	51050 08010	1
HSK-A63-HWD18-160	A06 34460	63	18	32	46	160	134	52	1.75	51050 08010	1
HSK-A63-HWD20-160	A06 34470	63	20	34	50	160	134	54	1.92	51050 08010	1
HSK-A63-HWD25-160	A06 34480	63	25	65	65	160	134	59	3.56	51050 18220	2
HSK-A63-HWD32-160	A06 34490	63	32	72	72	160	134	63	4.26	51050 20220	2
HSK-A100-HWD06-160	A06 54400	100	6	22	33	160	131	40	2.60	51050 06010	1
HSK-A100-HWD08-160	A06 54410	100	8	24	35	160	131	40	2.60	51050 06010	1
HSK-A100-HWD10-160	A06 54420	100	10	25	39	160	131	45	2.80	51050 06010	1
HSK-A100-HWD12-160	A06 54430	100	12	26	43	160	131	49	2.80	51050 06010	1
HSK-A100-HWD14-160	A06 54440	100	14	28	44	160	131	49	2.90	51050 08010	1
HSK-A100-HWD16-160	A06 54450	100	16	30	45	160	131	52	3.00	51050 08010	1
HSK-A100-HWD18-160	A06 54460	100	18	32	46	160	131	52	3.10	51050 08010	1
HSK-A100-HWD20-160	A06 54470	100	20	34	50	160	131	54	3.20	51050 08010	1
HSK-A100-HWD25-160	A06 54480	100	25	65	65	160	131	59	4.96	51050 18220	2
HSK-A100-HWD32-160	A06 54490	100	32	72	72	160	131	63	5.60	51050 20220	2

Further HSK-sizes on request

### Supply includes:

Adaptor sleeve complete with clamping screw. Please order coolant supply connection and key separately (chapter 8).

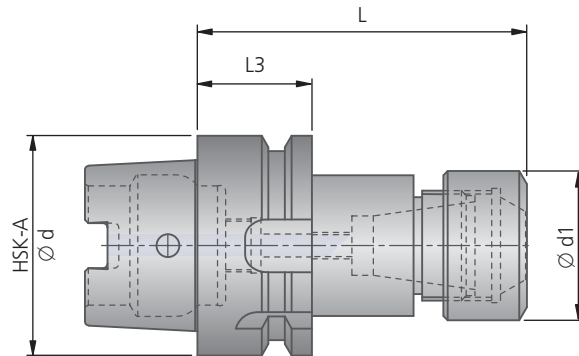


# KOMET® ISO 12164-1

## HSK-A Collet Holder

machine adaptor 	location 	balancing note (Chapter 8) 	coolant central 	rotating tool 	stationary tool 	tool holder 
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- high concentricity with ground thread on holder and clamping nut
- axial adjustment



HSK-A DIN 69893 T1 SZV								Accessory			
Description	Order No.	HSK-A Ø d	Ø d1	L	L3	Clamping range for collet 		Adjusting screw			
								Order No.	Description	with hole Order No.	without hole Order No.
HSK-A50-SZV/ER16	A06 23401	50	SW25	96.4–100	26	0.5 – 10.0	0.5	SW 25	M16×20	51049 16025	51050 16016
HSK-A50-SZV/ER32	A06 23431	50	50	96.5–100	26	2.0 – 20.0	1.2	L05 02050	M16×20	51049 16025	51050 16016
HSK-A63-SZV/ER16	A06 33400	63	SW25	96.4–100	26	0.5 – 10.0	1.2	SW 25	M5×8	N00 71900	N00 71910
HSK-A63-SZV/ER20	A06 33410	63	35	96.5–100	26	1.0 – 13.0	0.87	L05 02030	M6×12	N00 71070	N00 71940
HSK-A63-SZV/ER25	A06 33420	63	42	96.5–100	26	1.0 – 16.0	1.03	L05 02040	M8×1×14	N00 71970	N00 71980
HSK-A63-SZV/ER32	A06 33430	63	50	96.5–100	26	2.0 – 20.0	1.36	L05 02050	M10×1×14	N00 71280	N00 71240
HSK-A63-SZV/ER40	A06 33440	63	63	116.5–120	26	3.0 – 26.0	1.76	L05 02060	M12×1×18	N00 71330	N00 71340
HSK-A63-SZV/ER16-160	A06 34500	63	SW25	156.4–160	26	0.5 – 10.0	1.15	SW 25	M5×8	N00 71900	N00 71910
HSK-A63-SZV/ER25-160	A06 34520	63	42	156.5–160	26	1.0 – 16.0	1.37	L05 02040	M8×1×14	N00 71970	N00 71980
HSK-A100-SZV/ER16	A06 53400	100	SW25	96.4–100	29	0.5 – 10.0	2.00	SW 25	M5×8	N00 71900	N00 71910
HSK-A100-SZV/ER20	A06 53410	100	35	96.5–100	29	1.0 – 13.0	2.19	L05 02030	M6×12	N00 71070	N00 71940
HSK-A100-SZV/ER25	A06 53420	100	42	96.5–100	29	1.0 – 16.0	2.35	L05 02040	M8×1×14	N00 71970	N00 71980
HSK-A100-SZV/ER32	A06 53430	100	50	96.5–100	29	2.0 – 20.0	2.50	L05 02050	M10×1×14	N00 71280	N00 71240
HSK-A100-SZV/ER40	A06 53440	100	63	116.5–120	29	3.0 – 26.0	3.00	L05 02060	M12×1×18	N00 71330	N00 71340
HSK-A100-SZV/ER16-160	A06 54500	100	SW25	156.4–160	29	0.5 – 10.0	2.40	SW 25	M5×8	N00 71900	N00 71910
HSK-A100-SZV/ER25-160	A06 54520	100	42	156.5–160	29	1.0 – 16.0	2.66	L05 02040	M8×1×14	N00 71970	N00 71980

for size	Assembly parts		Accessories	
	Collet nut ①  Order No.	Collet nut ② for washer Order No.	Collet nut ③ with friction bearings Order No.	Collet nut ④ with friction bearings for washer Order No.
ER16	51200 00316	51200 00416	52807 03016	52807 01016
ER20	51200 00320	51200 00420	52807 03020	52807 01020
ER25	51200 00325	51200 00425	52807 03025	52807 01025
ER32	51200 00332	51200 00432	52807 03032	52807 01032
ER40	51200 00340	51200 00440	52807 03040	52807 01040

Washer for collet nuts ② and ④ 		optional from Ø d1	Clamping range increasing by
Description	Order No.		
DS/ER 16...	52806 16...	3 – 10	0.5 mm
DS/ER 20...	52806 20...	3 – 13	0.5 mm
DS/ER 25...	52806 25...	3 – 16	0.5 mm
DS/ER 32...	52806 32...	3 – 20	0.5 mm
DS/ER 40...	52806 33...	3 – 26	0.5 mm

Please state diameter required d1, e.g. :  
 ▲ 035 → Ø 3.5 mm Δd1 3.5–3.0 mm  
 090 → Ø 9.0 mm Δd1 9.0–8.5 mm  
 260 → Ø 26.0 mm Δd1 26.0–25.5 mm

### Supply includes:

Collet holder complete with collet nut ①.  
 Please order separately: accessory and coolant supply connection and key (chapter 8).

**Note:** The washers can be used up to a coolant pressure of 100 bar.



1



2



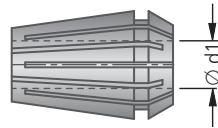
3



4



5



## Note:

<sup>1)</sup> Tool shank diameter d1 must not be greater than collet nominal dimension d1 (risk of fracture)

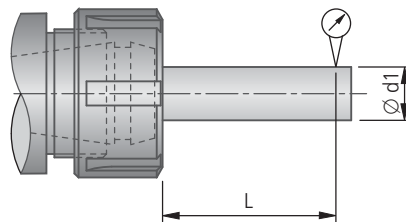
for collet holder	Order No.	<sup>1)</sup> optional from $\varnothing$ d1	Clamping range
HSK...A-SZV/ER16	A33 52000...	3 – 10.0	1 mm
HSK...A-SZV/ER20	A33 53000...	3 – 13	1 mm
HSK...A-SZV/ER25	A33 54000...	3 – 16	1 mm
HSK...A-SZV/ER32	A33 55000...	3 – 20	1 mm
HSK...A-SZV/ER40	A33 56000...	3 – 26	1 mm

Please state diameter ▲  
required d1, e. g.: **0300** for  $\varnothing$  3.0 mm  
**2600** for  $\varnothing$  26.0 mm

high precision			
for collet holder	Order No.	<sup>1)</sup> optional from $\varnothing$ d1	Clamping range
HSK...A-SZV/ER16	A33 52010...	3 – 10.0	from diameter 3 mm in 0.5 mm stages
HSK...A-SZV/ER20	A33 53010...	3 – 13	
HSK...A-SZV/ER25	A33 54010...	3 – 16	
HSK...A-SZV/ER32	A33 55010...	3 – 20	
HSK...A-SZV/ER40	A33 56010...	3 – 26	

Please state diameter ▲  
required d1, e. g.: **0300** for  $\varnothing$  3.0 mm  
**2650** for  $\varnothing$  26.5 mm

## Concentricity of collets

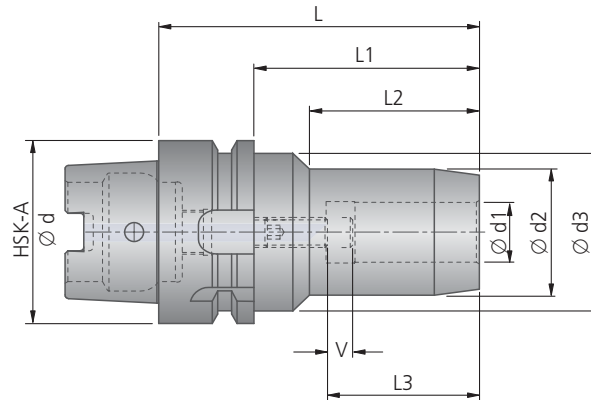


L	$\varnothing$ d1	Accuracy of concentricity to collets and collet holder	Accuracy of concentricity (higher precision) to collets and collet holder
6	1.0 – 1.6	0.015	0.010
10	1.6 – 3.0	0.015	0.010
16	3.0 – 6.0	0.015	0.010
25	6.0 – 10.0	0.015	0.010
40	10.0 – 18.0	0.020	0.015
50	18.0 – 26.0	0.020	0.015

# KOMET® ISO 12164-1

## HSK-A Expanding Chuck

machine adaptor	location	balancing note (chap. 8)		concentricity	coolant central	rotating tool	tool holder						
HSK-A ISO 12164-1	DIN 69882-7	pre-balanced HSK-A50 15.000 min <sup>-1</sup>	pre-balanced HSK-A63 12.000 min <sup>-1</sup>	< 3 µm			cylindrical shank	DIN 6535 HA	DIN 6535 HB	DIN 6535 HE	DIN 1835-B Weldon	DIN 1835-E Whistle Notch	DIN 6535 HE + DIN 6595



HSK-A DIN 69893 T1 Expanding chuck

HSK-A DIN 69893 T1 Expanding chuck												Assembly parts	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	L3	V		Adjusting screw	
												Description	Order No.
HSK-A50-D12	A06 23530	50	12	32	40	85	59	44	46	10	0.80	M10x1x12	N00 71800
HSK-A50-D20	A06 23570	50	20	42	60	90	64	29	51	10	1.10	M16x1x14	N00 71550
HSK-A63-D6	A06 33500	63	6	26	50	70	44	24	37	10	0.74	M5x12	N00 71020
HSK-A63-D8	A06 33510	63	8	28	50	70	44	25	37	10	0.83	M6x12	N00 71070
HSK-A63-D10	A06 33520	63	10	30	50	80	54	35	41	10	0.83	M8x1x12	N00 71730
HSK-A63-D12	A06 33530	63	12	32	50	85	59	40	46	10	1.14	M10x1x12	N00 71800
HSK-A63-D14	A06 33540	63	14	34	50	85	59	40	46	10	0.83	M10x1x12	N00 71800
HSK-A63-D16	A06 33550	63	16	38	50	90	64	46	49	10	1.05	M12x1x12	N00 71860
HSK-A63-D18	A06 33560	63	18	40	50	90	64	47	49	10	0.91	M12x1x12	N00 71860
HSK-A63-D20	A06 33570	63	20	42	50	90	64	48	51	10	1.15	M16x1x14	N00 71550
HSK-A63-D25	A06 33580	63	25	57	63	120	94	59	57	10	2.30	M16x1x14	N00 71550
HSK-A63-D32	A06 33590	63	32	64	75	125	99	63	61	10	2.90	M16x1x14	N00 71550
HSK-A100-D6	A06 53500	100	6	26	50	75	46	26	37	10	2.28	M5x12	N00 71020
HSK-A100-D8	A06 53510	100	8	28	50	75	46	26	37	10	2.28	M6x12	N00 71070
HSK-A100-D10	A06 53520	100	10	30	50	90	61	42	41	10	2.40	M8x1x12	N00 71730
HSK-A100-D12	A06 53530	100	12	32	50	95	66	47	46	10	2.29	M10x1x12	N00 71800
HSK-A100-D14	A06 53540	100	14	34	50	95	66	47	46	10	2.45	M10x1x12	N00 71800
HSK-A100-D16	A06 53550	100	16	38	50	100	71	53	49	10	2.59	M12x1x12	N00 71860
HSK-A100-D18	A06 53560	100	18	40	50	100	71	53	49	10	2.61	M12x1x12	N00 71860
HSK-A100-D20	A06 53570	100	20	42	50	105	76	59	51	10	3.07	M16x1x14	N00 71550
HSK-A100-D25	A06 53580	100	25	57	63	110	81	62	57	10	3.54	M16x1x14	N00 71550
HSK-A100-D32	A06 53590	100	32	64	75	110	81	62	61	10	2.80	M16x1x14	N00 71550

Further HSK-size on request.

Tool shank tolerance: h6 for Ø 6 - 32 mm

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

**Accessories**  
expanding chuck:  
Adaptor sleeve



### Closed system:

The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

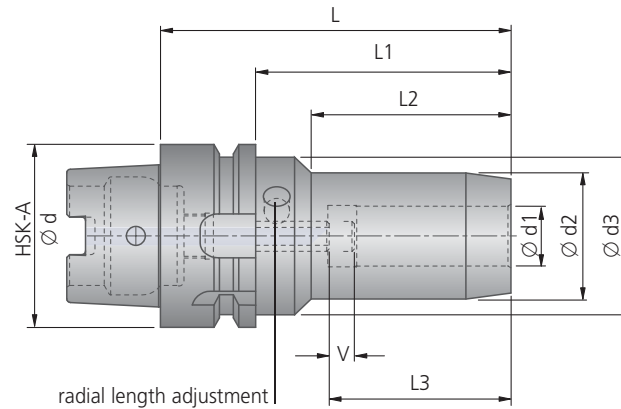
**rpm limit:** Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

# KOMET® ISO 12164-1

## HSK-A Expanding Chuck

machine adaptor	location	balancing note (chap. 8)	concentricity	coolant central	rotating tool	tool holder						
	DIN 69882-7	pre-balanced 0,3 15.000 min <sup>-1</sup>	< 3 μm				DIN 6535 HA	DIN 6535 HB	DIN 6535 HE	DIN 1835-B Weldon	DIN 1835-E Whistle Notch	DIN 6535 HE + DIN 6595

with radial length adjustment ■



HSK-A DIN 69893 T1 Expanding chuck

Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	L3	V	kg
HSK-A63-D6	A06 34800	63	6	26	50	80	54	33	37	10	1.1
HSK-A63-D8	A06 34810	63	8	28	50	80	54	33	37	10	1.1
HSK-A63-D10	A06 34820	63	10	30	50	85	59	38	41	10	1.1
HSK-A63-D12	A06 34830	63	12	32	50	90	64	40	46	10	1.2
HSK-A63-D14	A06 34840	63	14	34	50	90	64	46	46	10	1.2
HSK-A63-D16	A06 34850	63	16	38	50	95	69	51	49	10	1.3
HSK-A63-D18	A06 34860	63	18	40	50	95	69	52	49	10	1.3
HSK-A63-D20	A06 34870	63	20	42	50	100	74	51	51	10	1.4
HSK-A63-D25	A06 34880	63	25	57	63	120	94	54.5	57	10	2.2
HSK-A63-D32	A06 34890	63	32	64	75	125	99	57.5	61	10	2.7

further HSK-size on request

Tool shank tolerance: h6 for Ø 6 - 32 mm

### Accessories expanding chuck:

Adaptor sleeve



### Closed system:

The system is fully sealed. No dirt, coolant, lubricants or chips can penetrate.

### rpm limit:

Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

### Supply includes:

Expanding chuck fitted complete, inclusive adjusting screw.

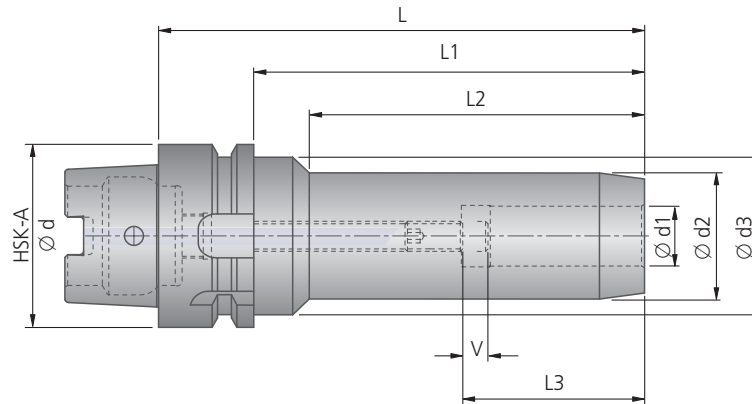
Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Expanding Chuck

machine adaptor	location	balancing note (chap. 8)	concentricity	coolant central	rotating tool	tool holder						
	DIN 69882-7	pre-balanced 06,3 15.000 min <sup>-1</sup>	$< 3 \mu\text{m}$			cylindrical shank	DIN 6535 HA	DIN 6535 HB	DIN 6535 HE	DIN 1835-B Weldon	DIN 1835-E Whistle Notch	DIN 6535 HE + DIN 6595

■ long version



HSK-A DIN 69893 T1 Expanding chuck												Assembly parts	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	L3	V		Adjusting screw	
												Description	Order No.
HSK-A63-D6	A06 34900	63	6	26	50	200	174	153	37	10	1.6	M5×12	N00 71020
HSK-A63-D8	A06 34910	63	8	28	50	200	174	154	37	10	1.6	M6×12	N00 71070
HSK-A63-D10	A06 34920	63	10	30	50	200	174	154	41	10	1.7	M8×1×12	N00 71730
HSK-A63-D12	A06 34930	63	12	32	50	200	174	155	46	10	1.8	M10×1×12	N00 71800
HSK-A63-D14	A06 34940	63	14	34	50	200	174	155	46	10	1.9	M10×1×12	N00 71800
HSK-A63-D16	A06 34950	63	16	38	50	200	174	156	49	10	2.2	M12×1×12	N00 71860
HSK-A63-D18	A06 34960	63	18	40	50	200	174	157	49	10	2.3	M12×1×12	N00 71860
HSK-A63-D20	A06 34970	63	20	42	50	200	174	158	51	10	2.4	M16×1×14	N00 71550

further HSK-size on request

Tool shank tolerance: h6 for Ø 6 - 32 mm

### Accessories expanding chuck:

Adaptor sleeve



### Closed system:

The system is fully sealed. No dirt, coolant, lubricants or chips can penetrate.

### rpm limit:

Depending on the HSK size, all expanding chucks are applicable up to  $n = 50,000$  rpm in its balanced version.

### Supply includes:

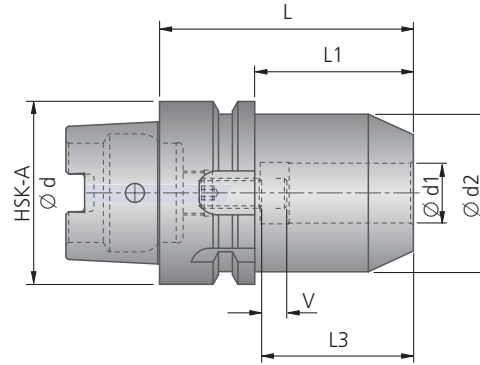
Expanding chuck fitted complete, inclusive adjusting screw.

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

# KOMET® ISO 12164-1 HSK-A Expanding Chuck

machine adaptor HSK-A ISO 12164-1	balancing note (chap. 8) pre-balanced Q6,3 15.000 min <sup>-1</sup>	concentricity < 3 µm	coolant central	rotating tool	tool holder						

short design ■



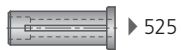
HSK-A DIN 69893 T1 Expanding chuck										Assembly parts Adjusting screw	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L	L1	L3	V		Description	Order No.
HSK-A63-D20	A06 34350	63	20	51.5	80	53.95	51	10	1.3	M16×1x14	N00 71550

further HSK-size on request

Tool shank tolerance: h6 for Ø 6 - 32 mm

### Accessories expanding chuck:

Adaptor sleeve



▶ 525

### Closed system:

The system is fully sealed. No dirt, coolant, lubricants or chips can penetrate.

### rpm limit:

Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

### Supply includes:








Expanding chuck fitted complete, inclusive adjusting screw.

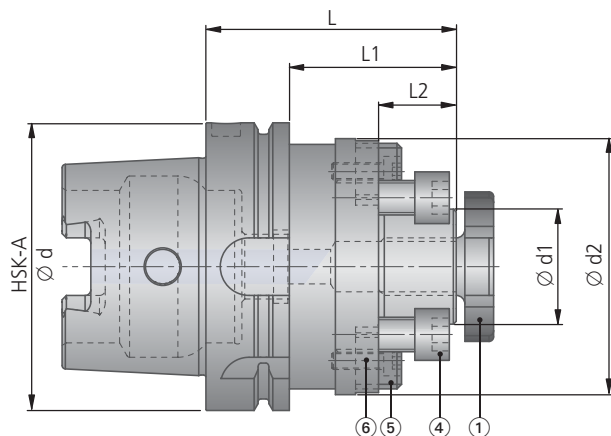
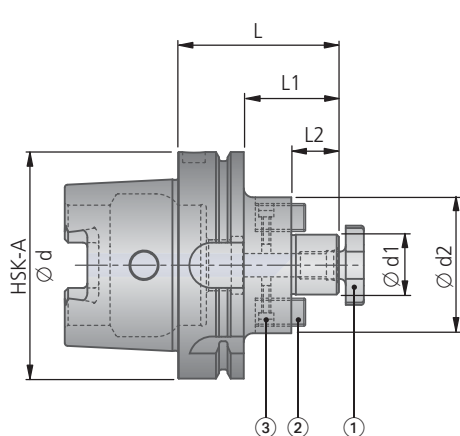
Please order coolant supply connection and key separately (chapter 8).




# KOMET® ISO 12164-1

## HSK-A Milling Cutter Arbor

machine adaptor 	location FAM 	balancing note (chap. 8) 	coolant central 	rotating tool 	tool holder FA 	tool holder FAM 
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HSK-A DIN 69893 T1 FA / FAM

Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L	L1	L2	
HSK-A63-FA16	A06 33901	63	16	40	67	41	17	0.90
HSK-A63-FA22	A06 33911	63	22	50	69	43	19	1.08
HSK-A63-FA27	A06 33921	63	27	60	81	55	21	1.44
HSK-A63-FA32	A06 33931	63	32	78	84	58	24	1.79
HSK-A63-FA40*	A06 33941	63	40	89	87	61	27	2.15
HSK-A100-FA16	A06 53901	100	16	40	67	38	17	2.21
HSK-A100-FA22	A06 53911	100	22	50	69	40	19	2.38
HSK-A100-FA27	A06 53921	100	27	60	71	42	21	2.58
HSK-A100-FA32	A06 53931	100	32	78	74	45	24	3.00
HSK-A100-FA40*	A06 53941	100	40	89	87	58	27	3.80
HSK-A100-FA50	A06 53950	100	50	120	100	71	30	5.58
HSK-A100-FAM60*	A06 53960	100	60	129	110	81	40	5.99

\* Size 40 and 60 with 4 additional screw-in threads for cutter heads with tool clamping to DIN 2079.

for Description	Assembly parts													
	Cutter clamping screw DIN 6367 ①		Allen key DIN 6368 for ① on request		Drive key DIN 6367 ②		Clamping screw ③		Cylindrical screw ④		Key block DIN 2079 ⑤		Clamping screw DIN 912 ⑥	
	Size	Order No.	Des.	Order No.	Order No.	Des.	Order No.	Des.	Order No.	Des.	Order No.	Des.	Order No.	
...-FA16	M8	55062 00008	16	18701 80016	N12 20240	M3x8	55011 03008	-	-	-	-	-	-	
...-FA22	M10	55062 00010	22	18701 80022	N12 20250	M4x12	55011 04012	-	-	-	-	-	-	
...-FA27	M12	55062 00012	27	18701 80027	N12 20260	M5x12	55011 05012	-	-	-	-	-	-	
...-FA32	M16	55062 00016	32	18701 80032	N12 20270	M5x20	55011 05020	-	-	-	-	-	-	
...-FA40	M20	55062 00020	40	18701 80040	-	-	-	FA40	5501112040	A40	56341 00001	M6x18	55011 06018	
...-FA50	M24	55062 00024	50	18701 80050	N12 20230	-	-	-	-	-	-	-	-	
...-FAM60	-	-	-	-	-	-	-	FA60	5501116050	A50	56341 00003	M12x25	55011 12025	

### Supply includes:

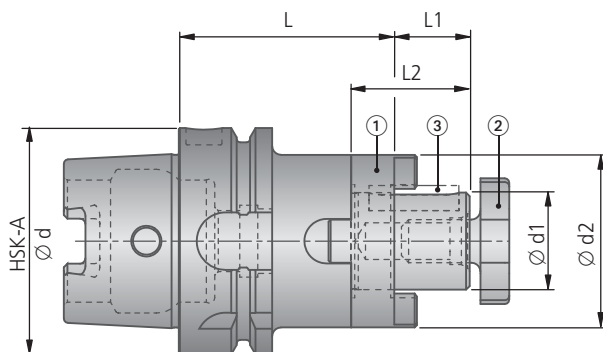
Combination milling cutter arbor fitted complete. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Combination Milling Cutter Arbor

machine adaptor HSK-A ISO 12164-1	location DIN 69882-2	balancing note (chap. 8) pre-balanced Q6,3 15.000 min <sup>-1</sup>	rotating tool	tool holder DIN 6358
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for milling cutters with longitudinal or cross slots ■



HSK-A DIN 69893 T1 FAK

Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L	L1	L2	kg
HSK-A50-FAK16	A06 23751	50	16	32	50	17	27	0.62
HSK-A50-FAK22	A06 23761	50	22	40	50	19	31	0.60
HSK-A50-FAK27	A06 23771	50	27	48	65	21	33	1.05
HSK-A50-FAK32	A06 23781	50	32	58	65	24	38	1.25
HSK-A63-FAK16	A06 33750	63	16	32	60	17	27	0.96
HSK-A63-FAK22	A06 33760	63	22	40	60	19	31	1.10
HSK-A63-FAK27	A06 33770	63	27	48	60	21	33	1.22
HSK-A63-FAK32	A06 33780	63	32	58	60	24	38	1.45
HSK-A63-FAK40	A06 33790	63	40	70	70	27	41	2.10
HSK-A100-FAK16	A06 53750	100	16	32	60	17	27	2.20
HSK-A100-FAK22	A06 53760	100	22	40	60	19	31	2.48
HSK-A100-FAK27	A06 53770	100	27	48	60	21	33	2.55
HSK-A100-FAK32	A06 53780	100	32	58	60	24	38	2.80
HSK-A100-FAK40	A06 53790	100	40	70	70	27	41	3.55
HSK-A100-FAK50	A06 53800	100	50	90	80	30	46	5.00

Assembly parts

for Description	Driving ring DIN 6366 Part 1 ①		Cutter clamping screw DIN 6367 ②		Feather key DIN 6885 Part 1 ③		Allen key DIN 6368 for ② on request	
	Description	Order No.	Description	Order No.	Description	Order No.	Size	Order No.
HSK...FAK16	16x10	55237 00016	M8	55062 00008	A4x4x20	51305 04020	16	18701 80016
HSK...FAK22	22x12	55237 00022	M10	55062 00010	A6x6x25	51305 06025	22	18701 80022
HSK...FAK27	27x12	55237 00027	M12	55062 00012	A7x7x25	51305 07025	27	18701 80027
HSK...FAK32	32x14	55237 00032	M16	55062 00016	A8x7x28	51305 08028	32	18701 80032
HSK...FAK40	40x14	55237 00040	M20	55062 00020	A10x8x32	51305 10032	40	18701 80040
HSK...FAK50	50x16	55237 00050	M24	55062 00024	A12x8x36	51305 12036	50	18701 80050

### Supply includes:

Combination milling cutter arbor fitted complete. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Morse Taper

1



machine  
adaptor



rotating tool



tool holder



■ for holding tools with morse taper with tangs to DIN 228, Part 2 Form D

2



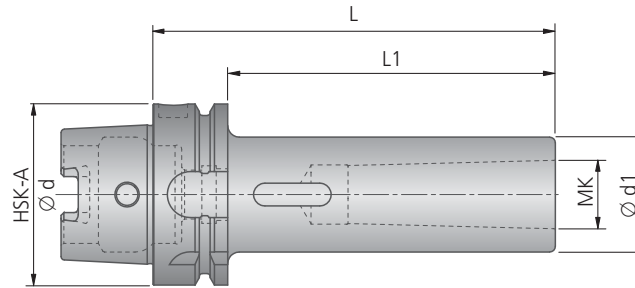
3



4



5



HSK-A DIN 69893 T1 Morse taper

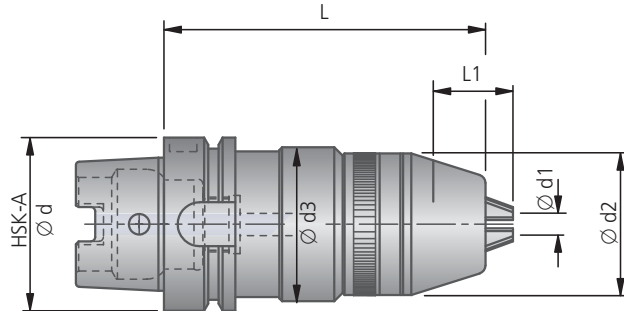
Description	Order No.	HSK-A Ø d	Taper size MK	Ø d1	L	L1	kg
HSK-A63-MK1	A06 34010	63	MK 1	25	100	74	0.86
HSK-A63-MK2	A06 34020	63	MK 2	32	120	94	1.08
HSK-A63-MK3	A06 34030	63	MK 3	40	140	114	1.81
HSK-A63-MK4	A06 34040	63	MK 4	48	160	134	2.33



# KOMET® ISO 12164-1

## HSK-A Short Drill Chuck

machine adaptor 	balancing note (chap. 8) 	concentricity 	coolant central 	rotating tool 	tool holder 
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HSK-A DIN 69893 T1 NCB

Description	Order No.	HSK-A Ø d	Clamping range Ø d1	Ø d2	Ø d3	L	Clamping depth L1	kg
HSK-A 50 NCB 0.5-13	A06 23620	50	0.5-13	49.5	56	117	29	1.47
HSK-A 50 NCB 3-16	A06 23610	50	3-16	52.0	56	117	29	1.54
HSK-A 63 NCB 0.5-13	A06 33620	63	0.5-13	49.5	56	117	29	1.82
HSK-A 63 NCB 3-16	A06 33610	63	3-16	52.0	56	117	29	1.89

### Supply includes:

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



# KOMET® ISO 12164-1

## HSK-A Test Arbor

1



machine  
adaptor



- measuring arbors for checking machine geometry and concentricity of spindle.

2



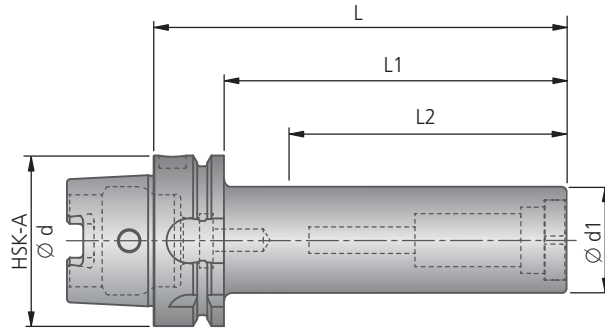
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4



5

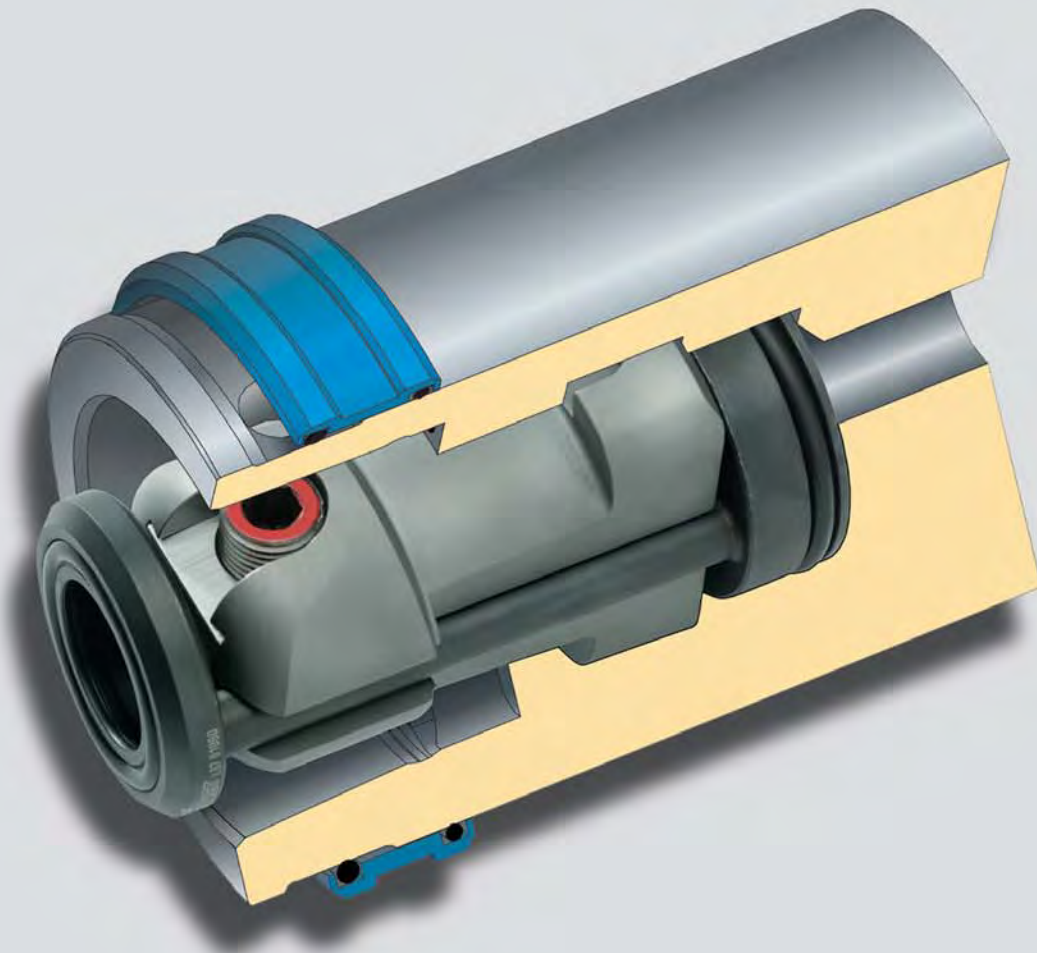


HSK-A DIN 69893 T1 Test arbor

Description	Order No.	HSK-A $\varnothing d$	$\varnothing d_1$	L	L1	useable length L2	
HSK-A 50-D32/L200	A06 23480	50	32	236	210	200	1.90
HSK-A 63-D40/L300	A06 33480	63	40	346	320	300	2.98
HSK-A 100-D40/L300	A06 53480	100	40	349	320	300	4.70

# KOMET® ISO 12164-1 HSK with integrated KomLoc® HSK Clamping System

For more detailed information, see Chapter 8



1



2



3



4









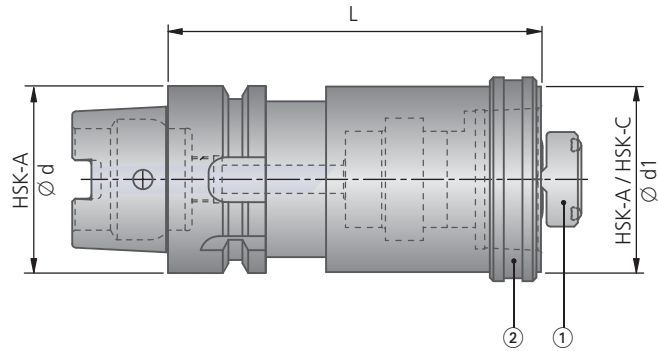
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


# KOMET® ISO 12164-1

## HSK-A Extension KomLoc® HSK Clamping System K

machine adaptor 	balancing note (chap. 8) pre-balanced Q6,3 15.000 min <sup>-1</sup>	coolant central 	rotating tool 	KomLoc® HSK clamping system System K 	tool holder  
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




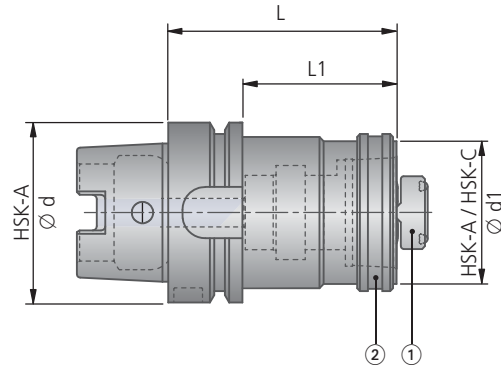
HSK-A DIN 69893 T1 Extension KomLoc®						Assembly parts	
Description	Order No.	HSK-A Ø d	HSK-A HSK-C Ø d1	L	 kg	Clamping device KomLoc® ①	Sealing ring, shifting ②
						Order No.	Order No.
HSK-A63-V100	A06 34700	63	63	100	1.87	L07 01060	L07 01460
HSK-A63-V140	A06 34710	63	63	140	2.93	L07 01060	L07 01460
HSK-A100-V200	A06 54720	100	100	200	10.58	L07 01080	L07 01480


### Supply includes:

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

HSK-A Reducing Adaptor KomLoc® HSK Clamping System K

<p>machine adaptor</p> 	<p>balancing note (chap. 8)</p> <p>pre-balanced Q6,3 15.000 min<sup>-1</sup></p>	<p>coolant central</p> 	<p>rotating tool</p> 	<p>KomLoc® HSK clamping system</p> <p>System K</p>	<p>tool holder</p>  
--	--	--	--	--	--



HSK-A DIN 69893 T1 Reducing Adaptor KomLoc®							Assembly parts	
Description	Order No.	HSK-A Ø d	HSK-A HSK-C Ø d1	L	L1		Clamping device KomLoc® ①	Sealing ring, shifting ②
							Order No.	Order No.
HSK-A63-HSK50	A06 34770	63	50	80	54	1.30	L07 01050	L07 01450
HSK-A100-HSK50	A06 54770	100	50	90	61	2.76	L07 01050	L07 01450
HSK-A100-HSK63	A06 54780	100	63	100	71	3.24	L07 01060	L07 01460
HSK-A100-HSK80	A06 54790	100	80	120	91	4.89	L07 01070	L07 01470

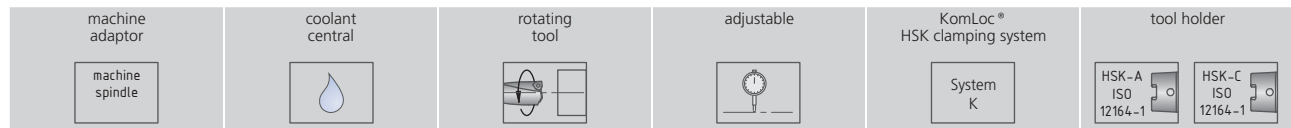
Supply includes:

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

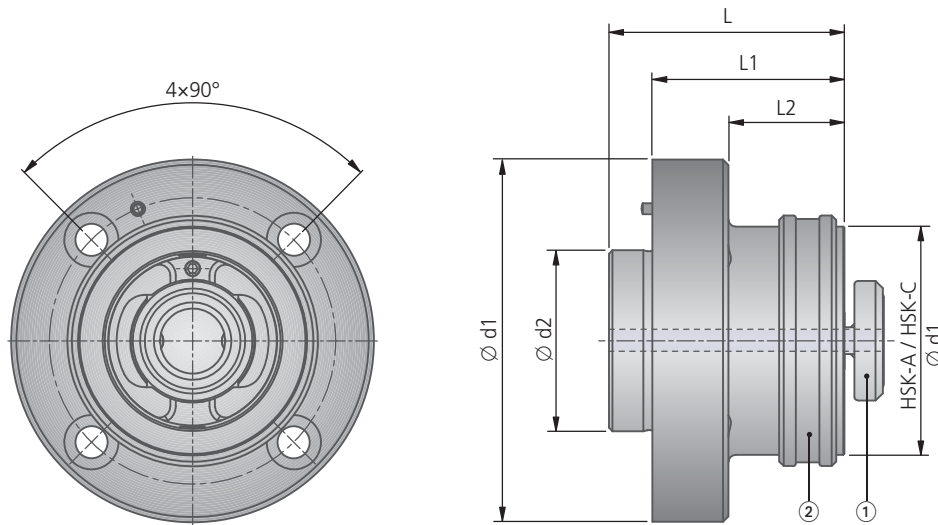


# KOMET® HSK-RVF Adaptor Flange

## KomLoc® HSK Clamping System K



■ can be radially adjusted on the machine spindle with adjusting screws



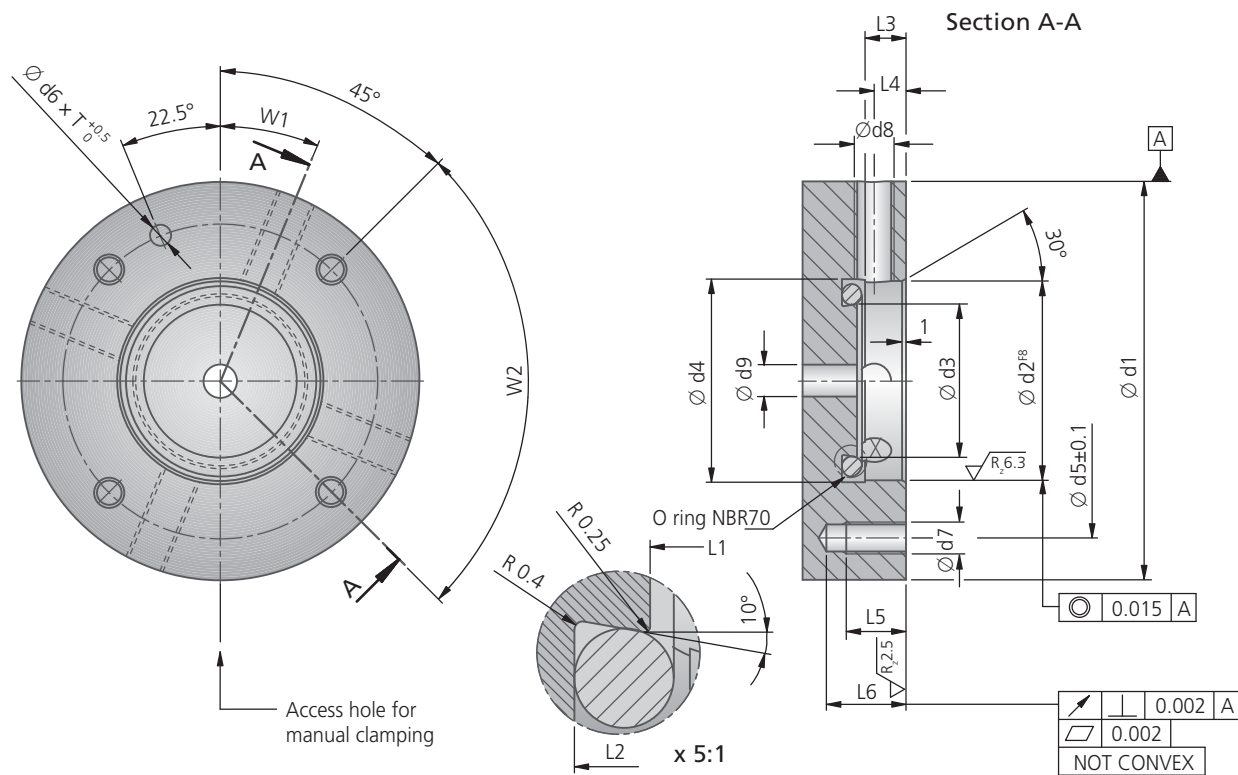
HSK-RVF									Assembly parts		Accessories	
Description	Order No.	HSK-A HSK-C Ød	Ød1	Ød2	L	L1	L2	kg	Clamping device KomLoc® ①	Sealing ring, shifting ②	Clamping screw DIN 912	
									Order No.	Order No.	Description	Order No.
HSK-40 RVF	A08 51031	40	70	35	42.4	32.5	21	0.52	L07 01040	L07 01440	M6x20-12.9	–
HSK-50 RVF	A08 61031	50	80	40	53	43	26	0.97	L07 01050	L07 01450	M6x20-12.9	–
HSK-63 RVF	A08 71031	63	100	50	65	53	32	1.84	L07 01060	L07 01460	M8x25-12.9	–
HSK-80 RVF	A08 81030	80	117	60	84.8	72.8	45	3.62	L07 01070	L07 01470	M8x35-12.9	55011 08035

### Supply includes:

Adaptor flange complete with KomLoc® clamping device and sealing ring. Please order accessories separately.

# KOMET® HSK-RVF Adaptor Flange

## Connection Dimensions



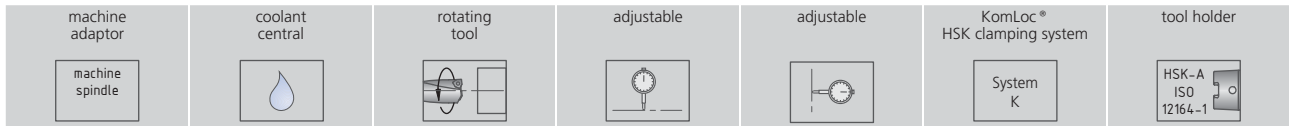
Connection Dimensions																			
for adaptor flange	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	$\varnothing d4$	$\varnothing d5$ min	$\varnothing d6$	$\varnothing d7$	$\varnothing d8$	$\varnothing d9$	L1	L2	L3 min	L4	L5	L6	T	W1	W2	O ring
A08 51031	70	35	28.5	36	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	14	18	3.5	$0^\circ$	4x90°	28x3
A08 61031	80	40	30.5	41	63	5	M6	M8x1	6.0	10.3	13.3	8.3	7.0	14	18	3.5	$0^\circ$	4x90°	30x4
A08 71031	100	50	38.5	51	79	5	M8	M10x1	8.0	12.3	16.1	10.3	8.0	15	20	3.5	$0^\circ$	4x90°	38x5
A08 81030	117	60	47.5	61	96	6	M8	M10x1	10.2	12.3	16.1	10.3	8.0	18	22	4.5	$0^\circ$	4x90°	47x5

Please ask for current KOMET drawing No. N49 13470 for spindle production.

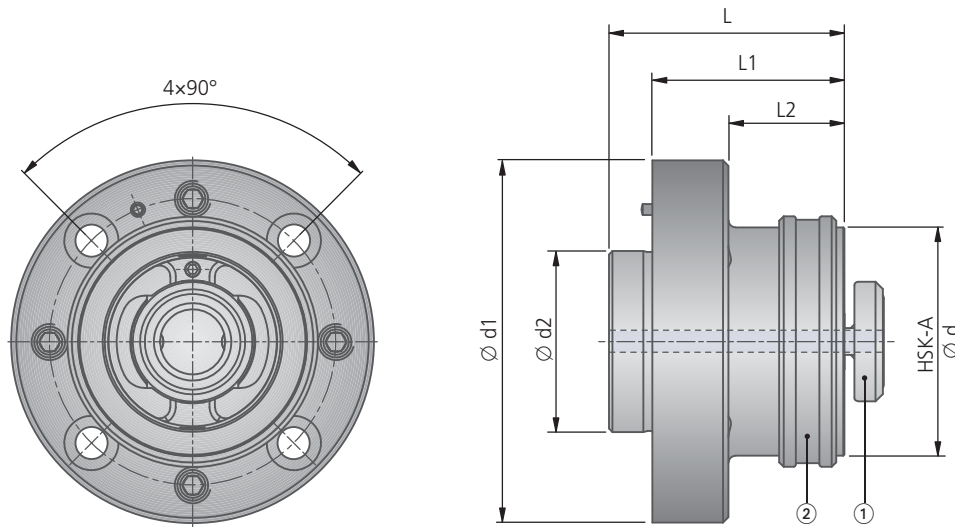


# KOMET® HSK-RVFW Adaptor Flange, adjustable

## KomLoc® HSK Clamping System K



- can be radially adjusted on the machine spindle with adjusting screws
- can be precisely adjusted in face run-out by means of adjusting screw in adaptor flange



HSK-RVFW									Assembly parts				Accessories	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L	L1	L2	kg	Clamping device KomLoc® ①	Sealing ring, shifting ②	Disc	Threaded pin	Clamping screw DIN 912	
									Order No.	Order No.	Order No.	Order No.	Description	Order No.
HSK-40 RVFW	A08 52030	40	70	35	42.4	32.5	21	0.52	L07 01040	L07 01440	L02 30960	N00 70250	M6x20-12.9	-
HSK-63 RVFW	A08 72030	63	100	50	65	53	32	1.84	L07 01060	L07 01460	L02 30960	N00 70320	M8x25-12.9	-
HSK-80 RVFW	A08 82030	80	117	60	84.8	72.8	45	3.62	L07 01070	L07 01470	L02 30960	N00 70330	M8x35-12.9	55011 08035

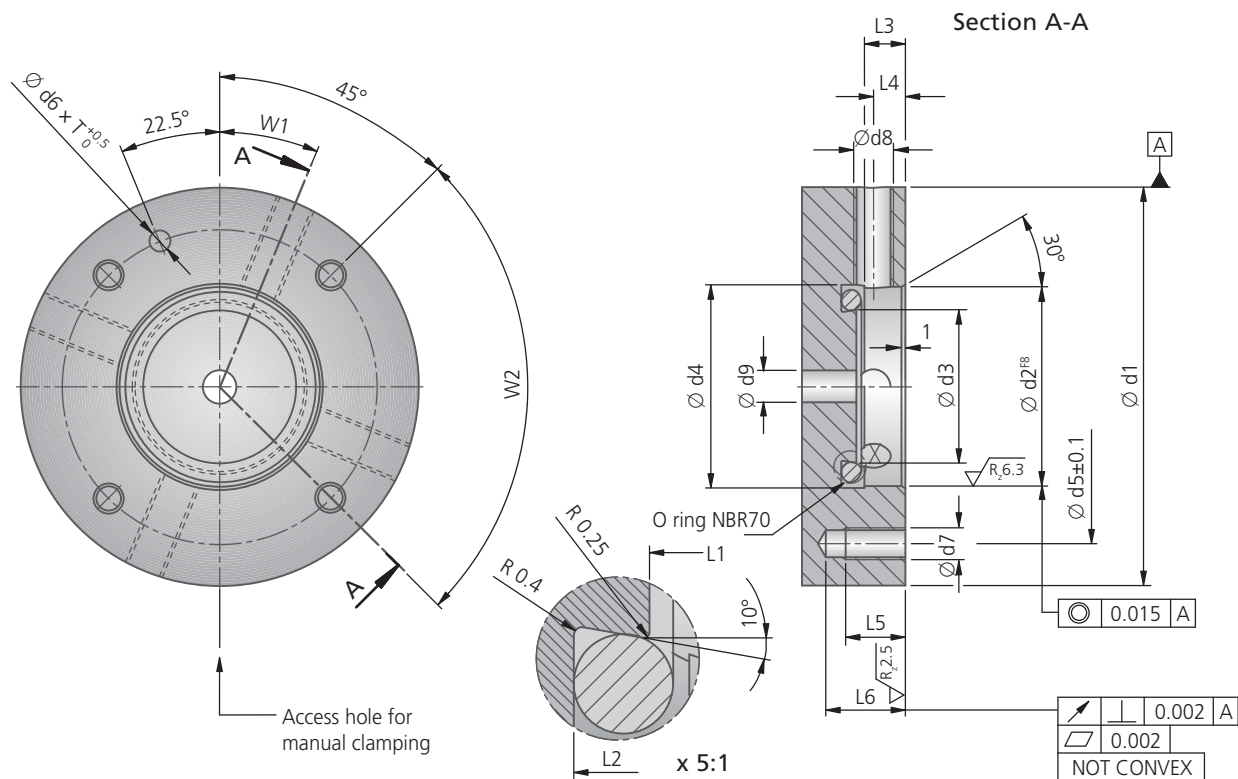
### Supply includes:

Adaptor flange complete with KomLoc® clamping device, sealing ring, disc and threaded pin.  
Please order accessories separately.



# KOMET® HSK-RVFW Adaptor Flange, adjustable

## Connection Dimensions



Connection dimensions																			
for adaptor flange	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	$\varnothing d4$	$\varnothing d5$	$\varnothing d6$	$\varnothing d7$	$\varnothing d8$	$\varnothing d9$	L1	L2	L3	L4	L5	L6	T	W1	W2	O ring
A08 52030	70	35	28.5	36	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	16	20	3.5	$0^\circ$	4x90°	28x3
A08 72030	100	50	38.5	51	79	5	M8	M10x1	8.0	12.3	16.1	10.3	8.0	15	20	3.5	$0^\circ$	4x90°	38x5
A08 82030	117	60	47.5	61	96	6	M8	M10x1	10.2	12.3	16.1	10.3	8.0	18	22	4.5	$0^\circ$	4x90°	47x5

Please ask for current KOMET drawing No. N49 13470 for spindle production.

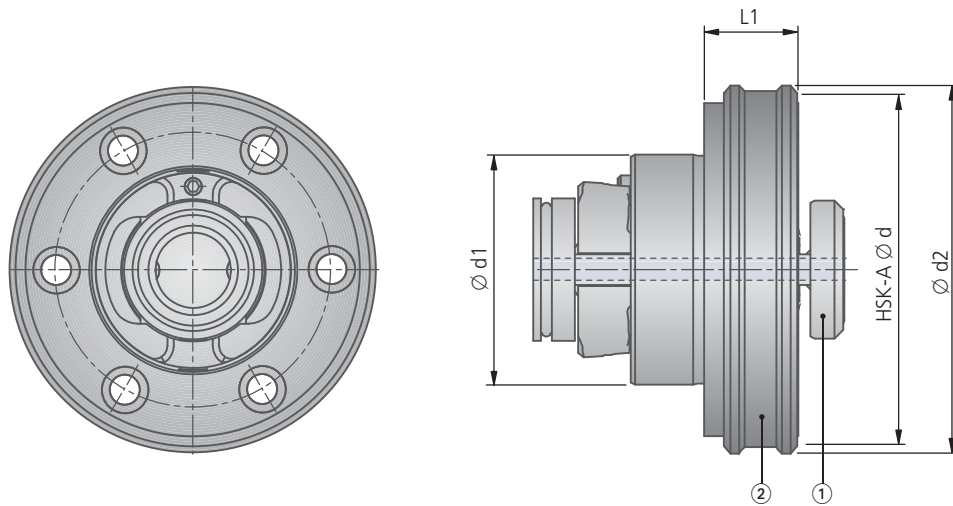


# KOMET® HSK-REF Built-in Flange

## KomLoc® HSK Clamping System K

machine adaptor short spindle DIN 69002	coolant central	rotating tool	adjustable	KomLoc® HSK clamping system System K	tool holder HSK-A ISO 12164-1
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■ can be radially adjusted on the machine spindle with adjusting screw



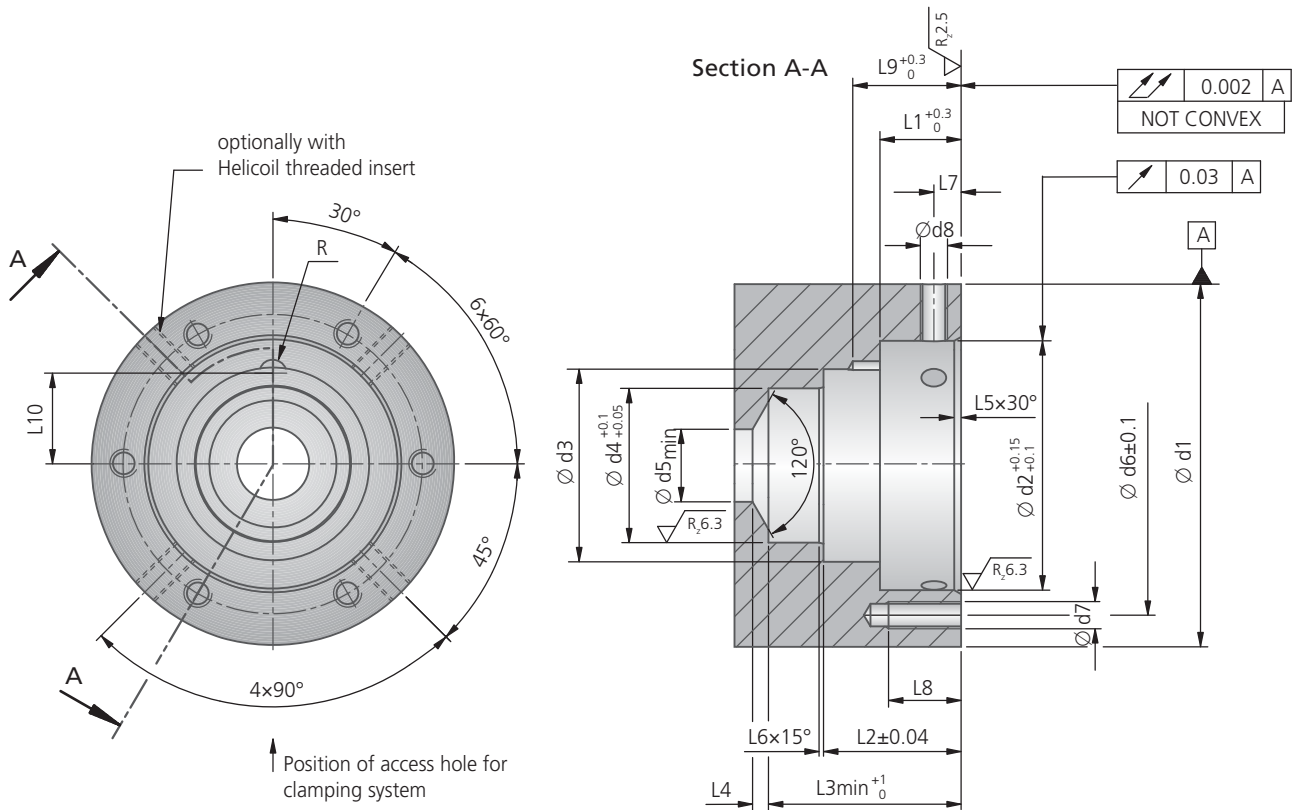
HSK-REF							Assembly parts			Accessories	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	L1	kg	Clamping device KomLoc® ①	Sealing ring, turning ②	Ball pressure screw	Clamping screw DIN 912	
							Order No.	Order No.	Order No.	Description	Order No.
HSK-50 REF	A08 61060	63	42	69.2	17.5	0.54	L07 01050	L07 01761	N10 30739	M5x20 12.9	55011 05020
HSK-63 REF	A08 71060	80	55	88	22.5	1.12	L07 01060	L07 01771	N10 30740	M6x30 12.9	55011 06030
HSK-80 REF	A08 81060	100	68	110	27.5	2.19	L07 01070	L07 01780	N10 30741	M8x35 12.9	55011 08035
HSK-100 REF	A08 91060	125	88	137	30	4.10	L07 01080	L07 01790	N10 30742	M10x1x40 12.9	55011 10042

### Supply includes:

Built-in flange complete with KomLoc® clamping device, sealing ring and ball pressure screw.  
Please order accessories separately.

# KOMET® HSK-REF Built-in Flange

## Connection Dimensions



Connection dimensions

for built-in flange	Ø d1	Ø d2	Ø d3 <sup>+0.5</sup>	Ø d4	Ø d5 <sub>min</sub>	Ø d6	Ø d7	Ø d8	L1	L2	L3 <sub>min</sub>	L4	L5	L6	L7	L8	L9	L10	R
A08 61060	63	42	33	26	10	52	M5	M5	15	24.75	35.5	3	1.5	1	5	12	18.4	15.5	2.5
A08 71060	80	55	42.5	34	16	66	M6	M6	17.9	30.35	42.5	3.5	1.5	1	6	16	23.9	20	3
A08 81060	100	68	52.8	42	16	82	M8	M8	24.3	40.2	57.3	4	2	1.5	8	18	32.9	24.8	3.5
A08 91060	125	88	66	53	20	106	M10x1	M8	34.4	54.4	76	4.5	2	2	8	25	42.4	31.4	4.5

Please ask for current KOMET drawing No. N49 13460 for spindle production.

1

2

3

4

5

KOMET®  
Taper Shanks

1



2



3



4



5



**BENEFITS for you:**

- The steep taper is the standardised form of a tool taper for clamping tools in the main spindle of a machine tool
- The steep taper is standardised in DIN 69871 part 1
- No self-locking (in contrast with the Morse taper), thereby making tool changes easier without clamping. This is particularly significant with automatic tool changes
- Small clamping travel, thereby short clamping time
- High torsional rigidity due to the short distance between the cutting edge and spindle bearing (short overall length)

**KOMET® Taper Shanks**

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**DIN 2080 A**

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**1**

**2**

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**4**

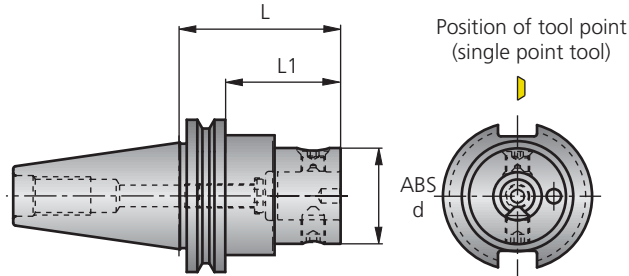
**5**


# CAT

## Taper Shank Holder with ABS® Connection



■ for through spindle coolant



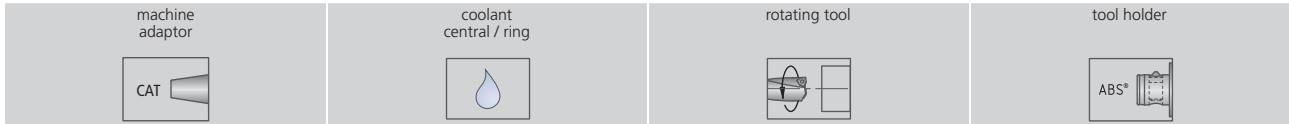
ABS®						
CAT	Description	Order No.	ABS Ø d	L	L1	
40	ABS 25CAT40	A52 10120	25	2.362	1.612	2.00
	ABS 32CAT40	A52 10130	32	2.362	1.612	2.20
	ABS 40CAT40	A52 10140	40	2.362	1.612	2.45
	ABS 50CAT40	A52 10150	50	2.953	2.203	2.75
	ABS 50CAT40 EXT	A52 10180	50	5.512	4.762	
	ABS 63CAT40	A52 10160	63	3.543	2.793	3.50
45	ABS 25CAT45	A52 10220	25	2.362	1.612	3.30
	ABS 32CAT45	A52 10230	32	2.362	1.612	3.55
	ABS 40CAT45	A52 10240	40	2.362	1.612	4.40
	ABS 50CAT45	A52 10250	50	2.362	1.612	5.10
	ABS 63CAT45	A52 10260	63	3.346	2.596	6.20
	ABS 80CAT45	A52 10270	80	3.937	3.187	
50	ABS 25CAT50	A52 10320	25	2.362	1.612	3.20
	ABS 32CAT50	A52 10330	32	2.362	1.612	6.20
	ABS 40CAT50	A52 10340	40	2.362	1.612	6.40
	ABS 50CAT50	A52 10350	50	2.362	1.612	7.05
	ABS 50CAT50 EXT	A52 10400	50	6.299	5.549	
	ABS 63CAT50	A52 10360	63	3.150	2.400	7.70
	ABS 80CAT50	A52 10370	80	3.937	3.187	10.00
	ABS 100CAT50	A52 10380	100	4.921	4.171	15.00
60	ABS 125CAT50	A52 10390	125	5.709	4.959	23.50
	ABS 63CAT60	A52 10460	63	3.150	2.400	16.70
	ABS 80CAT60	A52 10470	80	3.150	2.400	22.00
	ABS 100CAT60	A52 10480	100	3.937	3.187	31.00
	ABS 125CAT60	A52 10490	125	5.512	4.762	33.00

### Supply includes:

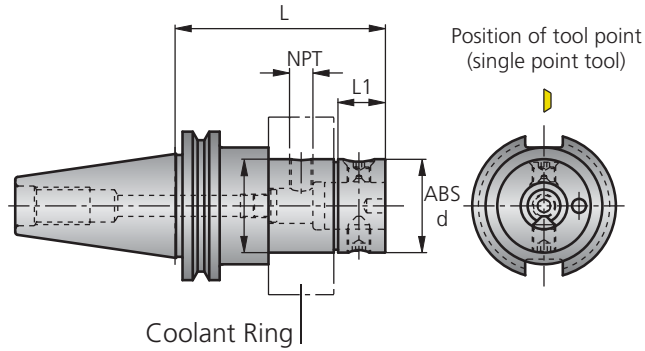
Taper shank holders supplied without retention knob.

For plug screw, ABS® replacement parts see Chapter 8.

Taper Shank Holder with ABS® Connection



for use with KRD / KRSD Coolant Glands ■



ABS®								
CAT	Description	Order No.	ABS Ø d	Coolant ring d1	L	L1	NPT	lbs
40	ABS 40CAT40KR	A52 10640	40	40	3.740	0.913	1/8	3.30
	ABS 50CAT40KR	A52 10650	50	50	3.740	0.906	1/8	3.55
	ABS 63CAT40KR	A52 10660	63	70	4.330	1.437	1/8	4.10
45	ABS 40CAT45KR	A52 10740	40	40	3.937	1.110	1/8	5.50
	ABS 50CAT45KR	A52 10750	50	50	3.937	1.102	1/8	5.95
	ABS 63CAT45KR	A52 10760	63	70	4.134	1.280	1/8	7.90
50	ABS 40CAT50KR	A52 10840	40	40	3.937	1.110	1/8	7.50
	ABS 50CAT50KR	A52 10850	50	50	3.937	1.102	1/8	8.80
	ABS 63CAT50KR	A52 10860	63	70	4.331	1.476	1/8	10.80
	ABS 80CAT50KR	A52 10870	80	80	4.331	1.476	1/8	11.65
	ABS100CAT50KR	A52 10880	100	100	5.118	2.244	3/8	15.00

Supply includes:

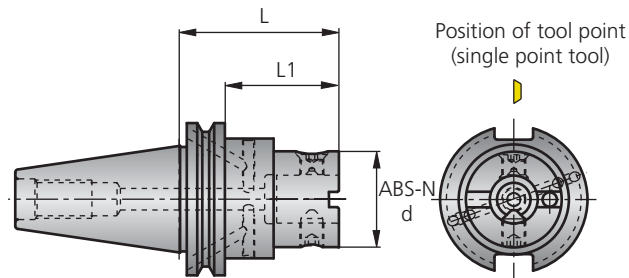
Taper shank holders supplied without retention knob and coolant ring.

For plug screw, ABS® replacement parts see Chapter 8.



# CAT AD/B

## Taper Shank Holder with ABS<sup>®</sup> - N Connection



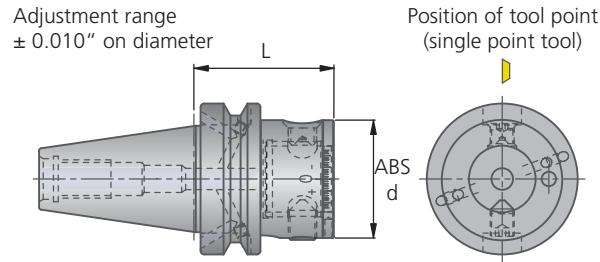
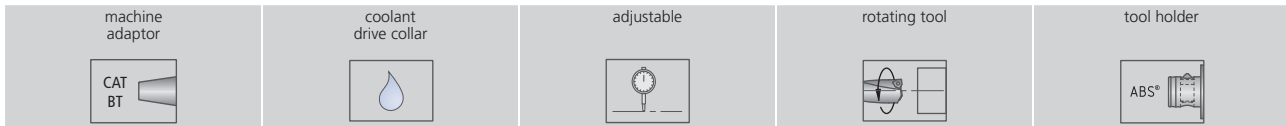
ABS <sup>®</sup> N						
CAT	Description	Order No.	ABS-N Ø d	L	L1	lbs
40	ABS 50N-CAT40 AD/B	A52 51150	50	2.953	2.203	2.75
	ABS 63N-CAT40 AD/B	A52 51160	63	3.543	2.793	3.50
50	ABS 50N-CAT50 AD/B	A52 51350	50	2.362	1.612	7.05
	ABS 63N-CAT50 AD/B	A52 51360	63	3.150	2.400	7.70
	ABS 80N-CAT50 AD/B	A52 51370	80	3.937	3.187	10.00

### Supply includes:

Taper shank holders supplied without retention knob.  
For plug screw, ABS<sup>®</sup> replacement parts see Chapter 8.



Eccentric - Taper Shank Holder with ABS® Connection



ABS®					
CAT / BT	Description	Order No.	ABS Ø d	L	lbs
CAT 40	ABS 50 CAT 40 AD/B EH	A52 11151	50	2.953	
	ABS 63 CAT 40 AD/B EH	A52 11160	63	3.543	
CAT 50	ABS 50 CAT 50 AD/B EH	A52 11351	50	2.362	
	ABS 63 CAT 50 AD/B EH	A52 11360	63	3.150	
BT 40	ABS 50 BT 40 AD/B EH	A55 56150	50	2.362	2.82
BT 50	ABS 50 BT 50 AD/B EH	A55 56350	50	2.756	8.69

Supply includes:

Eccentric taper shank drill holder complete without retention knob.

Note:

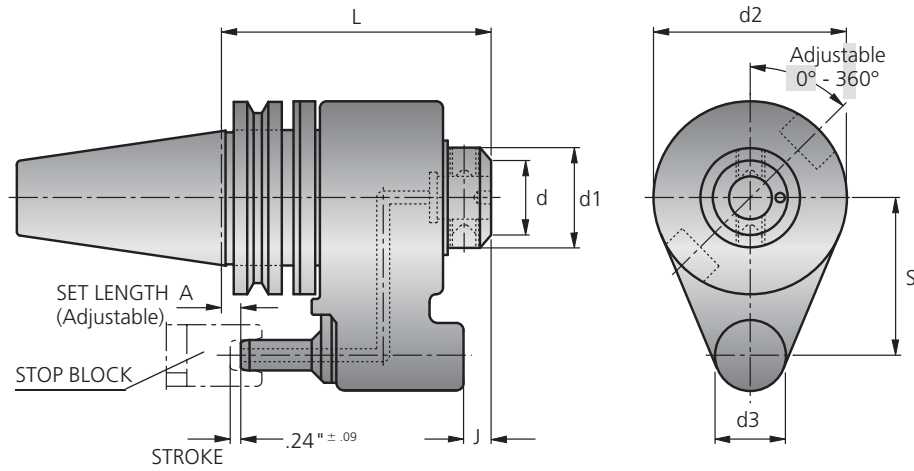
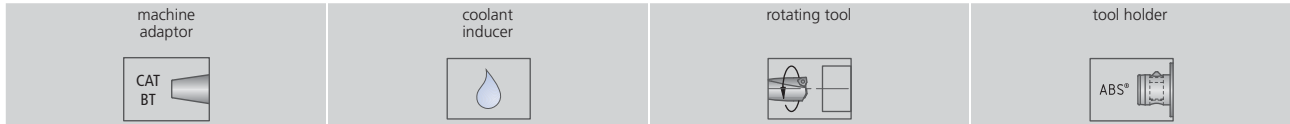
Additional ABS® sizes and machine connections are available upon request.

Replacement Parts		
	Adjustment Key	Change Kit
CAT / BT	Order No.	Order No.
CAT 40	1804300028.00	–
CAT 50	1804300028.00	–
BT 40	1804300028.00	L02 30920
BT 50	1804300028.00	L02 30940



# CAT / BT

## Taper Shank Holder with ABS® Connection



ABS®											
CAT / BT	Description	Order No.	ABS Ø d	L	A	d1	d2	d3	S	J	lbs
CAT 40	ABS 50 CI/CAT 40	A52 20550	50	5.512	0	2.551	3.86	1.38	2.56	0.590	12.50
CAT 50	ABS 50 CI/CAT 50	A52 20950	50	5.512	0	2.551	3.86	1.38	3.15	0.590	17.00
	ABS 63 CI/CAT 50	A52 20960	63	5.709	0	2.551	3.86	1.38	3.15	0.787	17.10
BT 40	ABS 50 CI/BT 40	A55 10550	50	5.709	0.24	2.551	3.86	1.38	2.56	0.511	12.50
BT 50	ABS 50 CI/BT 50	A55 10950	50	6.102	0.59	2.551	3.86	1.38	3.15	0.551	19.30
	ABS 63 CI/BT 50	A55 10960	63	6.299	0.59	2.551	3.86	1.38	3.15	0.748	19.10

### Supply includes:

Taper shank holder complete with coolant reducer, less stop block, mounting hardware and retention knob.

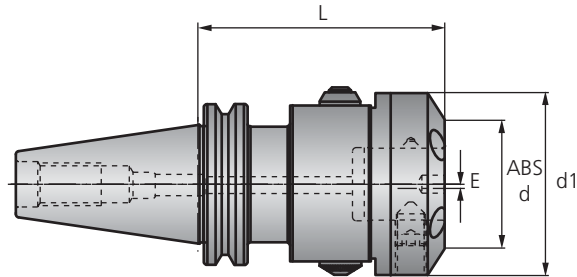
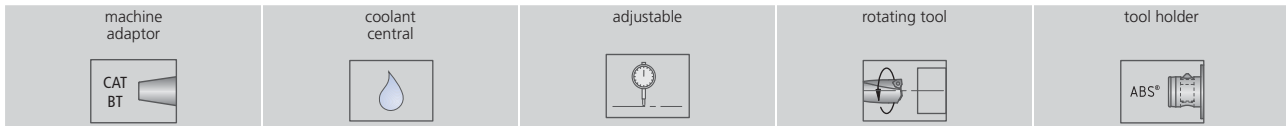
### Note:

Coolant must be filtered.

For stop block dimensions and mounting information, see Chapter 8.

- Improved hole making with better chip control.
- Faster feeds and speeds.
- Longer tool life.
- Up to 5,000 RPM and maximum 285 PSI coolant pressure.
- Enables deep hole operations.
- Suitable for use with carbide drills for improved productivity.
- Provides better control of work piece tolerance due to reduced heat.

Integral Drill Holder for ABS® Connection



ABS®						
CAT / BT	Description	Order No.	ABS Ø d	d1	L	E
CAT 40	CAT 40MV-ABS 50	M01 06030	50	2.756	3.622	0.06
CAT 50	CAT 50MV-ABS 50	M01 06040	50	2.756	3.622	0.06
BT 40	BT 40MV-ABS 50	M01 06110	50	2.756	3.622	0.06

**Supply includes:**

Integral drill holder complete without retention knob.  
ABS® replacement parts see Chapter 8.

**Note:**

The ABS® seal cannot be fitted into the M01 Micro Adjustable Holder.

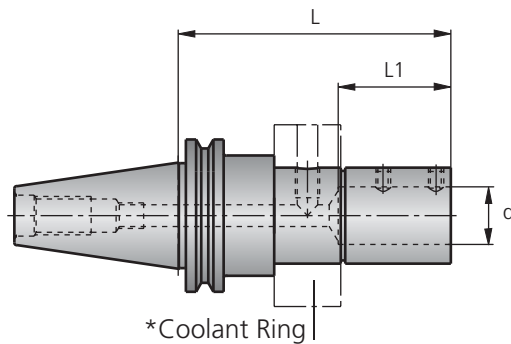
Accurate adjustment with micro-adjustable spindle

- Maximum adjustment range .125" on diameter
- Scale divisions .001" on diameter
- Rigid clamping of head after adjustment achieved by means of 4 clamping screws on face



# CAT

## Integral Drill Holder for Straight Shank Connection



### Important:

KUB IT HD Drills used with these holders must be cut off at notch on shank!

CAT	Description	Order No.	D1	L	L1	lbs
50	ZWH 1.250 CAT 50	A05 00310	1.250	4.913	3.075	9.00
	ZWH 1.500 CAT 50	A05 00320	1.500	4.913	3.159	10.10

### Supply includes:

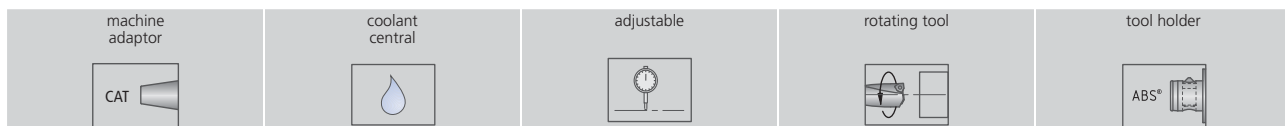
Integral drill holder complete without retention knob.

### Note:

Other shank sizes are available on request.

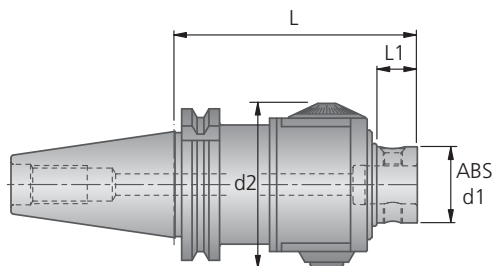
**\* Please use the coolant ring KRD 60 (L0100021) in Chapter 8.**

## Integral Micro-adjustable Boring Head M020



(KFK)

radial adjustment of 0.0001" per graduation on diameter, using vernier scale



CAT	Description	Order No.	ABS Ø d	d1	L		E
40	CAT 40 KFK1-Z-ABS 32	M02 07200	32	2.692	0.157	3.740	0.635
50	CAT 50 KFK1-Z-ABS 32	M02 07210	32	2.756	0.157	3.740	0.635

**Supply includes:**

Integral micro-adjustable boring head complete without retention knob.  
ABS® replacement parts see Chapter 8.

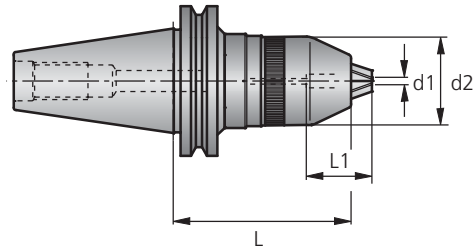
**The micro-adjustable head balanced in zero position**


**Boring Range:**  $D_{min} = D$   
 $D_{max} = D1(2 \times S)$



# CAT

## Integral Mill Drill Chuck



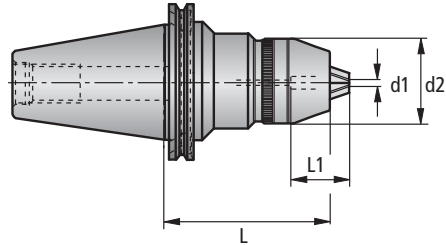
CAT	Description	Order No.	L	d1	d2	L1	
40	KMDC 0.5-13 CAT40	A34 60010	4.331	0.020 - 0.512	1.949	1.142	4.5
	KMDC 3-16 CAT40	A34 60020	4.331	0.118 - 0.630	2.047	1.142	4.7
50	KMDC 0.5-13 CAT50	A34 60050	4.331	0.020 - 0.512	1.949	1.142	9.1
	KMDC 3-16 CAT50	A34 60060	4.331	0.118 - 0.630	2.047	1.142	9.2
	KMDC 12-20 CAT 50	A34 60070	4.567	0.472 - 0.787	2.480	1.575	10.3


### Supply includes:

Integral mill drill chuck complete with hex socket wrench, interchangeable seals and seal changing tool less retention knob.

# CAT MS (Mori Seiki)

## Integral Mill Drill Chuck CAT MS



CAT MS	Description	Order No.	L	d1	d2	L1	
40	KMDC 3-16 CAT 40 MS	A34 60080	4.331	0.118-0.630	2.047	1.142	4.7
50	KMDC 3-16 CAT 50 MS	A34 60090	4.331	0.118-0.630	2.047	1.142	9.2

### Supply includes:

Integral mill drill chuck complete with hex socket wrench, interchangeable seals and seal changing tool less retention knob.

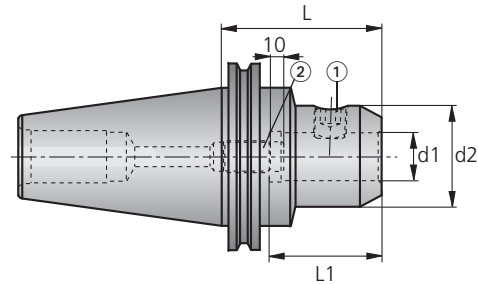


# CAT

## Integral FWD Precision Tool Holder



■ for straight shank connection (metric)



All dimensions are in mm

CAT	Description	Order No.	d1	d2	L	L1	Replacement parts	
							Clamping screw	Adjusting screw
							① Order No.	② Order No.
40	CAT 40 FWD 10MM	A25 56820	10	28	50	40	N00 70310	N00 71130
	CAT 40 FWD 12MM	A25 56830	12	42	50	45	N00 70370	N00 71230
	CAT 40 FWD 14MM	A25 56840	14	42	50	45	N00 70370	N00 71320
	CAT 40 FWD 16MM	A25 56850	16	48	63	48	N00 70400	N00 71410
	CAT 40 FWD 18MM	A25 56860	18	48	63	48	N00 70400	N00 71410
	CAT 40 FWD 20MM	A25 56870	20	52	63	50	N00 70450	N00 71500
	CAT 40 FWD 25MM	A25 56880	25	52	90	56	N00 70450	N00 71500
50	CAT 50 FWD 10MM	A25 66820	10	28	63	40	N00 70310	N00 71130
	CAT 50 FWD 12MM	A25 66830	12	42	63	45	N00 70370	N00 71230
	CAT 50 FWD 14MM	A25 66840	14	42	63	45	N00 70370	N00 71320
	CAT 50 FWD 16MM	A25 66850	16	48	63	48	N00 70400	N00 71410
	CAT 50 FWD 18MM	A25 66860	18	48	63	48	N00 70400	N00 71410
	CAT 50 FWD 20MM	A25 66870	20	52	63	50	N00 70450	N00 71500
	CAT 50 FWD 25MM	A25 66880	25	52	80	56	N00 70450	N00 71500

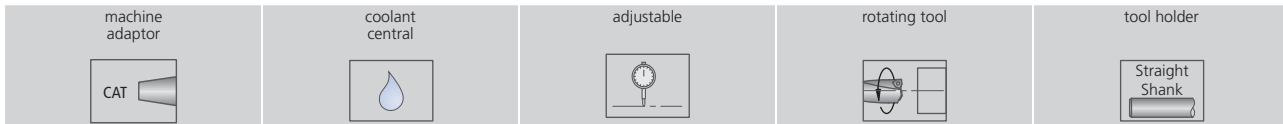
### Supply includes:

Integral precision tool holder complete with clamping and adjusting screws, less hex socket type wrench and retention knob.

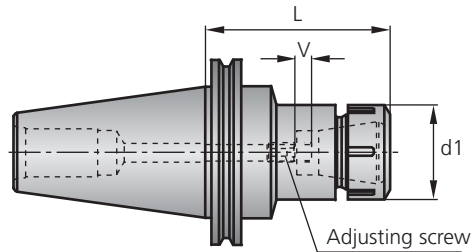
- Total Runout  $\leq 0.01$  mm.
- A 2° tilted clamping screw secures tool from being pulled out of the chuck.
- Central coolant supply through adjusting screw.
- Length axially adjustable.



# CAT Integral Collet Holder



externally adjustable - SZV ■



\* Dimension "L" depends on clamping range of collet

CAT	Description	Order No.	d1	L*	V	Description	Order No.	Description	Order No.	Max. collet nut clamping torque (ft-lbs)
40	CAT 40 SZV/ER 32	A05 80350	1.969	3.500	0.402	KC/ER 32	5280601032.00	E 32	L05 02050	120
50	CAT 50 SZV/ER 32	A05 80450	1.969	3.500	0.472	KC/ER 32	5280601032.00	E 32	L05 02050	120

### Supply includes:

Integral collet holder complete with collet nut, short adjusting screw with hole, less collet, spanner wrench and retention knob.

- For clamping tools with cylindrical shank up to 3/4" (20mm) diameter.
- Concentricity between taper and tool shank  $\leq 0.0006"$  (0.015mm).
- Axial adjustment via side adjustable rack and pinion system without removal of tool.

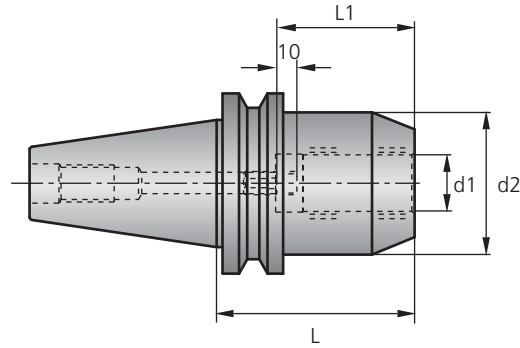


# CAT

## Integral Hydraulic Clamping Chuck



■ inch



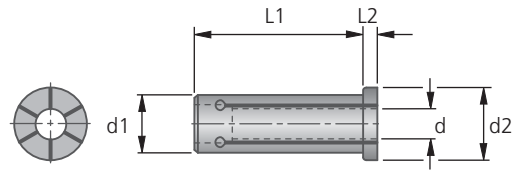
CAT	Description	Order No.	d1	d2	L	L1	Replacement parts	
							Adjusting screw	
							Description	Order No.
40	CAT40 .250	A25 56710	0.250	1.752	2.520	1.457	FWD M6X1X16	N00 71050
	CAT40 .375	A25 56720	0.375	1.752	2.520	1.673	FWD M10X1X18	N00 71230
	CAT40 .500	A25 56730	0.500	1.752	2.520	1.870	FWD M10X1X18	N00 71230
	CAT40 .625	A25 56740	0.625	1.752	2.520	2.067	FWD M10X1X18	N00 71230
	CAT40 .750	A25 56750	0.750	1.752	2.520	2.067	FWD M10X1X18	N00 71230
50	CAT50 .250	A25 66710	0.250	2.752	3.189	1.457		
	CAT50 .375	A25 66720	0.375	2.752	3.189	1.673		
	CAT50 .500	A25 66730	0.500	2.752	3.189	1.870		
	CAT50 .625	A25 66740	0.625	2.752	3.189	1.870		
	CAT50 .750	A25 66750	0.750	2.752	3.189	2.067		
	CAT50 1.000	A25 66760	1.000	2.752	3.189	2.402		
	CAT50 1.250	A25 66770	1.250	2.752	3.189	2.559		

### Supply includes:

Integral hydraulic clamping chuck complete with adjusting screw, less hex socket type wrench and retention knob.

- Total runout < 0.0002".
- Completely enclosed pressure system, sealed against dirt and coolant.
- Central coolant supply through adjusting screw.
- Length axially adjustable.

# Reducer Bushing for Hydraulic Clamping Chucks



with flange grooves for peripheral coolant

Reducer Bushing (inch)					
Order No.	d	d1	d2	L1	L2
L01 13400	0.250	0.750	0.980	2.00	0.78
L01 13410	0.312				
L01 13420	0.375				
L01 13430	0.437				
L01 13440	0.500				
L01 13450	0.625				

Gage Pin	
Order No.	d1
L00 00080	6
L00 00090	8
L00 00100	10
L00 00110	12
L00 00130	16
L00 00070	20
L00 00160	32

Cylindrical Brush	
Order No.	d1
4779116206	6
4779116208	8
4779116210	10
4779116212	12
4779116216	16
4779116220	20
4779116232	32

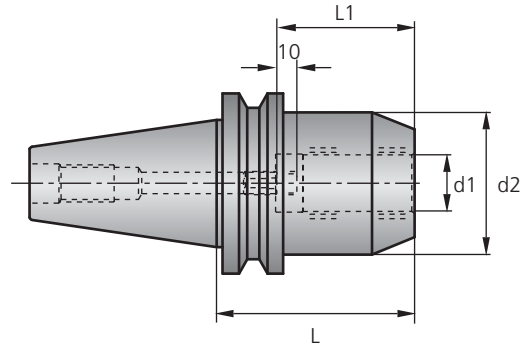


# CAT

## Integral Hydraulic Clamping Chuck



■ metric



All dimensions are in mm

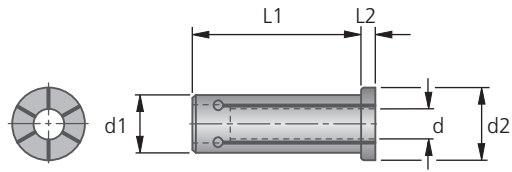
CAT	Description	Order No.	d1	d2	L	L1	Replacement parts Adjusting screw	
							Description	Order No.
40	CAT40 10 mm	A25 56620	10	44.5	64	42.5	FWD M6X1X16	N00 71050
	CAT40 12 mm	A25 56630	12	44.5	64	47.5	FWD M10X1X18	N00 71230
	CAT40 14 mm	A25 56640	14	44.5	64	47.5	FWD M10X1X18	N00 71230
	CAT40 16 mm	A25 56650	16	44.5	64	52.0	FWD M10X1X18	N00 71230
	CAT40 20 mm	A25 56670	20	44.5	64	52.5	FWD M10X1X18	N00 71230
50	CAT50 10 mm	A25 66620	10	69.9	81	42.5		
	CAT50 12 mm	A25 66630	12	69.9	81	47.5		
	CAT50 14 mm	A25 66640	14	69.9	81	47.5		
	CAT50 16 mm	A25 66650	16	69.9	81	52.5		
	CAT50 20 mm	A25 66670	20	69.9	81	52.5		
	CAT50 25 mm	A25 66680	25	69.9	81	61.0		
	CAT50 32 mm	A25 66690	32	69.9	81	65.0		

### Supply includes:

Integral hydraulic clamping chuck complete with adjusting screw, less hex socket type wrench and retention knob.

- Total runout < 0.005 mm.
- Completely enclosed pressure system, sealed against dirt and coolant.
- Central coolant supply through adjusting screw.
- Length axially adjustable.

# Reducer Bushing for Hydraulic Clamping Chucks



with flange grooves for peripheral coolant

Reducer Bushing (metric)					
Order No.	d	d1	d2	L1	L2
L01 13290	3	12	19	45	2
L01 13300	4				
L01 13310	5				
L01 13320	6				
L01 13330	8	20	29	50.5	2
L01 13260	3				
L01 13270	4				
L01 13280	5				
L01 13200	6				
L01 13210	8				
L01 13220	10				
L01 13230	12				
L01 13240	14				
L01 13250	16				
L01 13500	6	32	39	60.5	3
L01 13510	8				
L01 13520	10				
L01 13530	12				
L01 13540	14				
L01 13550	16				
L01 13560	18				
L01 13570	20				
L01 13580	25				





Gage Pin	
Order No.	d1
L00 00080	6
L00 00090	8
L00 00100	10
L00 00110	12
L00 00130	16
L00 00070	20
L00 00160	32

Cylindrical Brush	
Order No.	d1
4779116206	6
4779116208	8
4779116210	10
4779116212	12
4779116216	16
4779116220	20
4779116232	32

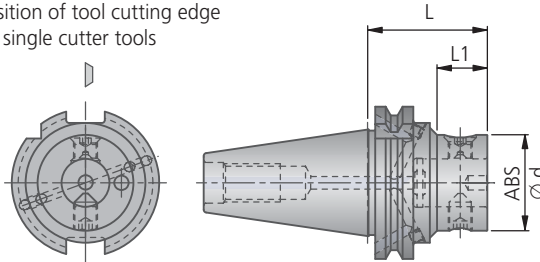



# KOMET® DIN 69871 AD/B

## Taper Shank with ABS® Connection

machine adaptor 	balancing note (chapter 8) pre-balanced Q6,3 8.000 min <sup>-1</sup>	coolant central / collar 	rotating tool 	tool holder ABS® 
--	--	--	--	--

Position of tool cutting edge  
on single cutter tools



DIN 69871 AD/B (△ ISO 7388/1) ABS®							Assembly parts
ISO	Description	Order No.	ABS Ø d	L	L1		Conversion kit  Order No.
40	ABS25SK-AD/B40	A50 55120	25	50	19	0.99	L02 30920
40	ABS32SK-AD/B40	A50 55130	32	50	19	1.05	L02 30920
40	ABS40SK-AD/B40	A50 55140	40	50	19	1.07	L02 30920
40	ABS50SK-AD/B40	A50 55150	50	50	30	1.10	L02 30920
40	ABS63SK-AD/B40	A50 55160	63	90	70	2.05	L02 30920
45	ABS40SK-AD/B45	A50 55240	40	60	20	2.10	L02 30930
45	ABS50SK-AD/B45	A50 55250	50	60	25	2.10	L02 30930
45	ABS63SK-AD/B45	A50 55260	63	60	40	2.25	L02 30930
45	ABS80SK-AD/B45	A50 55270	80	100	80	3.75	L02 30930
50	ABS25SK-AD/B50	A50 55320	25	60	20	3.17	L02 30940
50	ABS32SK-AD/B50	A50 55330	32	60	20	3.24	L02 30940
50	ABS40SK-AD/B50	A50 55340	40	60	20	3.30	L02 30940
50	ABS50SK-AD/B50	A50 55350	50	60	22	3.30	L02 30940
50	ABS63SK-AD/B50	A50 55360	63	60	29	3.37	L02 30940
50	ABS80SK-AD/B50	A50 55370	80	70	50	3.91	L02 30940
50	ABS100SK-AD/B50	A50 55380	100	115	95	6.72	L02 30940

### Supply includes:

Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

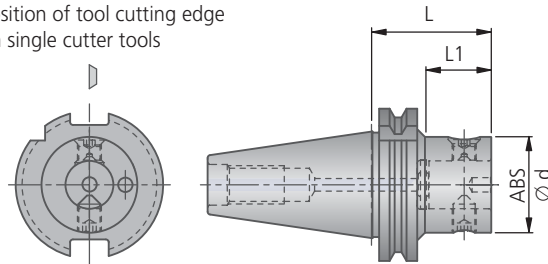


# KOMET® DIN 69871 AD

## Taper Shank with ABS® Connection



Position of tool cutting edge on single cutter tools



DIN 69871 AD (△ ISO 7388/1) ABS®

ISO	Description	Order No.	ABS Ø d	L	L1	kg
40	ABS 25 ISO400200	A50 00120	25	50	23	0.93
40	ABS 32 ISO400200	A50 00130	32	50	23	0.99
40	ABS 40 ISO400200	A50 00140	40	50	30	1.03
40	ABS 50 ISO400200	A50 00150	50	50	30	1.15
40	ABS 63 ISO400200	A50 00160	63	90	70	2.04
50	ABS 25 ISO500200	A50 00320	25	60	31	2.81
50	ABS 32 ISO500200	A50 00330	32	60	31	2.91
50	ABS 40 ISO500200	A50 00340	40	60	31	3.02
50	ABS 50 ISO500200	A50 00350	50	60	40	3.18
50	ABS 63 ISO500200	A50 00360	63	60	40	3.35
50	ABS 80 ISO500200	A50 00370	80	70	50	4.05
50	ABS100 ISO500200	A50 00380	100	115	95	7.05
50	ABS125 ISO500200	A50 00390	125	145	–	11.54

### Supply includes:

Taper shank 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.

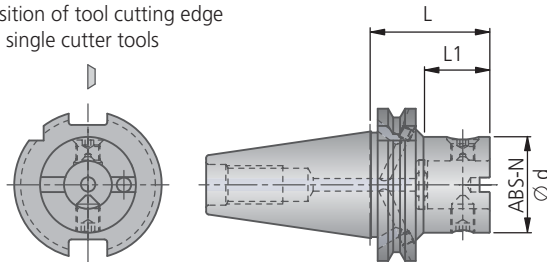


# KOMET® DIN 69871 AD/B

## Taper Shank with ABS® N Connection



Position of tool cutting edge  
on single cutter tools



DIN 69871 AD/B ABS® N						
ISO	Description	Order No.	ABS-N Ø d	L	L1	kg
40	ABS 50N-AD/B 40	A50 76150	50	50	30	1.10
40	ABS 63N-AD/B 40	A50 76160	63	90	70	2.06
50	ABS 50N-AD/B 50	A50 76350	50	60	22	3.32
50	ABS 63N-AD/B 50	A50 76360	63	60	29	3.39
50	ABS 80N-AD/B 50	A50 76370	80	70	50	3.92
50	ABS 100N ISO500200	A50 00380.4000*	100	115	95	7.05
50	ABS 125N ISO500200	A50 00390.4000*	125	145	125	11.54

\* Please note: Coolant supply AD (central)

### Supply includes:

Taper shank complete.

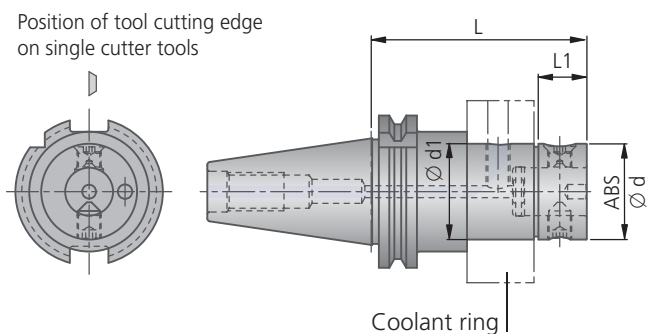
Pull studs not included (chapter 8).





# KOMET® DIN 69871 AD

## Taper Shank with ABS® Connection for Coolant Ring



DIN 69871 AD (△ ISO 7388/1) ABS®							
SK	Description	Order No.	ABS Ø d	Coolant ring Ø d1	L	L1	kg
40	ABS50 ISO400200KR	A50 00650	50	50	95	25	1.70
50	ABS50 ISO500200KR	A50 00850	50	50	100	28	3.84
50	ABS63 ISO500200KR	A50 00860	63	70	110	37	5.05
50	ABS80 ISO500200KR	A50 00870	80	80	110	37	5.60
50	ABS100 ISO500200KR	A50 00880	100	100	115	42	6.67

### Supply includes:

Taper shank complete.

Pull studs not included (chapter 8).

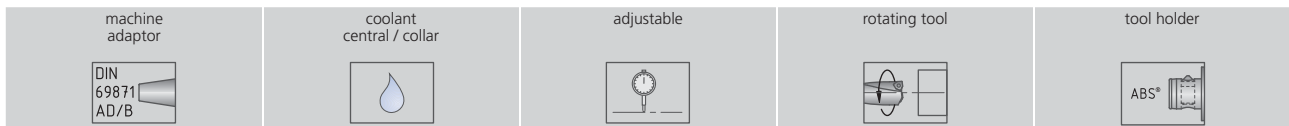


**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



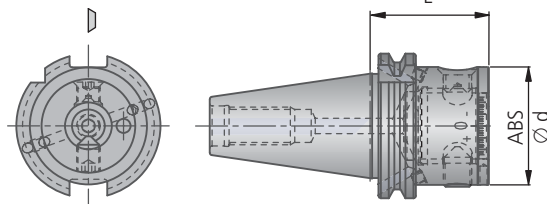
# KOMET® DIN 69871 AD/B

## Eccentric Adjusting Device with ABS® Connection



■ adjustment path  $\pm 0.25$  mm in the diameter

Position of tool cutting edge on single cutter tools



DIN 69871 AD/B ABS® EXZ						Accessory	Assembly parts
ISO	Description	Order No.	ABS Ø d	L	kg	Adjusting key	Conversion kit
						Order No.	Order No.
40	ABS50-SK AD/B40 EXZ.	A50 56150	50	50	1.10	18043 00028	L02 30920
40	ABS63-SK AD/B40 EXZ.	A50 56160	63	90	2.03	18043 00028	L02 30920
50	ABS50-SK AD/B50 EXZ.	A50 56350	50	60	3.33	18043 00028	L02 30940
50	ABS63-SK AD/B50 EXZ.	A50 56360	63	60	3.36	18043 00028	L02 30940

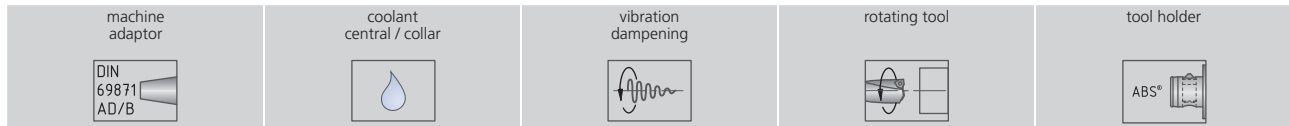
### Supply includes:

Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

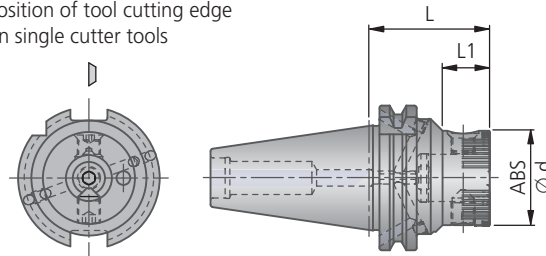


# KOMET® DIN 69871 AD/B

## Torsional Dampener with ABS® Connection



Position of tool cutting edge on single cutter tools



DIN 69871 AD/B ABS® TSD							Assembly parts
ISO	Description	Order No.	ABS Ø d	L	L1	kg	Conversion kit
40	ABS50-ISO40-TSD	A50 01351	50	50	30	1.07	L02 30920
40	ABS63-ISO40-TSD	A50 01361	63	90	–	2.00	L02 30930
50	ABS50-ISO50-TSD	A50 01451	50	60	40	3.30	L02 30920
50	ABS63-ISO50-TSD	A50 01461	63	60	40	3.40	L02 30930
50	ABS80-ISO50-TSD	A50 01470	80	70	50	3.84	L02 30940

### Supply includes:

Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use: ...-ABS50-TSD for drill Ø 14 - 44 mm  
 ...-ABS63-TSD for drill Ø 45 - 54 mm  
 ...-ABS80-TSD for drill Ø 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).



**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 2080 A

## Taper Shank with ABS® Connection

1



machine  
adaptor



coolant  
central



rotating tool



tool holder



2



3



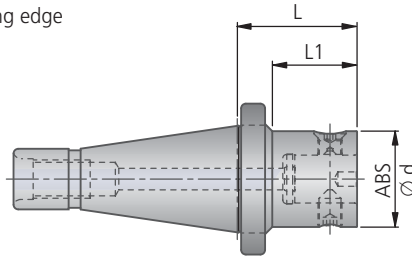
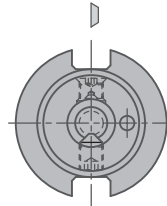
4



5



Position of tool cutting edge  
on single cutter tools

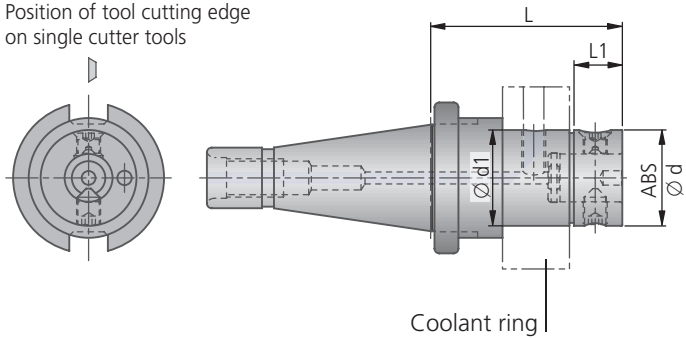


### DIN 2080 A ABS®

ISO	Description	Order No.	ABS Ø d	L	L1	kg
40	ABS 25 ISO400000	A54 00120	25	50	38	0.88
40	ABS 32 ISO400000	A54 00130	32	50	38	0.95
40	ABS 40 ISO400000	A54 00140	40	50	38	1.04
40	ABS 50 ISO400000	A54 00150	50	50	38	1.15
40	ABS 63 ISO400000	A54 00160	63	70	58	1.81
50	ABS 32 ISO500000	A54 00330	32	60	44	2.92
50	ABS 40 ISO500000	A54 00340	40	60	44	3.03
50	ABS 50 ISO500000	A54 00350	50	60	44	3.19
50	ABS 63 ISO500000	A54 00360	63	60	44	3.46
50	ABS 80 ISO500000	A54 00370	80	80	68	4.64
50	ABS100 ISO500000	A54 00380	100	100	84	6.58

Supply includes:  
Taper shank complete.

Taper Shank with ABS® Connection for Coolant Ring



DIN 2080 B ABS®							
ISO	Description	Order No.	ABS Ø d	Ø d1	L	L1	kg
40	ABS 50 ISO400010KR	A54 10650	50	50	85	25	1.69
50	ABS 50 ISO500010KR	A54 10850	50	50	95	25	3.85
50	ABS 63 ISO500010KR	A54 10860	63	70	105	35	5.01
50	ABS 80 ISO500010KR	A54 10870	80	80	110	40	5.75
50	ABS100 ISO500010KR	A54 10880	100	100	125	55	7.73

Supply includes:  
 Taper shank complete.  
 Coolant ring not included (chapter 8).

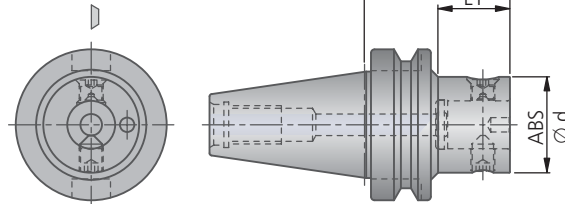


# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank with ABS® Connection



Position of tool cutting edge on single cutter tools



JIS B 6339 AD ABS®

ISO	Description	Order No.	ABS Ø d	L	L1	kg
40	ABS 25 ISO401500	A55 00120	25	60	25	1.09
40	ABS 32 ISO401500	A55 00130	32	60	33	1.13
40	ABS 40 ISO401500	A55 00140	40	60	33	1.21
40	ABS 50 ISO401500	A55 00150	50	60	33	1.29
40	ABS 63 ISO401500	A55 00160	63	70	43	1.68
50	ABS 32 ISO501500	A55 00330	32	70	24	3.76
50	ABS 40 ISO501500	A55 00340	40	70	24	3.86
50	ABS 50 ISO501500	A55 00350	50	70	24	4.07
50	ABS 63 ISO501500	A55 00360	63	80	37	4.33
50	ABS 80 ISO501500	A55 00370	80	100	62	5.42
50	ABS100 ISO501500	A55 00380	100	110	72	6.85

### Supply includes:

Taper shank complete.

Pull studs not included (chapter 8).

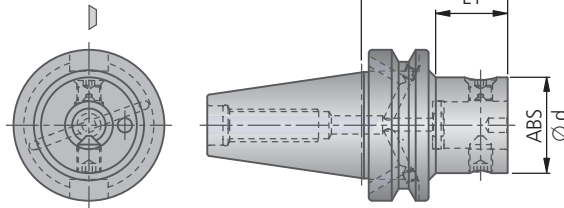


# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank with ABS® Connection



Position of tool cutting edge on single cutter tools



JIS B 6339 AD/B ABS®							Assembly parts
ISO	Description	Order No.	ABS Ø d	L	L1	kg	Conversion kit
40	ABS50 JIS B6339 BT40 AD/B	A55 55150	50	60	33	1.3	L02 30920
40	ABS63 JIS B6339 BT40 AD/B	A55 55160	63	70	–	1.7	L02 30920
50	ABS50 JIS B6339 BT50 AD/B	A55 55350	50	70	24	4.0	L02 30940
50	ABS63 JIS B6339 BT50 AD/B	A55 55360	63	80	37	4.3	L02 30940
50	ABS80 JIS B6339 BT50 AD/B	A55 55370	80	100	60	5.4	L02 30940
50	ABS100 JIS B6339 BT50 AD/B	A55 55380	100	110	–	6.8	L02 30940

### Supply includes:

Taper shank in form B complete with seal, conversion kit (for form AD).  
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.

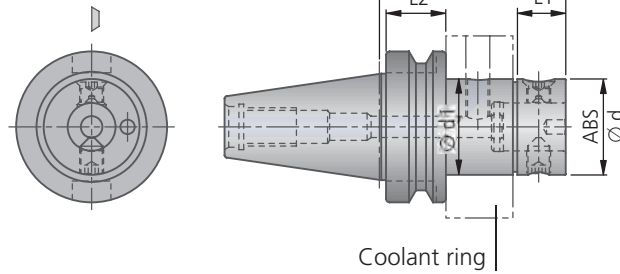


# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank with ABS® Connection for Coolant Ring



Position of tool cutting edge on single cutter tools



JIS B 6339 AD ABS®								
ISO	Description	Order No.	ABS Ø d	Ø d1	L	L1	L2	kg
40	ABS40 ISO401510KR	A55 10640	40	40	105	33	40	1.70
40	ABS50 ISO401510KR	A55 10650	50	50	105	33	40	3.84
50	ABS50 ISO501510KR	A55 10850	50	50	105	24	35	5.05
50	ABS63 ISO501510KR	A55 10860	63	70	115	29	35	5.60
50	ABS80 ISO501510KR	A55 10870	80	80	120	38	35	6.67

### Supply includes:

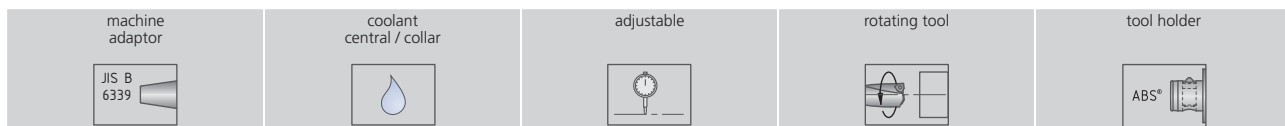
Taper shank complete.

Coolant ring and pull studs not included (chapter 8).



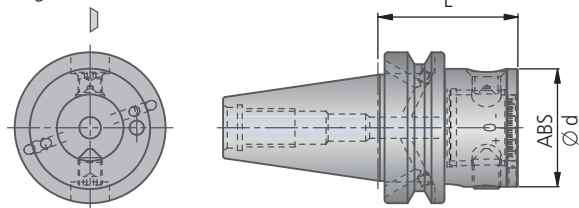


# KOMET® JIS B 6339 (MAS 403 BT) Eccentric Adjusting Device with ABS® Connection



adjustment path  $\pm 0.25$  mm in the diameter ■

Position of tool cutting edge  
on single cutter tools



JIS B 6339 AD/B ABS® EXZ						Accessory	Assembly parts
ISO	Description	Order No.	ABS Ø d	L	kg	Adjusting key Order No.	Conversion kit Order No.
40	ABS50 JIS B 6339 AD/B 40 EXZ.	A55 56150	50	60	1.28	18043 00028	L02 30920
40	ABS63 JIS B 6339 AD 40 EXZ.	A55 56160	63	70	1.67	18043 00028	–
50	ABS50 JIS B 6339 AD/B 50 EXZ.	A55 56350	50	70	3.94	18043 00028	L02 30940
50	ABS63 JIS B 6339 AD 50 EXZ.	A55 56360	63	80	4.30	18043 00028	–

### Supply includes:

Taper shank ABS50 in form B complete with seal, conversion kit (for form AD).

Taper shank ABS63 in form AD.

Pull studs not included (chapter 8).

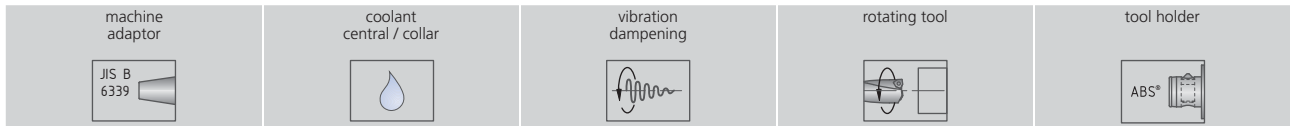


**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

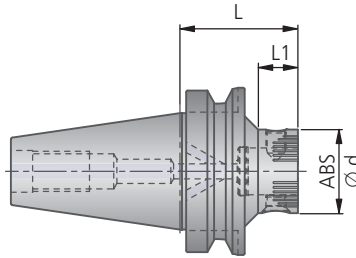
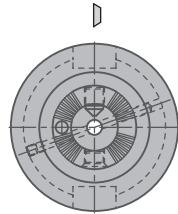


# KOMET® JIS B 6339 (MAS 403 BT)

## Torsional Dampener with ABS® Connection



Position of tool cutting edge  
on single cutter tools



DIN 69871 AD/B ABS® TSD							Assembly parts
ISO	Description	Order No.	ABS Ø d	L	L1	kg	Conversion kit Order No.
40	ISO40-ABS50-TSD	A55 02150	50	60	33	1.2	L02 30920
40	ISO40-ABS63-TSD	A55 02160	63	70	–	1.6	L02 30920
50	ISO50-ABS50-TSD	A55 02350	50	70	24	3.9	L02 30940
50	ISO50-ABS63-TSD	A55 02360	63	80	37	4.2	L02 30940

### Supply includes:

Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use:     ...-ABS50-TSD for drill Ø 14 - 44 mm  
                               ...-ABS63-TSD for drill Ø 45 - 54 mm  
                               ...-ABS80-TSD for drill Ø 55 - 81 mm

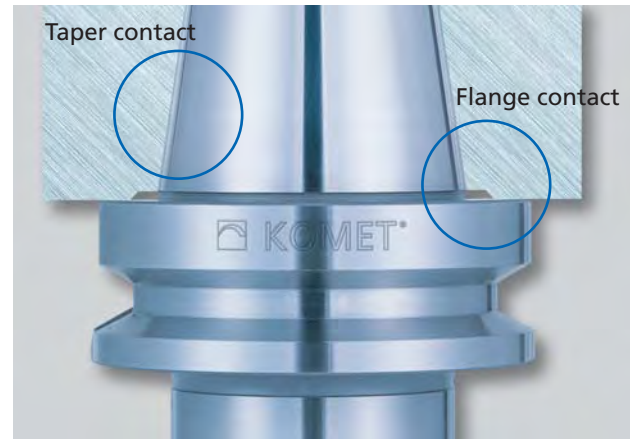
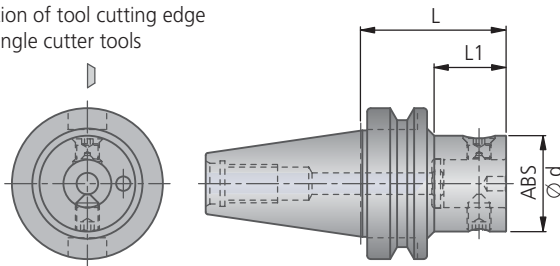
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).



# KOMET® JIS B 6339 (MAS 403 BT) BIG-PLUS™ Taper Shank with ABS® Connection



Position of tool cutting edge on single cutter tools

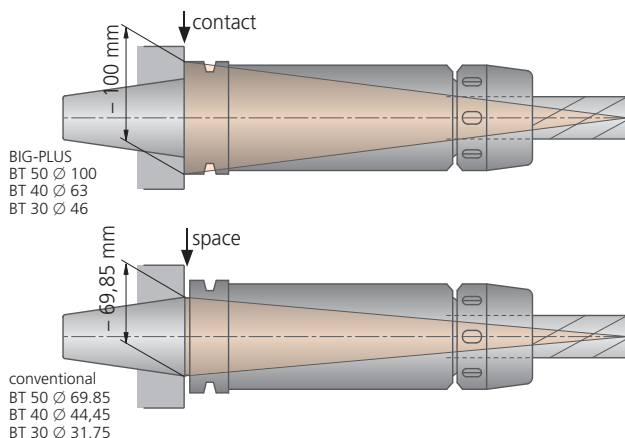


JIS B 6339 AD ABS®						
ISO	Description	Order No.	ABS Ø d	L	L1	kg
40	ISO40 JIS B6339-BIG PLUS-ABS25	A55 57121	25	60	25	1.09
40	ISO40 JIS B6339-BIG PLUS-ABS32	A55 57131	32	60	33	1.13
40	ISO40 JIS B6339-BIG PLUS-ABS40	A55 57141	40	60	33	1.21
40	ISO40 JIS B6339-BIG PLUS-ABS50	A55 57151	50	60	33	1.29
40	ISO40 JIS B6339-BIG PLUS-ABS63	A55 57161	63	70	43	1.68
50	ISO50 JIS B6339-BIG PLUS-ABS32	A55 57331	32	70	24	3.76
50	ISO50 JIS B6339-BIG PLUS-ABS40	A55 57341	40	70	24	3.86
50	ISO50 JIS B6339-BIG PLUS-ABS50	A55 57351	50	70	24	4.07
50	ISO50 JIS B6339-BIG PLUS-ABS63	A55 57361	63	80	37	4.33
50	ISO50 JIS B6339-BIG PLUS-ABS80	A55 57371	80	100	62	5.42
50	ISO50 JIS B6339-BIG PLUS-ABS100	A55 57381	100	110	72	6.85

## Supply includes:

Taper shank complete. Pull studs not included (chapter 8).

## Increased contact diameter (example of BT 50)



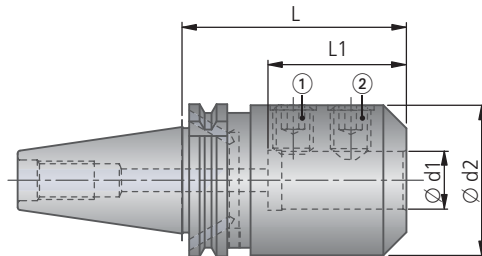
## BIG-PLUS™ Spindle System

- The BIG-PLUS™ Spindle System offers simultaneous dual contact between the machine spindle face and toolholder flange face, as well as the machine spindle taper and long toolholder taper shank. This system is based on the most currently available standards for JIS-BT, DIN 69871 and CAT-V flange tooling.
- By having all tolerances strictly controlled by high tolerance gauges and measuring equipment, simultaneous dual contact of the face and taper is thus assured.
- In this way, the BIG-PLUS™ Spindle System skillfully utilizes the elastic deformation of the machine spindle to control the gauge line accuracy, which thus insures that dual contact of the face and taper is achieved.
- Existing accessories such as presetters, tooling fixtures and tooling storage systems can be used.
- The results in greatly extending the life of both the machine spindle and the toolholder.
- As a result of the dual contact which precisely positions the toolholder within 1 micron.

BIG-PLUS™ Spindle System licenced by BIG DAISHOWA.

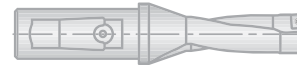
# KOMET® DIN 69871 AD/B

## Taper Shank for KUB® Drill (combination shank)



Tools with combination shank p.ex.:

KUB Quatron®



KUB Trigon®



KUB Duon®



DIN 69871 AD/B							Assembly parts	
ISO	Order No.	Ø d1	Ø d2	L	L1		Clamping screw ①  Order No.	Clamping screw ②  Order No.
40	A05 13140	20	40	65	54	1.10	55051 12112	N00 60400
40	A05 13151	25	45	70	60	1.17	55051 12112	L02 30350
40	A05 13161	32	52	75	64	1.27	55051 12112	L02 30350
50	A05 13340	20	40	65	54	2.87	55051 12112	N00 60400
50	A05 13351	25	45	70	60	2.94	55051 12112	L02 30350
50	A05 13361	32	52	70	64	2.98	55051 12112	L02 30350
50	A05 13370	40	65	80	73	3.38	55051 16112	N00 60430

### Supply includes:

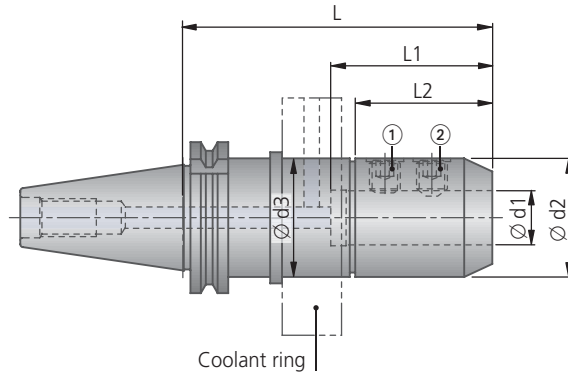
Taper shank with assembly parts. Pull studs not included (chapter 8).

Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.



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

Taper Shank for KUB® Drill (combination shank) for Coolant Ring



Tools with combination shank p.ex.:

KUB Quatron®



KUB Trigon®



KUB Duon®



DIN 69871 AD									Assembly parts	
ISO	Order No.	Ø d1	Ø d2	Coolant ring Ø d3	L	L1	L2	kg	Clamping screw ① Order No.	Clamping screw ② Order No.
40	A05 03140	20	50	50	115	65	43		55051 12112	N00 60400
40	A05 03150	25	50	50	130	65	58	2.23	55051 12112	L02 30350
40	A05 03160	32	50	50	130	65	58	2.05	55051 12112	L02 30350
50	A05 03340	20	50	50	115	65	43		55051 12112	N00 60400
50	A05 03350	25	50	50	130	65	58	4.18	55051 12112	L02 30350
50	A05 03360	32	50	50	130	65	58	4.05	55051 12112	L02 30350
50	A05 03370	40	70	70	140	73	67.5	5.63	55051 16112	N00 60430

Supply includes:

Taper shank with assembly parts.

Coolant ring and pull studs not included (chapter 8).

Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.




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

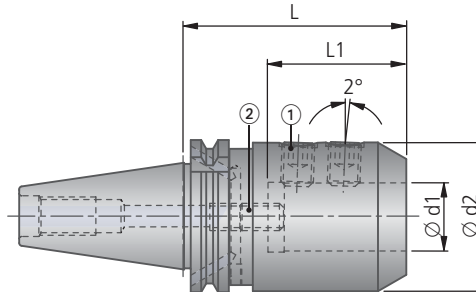


# KOMET® DIN 69871 AD/B

## Taper Shank Whistle Notch

machine adaptor 	location 	coolant central / collar 	rotating tool 	tool holder 	
--	---	---	--	--	---

- the robust and highly accurate location also enables solid carbide drills to be clamped
- the 2° tilt of the clamping screws prevents the tool from pulling out



DIN 69871 AD/B FWD							Assembly parts		
ISO	Order No.	Ø d1	Ø d2	L	L1	kg	Clamping screw ①		Adjusting screw ②
							Order No.	Qty.	Order No.
40	A05 12071	6	25	50	36	0.98	51050 06010	1	N00 71000
40	A05 12081	8	28	50	36	1.00	51050 08010	1	N00 71050
40	A05 12091	10	35	50	40	1.05	51050 10012	1	51049 08016
40	A05 12101	12	42	50	45	1.13	51050 12016	1	51049 10020
40	A05 12111	14	44	50	45	1.15	51050 12016	1	51049 10020
40	A05 12121	16	48	63	48	1.35	51050 14016	1	51049 12025
40	A05 12131	18	50	63	48	1.40	51050 14016	1	51049 12025
40	A05 12141	20	52	63	50	1.10	51050 16016	1	51049 16025
40	A05 12151	25	65	100	56	2.20	51050 18220	2	51049 20035
40	A05 12161	32	72	100	60	2.50	51050 20220	2	51049 20035
50	A05 12271	6	25	63	36	2.75	51050 06010	1	N00 71000
50	A05 12281	8	28	63	36	2.80	51050 08010	1	N00 71050
50	A05 12291	10	35	63	40	2.90	51050 10012	1	51049 08016
50	A05 12301	12	42	63	45	3.05	51050 12016	1	51049 10020
50	A05 12311	14	44	63	45	3.10	51050 12016	1	51049 10020
50	A05 12321	16	48	63	48	3.15	51050 14016	1	51049 12025
50	A05 12331	18	50	63	48	3.20	51050 14016	1	51049 12025
50	A05 12341	20	52	63	50	3.20	51050 16016	1	51049 16025
50	A05 12351	25	65	80	56	3.95	51050 18220	2	51049 20035
50	A05 12361	32	72	100	60	4.70	51050 20220	2	51049 20035

### Supply includes:






Taper shank with assembly parts. Pull studs not included (chapter 8).

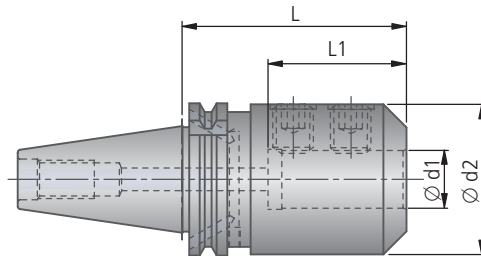




**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD/B

## Taper Shank Weldon

machine adaptor 	location 	coolant central / collar 	rotating tool 	tool holder 
--	---	---	---	--



DIN 69871 AD/B HWD							Assembly parts Clamping screw	
ISO	Order No.	Ø d1	Ø d2	L	L1			Piece
40	A05 24070	6	25	50	37	0.98	51050 06010	1
40	A05 24080	8	28	50	37	1.00	51050 08010	1
40	A05 24090	10	35	50	41	1.05	51050 10012	1
40	A05 24100	12	42	50	46	1.13	51050 12016	1
40	A05 24110	14	44	50	46	1.15	51050 12016	1
40	A05 24120	16	48	63	49	1.35	51050 14016	1
40	A05 24130	18	50	63	49	1.40	51050 14016	1
40	A05 24140	20	52	63	51	1.31	51050 16016	1
40	A05 24150	25	65	100	59	2.20	51050 18220	2
40	A05 24160	32	72	100	63	2.50	51050 20220	2
50	A05 24270	6	25	63	37	2.75	51050 06010	1
50	A05 24280	8	28	63	37	2.80	51050 08010	1
50	A05 24290	10	35	63	41	2.90	51050 10012	1
50	A05 24300	12	42	63	46	3.05	51050 12016	1
50	A05 24310	14	44	63	46	3.10	51050 12016	1
50	A05 24320	16	48	63	49	3.15	51050 14016	1
50	A05 24330	18	50	63	49	3.20	51050 14016	1
50	A05 24340	20	52	63	51	3.20	51050 16016	1
50	A05 24350	25	65	80	59	3.95	51050 18220	1
50	A05 24360	32	72	100	63	4.70	51050 20220	2
50	A05 24370	40	80	100	73	4.90	51050 20220	2

### Supply includes:

Taper shank with assembly parts. Pull studs not included (chapter 8).

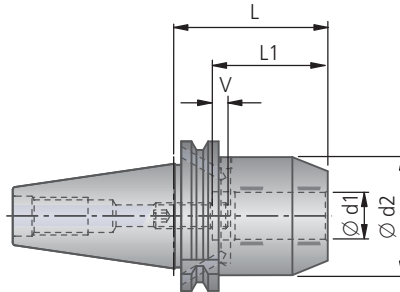
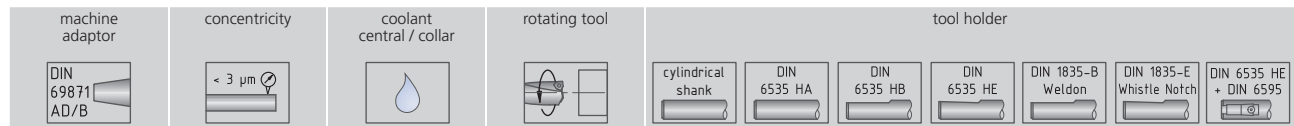


**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



# KOMET® DIN 69871 AD/B

## Expanding Chuck



DIN 69871 AD/B Expanding chuck								Assembly parts	
ISO	Order No.	$\varnothing d1$	$\varnothing d2$	L	L1	V	kg	Adjusting screw	
								Description	Order No.
40	A05 92050	20	49.5	64.5	51	10	1.65	M16×1×14	N00 71550
50	A05 92170	32	72	81	61	10	3.90	M16×1×14	N00 71550

**Tool shank tolerance:** h6 for  $\varnothing 6 - 32$  mm

**Supply includes:** Expanding chuck with assembly parts.  
Pull studs not included (chapter 8).

**Accessories**  
**expanding chuck:**  
Adaptor sleeve



### Accuracy:

Maximum long-term concentricity and repeatability of  $\leq 3 \mu\text{m}$ . Evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.

### Adaptor sleeve:

Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.

### Closed system:

The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

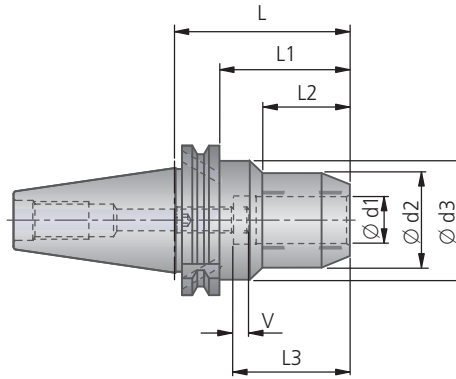
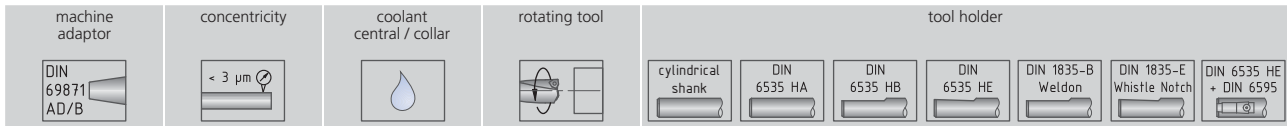


**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



# KOMET® DIN 69871 AD/B

## Expanding Chuck



DIN 69871 AD/B Expanding chuck											Assembly parts	
ISO	Order No.	Ø d1	Ø d2	Ø d3	L	L1	L2	L3	V		Adjusting screw	
											Description	Order No.
40	A05 92090	12	32	49.5	80.5	61.5	31.5	46	10	1.4	M10×1×12	N00 71800
40	A05 92100	16	38	49.5	80.5	61.5	33	49	10	1.4	M12×1×12	N00 71860
40	A05 92110	20	42	49.5	80.5	61.5	34	51	10	1.4	M16×1×14	N00 71550
40	A05 92120	25	55	66	80.5	61.5	22	57	10	1.8	M16×1×14	N00 71550

**Tool shank tolerance:** h6 for Ø 6 - 32 mm

**Supply includes:** Expanding chuck with assembly parts.  
 Pull studs not included (chapter 8).

**Accessories**  
**expanding chuck:**  
 Adaptor sleeve  
 ▶ 525

**Accuracy:**

Maximum long-term concentricity and repeatability of  $\leq 3 \mu\text{m}$ . Evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.

**Adaptor sleeve:**

Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.

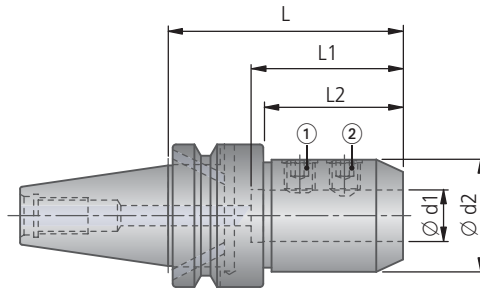
**Closed system:**

The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

**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 KUB® Drill (combination shank)



Tools with combination shank p.ex.:

KUB Quatron®



KUB Trigon®



KUB Duon®



JIS B 6339 AD/B								Assembly parts	
ISO	Order No.	Ø d1	Ø d2	L	L1	L2	kg	Clamping screw ① Order No.	Clamping screw ② Order No.
40	A05 16140	20	40	70	54	43	1.22	55051 12112	N00 60400
40	A05 16150	25	45	75	59	48	1.29	55051 12112	L02 30350
40	A05 16160	32	52	80	64	53	1.40	55051 12112	L02 30350
50	A05 16340	20	40	80	54	42	3.80	55051 12112	N00 60400
50	A05 16350	25	45	85	59	47	3.88	55051 12112	L02 30350
50	A05 16360	32	52	90	64	52	3.98	55051 12112	L02 30350
50	A05 16370	40	65	100	73	62	4.38	55051 16112	N00 60430

### Supply includes:

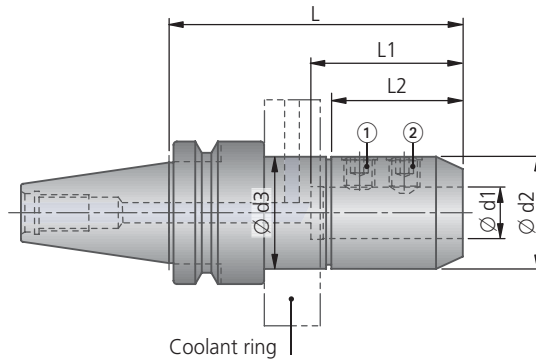
Taper shank with assembly parts. Pull studs not included (chapter 8).

Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.



**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 KUB® Drill (combination shank) for Coolant Ring



Tools with combination shank p.ex.:

KUB Quatron®



KUB Trigon®



KUB Duon®



JIS B 6339 AD									Assembly parts	
ISO	Order No.	Ø d1	Ø d2	Coolant ring Ø d3	L	L1	L2	kg	Clamping screw ① Order No.	Clamping screw ② Order No.
40	A05 06140	20	50	50	115	65	43		55051 12112	N00 60400
40	A05 06150	25	50	50	130	65	58	2.38	55051 12112	L02 30350
40	A05 06160	32	50	50	130	66	58	2.23	55051 12112	L02 30350
50	A05 06340	20	50	50	125	66	44		55051 12112	N00 60400
50	A05 06350	25	50	50	140	66	59	5.60	55051 12112	L02 30350
50	A05 06360	32	50	50	140	66	59	5.68	55051 12112	L02 30350
50	A05 06370	40	70	70	145	73	63.5	6.42	55051 16112	N00 60430

### Supply includes:

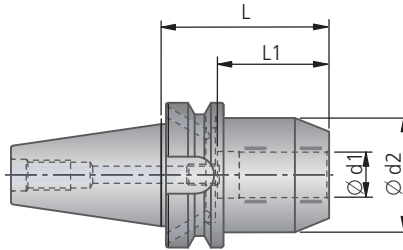
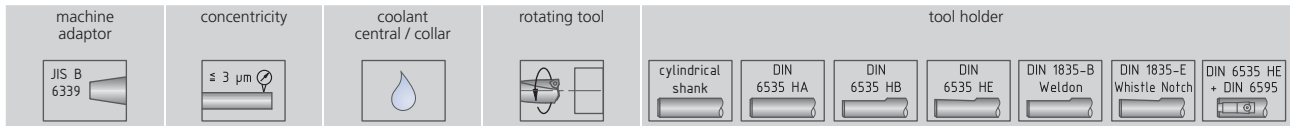
Taper shank with assembly parts.

Coolant ring and pull studs not included (chapter 8).

Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.

# KOMET® JIS B 6339 (MAS 403 BT)

## Expanding Chuck



JIS B 6339 AD/B Expanding chuck							Assembly parts	
ISO	Order No.	Ø d1	Ø d2	L	L1	kg	Adjusting screw	
							Description	Order No.
40	A05 92350	20	49.5	72.5	51	1.65	M16×1×14	N00 71550
50	A05 92470	32	72.0	90.0	61	3.90	M16×1×14	N00 71550

**Tool shank tolerance:** h6 for Ø 6 - 32 mm

**Supply includes:** Expanding chuck with assembly parts.  
Pull studs not included (chapter 8).

### Accuracy:

Maximum long-term concentricity and repeatability of  $\leq 3 \mu\text{m}$ . Evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.

### Adaptor sleeve:

Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.

### Closed system:

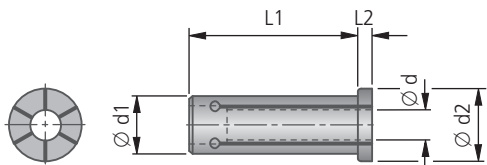
The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.



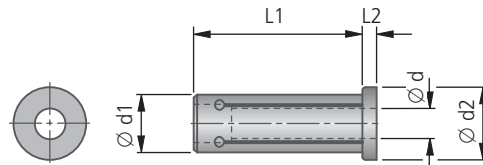
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® 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	19	45	2	0.1
L01 13301	4					
L01 13311	5					
L01 13321	6					
L01 13331	8					
L01 13261	3	20	29	50.5	2	0.1
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 13501	6					
L01 13511	8					
L01 13521	10					
L01 13531	12					
L01 13541	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	19	45	2	0.1
L01 14301	4					
L01 14311	5					
L01 14321	6					
L01 14331	8					
L01 14261	3	20	29	50.5	2	0.1
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 14501	6					
L01 14511	8					
L01 14521	10					
L01 14531	12					
L01 14541	14					
L01 14551	16					
L01 14561	18					
L01 14571	20					
L01 14581	25					



KOMET®  
ABS® Adaptors

1



2



3



4



5



In tooling systems, the tool adapter is an important element between the tool and the machine. It must be able to transfer the machining forces safely. Moreover, tool adapters greatly influence the quality of the machining result. They also contribute to a cost efficient machining process.

KOMET ABS® connections form a modular coupling system for rotating and stationary tools. The interface system is designed according to the modular principle. In this way, users can quickly and cheaply make use of modular metal cutting tools, extensions or adaptors.

Since its launch by KOMET® in 1981, the system has become established globally. It has fully developed components for each requirement.

#### BENEFITS for you:

- Better transmission of power
- Optimum machining result
- Achieves better cutting values
- Less noise during production

## KOMET ABS® Page

### Spindle adaptor flange

with ABS® connection	530
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### VDI adaptor

with ABS® connection	528
Torsional dampener	529

### Cylindrical adaptor

TC adaptor	531
Damping element HMD	543

### PSC adaptor

with ABS® connection	532
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### ABS® adaptor

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1



2



3



4



5

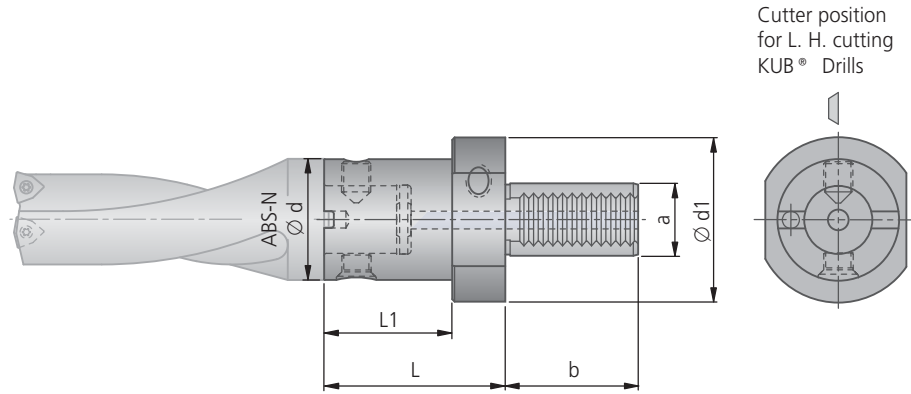


# KOMET ABS<sup>®</sup> N NC

## Adaptor with ABS<sup>®</sup> N Connection



■ for KUB<sup>®</sup> drill



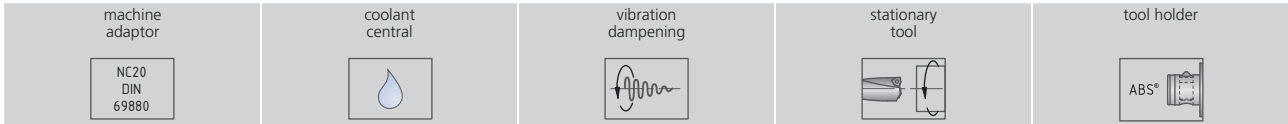
NC..20 ABS <sup>®</sup> N								
Description	Order No.	ABS-N Ø d	L	L1	a	b	Ø d1	kg
ABS50N-NC3020	A01 11152	50	60	38	30	55	68	1.33
ABS40N-NC4020	A01 11242	40	50	25	40	63	83	1.70
ABS50N-NC4020	A01 11252	50	60	38	40	63	83	1.89
ABS63N-NC4020	A01 11262	63	70	48	40	63	83	2.35
ABS80N-NC4020	A01 11271	80	75	53	40	63	83	2.97
ABS50N-NC5020	A01 11352	50	65	35	50	78	98	3.06
ABS63N-NC5020	A01 11362	63	75	45	50	78	98	3.51
ABS80N-NC5020	A01 11372	80	75	45	50	78	98	3.86
ABS50N-NC6020	A01 11452	50	65	35	60	94	123	4.82
ABS63N-NC6020	A01 11462	63	75	45	60	94	123	5.24
ABS80N-NC6020	A01 11472	80	75	45	60	94	123	5.61
ABS100N-NC6020	A01 11482	100	90	60	60	94	123	7.00

**Note:**

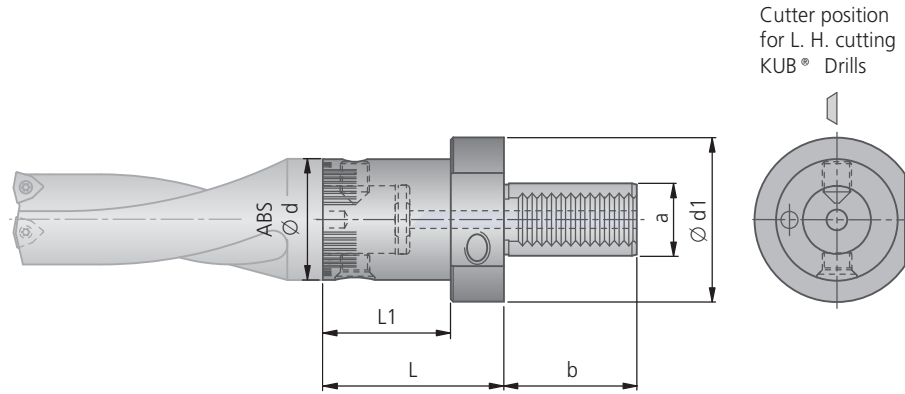
When adjusting the KUB<sup>®</sup> drill in + X direction, use this adaptor.



## Torsional Dampener with ABS® Connection for KUB® Drill



for KUB® drill ■



NC..20 ABS® TSD								
Description	Order No.	ABS Ø d	L	L1	a	b	Ø d1	kg
NC4020 ABS50-TSD	A01 14251	50	60	38	40	63	83	1.89
NC4020 ABS63-TSD	A01 14261	63	70	48	40	63	83	2.35
NC5020 ABS50-TSD	A01 14351	50	65	35	50	78	98	3.06
NC5020 ABS63-TSD	A01 14361	63	75	45	50	78	98	3.51
NC5020 ABS80-TSD	A01 14370	80	75	45	50	78	98	3.86

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use:

...-ABS50-TSD for drill Ø 14 - 44 mm

...-ABS63-TSD for drill Ø 45 - 54 mm

...-ABS80-TSD for drill Ø 55 - 81 mm

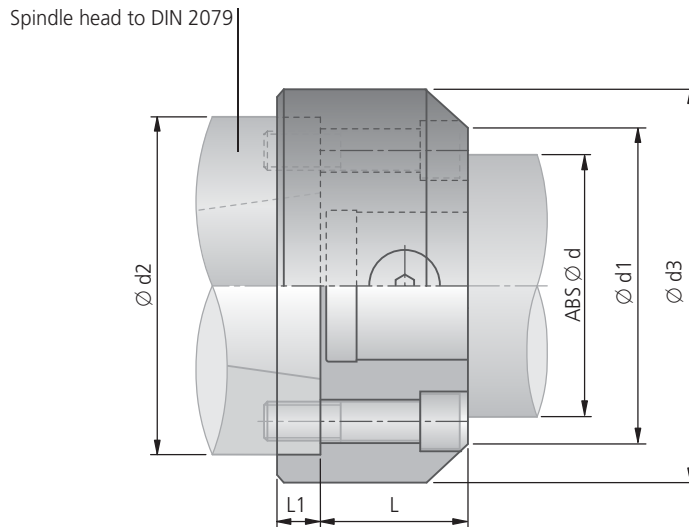
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).



## Spindle Adaptor Flange with ABS® Connection



■ this adaptor flange does not have key slots. Drive keys on spindle head must be removed.



DIN 2079 ABS®

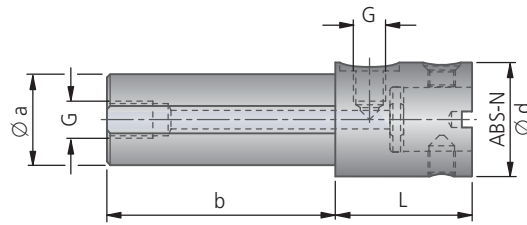
ISO	Description	Order No.	ABS $\varnothing d$	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	L	L1	kg
30	ABS32 VFS30	A01 01130	32	70	69.83	90	24	11	1.14
30	ABS40 VFS30	A01 01140	40	70	69.83	90	28	11	1.24
30	ABS50 VFS30	A01 01150	50	70	69.83	90	32	11	1.42
30	ABS63 VFS30	A01 01160	63	70	69.83	90	40	11	1.71
40	ABS40 VFS40	A01 01240	40	80	88.88	110	28	12	2.02
40	ABS50 VFS40	A01 01250	50	80	88.88	110	32	12	2.15
40	ABS63 VFS40	A01 01260	63	80	88.88	110	40	12	2.60
40	ABS80 VFS40	A01 01270	80	100	88.88	110	44	12	2.74
50	ABS50 VFS50	A01 01450	50	120	128.57	150	32	17	4.57
50	ABS63 VFS50	A01 01460	63	120	128.57	150	40	17	5.22
50	ABS80 VFS50	A01 01470	80	120	128.57	150	44	17	5.65
50	ABS100 VFS50	A01 01480	100	120	128.57	150	56	17	6.52
50	ABS125 VFS50	A01 01490	125	140	128.57	160	72	17	9.24

Supply includes:

Adaptor mounted complete.

# KOMET ABS® N TC

## Adaptor with ABS® N Connection

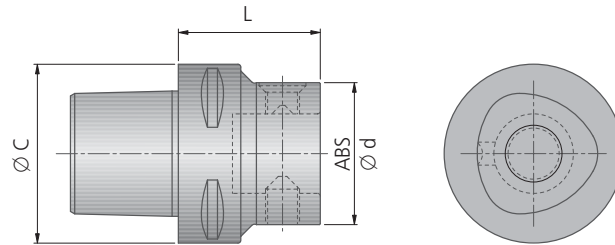


ABS® N TC							
Description	Order No.	ABS-N Ø d	L	Ø a	b	G	kg
ABS50N-TC40	A01 15450	50	60	40	100	G3/8"	1.67
ABS63N-TC40	A01 15460	63	65	40	100	G3/8"	2.25
ABS50N-TC50	A01 15550	50	60	50	120	G3/8"	2.50
ABS63N-TC50	A01 15560	63	65	50	120	G3/8"	3.10
ABS80N-TC50	A01 15570	80	70	50	120	G3/8"	3.94
ABS50N-TC60	A01 15650	50	60	60	120	G3/8"	3.35
ABS63N-TC60	A01 15660	63	65	60	120	G3/8"	3.87
ABS80N-TC60	A01 15670	80	70	60	120	G3/8"	4.84
ABS50N-TC80	A01 15750	50	60	80	160	G3/8"	6.87
ABS63N-TC80	A01 15760	63	65	80	160	G3/8"	7.41
ABS80N-TC80	A01 15770	80	70	80	160	G3/8"	8.25
ABS100N-TC80	A01 15780	100	90	80	160	G3/8"	10.38

We supply other shank versions on request.

# KOMET® ISO 26622-1 / ISO 26622-2

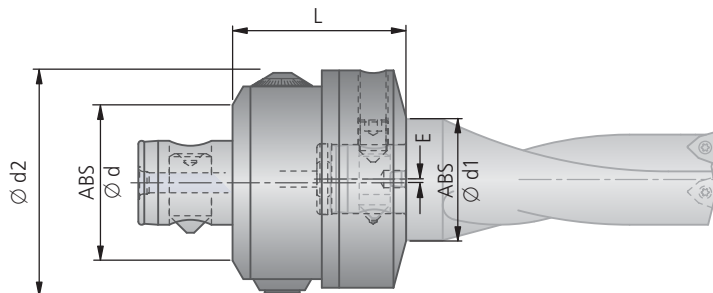
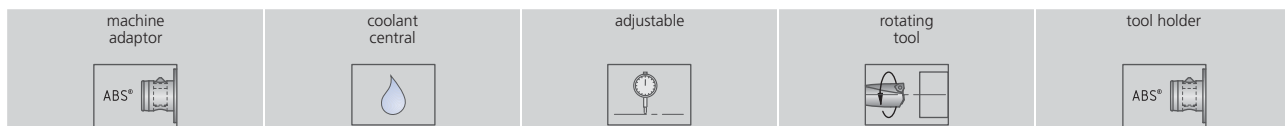
## PSC Adaptor with ABS® Connection



Polygonal shank taper ABS®				
Order No.	Ø C	ABS Ø d	L	kg
A69 05050	50	50	50	0.95
A69 06050	63	50	50	1.00
A69 06060	63	63	60	1.34
A69 08050	80	50	50	1.76
A69 08060	80	63	60	2.11
A69 08070	80	80	80	2.99

Other adaptors with connections for specific manufacturers can be supplied on request.

## Adjustment Device with ABS® Connection



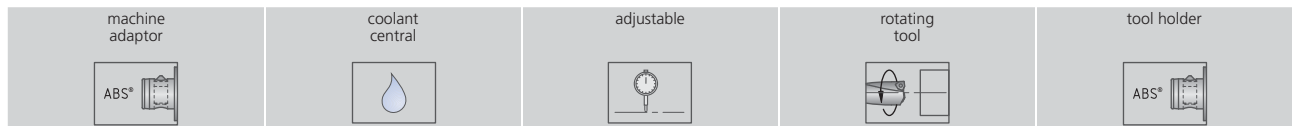
ABS® MV							
Description	Order No.	ABS Ø d	ABS Ø d1	Ø d2	L	E	kg
ABS50 / 50-MV	M01 00000	50	50	70	57	1.5	1.49
ABS63 / 50-MV	M01 00010	63	50	88	70	1.5	3.01
ABS63 / 63-MV	M01 00020	63	63	88	70	1.5	2.89

- Accurate adjustment with micro-adjustable spindle.
- Maximum adjustment range 3 mm on diameter.
- Scale divisions 1 division 0.02 mm on diameter.
- Rigid clamping of head after adjustment achieved by means of 4 clamping screws on face.
- **Note:** A seal cannot be used in the ABS® hole with the M01 adjustment device.

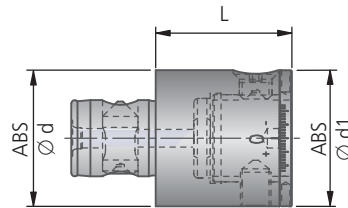


# KOMET ABS®

## Eccentric Adjusting Device with ABS® Connection



■ adjustment path  $\pm 0.25$  mm in the diameter

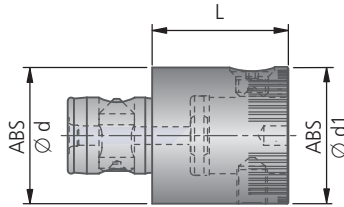
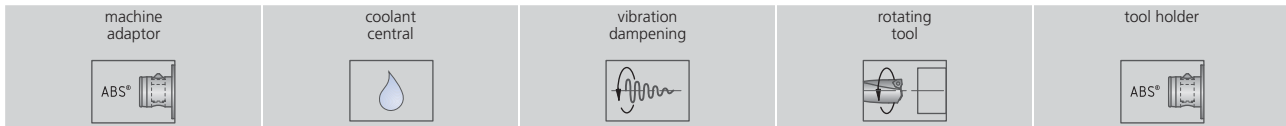


ABS® EXZ						
Description	Order No.	ABS Ø d	ABS Ø d1	L	kg	Adjusting key
						Order No.
ABS50-V50 EXZ.	A20 00620	50	50	50	0.71	1804300028
ABS63-V60 EXZ.	A20 00630	63	63	60	1.33	1804300028

### Supply includes:

Eccentric adjusting device with adjusting key.

## Torsional Dampener with ABS® Connection



ABS® TSD					
Description	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS50-V50-TSD	A20 00651	50	50	50	0.69
ABS63-V60-TSD	A20 00661	63	63	60	1.32
ABS80-V70-TSD	A20 00670	80	80	70	2.5

### Supply includes:

Torsional dampener with sealing disc (chapter 8)

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use:

...-ABS50-TSD for drill Ø 14 - 44 mm

...-ABS63-TSD for drill Ø 45 - 54 mm

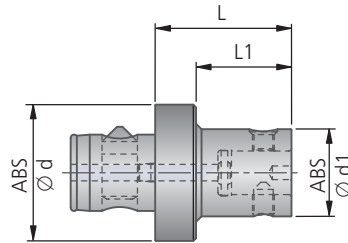
...-ABS80-TSD for drill Ø 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).



# KOMET ABS® R

## Reducer with ABS® Connection



ABS® R						
Description	Order No.	ABS Ø d	ABS Ø d1	L	L1	kg
ABS 32-R 25	A20 10120	32	25	40	30	0.18
ABS 40-R 32	A20 10230	40	32	40	28	0.30
ABS 40-R 25	A20 10220	40	25	40	28	0.26
ABS 50-R 40	A20 10340	50	40	50	35	0.62
ABS 50-R 32	A20 10330	50	32	50	35	0.53
ABS 50-R 25	A20 10320	50	25	50	35	0.47
ABS 63-R 50	A20 10450	63	50	60	40	1.15
ABS 63-R 40	A20 10440	63	40	60	40	1.05
ABS 63-R 32	A20 10430	63	32	60	40	0.94
ABS 63-R 25	A20 10420	63	25	60	40	0.86
ABS 80-R 63	A20 10560	80	63	60	35	2.01
ABS 80-R 50	A20 10550	80	50	60	35	1.85
ABS 80-R 40	A20 10540	80	40	60	35	1.76
ABS 80-R 32	A20 10530	80	32	60	35	1.67
ABS100-R 80	A20 10670	100	80	80	50	4.11
ABS100-R 63	A20 10660	100	63	80	50	3.70
ABS100-R 50	A20 10650	100	50	80	50	3.35
ABS125-R100	A20 10780	125	100	100	50	8.56
ABS125-R 80	A20 10770	125	80	100	50	8.01
ABS125-R 63	A20 10760	125	63	100	50	7.62
ABS125-R 50	A20 10750	125	50	100	50	7.42

### Supply includes:

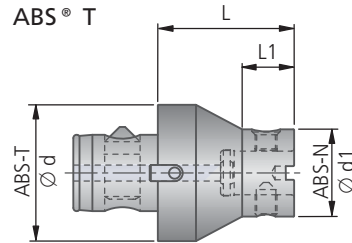
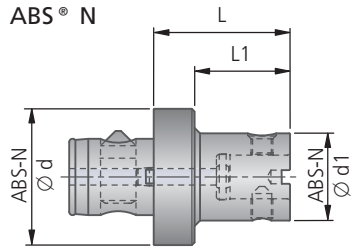
Reducer mounted complete.

Other lengths available on request



# KOMET ABS® N / ABS® T

## Reducer with ABS® N / ABS® T Connection



ABS® N R						
Description	Order No.	ABS-N Ø d	ABS-N Ø d1	L	L1	kg
ABS 50N-R 40	A20 20340	50	40	50	35	0.62
ABS 50N-R 32	A20 20330	50	32	50	35	0.53
ABS 50N-R 25	A20 20320	50	25	50	35	0.47
ABS 63N-R 50	A20 20450	63	50	60	40	1.15
ABS 63N-R 40	A20 20440	63	40	60	40	1.05
ABS 80N-R 63	A20 20560	80	63	60	35	2.01
ABS 80N-R 50	A20 20550	80	50	60	35	1.85
ABS 80N-R 40	A20 20540	80	40	60	35	1.76
ABS100N-R 80	A20 20670	100	80	80	50	4.11
ABS100N-R 63	A20 20660	100	63	80	50	3.70
ABS100N-R 50	A20 20650	100	50	80	50	3.35

ABS® T R						
Description	Order No.	ABS-T Ø d	ABS-N Ø d1	L	L1	kg
ABS 63T-R50	A20 21450	63	50	60	21	
ABS 80T-R63	A20 21560	80	63	60	22	

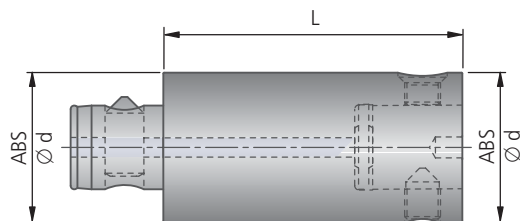
**Supply includes:**  
Reducer mounted complete.

Other lengths available on request



# KOMET ABS® V

## Extension with ABS® Connection



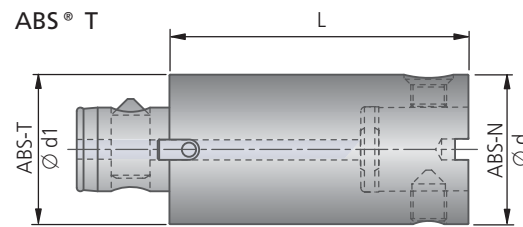
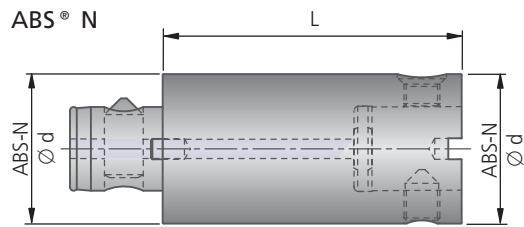
ABS® V				
Description	Order No.	ABS $\varnothing d$	L	kg
ABS 25-V60	A20 00220	25	60	0.22
ABS 25-V45	A20 00020	25	45	0.16
ABS 32-V70	A20 00230	32	70	0.42
ABS 32-V50	A20 00030	32	50	0.29
ABS 32-V35	A20 00530	32	35	0.20
ABS 40-V90	A20 00240	40	90	0.84
ABS 40-V60	A20 00040	40	60	0.52
ABS 40-V40	A20 00540	40	40	0.36
ABS 50-V150	A20 00150	50	150	2.22
ABS 50-V100	A20 00250	50	100	1.46
ABS 50-V65	A20 00050	50	65	0.94
ABS 50-V50	A20 00550	50	50	0.71
ABS 63-V190	A20 00160	63	190	4.47
ABS 63-V125	A20 00260	63	125	2.94
ABS 63-V85	A20 00060	63	85	1.97
ABS 63-V60	A20 00560	63	60	1.37
ABS 80-V240	A20 00170	80	240	9.18
ABS 80-V125	A20 00270	80	125	4.71
ABS 80-V85	A20 00070	80	85	3.15
ABS 80-V70	A20 00570	80	70	2.58
ABS100-V160	A20 00280	100	160	9.47
ABS100-V125	A20 00080	100	125	7.36
ABS100-V85	A20 00580	100	85	4.95
ABS125-V200	A20 00290	125	200	18.96
ABS125-V160	A20 00090	125	160	15.13

### Supply includes:

Extension mounted complete.

# KOMET ABS® N V / ABS® T V

## Extension with ABS® N / ABS® T Connection



ABS® N V / ABS® T V					
Description	Order No.	ABS-N Ø d	ABS-T Ø d1	L	kg
ABS 32N-V35	A20 05830	32		35	0.20
ABS 40N-V90	A20 05640	40		90	0.84
ABS 40N-V60	A20 05440	40		60	0.52
ABS 40N-V40	A20 05840	40		40	0.36
ABS 50T-V150	A20 05751	50	50	150	2.22
ABS 50T-V100	A20 05652	50	50	100	1.46
ABS 50N-V65	A20 05450	50		65	0.94
ABS 50N-V50	A20 05850	50		50	0.71
ABS 63T-V190	A20 05760	63	63	190	4.47
ABS 63T-V125	A20 05661	63	63	125	2.94
ABS 63N-V85	A20 05460	63		85	1.97
ABS 63N-V60	A20 05860	63		60	1.37
ABS 80T-V240	A20 05770	80	80	240	9.18
ABS 80T-V125	A20 05671	80	80	125	4.71
ABS 80N-V85	A20 05470	80		85	3.15
ABS 80N-V70	A20 05870	80		70	2.58
ABS100N-V160	A20 05680	100		160	9.47
ABS100N-V125	A20 05480	100		125	7.36
ABS100N-V85	A20 05880	100		85	4.95

### Supply includes:

Extension mounted complete.

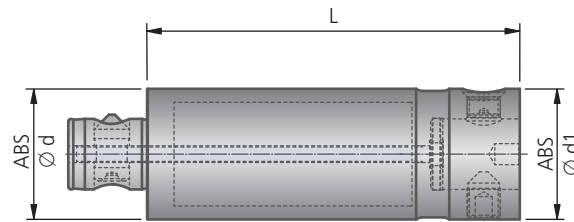
### Note:

For optimum torque drive we recommend the use of ABS® T extensions.



# KOMET ABS® V LB

## Lightweight Extension with ABS® Connection

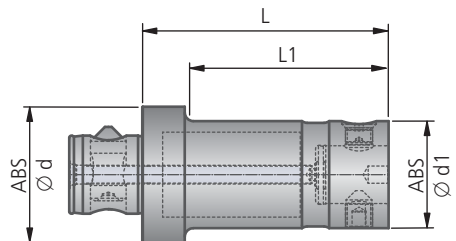


ABS® V LB					
Description	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS63-V125-LB	A20 01060	63	63	125	1.90
ABS63-V190-LB	A20 01160	63	63	190	2.60
ABS80-V170-LB	A20 01070	80	80	170	4.00
ABS80-V240-LB	A20 01170	80	80	240	5.30
ABS100-V200-LB	A20 01080	100	100	200	7.30
ABS100-V300-LB	A20 01180	100	100	300	9.70

Supply includes:  
Extension mounted complete.

# KOMET ABS® R LB

## Lightweight Reducer with ABS® Connection



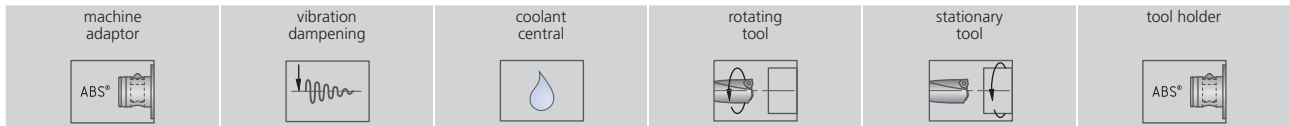
ABS® R LB						
Description	Order No.	ABS Ø d	ABS Ø d1	L	L1	kg
ABS80-R63-LB	A20 11560	80	63	145	120	2.80
ABS100-R80-LB	A20 11670	100	80	160	130	5.00

**Supply includes:**  
Reducer mounted complete.

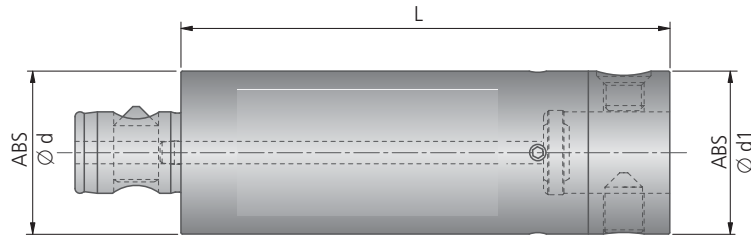


# KOMET ABS® V HMD

## Damping Element with ABS® Connection



- reduction in undesirable vibration in the tool
- suitable for shrink fits



ABS® V HMD					
Description	Order No.	ABS Ø d	ABS Ø d1	L	kg
ABS 40-V120-HMD	A20 01240	40	40	120	1.5
ABS 50-V150-HMD	A20 01250	50	50	150	2.8
ABS 63-V190-HMD	A20 01260	63	63	190	5.8
ABS 80-V240-HMD	A20 01270	80	80	240	11.6

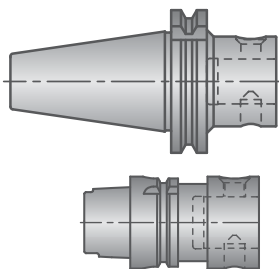
### Supply includes:

Extension mounted complete.



### Please note:

HMD extension not suitable for continuous drilling.

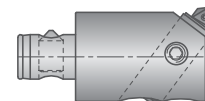


ABS40  
ABS50  
ABS63  
ABS80



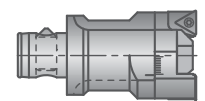
### Adjustable Head

ABS40  
ABS50  
ABS63  
ABS80



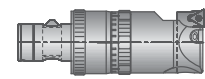
### TwinKom® G01

ABS40  
ABS50  
ABS63  
ABS80



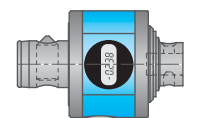
### MicroKom® M03Speed

ABS40  
ABS50  
ABS63



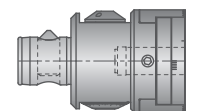
### MicroKom® M04

ABS50



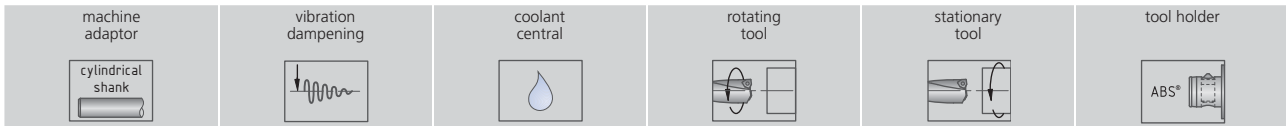
### MicroKom® hi.flex

ABS50

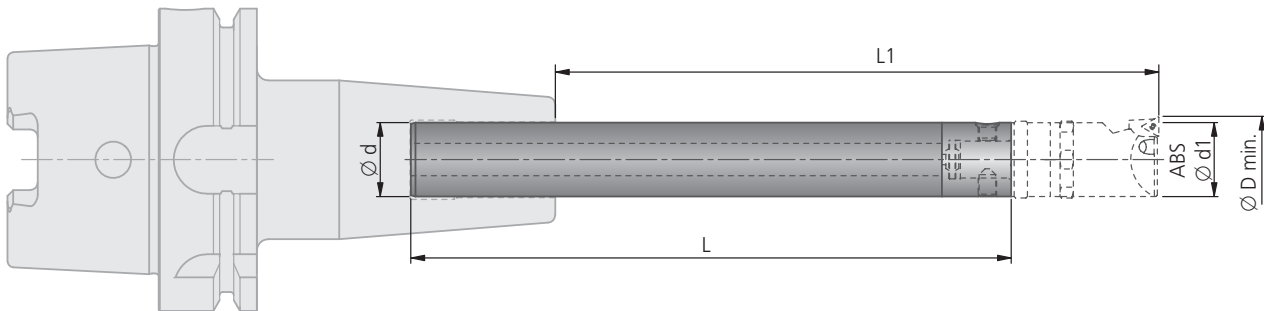


# KOMET ABS® V HMD

## Damping Element with ABS® Connection



- reduction in undesirable vibration in the tool ■
- suitable for shrink fits ■



ABS® V HMD							
Description	Order No.	Cylindrical shank Ø d	ABS Ø d1	Ø Dmin.	L	L1	kg
ABS 25-V150-HMD	A20 01220 <sup>*1</sup>	25	25	26	160	150 *	0.84
ABS 25-V175-HMD	A20 01320 <sup>*2</sup>	25	25	26	185	175 *	0.98
ABS 25-V200-HMD	A20 01420 <sup>*3</sup>	25	25	26	210	200 *	1.13
ABS 32-V200-HMD	A20 01230 <sup>*1</sup>	32	32	38	200	200 *	1.74
ABS 32-V230-HMD	A20 01330 <sup>*2</sup>	32	32	38	230	230 *	2.03
ABS 32-V260-HMD	A20 01430 <sup>*3</sup>	32	32	38	260	260 *	2.31

### Supply includes:

Extension mounted complete.

- \* dimension inclusive of M03..... or B30.... Boring heads
- \*1 suitable for steel, cast and non ferrous metals
- \*2 suitable for cast and non ferrous metals
- \*3 only for non ferrous metals



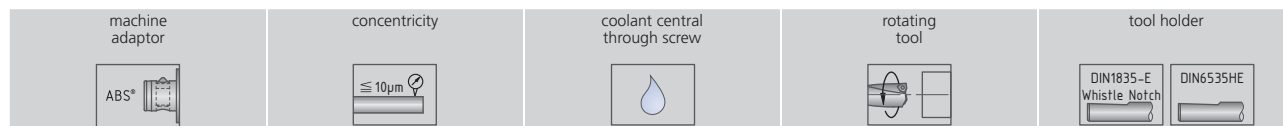
### Please note:

HMD extension not suitable for continuous drilling.

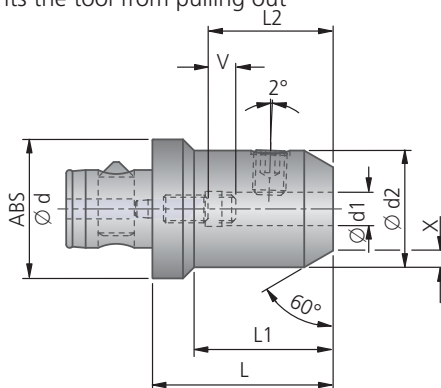


# KOMET ABS® FWD

## Adaptor Sleeve Whistle Notch



- metric
- the 2° tilt of the clamping screws prevents the tool from pulling out



Tool restriction X for:  
 Ø 6 = 5 mm    Ø 12 = 6 mm  
 Ø 8 = 4 mm    Ø 16 = 6 mm  
 Ø 10 = 5 mm    Ø 20 = 6 mm

ABS® FWD										Assembly parts		
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	V	kg	Clamping screw		Adjusting screw
										Order No.	Qty.	Order No.
ABS25 FWD6	A30 10601	25	6	25	55	-	36	10	0.21	51050 06010	1	N00 71000
ABS25 FWD...*	A30 10 ..1	25	6.1-6.4	25	55	-	36	10	0.21	51050 06010	1	N00 71000
ABS25 FWD...*	A30 10 ..1	25	6.5-7.9	25	55	-	36	10	0.21	51050 06010	1	N00 71050
ABS25 FWD8	A30 10801	25	8	28	55	-	36	10	0.25	51050 08010	1	N00 71050
ABS25 FWD...*	A30 10 ..1	25	8.1-8.4	28	55	-	36	10	0.25	51050 08010	1	N00 71050
ABS25 FWD...*	A30 10 ..1	25	8.5-9.9	28	55	-	36	10	0.25	51050 08010	1	N00 71100
ABS25 FWD10	A30 11001	25	10	35	60	-	40	10	0.41	51050 10012	1	N00 71100
ABS25 FWD...*	A30 1 ... 1	25	10.1-10.4	35	60	-	40	8	0.41	51050 10012	1	N00 71100
ABS25 FWD...*	A30 1 ... 1	25	10.5-11.9	35	60	-	40	8	0.41	51050 10012	1	N00 71200
ABS32 FWD6	A30 20601	32	6	25	55	40	36	10	0.25	51050 06010	1	N00 71000
ABS32 FWD...*	A30 20 ..1	32	6.1-6.4	25	55	40	36	10	0.25	51050 06010	1	N00 71000
ABS32 FWD...*	A30 20 ..1	32	6.5-7.9	25	55	40	36	10	0.25	51050 06010	1	N00 71050
ABS32 FWD8	A30 20801	32	8	28	55	40	36	10	0.29	51050 08010	1	N00 71050
ABS32 FWD...*	A30 20 ..1	32	8.1-8.4	28	55	40	36	10	0.29	51050 08010	1	N00 71050
ABS32 FWD...*	A30 20 ..1	32	8.5-9.9	28	55	40	36	10	0.29	51050 08010	1	N00 71110
ABS32 FWD10	A30 21001	32	10	35	60	-	40	10	0.43	51050 10012	1	N00 71110
ABS32 FWD...*	A30 2 ... 1	32	10.1-10.4	35	60	-	40	10	0.43	51050 10012	1	N00 71110
ABS32 FWD...*	A30 2 ... 1	32	10.5-11.9	35	60	-	40	10	0.43	51050 10012	1	N00 71210
ABS32 FWD12	A30 21201	32	12	42	65	-	45	10	0.65	51050 12016	1	N00 71210
ABS32 FWD...*	A30 2 ... 1	32	12.1-12.4	42	65	-	45	10	0.65	51050 12016	1	N00 71210
ABS32 FWD...*	A30 2 ... 1	32	12.5-14	42	65	-	45	10	0.65	51050 12016	1	N00 71300
ABS40 FWD6	A30 30601	40	6	25	55	35	36	10	0.34	51050 06010	1	N00 71000
ABS40 FWD...*	A30 30 ..1	40	6.1-6.4	25	55	35	36	10	0.34	51050 06010	1	N00 71000
ABS40 FWD...*	A30 30 ..1	40	6.5-7.9	25	55	35	36	10	0.34	51050 06010	1	N00 71050
ABS40 FWD8	A30 30801	40	8	28	55	35	36	10	0.38	51050 08010	1	N00 71050
ABS40 FWD...*	A30 30 ..1	40	8.1-8.4	28	55	35	36	10	0.38	51050 08010	1	N00 71050
ABS40 FWD...*	A30 30 ..1	40	8.5-9.9	28	55	35	36	10	0.38	51050 08010	1	N00 71120

Please enter drilling diameter:  
 Example    Ø 7.2 mm = A30 10721  
               Ø 10.6 mm = A30 11061




**Please note:**

For all adaptor sleeves marked with \* the clamping diameter d1 varies from DIN 1835 E.  
 All dimensions correspond to the next standardized clamping diameter d1 downwards.



# KOMET ABS® FWD

## Adaptor Sleeve Whistle Notch

ABS® FWD										Assembly parts		
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	V		Clamping screw		Adjusting screw
											Qty.	
										Order No.		Order No.
ABS40 FWD10	A30 31001	40	10	35	60	45	40	10	0.48	51050 10012	1	N00 71120
ABS40 FWD...*	A30 3 ... 1	40	10.1–10.4	35	60	45	40	10	0.48	51050 10012	1	N00 71120
ABS40 FWD...*	A30 3 ... 1	40	10.5–11.9	35	60	45	40	10	0.48	51050 10012	1	N00 71220
ABS40 FWD12	A30 31201	40	12	42	65	–	45	10	0.68	51050 12016	1	N00 71220
ABS40 FWD...*	A30 3 ... 1	40	12.1–12.4	42	65	–	45	10	0.68	51050 12016	1	N00 71220
ABS40 FWD...*	A30 3 ... 1	40	12.5–15.9	42	65	–	45	10	0.68	51050 12016	1	N00 71310
ABS40 FWD16	A30 31601	40	16	48	70	–	48	10	0.91	51050 14016	1	N00 71400
ABS40 FWD...*	A30 3 ... 1	40	16.1–19.9	48	70	–	48	10	0.91	51050 14016	1	N00 71400
ABS50 FWD6	A30 40601	50	6	25	55	30	36	10	0.53	51050 06010	1	N00 71000
ABS50 FWD...*	A30 40 ..1	50	6.1–6.4	25	55	30	36	10	0.53	51050 06010	1	N00 71000
ABS50 FWD...*	A30 40 ..1	50	6.5–7.9	25	55	30	36	10	0.53	51050 06010	1	N00 71050
ABS50 FWD8	A30 40801	50	8	28	55	30	36	10	0.57	51050 08010	1	N00 71050
ABS50 FWD...*	A30 40 ..1	50	8.1–8.4	28	55	30	36	10	0.57	51050 08010	1	N00 71050
ABS50 FWD...*	A30 40 ..1	50	8.5–9.9	28	55	30	36	10	0.57	51050 08010	1	N00 71120
ABS50 FWD10	A30 41001	50	10	35	60	40	40	10	0.66	51050 10012	1	N00 71130
ABS50 FWD...*	A30 4 ... 1	50	10.1–10.4	35	60	40	40	10	0.66	51050 10012	1	N00 71130
ABS50 FWD...*	A30 4 ... 1	50	10.5–11.9	35	60	40	40	10	0.66	51050 10012	1	N00 71230
ABS50 FWD12	A30 41201	50	12	42	65	50	45	10	0.81	51050 12016	1	N00 71230
ABS50 FWD...*	A30 4 ... 1	50	12.1–12.4	42	65	50	45	10	0.81	51050 12016	1	N00 71230
ABS50 FWD...*	A30 4 ... 1	50	12.5–15.9	42	65	50	45	10	0.81	51050 12016	1	N00 71320
ABS50 FWD16	A30 41601	50	16	48	70	55	48	10	1.01	51050 14016	1	N00 71410
ABS50 FWD...*	A30 4 ... 1	50	16.1–19.9	48	70	55	48	10	1.01	51050 14016	1	N00 71410
ABS50 FWD20	A30 42002	50	20	52	75	–	50	10	1.20	51050 16016	1	N00 71500
ABS50 FWD...*	A30 4 ... 2	50	20.1–24.9	52	75	–	50	10	1.20	51050 16016	1	N00 71500
ABS50 FWD25*	A30 42502	50	25	52	75	–	50	10	1.13	51050 16016	1	N00 71500
ABS63 FWD10	A30 51001	63	10	35	60	35	40	10	0.96	51050 10012	1	N00 71130
ABS63 FWD...*	A30 5 ... 1	63	10.1–10.4	35	60	35	40	10	0.96	51050 10012	1	N00 71130
ABS63 FWD...*	A30 5 ... 1	63	10.5–11.9	35	60	35	40	10	0.96	51050 10012	1	N00 71230
ABS63 FWD12	A30 51201	63	12	42	65	45	45	10	1.08	51050 12016	1	N00 71230
ABS63 FWD...*	A30 5 ... 1	63	12.1–12.4	42	65	45	45	10	1.08	51050 12016	1	N00 71230
ABS63 FWD...*	A30 5 ... 1	63	12.5–15.9	42	65	45	45	10	1.08	51050 12016	1	N00 71320
ABS63 FWD16	A30 51601	63	16	48	70	50	48	10	1.27	51050 14016	1	N00 71410
ABS63 FWD...*	A30 5 ... 1	63	16.1–19.9	48	70	50	48	10	1.27	51050 14016	1	N00 71410
ABS63 FWD20	A30 52001	63	20	52	75	55	50	10	1.43	51050 16016	1	N00 71500
ABS63 FWD...*	A30 5 ... 1	63	20.1–24.9	52	75	55	50	10	1.43	51050 16016	1	N00 71500
ABS63 FWD25	A30 52501	63	25	65	80	–	56	10	2.00	51050 18220	2	N00 71500
ABS63 FWD...*	A30 5 ... 1	63	25.1–28	65	80	–	56	10	2.00	51050 18220	2	N00 71500
ABS80 FWD16	A30 61601	80	16	48	70	50	48	10	1.80	51050 14016	1	N00 71430
ABS80 FWD...*	A30 6 ... 1	80	16.1–19.9	48	70	50	48	10	1.80	51050 14016	1	N00 71430
ABS80 FWD20	A30 62001	80	20	52	75	52	50	10	1.98	51050 16016	1	N00 71520
ABS80 FWD...*	A30 6 ... 1	80	20.1–24.9	52	75	52	50	10	1.98	51050 16016	1	N00 71520
ABS80 FWD25	A30 62501	80	25	65	80	60	58	10	2.50	51050 18220	2	N00 71600
ABS80 FWD...*	A30 6 ... 1	80	25.1–28	65	80	60	58	10	2.50	51050 18220	2	N00 71600
ABS80 FWD...*	A30 6 ... 1	80	28.1–31.9	72	90	70	60	10	2.50	51050 20220	2	N00 71650
ABS80 FWD32	A30 63201	80	32	72	90	70	60	10	3.02	51050 20220	2	N00 71650

Please enter drilling diameter:

Example    Ø 25.1 mm = A30 62511  
               Ø 31.9 mm = A30 63191

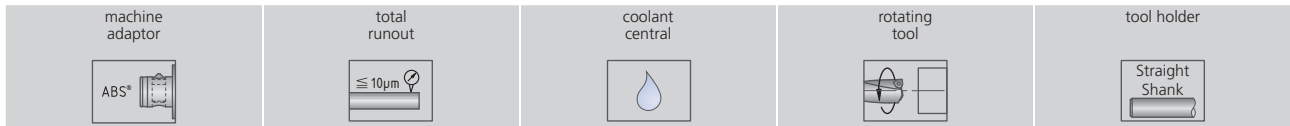
**Please note:**

For all adaptor sleeves marked with \* the clamping diameter d1 varies from DIN 1835 E.  
 All dimensions correspond to the next standardized clamping diameter d1 downwards.

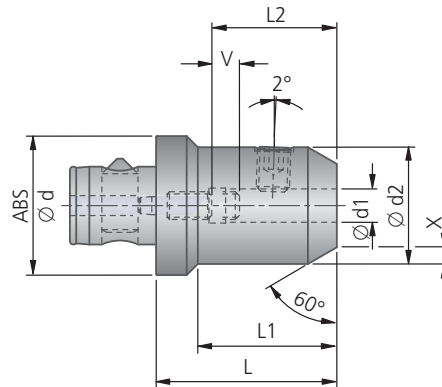


# KOMET ABS® FWD

## Adaptor Sleeve Whistle Notch



- inch
- the 2° tilt of the clamping screws prevents the tool from pulling out



Tool restriction X for:

Ø .250 = .197"	Ø .750 = .236"
Ø .375 = .157"	Ø .875 = .236"
Ø .500 = .236"	Ø 1.000 = .236"
Ø .625 = .236"	

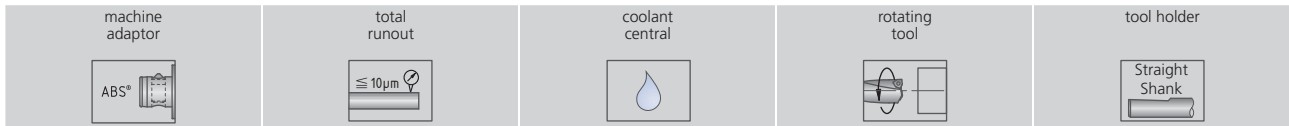
ABS® FWD										Assembly parts		
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	V	lbs	Clamping screw		Adjusting screw
										Order No.	Qty.	Order No.
ABS32 FWD .250	A31 22501	32	0.250	0.984	2.165	1.575	1.457	0.394	0.61	N00 70210	1	N00 71000
ABS32 FWD .375	A31 23751	32	0.375	1.102	2.165	1.575	1.457	0.394	0.67	N00 70260	1	N00 71100
ABS32 FWD .500	A31 25001	32	0.500	1.654	2.559	–	1.811	0.394	1.54	N00 70350	1	N00 71300
ABS40 FWD .250	A31 32501	40	0.250	0.984	2.165	1.378	1.457	0.394	0.81	N00 70210	1	N00 71000
ABS40 FWD .375	A31 33751	40	0.375	1.102	2.165	1.378	1.457	0.394	1.21	N00 70260	1	N00 71100
ABS40 FWD .500	A31 35001	40	0.500	1.654	2.559	–	1.811	0.394	1.61	N00 70350	1	N00 71130
ABS40 FWD .625	A31 36251	40	0.625	1.654	2.559	–	1.811	0.394	1.58	N00 70350	1	N00 71130
ABS50 FWD .250	A31 42501	50	0.250	0.984	2.165	1.181	1.457	0.394	1.26	N00 70210	1	N00 71000
ABS50 FWD .375	A31 43751	50	0.375	1.102	2.165	1.181	1.457	0.394	1.33	N00 70260	1	N00 71100
ABS50 FWD .500	A31 45001	50	0.500	1.654	2.559	1.968	1.811	0.394	1.91	N00 70350	1	N00 71310
ABS50 FWD .625	A31 46251	50	0.625	1.654	2.559	1.968	1.811	0.394	1.85	N00 70350	1	N00 71310
ABS50 FWD .750	A31 47501	50	0.750	1.890	2.756	2.165	1.929	0.394	2.30	N00 70400	1	N00 71410
ABS50 FWD .875	A31 48751	50	0.875	2.047	2.953	–	2.008	0.394	2.80	N00 70450	1	N00 71500
ABS50 FWD 1.000	A31 40001	50	1.000	2.047	2.953	–	2.008	0.394	2.66	N00 70450	1	N00 71500

### Supply includes:

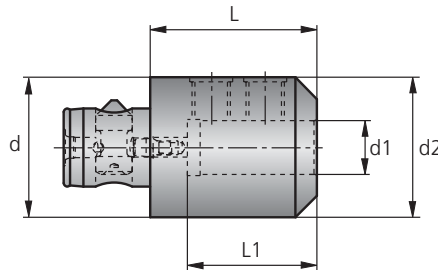
Precision tool holder complete with ABS hardware, clamping and adjusting screws and hex socket type wrenches.

# KOMET ABS® EMH

## End Mill Holder



inch ■



ABS® EMH								Assembly parts	
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	lbs	Clamping screw	Hex Socket Wrench
								Description	Description
ABS 50-EMH .375	A32 41010	50	0.375	1.125	2.000	1.812	1.18	3/8" - 16	3/16"
ABS 50-EMH .500	A32 41020	50	0.500	1.125	2.000	1.900	1.13	7/16" - 14	7/32"
ABS 50-EMH .625	A32 41030	50	0.625	1.969	2.625	2.188	2.35	9/16" - 12	1/4"
ABS 50-EMH .750	A32 41040	50	0.750	1.969	2.625	2.313	2.31	5/8" - 11	5/16"
ABS 50-EMH .875	A32 41050	50	0.875	1.969	2.625	2.313	2.19	5/8" - 11	5/16"
ABS 63-EMH1.000	A32 51060	63	1.000	2.480	3.000	2.563	3.98	3/4" - 10	3/8"
ABS 63-EMH1.250	A32 51070	63	1.250	2.480	3.000	2.563	3.68	3/4" - 10	3/8"
ABS 80-EMH1.500	A32 61080	80	1.500	2.480	3.600	2.895	5.19	3/4" - 10	3/8"
ABS100-EMH2.000	A32 71100	100	2.000	3.937	4.921	3.429	16.22	1" - 14	9/16"

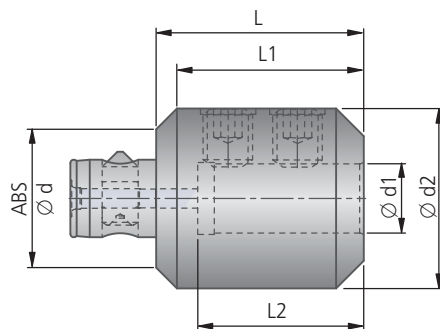
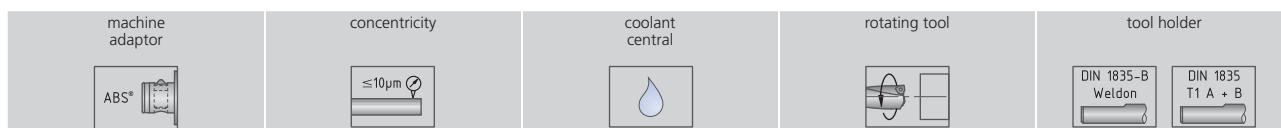
### Supply includes:

End mill holder complete with ABS hardware, clamping screws and hex socket wrench.



# KOMET ABS® HWD

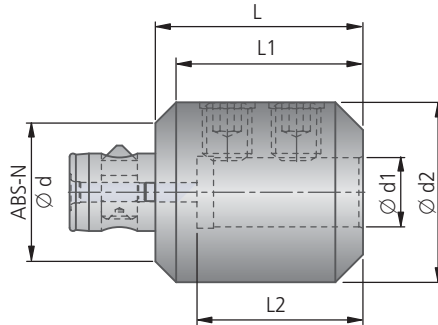
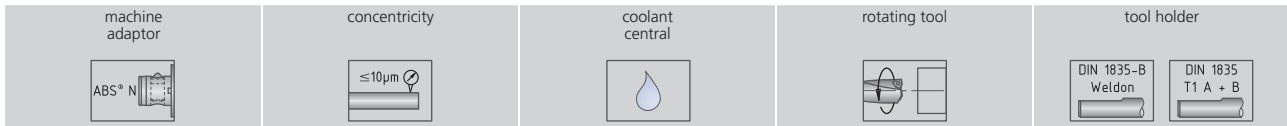
## Adaptor Sleeve Weldon



ABS® HWD									Assembly parts Clamping screw	
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	kg	Order No.	Piece
ABS50-HWD6	A32 40010	50	6	25	45	27	40	0.51	51050 06010	1
ABS50-HWD8	A32 40020	50	8	28	45	27	40	0.49	51050 08010	1
ABS50-HWD10	A32 40030	50	10	35	55	37	44	0.62	51050 10012	1
ABS50-HWD12	A32 40040	50	12	42	65	50	49	0.81	51050 12016	1
ABS50-HWD14	A32 40080	50	14	44	65	50	49	0.85	51050 12016	1
ABS50-HWD16	A32 40050	50	16	48	65	50	52	0.94	51050 14016	1
ABS50-HWD18	A32 40090	50	18	50	65	–	52	0.98	51050 14016	1
ABS50-HWD20	A32 40060	50	20	52	65	–	54	1.03	51050 16016	1
ABS50-HWD25	A32 40070	50	25	65	75	–	60	1.70	51050 18220	2
ABS63-HWD10	A32 50030	63	10	35	55	37	44	0.88	51050 10012	1
ABS63-HWD12	A32 50040	63	12	42	65	50	49	1.02	51050 12016	1
ABS63-HWD14	A32 50100	63	14	44	65	50	49	1.06	51050 12016	1
ABS63-HWD16	A32 50050	63	16	48	65	50	52	1.15	51050 14016	1
ABS63-HWD18	A32 50110	63	18	50	65	50	52	1.21	51050 14016	1
ABS63-HWD20	A32 50060	63	20	52	65	45	54	1.26	51050 16016	1
ABS63-HWD25	A32 50070	63	25	65	75	–	60	1.86	51050 18220	2
ABS63-HWD32	A32 50080	63	32	72	80	–	64	2.25	51050 20220	2
ABS80-HWD16	A32 60050	80	16	48	65	45	52	1.51	51050 14016	1
ABS80-HWD18	A32 60110	80	18	50	65	45	52	1.81	51050 14016	1
ABS80-HWD20	A32 60060	80	20	52	65	45	54	1.84	51050 16016	1
ABS80-HWD25	A32 60070	80	25	65	75	55	60	2.41	51050 18220	2
ABS80-HWD32	A32 60080	80	32	72	80	66	64	2.62	51050 20220	2

Supply includes: Adaptor sleeve with assembly parts.

# KOMET ABS® N HWD Adaptor Sleeve Weldon



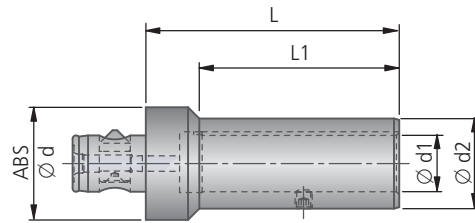
ABS® N HWD									Assembly parts	
Description	Order No.	ABS-N Ø d	Ø d1	Ø d2	L	L1	L2	kg	Clamping screw	
									Order No.	Piece
ABS50N-HWD16	A32 40250	50	16	48	65	50	52	0.94	51050 14016	1
ABS50N-HWD20	A32 40260	50	20	52	65	–	54	1.03	51050 16016	1
ABS50N-HWD25	A32 40270	50	25	65	75	–	60	1.70	51050 18220	2
ABS63N-HWD16	A32 50250	63	16	48	65	50	52	1.15	51050 14016	1
ABS63N-HWD20	A32 50260	63	20	52	65	45	54	1.26	51050 16016	1
ABS63N-HWD25	A32 50270	63	25	65	75	–	60	1.86	51050 18220	2
ABS63N-HWD32	A32 50280	63	32	72	80	–	64	2.25	51050 20220	2

Supply includes: Adaptor sleeve with assembly parts.



# KOMET ABS<sup>®</sup> HTR

## Adaptor

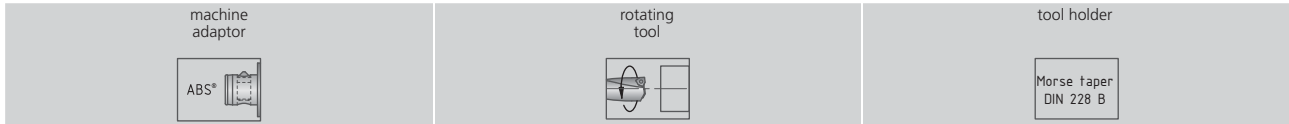


ABS <sup>®</sup> HTR							
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	kg
ABS50-HTR28	A34 04030	50	28	40	100	88	0.75
ABS63-HTR28	A34 05030	63	28	40	100	85	1.01
ABS63-HTR36	A34 05040	63	36	50	125	110	1.42

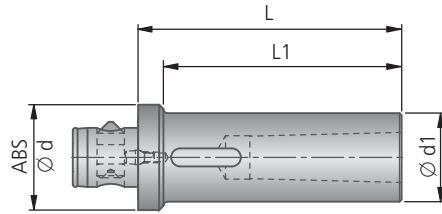
### Supply includes:

Adaptor with clamping screw.

# KOMET ABS<sup>®</sup> HMK Adaptor



without central coolant supply ■  
adaptor sleeves with central coolant supply available on request ■



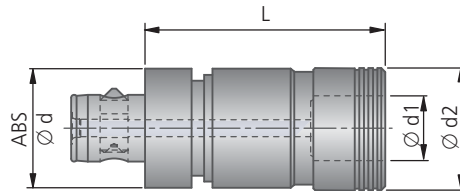
ABS <sup>®</sup> HMK							
Description	Order No.	ABS Ø d	Ø d1	Internal taper DIN 228	L	L1	kg
ABS50-HMK1	A34 14020	50	20	MK 1	90	78	0.45
ABS50-HMK2	A34 14030	50	30	MK 2	105	93	0.69
ABS50-HMK3	A34 14040	50	36	MK 3	125	113	0.96
ABS63-HMK4	A34 15050	63	48	MK 4	150	135	1.86

**Supply includes:**  
Adaptor with assembly parts.



# KOMET ABS® GWF

## Tapping Chuck



ABS® GWF							
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	Length compensation pressure and tension	kg
ABS 32-GWF19-IK	A34 32060	32	19	39	69	7.5	0.46
ABS 40-GWF19-IK	A34 33060	40	19	39	73	7.5	0.55
ABS 50-GWF19-IK	A34 34060	50	19	39	72	7.5	0.68
ABS 50-GWF31-IK	A34 34070	50	31	60	98	10.0	1.50
ABS 63-GWF31-IK	A34 35070	63	31	60	111	10.0	1.65
ABS 63-GWF48-IK	A34 35080	63	48	86	160	17.5	4.70
ABS100-GWF60-IK	A34 37100	100	60	107	195	20.0	10.00

### Supply includes:

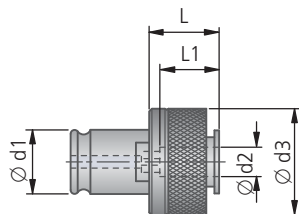
Tapping chuck with assembly parts.

Tapping chucks with tension adjustment on request.



# KOMET® Tap Holder for Tapping Chuck

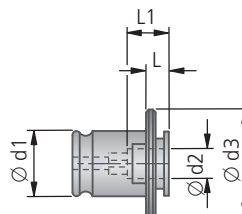
- with safety coupling
- for location of taps



\* Please state shank diameter d2 required  
Example: tap M3.5 · shank d2 = 3.55 mm  
Order No. A34 911100355

Tap holder WES						
for taps	Description	Order No.	d1	d3	L	L1
M 3	WES 1 B (M3)	A34 91100..*	19	32	25	17
M 3.5	WES 1 B (M3.5)	A34 91110..*	19	32	25	17
M 4	WES 1 B (M4)	A34 91120..*	19	32	25	17
M 4.5	WES 1 B (M4.5)	A34 91130..*	19	32	25	17
M 5	WES 1 B (M5)	A34 91140..*	19	32	25	17
M 6	WES 1 B (M6)	A34 91150..*	19	32	25	17
M 8	WES 1 B (M8)	A34 91160..*	19	32	25	17
M 10	WES 1 B (M10)	A34 91170..*	19	32	25	17
M 12	WES 1 B (M12)	A34 91180..*	19	32	25	17
M 8	WES 2 B (M8)	A34 92160..*	31	50	34	30
M 10	WES 2 B (M10)	A34 92170..*	31	50	34	30
M 12	WES 2 B (M12)	A34 92180..*	31	50	34	30
M 14	WES 2 B (M14)	A34 92190..*	31	50	34	30
M 16	WES 2 B (M16)	A34 92200..*	31	50	34	30
M 18	WES 2 B (M18)	A34 92210..*	31	50	34	30
M 20	WES 2 B (M20)	A34 92220..*	31	50	34	30
M 14	WES 3 B (M14)	A34 93190..*	48	72	45	44
M 16	WES 3 B (M16)	A34 93200..*	48	72	45	44
M 18	WES 3 B (M18)	A34 93210..*	48	72	45	44
M 20	WES 3 B (M20)	A34 93220..*	48	72	45	44
M 22	WES 3 B (M22)	A34 93230..*	48	72	45	44
M 24	WES 3 B (M24)	A34 93240..*	48	72	45	44
M 27	WES 3 B (M27)	A34 93250..*	48	72	45	44
M 30	WES 3 B (M30)	A34 93260..*	48	72	45	44
M 33	WES 3 B (M33)	A34 93270..*	48	72	45	44
M 22	WES 4 B (M22)	A34 94230..*	60	95	68	71
M 24	WES 4 B (M24)	A34 94240..*	60	95	68	71
M 27	WES 4 B (M27)	A34 94250..*	60	95	68	71
M 30	WES 4 B (M30)	A34 94260..*	60	95	68	71
M 33	WES 4 B (M33)	A34 94270..*	60	95	68	71
M 36	WES 4 B (M36)	A34 94280..*	60	95	68	71
M 39	WES 4 B (M39)	A34 94290..*	60	95	68	71
M 42	WES 4 B (M42)	A34 94300..*	60	95	68	71
M 45	WES 4 B (M45)	A34 94310..*	60	95	68	71
M 48	WES 4 B (M48)	A34 94320..*	60	95	68	71

- for location of taps



\* Please state shank diameter d2 required  
Example: tap M3.5 · shank d2 = 3.55 mm  
Order No. A34 961100355

Tap holder WE						
for taps	Description	Order No.	d1	d3	L	L1
M 3	WE 1 (M3)	A34 96100..*	19	30	7	17
M 3,5	WE 1 (M3,5)	A34 96110..*	19	30	7	17
M 4	WE 1 (M4)	A34 96120..*	19	30	7	17
M 4,5	WE 1 (M4,5)	A34 96130..*	19	30	7	17
M 5	WE 1 (M5)	A34 96140..*	19	30	7	17
M 6	WE 1 (M6)	A34 96150..*	19	30	7	17
M 8	WE 1 (M8)	A34 96160..*	19	30	7	17
M 10	WE 1 (M10)	A34 96170..*	19	30	7	17
M 12	WE 1 (M12)	A34 96180..*	19	30	7	17
M 8	WE 2 (M8)	A34 97160..*	31	48	11	30
M 10	WE 2 (M10)	A34 97170..*	31	48	11	30
M 12	WE 2 (M12)	A34 97180..*	31	48	11	30
M 14	WE 2 (M14)	A34 97190..*	31	48	11	30
M 16	WE 2 (M16)	A34 97200..*	31	48	11	30
M 18	WE 2 (M18)	A34 97210..*	31	48	11	30
M 20	WE 2 (M20)	A34 97220..*	31	48	11	30
M 14	WE 3 (M14)	A34 98190..*	48	70	14	44
M 16	WE 3 (M16)	A34 98200..*	48	70	14	44
M 18	WE 3 (M18)	A34 98210..*	48	70	14	44
M 20	WE 3 (M20)	A34 98220..*	48	70	14	44
M 22	WE 3 (M22)	A34 98230..*	48	70	14	44
M 24	WE 3 (M24)	A34 98240..*	48	70	14	44
M 27	WE 3 (M27)	A34 98250..*	48	70	14	44
M 30	WE 3 (M30)	A34 98260..*	48	70	14	44
M 33	WE 3 (M33)	A34 98270..*	48	70	14	44
M 22	WE 4 (M22)	A34 99230..*	60	92	42	71
M 24	WE 4 (M24)	A34 99240..*	60	92	42	71
M 27	WE 4 (M27)	A34 99250..*	60	92	42	71
M 30	WE 4 (M30)	A34 99260..*	60	92	42	71
M 33	WE 4 (M33)	A34 99270..*	60	92	42	71
M 36	WE 4 (M36)	A34 99280..*	60	92	42	71
M 39	WE 4 (M39)	A34 99290..*	60	92	42	71
M 42	WE 4 (M42)	A34 99300..*	60	92	42	71
M 45	WE 4 (M45)	A34 99310..*	60	92	42	71
M 48	WE 4 (M48)	A34 99320..*	60	92	42	71

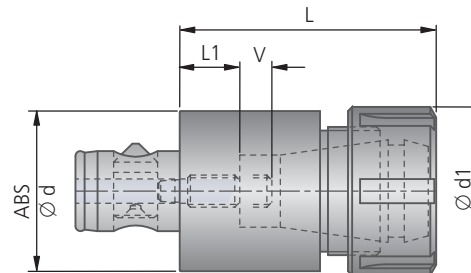


# KOMET ABS® SZV

## Collet Holder



- high concentricity with ground thread on holder and clamping nut
- axial adjustment



ABS® SZV						Accessories		Assembly parts			Accessories			
Description	Order No.	ABS Ø d	Ø d1	Clamping range for collet		kg	Hook spanner Order No.	Adjusting screw Description	Adjusting screw ⑤ short with hole		Adjusting screw			
				L	L1				V	short without hole	long with hole	Order No.	V	Order No.
ABS25 SZV/ER16	A33 11120	25	28	36.5–40.1	9	0.12	L05 02020	M5	N00 71900	4	N00 71910	4	N00 71020	8
ABS32 SZV/ER20	A33 12130	32	34	49–52.5	14	0.26	L05 02030	M6	N00 71070	8	N00 71940	8	N00 71050	10
ABS40 SZV/ER25	A33 13141	40	42	58.5–62	16	0.50	L05 02040	M8×1	N00 71970	8	N00 71980	8	N00 71150	15
ABS50 SZV/ER32	A33 14151	50	50	65.8–69.3	18	0.86	L05 02050	M10×1	N00 71280	6	N00 71240	10	N00 71250	15
ABS63 SZV/ER40	A33 15161	63	63	74.8–78.3	23	1.58	L05 02060	M12×1	N00 71320	8	N00 71340	15	N00 71350	20
ABS80 SZV/ER50	A33 16171	80	78	92.3–99.3	27	3.22	L05 02070	M16×1	N00 71520	8	–	–	–	–

for size	Assembly parts		Accessories		
	Collet nut ① Order No.	Collet nut ② for washer Order No.	Collet nut ③ with friction bearings Order No.	Collet nut ④ with friction bearings for washer Order No.	
ER16	51200 00316	51200 00416	52807 03016	52807 01016	
ER20	51200 00320	51200 00420	52807 03020	52807 01020	
ER25	51200 00325	51200 00425	52807 03025	52807 01025	
ER32	51200 00332	51200 00432	52807 03032	52807 01032	
ER40	51200 00340	51200 00440	52807 03040	52807 01040	

Washer for collet nuts ② and ④			
Description	Order No.	optional from Ø d1	Clamping range increasing by
DS/ER 16...	52806 16...	3 – 10	0.5 mm
DS/ER 20...	52806 20...	3 – 13	0.5 mm
DS/ER 25...	52806 25...	3 – 16	0.5 mm
DS/ER 32...	52806 32...	3 – 20	0.5 mm
DS/ER 40...	52806 33...	3 – 26	0.5 mm

### Supply includes:

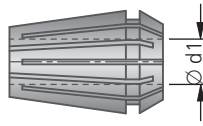
Collet holder with adjusting screw ⑤ and collet nut ①.  
Please order accessories separately.

Please state diameter required d1, e.g. :  
 ▲ 035 → Ø 3.5 mm ± d1 3.5–3.0 mm  
 090 → Ø 9.0 mm ± d1 9.0–8.5 mm  
 260 → Ø 26.0 mm ± d1 26.0–25.5 mm

**Note:** The washers can be used up to a coolant pressure of 100 bar.

## Note:

- <sup>1)</sup> Tool shank diameter d1 must not be greater than collet nominal dimension d1 (risk of fracture)



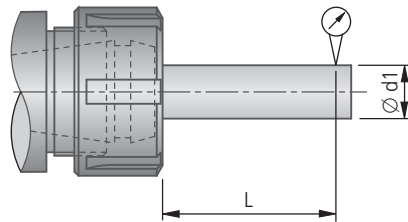
for collet holder	Order No.	<sup>1)</sup> optional from $\varnothing$ d1	Clamping range
ABS.. SZV/ER16	A33 52000...	3 – 10.0	1 mm
ABS.. SZV/ER20	A33 53000...	3 – 13	1 mm
ABS.. SZV/ER25	A33 54000...	3 – 16	1 mm
ABS.. SZV/ER32	A33 55000...	3 – 20	1 mm
ABS.. SZV/ER40	A33 56000...	3 – 26	1 mm

Please state diameter ▲  
required d1, e. g.: **0300** for  $\varnothing$  3.0 mm  
**2600** for  $\varnothing$  26.0 mm

high precision			
for collet holder	Order No.	<sup>1)</sup> optional from $\varnothing$ d1	Clamping range
ABS.. SZV/ER16	A33 52010...	3 – 10.0	from diameter 3 mm in 0.5 mm stages
ABS.. SZV/ER20	A33 53010...	3 – 13	
ABS.. SZV/ER25	A33 54010...	3 – 16	
ABS.. SZV/ER32	A33 55010...	3 – 20	
ABS.. SZV/ER40	A33 56010...	3 – 26	

Please state diameter ▲  
required d1, e. g.: **0300** for  $\varnothing$  3.0 mm  
**2650** for  $\varnothing$  26.5 mm

## Concentricity of collets



L	$\varnothing$ d1	Accuracy of concentricity to collets and collet holder	Accuracy of concentricity (higher precision) to collets and collet holder
6	1.0 – 1.6	0.015	0.010
10	1.6 – 3.0	0.015	0.010
16	3.0 – 6.0	0.015	0.010
25	6.0 – 10.0	0.015	0.010
40	10.0 – 18.0	0.020	0.015
50	18.0 – 26.0	0.020	0.015

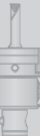
1



2



3



4

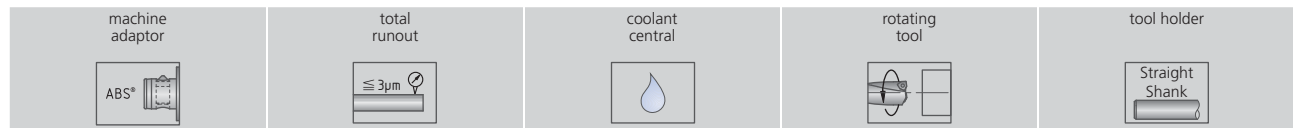


5

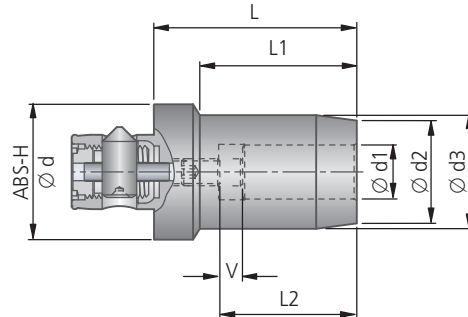


# KOMET ABS<sup>®</sup> H

## Expanding Chuck



■ inch



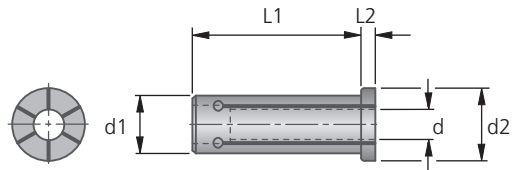
ABS <sup>®</sup> H										Assembly parts	
Order No.	ABS-H Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	V		Adjusting screw	
										Description	Order No.
A32 33050	40	0.250	0.866	1.020	2.160	1.370	1.450	0.394	1.30	M5X12	N00 71000
A32 33060	40	0.375	1.020	1.180	2.360	1.610	1.610	0.394	0.92	M8X1X16	N00 71120
A32 33070	40	0.500	1.100	1.250	2.550	1.850	1.810	0.394	1.01	M10X1X18	N00 71220
A32 43080	50	0.250	0.866	1.020	2.160	1.290	1.450	0.394	1.17	M5X16	N00 71000
A32 43090	50	0.375	1.020	1.180	2.360	1.530	1.610	0.394	1.32	M8X1X16	N00 71120
A32 43100	50	0.500	1.100	1.250	2.550	1.750	1.810	0.394	1.23	M10X1X18	N00 71230
A32 43110	50	0.625	1.330	1.490	2.750	2.020	1.920	0.394	1.34	M14X1X19	N00 71410
A32 43120	50	0.750	1.490	1.650	2.950	2.280	2.000	0.394	1.32	M16X1X21	N00 71500
A32 43130	50	0.875	1.810	2.040	2.950	2.280	2.000	0.394	1.32	M16X1X21	N00 71500

### Supply includes:

Hydraulic chuck with adjusting screw.

- **Axial adjustment:** Adjustment is made by the ABS<sup>®</sup> -H spigot with a hexagonal key.
- **Coolant:** Internal central coolant supply onto cutting edge.
- **ABS<sup>®</sup> -H tool connection:** ABS<sup>®</sup> -H, the ABS<sup>®</sup> variation for use where greater concentricity is required, is fully compatible with the ABS<sup>®</sup> standard program. During the clamping operation, the design of the ABS<sup>®</sup> -H compensates for play in the connection.
- **Closed system:** The system is fully sealed. No dirt, coolant, lubricants or chips can penetrate.
- **Accuracy:** Maximum long-term concentricity and repeatability of % 3 µm. Because of evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.
- **Reducer sleeve:** Using slotted reducer sleeves several shank diameters can be clamped with one expanding chuck.
- **Spindle speed:** If the spindle speed exceeds 15,000 RPM, the tool and the hydraulic chuck must be balanced.
- **Maintenance free**

# Reducer Bushing for Hydraulic Clamping Chucks



with flange grooves for peripheral coolant

Reducer Bushing (inch)					
Order No.	d	d1	d2	L1	L2
L01 13400	0.250	0.750	0.980	2.00	0.78
L01 13410	0.312				
L01 13420	0.375				
L01 13430	0.437				
L01 13440	0.500				
L01 13450	0.625				

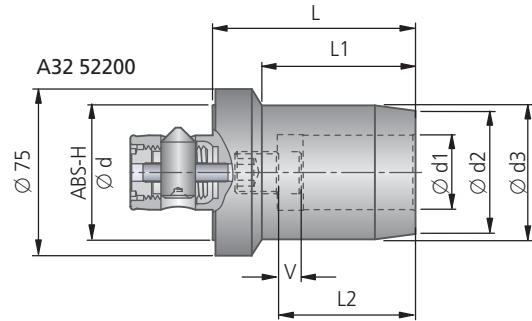
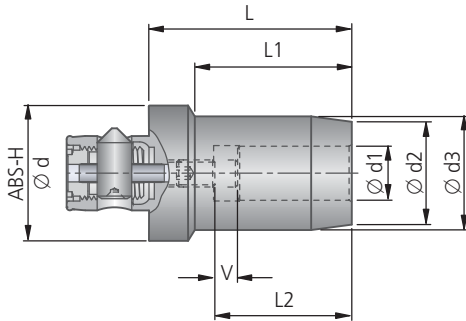
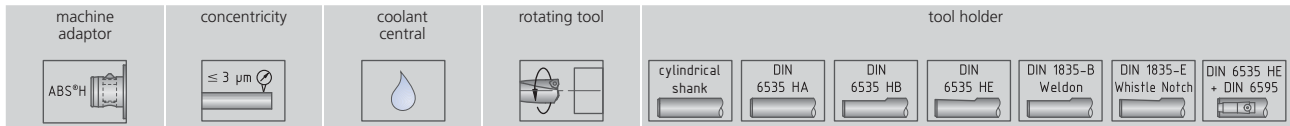
Gage Pin	
Order No.	d1
L00 00080	6
L00 00090	8
L00 00100	10
L00 00110	12
L00 00130	16
L00 00070	20
L00 00160	32


Cylindrical Brush	
Order No.	d1
4779116206	6
4779116208	8
4779116210	10
4779116212	12
4779116216	16
4779116220	20
4779116232	32



# KOMET ABS® H

## Expanding Chuck



ABS® H										Assembly parts	
Order No.	ABS-H Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	V	 kg	Adjusting screw	
										Description	Order No.
A32 32050	40	6	22	26	55	36.5	37	10	0.59	M5×12	N00 71020
A32 32060	40	8	24	28	60	42	37	10	0.42	M6×12	N00 71070
A32 32070	40	10	26	30	65	47.5	41	10	0.46	M8×1×12	N00 71730
A32 32080	40	12	28	32	65	48	46	10	0.43	M10×1×12	N00 71800
A32 42110	50	6	22	26	55	33.5	37	10	0.53	M5×12	N00 71020
A32 42120	50	8	24	28	55	34	37	10	0.60	M6×12	N00 71070
A32 42130	50	10	26	30	65	45	41	10	0.56	M8×1×12	N00 71730
A32 42140	50	12	28	32	65	45.5	46	10	0.61	M10×1×12	N00 71800
A32 42150	50	14	30	34	65	46	46	10	0.60	M10×1×12	N00 71800
A32 42160	50	16	34	38	70	52	49	10	0.80	M10×1×12	N00 71800
A32 42170	50	18	36	40	70	52.5	49	10	0.85	M10×1×12	N00 71800
A32 42101	50	20	38	42	75	58	51	10	0.90	M16×1×16	N00 71540
A32 52180	63	20	38	42	78	56	51	10	1.15	M16×1×16	N00 71540
A32 52190	63	25	53	57	85	60	57	10		M16×1×16	N00 71540
A32 52200	63	32	60	64	90	61	61	10	2.10	M16×1×16	N00 71540

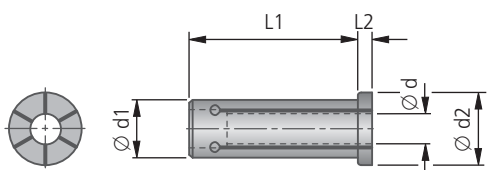
Tool shank tolerance: h6 for Ø 6 - 32 mm

Supply includes: Expanding chuck fitted complete with adjusting screw.

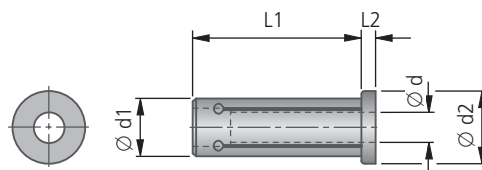
- **Axial adjustment:** Adjustment is made by the ABS® -H spigot with a hexagonal key.
- **Coolant:** Internal central coolant supply onto cutting edge.
- **ABS® -H tool connection:** ABS® -H, the ABS® variation for use where greater concentricity is required, is fully compatible with the ABS® standard program. During the clamping operation, the design of the ABS® -H compensates for play in the connection.
- **Closed system:** The system is fully sealed. No dirt, coolant, lubricants or chips can penetrate.
- **Accuracy:** Maximum long-term concentricity and repeatability of % 3 µm. Because of evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.
- **Reducer sleeve:** Using slotted reducer sleeves several shank diameters can be clamped with one expanding chuck.
- **Spindle speed:** If the spindle speed exceeds 15,000 RPM, the tool and the hydraulic chuck must be balanced.
- **Maintenance free**

# 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	19	45	2	0.1
L01 13301	4					
L01 13311	5					
L01 13321	6					
L01 13331	8					
L01 13261	3	20	29	50.5	2	0.1
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 13501	6					
L01 13511	8					
L01 13521	10					
L01 13531	12					
L01 13541	14					
L01 13551	16					
L01 13561	18					
L01 13571	20					
L01 13581	25					

Adaptor sleeve

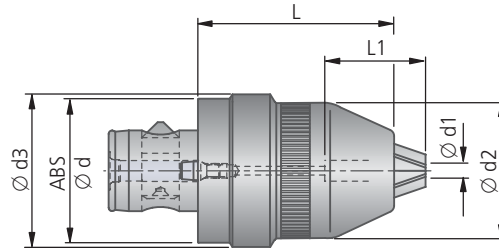
Order No.	Ø d	Ø d1	Ø d2	L1	L2	kg
L01 14291	3	12	19	45	2	0.1
L01 14301	4					
L01 14311	5					
L01 14321	6					
L01 14331	8					
L01 14261	3	20	29	50.5	2	0.1
L01 14271	4					
L01 14281	5					
L01 14201	6					
L01 14211	8					
L01 14221	10					
L01 14231	12					
L01 14241	14					
L01 14251	16					
L01 14501	6					
L01 14511	8					
L01 14521	10					
L01 14531	12					
L01 14541	14					
L01 14551	16					
L01 14561	18					
L01 14571	20					
L01 14581	25					



# KOMET ABS® NCB

## Short Drill Chuck

<p>machine adaptor</p> 	<p>concentricity</p> 	<p>balancing note (chapter 8)</p> 	<p>coolant central</p> 	<p>rotating tool</p> 	<p>tool holder</p> 
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ABS® NCB								
Description	Order No.	ABS Ø d	Clamping range Ø d1	Ø d2	Ø d3	L	Clamping depth L1	kg
ABS50-NCB1	A34 24030	50	0.5-13	49	57.5	95	29	1.56
ABS50-NCB2	A34 24040	50	3-16	52	57.5	95	29	1.60

### Supply includes:

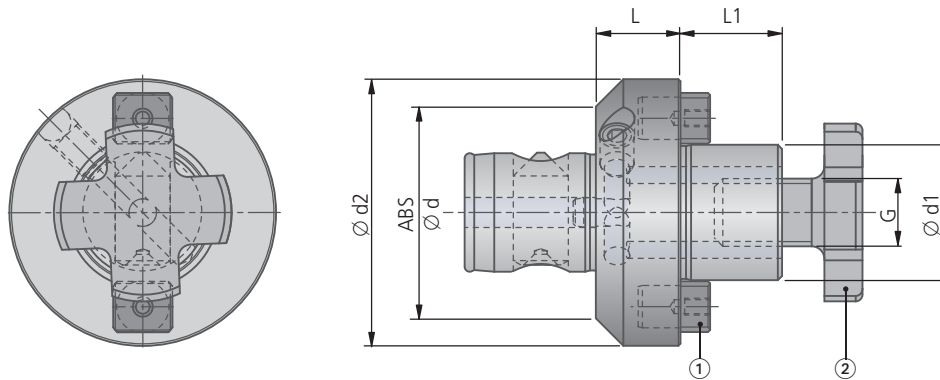
Short drill chuck with ZETTL allen key.

- clamping with original ZETTL allen key only
- the maximum permissible spindle speed for short drill chuck is **6500 min<sup>-1</sup>** for **pre-balanced** design
- on request: for **fine balanced** version (Q2.5), the maximum spindle speed is **20 000 min<sup>-1</sup>**
- higher clamping force (also suitable for milling)



# KOMET ABS® FA

## Milling Cutter Arbor



ABS® FA									Assembly parts		Accessories
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	G	kg	Drive key ①	Cutter clamping screw ② DIN 6367	Allen key DIN 6368 on request
									Order No.	Order No. Description	Order No. Description
ABS50-FA16*	A40 24023	50	16	50	20	17	M 8	0.48	A40 24020.12	55062 00008 M8	18701 80016 SW16
ABS50-FA22	A40 24034	50	22	50	20	19	M10	0.51	N12 20120	55062 00010 M10	18701 80022 SW 22
ABS50-FA27	A40 24043	50	27	50	20	21	M12	0.57	N12 20140	55062 00012 M12	18701 80027 SW 27
ABS50-FA32	A40 24053	50	32	63	20	24	M16	0.80	N12 20170	55062 00016 M16	18701 80032 SW 32
ABS63-FA22	A40 25032	63	22	63	22	19	M10	0.84	N12 20120	55062 00010 M10	18701 80022 SW 22
ABS63-FA27	A40 25042	63	27	63	22	21	M12	0.90	N12 20140	55062 00012 M12	18701 80027 SW 27
ABS63-FA32	A40 25052	63	32	63	22	24	M16	0.99	N12 20170	55062 00016 M16	18701 80032 SW 32
ABS63-FA40	A40 25062	63	40	80	22	27	M20	1.41	N12 20200	55062 00020 M20	18701 80040 SW 40
ABS80-FA27	A40 26042	80	27	80	25	21	M12	1.59	N12 20140	55062 00012 M12	18701 80027 SW 27
ABS80-FA32	A40 26052	80	32	80	25	24	M16	1.68	N12 20170	55062 00016 M16	18701 80032 SW 32
ABS80-FA40	A40 26062	80	40	80	25	27	M20	1.85	N12 20200	55062 00020 M20	18701 80040 SW 40
ABS100-FA32	A40 27052	100	32	100	25	24	M16		N12 20170	55062 00016 M16	18701 80032 SW 32
ABS100-FA40	A40 27062	100	40	100	25	27	M20		N12 20200	55062 00020 M20	18701 80040 SW 40

\* without internal coolant supply

### Supply includes:

Milling cutter adaptor with assembly parts. Please order accessories separately.



# KOMET ABS® FAM

## Milling Cutter Arbor

1



machine adaptor



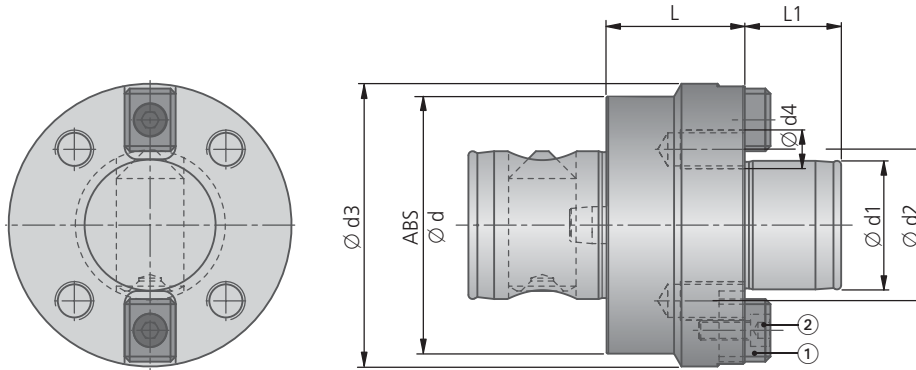
rotating tool



tool holder



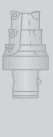
■ for cutter heads with internal bore location



3



4



5

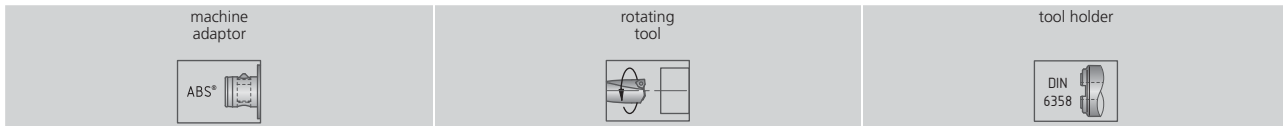


ABS® FAM										Assembly parts	
Description	Order No.	ABS Ø d	Ø d1	Ø d2	Ø d3	Ø d4	L	L1	kg	Key block DIN 2079 ①	Clamping screw DIN 912 ②
										Order No. Description	Order No. Description
ABS 80-FAM40	A40 16062	80	40	66.7	88	M12	43	30	2.60	56341 00001 A40	55011 06016 M 6×16
ABS100-FAM40	A40 17062	100	40	66.7	88	M12	38	30	3.50	56341 00001 A40	55011 06016 M 6×16
ABS100-FAM60	A40 17072	100	60	101.6	130	M16	56	40	6.50	56341 00003 A50	55011 12025 M 12×25

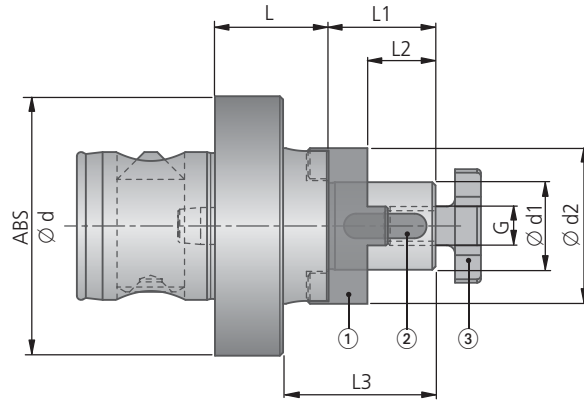
Supply includes:

Milling cutter adaptor with assembly parts.

# KOMET ABS® FAK Combination Milling Cutter Arbor



for milling cutters with longitudinal or cross slots ■



ABS® FAK											Assembly parts			Accessories
Description	Order No.	ABS Ø d	Ø d1	Ø d2	L	L1	L2	L3	G	kg	Driving ring DIN 6366 Part 1 ① Order No. Description	Feather key DIN 6885 Part 1 ② Order No. Description	Cutter clamping screw DIN 6367 ③ Order No. Description	Allen key DIN 6368 on request Order No. Description
ABS 50-FAK16	A40 04022	50	16	32	22	27	17	39	M 8	0.46	55237 00016 16x10	51305 04020 A4x4x20	55062 00008 M8	18701 80016 SW16
ABS 50-FAK22	A40 04032	50	22	40	22	31	19	43	M10	0.59	55237 00022 22x12	51305 06025 A6x6x25	55062 00010 M10	18701 80022 SW22
ABS 63-FAK16	A40 05021	63	16	32	26	27	17	42	M 8	1.0	55237 00016 16x10	51305 04020 A4x4x20	55062 00008 M8	18701 80016 SW16
ABS 63-FAK22	A40 05031	63	22	40	26	31	19	46	M10	1.15	55237 00022 22x12	51305 06025 A6x6x25	55062 00010 M10	18701 80022 SW22
ABS 63-FAK27	A40 05041	63	27	48	26	33	21	48	M12	1.25	55237 00027 27x12	51305 07025 A7x7x25	55062 00012 M12	18701 80027 SW27
ABS 80-FAK22	A40 06031	80	22	40	33	31	19	51	M10	1.8	55237 00022 22x12	51305 06025 A6x6x25	55062 00010 M10	18701 80022 SW22
ABS 80-FAK27	A40 06041	80	27	48	33	33	21	53	M12	1.9	55237 00027 27x12	51305 07025 A7x7x25	55062 00012 M12	18701 80027 SW27
ABS 80-FAK32	A40 06051	80	32	58	33	38	24	58	M16	2.3	55237 00032 32x14	51305 08028 A8x7x28	55062 00016 M16	18701 80032 SW32
ABS 80-FAK40	A40 06061	80	40	70	33	41	27	61	M20	2.75	55237 00040 40x14	51305 10032 A10x8x32	55062 00020 M20	18701 80040 SW40

### Supply includes:

Milling cutter adaptor with assembly parts. Please order accessories separately.



**BENEFITS for you:**

- Rapid thermal expansion and shrinkage
- Maximum clamping forces can be achieved
- Longer tool life and spindle life
- Good surfaces due to high rigidity produced by tool clamping
- Good bending and radial rigidity even with long overhangs
- Narrow chuck design
- Clamping for solid carbide and HSS tools for shank tolerance h6, <math>\varnothing 6\ h5</math> to DIN 6335 and DIN 1835 possible with the same chucks
- By using a special heat resistant steel and a special heat treatment process the chucks have particularly good durability and stable form
- Chuck concentricity  $\leq 3\ \mu\text{m}$
- Used for extremely high spindle speeds



**KOMET® THERMOGRIP®** Page

**HSK-A adaptor**

short design	566 / 568
long design	567 / 569

**HSK-E adaptor** 570

**Cylindrical adaptor**

Extension / Reducer	571
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**Taper shank**

CAT Standard	572 – 573
DIN 69871-1 AD	574 – 575
DIN 69871-1 AD/B	576 – 577
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**ABS® adaptor** 580

**Measuring adaptor** 581

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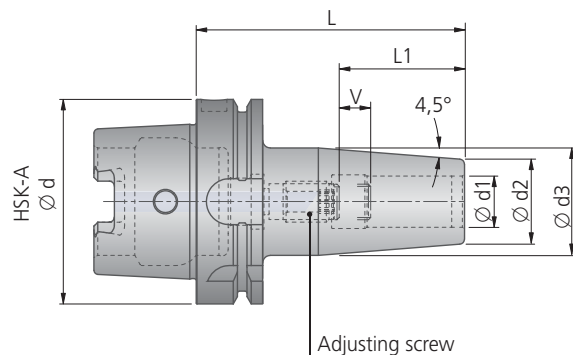


# KOMET® ISO 12164-1

## HSK-A Thermal Expansion Chuck THERMOGRIP®

machine adaptor 	location 	balancing note (chapter 8) 	coolant central 	rotating tool 	tool holder 
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■ short design



HSK-A DIN 69893 T1 Thermogrip®

Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V		Assembly parts Adjusting screw	
										Description	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	20	5		M6 / SW3	55051 06008
HSK-A32-T6	A06 06040	32	6	21	27	70	36	10		M5 / SW2.5	N00 72000
HSK-A32-T8	A06 06050	32	8	21	27	70	36	10		M6 / SW3	N00 72010
HSK-A32-T10	A06 06061	32	10	24	32	70	42	10		M8x1 / SW4	N00 72050
HSK-A32-T12	A06 06071	32	12	24	32	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	53	115	58	10	1.73	M16x1 / SW8	N00 72080
HSK-A63-T32	A06 36131	63	32	44	53	120	58	10	1.66	M16x1 / SW8	N00 72080

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

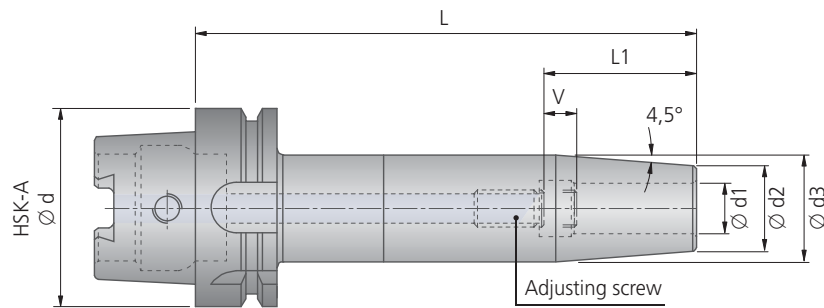
Supply includes:

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

HSK-A Thermal Expansion Chuck THERMOGRIP®

<p>machine adaptor</p>	<p>balancing note (chapter 8)</p> <p>pre-balanced Q6,3 18.000 min<sup>-1</sup></p>	<p>coolant central</p>	<p>rotating tool</p>	<p>tool holder</p> <div style="display: flex; justify-content: space-around;"> <div>DIN 1835 A</div> <div>DIN 1835-B Weldon</div> <div>DIN 6535 A</div> <div>DIN 6535 HB</div> <div>DIN 6535 HE</div> </div>				
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long design ■



HSK-A DIN 69893 T1 Thermogrip®										Assembly parts	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Description	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	M8×1/SW4	N00 72050
HSK-A63-T12-120	A06 36271	63	12	24	32	120	47	10	1.21	M10×1/SW5	N00 72060
HSK-A63-T14-120	A06 36281	63	14	27	34	120	47	10	1.25	M10×1/SW5	N00 72060
HSK-A63-T16-120	A06 36291	63	16	27	34	120	50	10	1.22	M12×1/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	M8×1/SW4	N00 72050
HSK-A63-T12-160	A06 36471	63	12	24	34	160	47	10	1.48	M10×1/SW5	N00 72060
HSK-A63-T14-160	A06 36481	63	14	27	42	160	47	10	1.72	M10×1/SW5	N00 72060
HSK-A63-T16-160	A06 36491	63	16	27	42	160	50	10	1.70	M12×1/SW6	N00 72070
HSK-A63-T18-160	A06 36501	63	18	33	51	160	50	10	1.87	M12×1/SW6	N00 72070
HSK-A63-T20-160	A06 36511	63	20	33	51	160	52	10	1.83	M16×1/SW8	N00 72080
HSK-A63-T25-160	A06 36521	63	25	44	53	160	58	10	2.50	M16×1/SW8	N00 72080
HSK-A63-T32-160	A06 36531	63	32	44	53	160	58	10	2.36	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).

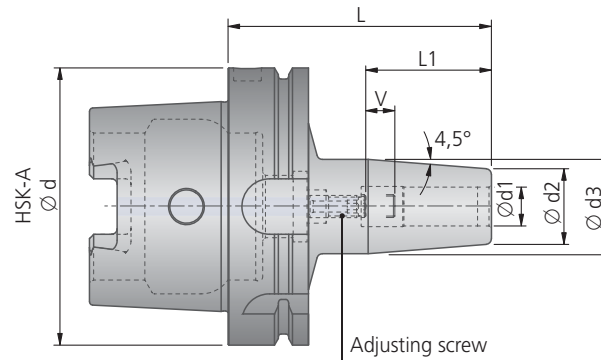


# KOMET® ISO 12164-1

## HSK-A Thermal Expansion Chuck THERMOGRIP®

machine adaptor 	location 	balancing note (chapter 8) 	coolant central 	rotating tool 	tool holder 
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■ short design



HSK-A DIN 69893 T1 Thermogrip®										Assembly parts	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Description	Order No.
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	58	10	2.93	M16x1 / SW8	N00 72080

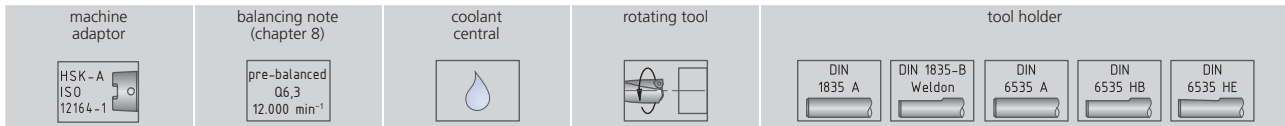
Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

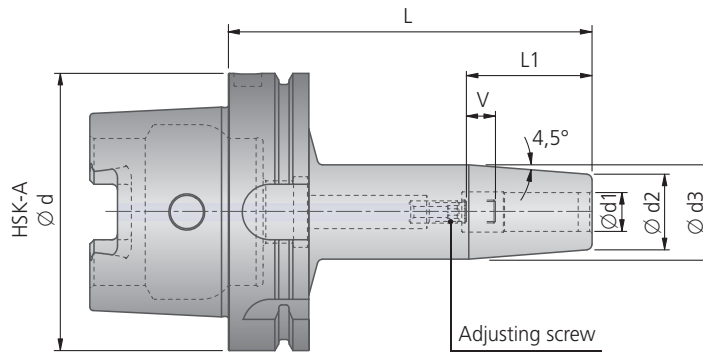
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).



HSK-A Thermal Expansion Chuck THERMOGRIP®



long design ■



HSK-A DIN 69893 T1 Thermogrip®										Assembly parts Adjusting screw	
Description	Order No.	HSK-A Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Description	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	58	10	3.70	M16×1/SW8	N00 72080

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

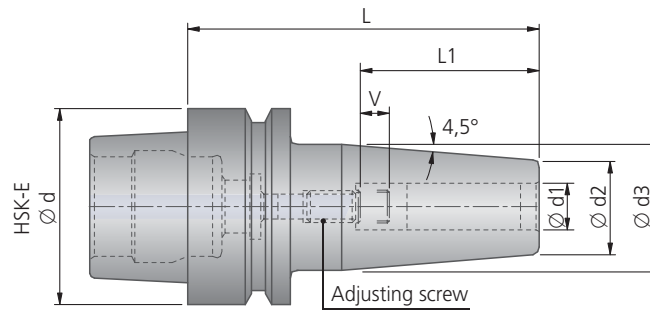
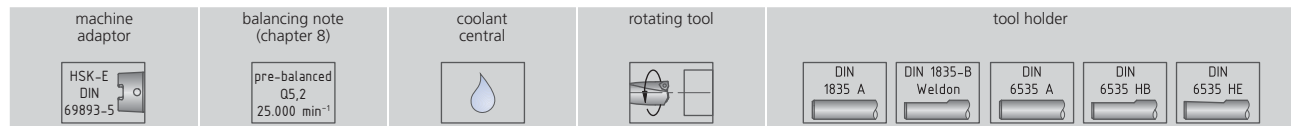
Supply includes:

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



# KOMET® DIN 69893 T5

## HSK-E Thermal Expansion Chuck THERMOGRIP®

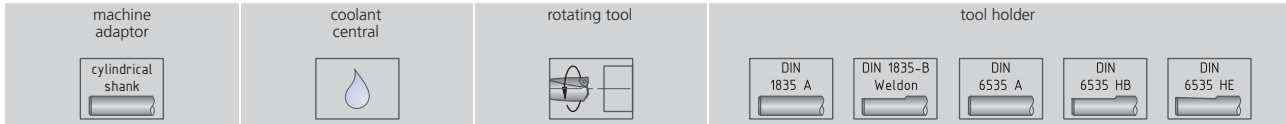


HSK-E DIN 69893 T5 Thermogrip®										Assembly parts	
Description	Order No.	HSK-E Ø d	Ø d1	Ø d2	Ø d3	L	L1	V		Adjusting screw	
										Description	Order No.
HSK-E 32-T 3	A10 16010	32	3	15	20	60	20	5		M6/SW3	55051 06008
HSK-E 32-T 4	A10 16020	32	4	15	20	60	20	5		M6/SW3	55051 06008
HSK-E 32-T 6	A10 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	29.5	70	42	10		M8x1/SW4	N00 72050
HSK-E 32-T12	A10 16071	32	12	24	29.5	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

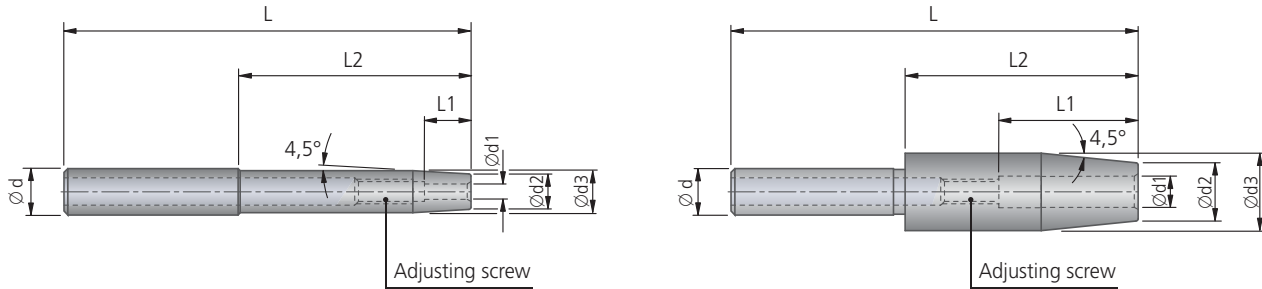
Tool shank tolerances: h5 for shanks < Ø 6 mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

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



to extended and reduce to smaller diameters



Extension / Reducer Thermogrip®										Assembly parts	
Description	Order No.	Ø d	Ø d1	Ø d2	Ø d3	L	L1	L2	kg	Adjusting screw	
										Description	Order No.
D12-T 3	A21 02001	12	3	9	12	107	20	60		M6/SW3	55051 06008
D12-T 4	A21 02011	12	4	9	12	107	20	60		M6/SW3	55051 06008
D12-T 5	A21 02021	12	5	9	12	107	25	60		M6/SW3	55051 06008
D12-T 6	A21 02031	12	6	15	19	107	36	60		M5/SW2.5	N00 72000
D12-T 8	A21 02041	12	8	15	19	107	36	60		M6/SW3	N00 72010
D16-T 3	A21 04001	16	3	9	15	110	20	60		M6/SW3	55051 06008
D16-T 4	A21 04011	16	4	9	15	110	20	60		M6/SW3	55051 06008
D16-T 5	A21 04021	16	5	9	15	110	25	60		M6/SW3	55051 06008
D16-T 6	A21 04031	16	6	15	20	110	36	60		M5/SW2.5	N00 72000
D16-T 8	A21 04041	16	8	15	20	110	36	60		M6/SW3	N00 72010
D20-T 3	A21 06001	20	3	9	15	112	20	60		M6/SW3	55051 06008
D20-T 4	A21 06011	20	4	9	15	112	20	60		M6/SW3	55051 06008
D20-T 5	A21 06021	20	5	9	15	112	25	60		M6/SW3	55051 06008
D20-T 6	A21 06031	20	6	15	19.5	112	36	60		M5/SW2.5	N00 72000
D20-T 8	A21 06041	20	8	15	19.5	112	36	60		M6/SW3	N00 72010
D20-T10	A21 06052	20	10	20	27	112	42	60		M8×1/SW4	N00 72050
D20-T12	A21 06062	20	12	20	27	112	47	60		M10×1/SW5	N00 72060

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

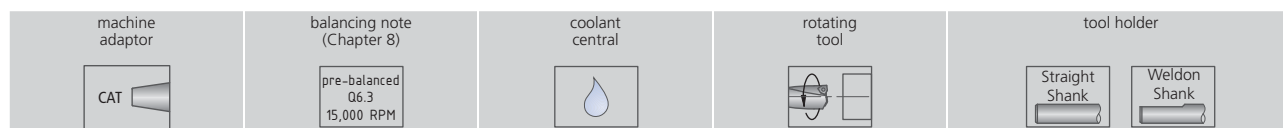
Supply includes:

Extension / Reducer with adjusting screw.

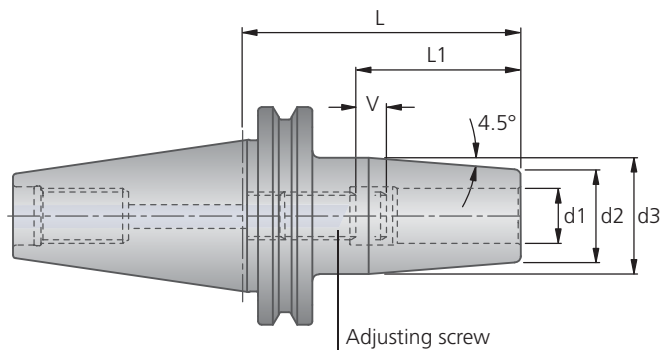


# CAT - Standard

## CAT Thermal Expansion Chuck THERMOGRIP®



- metric
- short design



CAT Thermogrip®									Assembly parts	
Description	Order No.	CAT	Ø d1	Ø d2	Ø d3	L	L1	V	Adjusting screw	
									Description	Order No.
CAT 40 T 6- 95	A25 56040	40	6	20	27	95	36	10	M5×18 SW2.5	N00 72000
CAT 40 T 8- 95	A25 56050	40	8	20	27	95	36	10	M6×20 SW3	N00 72010
CAT 40 T10- 95	A25 56060	40	10	24	32	95	42	10	M8×20 SW4	N00 72020
CAT 40 T12- 95	A25 56070	40	12	24	32	95	47	10	M8×20 SW4	N00 72020
CAT 40 T14- 95	A25 56080	40	14	27	34	95	47	10	M8×20 SW4	N00 72020
CAT 40 T16- 95	A25 56090	40	16	27	34	95	50	10	M12×20 SW6	N00 72030
CAT 40 T18- 95	A25 56100	40	18	33	42	95	50	10	M12×20 SW6	N00 72030
CAT 40 T20- 95	A25 56110	40	20	33	42	95	52	10	M16×20 SW8	N00 72040
CAT 40 T25-100	A25 56120	40	25	44	53	100	58	10	M16×20 SW8	N00 72040
CAT 50 T 6- 95	A25 66040	50	6	20	27	95	36	10	M5×18 SW2.5	N00 72000
CAT 50 T 8- 95	A25 66050	50	8	20	27	95	36	10	M6×20 SW3	N00 72010
CAT 50 T10- 95	A25 66060	50	10	24	32	95	42	10	M8×20 SW4	N00 72020
CAT 50 T12- 95	A25 66070	50	12	24	32	95	47	10	M8×20 SW4	N00 72020
CAT 50 T14- 95	A25 66080	50	14	27	34	95	47	10	M8×20 SW4	N00 72020
CAT 50 T16- 95	A25 66090	50	16	27	34	95	50	10	M12×20 SW6	N00 72030
CAT 50 T18- 95	A25 66100	50	18	33	42	95	50	10	M12×20 SW6	N00 72030
CAT 50 T20- 95	A25 66110	50	20	33	42	95	52	10	M16×20 SW8	N00 72040
CAT 50 T25-105	A25 66120	50	25	44	53	105	58	10	M16×20 SW8	N00 72040
CAT 50 T32-100	A25 66130	50	32	44	53	105	58	10	M16×20 SW8	N00 72040

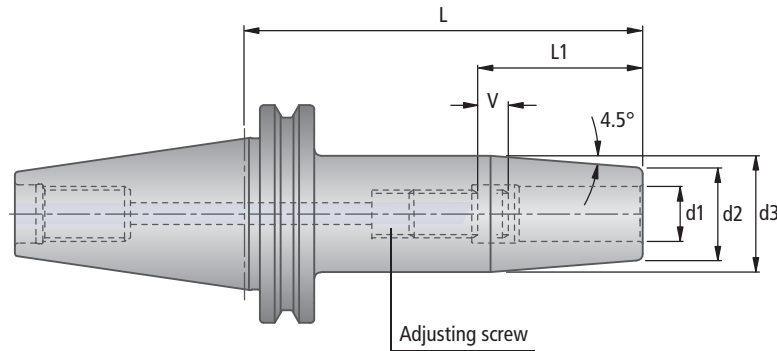
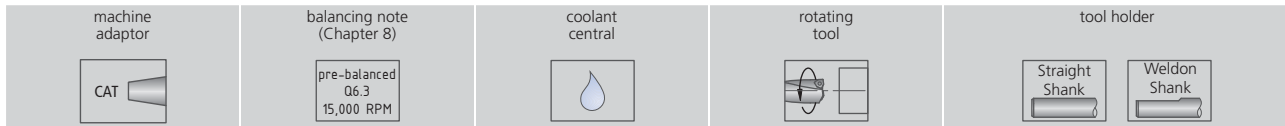
Tool shank tolerances: h5 for shanks < Ø 6mm; h6 for shanks ≥ Ø 6 mm

Supply includes:

Thermal expansion chuck complete. Retention knobs not included (Chapter 8).



**Note:** With coolant supply through spindle, use retention knob with through hole. To close off central coolant hole, use retention knob without through hole.



metric ■  
long design ■

CAT Thermogrip®									Assembly parts	
Description	Order No.	CAT	Ø d1	Ø d2	Ø d3	L	L1	V	Adjusting screw	
									Description	Order No.
CAT 40 T 6-160	A25 56240	40	6	20	32	160	36	10	M5x18 SW2.5	N00 72000
CAT 40 T 8-160	A25 56250		8	20	32	160	36	10	M6x20 SW3	N00 72010
CAT 40 T10-160	A25 56260		10	24	34	160	42	10	M8x20 SW4	N00 72020
CAT 40 T12-160	A25 56270		12	24	34	160	47	10	M8x20 SW4	N00 72020
CAT 40 T14-160	A25 56280		14	27	42	160	47	10	M8x20 SW4	N00 72020
CAT 40 T16-160	A25 56290		16	27	42	160	50	10	M12x20 SW6	N00 72030
CAT 40 T18-160	A25 56300		18	33	51	160	50	10	M12x20 SW6	N00 72030
CAT 40 T20-160	A25 56310		20	33	51	160	52	10	M16x20 SW8	N00 72040
CAT 40 T25-160	A25 56320		25	44	60	160	58	10	M16x20 SW8	N00 72040
CAT 50 T 6-160	A25 66240	50	6	20	32	160	36	10	M5x18 SW2.5	N00 72000
CAT 50 T 8-160	A25 66250		8	20	32	160	36	10	M6x20 SW3	N00 72010
CAT 50 T10-160	A25 66260		10	24	34	160	42	10	M8x20 SW4	N00 72020
CAT 50 T12-160	A25 66270		12	24	34	160	47	10	M8x20 SW4	N00 72020
CAT 50 T14-160	A25 66280		14	27	42	160	47	10	M8x20 SW4	N00 72020
CAT 50 T16-160	A25 66290		16	27	42	160	50	10	M12x20 SW6	N00 72030
CAT 50 T18-160	A25 66300		18	33	51	160	50	10	M12x20 SW6	N00 72030
CAT 50 T20-160	A25 66310		20	33	51	160	52	10	M16x20 SW8	N00 72040
CAT 50 T25-160	A25 66320		25	44	60	160	58	10	M16x20 SW8	N00 72040

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

Supply includes:

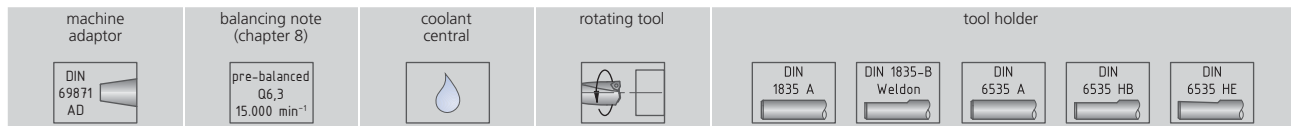
Thermal expansion chuck complete. Retention knobs not included (Chapter 8).

**Note:** With coolant supply through spindle, use retention knob with through hole. To close off central coolant hole, use retention knob without through hole.

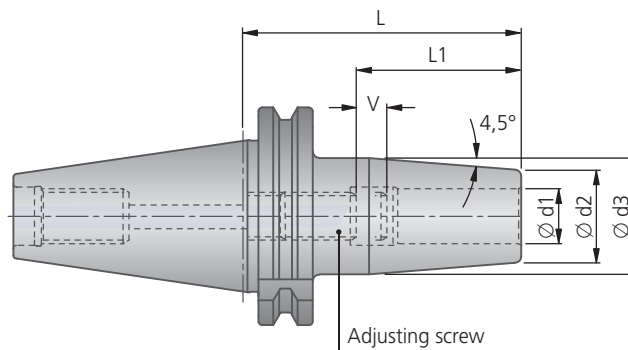


# KOMET® DIN 69871 AD

Taper shank **THERMOGRIP®**



■ short design



DIN 69871 AD Thermogrip®										Assembly parts	
ISO	Description	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V		Adjusting screw	
										Description	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	53	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:

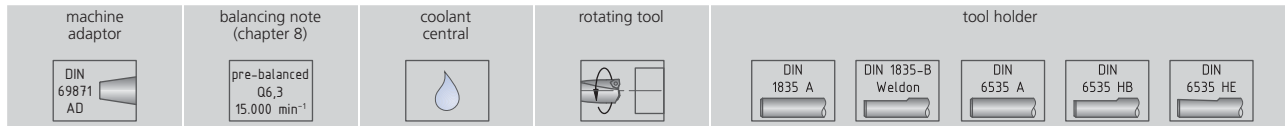
Thermal expansion chuck fitted complete. Pull studs not included (chapter 8).



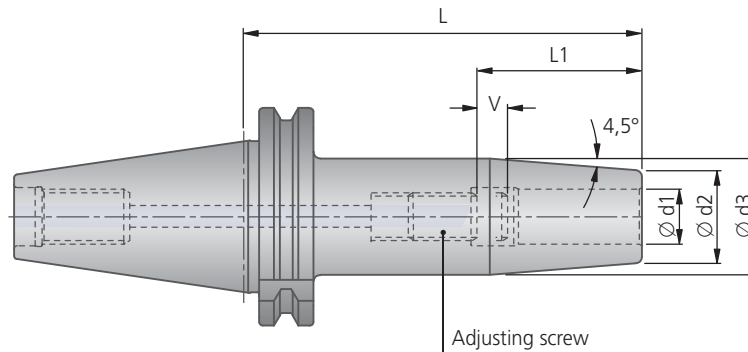
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD

## Taper shank THERMOGRIP®



long design ■



DIN 69871 AD Thermogrip®										Assembly parts	
ISO	Description	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Description	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		M8×1/SW4	N00 72050
40	ISO40 DIN69871AD-T12-160	A25 36471	12	24	34	160	47	10		M10×1/SW5	N00 72060
40	ISO40 DIN69871AD-T14-160	A25 36481	14	27	42	160	47	10		M10×1/SW5	N00 72060
40	ISO40 DIN69871AD-T16-160	A25 36491	16	27	42	160	50	10		M12×1/SW6	N00 72070
40	ISO40 DIN69871AD-T18-160	A25 36501	18	33	42	160	50	10		M12×1/SW6	N00 72070
40	ISO40 DIN69871AD-T20-160	A25 36511	20	33	42	160	52	10		M16×1/SW8	N00 72080

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

**Supply includes:**

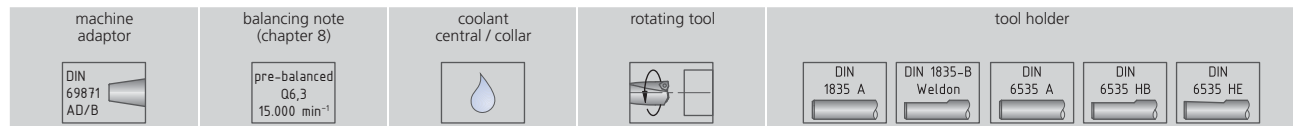
Thermal expansion chuck fitted complete. Pull studs not included (chapter 8).



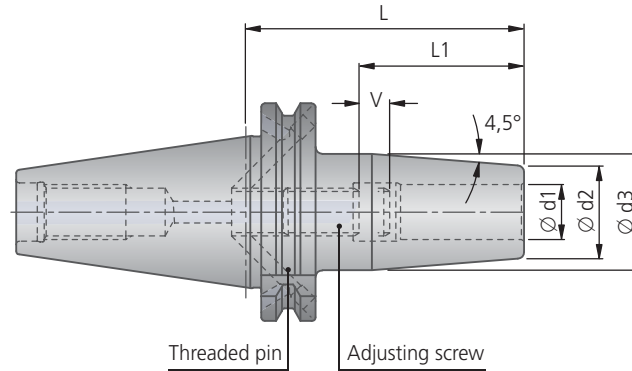
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD/B

## Thermal Expansion Chuck THERMOGRIP®



■ short design



DIN 69871 AD/B Thermogrip®										Assembly parts		Threaded pin
ISO	Description	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw		
										Description	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	53	100	58	10	1.73	M16x1 / SW8	N00 72080	
50	ISO50 DIN69871AD/B-T6	A25 26040	6	21	27	80	36	10	1.95	M5 / SW2.5	N00 72000	N00 70140 M5x5
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	58	10	3.33	M16x1 / SW8	N00 72080	

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

Supply includes:

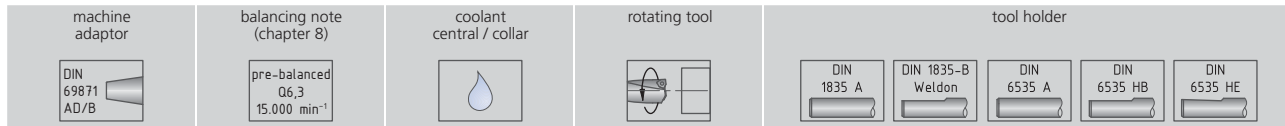
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).



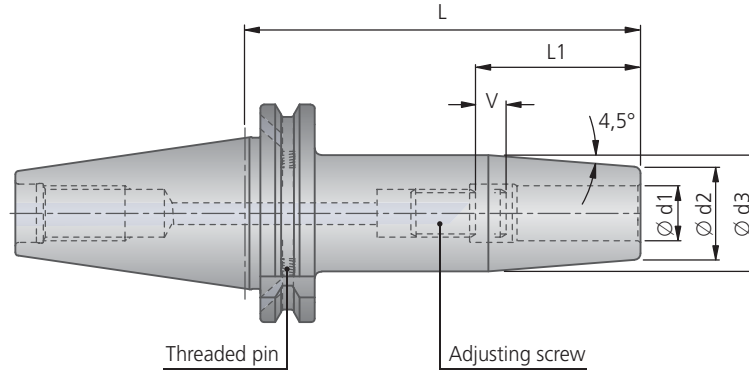
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



# KOMET® DIN 69871 AD/B Thermal Expansion Chuck THERMOGRIP®



long design ■



DIN 69871 AD/B Thermogrip®										Assembly parts		
ISO	Description	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw		Threaded pin
										Description	Order No.	Order No. Description
40	ISO40 DIN69871AD/B-T6-120	A25 06240	6	21	27	120	36	10		M5/SW2.5	N00 72000	N00 70140 M5×5
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		M8×1/SW4	N00 72050	
40	ISO40 DIN69871AD/B-T12-120	A25 06271	12	24	32	120	47	10		M10×1/SW5	N00 72060	
40	ISO40 DIN69871AD/B-T14-120	A25 06281	14	27	34	120	47	10		M10×1/SW5	N00 72060	
40	ISO40 DIN69871AD/B-T16-120	A25 06291	16	27	34	120	50	10		M12×1/SW6	N00 72070	
40	ISO40 DIN69871AD/B-T18-120	A25 06301	18	33	42	120	50	10		M12×1/SW6	N00 72070	
40	ISO40 DIN69871AD/B-T20-120	A25 06311	20	33	42	120	52	10		M16×1/SW8	N00 72080	
50	ISO50 DIN69871AD/B-T6-120	A25 26240	6	21	27	120	36	10		M5/SW2.5	N00 72000	N00 70140 M5×5
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		M8×1/SW4	N00 72050	
50	ISO50 DIN69871AD/B-T12-120	A25 26271	12	24	32	120	47	10		M10×1/SW5	N00 72060	
50	ISO50 DIN69871AD/B-T14-120	A25 26281	14	27	34	120	47	10		M10×1/SW5	N00 72060	
50	ISO50 DIN69871AD/B-T16-120	A25 26291	16	27	34	120	50	10		M12×1/SW6	N00 72070	
50	ISO50 DIN69871AD/B-T18-120	A25 26301	18	33	42	120	50	10		M12×1/SW6	N00 72070	
50	ISO50 DIN69871AD/B-T20-120	A25 26311	20	33	42	120	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).

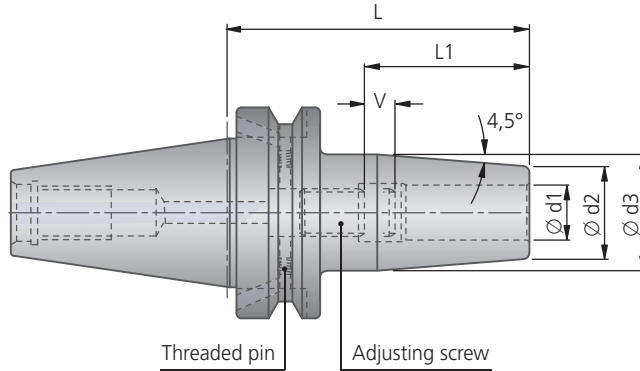
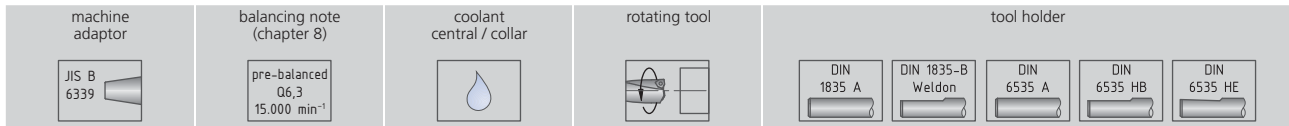


**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



# KOMET® JIS B 6339 (MAS 403 BT)

## Thermal Expansion Chuck THERMOGRIP®



JIS B 6339 (MAS 403 BT) Thermogrip®										Assembly parts		
ISO	Description	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw		Threaded pin
										Description	Order No.	
40	ISO40 JIS B 6339AD/B-T6	A25 86040	6	20	27	90	36	10	1.15	M5/SW2.5	N00 72000	N00 70140 M5x5
40	ISO40 JIS B 6339AD/B-T8	A25 86050	8	20	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	58	10	1.7	M16x1/SW8	N00 72080	

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

### Supply includes:

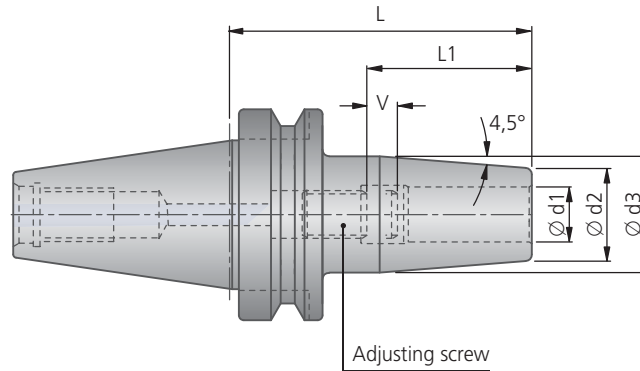
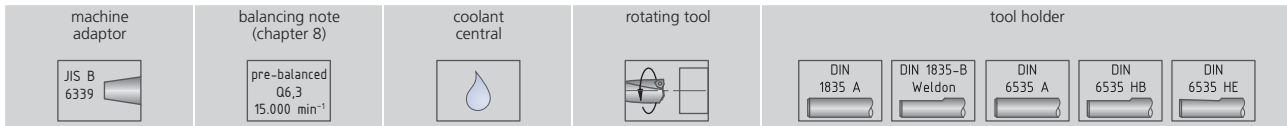
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).



**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)

## Thermal Expansion Chuck THERMOGRIP®



JIS B 6339 (MAS 403 BT) Thermogrip®										Assembly parts	
ISO	Description	Order No.	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Description	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:**

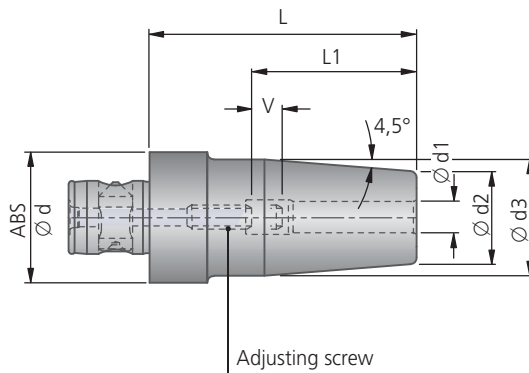
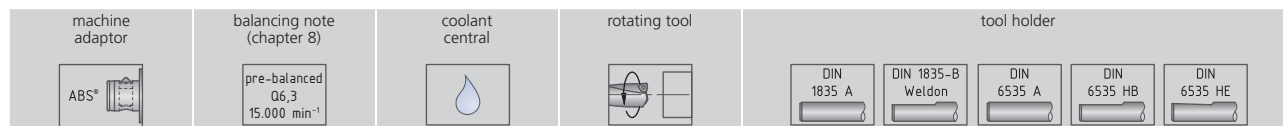
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

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



# KOMET ABS®

## Thermal Expansion Chuck THERMOGRIP®

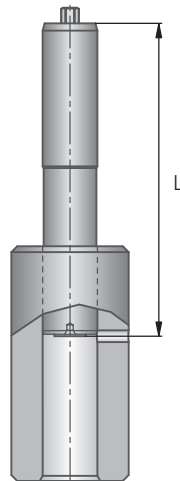


ABS® Thermogrip®										Assembly parts	
Description	Order No.	ABS Ø d	Ø d1	Ø d2	Ø d3	L	L1	V	kg	Adjusting screw	
										Description	Order No.
ABS32-T6	A32 26040	32	6	21	27	70	36	10	0.32	M5 / SW2.5	N00 72000
ABS32-T8	A32 26050	32	8	21	27	70	36	10	0.30	M6 / SW3	N00 72010
ABS32-T10	A32 26061	32	10	24	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-T6	A32 36040	40	6	21	27	70	36	10	0.40	M5 / SW2.5	N00 72000
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-T14	A32 36081	40	14	27	34	80	47	10	0.53	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-T6	A32 56040	63	6	21	27	80	36	10	0.96	M5 / SW2.5	N00 72000
ABS63-T8	A32 56050	63	8	21	27	80	36	10	0.95	M6 / SW3	N00 72010
ABS63-T10	A32 56061	63	10	24	32	80	42	10	1.00	M8x1 / SW4	N00 72050
ABS63-T12	A32 56071	63	12	24	32	85	47	10	1.02	M10x1 / SW5	N00 72060
ABS63-T14	A32 56081	63	14	27	34	85	47	10	1.07	M10x1 / SW5	N00 72060
ABS63-T16	A32 56091	63	16	27	34	85	50	10	1.05	M12x1 / SW6	N00 72070
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

# KOMET® Measuring Adaptor

## for Thermal Expansion Chuck

for length setting in cold state



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Description	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

for Thermogrip® thermal expansion chuck Ø 12 mm and 14 mm with M8 / SW4 set screw

Description	Order No.	Description	SW	L
TM 12	L05 09460	Measuring adaptor TM 12	4	80
TM 14	L05 09470	Measuring adaptor TM 14	4	80

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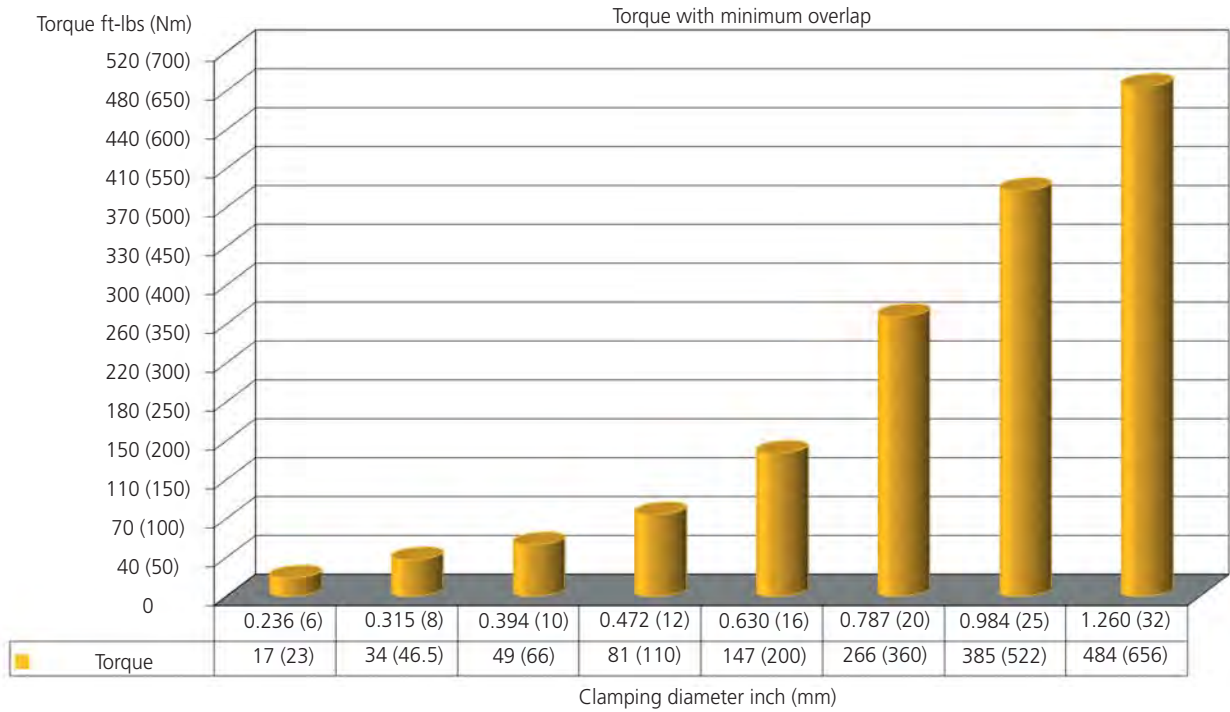
4



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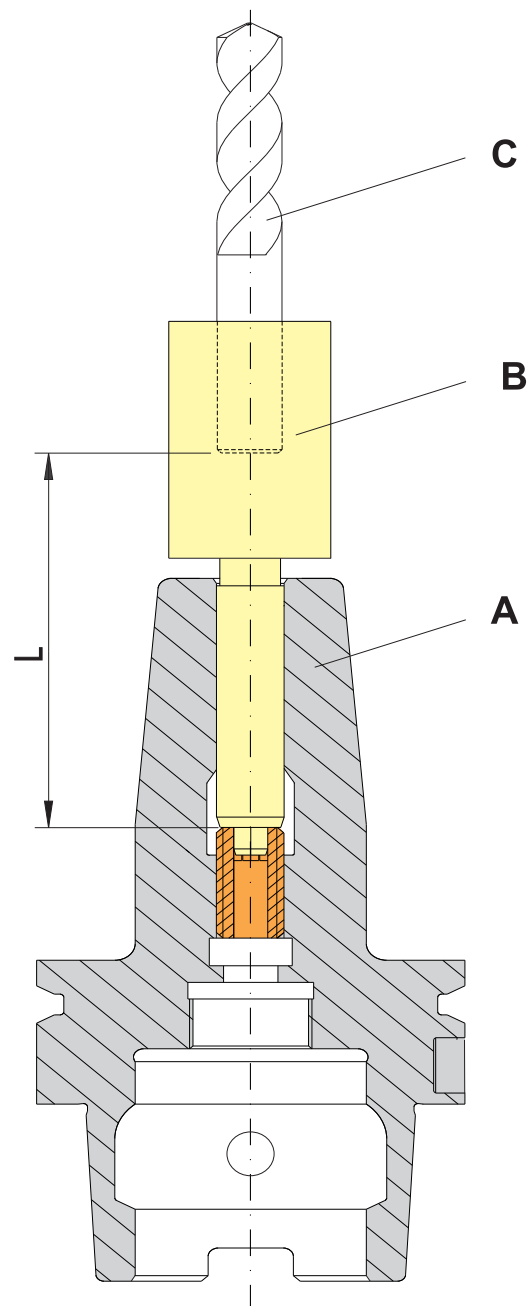


Torque transmission for thermal expansion connection



## 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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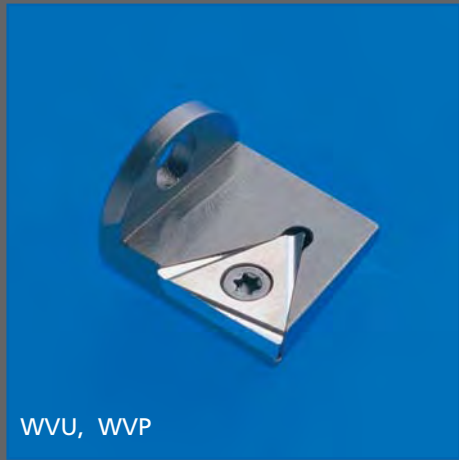
## Insert Seatings



UKS



UZV, UZ, UV



WVU, WVP



FLEW

Short clamp holder UKS  
Boring tool UZV, UZ, UV  
Adjustable insert seating WVU, WVP  
Insert flat bed seating FLEW

## Micro-adjustable cartridges



FZ



FF



M31



You can obtain KOMET Kometric® seatings from us for fitting into tools. The KOMET Kometric® system offers a tried and tested range of efficient and economic insert seatings and fine boring cartridges.

This chapter contains the necessary information for fitting these elements. They have been designed so that they are easy to fit, versatile to use and require minimum space.

#### BENEFITS for you:

- Uncomplicated installation and versatile use, even in the smallest areas
- The use of special tools makes it possible to combine several machining tasks in one work step
- The same quality at reduced production costs

KOMET Kometric®		Page
Programme Summary		586 – 587
Semi-finished Head		588 – 589
Short Clamp Holder UKS		
for machining steel		590 – 623
for machining aluminium		672 – 674
Adjustable Insert Seating WVU, WVP		
for machining steel		626 – 641
Insert Flat Bed Seating FLWE		
for machining steel		624 – 625
for machining aluminium		675
Boring Tool UZV, UZ, UV		
for machining steel		648 – 661
Micro-adjustable Cartridge FZ, FF		
for machining steel		664 – 670
for machining aluminium		676 – 677
Micro-adjustable Cartridge M31		
for machining steel		662 – 663
for machining aluminium		678 – 679
Insert Seating UWU, UWE		642 – 647
Chamfering Cartridge		671

1



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6



# Programme Summary – Insert Seatings Kometric®

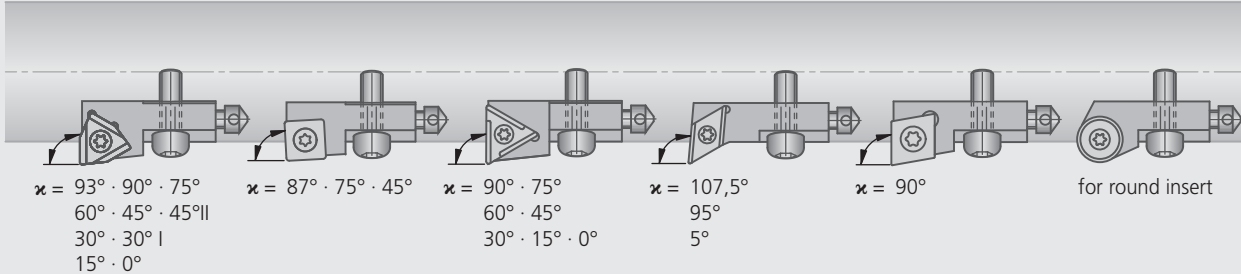
for machining steel

1



## Short Clamp Holder UKS

Page 592 – 601      602      603 – 609      610 – 612      614      613



2



## Short Clamp Holder to ISO standard

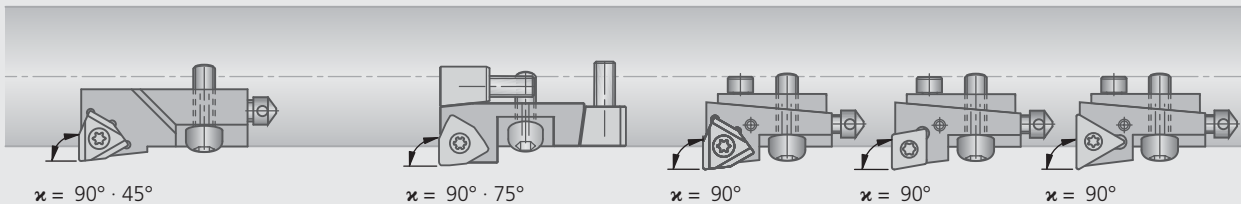
Page 615 – 616

## with Power insert

618 – 619

## with wedge adjustment

621 – 623



3



## Adjustable Insert Seating

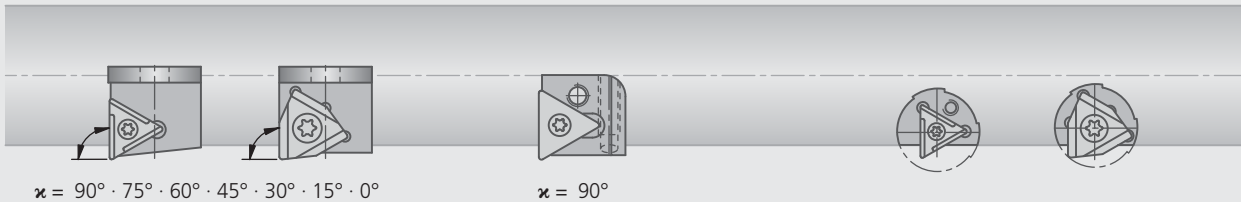
WVU      WVP  
Page 635 – 641      628 – 634

## Insert Flat Bed Seating

FLWE  
625

## Insert Seating

UWU, UWE  
642 – 643

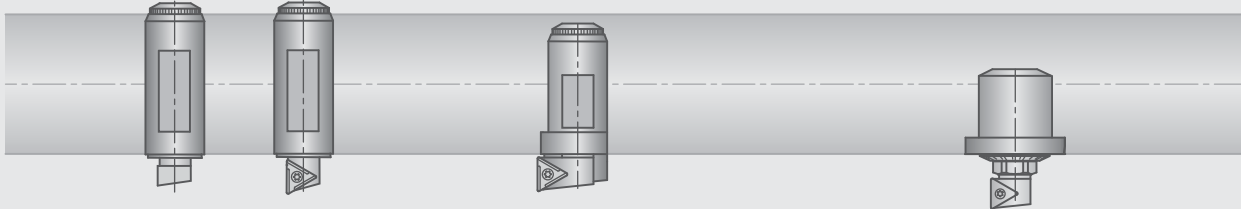


4



## Micro-adjustable Cartridge radial and angled mounting

FZ      FF      M31  
Page 664 – 668      669      662 – 663

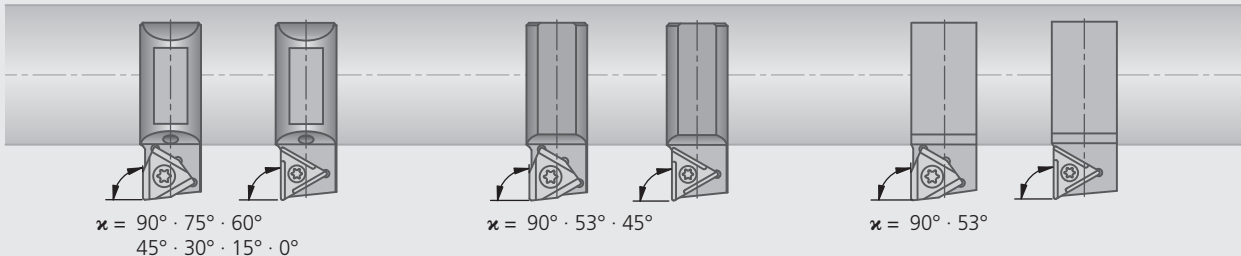


6



## Boring Tool

UZV      UZ      UV  
Page 649 – 655      657 – 659      660 – 661



# Programme Summary – Insert Seatings Kometric® for machining aluminium

<p>Short Clamp Holder UKS Page 673 – 674</p>	<p>672</p>	<p>Insert Flat Bed Seating FLEW 675</p>	
<p>Micro-adjustable Cartridge radial and angled mounting</p>			
<p>Page</p>	<p>FZ 676</p>	<p>FF 677</p>	<p>M31 678 – 679</p>

Semi-finished Head  
588 – 589

Chamfering Cartridge  
671

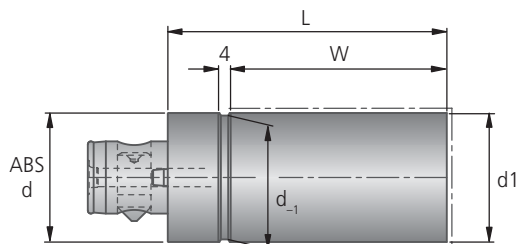
Boring bars with adjustable  
KOMET Kometric® insert seatings.



# KOMET ABS® HK

## ABS® Semi-finished Heads

■ ABS® connection area hardened and ground



— · · · — soft zone for further machining

ABS® HK						
Article	Order No.	ABS Ø d	Ø d1	L	W	kg
ABS 25-HK	B10 01011	25	26	70	51	0.30
ABS 32-HK	B10 02011	32	33	80	61	0.57
ABS 40-HK	B10 03011	40	41	100	78	1.10
ABS 50-HK	B10 04011	50	51	120	95	2.02
ABS 63-HK	B10 05011	63	64	150	120	4.08
ABS 80-HK	B10 06011	80	81	180	141	7.76
ABS 100-HK	B10 07011	100	101	200	154	13.48

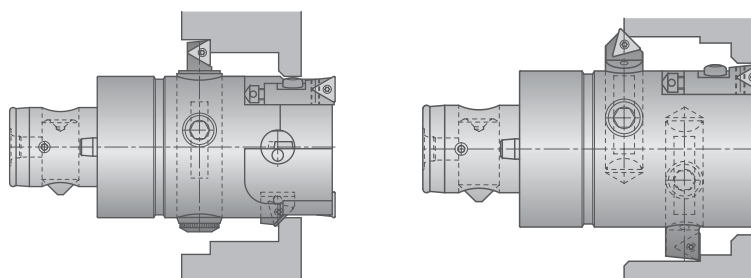
As all heavy-duty tools are completely hardened, semi-finished heads should only be used where there is no alternative. These semi-finished heads are hardened and ground on the connecting faces only and are soft at the front, i. e. not heat-treated. Further machining of semi-finished heads can only be carried out in the area marked W.

### Note:

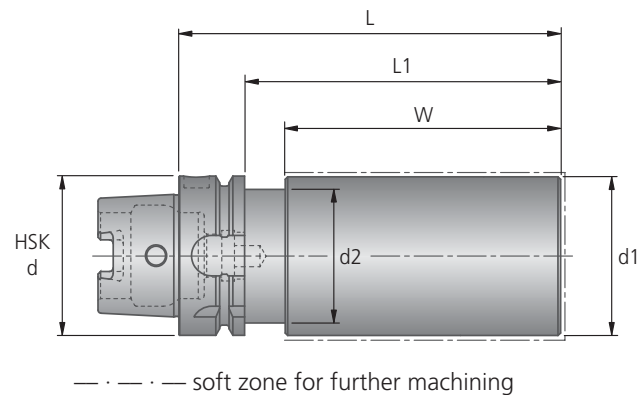
Subsequent hardening of semi-finished heads can cause distortion and deviations in the dimensions; under these circumstances function and quality cannot be guaranteed.

## Fitting KOMET Kometric® insert seatings yourself

Example of semi-finished heads from ABS® HK in conjunction with Kometric® insert seatings



HSK connection area hardened and ground ■



HSK-A DIN 69893 T1

Article	Order No.	HSK Ø d	Ø d1	Ø d2	L	L1	W	kg
HSK-A63-63x200	A06 33650	63	63	53	200	174	158	4.87
HSK-A100-100x250	A06 53650	100	100	85	250	221	205	14.38

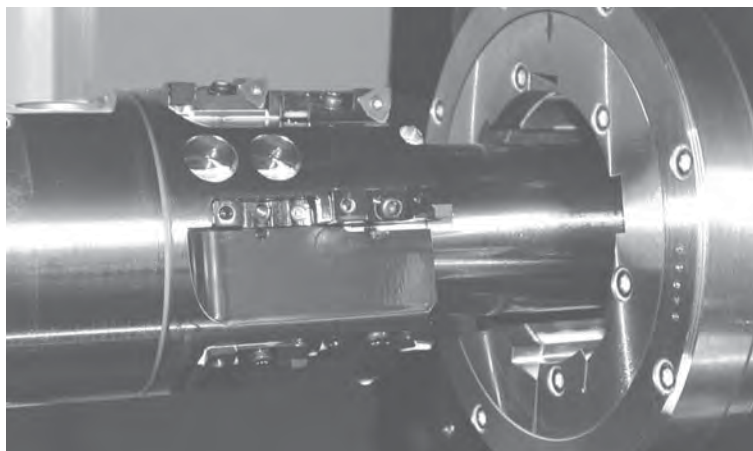
**Supply includes:**

Semi-finished head complete fitted. Please order coolant supply connection and key separately (see chapter 8).

As all heavy-duty tools are completely hardened, semi-finished heads should only be used where there is no alternative. These semi-finished heads are hardened and ground on the connecting faces only and are soft at the front, i. e. not heat-treated. Further machining of semi-finished heads can only be carried out in the area marked W.

**Note:**

Subsequent hardening of semi-finished heads can cause distortion and deviations in the dimensions; under these circumstances function and quality cannot be guaranteed.



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4



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6



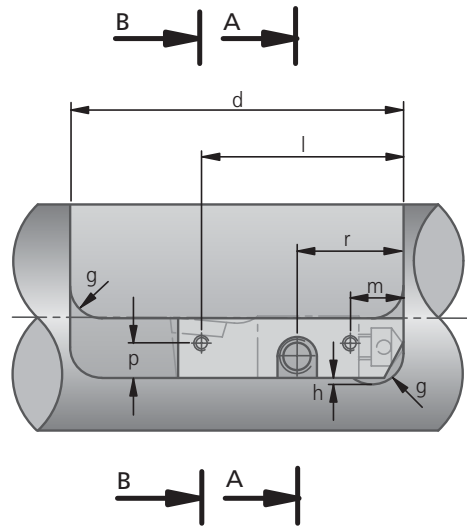
# KOMET Kometric® UKS Short Clamp Holder

## Mounting details

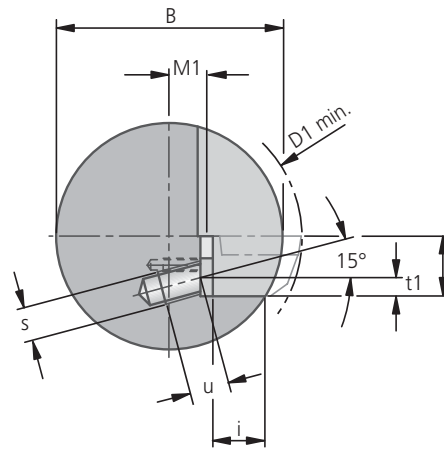
1



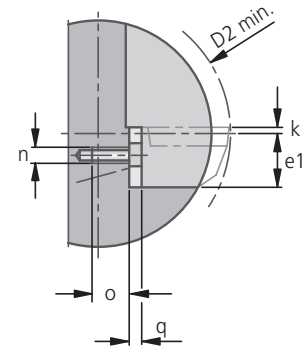
### Axial mounting with shim plate



Section A-A



Part section B-B,  
cutting edge at "k"  
above centre

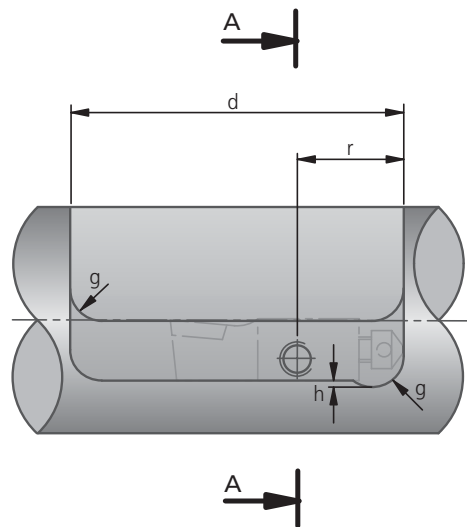


$$B = 2 \sqrt{e^2 + (M1 + q + i)^2} \quad M1 = \frac{D}{2} - f - q \quad (\text{Dimension } f: \text{ see following pages})$$

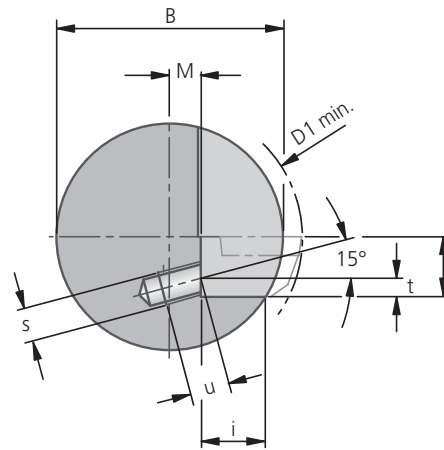
5



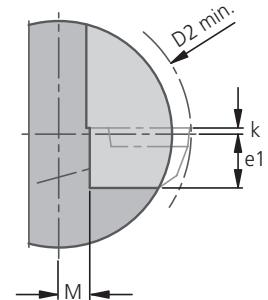
### Axial mounting without shim plate



Section A-A



Part section A-A,  
cutting edge at "k"  
above centre



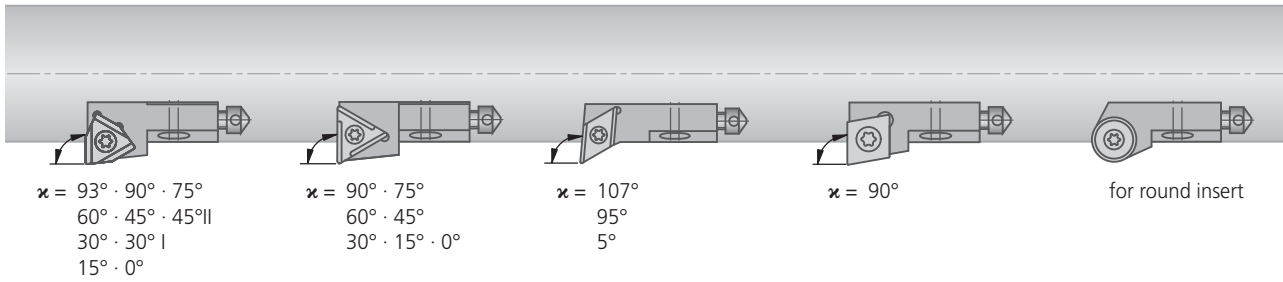
$$B = 2 \sqrt{e^2 + (M + i)^2} \quad M = \frac{D}{2} - f \quad (\text{Dimension } f: \text{ see following pages})$$

6



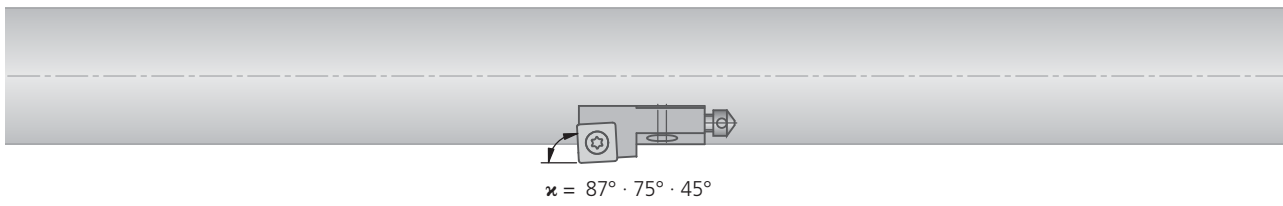
# KOMET Kometric® UKS Short Clamp Holder

## Mounting details



Short clamp holder size	Boring bar																										
	Ø D1 min. for												Ø D2 min. for														
	κ = 107°	κ = 95°	κ = 93°	κ = 90°	κ = 75°	κ = 60°	κ = 45°	κ = 45°II	κ = 30°	κ = 30°I	κ = 15°	κ = 5°	κ = 0°	round insert	κ = 107°	κ = 95°	κ = 93°	κ = 90°	κ = 75°	κ = 60°	κ = 45°	κ = 45°II	κ = 30°	κ = 30°I	κ = 15°	κ = 5°	κ = 0°
UKS6	24			20	20	24	20	24		16						16	16	16	16	16		16					
UKS8	33			22	24	33	26	33		25						18	20	25	22	25		25					
UKS10	36			26	26	36	36	36		28						22	22	28	32	28		28					
UKS16	56			56	64	56	60	56		40						46	52	40	40	40		40					
UKS20	68			74	78	68	80	68		52						52	58	52	52	52		52					

Short clamp holder size	Holder mounting							Location thread																			
								without shim plate							with shim plate												
								r	s	t	t1	u	93° 45°II	Dimension I for κ = ...°						107° 95°	round insert	m	n	o	p	q	
	90°	75°	60°	45°	30°I	15°																					
d	e	e1	g	h	i	k																					
UKS6	33	5.8	4.8	3	0.5	4	1	12	M3	2.5	2	7	-	-	24	23.5	-	-	-	-	-	-	7	M2	6	3	2
UKS8-804/706	43	7.6	6.6	4	1	7	1	17	M4	3.2	2.7	6.5	28	28	28	32	28	28	28	-	-	32.5	8.5	M2	6	4	2
UKS8-802/708																											
UKS8-818																											
UKS8-8C1																											
UKS8-CC06																											
UKS10	53	9.6	8.6	5	1	8.4	1	17	M5	3.5	3	8.5	31.5	32	33.5	38	37.5	33.5	-	-	32.5	8.5	M2	6	5	2	
UKS16	70	15.6	13.6	8	1	10.5	2	25	M6	6.5	6	10	44.5	45	46	50	49	46	-	-	43.5	14	M3	8	8	2	
UKS20	82	19.6	17.1	10	1	13	2.5	27	M8	8.5	8	12	49	51.5	55	55	57	50	-	-	49	16	M3	8	10	2	

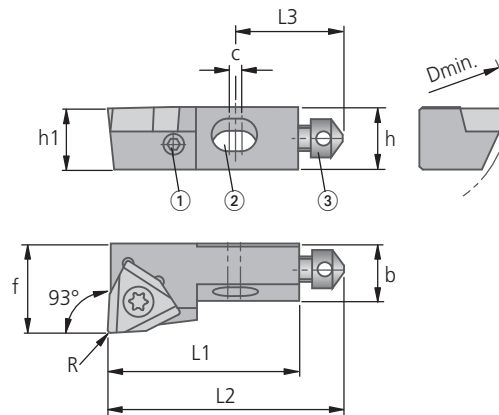


Short clamp holder size	Boring bar		Holder mounting							Location thread																
	D1 min.	D2 min.								without shim plate							with shim plate									
										Dimension I for κ						m	n	o	p	q						
87°	75°	45°																								
UKS8	33	25	43	7.6	6.6	4	1	7	1	17	M4	3.2	2.7	6.5	28	28	28	7	M2	6	4	2				
UKS10	36	28	53	9.6	8.6	5	1	8.4	1	17	M5	3.5	3	8.5	32	33.5	37.5	8.5	M2	6	5	2				
UKS16	56	40	70	15.6	13.6	8	1	10.5	2	25	M6	6.5	6	10	45	46	49	14	M3	8	8	2				

# KOMET Kometric® UKS Short Clamp Holder $\kappa = 93^\circ$

**P M K N S H** for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 2.5 0.5		Countersunk screw for shim plate
												Description	Order No.	Order No.	
UKS8-802-93 L 38	D40 50011	7.6	8	25	32	17	7.5	2	11	10.99	10.97	0.009	UKS8-5-75L	L02 21310	55023 00206 M2x6 DIN965
UKS10-801-93 R 38	D40 55020	9.6	10	30	37	17	9	2	14	13.99	13.97	0.017	UKS10-5-OR	L02 20920	55023 00206 M2x6 DIN965
UKS10-801-93 L 38	D40 50020												UKS10-5-OL	L02 21920	
UKS16-810-93 R 48	D40 55040	15.6	16	42	50	25	12	2	18	17.99	17.97	0.048	UKS16-5-OR	L02 20940	55021 03008 M3x8 DIN7991
UKS16-810-93 L 48	D40 50040												UKS16-5-OL	L02 21940	

for short clamp holder	Insert				Assembly parts	Accessories	Assembly parts		
	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral	Clamping screw Order No. Description	Screwdriver Order No. Description	Adjusting screw ① DIN 916 Order No. Description	Location screw ② Order No. Description	Stop screw ③ Order No. Description
UKS8-802-93 L 38		W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-93 R 38	W01 34..0.02..		W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-801-93 L 38		W01.34..0.02..							
UKS16-810-93 R 48	W01 42..0.02..		W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-810-93 L 48		W01 42..0.02..							

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

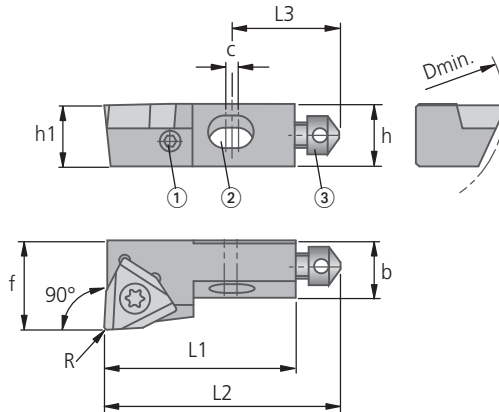
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.












# KOMET Kometric® UKS Short Clamp Holder $\alpha = 90^\circ$

for insert W01 / W29 **P M K N S H**

- R.H. short clamp holder as shown with left or neutral insert ■
- L.H. short clamp holder in mirror image with right or neutral insert ■
- mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
												Description	Order No.	Order No. Description	
UKS6-810-90 R 23	D40 55160	5.8	6	20	24.5	12	4.5	1	-	6.98	-	0.003	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS8-818-90 R 32	D40 55170	7.6	8	25	32	17	7.5	2	-	10.98	-	0.003	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-802-90 R 38	D40 55111	7.6	8	25	32	17	7.5	2	11	10.98	10.93	0.01	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-90 R 38	D40 55120	9.6	10	30	37	17	9	2	14	13.98	13.93	0.017	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS10-801-90 L 38	D40 50120												UKS10-5-90L	L02 21220	
UKS16-810-90 R 48	D40 55140	15.6	16	42	50	25	12	2	17	17.98	17.93	0.05	UKS16-5-90R	L02 20240	55021 03008 M3x8 DIN7991
UKS16-810-90 L 48	D40 50140												UKS16-5-90L	L02 21240	
UKS20-820-90 R 53	D40 55150	19.6	20	47	57	27	15	2	-	21.95	21.95	0.089	UKS20-5-90R	L02 20250	55021 03008 M3x8 DIN7991

for short clamp holder	Insert				Assembly parts	Accessories	Assembly parts			
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw 	Screwdriver 	Adjusting screw ① 	Location screw ② 	Stop screw ③ 	
radial rake	06 = 6° 12 = 12° ▽▽	radial rake	36 = 6° 42 = 12° ▽▽		Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	
UKS6-810-90 R 23				W29 10000.04..	N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4	
UKS8-818-90 R 32				W29 18000.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4	
UKS8-802-90 R 38	W01 24..0.02..		W01 24600..	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4	
UKS10-801-90 R 38	W01 34..0.02..		W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4	
UKS10-801-90 L 38		W01.34..0.02..								
UKS16-810-90 R 48	W01 42..0.02..		W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4	
UKS16-810-90 L 48		W01 42..0.02..								
UKS20-820-90 R 53	W01 50..0.04..		W01 50600...	W29 50000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05014 M5x14	L02 30160 UKS20-3 35 Nm	L02 30030 UKS12-4	

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

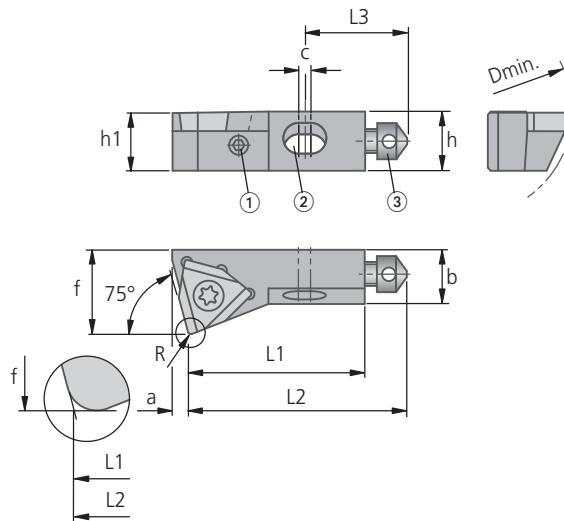
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.



# KOMET Kometric® UKS Short Clamp Holder $\kappa = 75^\circ$

**P M K N S H** for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius			kg	Accessories		
										R0.2	R0.4	R0.8		Shim plate grinding allowance	Countersunk screw for shim plate	
UKS8-818-75 R 32	D40 55270	7.6	8	25	32	17	7.5	2	1	–	10.94	–	0.003	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-802-75 R 38	D40 55211	7.6	8	25	32	17	7.5	2	1	11	10.94	10.8	0.01	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-75 R 38	D40 55220	9.6	10	30	37	17	9	2	3	14	13.94	13.8	0.017	UKS10-5-75R	L02 20320	55023 00206 M2x6 DIN965
UKS16-810-75 R 48	D40 55240	15.6	16	42	50	25	12	2	3.5	18	17.94	17.8	0.052	UKS16-5-75R	L02 20340	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 neutral	W29 neutral	Clamping screw Order No. Description	Screwdriver Order No. Description	Adjusting screw ① DIN 916 Order No. Description	Location screw ② Order No. Description	Stop screw ③ Order No. Description
UKS8-818-75 R 32			W29 18000.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-802-75 R 38	W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	–	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-75 R 38	W01 34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-810-75 R 48	W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

## Supply includes:

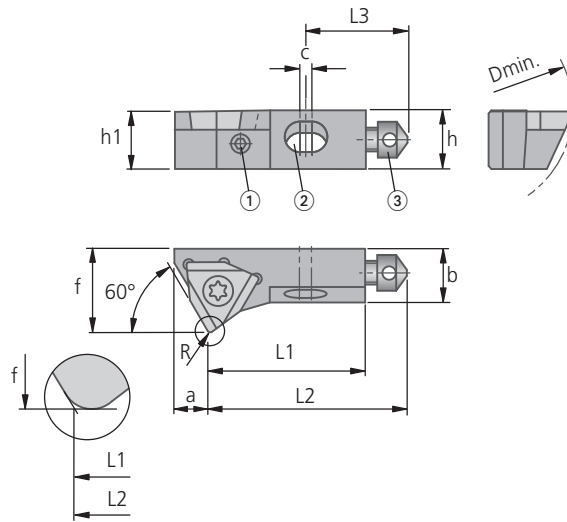
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\alpha = 60^\circ$

for insert W01 / W29 **P M K N S H**

R.H. short clamp holder as shown with left or neutral insert ■  
mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius			kg	Accessories		
										R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5	Countersunk screw for shim plate	
														Description	Order No.	Order No. Description
UKS6-810-60 R 23	D40 55360	5.8	6	20	24.5	12	4.5	1	3	–	6.9	–	0.003	UKS6-5-60R	L02 20400	55023 00206 M2x6 DIN965
UKS8-802-60 R 38	D40 55311	7.6	8	25	32	17	7.5	2	4.5	11	10.9	10.72	0.011	UKS8-5-60R	L02 20410	55023 00206 M2x6 DIN965
UKS10-801-60 R 38	D40 55320	9.6	10	30	37	17	9	2	6	14	13.9	13.72	0.018	UKS10-5-60R	L02 20420	55023 00206 M2x6 DIN965
UKS16-810-60 R 48	D40 55340	15.6	16	42	50	25	12	2	7	18	17.9	17.72	0.057	UKS16-5-60R	L02 20440	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W01 neutral	W29 neutral	Clamping screw Order No. Description	Screwdriver Order No. Description	Adjusting screw ① Order No. Description	Location screw ② Order No. Description	Stop screw ③ Order No. Description
UKS6-810-60 R 23			W29 10000.04..	N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS8-802-60 R 38	W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	–	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-60 R 38	W01 34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-810-60 R 48	W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

### Supply includes:

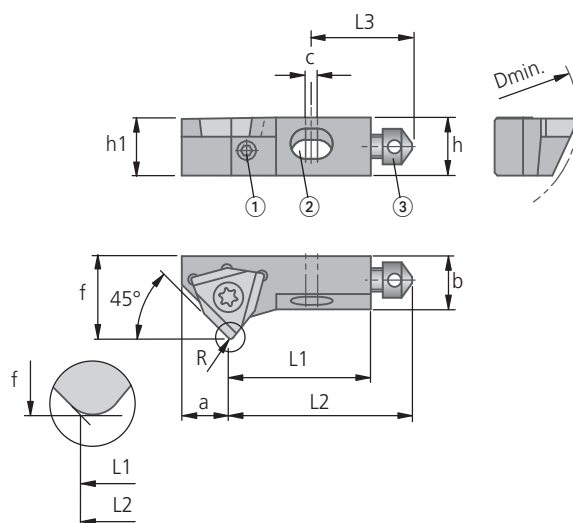
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\alpha = 45^\circ$

**P M K N S H** for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius			kg	Accessories		
										R0.2	R0.4	R0.8		Shim plate grinding allowance	Countersunk screw for shim plate	
UKS6-810-45 R 23	D40 55460	5.8	6	15	19.5	12	4.5	1	4	-	6.9	-	0.003	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS8-802-45 R 38	D40 55411	7.6	8	19.5	26.5	17	7.5	2	6.5	11	10.9	10.71	0.008	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-45 R 38	D40 55420	9.6	10	30	37	17	9	2	9	14	13.9	13.71	0.026	UKS10-5-45R	L02 20520	55023 00206 M2x6 DIN965
UKS10-801-45 L 38	D40 50420													UKS10-5-45L	L02 21520	
UKS16-810-45 R 48	D40 55440	15.6	16	42	50	25	12	2	10	17	17.9	17.71	0.064	UKS16-5-45R	L02 20540	55021 03008 M3x8 DIN7991

for short clamp holder	Insert				Assembly parts	Accessories	Assembly parts		
	W01 L.H.	W01 R.H.	W01 neutral	W29 neutral			Clamping screw	Screwdriver	Adjusting screw ①
	radial rake 06 = 6° 12 = 12° ▽▽	radial rake 36 = 6° 42 = 12° ▽▽			Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description
UKS6-810-45 R 23				W29 10000.04..	N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP	-	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS8-802-45 R 38	W01 24..0.02..		W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-45 R 38	W01 34..0.02..		W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-801-45 L 38		W01.34..0.02..							
UKS16-810-45 R 48	W01 42..0.02..		W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

## Supply includes:

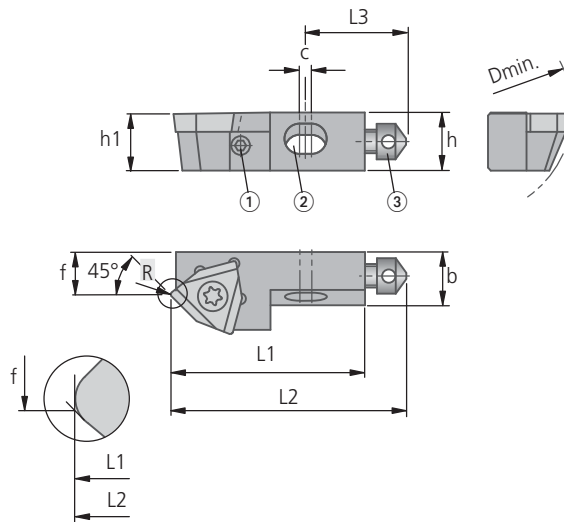
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.









# KOMET Kometric® UKS Short Clamp Holder $\alpha = 45^\circ$ II

for insert W01 / W29 P M K N S H

R.H. short clamp holder as shown with right or neutral insert ■  
mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Description	Order No.	Order No. Description
UKS8-802-II-45R38	D40 55511	7.6	8	26	33	17	7.5	2	5.6	5.7	5.89	0.009	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-II-45R38	D40 55520	9.6	10	30	37	17	9	2	7.1	7.2	7.39	0.018	UKS10-5-0R	L02 20920	55023 00206 M2x6 DIN965
UKS16-810-II-45R38	D40 55540	15.6	16	42	50	25	12	2	9.6	9.7	9.89	0.05	UKS16-5-0R	L02 20940	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 R.H.  radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-802-II-45R38	W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-II-45R38	W01 34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-810-II-45R38	W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

### Supply includes:

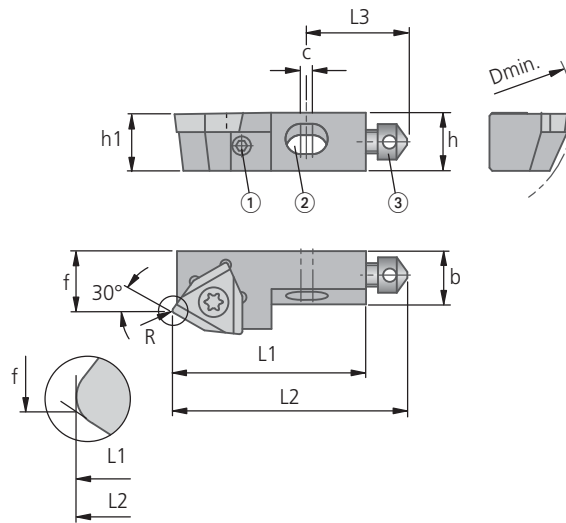
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\kappa = 30^\circ$

**P M K N S H** for insert W01 / W29

- R.H. short clamp holder as shown with right or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5	Countersunk screw for shim plate	
UKS8-802-30 R 38	D40 55611	7.6	8	26	33	17	7.5	2	8.05	8.11	8.21	0.009	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-30 R 38	D40 55620	9.6	10	30	37	17	9	2	10.05	10.11	10.21	0.009	UKS10-5-0R	L02 20920	55023 00206 M2x6 DIN965
UKS16-810-30 R 48	D40 55640	15.6	16	42	50	25	12	2	13.05	13.11	13.21	0.052	UKS16-5-0R	L02 20940	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral	W29 neutral	Clamping screw Order No. Description	Screwdriver Order No. Description	Adjusting screw ① DIN 916 Order No. Description	Location screw ② Order No. Description	Stop screw ③ Order No. Description
UKS8-802-30 R 38	W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-30 R 38	W01 34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-810-30 R 48	W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

### Supply includes:

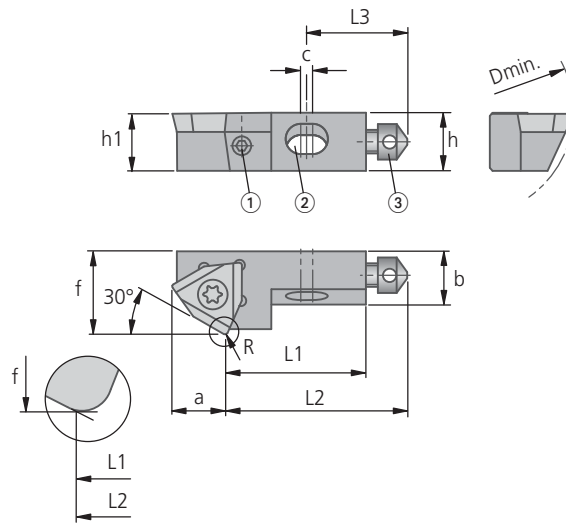
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.









# KOMET Kometric® UKS Short Clamp Holder $\alpha = 30^\circ$ I

for insert W01 / W29 **P M K N S H**

R.H. short clamp holder as shown with left or neutral insert ■  
mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius			kg	Accessories		
										R0.2	R0.4	R0.8		Shim plate grinding allowance 2.5-0.5	Countersunk screw for shim plate	
													Description	Order No.	Order No. Description	
UKS8-802-I-30R38	D40 55711	7.6	8	19.5	26.5	17	7.5	2	8	11	10.92	10.75	0.01	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-I-30R38	D40 55720	9.6	10	24	31	17	9	2	9.38	14	13.92	13.75	0.017	UKS10-5-75R	L02 20320	55023 00206 M2x6 DIN965
UKS16-810-I-30R48	D40 55740	15.6	16	34	42	25	12	2	11	18	17.92	17.75	0.045	UKS16-5-75R	L02 20340	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 L.H.  radial rake 06 = 6° 12 = 12° ▽▽	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-802-I-30R38	W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-I-30R38	W01 34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-810-I-30R48	W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

## Supply includes:

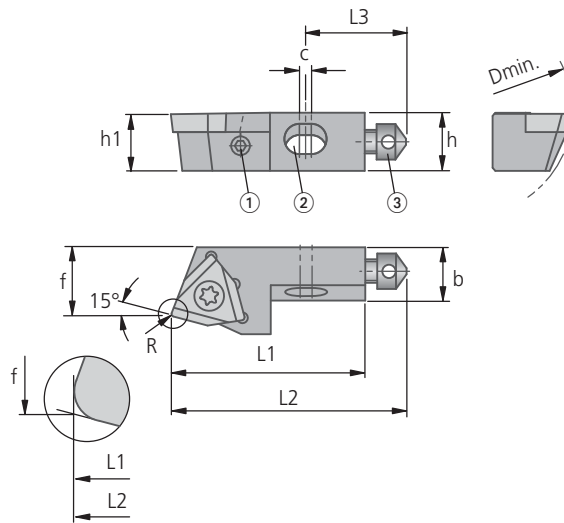
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\kappa = 15^\circ$

**P M K N S H** for insert W01 / W29

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
UKS8-802-15 R 38	D40 55811	7.6	8	26	33	17	7.5	2	9.52	9.54	9.57	0.01	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-15 R 38	D40 55820	9.6	10	30	37	17	9	2	12.02	12.04	12.07	0.017	UKS10-5-15R	L02 20720	55023 00206 M2x6 DIN965
UKS10-801-15 L 38	D40 50820												UKS10-5-15L	L02 21720	
UKS16-810-15 R 48	D40 55840	15.6	16	42	50	25	12	2	15.52	15.54	15.57	0.048	UKS16-5-15R	L02 20740	55021 03008 M3x8 DIN7991
UKS16-810-15 L 48	D40 50840												UKS16-5-15L	L02 21740	

for short clamp holder	Insert				Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
	W01 L.H.  radial rake 06 = 6° 12 = 12°	W01 R.H.  radial rake 36 = 6° 42 = 12°	W01 neutral 	W29 neutral 					
UKS8-802-15 R 38		W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-15 R 38		W01.34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-801-15 L 38	W01 34..0.02..								
UKS16-810-15 R 48		W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-810-15 L 48	W01 42..0.02..								

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

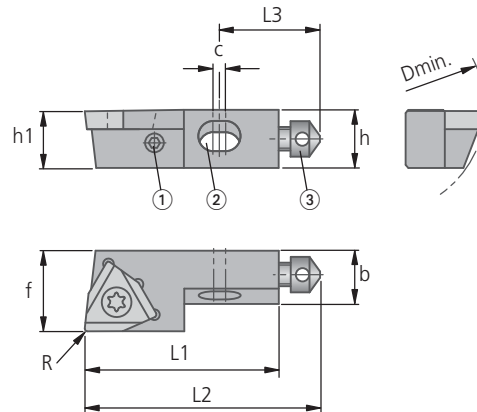
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.












# KOMET Kometric® UKS Short Clamp Holder $\kappa = 0^\circ$

for insert W01 / W29 **P M K N S H**

- R.H. short clamp holder as shown with right or neutral insert ■
- L.H. short clamp holder in mirror image with left or neutral insert ■
- mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
												Description	Order No.	Order No. Description	
UKS8-802-0 R 38	D40 55911	7.6	8	26	33	17	7.5	2	11	11	11	0.008	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-801-0 R 38	D40 55920	9.6	10	30	37	17	9	2	14	14	14	0.016	UKS10-5-0R	L02 20920	55023 00206 M2x6 DIN965
UKS10-801-0 L 38	D40 50920												UKS10-5-0L	L02 21920	
UKS16-810-0 R 48	D40 55940	15.6	16	42	50	25	12	2	18	18	18	0.048	UKS16-5-0R	L02 20940	55021 03008 M3x8 DIN7991
UKS16-810-0 L 48	D40 50940												UKS16-5-0L	L02 21940	

for short clamp holder	Insert				Assembly parts	Accessories	Assembly parts		
	W01 L.H.  radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H.  radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-802-0 R 38		W01 24..0.02..	W01 24600...	W29 24000.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	-	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-801-0 R 38		W01.34..0.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-801-0 L 38	W01 34..0.02..								
UKS16-810-0 R 48		W01 42..0.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-810-0 L 48	W01 42..0.02..								

For further details on inserts see chapter 7

### Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

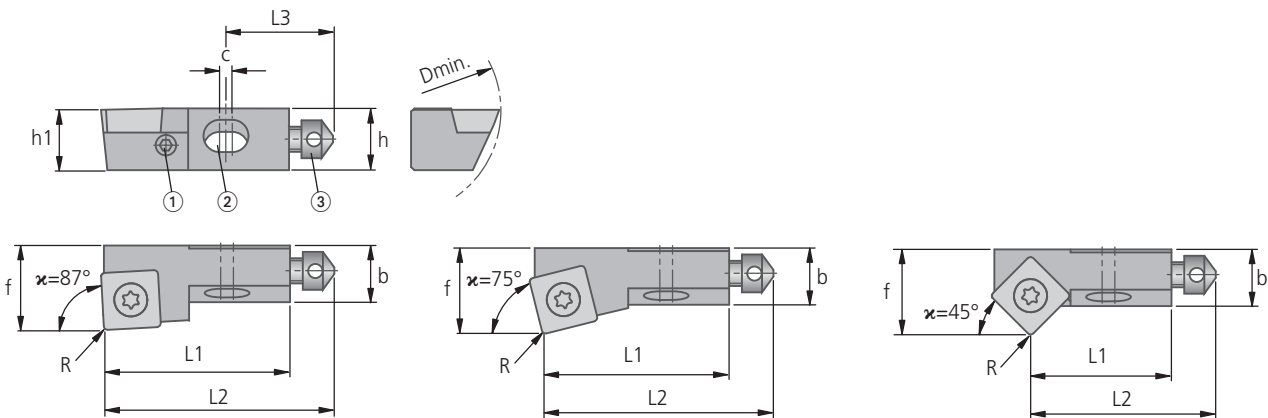
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.









# KOMET Kometric® UKS Short Clamp Holder $\alpha = 87^\circ / 75^\circ / 45^\circ$

**P M K N S H** for insert W83

- R.H. short clamp holder as shown with neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	$\alpha$	h1	h	L1	L2	L3	b	c	R	ISO dim. f	kg	Accessories		
													Description	Order No.	Order No. Description
UKS8 SOEX060306 87 R	D40 06700	87°			25	32					11	0.014	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8 SOEX060306 75 R	D40 06710	75°	7.6	8	25	32	17	7.5	2	0.6	10.94	0.013			
UKS8 SOEX060306 45 R	D40 06720	45°			19.5	26.5					10.9	0.012			
UKS10 SOEX090408 87 R	D40 06800	87°			30	37					14	0.025	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS10 SOEX07T308 75 R	D40 06810	75°	9.6	10	30	37	17	9	2	0.8	13.94	0.024	UKS10-5-75R	L02 20320	
UKS10 SOEX07T308 45 R	D40 06820	45°			25	32					13.9	0.023	UKS10-5-45R	L02 20520	
UKS16 SOEX120508 87 R	D40 06901	87°									18	0.066	UKS16-5-90R	L02 20240	55021 03008 M3x8 DIN7991
UKS16 SOEX120508 75 R	D40 06911	75°	15.6	15.7	42	50	25	12	2	0.8	17.94	0.066	UKS16-5-75R	L02 20340	
UKS16 SOEX120508 45 R	D40 06921	45°									17.9	0.076	UKS16-5-45R	L02 20540	

for short clamp holder	Insert W83 	Assembly parts	Accessories	Assembly parts		
		Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8 ... R	W83 18...	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	–	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10 ... 87 R	W83 32...	N00 57261 S3575-15IP 2.8 Nm	L05 00860 15IP	–	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10 ... 75 R	W83 23...	N00 57571 S/M2.5x6.3-8IP 1.28 Nm	L05 00830 8IP	–	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10 ... 45 R	W83 23...	N00 57571 S/M2.5x6.3-8IP 1.28 Nm	L05 00830 8IP	–	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16 ... R	W83 44...	N00 57301 S45100-20IP 6.25 Nm	L05 00870 20IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12

For further details on inserts see chapter 7

## Supply includes:

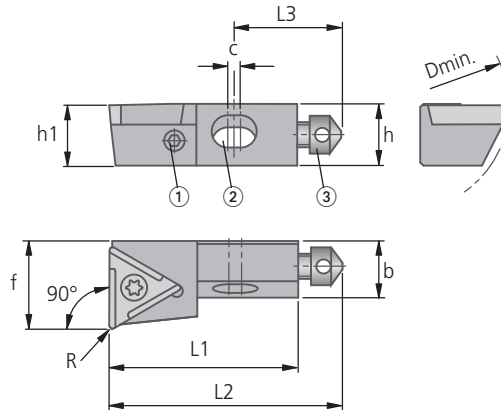
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\alpha = 90^\circ$

for insert W30 / W57 **P M K N S H**

- R.H. short clamp holder as shown with left or neutral insert ■
- L.H. short clamp holder in mirror image with right or neutral insert ■
- mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius					kg	Accessories		
									R0.2	R0.3	R0.4	R0.5	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
														Description	Order No.	Order No. Description	
UKS6-803-90 R	D40 05160	5.8	6	20	24.5	12	4.5	1	7.08	7	6.93	-	-	0.003	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS6-803-90 L	D40 00160														UKS6-5-90L	L02 21200	
UKS8-804-90 R	D40 05170	7.6	8	25	32	17	6.5	2	10.14	-	10	-	9.7	0.008	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-804-90 L	D40 00170														UKS8-5-75L	L02 21310	
UKS10-805-90 R	D40 05180	9.6	10	30	37	17	9	2	14.23	-	14.08	14	13.78	0.017	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS10-805-90 L	D40 00180														UKS10-5-90L	L02 21220	
UKS20-806-90 R	D40 05190	19.6	20	47	57	27	15	2	-	-	22.3	-	22	0.092	UKS20-5-90R	L02 20250	55021 03008 M3x8 DIN7991
UKS20-806-90 L	D40 00190														UKS20-5-90L	L02 21250	
UKS10-T4-90 R	D40 07130	9.6	10	30	37	17	9	2	-	-	14.08	-	13.78	0.05	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS16-T5-90 R	D40 07140	15.6	16	42	50	25	12	2	-	-	-	18.22	18	0.06	UKS16-5-90R	L02 20240	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W57 / W59 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-803-90 R	W30 04..0.03..	W30 04..0.03..	W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS6-803-90 L			W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-804-90 R	W30 14..0.04..	W30 14..0.04..	W57 26140.04..	N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS8-804-90 L			W59 18050.04..	N00 56411 S/M5x13.4-20IP 6.25 Nm	L05 00870 20IP	55054 05014 M5x14	L02 30160 UKS20-3 35 Nm	L02 30030 UKS12-4
UKS10-805-90 R	W30 26..0.05..	W30 26..0.05..	W59 32050.08..	N00 56651 S2560-8IP 1.28 Nm	L05 00830 8IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-805-90 L				N00 56771 S35102-10IP 2.8 Nm	L05 00850 10IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS20-806-90 R	W30 44..0.08..	W30 44..0.08..						
UKS20-806-90 L								
UKS10-T4-90 R								
UKS16-T5-90 R								

For further details on inserts see chapter 7

### Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

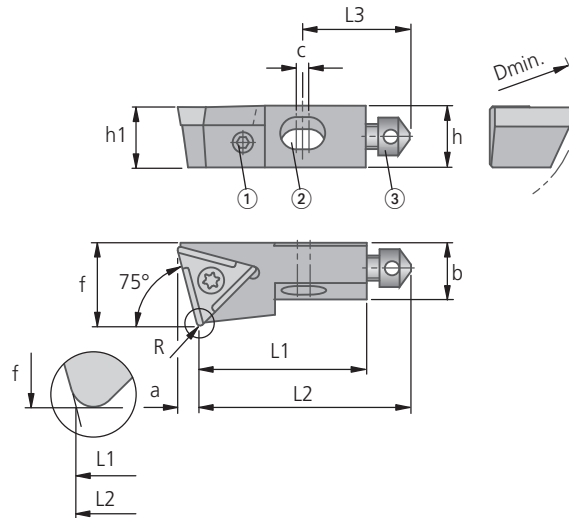
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.











# KOMET Kometric® UKS Short Clamp Holder $\kappa = 75^\circ$

**P M K N S H** for insert W30 / W57

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius			kg	Accessories		
										R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
UKS6-803-75 R	D40 05260	5.8	6	20	24.5	12	4.5	1	1	7.1	7	6.91	0.003	UKS6-5-75R	L02 20300	55023 00206 M2x6 DIN965
UKS6-803-75 L	D40 00260													UKS6-5-75L	L02 21300	
UKS8-804-75 R	D40 05270	7.6	8	25	32	17	6.5	2	1.5	10.18	–	10	0.009	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W30 L.H.  radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-803-75 R	W30 04..0.03..	W30 04..0.03..	W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS6-803-75 L			W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4

For further details on inserts see chapter 7

## Supply includes:

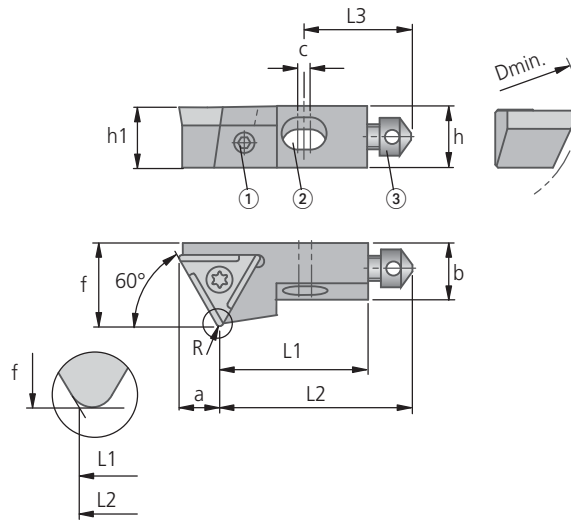
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.








# KOMET Kometric® UKS Short Clamp Holder $\alpha = 60^\circ$

for insert W30 / W57 **P M K N S H**

R.H. short clamp holder as shown with left or neutral insert ■  
mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius				kg	Accessories		
										R0.2	R0.3	R0.4	R0.8		Description	Order No.	Description
UKS6-803-60 R	D40 05360	5.8	6	20	24.5	12	4.5	1	3.6	7.1	7	6.9	-	0.003	UKS6-5-60R	L02 20400	55023 00206 M2x6 DIN965
UKS8-804-60 R	D40 05370	7.6	8	25	32	17	6.5	2	4.8	10.2	-	10	9.6	0.01	UKS8-5-60R	L02 20410	55023 00206 M2x6 DIN965

for short clamp holder	Insert		Assembly parts	Accessories	Assembly parts		
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-803-60 R	W30 04..0.03..	W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS8-804-60 R	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4

For further details on inserts see chapter 7

### Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

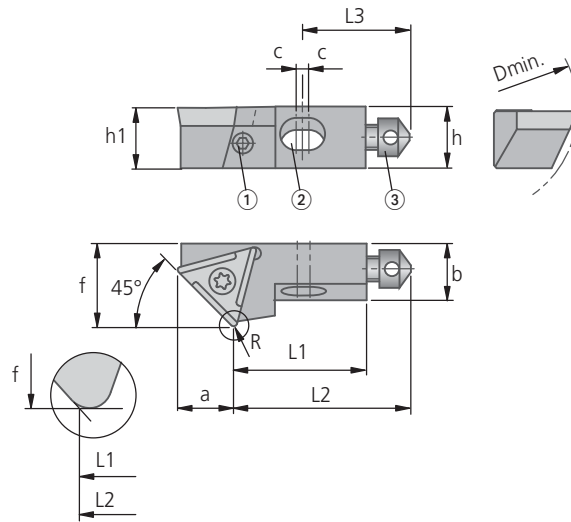
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.











# KOMET Kometric® UKS Short Clamp Holder $\alpha = 45^\circ$

**P M K N S H** for insert W30 / W57

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius				kg	Accessories		
										R0.2	R0.3	R0.4	R0.8		Shim plate grinding allowance 2.5 0.5		Countersunk screw for shim plate
														Description	Order No.	Order No. Description	
UKS6-803-45 R	D40 05460	5.8	6	15	19.5	12	4.5	1	5	7.1	7	6.91	–	0.003	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS8-804-45 R	D40 05470	7.6	8	19.5	26.5	17	6.5	2	6.5	10.18	–	10	9.62	0.007	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-804-45 L	D40 00470														UKS8-5-75L	L02 21310	

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-803-45 R	W30 04..0.03..		W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62Nm	L05 00810 6IP	55054 03004 M3x4	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS8-804-45 R	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121*	L02 30020 UKS8-4
UKS8-804-45 L		W30 14..0.04..						

For further details on inserts see chapter 7

## Supply includes:

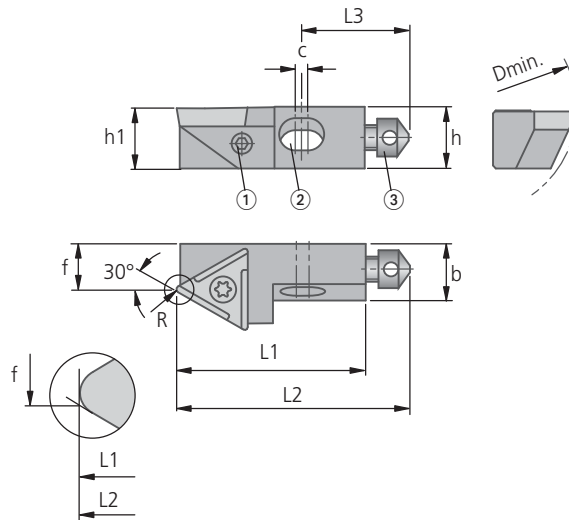
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.









# KOMET Kometric® UKS Short Clamp Holder $\alpha = 30^\circ$

for insert W30 / W57 **P M K N S H**

- R.H. short clamp holder as shown with right or neutral insert ■
- L.H. short clamp holder in mirror image with left or neutral insert ■
- mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius				kg	Accessories		
									R0.2	R0.3	R0.4	R0.8		Description	Order No.	Countersunk screw for shim plate Description
UKS6-803-30 R	D40 05660	5.8	6	20	24.5	12	4.5	1	3.62	3.67	3.73	-	0.003	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS6-803-30 L	D40 00660								UKS6-5-90L	L02 21200						
UKS8-804-30 R	D40 05670	7.6	8	26	33	17	6.5	2	5.12	-	5.23	5.46	0.008	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-804-30 L	D40 00670								UKS8-5-75L	L02 21310						

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-803-30 R		W30 04..0.03..	W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS6-803-30 L	W30 04..0.03..							
UKS8-804-30 R		W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-804-30 L	W30 14..0.04..							

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

1



2



3



4



5



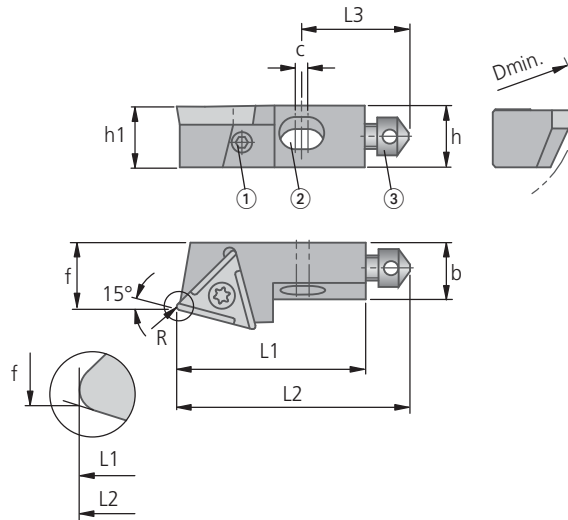
6



# KOMET Kometric® UKS Short Clamp Holder $\kappa = 15^\circ$

**P M K N S H** for insert W30 / W57

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius				kg	Accessories		
									R0.2	R0.3	R0.4	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
UKS6-803-15 R	D40 05860	5.8	6	20	24.5	12	4.5	1	5.05	5.07	5.1	–	0.003	UKS6-5-90R	L02 20200	55023 00206 M2×6 DIN965
UKS6-803-15 L	D40 00860								UKS6-5-90L	L02 21200						
UKS8-804-15 R	D40 05870	7.6	8	26	33	17	6.5	2	7.55	–	7.6	7.7	0.008	UKS8-5-75R	L02 20310	55023 00206 M2×6 DIN965
UKS8-804-15 L	D40 00870								UKS8-5-75L	L02 21310						

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W30 L.H.	W30 R.H.	W57 neutral	Clamping screw	Screwdriver	Adjusting screw ①	Location screw ②	Stop screw ③
	radial rake 06 = 6° 12 = 12° 20 = 20°	radial rake 36 = 6° 42 = 12° 50 = 20°						
				<b>Order No.</b> Description	<b>Order No.</b> Description	<b>Order No.</b> Description	<b>Order No.</b> Description	<b>Order No.</b> Description
UKS6-803-15 R		W30 04..0.03..	W57 04140.04..	N00 56031 S/M2×4.9-6IP 0.62Nm	L05 00810 6IP	55054 03005 M3×5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS6-803-15 L	W30 04..0.03..							
UKS8-804-15 R		W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3×5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-804-15 L	W30 14..0.04..							

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

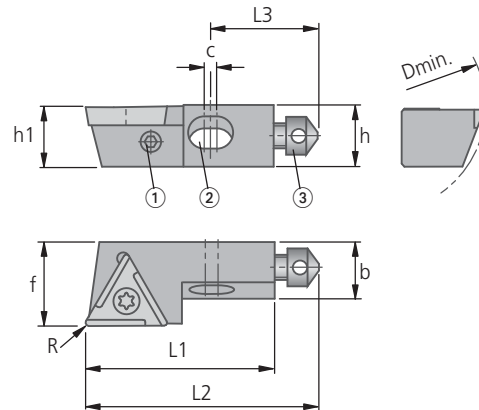
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.











# KOMET Kometric® UKS Short Clamp Holder $\alpha = 0^\circ$

for insert W30 / W57 **P M K N S H**

- R.H. short clamp holder as shown with right or neutral insert ■
- L.H. short clamp holder in mirror image with left or neutral insert ■
- mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dim. f	kg	Accessories		
											Description	Order No.	Order No. Description
UKS6-803-0 R	D40 05960	5.8	6	20	24.5	12	4.5	1	7	0.004	Shim plate grinding allowance 2.5 0.5	Countersunk screw for shim plate	
UKS6-803-0 L	D40 00960										UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS8-804-0 R	D40 05970	7.6	8	25	32	17	6.5	2	10	0.008	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-804-0 L	D40 00970										UKS8-5-75L	L02 21310	
UKS10-805-0 R	D40 05980	9.6	10	30	37	17	9	2	14	0.015	UKS10-5-0R	L02 20920	55023 00206 M2x6 DIN965

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-803-0 R		W30 04..0.03..	W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62Nm	L05 00810 6IP	55054 03005 M3x5	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS6-803-0 L	W30 04..0.03..							
UKS8-804-0 R		W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-804-0 L	W30 14..0.04..							
UKS10-805-0 R		W30 26..0.05..	W57 26140.04..	N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

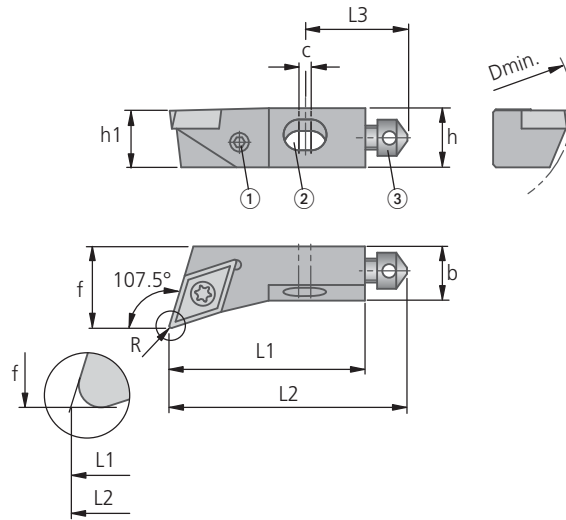
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.









# KOMET Kometric® UKS Short Clamp Holder $\alpha = 107.5^\circ$

**P M K N S H** for insert W79

- R.H. short clamp holder as shown, insert for this with peripheral chipbreaker
- L.H. short clamp holder in mirror image
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 2.5 0.5		Countersunk screw for shim plate
												Description	Order No.	Order No. Description	
UKS8-8C1-107R	D40 06010	7.6	8	25	32	17	7.5	2	11.11	11	-	0.008	UKS8-5-107R	L02 20010	55023 00206 M2x6 DIN965
UKS8-8C1-107L	D40 01010												UKS8-5-107L	L02 21010	
UKS10-8C1-107R	D40 06020	9.6	10	30	37	17	9	2	14.11	14	-	0.015	UKS10-5-107R	L02 20720	55023 00206 M2x6 DIN965
UKS10-8C1-107L	D40 01020												UKS10-5-107L	L02 21720	
UKS16-8C2-107R	D40 06040	15.6	16	42	50	25	12	2	-	18.21	18	0.044	UKS16-5-107R	L02 20040	55021 03008 M3x8 DIN7991
UKS16-8C2-107L	D40 01040												UKS16-5-107L	L02 21040	

for short clamp holder	Insert	Assembly parts	Accessories	Assembly parts		
	W79 neutral 	Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description	Adjusting screw ①  <b>Order No.</b> Description	Location screw ②  <b>Order No.</b> Description	Stop screw ③  <b>Order No.</b> Description
UKS8-8C1-107R	W79 18060.04..	N00 56651 S2560-8IP 1.28Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-8C1-107L						
UKS10-8C1-107R	W79 18060.04..	N00 56651 S2560-8IP 1.28Nm	L05 00830 8IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-8C1-107L						
UKS16-8C2-107R	W79 32060.08..	N00 56751 S3574-10IP 2.8Nm	L05 00850 10IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-8C2-107L						

For further details on inserts see chapter 7

## Supply includes:

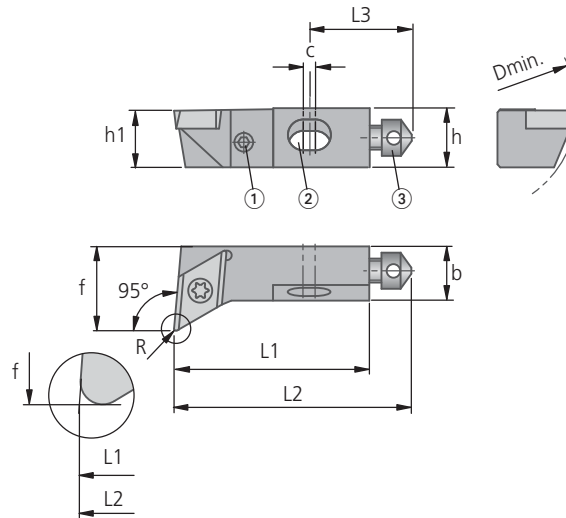
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.









# KOMET Kometric® UKS Short Clamp Holder $\alpha = 95^\circ$

for insert W60 / W79 **P M K N S H**

- R.H. short clamp holder as shown with left or neutral insert ■
- L.H. short clamp holder in mirror image with right or neutral insert ■
- mounting details see page 590-591 ■



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 2.5 0.5		Countersunk screw for shim plate
									Description	Order No.	Order No.		Description		
UKS8-8C1-95R	D40 06110	7.6	8	25	32	17	7.5	2	12.17	12	-	0.009	UKS8-5-95R	L02 20110	55023 00206 M2x6 DIN965
UKS8-8C1-95L	D40 01110												UKS8-5-95L	L02 21110	
UKS10-8C1-95R	D40 06120	9.6	10	30	37	17	9	2	14.17	14	-	0.016	UKS10-5-95R	L02 20120	55023 00206 M2x6 DIN965
UKS10-8C1-95L	D40 01120												UKS10-5-95L	L02 21120	
UKS16-8C2-95R	D40 06140	15.6	16	42	50	25	12	2	-	18.33	18	0.046	UKS16-5-95R	L02 20140	55021 03008 M3x8 DIN7991
UKS16-8C2-95L	D40 01140												UKS16-5-95L	L02 21140	

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W60 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W60 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W79 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-8C1-95R	W60 18..0.04..	W60 18..0.04..	W79 18060.02..	N00 56651 S2560-8IP 1.28Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-8C1-95L			W79 18060.02..	N00 56651 S2560-8IP 1.28Nm	L05 00830 8IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-8C1-95R	W60 18..0.04..	W60 18..0.04..	W79 18060.02..	N00 56751 S3574-10IP 2.8 Nm	L05 00850 10IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS10-8C1-95L			W79 32060.02..					
UKS16-8C2-95R	W60 32..0.08..	W60 32..0.08..	W79 32060.02..					
UKS16-8C2-95L								

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

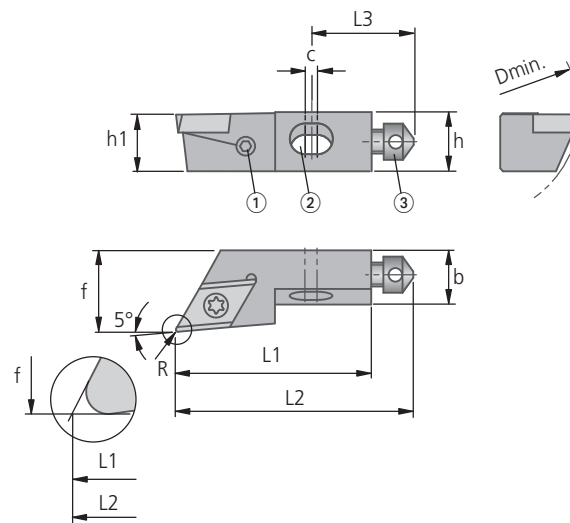
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.











# KOMET Kometric® UKS Short Clamp Holder $\alpha = 5^\circ$

**P M K N S H** for insert W60 / W79

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting details see page 590-591



Description cutting form ▼	Order No.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg	Accessories		
									R0.2	R0.4	R0.8		Shim plate grinding allowance 0.5		Countersunk screw for shim plate
													Description	Order No.	Order No. Description
UKS8-8C1-5R	D40 06210	7.6	8	25	32	17	7.5	2	11.03	11	-	0.007	UKS8-5-5R	L02 20810	55023 00206 M2x6 DIN965
UKS8-8C1-5L	D40 01210												UKS8-5-5L	L02 21810	
UKS10-8C1-5R	D40 06220	9.6	10	30	37	17	9	2	14.03	14	-	0.014	UKS10-5-5R	L02 20820	55023 00206 M2x6 DIN965
UKS10-8C1-5L	D40 01220												UKS10-5-5L	L02 21820	
UKS16-8C2-5R	D40 06240	15.6	16	42	50	25	12	2	-	18.06	18	0.041	UKS16-5-5R	L02 20840	55021 03008 M3x8 DIN7991
UKS16-8C2-5L	D40 01240												UKS16-5-5L	L02 21840	

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W60 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W60 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W79 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-8C1-5R		W60 18..0.04..	W79 18060.02..	N00 56651 S2560-8IP 1.28Nm	L05 00830 8IP	55054 03005 M3x5	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-8C1-5L	W60 18..0.04..							
UKS10-8C1-5R		W60 18..0.04..	W79 18060.02..	N00 56651 S2560-8IP 1.28Nm	L05 00830 8IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-8C1-5L	W60 18..0.04..							
UKS16-8C2-5R		W60 32..0.08..	W79 32060.02..	N00 56751 S3574-10IP 2.8 Nm	L05 00850 10IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-8C2-5L	W60 32..0.08..							

For further details on inserts see chapter 7

## Supply includes:

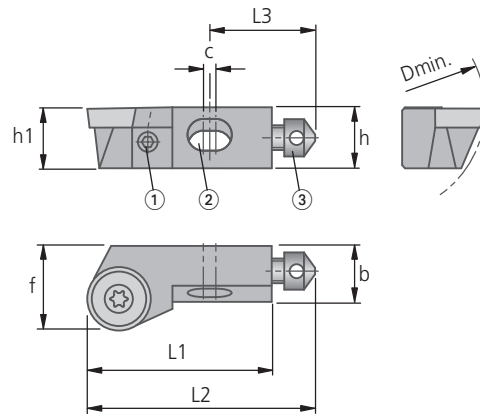
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder

for round insert **P M K N S H**

mounting details see page 590-591 ■



Description	Order No.	h1	h	L1	L2	L3	b	c	ISO dim. f	kg	Accessories		
											Description	Order No.	Order No. Description
UKS6-705-Rd-R	D40 06500	5.8	6	20	24.5	12	4.5	1	7	0.003	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS8-706-Rd-R	D40 06510	7.6	8	25	32	17	6.5	2	10	0.008	UKS8-5-107R	L02 20010	55023 00206 M2x6 DIN965
UKS8-708-Rd-R	D40 06520						7.5		11				
UKS10-710-Rd-R	D40 06530	9.6	10	30	37	17	9	2	14	0.015	UKS10-5-0R	L02 20920	55023 00206 M2x6 DIN965
UKS16-712-Rd-R	D40 06551	15.6	16	42	50	25	12	2	18	0.046	UKS16-5-0R	L02 20940	55021 03008 M3x8 DIN7991

for short clamp holder	Insert	Assembly parts		Accessories			Assembly parts		
		Clamping screw	Screwdriver	Screwdriver	Adjusting screw ①	Location screw ②	Stop screw ③		
UKS6-705-Rd-R	RCMT 05 02 M0	Order No. S2247-6IP Description 1.01Nm	Order No. L05 00810 Description 6IP	Order No. 55054 03005 Description M3x5	Order No. L02 30111 Description UKS6-3 1.9 Nm	Order No. L02 30010 Description UKS6-4			
UKS8-706-Rd-R	RCMT 06 02 M0	Order No. S2560-8IP Description 1.28Nm	Order No. L05 00830 Description 8IP	Order No. 55054 03005 Description M3x5	Order No. L02 30121* Description UKS8-3 4.1 Nm	Order No. L02 30020 Description UKS8-4			
UKS8-708-Rd-R	RCMT 08 03 M0	Order No. S3066-9IP Description 2.5Nm	Order No. L05 00840 Description 9IP	Order No. 55054 03005 Description M3x5	Order No. L02 30121* Description UKS8-3 4.1 Nm	Order No. L02 30020 Description UKS8-4			
UKS10-710-Rd-R	RCMT 10 T3 M0	Order No. S3574-10IP Description 2.8Nm	Order No. L05 00850 Description 10IP	Order No. 55054 04008 Description M4x8	Order No. L02 30130 Description UKS10-3 8.5 Nm	Order No. L02 30020 Description UKS8-4			
UKS16-712-Rd-R	RCMT 12 04 M0	Order No. S3585-15IP Description 2.8Nm	Order No. L05 00860 Description 15IP	Order No. 55054 05012 Description M5x12	Order No. L02 30140 Description UKS12-3 14 Nm	Order No. L02 30030 Description UKS12-4			

## Supply includes:

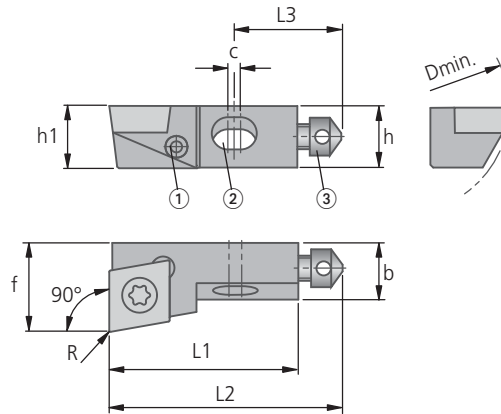
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\kappa = 90^\circ$

**P M K N S H** for insert C85 / CCMT

■ mounting details see page 590-591



Description	Order No.	h1	h	L1	L2	L3	b	c	ISO dim. f	kg	Accessories		
											Shim plate grinding allowance 0.5	Order No.	Countersunk screw for shim plate Order No.
UKS8-CC06-90R	D40 06600	7.6	7.8	25	32	17	7.5	2	11	0.013	UKS8-5-90R	L02 20310	55023 00206 M2x6 DIN965
UKS10-CC09-90R	D40 06610	9.6	9.8	30	37	17	9	2	14	0.022	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS16-CC09-90R	D40 06630	15.6	15.8	42	50	25	12	2	18	0.063	UKS16-5-90R	L02 20240	55021 03008 M3x8 DIN7991
UKS20-CC12-90R	D40 06640	19.6	19.8	47	57	27	15	2	22	0.111	UKS20-5-90R	L02 20250	55021 03008 M3x8 DIN7991

for short clamp holder	Insert	Assembly parts	Accessories	Assembly parts		
		Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-CC06-90R	CCMT 06 02 04	<b>N00 56651</b> S2560-8IP 1.28Nm	<b>L05 00830</b> 8IP	<b>55054 03005</b> M3x5	<b>L02 30121*</b> UKS8-3 4.1 Nm	<b>L02 30020</b> UKS8-4
UKS10-CC09-90R	CCMT 09 T3 04	<b>N00 56751</b> S3574-10IP 2.8Nm	<b>L05 00850</b> 10IP	<b>55054 04008</b> M4x8	<b>L02 30130</b> UKS10-3 8.5 Nm	<b>L02 30020</b> UKS8-4
UKS16-CC09-90R	CCMT 09 T3 04	<b>N00 56751</b> S3574-10IP 2.8Nm	<b>L05 00850</b> 10IP	<b>55054 05012</b> M5x12	<b>L02 30140</b> UKS12-3 14 Nm	<b>L02 30030</b> UKS12-4
UKS20-CC12-90R	CCMT 12 04 04	<b>N00 56851</b> S45111-20IP 6.25Nm	<b>L05 00870</b> 20IP	<b>55054 05014</b> M5x14	<b>L02 30160</b> UKS20-3 35 Nm	<b>L02 30030</b> UKS12-4

## Supply includes:

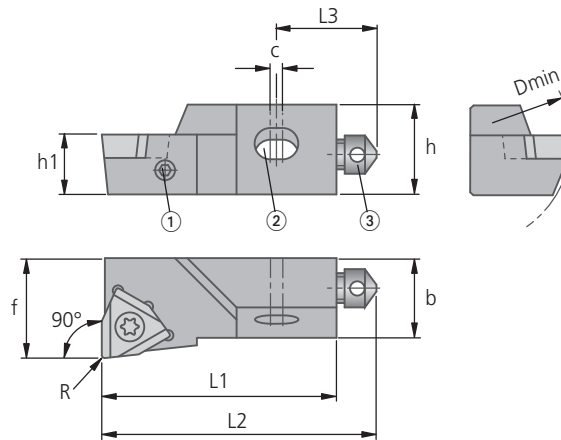
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\alpha = 90^\circ$

for insert W01 / W29 **P M K N S H**

R.H. short clamp holder as shown with left or neutral insert ■  
 mounting details see page 617 ■  
 to ISO standard ■



Description	Order No.	D min.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			
										R0.2	R0.4	R0.8	
SWFOR 10CA-06-38	D40 58000	40	10	14	42	50	20	9	2	14	13.98	13.93	0.028
SWFOR 12CA-07-48	D40 58010	50	12	18	47	55	20	16	2	20	19.98	19.93	0.071

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 L.H. 	W01 neutral 	W29 neutral 	Clamping screw   Order No. Description	Screwdriver   Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
SWFOR 10CA-06-38	W01 34060.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30140 UKS12-3 14 Nm	L02 30020 UKS8-4
SWFOR 12CA-07-48	W01 42060.02..	W01 42600...	W29 42000.04..	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP	55054 05012 M5x12	55011 06020	L02 30030 UKS12-4

For further details on inserts see chapter 7

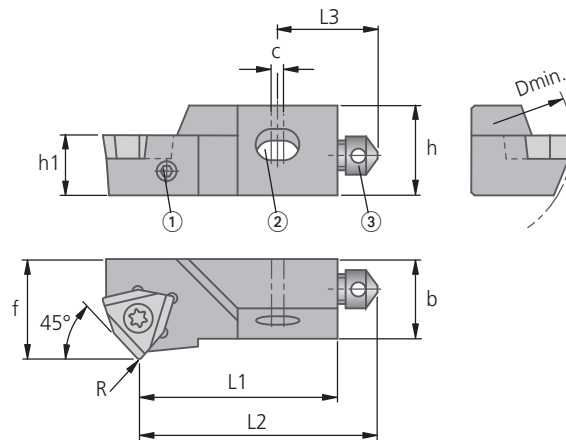
### Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UKS Short Clamp Holder $\alpha = 45^\circ$

**P M K N S H** for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- mounting details see page 617
- to ISO standard



Description	Order No.	D min.	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			kg
										R0.2	R0.4	R0.8	
SWSOR 10CA-06-38	D40 58400	40	10	14	36	44	20	9	2	14	13.9	13.71	0.028

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W01 L.H.	W01 neutral	W29 neutral	Clamping screw 	Screwdriver 	Adjusting screw ① 	Location screw ② 	Stop screw ③ 
	Order No.	Order No.	Order No.	Description	Description	Description	Description	Description
SWSOR 10CA-06-38	W01 34060.02..	W01 34600...	W29 34000.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30140 UKS12-3 14 Nm	L02 30020 UKS8-4

For further details on inserts see chapter 7

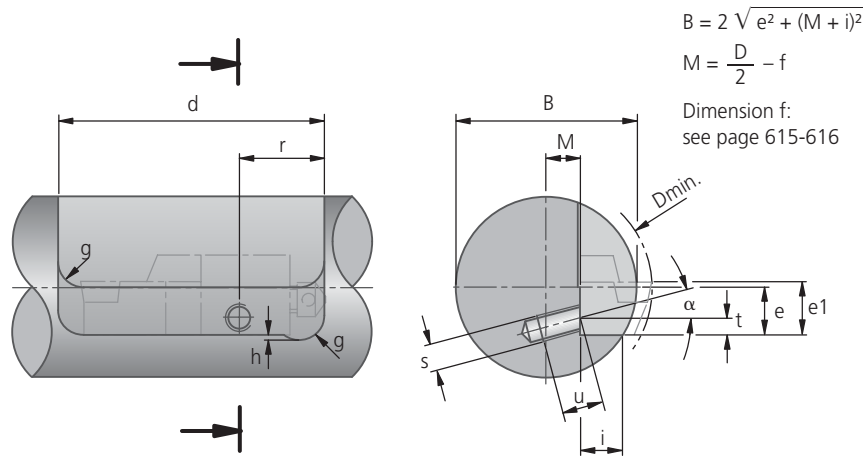
## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UKS Short Clamp Holder

## Mounting details



Short clamp holder size	Holder mounting						
	D min.	d	e	e1	g	h	i
10CA	40	60	9	10	4	1	9
12CA	50	65	11	12	5	1	13

Short clamp holder size	Location thread				
	r	s	t	α	u
10CA	20	M6	5	20°	12
12CA	20	M6	6	20°	12



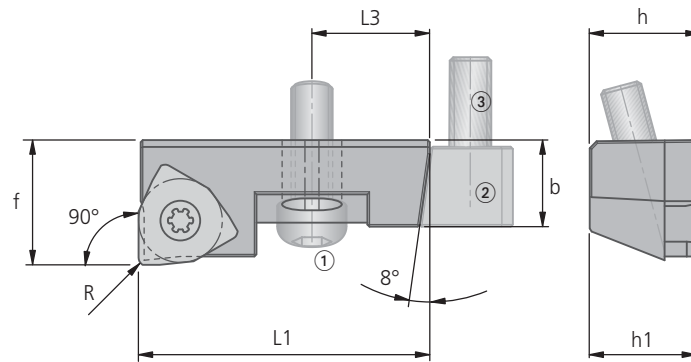
# KOMET Kometric® UKS Short Clamp Holder $\kappa = 90^\circ$

**P M K N S H** for power insert W01

1



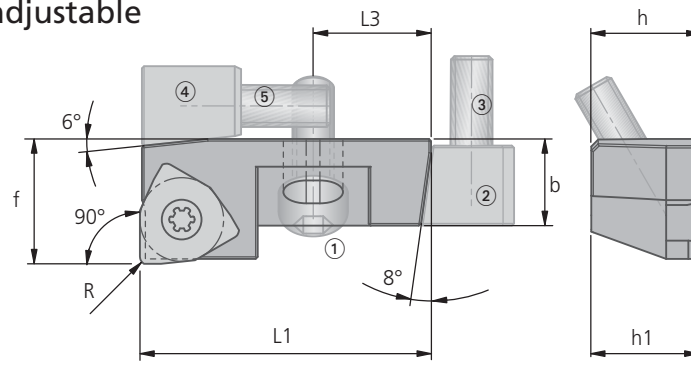
axially adjustable



2



axially + radially adjustable



3



4







5



6



Description cutting form ▼	Order No.	adjustable	h1	h	L1	L3	b	ISO dimension f for radius R0.8	kg
UKS 8 WOHX 05T3 PN EL 90°	D40 55180	axially	7.6	7.8	24.75	9.75	7.5	10.81	0.01
UKS 10 WOHX 05T3 PN EL 90°	D40 55190	axially + radially	7.6	9.8	29.5	10.5	10	14.5	0.021
UKS 16 WOHX 0804 PN EL 90°	D40 65180	axially	15.6	15.8	42	17	12.5	18	0.059
UKS 16 WOHX 0804 PN EL 90°	D40 65190	axially + radially	15.6	15.8	42	17	12.5	18	0.057

for short clamp holder	Insert	Assembly parts	Accessories	Assembly parts				
	W01 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw ①  Order No. Description	Axial wedge ②	Differential screw ③	Radial wedge ④	Differential screw ⑤
UKS 8 WOHX 05T3 PN EL 90°	W01 24600.906115	N00 57511 S/M2.5x7.2-8IP 1.28	L05 00830 8IP	L02 30170 UKS8-3 4.1 Nm	L02 30870	L02 30851 M5x18-15IP	-	-
UKS 10 WOHX 05T3 PN EL 90°	W01 24600.906115	N00 57511 S/M2.5x7.2-8IP 1.28	L05 00830 8IP	L02 30130 UKS10-3 8.5 Nm	L02 30880	L02 30851 M5x18-15IP	L02 30860	L02 30851 M5x18-15IP
UKS 16 WOHX 0804 PN EL 90°	W01 42600.906115	N00 57531 S/M4.5x9-15IP 6.25	L05 00860 15IP	L02 30140 UKS12-3 14 Nm	L02 30890	N10 20220 M6x0.75	-	-
UKS 16 WOHX 0804 PN EL 90°	W01 42600.906115	N00 57531 S/M4.5x9-15IP 6.25	L05 00860 15IP	L02 30140 UKS12-3 14 Nm	L02 30890	N10 20220 M6x0.75	L02 30860	L02 30851 M5x18-15IP

For further details on inserts see chapter 7

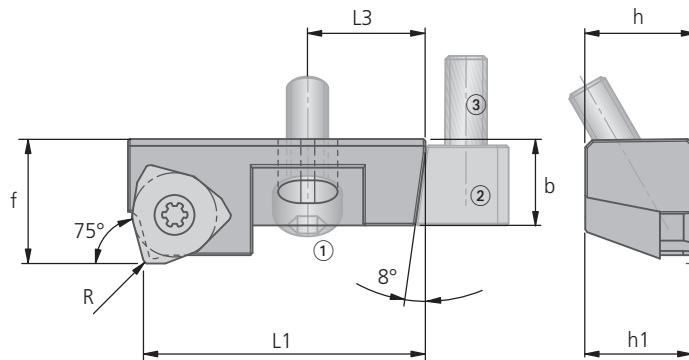
**Supply includes:**

Short clamp holder with assembly parts. Please order insert and accessories separately.

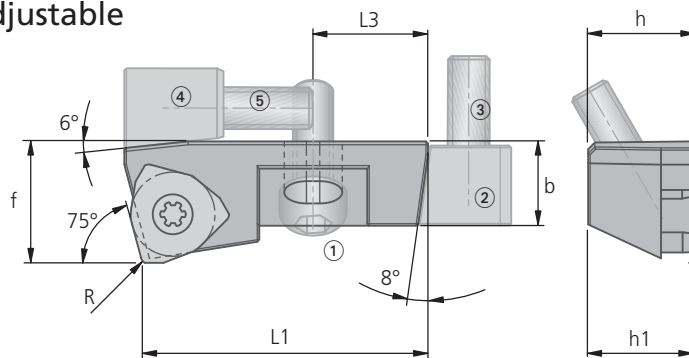
# KOMET Kometric® UKS Short Clamp Holder $\alpha = 75^\circ$

for power insert W01 **P M K N S H**









axially adjustable



axially + radially adjustable



Description cutting form ▼	Order No.	adjustable	h1	h	L1	L3	b	ISO dimension f for radius R0.8	kg
UKS 10 WOHX 05T3 EN EL 75°	D40 55280	axially	7.6	9.8	26.9	10.25	7.75	14.5	0.018
UKS 10 WOHX 05T3 EN EL 75°	D40 55290	axially + radially	7.6	9.8	27.15	10.5	10	14.5	0.019
UKS 16 WOHX 0804 EN EL 75°	D40 65280	axially	15.6	15.8	40.5	17	12.5	18	0.06
UKS 16 WOHX 0804 EN EL 75°	D40 65290	axially + radially	15.6	15.8	42	17	12.5	18	0.06

for short clamp holder	Insert	Assembly parts	Accessories	Assembly parts				
	W01 neutral	Clamping screw	Screwdriver	Location screw ①	Axial wedge ②	Differential screw ③	Radial wedge ④	Differential screw ⑤
								
		Order No. Description	Order No. Description	Order No. Description	Order No.	Order No. Description	Order No.	Order No. Description
UKS 10 WOHX 05T3 EN EL 75°	W01 24600.756115	N00 57511 S/M2.5x7.2-8IP 1.28	L05 00830 8IP	L02 30130 UKS10-3 8.5 Nm	L02 30880	L02 30851 M5x18-15IP	-	-
UKS 10 WOHX 05T3 EN EL 75°	W01 24600.756115	N00 57511 S/M2.5x7.2-8IP 1.28	L05 00830 8IP	L02 30130 UKS10-3 8.5 Nm	L02 30880	L02 30851 M5x18-15IP	L02 30860	L02 30851 M5x18-15IP
UKS 16 WOHX 0804 EN EL 75°	W01 42600.756115	N00 57531 S/M4.5x9-15IP 6.25	L05 00860 15IP	L02 30140 UKS12-3 14 Nm	L02 30890	N10 20220 M6x0.75	-	-
UKS 16 WOHX 0804 EN EL 75°	W01 42600.756115	N00 57531 S/M4.5x9-15IP 6.25	L05 00860 15IP	L02 30140 UKS12-3 14 Nm	L02 30890	N10 20220 M6x0.75	L02 30860	L02 30851 M5x18-15IP

For further details on inserts see chapter 7

**Supply includes:**

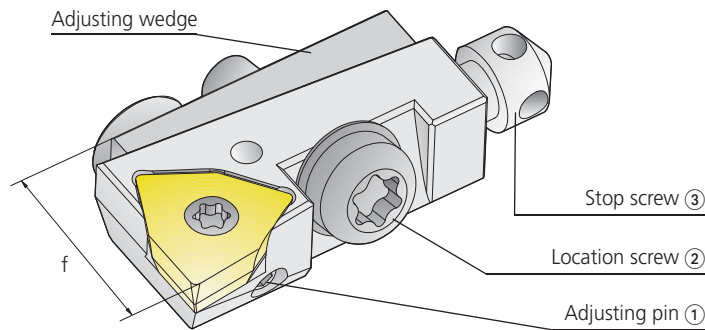
Short clamp holder with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UKS Short Clamp Holder

## with wedge adjustment and axial and radial adjustment

Adjusting the KOMET Kometric® short clamp holder with wedge adjustment



1. Set the short clamping holder to the smallest possible diameter (turn adjusting pin ① clockwise as far as the stop) and place the location screw ② lightly in position
2. Set the axial dimension (length) with the stop screw ③
3. Set the short clamping holder to the required diameter by turning the adjusting pin ① anti-clockwise. (If necessary loosen the location screw ② slightly)
4. Tighten the location screw ②

### Important note!

The short clamping holder must always be set from minus to plus!

The following short clamping holder adjustments apply:

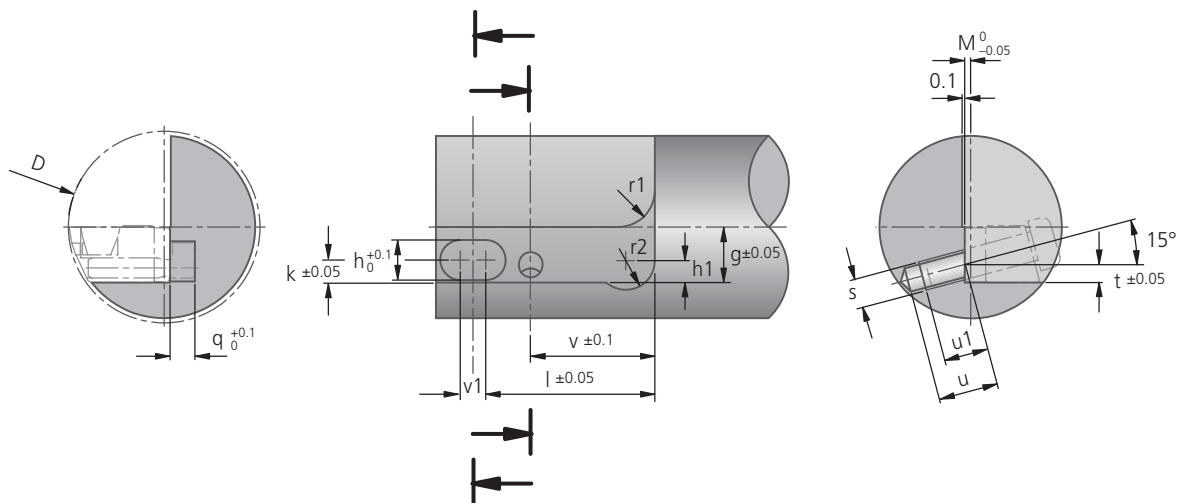
Holder size	axial	radial	f (for R0.4)
UKS 08	-1.0 to +1.0 mm	-0.07 to +0.16 mm	13.80
UKS 10	-1.0 to +1.0 mm	-0.07 to +0.20 mm	17.58

### Features

- Precise radial and axial adjustment
- Maximum support surface for short clamping holder on basic body provides maximum stability
- Parallel radial adjustment without changing the approach angle

Unlike the previous short clamping holder solutions, the user can carry out setting in the radial direction more accurately and more comfortably as no further movement occurs when the short clamping holder is locked with the central clamping screw.

### Mounting details

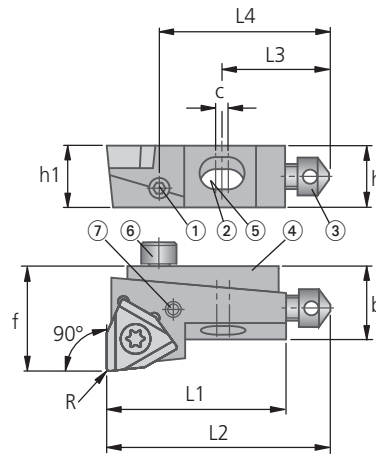


Short clamp holder size	D min.	for R0.4 f	g	h	h1	k	l	M	q	r1	r2	s	t	u	u1	v	v1
UKS 08	26	13.8	7.6	5.5	3	2.9	23.15	$\frac{1}{2} - f$	3.4	5	4	M4	2.45	8	6.5	17	3.5
UKS 10	34	17.58	9.6	6.5	4	4	24.6	$\frac{1}{2} - f$	4	5	5	M5	2.55	11	9	17	3.8

# KOMET Kometric® UKS Short Clamp Holder $\kappa = 90^\circ$











for insert W01 / W29 PMKNSH

R.H. short clamp holder as shown with left or neutral insert ■  
with wedge adjustment and axial and radial adjustment ■



Description	Order No.	h1	h	L1	L2	L3	L4	b	c	Adjustment path radial		ISO dim. f in zero setting for radius R0.4	kg	Inserts	
										from	to			W01 L.H.	W01 / W29 neutral
UKS08-W2924-90R	D40 65011	7.6	7.8	25	32	10	17.9	10.3	2	-0.07	+0.16	13.9	0.028	W01 24..0.04..	W01 24600.. W29 24000.04..
UKS10-W2934-90R	D40 65021	9.6	9.8	30	37	10	19.5	12.5	2	-0.10	+0.20	17.58	0.024	W01 34..0.04..	W01 34600.. W29 34000.04..

For further details on inserts see chapter 7

for short clamp holder	Assembly parts	Accessories	Assembly parts	Accessories	Assembly parts						
	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting pin ①  Order No. Description	Screwdriver  Order No.	Location screw ②  Order No. Description	Stop screw ③  Order No. Description	Adjusting wedge ④  Order No.	Disc spring ⑤  Order No. Description	Cylindrical pin ⑥  Order No. Description	Cylindrical pin ⑦  Order No. Description	
UKS08	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	L02 30771	Tx 6	L02 31010 UKS8-3	L02 30020 UKS8-4	L02 22510	56771 08043 8x4.2x0.3	55311 02006 2m6x6	55311 01504 1.5m6x4	
UKS10	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	L02 30781	Tx 6	L02 31020 UKS10-3	L02 30020 UKS8-4	L02 22520	56771 10054 10x5.2x0.4	55311 02008 2m6x8	55311 01505 1.5m6x5	

## Supply includes:

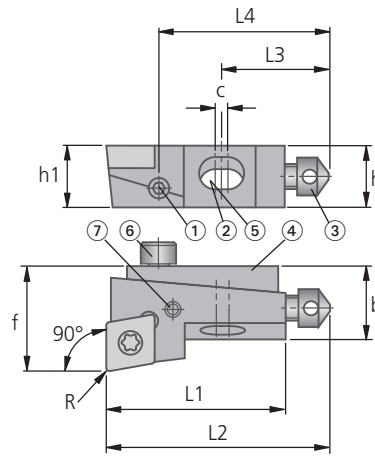
Short clamp holder with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UKS Short Clamp Holder $\alpha = 90^\circ$

**P M K N S H** for insert C85 / CCMT

- R.H. short clamp holder as shown with neutral insert
- with wedge adjustment and axial and radial adjustment
- mounting details see page 620



Description	Order No.	h1	h	L1	L2	L3	L4	b	c	Adjustment path radial		ISO dim. f in zero setting for radius R0.4	kg	Inserts
										from	to			W85 neutral
UKS10-CC09T3-90R	D40 65081	9.6	9.8	30	37	10	19.5	12.5	2	-0.10	+0.20	17.58	0.024	C85 32...

For further details on inserts see chapter 7

for short clamp holder	Assembly parts	Accessories	Assembly parts	Accessories	Assembly parts					
	Clamping screw	Screwdriver	Adjusting pin ①	Screwdriver	Location screw ②	Stop screw ③	Adjusting wedge ④	Disc spring ⑤	Cylindrical pin ⑥	Cylindrical pin ⑦
Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description	Order No. Description
UKS10	N00 56751 S3574-10IP 2.8 Nm	L05 00850 10IP	L02 30781	Tx 6	L02 31020 UKS10-3	L02 30020 UKS8-4	L02 22520	56771 10054 10x5.2x0.4	55311 02008 2m6x8	55311 01505 1.5m6x5

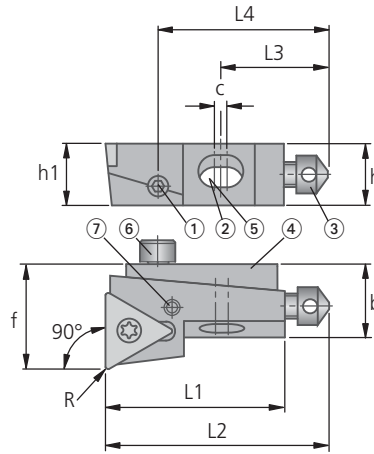
## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UKS Short Clamp Holder $\alpha = 90^\circ$

for insert W30 / W57 P M K N S H

- R.H. short clamp holder as shown with left or neutral insert ■
- with wedge adjustment and axial and radial adjustment ■
- mounting details see page 620 ■



Description	Order No.	h1	h	L1	L2	L3	L4	b	c	Adjustment path		ISO dim. f in zero setting for radius R0.4	kg	Inserts	
										radial	to			W30 L.H.	W57 neutral
UKS08-W3014-90R	D40 65131	7.6	7.8	25	32	10	17.9	10.3	2	-0.07	+0.16	13.8	0.013	W30 14..0.04..	W57 14140.04..

For further details on inserts see chapter 7

for short clamp holder	Assembly parts	Accessories	Assembly parts	Accessories	Assembly parts						
	Clamping screw	Screwdriver	Adjusting pin ①	Screwdriver	Location screw ②	Stop screw ③	Adjusting wedge ④	Disc spring ⑤	Cylindrical pin ⑥	Cylindrical pin ⑦	
	Order No. Description	Order No. Description	Order No. Description	Order No.	Order No. Description	Order No. Description	Order No.	Order No. Description	Order No. Description	Order No. Description	
UKS08	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	L02 30771	Tx 6	L02 31010 UKS8-3	L02 30020 UKS8-4	L02 22510	56771 08043 8x4.2x0.3	55311 02006 2m6x6	55311 01504 1.5m6x4	

### Supply includes:

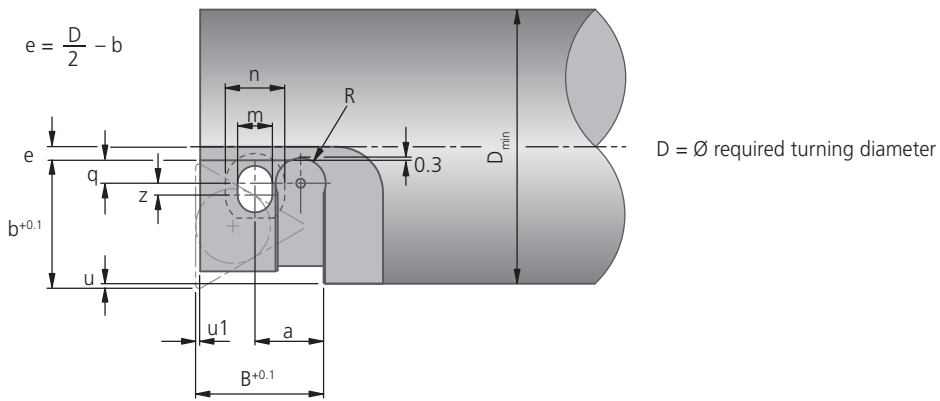
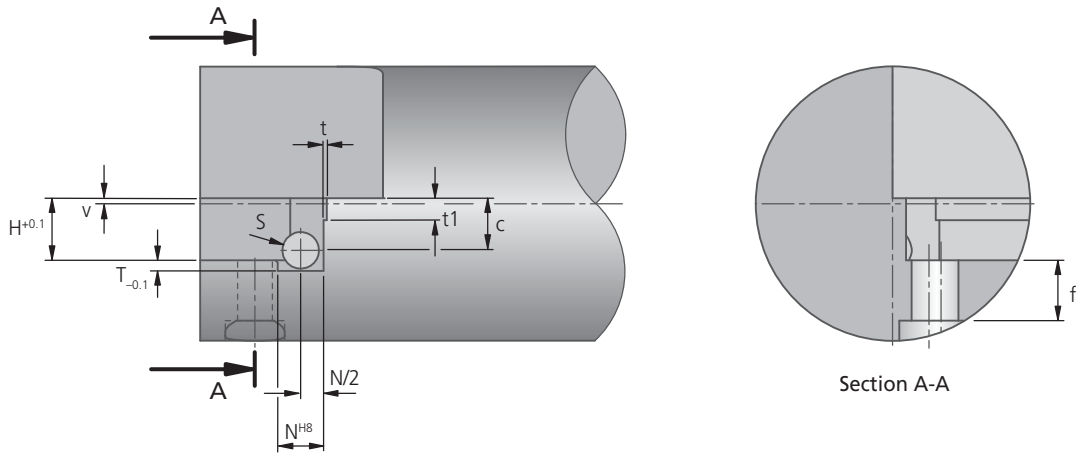
Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® FLWE Insert Flat Bed Seating

## Mounting details

### Mounting

for cutting form 1 as shown  
for cutting form 2 in mirror image

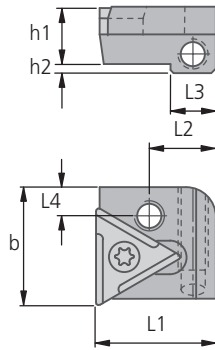


Insert flat bed seating size	a	B	c	D min.	f	b	H	m	N	n	q	R	S	T	t	t1	u	u1	v	z
FLWE-U3.. FLWE-TPHB06..	4.4	8	2.9	16	1.3	7.8	3.6	2.2	3	4	1.6	1.75	2.5	0.85	0.1	1.8	0.5	0.3	0.5	0.8
FLWE-U4.. FLWE-TPHB09..	7	12	4.1	22	3.6	11	5.7	2.8	5	4.5	2	2.75	4	1.15	0.15	2.4	0.5	0.5	0.6	1.3
FLWE-U5..	7.5	14	5.7	30	6.6	14	6.8	3.8	5	6.5	2.5	2.75	4	1.15	0.15	2.4	0.5	0.5	0.6	1.3

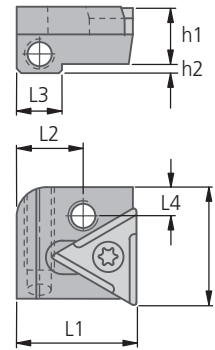


# KOMET Kometric® FLWE Adjustable Insert Flat Bed Seating $\kappa = 90^\circ$

for insert W30 / W57 P M K N S H










Insert seating cutting form 1 as shown with left or neutral insert.



Insert seating cutting form 2 in mirror image with right or neutral insert.

Dimension 'b' relates to the appropriate insert radius

Description cutting form ▼	Order No.	for radius b	L1	L2	L3	L4	h1	h2	kg
FLWE-U3-90°-1	D53 56410	7.8	8	4.4	3	1.9	3.6	0.6	0.004
FLWE-U4-90°-1	D53 56430	11	12	7	5	2.5	5.7	0.95	0.006
FLWE-U4-90°-2	D53 51430								
FLWE-U5-90°-1	D53 56440	14	14	7.5	5	3	6.8	0.95	0.008
FLWE-U5-90°-2	D53 51440								

for insert seating	Insert			Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No.	Threaded pin  Order No. Description
FLWE-U3-90°-1	W30 04..0.03..		W57 04140.04..	N00 56021 S/M2×3.8-6IP 0.62Nm	L05 00810 6IP	N10 11200	55051 02005 M2×5
FLWE-U4-90°-1	W30 14..0.04..		W57 14140.04..	N00 56031 S/M2.6×5.2-8IP 1.28Nm	L05 00830 8IP	N10 11310	55051 03006 M3×6
FLWE-U4-90°-2		W30 14..0.04..					
FLWE-U5-90°-1	W30 26..0.05..		W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8Nm	L05 00850 10IP	N10 11400	55051 03006 M3×6
FLWE-U5-90°-2		W30 26..0.05..					

For further details on inserts see chapter 7

## Note:

If using insert W30 ... .31.. (UF) the external contour have to be reworked.

## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.

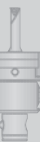
1



2



3



4



5



6



# KOMET Kometric® WVP, WVU Adjustable Insert Seating

## Mounting details

1



2



3



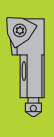
4



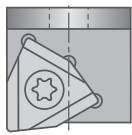
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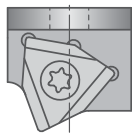
6



### WVP left



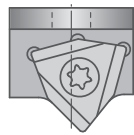
90°



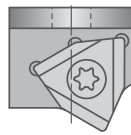
75°



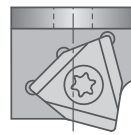
60°



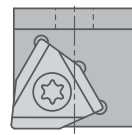
45°



30°

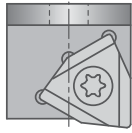


15°

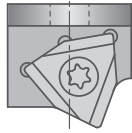


0°

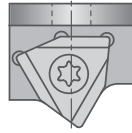
### WVP right



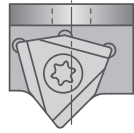
90°



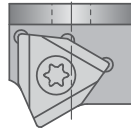
75°



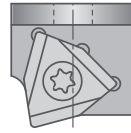
60°



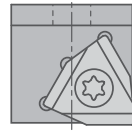
45°



30°

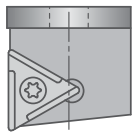


15°

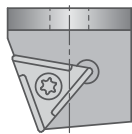


0°

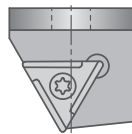
### WVU left



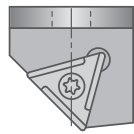
90°



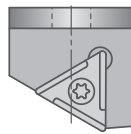
75°



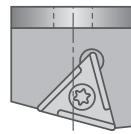
60°



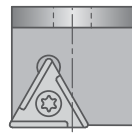
45°



30°

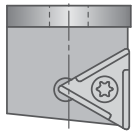


15°

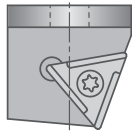


0°

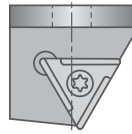
### WVU right available on request



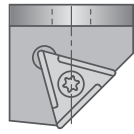
90°



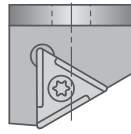
75°



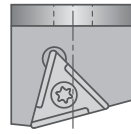
60°



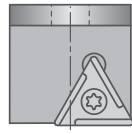
45°



30°



15°

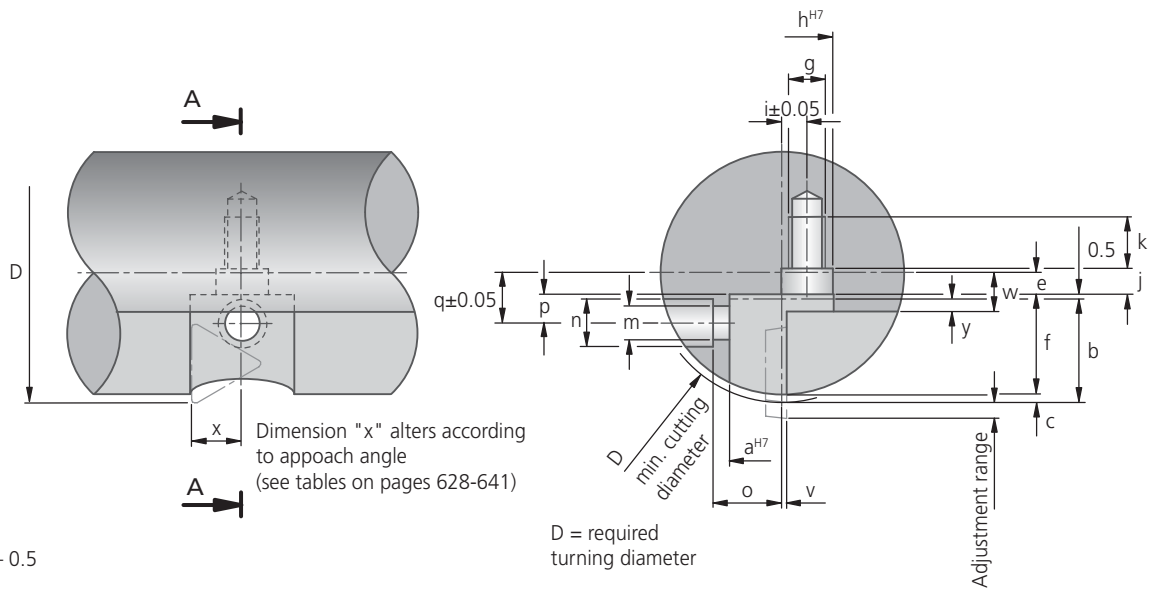


0°

### Features

- KOMET Kometric® type WVP can be fitted with Unisix® insert
- KOMET Kometric® type WVU can be fitted with triangular insert
- KOMET Kometric® types WVU4 and WVU5 can be interchanged with types WVP12 and WVP16
- can be used from 16 mm Ø
- optimum adjustment with easily accessible adjusting screw
- for own manufacture of fine boring tools using ABS® or HSK semi-finished heads

# KOMET Kometric® WVP, WVU Adjustable Insert Seating Mounting details



$$e = \frac{D}{2} - b - 0.5$$

$$f = b + 0.5 - c$$

$$q = p + \frac{D}{2} - b - 0.5$$

$$w = e + y + 0.5$$

WVP	Insert seating			Adjusting screw					Location screw				Chip channel	
	a	b	c	g	h	i	j	k	m	n	o	p	v	y
WVP 12..	12	12	1	M4	6	2.9	3	6	3.9	5.5	7.9	3.3	0.6	1.5
WVP 16..	16	16	1	M5	7	4.4	3.5	8	4.5	7.5	9.5	4.2	0.6	2
WVP 18..	18	18.5	2	M6	9	4.4	5	10	4.5	7.5	11	5	0.5	2.5

WVP	Insert seating			Adjusting screw					Location screw				Chip channel	
	a	b	c	g	h	i	j	k	m	n	o	p	v	y
WVU3..	8	8.5	0.75	M3	4	2.1	2.5	4	2.8	4	5.5	2.7	0.5	1.5
WVU T06..														
WVU4..	12	12	1	M4	6	2.9	3	6	3.9	5.5	7.9	3.3	0.6	1.5
WVU T09..														
WVU5..	16	16	1	M5	7	4.4	3.5	8	4.5	7.5	9.5	4.2	0.6	2
WVU T11..														
WVU T13..														
WVU T16..	20	24	2	M6	9	5.8	5	10	5.5	9	14	6	0.6	3

1



2



3



4



5



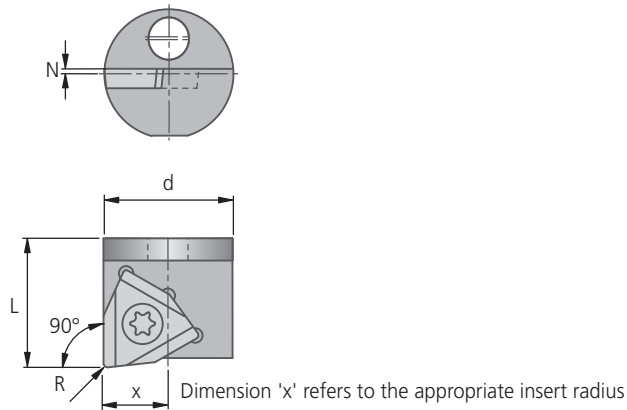
6



# KOMET Kometric® WVP Adjustable Insert Seatings $\alpha = 90^\circ$

**P M K N S H** for insert W01 / W29

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting details see page 626-627



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			
							R0.2	R0.4	R0.8	
WVP12-818-90L31	D20 80050	22	0.4	12	12	0.6	5.8	5.8	5.8	0.02
WVP12-818-90R31	D20 85050									
WVP16-824-90L38	D20 80060	30	0.5	16	16	0.6	7.8	7.8	7.8	0.02
WVP16-824-90R38	D20 85060									
WVP18-834-90L38	D20 80070	36	0.5	18	18.5	0.5	8.8	8.8	8.8	0.02
WVP18-834-90R38	D20 85070									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-90L31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP12-818-90R31								
WVP16-824-90L38	W01 24060.02..		W01 24600...	W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP16-824-90R38		W01 24360.02..						
WVP18-834-90L38	W01 34060.04..		W01 34600...	W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610
WVP18-834-90R38		W01 34360.04..						

For further details on inserts see chapter 7

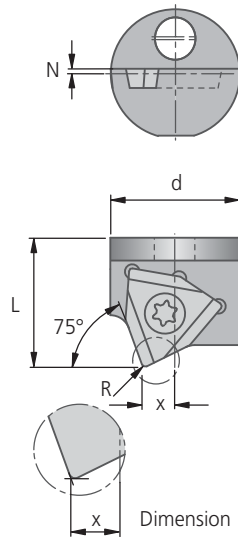
## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.









# KOMET Kometric® WVP Adjustable Insert Seatings $\alpha = 75^\circ$

for insert W01 / W29 **P M K N S H**

L.H. insert seating as shown with left or neutral insert ■  
 R.H. insert seating in mirror image with right or neutral insert ■  
 mounting details see page 626-627 ■



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			kg
							R0.2	R0.4	R0.8	
WVP12-818-75R31	D20 85150	22	0.4	12	12	0.6	3.6	3.62	3.66	0.02
WVP16-824-75L38	D20 80160	30	0.5	16	16	0.6	4	4.02	4.05	0.02
WVP16-824-75R38	D20 85160									
WVP18-834-75L38	D20 80170	36	0.5	18	18.5	0.5	5	5.02	5.05	0.02
WVP18-834-75R38	D20 85170									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-75R31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP16-824-75L38	W01 24060.02..			W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP16-824-75R38		W01 24360.02..	W01 24600...					
WVP18-834-75L38	W01 34060.04..			W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610
WVP18-834-75R38		W01 34360.04..	W01 34600...					

For further details on inserts see chapter 7

## Supply includes:

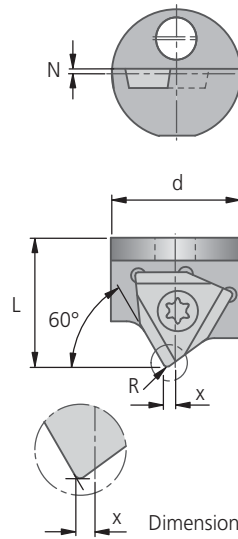
Insert seating with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® WVP Adjustable Insert Seatings $\alpha = 60^\circ$

**P M K N S H** for insert W01 / W29

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting details see page 626-627



Dimension 'x' refers to the appropriate insert radius

Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			
							R0.2	R0.4	R0.8	
WVP12-818-60L31	D20 80250	22	0.4	12	12	0.6	1.5	1.55	1.66	0.02
WVP12-818-60R31	D20 85250									
WVP16-824-60L38	D20 80260	30	0.5	16	16	0.6	1.3	1.36	1.46	0.02
WVP16-824-60R38	D20 85260									
WVP18-834-60L38	D20 80270	36	0.5	18	18.5	0.5	2.3	2.36	2.46	0.02
WVP18-834-60R38	D20 85270									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-60L31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP12-818-60R31								
WVP16-824-60L38	W01 24060.02..		W01 24600...	W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP16-824-60R38		W01 24360.02..						
WVP18-834-60L38	W01 34060.04..		W01 34600...	W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610
WVP18-834-60R38		W01 34360.04..						

For further details on inserts see chapter 7

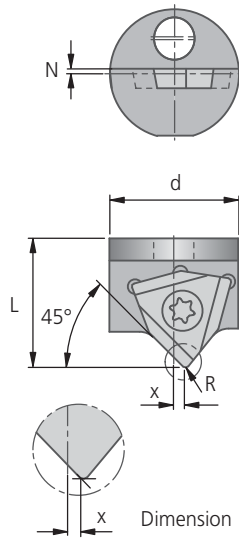
## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\kappa = 45^\circ$









for insert W01 / W29 **P M K N S H**

L.H. insert seating as shown with left or neutral insert ■  
 R.H. insert seating in mirror image with right or neutral insert ■  
 mounting details see page 626-627 ■



Dimension 'x' refers to the appropriate insert radius

Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			kg
							R0.2	R0.4	R0.8	
WVP12-818-45L31	D20 80350	22	0.4	12	12	0.6	0.7	0.61	0.41	0.02
WVP12-818-45R31	D20 85350									
WVP16-824-45L38	D20 80360	30	0.5	16	16	0.6	1.3	1.2	1.01	0.02
WVP16-824-45R38	D20 85360									
WVP18-834-45L38	D20 80370	36	0.5	18	18.5	0.5	0.5	0.4	0.21	0.02
WVP18-834-45R38	D20 85370									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-45L31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP12-818-45R31								
WVP16-824-45L38	W01 24060.02..		W01 24600...	W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP16-824-45R38		W01 24360.02..						
WVP18-834-45L38	W01 34060.04..		W01 34600...	W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610
WVP18-834-45R38		W01 34360.04..						

For further details on inserts see chapter 7

### Supply includes:

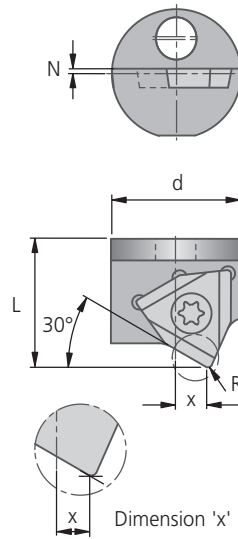
Insert seating with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® WVP Adjustable Insert Seatings $\alpha = 30^\circ$

**P M K N S H** for insert W01 / W29

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting details see page 626-627



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			
							R0.2	R0.4	R0.8	
WVP12-818-30L31	D20 80450	22	0.4	12	12	0.6	2.5	2.35	2.06	0.02
WVP12-818-30R31	D20 85450									
WVP16-824-30L38	D20 80460	30	0.5	16	16	0.6	4	3.86	3.57	0.02
WVP16-824-30R38	D20 85460									
WVP18-834-30L38	D20 80470	36	0.5	18	18.5	0.5	3.5	3.36	3.07	0.02
WVP18-834-30R38	D20 85470									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-30L31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP12-818-30R31								
WVP16-824-30L38	W01 24060.02..		W01 24600...	W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP16-824-30R38		W01 24360.02..						
WVP18-834-30L38	W01 34060.04..		W01 34600...	W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610
WVP18-834-30R38		W01 34360.04..						

For further details on inserts see chapter 7

## Supply includes:

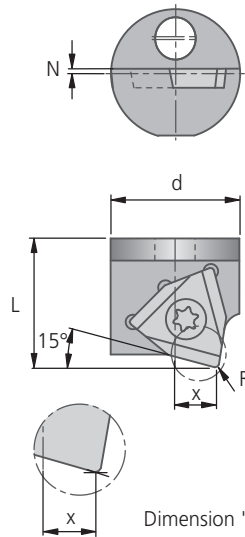
Insert seating with assembly parts. Please order insert and accessories separately.











# KOMET Kometric® WVP Adjustable Insert Seatings $\kappa = 15^\circ$

for insert W01 / W29 **P M K N S H**

L.H. insert seating as shown with left or neutral insert ■  
 R.H. insert seating in mirror image with right or neutral insert ■  
 mounting details see page 626-627 ■



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			kg
							R0.2	R0.4	R0.8	
WVP12-818-15L31	D20 80550	22	0.4	12	12	0.6	3	2.81	2.43	0.02
WVP12-818-15R31	D20 85550									
WVP16-824-15R38	D20 85560	30	0.5	16	16	0.6	5	4.81	4.43	0.02
WVP18-834-15L38	D20 80570	36	0.5	18	18.5	0.5	6	5.81	5.43	0.02
WVP18-834-15R38	D20 85570									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-15L31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP12-818-15R31								
WVP16-824-15R38		W01 24360.02..	W01 24600...	W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP18-834-15L38	W01 34060.04..							
WVP18-834-15R38		W01 34360.04..	W01 34600...	W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610

For further details on inserts see chapter 7

## Supply includes:

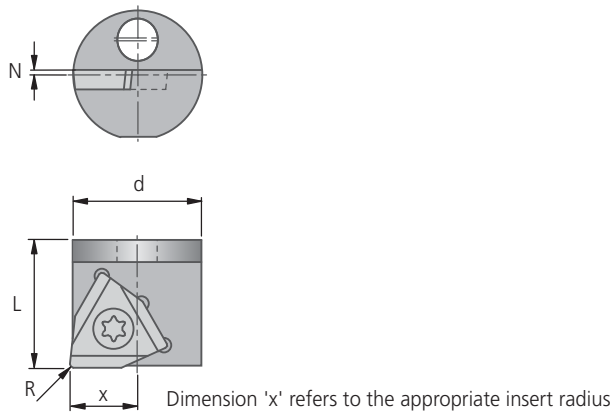
Insert seating with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® WVP Adjustable Insert Seatings $\alpha = 0^\circ$

**P M K N S H** for insert W01 / W29

- L.H. insert seating as shown with right or neutral insert
- R.H. insert seating in mirror image with left or neutral insert
- mounting details see page 626-627



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			
							R0.2	R0.4	R0.8	
WVP12-818-0L31	D20 80650	22	0.4	12	12	0.6	6.3	6.28	6.23	0.02
WVP12-818-0R31	D20 85650									
WVP16-824-0L38	D20 80660	30	0.5	16	16	0.6	8.3	8.28	8.23	0.02
WVP16-824-0R38	D20 85660									
WVP18-834-0L38	D20 80670	36	0.5	18	18.5	0.5	9.3	9.28	9.23	0.02
WVP18-834-0R38	D20 85670									

for insert seating	Insert				Assembly parts	Accessories	Assembly parts	
	W01 L.H. 	W01 R.H. 	W01 neutral 	W29 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVP12-818-0L31				W29 18010.04..	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP	N00 55701 M3x5-8IP 2.25 Nm	N00 52510 E46
WVP12-818-0R31								
WVP16-824-0L38	W01 24060.02..		W01 24600...	W29 24010.04..	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVP16-824-0R38		W01 24360.02..						
WVP18-834-0L38	W01 34060.04..		W01 34600...	W29 34010.04..	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	55011 04006 M4x6 DIN912	N00 52530 E610
WVP18-834-0R38		W01 34360.04..						

For further details on inserts see chapter 7

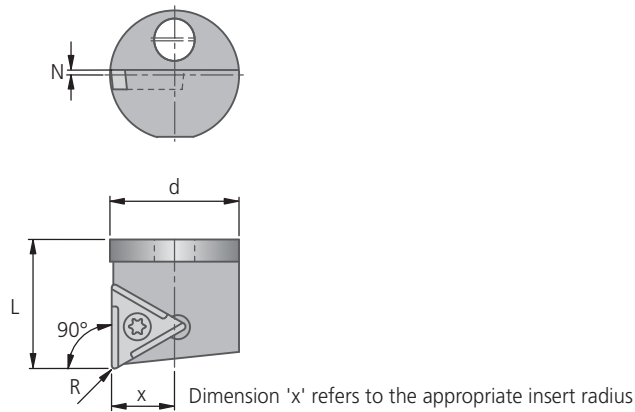
## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.







# KOMET Kometric® WVU Adjustable Insert Seatings $\kappa = 90^\circ$

for insert W30 / W57 **P M K N S H**

L.H. insert seating as shown with left or neutral insert ■  
mounting details see page 626-627 ■



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius			kg
							R0.2	R0.4	R0.8	
WVU3-800-90L	D20 40000	16	0.3	8	8.5	0.5	3.9	3.9	3.9	0.004
WVU4-800-90L	D20 40010	22	0.4	12	12	0.6	5.8	5.8	5.8	0.004
WVU5-800-90L	D20 40020	30	0.5	16	16	0.6	7.8	7.8	7.8	0.01

for insert seating	Insert		Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVU3-800-90L	W30 04..0.03..	W57 04140.04..	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	N00 55561 M2.5×4-8IP 1.28 Nm	N00 52500 E34
WVU4-800-90L	W30 14..0.04..	W57 14140.04..	N00 56121 S/M2.6×4.7-8IP 1.28 Nm	L05 00830 8IP	N00 55701 M3.5×5-8IP 2.25 Nm	N00 52510 E46
WVU5-800-90L	W30 26..0.05..	W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55012 04006 M4×6 DIN7984	N00 52520 E58

For further details on inserts see chapter 7

## Supply includes:

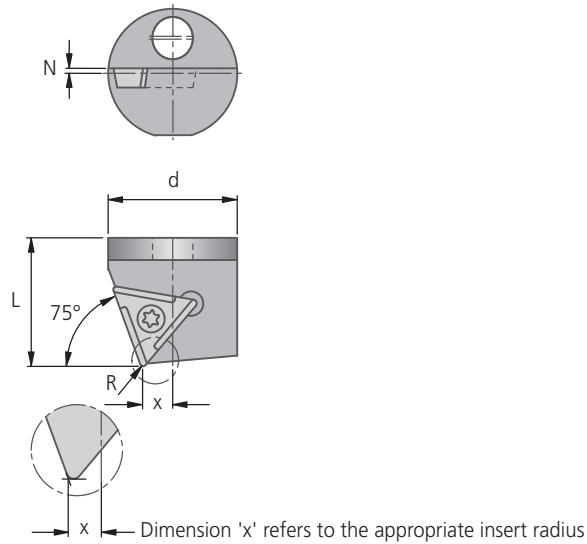
Insert seating with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® WVU Adjustable Insert Seatings $\alpha = 75^\circ$

**P M K N S H** for insert W30 / W57

- L.H. insert seating as shown with left or neutral insert
- mounting details see page 626-627



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius				
							R0.2	R0.3	R0.4	R0.8	
WVU3-800-75L	D20 40100	16	0.3	8	8.5	0.5	2.28	2.3	2.33	–	0.003
WVU4-800-75L	D20 40110	22	0.4	12	12	0.6	3.55	–	3.6	–	0.006
WVU5-800-75L	D20 40120	30	0.5	16	16	0.6	3.92	–	3.97	4	0.012

for insert seating	Insert		Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVU3-800-75L	W30 04..0.03..	W57 04140.04..	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	N00 55561 M2.5×4-8IP 1.28 Nm	N00 52500 E34
WVU4-800-75L	W30 14..0.04..	W57 14140.04..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	N00 55701 M3.5×5-8IP 2.25 Nm	N00 52510 E46
WVU5-800-75L	W30 26..0.05..	W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55012 04006 M4×6 DIN7984	N00 52520 E58

For further details on inserts see chapter 7

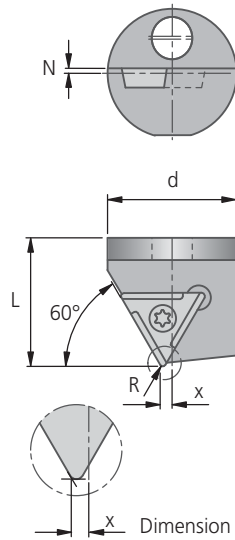
## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.







# KOMET Kometric® WVU Adjustable Insert Seatings $\kappa = 60^\circ$

for insert W30 / W57 P M K N S H

L.H. insert seating as shown with left or neutral insert ■  
mounting details see page 626-627 ■



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius				
							R0.2	R0.3	R0.4	R0.8	
WVU3-800-60L	D20 40200	16	0.3	8	8.5	0.5	0.75	0.8	0.86	–	0.002
WVU4-800-60L	D20 40210	22	0.4	12	12	0.6	1.39	–	1.5	–	0.006
WVU5-800-60L	D20 40220	30	0.5	16	16	0.6	1.13	–	1.24	1.3	0.013

for insert seating	Insert		Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description	Location screw  <b>Order No.</b> Description	Adjusting screw  <b>Order No.</b> Description
WVU3-800-60L	W30 04..0.03..	W57 04140.04..	<b>N00 56021</b> S/M2×3.8-6IP 0.62 Nm	<b>L05 00810</b> 6IP	<b>N00 55561</b> M2.5×4-8IP 1.28 Nm	<b>N00 52500</b> E34
WVU4-800-60L	W30 14..0.04..	W57 14140.04..	<b>N00 56101</b> S/M2.6×5.2-8IP 1.28 Nm	<b>L05 00830</b> 8IP	<b>N00 55701</b> M3.5×5-8IP 2.25 Nm	<b>N00 52510</b> E46
WVU5-800-60L	W30 26..0.05..	W57 26140.04..	<b>N00 56201</b> S/M3.5×6.2-10IP 2.8 Nm	<b>L05 00850</b> 10IP	<b>55012 04006</b> M4×6 DIN7984	<b>N00 52520</b> E58

For further details on inserts see chapter 7

## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.

1



2



3



4



5



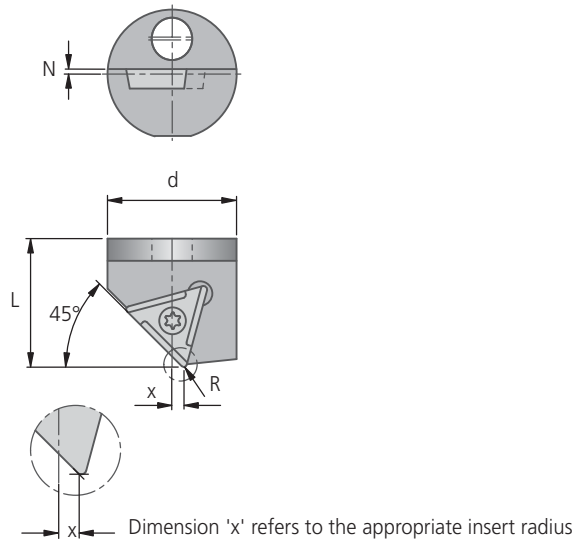
6



# KOMET Kometric® WVU Adjustable Insert Seatings $\kappa = 45^\circ$

**P M K N S H** for insert W30 / W57

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting details see page 626-627



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius				
							R0.2	R0.3	R0.4	R0.8	
WVU3-800-45L	D20 40300	16	0.3	8	8.5	0.5	0.49	0.4	0.3	–	0.002
WVU4-800-45L	D20 40310	22	0.4	12	12	0.6	0.88	–	0.7	–	0.005
WVU4-800-45R	D20 45310										
WVU5-800-45L	D20 40320	30	0.5	16	16	0.6	1.59	–	1.4	1.3	0.012
WVU5-800-45R	D20 45320										

for insert seating	Insert			Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H.  radial rake 36 = 6° 42 = 12° 50 = 20°	W57 neutral 	Clamping screw  Order No. Description N00 56021 S/M2x3.8-6IP 0.62Nm	Screwdriver  Order No. Description L05 00810 6IP	Location screw  Order No. Description N00 55561 M2.5x4-8IP 1.28Nm	Adjusting screw  Order No. Description N00 52500 E34
WVU3-800-45L	W30 04..0.03..		W57 04140.04..				
WVU4-800-45L	W30 14..0.04..		W57 14140.04..	N00 56101 S/M2.6x5.2-8IP 1.28Nm	L05 00830 8IP	N00 55701 M3.5x5-8IP 2.25Nm	N00 52510 E46
WVU4-800-45R		W30 14..0.04..					
WVU5-800-45L	W30 26..0.05..		W57 26140.04..	N00 56201 S/M3.5x6.2-10IP 2.8Nm	L05 00850 10IP	55012 04006 M4x6 DIN7984	N00 52520 E58
WVU5-800-45R		W30 26..0.05..					

For further details on inserts see chapter 7

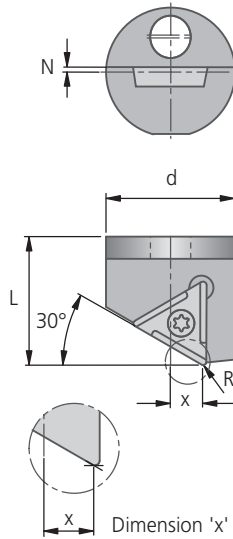
## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.







# KOMET Kometric® WVU Adjustable Insert Seatings $\kappa = 30^\circ$

for insert W30 / W57 **P M K N S H**

L.H. insert seating as shown with left or neutral insert ■  
mounting details see page 626-627 ■



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius				kg
							R0.2	R0.3	R0.4	R0.8	
WVU3-800-30L	D20 40400	16	0.3	8	8.5	0.5	1.63	1.5	1.37	–	0.002
WVU4-800-30L	D20 40410	22	0.4	12	12	0.6	2.76	–	2.5	–	0.006
WVU5-800-30L	D20 40420	30	0.5	16	16	0.6	4.38	–	4.12	4	0.012

for insert seating	Insert		Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVU3-800-30L	W30 04..0.03..	W57 04140.04..	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	N00 55561 M2.5×4-8IP 1.28 Nm	N00 52500 E34
WVU4-800-30L	W30 14..0.04..	W57 14040.04..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	N00 55701 M3.5×5-8IP 2.25 Nm	N00 52510 E46
WVU5-800-30L	W30 26..0.05..	W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55012 04006 M4×6 DIN7984	N00 52520 E58

For further details on inserts see chapter 7

## Supply includes:

Insert seating with assembly parts. Please order insert and accessories separately.

1



2



3



4



5



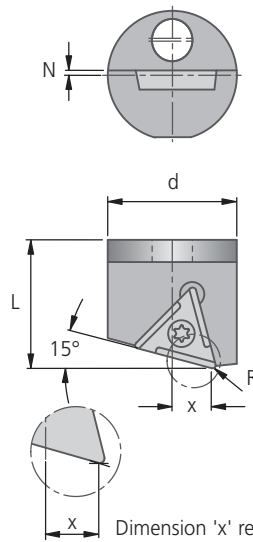
6



# KOMET Kometric® WVU Adjustable Insert Seatings $\kappa = 15^\circ$

**P M K N S H** for insert W30 / W57

- L.H. insert seating as shown with left or neutral insert
- mounting details see page 626-627



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius				
							R0.2	R0.3	R0.4	R0.8	
WVU3-800-15L	D20 40500	16	0.3	8	8.5	0.5	2.25	2.1	1.94	–	0.003
WVU4-800-15L	D20 40510	22	0.4	12	12	0.6	3.31	–	3	–	0.006
WVU5-800-15L	D20 40520	30	0.5	16	16	0.6	5.46	–	5.15	5	0.013

for insert seating	Insert		Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVU3-800-15L	W30 04..0.03..	W57 04140.04..	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	N00 55561 M2.5×4-8IP 1.28 Nm	N00 52500 E34
WVU4-800-15L	W30 14..0.04..	W57 14040.04..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	N00 55701 M3.5×5-8IP 2.25 Nm	N00 52510 E46
WVU5-800-15L	W30 26..0.05..	W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55012 04006 M4×6 DIN7984	N00 52520 E58

For further details on inserts see chapter 7

## Supply includes:

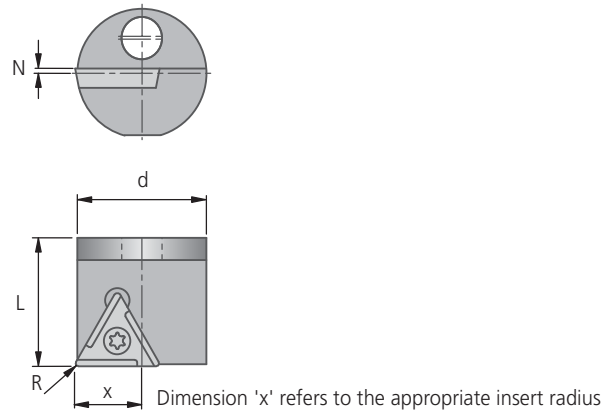
Insert seating with assembly parts. Please order insert and accessories separately.









# KOMET Kometric® WVU Adjustable Insert Seatings $\kappa = 0^\circ$

for insert W30 / W57 **P M K N S H**

L.H. insert seating as shown with right or neutral insert ■  
mounting details see page 626-627 ■



Description cutting form ▼	Order No.	min. cutting diameter	Adjust- ment- range	d	L	N	ISO dimension x for radius				kg
							R0.2	R0.3	R0.4	R0.8	
WVU4-800-0L	D20 40610	22	0.4	12	12	0.6	6.45	–	6.3	–	0.006
WVU5-800-0L	D20 40620	30	0.5	16	16	0.6	8.53	–	8.38	8.3	0.015

for insert seating	Insert		Assembly parts	Accessories	Assembly parts	
	W30 L.H.  radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral 	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Adjusting screw  Order No. Description
WVU4-800-0L	W30 14..0.04..	W57 14140.04..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	N00 55701 M3.5×5-8IP 2.25 Nm	N00 52510 E46
WVU5-800-0L	W30 26..0.05..	W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55012 04006 M4×6 DIN7984	N00 52520 E58

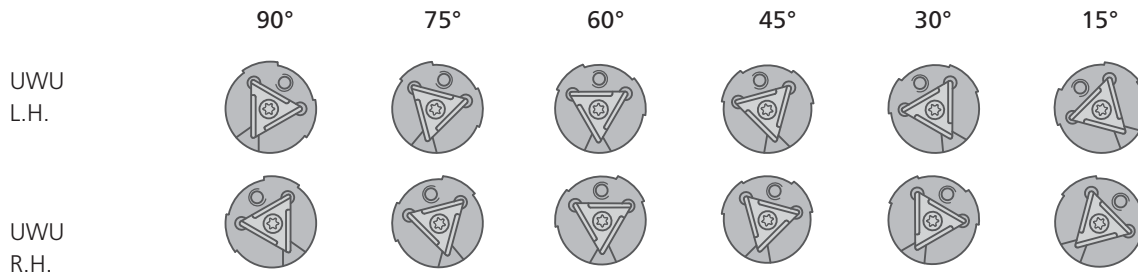
For further details on inserts see chapter 7

## Supply includes:

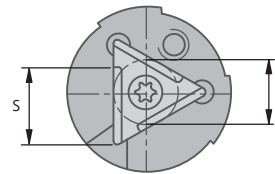
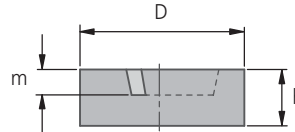
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UWU Insert Seatings

**P M K N S H** for insert W30 / W57



Mounting instruction see page 644-645



L.H. insert seating as shown with left or neutral insert.  
R.H. insert seating in mirror image with right or neutral insert.

Description cutting form ▼	Order No.	J	D	h	at standard radius s	insert thickness m	kg	Insert		
								W30 L.H. radial rake 06 = 6° 12 = 12° 20 = 20°	W30 R.H. radial rake 06 = 6° 12 = 12° 20 = 20°	W57 neutral
UWU 4 L	D52 01100	5.6	16	5.5	4.5	2.5	0.007	W30 14..0.04..		W57 14140.04..
UWU 4 R	D52 06100							W30 14..0.04..		
UWU 5 L	D52 01110	8.2	20	6.5	6.7	3	0.012	W30 26..0.04..		W57 26140.04..
UWU 5 R	D52 06110							W30 26..0.04..		
UWU 6 L	D52 01120	12.7	30	8.8	10.4	4.3	0.038	W30 44..0.05..		
UWU 6 R	D52 06120							W30 44..0.05..		

For further details on inserts see chapter 7

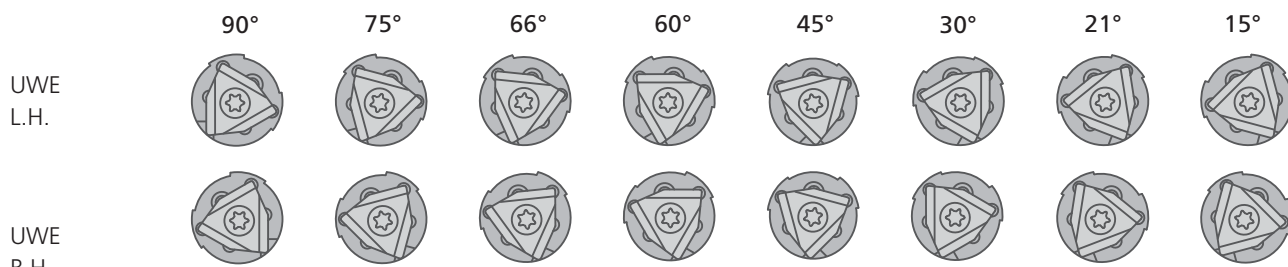
for insert seating	Assembly parts		Accessories		Assembly parts					
	Clamping screw		Screwdriver		Location screw		Cylindrical pin external machining		Cylindrical pin internal machining	
	Description	Order No.	Description	Order No.	Description	Order No.	Description	Order No.	Description	Order No.
UWU 4..	S/M2.6×6.2-8IP 1.28 Nm	N00 56111	8IP	L05 00830	Tx M2.6×6	N00 55600	1.8/2×4.5	N00 52000	1.8/2×4.5	N00 52000
UWU 5..	S/M3.5×7.3-10IP 2.8 Nm	N00 56211	10IP	L05 00850	M3.5×5-8IP 2.25 Nm	N00 55701	∅3×10 DIN 6325	55311 03010	1.8/2×5.5	55311 03010
UWU 6..	S/M5×13.4-20IP 6.25 Nm	N00 56411	20IP	L05 00870	M5×13.5-15IP 6.25 Nm	N00 55851	∅4×10 DIN 6325	55311 04010	3/4×5.5	55311 04010

### Supply includes:

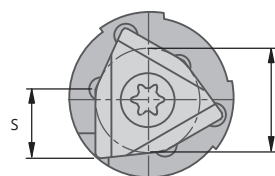
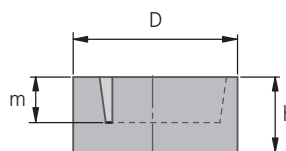
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UWE Insert Seatings

for insert W01 / W29 P M K N S H



Mounting instruction see page 646-647



L.H. insert seating as shown with left or neutral insert.  
R.H. insert seating in mirror image with right or neutral insert.

Description cutting form ▼	Order No.	J	D	h	s	insert thickness m		Insert			
								W01 L.H.  radial rake 06 = 6° 12 = 12° ▽▽	W01 R.H.  radial rake 36 = 6° 42 = 12° ▽▽	W01 neutral 	W29 neutral  00 = PD 01 = K ▽▽
UWE02-38 L	D52 50090	8	14	6	5	3.8	0.005	W01 24..0.04..	W01 24..0.04..	W01 24600...	W29 24..0.04..
UWE02-38 R	D52 55090							W01 24600...		W29 24..0.04..	
UWE01-38 L	D52 50100	10	16	6.5	6.5	3.8	0.007	W01 34..0.04..	W01 34..0.04..	W01 34600...	W29 34..0.04..
UWE01-38 R	D52 55100							W01 34600...		W29 34..0.04..	
UWE1-48 L	D52 50110	12	20	8.3	7.5	4.8	0.013	W01 42..0.04..	W01 42..0.04..	W01 42600...	W29 42..0.04..
UWE1-48 R	D52 55110							W01 42600...		W29 42..0.04..	
UWE2-53 L	D52 50120	15	25	8.8	9.5	5.3	0.023	W01 50..0.04..	W01 50..0.04..	W01 50600...	W29 50..0.08..
UWE2-53 R	D52 55120							W01 50600...		W29 50..0.08..	
UWE3-60 L	D52 50130	17.6	30	10.5	11.5	6	0.041	W01 58..0.04..	W01 58..0.04..	W01 58600...	W29 58..0.08..
UWE3-60 R	D52 55130							W01 58600...		W29 58..0.08..	

For further details on inserts see chapter 7

for insert seating	Assembly parts		Accessories		Assembly parts					
	Clamping screw		Screwdriver		Location screw		Cylindrical pin external machining		Cylindrical pin internal machining	
	Description	Order No.	Description	Order No.	Description	Order No.	Description	Order No.	Description	Order No.
UWE 02..	S/M2.5x6.3-8IP 1.28 Nm	N00 57571	8IP	L05 00830	M2.5x6-8IP 1.28 Nm	N00 55571	1.8/2x4.5	N00 52000	1.8/2x4.5	N00 52000
UWE 01..	S/M3.5x7.3-10IP 2.8 Nm	N00 57521	10IP	L05 00850	M3.5x5-8IP 2.25 Nm	N00 55701	1.8/2x4.5	N00 52000	1.8/2x4.5	N00 52000
UWE 1..	S/M4.5x9-15IP 6.25 Nm	N00 57531	15IP	L05 00860	M4.5x9-10IP 6.25 Nm	N00 55821	∅4x10 DIN 6325	55311 04010	3/4x5.5	N00 52010
UWE 2..	S/M4.5x9-15IP 6.25 Nm	N00 57531	15IP	L05 00860	M4.5x9-10IP 6.25 Nm	N00 55821	∅4x10 DIN 6325	55311 04010	3/4x5.5	N00 52010
UWE 3..	S/M5.5x11-20IP 6.25 Nm	N00 57541	20IP	L05 00870	M5.5x13.5-20IP 6.25 Nm	N00 559051	∅5x12 DIN 6325	55311 05012	4/5x7	N00 52020

Supply includes:

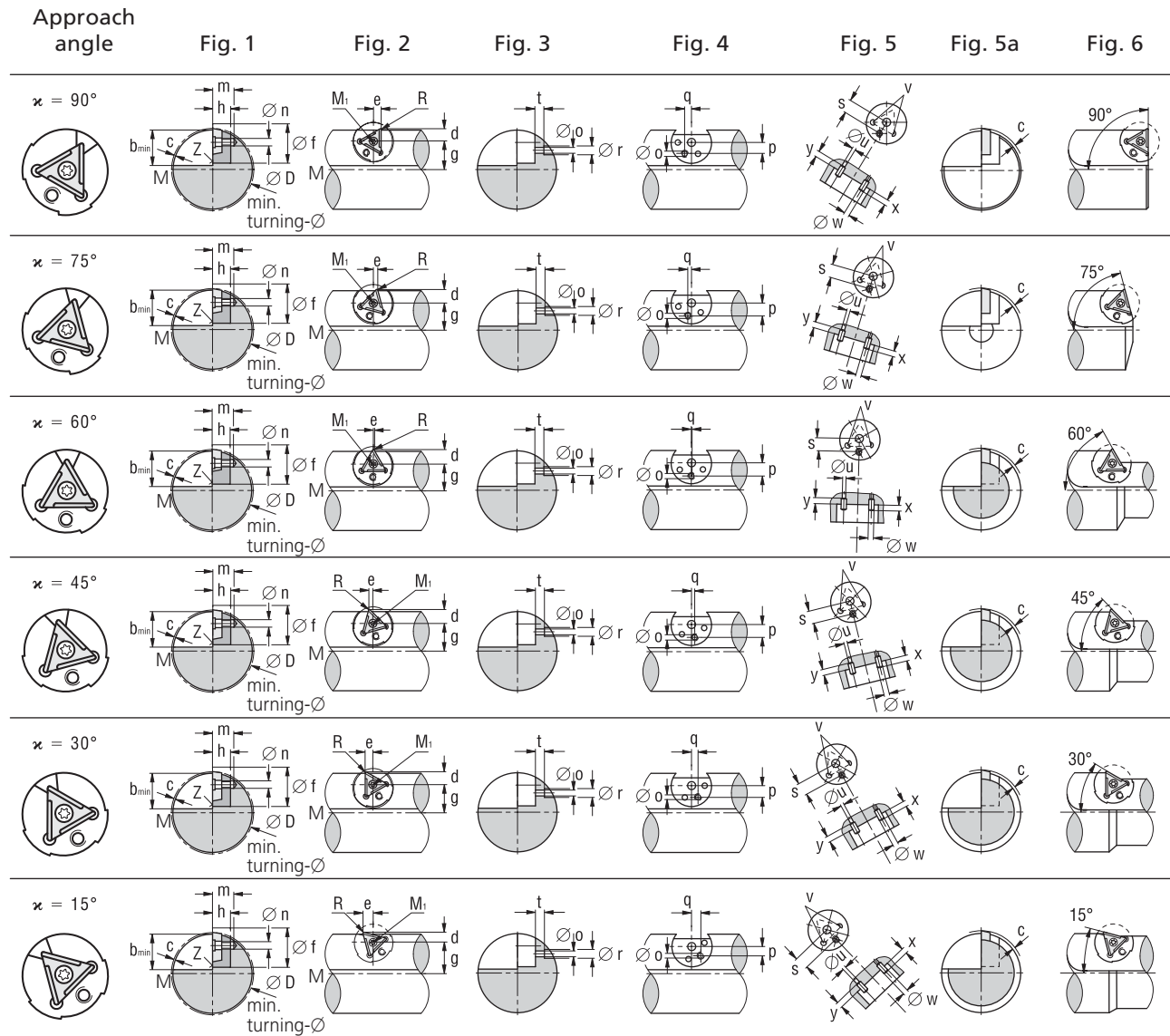
Insert seating with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UWU Insert Seatings

## Mounting instructions

L.H. cutting (R.H. cutting reflected image)



Ø D = required turning diameter







1. Mill cutting height  $Z$  to minimum width  $b$ , so that seating lies with diameter  $f$  as far as possible in the flute (Fig. 1).
2. Align machine spindle with central axis  $M-M$ , take dimensions  $d$  and  $e$  from the table, based on insert radius  $R$ , and calculate the distance  $g$  for centre point  $M1$  ( $g = \frac{D}{2} - d$ ). Move spindle by an amount  $g$  and allow for  $e$ . The spindle is now at the centre point  $M1$  (Fig. 2).
3. Centre centrepoint  $M1$  and drill centre hole  $n$  to depth  $m$  (Fig. 3). Position machine spindle over  $n$ .
4. Move to cutting height  $Z$  and countersink with  $\text{Ø } f$  to depth  $h$  (Fig. 3).
5. Move with machine spindle (to coordinates  $p$  and  $q$ ) to clamping hole  $o$ , centre and drill with  $\text{Ø } o$  (Fig. 4).
6. Rotate workpiece  $180^\circ$ , locate bore  $o$  and counterbore  $\text{Ø } r$  to dimension  $t$  (Fig. 4).
7. Move workpiece back  $180^\circ$ . Position seating, secure lightly, insert and check setting dimensions. Secure seating with clamping screw (Fig. 6).
8. Seating is now firmly mounted, remove insert and drill out both pin holes  $u$  to corner holes  $v$  and ream with  $\text{Ø } w$  to depth  $y$  (Fig. 6 + 6a). Remove seating.  
**Note:** Attention should be paid with pin hole  $u$  and  $w$  as to whether the seating is used for internal or external machining (see table).
9. Press in the pins provided to a distance of  $x$  (Fig. 6a).
10. Turn, mill or grind off the excessive seating (Fig. 7). Deburr the tool and if necessary harden or temper.

### Note:

The seating is hardened to approx. 52 HRC and has a tensile strength of approx. 1800 N/mm<sup>2</sup>. It is therefore highly suitable for machining with turning tool holders D007 and inserts. Carbide grade P25M at cutting speed of 45 m/min. and feed  $s \approx 0.08$  mm/rev.

# KOMET Kometric® UWU Insert Seatings

## Mounting dimensions

Approach angle		UWU 4 L/R		UWU 5 L/R			UWU 6 L/R		
		for R0.4	for R0.8	for R0.4	for R0.5	for R0.8	for R0.4	for R0.5	for R0.8
$\alpha = 90^\circ$ 	d	4.56	4.26	6.81	6.73	6.51	10.71	10.41	10.12
	e	2.8	2.8	4.1	4.1	4.1	6.35	6.35	6.35
	p	3.9	3.9	5.5	5.5	5.5	8.23	8.23	8.23
	q	2.25	2.25	3.18	3.18	3.18	4.75	4.75	4.75
$\alpha = 75^\circ$ 	d	5.04	4.66	7.55	7.45	7.17	11.94	11.56	11.19
	e	1.55	1.65	2.22	2.25	2.32	3.39	3.49	3.59
	p	4.35	4.35	6.13	6.13	6.13	9.18	9.18	9.18
	q	1.16	1.16	1.64	1.64	1.64	2.46	2.46	2.46
$\alpha = 60^\circ$ 	d	5.2	4.8	7.8	7.7	7.4	12.3	11.9	11.5
	e	0.23	0.46	0.23	0.29	0.46	0.23	0.46	0.69
	p	4.5	4.5	6.35	6.35	6.35	9.5	9.5	9.5
	q	-	-	-	-	-	-	-	-
$\alpha = 45^\circ$ 	d	5.04	4.66	7.55	7.45	7.17	11.89	11.52	11.15
	e	1.08	0.7	1.72	1.65	1.37	2.92	2.54	2.17
	p	4.35	4.35	6.13	6.13	6.13	9.18	9.18	9.18
	q	1.16	1.16	1.64	1.64	1.64	2.46	2.46	2.46
$\alpha = 30^\circ$ 	d	4.56	4.26	6.81	6.73	6.51	10.71	10.41	10.12
	e	2.29	1.79	3.59	3.47	3.09	5.84	5.34	4.83
	p	3.9	3.9	5.5	5.5	5.5	8.23	8.23	8.23
	q	2.25	2.25	3.18	3.18	3.18	4.75	4.75	4.75
$\alpha = 15^\circ$ 	d	3.79	3.63	5.63	5.59	5.47	8.81	8.65	8.48
	e	3.34	3.72	5.18	5.03	4.56	8.36	7.74	7.13
	p	3.18	3.18	4.49	4.49	4.49	6.72	6.72	6.72
	q	3.18	3.18	4.49	4.49	4.49	6.72	6.72	6.72

Mounting dimensions for		UWU 4 L/R		UWU 5 L/R		UWU 6 L/R	
Seating	min. cutting-Ø	24.0		40.0		50.0	
	b	14.0		19.0		28.0	
g = D/2 - d	c	0.5		0.5		0.7	
	f <sup>H7</sup>	16.0		20.0		30.0	
	h	5.5		6.5		8.8	
	n	3.0		3.8		5.5	
	m	7.0		11.3		14.2	
	s	4.5		6.35		9.5	
Location screw	o	2.8		3.8		5.3	
	r	4.5		5.5		7.5	
	s	4.5		6.35		9.5	
	t <sup>+0.1</sup>	2.5		3.9		8.5	
Pin				internal machining	external machining	internal machining	external machining
	u	1.6		1.6	2.8	2.8	3.8
	v <sup>H7</sup>	2.0		3.0	3.0	4.0	4.0
	w <sup>H7</sup>	1.8		1.8	3.0	3.0	4.0
	x	2.0		2.5	2.5	2.5	2.5
	y	3.0		6.0	7.5	6.0	7.5



# KOMET Kometric® UWE Insert Seatings

## Mounting instructions

L.H. cutting (R.H. cutting reflected image)

Approach angle	Fig. 1	Fig. 2	Fig. 3	Fig. 4	Fig. 5	Fig. 5a	Fig. 6
$\alpha = 90^\circ$							
$\alpha = 75^\circ$							
$\alpha = 66^\circ$							
$\alpha = 60^\circ$							
$\alpha = 45^\circ$							
$\alpha = 30^\circ$							
$\alpha = 21^\circ$							
$\alpha = 15^\circ$							

Ø D = required turning diameter

1. Mill cutting height  $Z$  to minimum width  $b$ , so that seating lies with diameter  $f$  as far as possible in the flute (Fig. 1).
2. Align machine spindle with central axis  $M-M$ , take dimensions  $d$  and  $e$  from the table, based on insert radius  $R$ , and calculate the distance  $g$  for centre point  $M1$  ( $g = \frac{D}{2} - d$ ). Move spindle by an amount  $g$  and allow for  $e$ . The spindle is now at the centre point  $M1$  (Fig. 2).
3. Centre centrepoint  $M1$  and drill centre hole  $n$  to depth  $m$  (Fig. 3). Position machine spindle over  $n$ .
4. Move to cutting height  $Z$  and countersink with  $\varnothing f$  to depth  $h$  (Fig. 3).
5. Move with machine spindle (to coordinates  $p$  and  $q$ ) to clamping hole  $o$ , centre and drill with  $\varnothing o$  (Fig. 4).
6. Rotate workpiece  $180^\circ$ , locate bore  $o$  and counterbore  $\varnothing r$  to dimension  $t$  (Fig. 4).
7. Move workpiece back  $180^\circ$ . Position seating, secure lightly, insert and check setting dimensions. Secure seating with clamping screw (Fig. 6).
8. Seating is now firmly mounted, remove insert and drill out both pin holes  $u$  to corner holes  $v$  and ream with  $\varnothing w$  to depth  $y$  (Fig. 6 + 6a). Remove seating.  
**Note:** Attention should be paid with pin hole  $u$  and  $w$  as to whether the seating is used for internal or external machining (see table).
9. Press in the pins provided to a distance of  $x$  (Fig. 6a).
10. Turn, mill or grind off the excessive seating (Fig. 7). Deburr the tool and if necessary harden or temper.

### Note:

The seating is hardened to approx. 52 HRC and has a tensile strength of approx. 1800 N/mm<sup>2</sup>. It is therefore highly suitable for machining with turning tool holders D007 and inserts. Carbide grade P25M at cutting speed of 45 m/min. and feed  $s \approx 0.08$  mm/rev.

# KOMET Kometric® UWE Insert Seatings

## Mounting dimensions

Approach angle		UWU 02..L/R				UWU 01..L/R			UWU 1..L/R				UWU 2..L/R				UWU 3..L/R			
		for R0.2	for R0.4	for R0.8	for R1.2	for R0.2	for R0.4	for R0.8	for R0.2	for R0.4	for R0.8	for R1.2	for R0.4	for R0.8	for R1.2	for R1.6	for R0.6	for R0.8	for R1.2	for R1.6
$\alpha = 90^\circ$	d	4.42	4.34	4.35	4.31	5.53	5.51	5.47	6.64	6.62	6.58		8.29	8.25	8.2		9.71	9.69	9.65	9.61
	e	4	4	4	4	5	5	5	6	6	6		7.5	7.5	7.5		8.8	8.8	8.8	8.8
	p	2.39	2.39	2.39	2.39	2.97	2.97	2.97	3.72	3.72	3.72		4.09	4.09	4.09		5.05	5.05	5.05	5.05
	q	2.14	2.14	2.14	2.14	2.68	2.68	2.68	3.35	3.35	3.35		3.68	3.68	3.68		4.55	4.55	4.55	4.55
$\alpha = 75^\circ$	d	5.26	5.19	5.06	4.93	6.59	6.53	6.39	7.92	7.87	7.72	7.59	9.86	9.72	9.59	9.46	11.52	11.46	11.33	11.2
	e	2.73	2.75	2.79	2.82	3.41	3.43	3.46	4.09	4.11	4.14	4.18	5.13	5.16	5.2	5.23	6.02	6.04	6.08	6.11
	p	2.85	2.85	2.85	2.85	3.56	3.56	3.56	4.46	4.46	4.46	4.46	4.9	4.9	4.9	4.9	6.06	6.06	6.06	6.06
	q	1.45	1.45	1.45	1.45	1.82	1.82	1.82	2.27	2.27	2.27	2.27	2.49	2.49	2.49	2.49	3.09	3.09	3.09	3.09
$\alpha = 66^\circ$	d	4.42	4.4	4.35	4.31	5.53	5.51	5.46	6.64	6.62	6.58		8.29	8.24	8.2		9.71	9.68	9.64	9.6
	e	4	4	4	4	5	5	5	6	6	6		7.5	7.5	7.5		8.8	8.8	8.8	8.8
	p	3.04	3.04	3.04	3.04	3.8	3.8	3.8	4.76	4.76	4.76		5.23	5.23	5.23		6.47	6.47	6.47	6.47
	q	0.99	0.99	0.99	0.99	1.24	1.24	1.24	1.55	1.55	1.55		1.7	1.7	1.7		2.1	2.1	2.1	2.1
$\alpha = 60^\circ$	d	5.76	5.66	5.48	5.29	7.22	7.12	6.94	8.68	8.58	8.4	8.22	10.78	10.6	10.42	10.33	12.59	12.49	12.31	12.12
	e	1.3	1.35	1.46	1.56	1.6	1.66	1.76	1.92	1.98	2.08	2.19	2.44	2.55	2.65	2.77	2.89	2.95	3.05	3.17
	p	3.13	3.13	3.13	3.13	3.91	3.91	3.91	4.89	4.89	4.89	4.89	5.38	5.38	5.38	5.38	6.65	6.65	6.65	6.65
	q	0.66	0.66	0.66	0.66	0.83	0.83	0.83	1.04	1.04	1.04	1.04	1.14	1.14	1.14	1.14	1.41	1.41	1.41	1.41
$\alpha = 45^\circ$	d	5.87	5.77	5.58	5.38	7.36	7.26	7.07	8.86	8.76	8.57	8.37	10.99	10.8	10.6	10.41	12.84	12.74	12.54	12.35
	e	0.21	0.12	0.08	-0.28	0.29	0.19	0	0.37	0.27	0.08	-0.12	0.39	0.2	0	-0.19	0.4	0.3	0.1	-0.09
	p	3.2	3.2	3.2	3.2	3.99	3.99	3.99	4.99	4.99	4.99	4.99	5.49	5.49	5.49	5.49	6.79	6.79	6.79	6.79
	q	0.17	0.17	0.17	0.17	0.21	0.21	0.21	0.26	0.26	0.26	0.26	0.29	0.29	0.29	0.29	0.36	0.36	0.36	0.36
$\alpha = 30^\circ$	d	5.6	5.52	5.35	5.18	7.02	6.93	6.76	8.45	8.36	8.19	8.03	10.49	10.32	10.15	9.99	12.25	12.16	12	11.82
	e	1.7	1.56	1.26	0.97	2.16	2.02	1.73	2.62	2.48	2.19	1.9	3.17	2.88	2.59	2.3	3.63	3.48	3.19	2.9
	p	3.04	3.04	3.04	3.04	3.8	3.8	3.8	4.76	4.76	4.76	4.76	5.23	5.23	5.23	5.23	6.47	6.47	6.47	6.47
	q	0.99	0.99	0.99	0.99	1.24	1.24	1.24	1.55	1.55	1.55	1.55	1.7	1.7	1.7	1.7	2.1	2.1	2.1	2.1
$\alpha = 21^\circ$	d	5.26	5.19	5.06	4.93	6.59	6.53	6.39	7.92	7.86	7.72		9.85	9.72	9.59		11.52	11.45	11.32	11.19
	e	2.54	2.37	2.02	1.68	3.22	3.05	2.7	3.9	3.73	3.38		4.74	4.4	4.05		5.45	5.28	4.93	4.59
	p	2.85	2.85	2.85	2.85	3.56	3.56	3.56	4.46	4.46	4.46		4.9	4.9	4.9		6.06	6.06	6.06	6.06
	q	1.45	1.45	1.45	1.45	1.82	1.82	1.82	2.27	2.27	2.27		2.5	2.5	2.5		3.09	3.09	3.09	3.09
$\alpha = 15^\circ$	d	4.96	4.91	4.81	4.71	6.22	6.17	6.06	7.47	7.42	7.32		9.3	9.2	9.1		10.88	10.83	10.73	10.62
	e	3.07	2.88	2.5	2.12	3.88	3.69	3.31	4.69	4.51	4.13		5.73	5.35	4.97		6.6	6.41	6.03	5.65
	p	2.68	2.68	2.68	2.68	3.35	3.35	3.35	4.19	4.19	4.19		4.61	4.61	4.61		5.7	5.7	5.7	5.7
	q	1.74	1.74	1.74	1.74	2.18	2.18	2.18	2.72	2.72	2.72		3	3	3		3.7	3.7	3.7	3.7

Mounting dimensions for		UWU 02..L/R	UWU 01..L/R	UWU 1..L/R	UWU 2..L/R	UWU 3..L/R			
$\alpha = 90^\circ, 75^\circ, 60^\circ, 45^\circ, 30^\circ, 15^\circ$	Seating	min. cutt.- $\emptyset$	32	34	40	50	54		
	b	13	16	19	24	28			
	c	0.5	0.5	0.6	0.7	0.8			
	$g = D/2 - d$	f <sup>H7</sup>	14	16	20	25	30		
	$\alpha = 66^\circ, 21^\circ$	h	6	6.5	8.3	8.8	10.5		
	$g = D/2 + d$	n	2.7	3.8	4.8	4.8	5.8		
Location screw	m	8.5	7	11.3	11.3	16			
	o	2.7	3.8	4.8	4.8	5.8			
	r	4	5.5	6.5	6.5	7.5			
	s	3.2	4	5	5.5	6.8			
Pin	t <sup>+0.1</sup>	3.9	2.5	5.7	5.7	9.2			
	u	1.6	1.6	2.8	3.8	3.8	4.8		
	v <sup>H7</sup>	2	2	4	4	4	5		
	w <sup>H7</sup>	1.8	1.8	3	4	3	4	4	5
	x	2	2	2.5	2.5	2.5	2.5	5	5
	y	3	3	6	7.5	6	7.5	8	8



# KOMET Kometric® UZV Boring Tool

## Mounting Instructions

Mounting depends on the insert position required. The right dimensions for the mounting bore and holding thread for each boring bar  $\varnothing$  can be taken from the details on the drawings and tables.

1



2



## Mounting details

Boring tool size	d1	a	b	G	c
UZV 8	8	15	10	M6	9
UZV 10	10	18	12	M6	12
UZV 12	12	20	15	M8	13
UZV 16	16	27	18	M10	18
UZV 20	20	30	20	M12	20

3

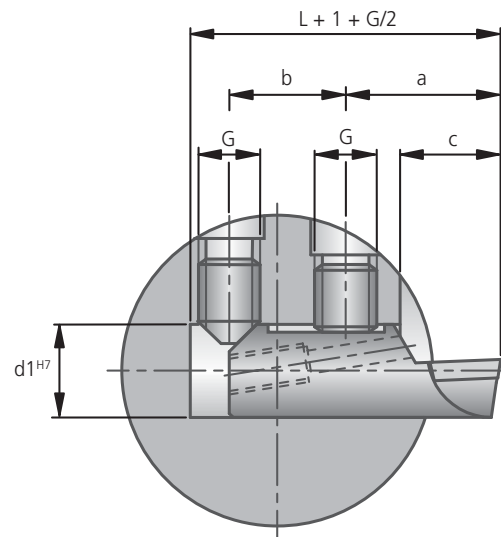


4



## Mounting form A

Angled adjustment with threaded pin DIN 914



5

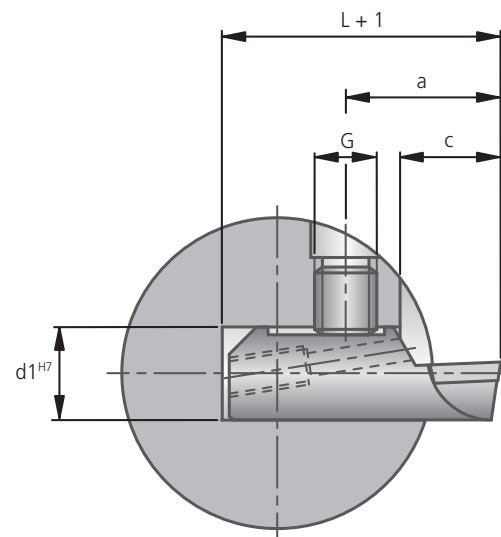


6



## Mounting form B

Adjustment with internal adjusting screw

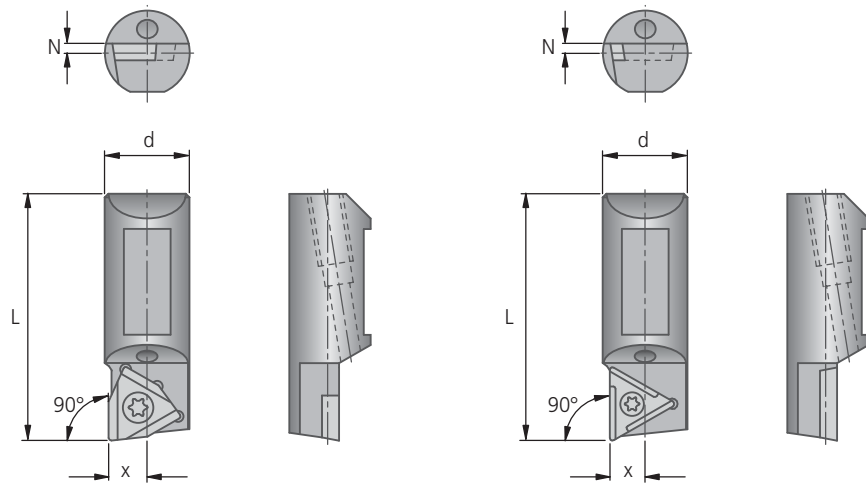




# KOMET Kometric® UZV Boring Tool $\kappa = 90^\circ$

for insert W01 / W29 and W30 / W57 P M K N S H

- L.H. boring tool as shown with left or neutral insert ■
- R.H. boring tool in mirror image with right or neutral insert ■
- mounting details see page 648 ■



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral		
UZV8-803-25-90°-L	D20 00000	8	25	1.0	3	0.007	W30 04..0.03..		W57 04140.04..	N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
UZV8-803-25-90°-R	D20 05000						W30 04..0.03..				
UZV10-804-30-90°-L	D20 00020	10	30	1.5	4	0.013	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZV10-804-30-90°-R	D20 05020						W30 14..0.04..				
UZV12-804-35-90°-L	D20 00040	12	35	1.5	5	0.022	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-90°-R	D20 05040						W30 14..0.04..				
UZV16-805-45-90°-L	D20 00060	16	45	3.0	6	0.052	W30 26..0.05..		W57 26140.04..	N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-805-45-90°-R	D20 05060						W30 26..0.05..				

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. radial rake 06 = 6° 12 = 12° ∇∇	W01 R.H. radial rake 36 = 6° 42 = 12° ∇∇	W29 neutral 00 = PD 01 = K ∇∇		
UZV10-818-30-90°-L31	D20 50020	10	30	1.5	4	0.013	W01 18....		W29 18....	N00 57553 S/M2.2×5.5-6IP 1.01 Nm	L05 00810 6IP
UZV10-818-30-90°-R31	D20 55020						W01 18....				
UZV12-802-35-90°-L38	D20 00071	12	35	1.5	5	0.022	W01 24....		W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-90°-R38	D20 05071						W01 24....				
UZV16-802-45-90°-L38	D20 50090	16	45	3.0	6	0.052	W01 24....		W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-90°-R38	D20 55090						W01 24....				
UZV16-801-45-90°-L38	D20 00091	16	45	3.0	6	0.052	W01 34....		W29 34....	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-90°-R38	D20 05091						W01 34....				

For further details on inserts see chapter 7

## Supply includes:

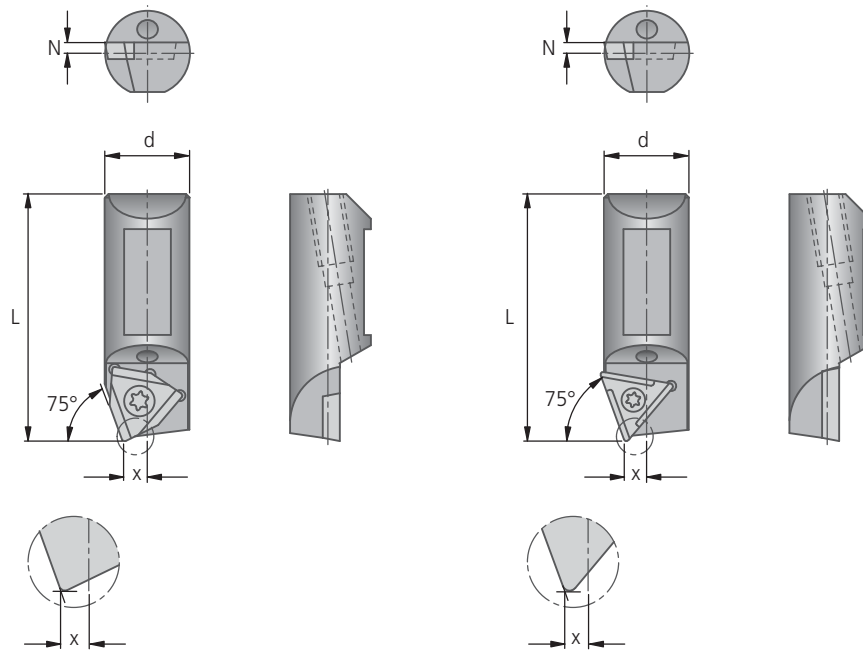
Boring tool with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UZV Boring Tool $\alpha = 75^\circ$

**P M K N S H** for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting details see page 648



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral		
UZV8-803-25-75°-L	D20 00100	8	25	1.0	2	0.007	W30 04..0.03..		W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
UZV8-803-25-75°-R	D20 05100							W30 04..0.03..			
UZV10-804-30-75°-L	D20 00120	10	30	1.5	2.5	0.013	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV10-804-30-75°-R	D20 05120							W30 14..0.04..			
UZV12-804-35-75°-L	D20 00140	12	35	1.5	4	0.022	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-75°-R	D20 05140							W30 14..0.04..			
UZV16-805-45-75°-L	D20 00160	16	45	3.0	4	0.052	W30 26..0.05..		W57 26140.04..	N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-805-45-75°-R	D20 05160							W30 26..0.05..			

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. radial rake 06 = 6° 12 = 12° ∇∇	W01 R.H. radial rake 36 = 6° 42 = 12° ∇∇	W29 neutral 00 = PD 01 = K ∇∇		
UZV10-818-30-75°-L31	D20 50120	10	30	1.5	2.5	0.013	W01 18....		W29 18....	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP
UZV10-818-30-75°-R31	D20 55120							W01 18....			
UZV12-802-35-75°-L38	D20 00171	12	35	1.5	4	0.022	W01 24....		W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-75°-R38	D20 05171							W01 24....			
UZV16-802-45-75°-L38	D20 50190	16	45	3.0	4	0.052	W01 24....		W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-75°-R38	D20 55190							W01 24....			
UZV16-801-45-75°-L38	D20 00191	16	45	3.0	4	0.052	W01 34....		W29 34....	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-75°-R38	D20 05191							W01 34....			

For further details on inserts see chapter 7

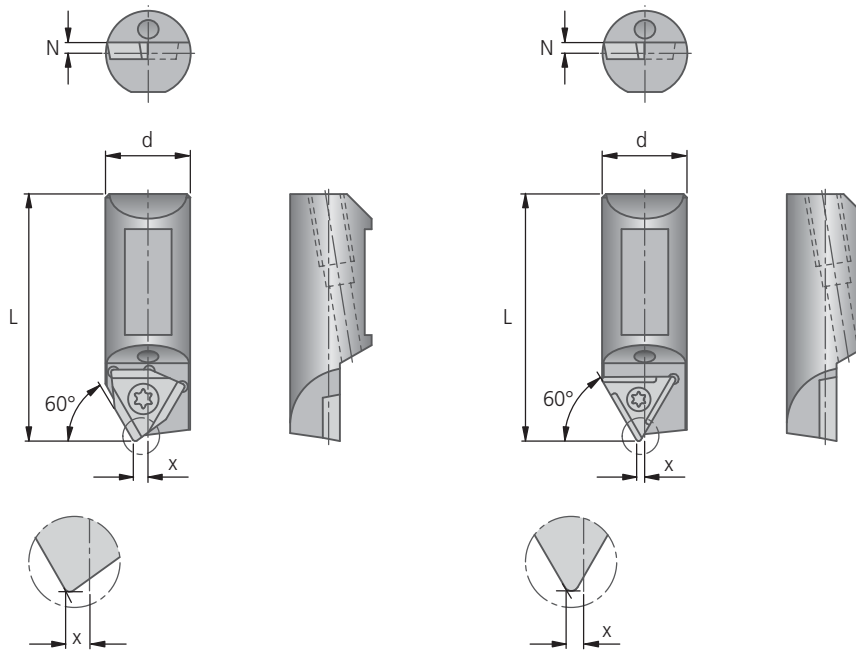
## Supply includes:

Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\kappa = 60^\circ$

for insert W01 / W29 and W30 / W57 P M K N S H

- L.H. boring tool as shown with left or neutral insert ■
- R.H. boring tool in mirror image with right or neutral insert ■
- mounting details see page 648 ■



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral	Clamping screw 	Screwdriver 
UZV8-803-25-60°-L	D20 00200	8	25	1.0	0.6	0.007	W30 04..0.03..		W57 04140.04..	N00 56031 S/M2x4.9-6IP 0.62 Nm	L05 00810 6IP
UZV8-803-25-60°-R	D20 05200						W30 04..0.03..			N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV10-804-30-60°-L	D20 00220	10	30	1.5	0.6	0.013	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV10-804-30-60°-R	D20 05220						W30 14..0.04..			N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-60°-L	D20 00240	12	35	1.5	1	0.022	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-60°-R	D20 05240						W30 14..0.04..			N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-805-45-60°-R	D20 05260	16	45	3.0	1	0.052	W30 26..0.05..	W57 26140.04..	N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP	

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. radial rake 06 = 6° 12 = 12° ∇∇	W01 R.H. radial rake 36 = 6° 42 = 12° ∇∇	W29 neutral 00 = PD 01 = K ∇∇	Clamping screw 	Screwdriver 
UZV10-818-30-60°-L31	D20 50220	10	30	1.5	0.5	0.013	W01 18....		W29 18....	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP
UZV10-818-30-60°-R31	D20 55220						W01 18....			N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-60°-L38	D20 00271	12	35	1.5	1	0.022	W01 24....		W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-60°-R38	D20 05271						W01 24....			N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-60°-L38	D20 50290	16	45	3.0	1	0.052	W01 24....		W29 24....	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-802-45-60°-R38	D20 55290						W01 24....			N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-60°-L38	D20 00291	16	45	3.0	1	0.052	W01 34....		W29 34....	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-60°-R38	D20 05291						W01 34....			N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP

For further details on inserts see chapter 7

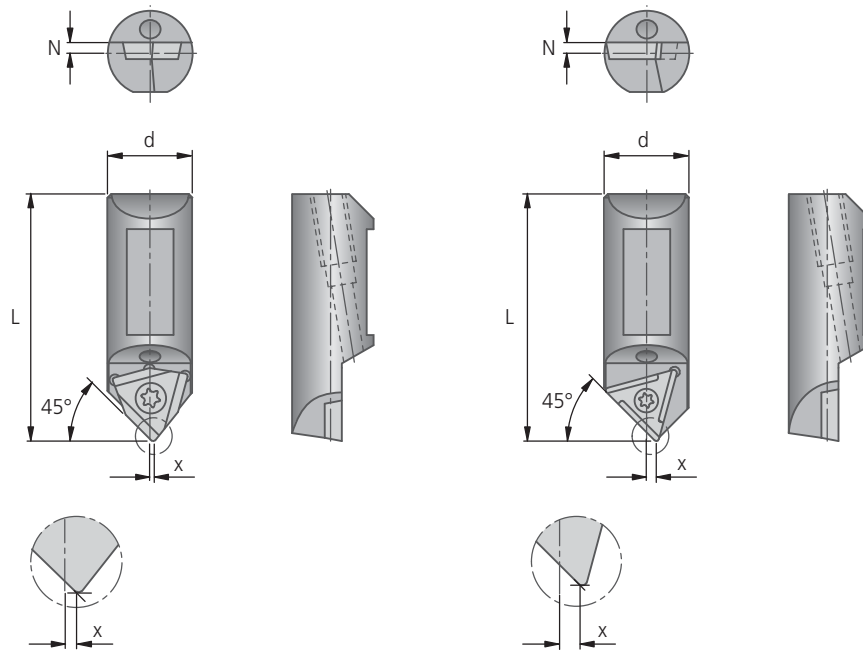
### Supply includes:

Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\alpha = 45^\circ$

**P M K N S H** for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting details see page 648



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. radial rake	W30 R.H. radial rake	W57 neutral		
UZV8-803-25-45°-L	D20 00400	8	25	1.0	1	0.007	06 = 6° 12 = 12° 20 = 20°	36 = 6° 42 = 12° 50 = 20°		Clamping screw Order No. Description	Screwdriver Order No. Description
UZV8-803-25-45°-R	D20 05400										
UZV10-804-30-45°-L	D20 00420	10	30	1.5	1.3	0.013	W30 14..0.04..	W30 14..0.04..	W57 04140.04..	N00 56031 S/M2.4x4.9-6IP 0.62 Nm	L05 00810 6IP
UZV10-804-30-45°-R	D20 05420								W57 14140.04..		
UZV12-804-35-45°-L	D20 00440	12	35	1.5	1	0.022	W30 14..0.04..	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-45°-R	D20 05440										
UZV16-805-45-45°-L	D20 00460	16	45	3.0	1.5	0.052	W30 26..0.05..	W30 26..0.05..	W57 26140.04..	N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-805-45-45°-R	D20 05460										

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. radial rake	W01 R.H. radial rake	W29 neutral		
UZV10-818-30-45°-L31	D20 50420	10	30	1.5	1.3	0.013	06 = 6° 12 = 12° 20 = 20°	36 = 6° 42 = 12° 50 = 20°	00 = PD 01 = K 20 = 20°	Clamping screw Order No. Description	Screwdriver Order No. Description
UZV10-818-30-45°-R31	D20 55420						W01 18....	W01 18....	W29 18....		
UZV12-802-35-45°-L38	D20 00471	12	35	1.5	1	0.022	W01 24....	W01 24....	W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-45°-R38	D20 05471										
UZV16-802-45-45°-L38	D20 50490	16	45	3.0	1.5	0.052	W01 24....	W01 24....	W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-45°-R38	D20 55490										
UZV16-801-45-45°-L38	D20 00491	16	45	3.0	1.5	0.052	W01 34....	W01 34....	W29 34....	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-45°-R38	D20 05491										

For further details on inserts see chapter 7

## Supply includes:

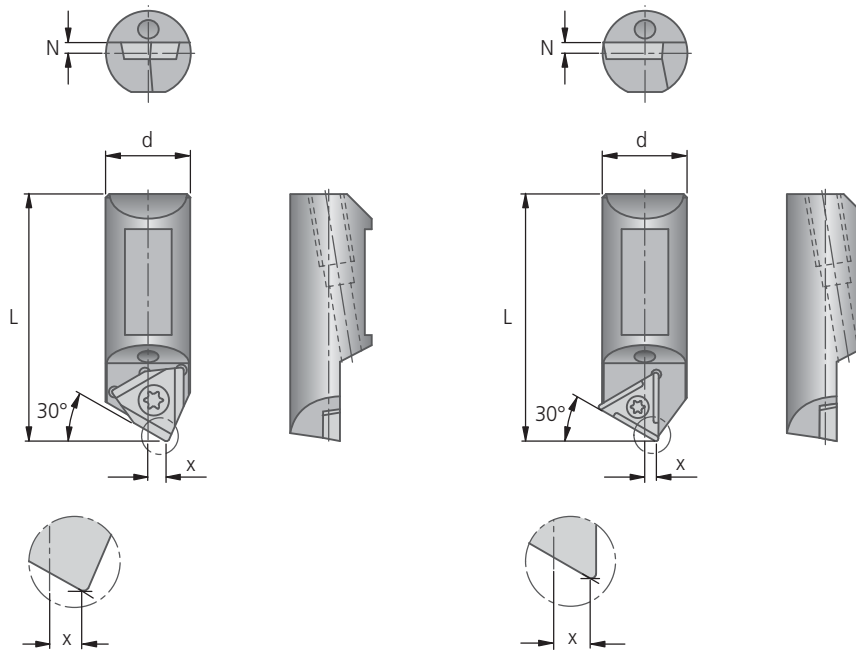
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\kappa = 30^\circ$

for insert W01 / W29 and W30 / W57



- L.H. boring tool as shown with left or neutral insert ■
- R.H. boring tool in mirror image with right or neutral insert ■
- mounting details see page 648 ■



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral		
UZV8-803-25-30°-L	D20 00500	8	25	1.0	2.5	0.007	W30 04..0.03..		W57 04140.04..	N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
UZV8-803-25-30°-R	D20 05500						W30 04..0.03..				
UZV10-804-30-30°-L	D20 00520	10	30	1.5	3	0.013	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZV10-804-30-30°-R	D20 05520						W30 14..0.04..				
UZV12-804-35-30°-L	D20 00540	12	35	1.5	3	0.022	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-30°-R	D20 05540						W30 14..0.04..				
UZV16-805-45-30°-L	D20 00560	16	45	3.0	3.5	0.052	W30 26..0.05..		W57 26140.04..	N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-805-45-30°-R	D20 05560						W30 26..0.05..				

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. radial rake 06 = 6° 12 = 12° ∇∇	W01 R.H. radial rake 36 = 6° 42 = 12° ∇∇	W29 neutral 00 = PD 01 = K ∇∇		
UZV10-818-30-30°-L31	D20 50520	10	30	1.5	3	0.013	W01 18....		W29 18....	N00 57553 S/M2.2×5.5-6IP 1.01 Nm	L05 00810 6IP
UZV10-818-30-30°-R31	D20 55520						W01 18....				
UZV12-802-35-30°-L38	D20 00571	12	35	1.5	3	0.022	W01 24....		W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-30°-R38	D20 05571						W01 24....				
UZV16-802-45-30°-L38	D20 50590	16	45	3.0	3.5	0.052	W01 24....		W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-30°-R38	D20 55590						W01 24....				
UZV16-801-45-30°-L38	D20 00591	16	45	3.0	3.5	0.052	W01 34....		W29 34....	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-30°-R38	D20 05591						W01 34....				

For further details on inserts see chapter 7

### Supply includes:

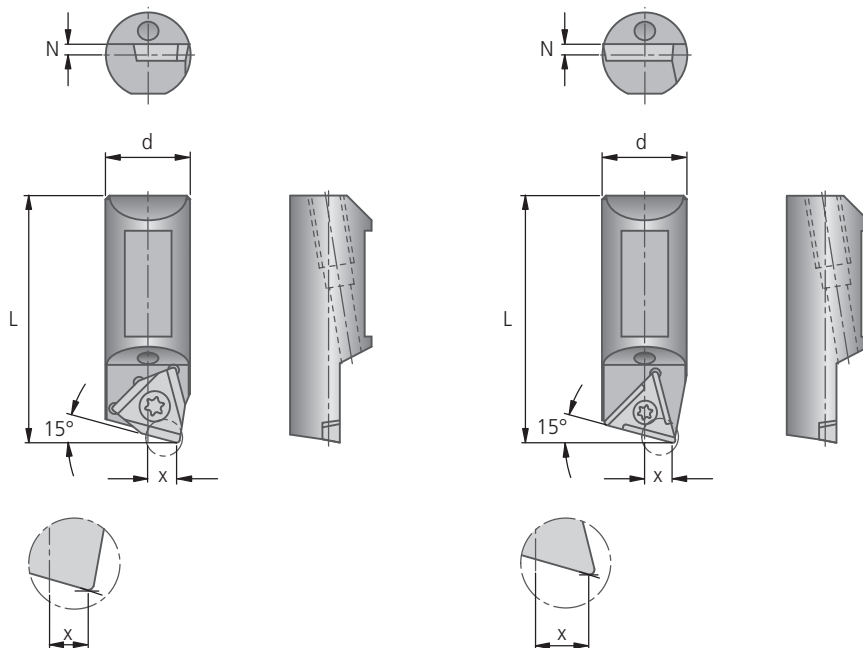
Boring tool with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UZV Boring Tool $\alpha = 15^\circ$

**P M K N S H** for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting details see page 648



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts Clamping screw Order No. Description	Accessories Screwdriver Order No. Description
							W30 L.H. radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral		
UZV8-803-25-15°-R	D20 05600	8	25	1.0	3	0.007		W30 04..0.03..	W57 04140.04..	N00 56031 S/M2.4x4.9-6IP 0.62 Nm	L05 00810 6IP
UZV10-804-30-15°-L	D20 00620	10	30	1.5	4	0.013	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV10-804-30-15°-R	D20 05620							W30 14..0.04..			
UZV12-804-35-15°-L	D20 00640	12	35	1.5	3.5	0.022	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-15°-R	D20 05640							W30 14..0.04..			
UZV16-805-45-15°-L	D20 00660	16	45	3.0	5	0.052	W30 26..0.05..		W57 26140.04..	N00 56211 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-805-45-15°-R	D20 05660							W30 26..0.05..			

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts Clamping screw Order No. Description	Accessories Screwdriver Order No. Description
							W01 L.H. radial rake 06 = 6° 12 = 12° ∇∇	W01 R.H. radial rake 36 = 6° 42 = 12° ∇∇	W29 neutral 00 = PD 01 = K ∇∇		
UZV10-818-30-15°-L31	D20 50620	10	30	1.5	4	0.013	W01 18....		W29 18....	N00 57553 S/M2.2x5.5-6IP 1.01 Nm	L05 00810 6IP
UZV10-818-30-15°-R31	D20 55620							W01 18....			
UZV12-802-35-15°-L38	D20 00671	12	35	1.5	3.5	0.022	W01 24....		W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-15°-R38	D20 05671							W01 24....			
UZV16-802-45-15°-L38	D20 50690	16	45	3.0	5	0.052	W01 24....		W29 24....	N00 57511 S/M2.5x7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-15°-R38	D20 55690							W01 24....			
UZV16-801-45-15°-L38	D20 00691	16	45	3.0	5	0.052	W01 34....		W29 34....	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-15°-R38	D20 05691							W01 34....			

For further details on inserts see chapter 7

## Supply includes:

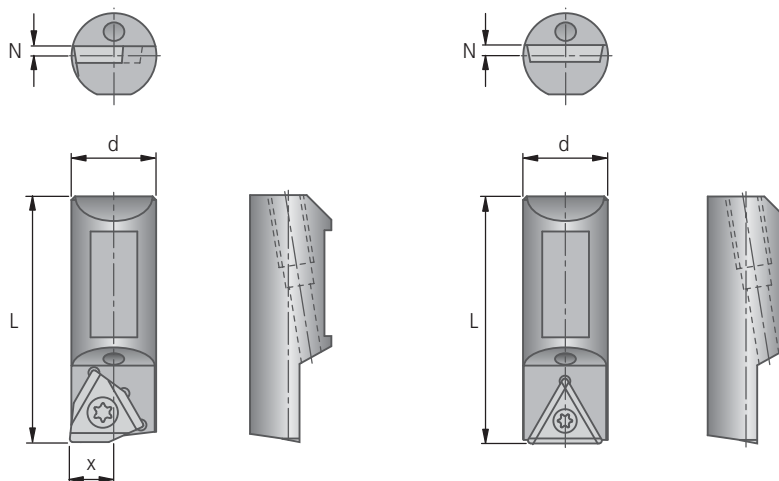
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\kappa = 0^\circ$

for insert W01 / W29 and W30 / W57



- L.H. boring tool as shown with right or neutral insert ■
- R.H. boring tool in mirror image with left or neutral insert ■
- mounting details see page 648 ■



Description	Order No.	d	L	N	kg	Insert			Assembly parts	Accessories
						W30 L.H. radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	W30 R.H. radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°	W57 neutral	Clamping screw	Screwdriver
								Order No. Description	Order No. Description	
UZV8-803-25-0°	D20 05700	8	25	1.0	0.007	W30 04..0.03..	W30 04..0.03..	W57 04140.04..	N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
UZV10-804-30-0°	D20 05720	10	30	1.5	0.013	W30 14..0.04..	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-804-35-0°	D20 05740	12	35	1.5	0.022	W30 14..0.04..	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-805-45-0°	D20 05760	16	45	3.0	0.052	W30 26..0.05..	W30 26..0.05..	W57 26140.04..	N00 56211 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UZV20-806-50-0°	D20 05800	20	50	4.0	0.98	W30 44..0.08..	W30 44..0.08..		N00 56411 S/M5×13.4-20IP 6.25 Nm	L05 00870 20IP

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. radial rake 06 = 6° 12 = 12° ∇∇	W01 R.H. radial rake 36 = 6° 42 = 12° ∇∇	W29 neutral 00 = PD 01 = K ∇∇	Clamping screw	Screwdriver
									Order No. Description	Order No. Description	
UZV10-818-30-0°-L31	D20 50720	10	30	1.5	5.3	0.013		W01 18....	W29 18....	N00 57553 S/M2.2×5.5-6IP 1.01 Nm	L05 00810 6IP
UZV10-818-30-0°-R31	D20 55720						W01 18....				
UZV12-802-35-0°-L38	D20 00771	12	35	1.5	6.3	0.022		W01 24....	W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZV12-802-35-0°-R38	D20 05771						W01 24....				
UZV16-802-45-0°-L38	D20 50790	16	45	3.0	8.3	0.052		W01 24....	W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZV16-802-45-0°-R38	D20 55790						W01 24....				
UZV16-801-45-0°-L38	D20 00791	16	45	3.0	8.3	0.052		W01 34....	W29 34....	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UZV16-801-45-0°-R38	D20 05791						W01 34....				

For further details on inserts see chapter 7

## Supply includes:

Boring tool with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UZ Boring Tool

## Mounting details

1



2



3



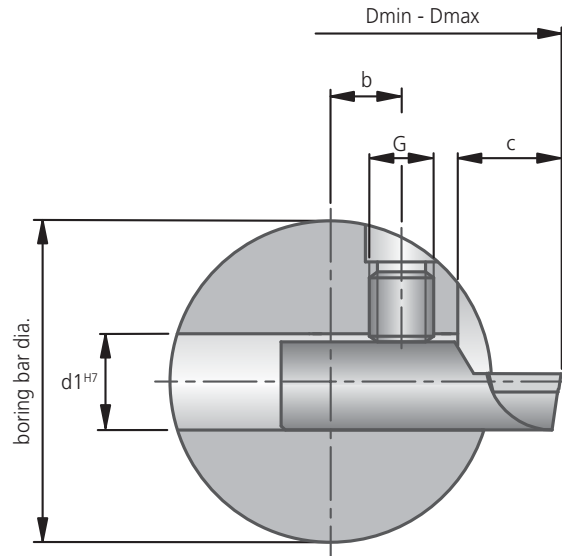
4



5



6



## Mounting dimensions

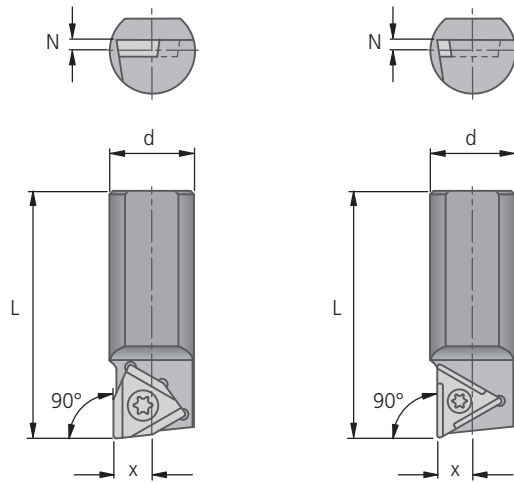
Boring tool size	Drilling range Radial mounting $D_{min} - D_{max}$	for boring bar dia.	d1	b	G	c
UZ8	27 – 40	20	8	1.5	M6	9
UZ10	35 – 52	25	10	2.0	M6	12
UZ12	40 – 63	32	12	2.5	M8	13
UZ16	52 – 80	40	16	3.0	M10	18
UZ20	64 – 100	50	20	5.0	M12	20
UZ25	79 – 126	63	25	4.0	M16	23













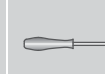









# KOMET Kometric® UZ Boring Tool $\kappa = 90^\circ$

for insert W01 / W29 and W30 / W57 P M K N S H

- L.H. boring tool as shown with left or neutral insert ■
- R.H. boring tool in mirror image with right or neutral insert ■
- mounting details see page 656 ■



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. 	W30 R.H. 	W57 neutral 		
UZ8-803-45-90°-L	D20 10010	8	45	1.0	3	0.015	radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ8-803-45-90°-R	D20 15010										
UZ10-804-50-90°-L	D20 10030	10	50	1.5	4	0.026	radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ10-804-50-90°-R	D20 15030										
UZ12-804-60-90°-L	D20 10050	12	60	1.5	5	0.045	radial rake 06 = 6° 12 = 12° ∇∇ 20 = 20°	radial rake 36 = 6° 42 = 12° ∇∇ 50 = 20°		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ12-804-60-90°-R	D20 15050										

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. 	W01 R.H. 	W29 neutral 		
UZ12-802-60-90°-L38	D20 10071	12	60	1.5	5	0.047	radial rake 06 = 6° 12 = 12° ∇∇	radial rake 36 = 6° 42 = 12° ∇∇		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ12-802-60-90°-R38	D20 15071										
UZ16-801-80-90°-L38	D20 10091	16	80	3.0	6	0.11	radial rake 06 = 6° 12 = 12° ∇∇	radial rake 36 = 6° 42 = 12° ∇∇		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ16-801-80-90°-R38	D20 15091										
UZ20-810-100-90°-L48	D20 10111	20	100	4.0	8	0.217	radial rake 06 = 6° 12 = 12° ∇∇	radial rake 36 = 6° 42 = 12° ∇∇		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ20-810-100-90°-R48	D20 15111										
UZ25-820-120-90°-L53	D20 10131	25	120	4.0	10	0.404	radial rake 06 = 6° 12 = 12° ∇∇	radial rake 36 = 6° 42 = 12° ∇∇		Clamping screw  <b>Order No.</b> Description	Screwdriver  <b>Order No.</b> Description
UZ25-820-120-90°-R53	D20 15131										

For further details on inserts see chapter 7

## Supply includes:

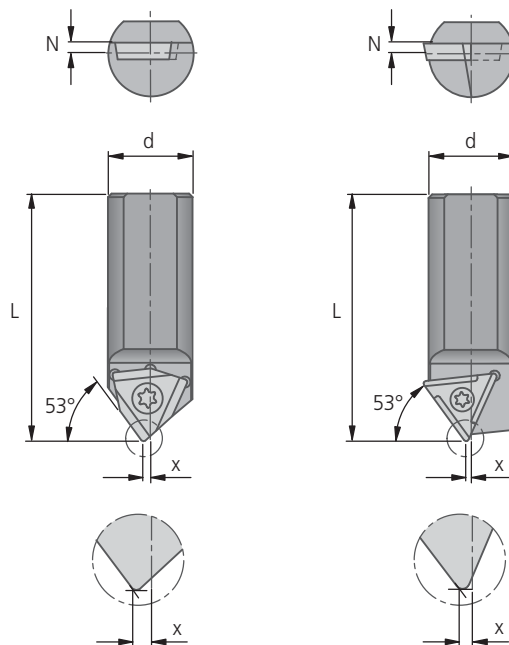
Boring tool with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® UZ Boring Tool $\alpha = 53^\circ$

**P M K N S H** for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting details see page 656



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. 	W30 R.H. 	W57 neutral 	Clamping screw 	Screwdriver 
UZ8-803-45-53°-L	D20 10610	8	45	1.0	0.4	0.015	radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°		Order No. Description	Order No. Description
UZ8-803-45-53°-R	D20 15610										
UZ10-804-50-53°-L	D20 10630	10	50	1.5	0.5	0.026	W30 14..0.04..		W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP
UZ12-804-60-53°-L	D20 10650										
UZ12-804-60-53°-R	D20 15650						W30 14..0.04..		W57 14140.04..		

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. 	W01 R.H. 	W29 neutral 	Clamping screw 	Screwdriver 
UZ12-802-60-53°-L38	D20 10671	12	60	1.5	0.5	0.047	radial rake 06 = 6° 12 = 12° ▽▽	radial rake 36 = 6° 42 = 12° ▽▽		Order No. Description	Order No. Description
UZ12-802-60-53°-R38	D20 15671										
UZ16-801-80-53°-L38	D20 10691	16	80	3.0	0.6	0.108	W01 34....		W29 34....	N00 57521 S/M3.5x7.3-10IP 2.8 Nm	L05 00850 10IP
UZ16-801-80-53°-R38	D20 15691										
UZ20-810-100-53°-L48	D20 10711	20	100	4.0	0.6	0.212	W01 42....		W29 42....	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP
UZ25-820-120-53°-L53	D20 10731										
UZ25-820-120-53°-R53	D20 15731						W01 50....		W29 50....	N00 57531 S/M4.5x9-15IP 6.25 Nm	L05 00860 15IP

For further details on inserts see chapter 7

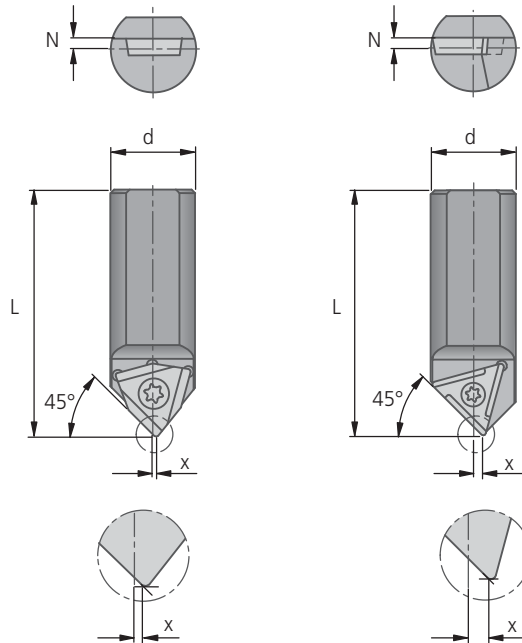
## Supply includes:












Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZ Boring Tool $\kappa = 45^\circ$










for insert W01 / W29 and W30 / W57 P M K N S H

L.H. boring tool as shown with left or neutral insert ■  
 R.H. boring tool in mirror image with right or neutral insert ■  
 mounting details see page 656 ■



Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W30 L.H. 	W30 R.H. 	W57 neutral 	Clamping screw 	Screwdriver 
UZ8-803-45-45°-L	D20 10810	8	45	1.0	1.0	0.015	radial rake 06 = 6° 12 = 12° ▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽ 50 = 20°		Order No. Description 	Order No. Description 
UZ8-803-45-45°-R	D20 15810						W30 04..0.03..	W30 04..0.03..	W57 04140.04..	N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
UZ10-804-50-45°-L	D20 10830	10	50	1.5	1.3	0.026	radial rake 06 = 6° 12 = 12° ▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽ 50 = 20°		Order No. Description 	Order No. Description 
UZ10-804-50-45°-R	D20 15830						W30 14..0.04..	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UZ12-804-60-45°-L	D20 10850	12	60	1.5	1.0	0.044	radial rake 06 = 6° 12 = 12° ▽ 20 = 20°	radial rake 36 = 6° 42 = 12° ▽ 50 = 20°		Order No. Description 	Order No. Description 
UZ12-804-60-45°-R	D20 15850						W30 14..0.04..	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP

Description cutting form ▼	Order No.	d	L	N	x	kg	Insert			Assembly parts	Accessories
							W01 L.H. 	W01 R.H. 	W29 neutral 	Clamping screw 	Screwdriver 
UZ12-802-60-45°-L38	D20 10871	12	60	1.5	1.0	0.044	radial rake 06 = 6° 12 = 12° ▽	radial rake 36 = 6° 42 = 12° ▽		Order No. Description 	Order No. Description 
UZ12-802-60-45°-R38	D20 15871						W01 24....	W01 24....	W29 24....	N00 57511 S/M2.5×7.2-8IP 1.28 Nm	L05 00830 8IP
UZ16-801-80-45°-L38	D20 10891	16	80	3.0	1.5	0.107	radial rake 06 = 6° 12 = 12° ▽	radial rake 36 = 6° 42 = 12° ▽		Order No. Description 	Order No. Description 
UZ16-801-80-45°-R38	D20 15891						W01 34....	W01 34....	W29 34....	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP

For further details on inserts see chapter 7

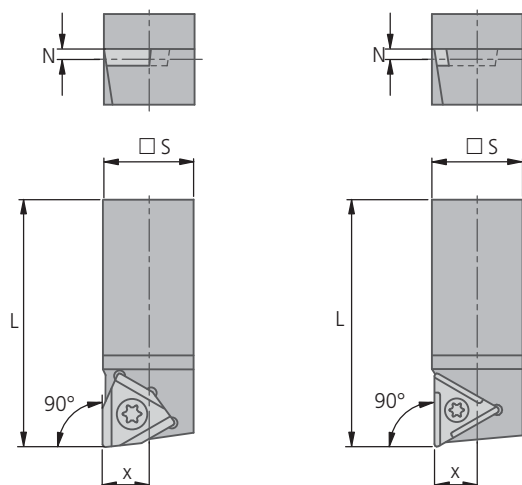
### Supply includes:

Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UV Boring Tool $\kappa = 90^\circ$

**P M K N S H** for insert W01 / W29 and W30 / W57

■ L.H. boring tool as shown with left or neutral insert



Description cutting form ▼	Order No.	for boring bar dia.	□ S	L	N	x	kg	Insert		Assembly parts	Accessories
								W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral		
UV8-803-40-90°-L	D20 20020	25	8	40	1.5	3.8	0.02	W30 04..0.03..	W57 04140.04..	Clamping screw Order No. Description N00 56031 S/M2.4x4.9-6IP 0.62 Nm	Screwdriver Order No. Description L05 00810 6IP
UV10-804-50-90°-L	D20 20040	32	10	50	1.5	4.8	0.03	W30 14..0.04..	W57 14140.04..	Clamping screw Order No. Description N00 56111 S/M2.6x6.2-8IP 1.28 Nm	Screwdriver Order No. Description L05 00830 8IP
UV12-804-60-90°-L	D20 20060	40	12	60	1.5	5.8	0.04	W30 14..0.04..	W57 14140.04..	Clamping screw Order No. Description N00 56111 S/M2.6x6.2-8IP 1.28 Nm	Screwdriver Order No. Description L05 00830 8IP
Description cutting form ▼	Order No.	for boring bar dia.	□ S	L	N	x	kg	Insert		Assembly parts	Accessories
								W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W29 neutral 00 = PD 01 = K ▽▽		
UV16-801-80-90°-L38	D20 20081	50	16	80	3	7.8	0.01	W01 34....	W29 34....	Clamping screw Order No. Description N00 57521 S/M3.5x7.3-10IP 2.8 Nm	Screwdriver Order No. Description L05 00850 10IP
UV20-810-100-90°-L48	D20 20101	63	20	100	4	9.8	0.03	W01 42....	W29 42....	Clamping screw Order No. Description N00 57531 S/M4.5x9-15IP 6.25 Nm	Screwdriver Order No. Description L05 00860 15IP
UV25-820-120-90°-L53	D20 20121	80	25	120	4	12.3	0.05	W01 50....	W29 50....	Clamping screw Order No. Description N00 57531 S/M4.5x9-15IP 6.25 Nm	Screwdriver Order No. Description L05 00860 15IP

For further details on inserts see chapter 7

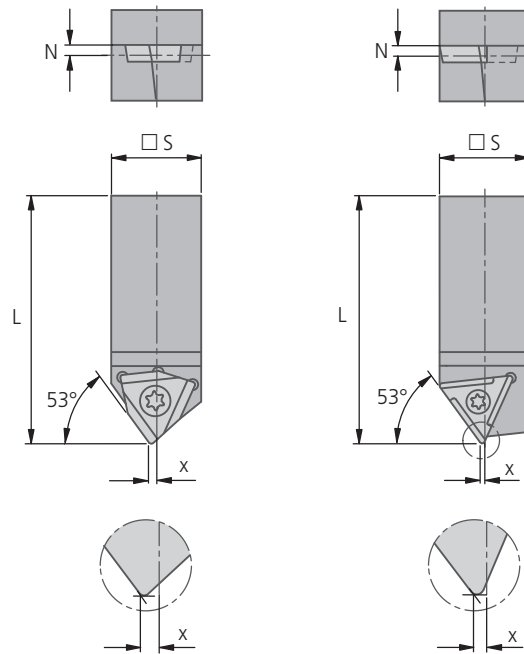
## Supply includes:

Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UV Boring Tool $\kappa = 53^\circ$

for insert W01 / W29 and W30 / W57 P M K N S H

L.H. boring tool as shown with left or neutral insert ■



Description cutting form ▼	Order No.	for boring bar dia.	□ S	L	N	x	kg	Insert		Assembly parts	Accessories
								W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°	W57 neutral		
UV8-803-40-53°-L	D20 20220	25	8	40	1.5	0.4	0.02	W30 04..0.03..	W57 04140.04..	N00 56031 S/M2×4.9-6IP 0.62 Nm	L05 00810 6IP
UV10-804-50-53°-L	D20 20240	32	10	50	1.5	0.5	0.03	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP
UV12-804-60-53°-L	D20 20260	40	12	60	1.5	0.5	0.06	W30 14..0.04..	W57 14140.04..	N00 56111 S/M2.6×6.2-8IP 1.28 Nm	L05 00830 8IP

Description cutting form ▼	Order No.	for boring bar dia.	□ S	L	N	x	kg	Insert		Assembly parts	Accessories
								W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽	W29 neutral 00 = PD 01 = K ▽▽		
UV16-801-80-53°-L38	D20 20281	50	16	80	3	0.6	0.01	W01 34....	W29 34....	N00 57521 S/M3.5×7.3-10IP 2.8 Nm	L05 00850 10IP
UV20-810-100-53°-L48	D20 20301	63	20	100	4	0.6	0.03	W01 42....	W29 42....	N00 57531 S/M4.5×9-15IP 6.25 Nm	L05 00860 15IP
UV25-820-120-53°-L53	D20 20321	80	25	120	4	0.6	0.05	W01 50....	W29 50....	N00 57531 S/M4.5×9-15IP 6.25 Nm	L05 00860 15IP

For further details on inserts see chapter 7

## Supply includes:

Boring tool with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® Micro-adjustable Cartridge up to Ø 27.6 mm

**P M K N S H** for insert W30 / W57

1



2



3



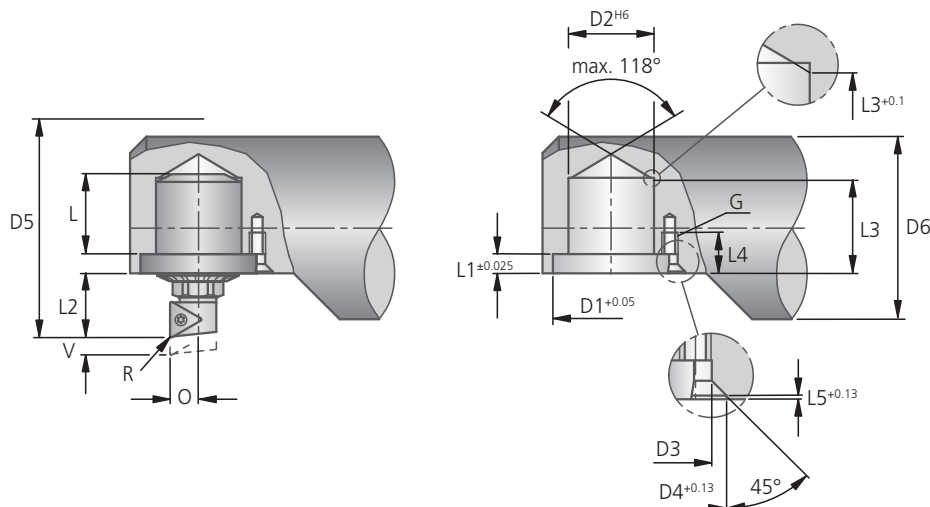
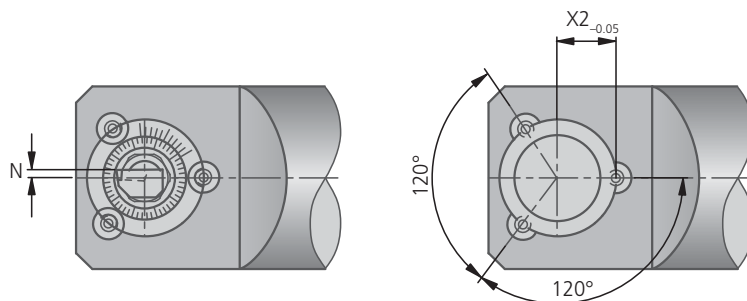
4



5



6



## Radial mounting

- the smallest adjustment increment is 0.002 mm in the Ø above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

min. turning Ø D5	Order No.	kg	Insert			Assembly parts	Accessories	Assembly parts	Accessories
			W30 L.H.	W30 neutral	W57 neutral	Clamping screw	Screwdriver	Location screw 3x	Wrench
									
						Order No. Description	Order No. Description	Order No. Description	Order No. Description
27.6	M31 00022	0.021	W30 04060.04..	W30 04660.03..	W57 04140.04..	N00 56041 S/M2×4.3-6IP 0.62 Nm	L05 00810 6IP	M31 00020.18 M3×6 sim. DIN7991	18589 10010 SW10
49.5	M31 00032	0.081	W30 14060.04..	W30 14660.04..	W57 14140.04..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	55021 04010 M4×10	18589 10014 SW14
70	M31 00042	0.249	W30 26060.05..	W30 26660.05..	W57 26140.04..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55021 05012 M5×12	18589 10022 SW22

## Supply includes:

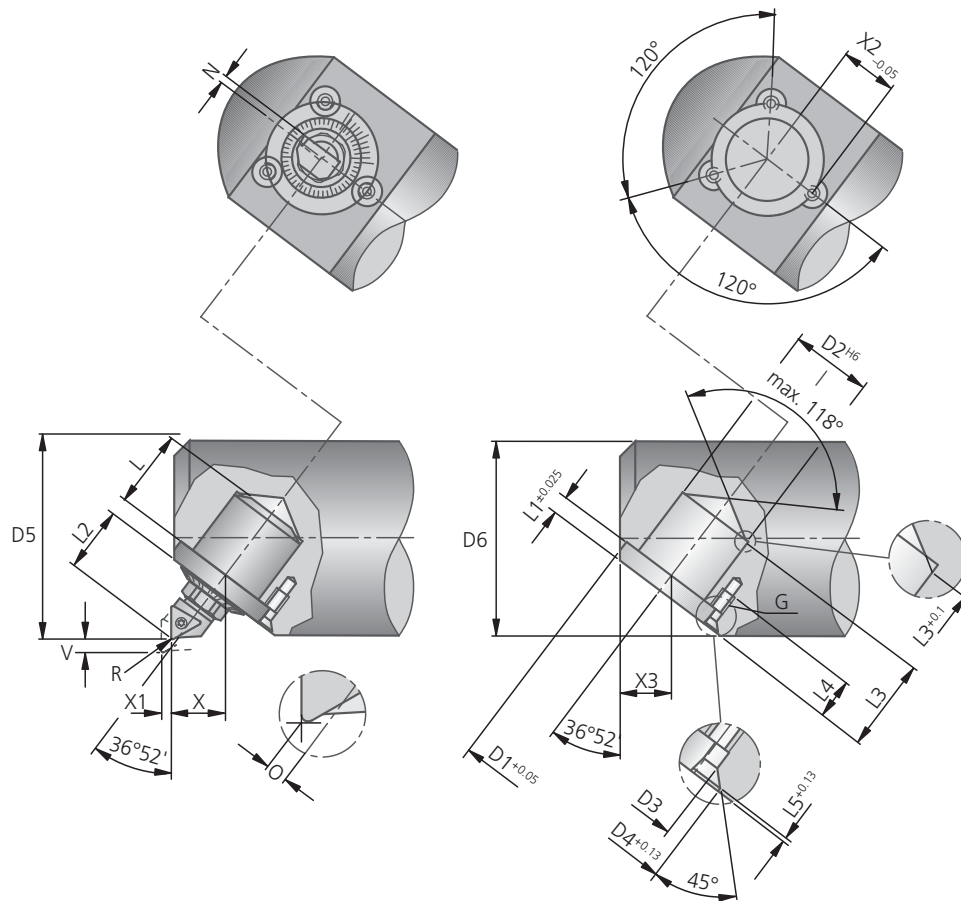
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

## Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	L2	L3 min.	L4	L5	G	N	R	V	O	X2
M31 00022	19	16	3.2	4.6	26	8.7	2.8	10	11.5	9	1.6	M3	1.5	0.4	1.0	5.1	9.65
M31 00032	30	22	4.3	8	46	21.2	5	16.9	25	10	0.9	M4	2	0.4	3.4	7.2	15.4
M31 00042	46	32	5.5	10	67	27.72	6.3	25.5	33	12	0.8	M5	2	0.5	5.22	10.3	23.0

# KOMET Kometric® Micro-adjustable Cartridge up to Ø 25.4 mm

for insert W30 / W57 P M K N S H



## Angled mounting

- the smallest adjustment increment is 0.0016 mm in the Ø above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

min. turning Ø D5	Order No.	kg	Insert			Assembly parts		Accessories	
			W30 L.H.	W30 neutral	W57 neutral	Clamping screw	Screwdriver	Location screw 3x	Wrench
25.4	M31 01022	0.021							
			W30 04060.04..	W30 04660.03..	W57 04140.04..	N00 56041 S/M2x4.3-6IP 0.62 Nm	L05 00810 6IP	M31 00020.18 M3x6 sim. DIN7991	18589 10010 SW10
43	M31 01032	0.082							
			W30 14060.04..	W30 14660.04..	W57 14140.04..	N00 56111 S/M2.6x6.2-8IP 1.28 Nm	L05 00830 8IP	55021 04010 M4x10	18589 00012 SW12
61	M31 01042	0.25							
			W30 26060.05..	W30 26660.05..	W57 26140.04..	N00 56201 S/M3.5x6.2-10IP 2.8 Nm	L05 00850 10IP	55021 05012 M5x12	18589 00017 SW17

### Supply includes:

Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

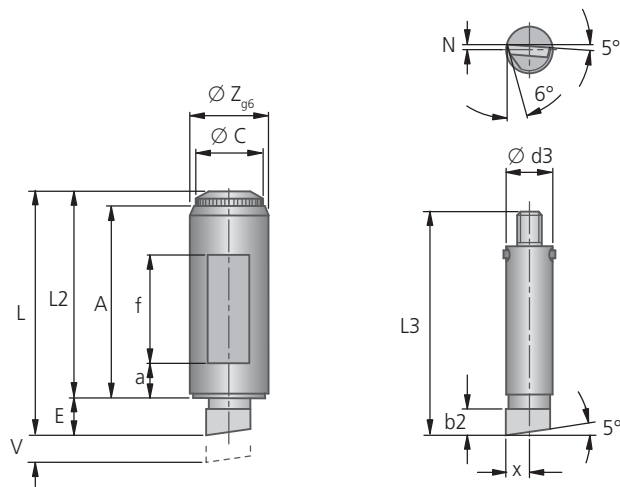
## Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	L2	L3 min.	L4	L5	G	N	ISO dimension						
														for R	V	O	X	X1	X2	X3
M31 01022	19	16	3.2	4.6	24.5	10.9	2.8	11	11.5	9	1.6	M3	1.5	0.4	1.1	0.33	8.64	0.81	9.65	8.18
M31 01032	30	22	4.3	8	40	20.5	5	18.4	24	10	0.9	M4	2	0.4	3.1	1.3	15.1	2.0	15.4	14.0
M31 01042	46	32	5.5	10	55	29	6.3	27.2	33	12	0.8	M5	2	0.5	4.6	1.4	21.34	3.2	23	19.8



# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 25 mm

**P M K N S H** for soldering



Drilling range <sup>1)</sup>			Housing		Soldering		kg	Accessories	
$D_{min}$ ①	$D_{max}$ ②	$D_{max}$ ③	Description	Order No.	cutting form 1 	cutting form 2 		Wrench 	
25	33	36	FZ8-25-1	M30 00011	M30 50111.21 8Z1-K10	M30 51111.21 8Z2-K10	0.007	L05 01010 R0/NO	
28	36	39	FZ8-28-1	M30 00021			0.008		

Drilling range <sup>1)</sup>			d1	n <sup>2)</sup>	Cutter Ø D1 <sup>2)</sup>	b	d2	Ø Z <sup>H7</sup> <sub>g6</sub>	L1	L2	E	V	A	Ø C	a	f	Ø d3	L3	x	N	b2
$D_{min}$ ①	$D_{max}$ ②	$D_{max}$ ③																			
25	33	36	20	3.5	8	1.5	M6	8	23.7	21	2.7	4	19.2	6.9	5	10	4.7	19.2	1.9	0.9	2.5
28	36	39							26.7	24			22.2			13					

<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

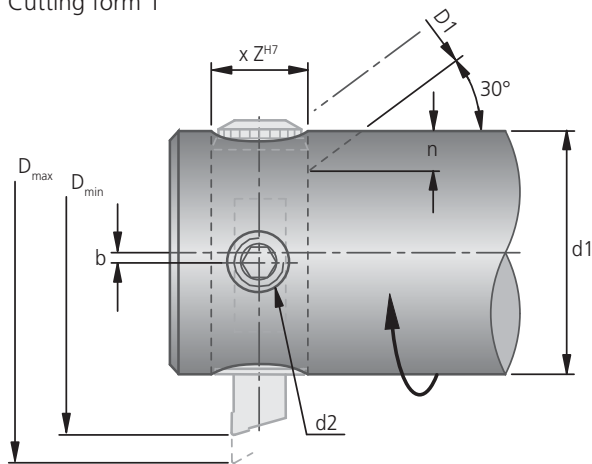
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

<sup>2)</sup> when using rough adjustment, the distance "n" must be used on the boring bar

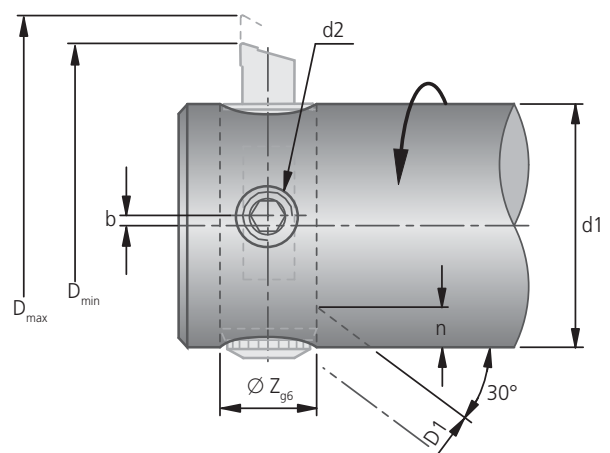
## Radial mounting 90° (cutting form 1 and 2)

- Adjustment per graduation = 0.02 mm Ø
- Adjustment accuracy 2 µm Ø above vernier

Cutting form 1



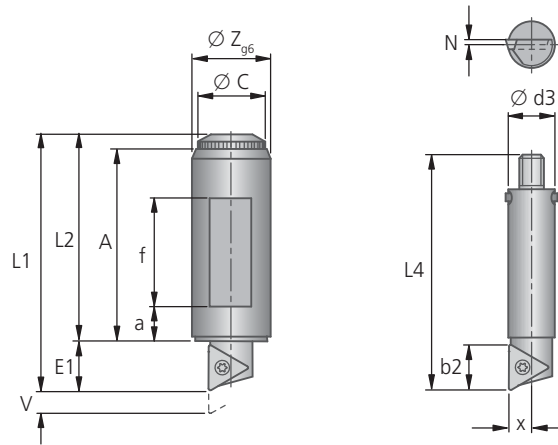
Cutting form 2





# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 33 mm

for insert W30 / W57 P M K N S H



Drilling range <sup>1)</sup>	Housing			Turning tool		kg	Insert			Assembly parts		Accessories	
	D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③	Description	Order No.		Order No.	Order No.	Order No.	Description	Description	Description	Description
33 41 48	FZ10-31-1	M30 00031	M30 50021	M30 51021	0.014	W30 04 .. 0.03..	W30 04 .. 0.03..	W57 04140.04..	N00 56021	L05 00810	L05 01020		
37 45 52	FZ10-35-1	M30 00041	U10Z1-803	U10Z2-803	0.016				S/M2x3.8-6IP	6IP	R2/N1		
41 51 58	FZ12-40-1	M30 00051	M30 50031	M30 51031	0.025				N00 56031	L05 00810	L05 01030		
46 56 63	FZ12-45-1	M30 00061	U12Z1-803	U12Z2-803	0.03				S/M2x4.9-6IP	6IP	R2a/N2		
53 65 73	FZ16-50-1	M30 00071	M30 50041	M30 51041	0.058				N00 56101	L05 00830	L05 01040		
59 71 79	FZ16-56-1	M30 00081	U16Z1-804	U16Z2-804	0.067	W30 14 .. 0.04..	W30 14 .. 0.04..	W57 14140.04..	S/M2.6x5.2-8IP	8IP	N3		
63 78 88	FZ20-64-1	M30 00091	M30 50051	M30 51051	0.112				N00 56111	L05 00830	L05 01050		
72 87 100	FZ20-72-1	M30 00101	U20Z1-804	U20Z2-804	0.13				S/M2.6x6.2-8IP	8IP	R4/N4		
80 100 115	FZ25-80-1	M30 00111	M30 50061	M30 51061	0.221						L05 01060		
90 110 126	FZ25-90-1	M30 00121	U25Z1-805	U25Z2-805	0.259						ZV25		
104 134 154	FZ32-100-1	M30 00131			0.482	W30 26 .. 0.05..	W30 26 .. 0.05..	W57 26140.04..	N00 56211	L05 00850			
114 144 165	FZ32-110-1	M30 00141	M30 50071	M30 51071	0.544				S/M3.5x7.3-10IP	10IP	L05 01070		
129 159 185	FZ32-125-1	M30 00151	U32Z1-805	U32Z2-805	0.635				2.8 Nm		R5/N5		
145 175 205	FZ32-140-1	M30 00161			0.728								

For further details on inserts see chapter 7

Drilling range <sup>1)</sup>			d1	n <sup>2)</sup>	Cutter Ø D1 <sup>2)</sup>	b	d2	Ø Z <sup>H7/g6</sup>	L1	L2	E1	V	A	Ø C	a	f	Ø d3	L4	x	N	b2
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③																			
33	41	48	25	4.5	8	2	M6	10	31.5	25.5	6	4	23.3	8.9	6	12	5.7	24.8	2.3	1.2	6.5
37	45	52							35.5	29.5			27.3			16					
41	51	58	32	5	10	2.5	M8	12	39.5	33.5	6	5	31	10.9	8	16	6.7	30.5	2.9	1.2	6.5
46	56	63							44.5	38.5			36			21					
53	65	73	40	8	12	3	M10	16	51	42	9	6	39	13.9	10	20	8.6	39.7	3.8	1.2	9
59	71	79							57	48			45			26					
63	78	88	50	9	16	5	M12	20	60	51	9	7.5	47	17.9	12	24	11.5	48.2	4.7	1.7	9
72	87	100							68	59			55			32					
80	100	115	63	10	20	4	M16	25	77.5	64.5	13	10	59.5	21.9	15	30	14	60.3	6	2	13.5
90	110	126							87.5	74.5			69.5			40					
104	134	154	80	13	25	6	M20	32	97	84	13	15	78	28.9	20	40	18	78.5	7.6	2.7	13.5
114	144	165							107	94			88			50					
129	159	185	100	13	25	12	M20	32	122	109	13	15	103	28.9	25	50	18	78.5	7.6	2.7	13.5
145	175	205							137	124			118			65					

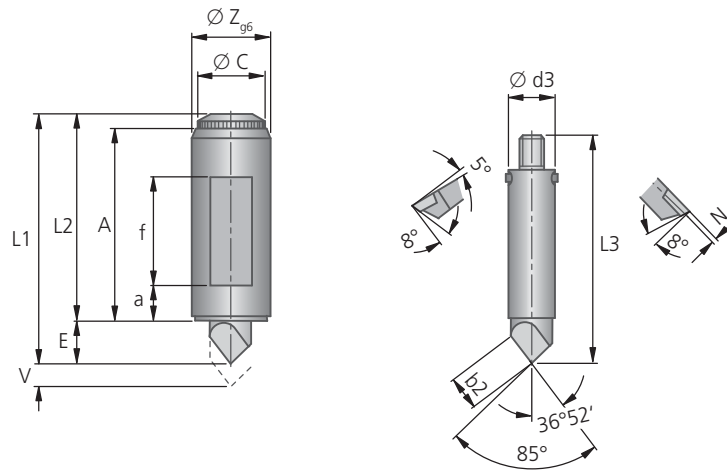
<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

<sup>2)</sup> when using rough adjustment, the distance "n" must be used on the boring bar

# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 23 mm

**P M K N S H** for soldering



Drilling range <sup>1)</sup>			Housing		Soldering cutting form 3		kg	Accessories	
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③	Description	Order No.	Order No. Description			Wrench	
23	29.4	32	FZ8-23-3	M30 02011	M30 52111.21 8Z3-K10	0.007	L05 01010 R0/N0		
26	32.4	49	FZ8-26-3	M30 02021		0.008			

Drilling range <sup>1)</sup>			d1	n <sup>2)</sup>	Cutter Ø D1 <sup>2)</sup>	b	d2	Ø Z <sub>H7</sub> <sub>g6</sub>	L1	L2	E	V	A	Ø C	a	f	Ø d3	L3	N	b2
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③																		
23	29.4	32	20	3	8	1.5	M6	8	26	21	5	4	19.2	6.9	5	10	4.7	21.5	0.9	2.5
26	32.4	49							29	24			22.2			13				

<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

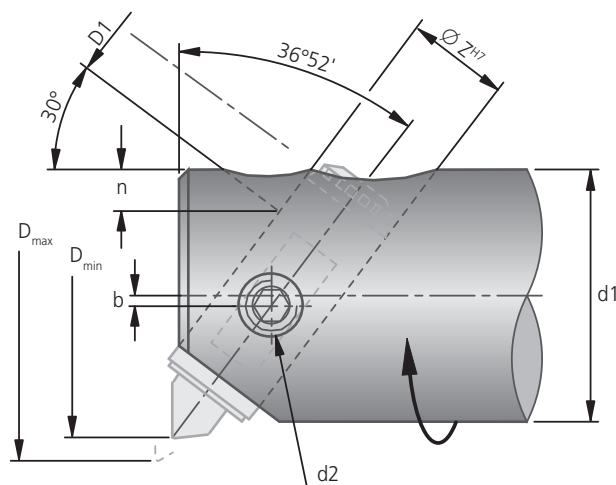
<sup>2)</sup> when using rough adjustment, the distance "n" must be used on the boring bar

6

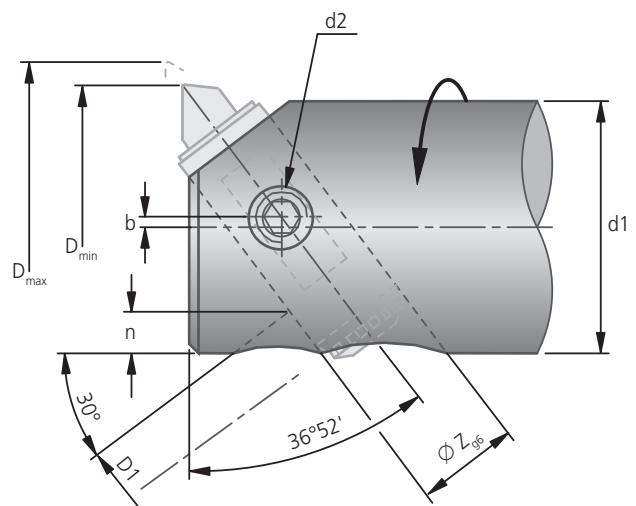
## Angled mounting 36°52' (cutting form 3 and 4)

- Adjustment per graduation = 0.02 mm Ø
- Adjustment accuracy 1.6 µm Ø above vernier

Cutting form 3

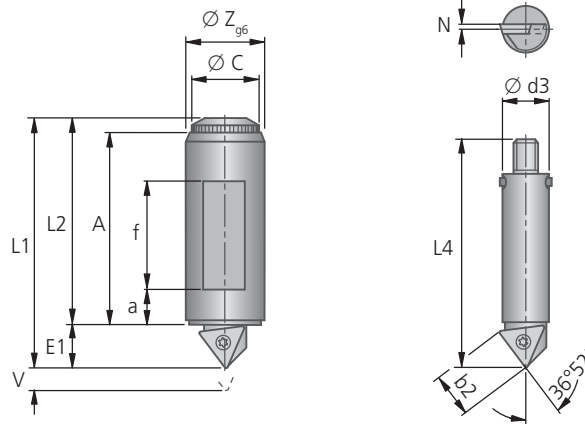


Cutting form 4



# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 28 mm

for insert W30 / W57 P M K N S H



Drilling range <sup>1)</sup>			Housing		Turning tool		kg	Insert			Assembly parts		Accessories	
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③	Description	Order No.	cutting form 3 Order No. Description	cutting form 4 Order No. Description		W30 L.H.	W30 R.H.	W57 neutral	Clamping screw Order No. Description	Screwdriver Order No. Description	Wrench Order No. Description	
28	34.4	38	FZ10-28-3	M30 02031	M30 52021	M30 53021	0.013				N00 56021	L05 00810	L05 01020	
32	38.4	44	FZ10-32-3	M30 02041	U10Z3-803	U10Z4-803	0.015				S/M2×3.8-6IP 0.62 Nm	6IP	R2/N1	
36	44	48	FZ12-36-3	M30 02051	M30 52031	M30 53031	0.026	W30 04 .. 0.03..	W30 04 .. 0.03..	W57 04140.04..	N00 56031	L05 00810	L05 01030	
40	48	55	FZ12-40-3	M30 02061	U12Z3-803	U12Z4-803	0.029				S/M2×4.9-6IP 0.62 Nm	6IP	R2a/N2	
45	54.6	60	FZ16-45-3	M30 02071	M30 52041	M30 53041	0.058				N00 56101	L05 00830	L05 01040	
50	59.6	68	FZ16-50-3	M30 02081	U16Z3-804	U16Z4-804	0.067	W30 14 .. 0.04..	W30 14 .. 0.04..	W57 14140.04..	S/M2.6×5.2-8IP 1.28 Nm	8IP	N3	
56	68	78	FZ20-56-3	M30 02091	M30 52051	M30 53051	0.112				N00 56111	L05 00830	L05 01050	
64	76	90	FZ20-64-3	M30 02101	U20Z3-804	U20Z4-804	0.132				S/M2.6×6.2-8IP 1.28 Nm	8IP	R4/N4	
72	88	100	FZ25-72-3	M30 02111	M30 52061	M30 53061	0.224				N00 56211	L05 00850	L05 01060	
80	96	114	FZ25-80-3	M30 02121	U25Z3-805	U25Z4-805	0.263				S/M3.5×7.3-10IP 2.8 Nm	10IP	ZV25	
90	114	126	FZ32-90-3	M30 02131			0.487	W30 26 .. 0.05..	W30 26 .. 0.05..	W57 26140.04..				
100	124	140	FZ32-100-3	M30 02141	M30 52071		0.548						L05 01070	
110	134	150	FZ32-110-3	M30 02151	U32Z3-805		0.639						R5/N5	
125	149	175	FZ32-125-3	M30 02161			0.732							

For further details on inserts see chapter 7

Drilling range <sup>1)</sup>			d1	n <sup>2)</sup>	Cutter		Ø Z <sub>H7</sub> <sup>96</sup>	L1	L2	E1	V	A	Ø C	a	f	Ø d3	L4	N	b2	
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③			D1 <sup>2)</sup>	b														d2
28	34.4	38	25	3.5	8	2	M6	10	31.5	25.5	6	4	23.3	8.9	6	12	5.7	24.8	1.2	6.5
32	38.4	44							35.5	29.5			27.3			16				
36	44	48	32	4	10	2.5	M8	12	40.3	33.5	6.8	5	31	10.9	8	16	6.7	31.3	1.2	6.5
40	48	55							45.3	38.5			36			21				
45	54.6	60	40	6.5	12	3	M10	16	51	42	9	6	39	13.9	10	20	8.6	39.7	1.2	9
50	59.6	68							57	48			45			26				
56	68	78	50	7	16	5	M12	20	63	51	12	7.5	47	17.9	12	24	11.5	51.2	1.7	9
64	76	90							71	59			55			32				
72	88	100	63	8	20	4	M16	25	81	64.5	16.5	10	59.5	21.9	15	30	14	63.8	2	13.5
80	96	114							91	74.5			69.5			40				
90	114	126	80	10	25	6	M20	32	102	84	18	15	78	28.9	20	40	18	83.5	2.7	13.5
100	124	140							112	94			88			50				
110	134	150	100	10	25	12	M20	32	127	109	18	15	103	28.9	25	50	18	83.5	2.7	13.5
125	149	175							142	124			118			65				

<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

<sup>2)</sup> when using rough adjustment, the distance "n" must be used on the boring bar

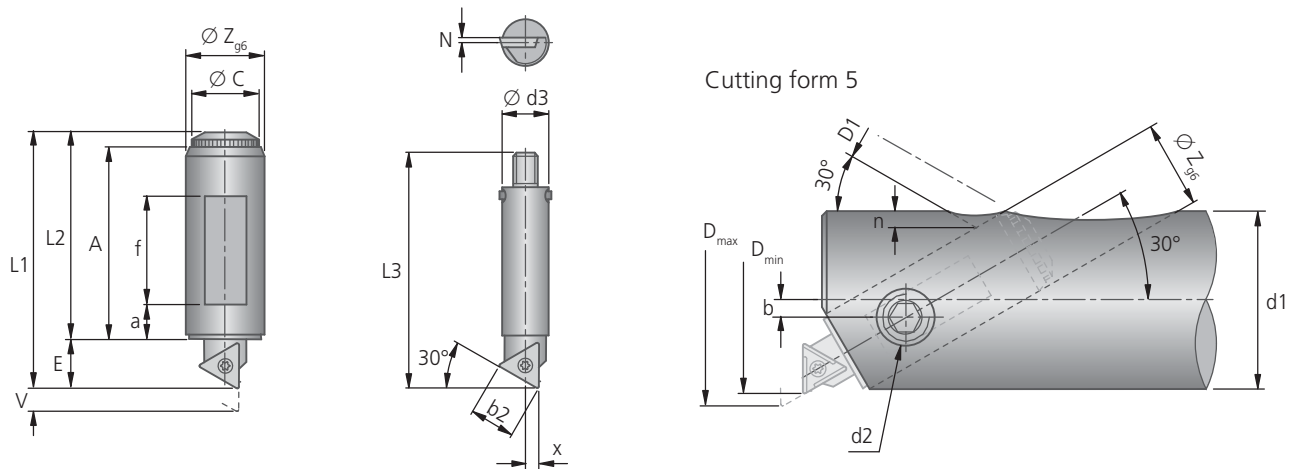


# KOMET Kometric® FZ Micro-adjustable Cartridge Ø 20 – 44 mm

**P M K N S H** for insert W30 / W57

## Angled mounting 30° (cutting form 5)

- Adjustment accuracy 1 µm Ø above vernier
- For machining particularly small bores, the FZ fine boring cartriges can also be used for radial mounting on the boring bar are a 30° angle. Adjustment is then →|← 0.005 mm per graduation in the radial direction.



Drilling range <sup>1)</sup>			Housing	Turning tool cutting form 5		Insert		Assembly parts	Accessories	
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③	Order No. Description	Order No. Description	kg	W30 L.H. radial rake	W57 neutral	Clamping screw Order No. Description	Screwdriver Order No. Description	Wrench Order No. Description
20	22	26	M30 04011 FZ10-20-5	M30 54011 U10Z5-803K	0.012	06 = 6° 12 = 12° ▽7 20 = 20°		N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	L05 01020 R2/N1
26	30	33	M30 00031 FZ10-31-1	M30 54021 U10Z5-803	0.014			N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	L05 01020 R2/N1
30	35	40	M30 00051 FZ12-40-1	M30 54030 U12Z5-803	0.026			N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	L05 01030 R2a/N2
38	44	50	M30 00071 FZ16-50-1	M30 54040 U16Z5-804	0.059			N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	L05 01040 N3

For further details on inserts see chapter 7

Drilling range <sup>1)</sup>			d1	n <sup>2)</sup>	Cutter Ø D1 <sup>2)</sup>	b	d2	Ø Z <sub>H7</sub> <sup>96</sup>	L1	L2	E	V	A	Ø C	a	f	Ø d3	L3	x	N	b2
20	22	26	18	–	–	0.8	M5	10	28.5	23.7	4.8	2	21.5	8.9	5	10	5.7	22.0	2.1	1.2	6.5
26	30	33	20	4.5	8	1.2	M6	10	33.9	25.5	8.4	4	23.3	8.9	6	12	5.7	27.3	2.1	1.2	6.5
30	35	40	25	5	10	1.5	M8	12	43.0	33.5	9.5	5	31.0	10.9	8	16	6.7	34.0	2.8	1.2	6.5
38	44	50	32	8	12	2.0	M10	16	54.5	42.0	12.5	6	39.0	13.9	10	20	8.6	43.2	3.3	1.2	9

<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

<sup>2)</sup> when using rough adjustment, the distance "n" must be used on the boring bar

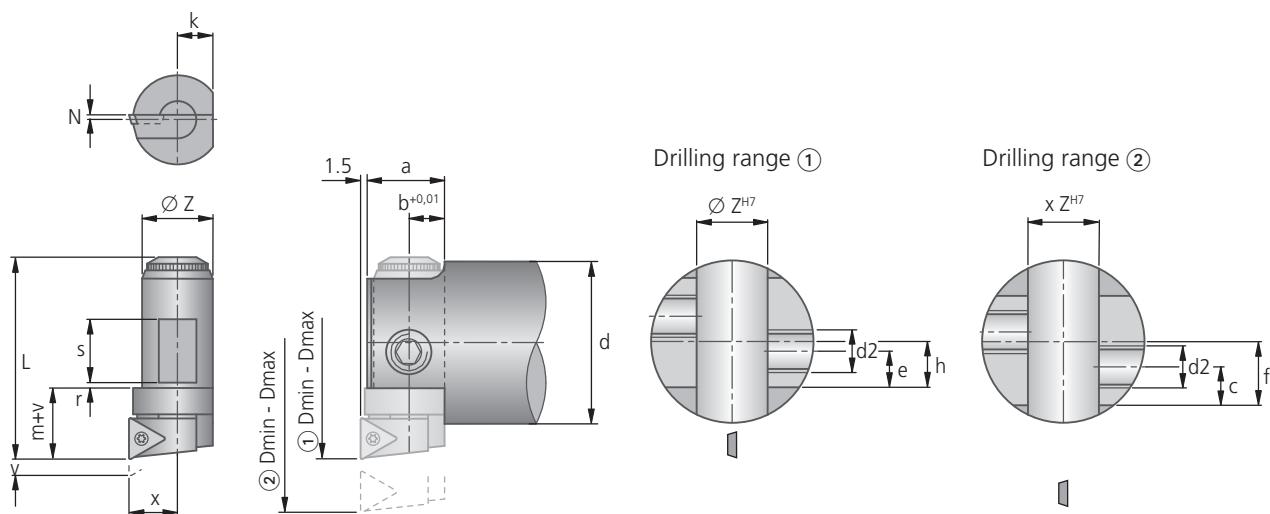
# KOMET Kometric® FF Micro-adjustable Cartridge Ø 29,5 – 179 mm

for insert W30 / W57 P M K N S H

Adjustment per graduation = 0.02 mm Ø ■  
Adjustment accuracy 2 µm Ø above vernier ■

The FF micro adjustable cartridge is mounted radially and ideally suitable for NC tools, because the axial cutting dimensions are constant. The design and features of the cartridge are the same as type FZ (see sectional drawing), and are therefore also highly accurate. The protruding cutting edge is supported in its seating and mounting, and is therefore exceptionally robust. The adjustment is only carried out in a clamped state.

**Setting:** 1. Basic setting to be taken from drilling range ① and ②.  
2. Machining diameter set by fine adjustment device.



Drilling range ① D <sub>min</sub> - D <sub>max</sub>	Drilling range ② D <sub>min</sub> - D <sub>max</sub>	Cartridges			kg	Insert		Assembly parts			Accessories	
		Description	Order No.	radial rake		W30 L.H.	W57 neutral	Clamping screw		Screwdriver		
					06 = 6° 12 = 12° 17 20 = 20°		Description	Order No.	Nm	Description	Order No.	
29.5 – 36	35.5 – 42	FF10-30	M30 20011	0.055			S/M2×3.8-6IP	N00 56021	0.62	6IP	L05 00810	
39 – 45	44 – 50	FF12-39	M30 20021	0.031	W30 04 .. 0.03..	W57 04140.04..	S/M2.6×5.2-8IP	N00 56101	1.28	8IP	L05 00830	
47 – 57	56 – 66	FF16-47	M30 20031	0.062	W30 14 .. 0.04..	W57 14140.04..	S/M2.6×6.2-8IP	N00 56111	1.28	10IP	L05 00850	
58 – 71	70 – 83	FF20-58	M30 20041	0.123			S/M3.5×7.3-10IP	N00 56211	2.8			
79 – 94	93 – 108	FF25-79	M30 20051	0.268								
100 – 121	120 – 141	FF32-100	M30 20061	0.548	W30 26 .. 0.05..	W57 26140.04..						
138 – 159	158 – 179	FF32-138	M30 20071	0.76								

For further details on inserts see chapter 7

for cartridges	d	Ø Z	a	b	h	e	f	c	d2	L	x	N	k	v	m	r	s
M30 20011	25	10	11	5	3.7	3.9	6.7	3.9	M6	28.8	7.5	2.0	5	3.5	11	0.5	8
M30 20021	32	12	13.5	6	7	6	9.5	6	M8	37.75	9	1.2	6	3.5	12.5	1	11
M30 20031	40	16	17.5	8	7.5	7.5	12	8	M10	45.4	11	1.2	8	5	16	2	13
M30 20041	50	20	23	10	11	9	17	9	M12	56.35	14.5	1.7	10	7	18	2	14.5
M30 20051	63	25	27	12.5	17.9	12.4	24.9	15.4	M16	77.8	16	2.0	12.5	8	21.6	2	28
M30 20061	80	32	33.5	16	24.5	15	34.5	22	M20	97.4	19	2.7	16	11	25.5	2	35
M30 20071	115	32	33.5	16	43.5	20	53.5	20	M20	131.4	19	2.7	16	11	25.5	2	35

# KOMET Kometric® FZ Micro-adjustable Cartridge

## BENEFITS for you:

- Fast, accurate tool setting: simply using setting spindle
- Maximum accuracy: Tool is adjusted when clamped
- Anti-backlash design
- Large turning range: In addition to micro-adjustment, the whole cartridge can be moved
- Easy mounting: Only requirements are: close tolerance bore or broached square hole and tapped hole for clamping
- Minimum weakening of boring bar: due to small dimensions of cartridges
- Suitable for standard boring bars
- Excellent for external turning: on automatics, turret lathes and special machines

## Application example

### A Material: Cast iron GG22

Boring bar: BZ 40×63×160 mm

Micro-adjustable cartridge:

Housing: M30 02121 (FZ25-80-3)

Turning tool: M30 52061 (U25Z3-805)

Insert: W30 26600.0521 (TOHX 140305 EN K10)

Cutting speed:  $v \sim 80 \text{ m/min}$

Feed:  $f = 0.08 \text{ mm}^{-1}$

Cutting depth:  $a = 0.2 \text{ mm}$  ( $\Delta 0.4 \text{ mm}$  in dia.)

Measuring tool: TESA internal precision measuring instrument

bore dia. start:	91.210	91.608	92.008	92.409	92.809	93.210	93.609	94.012	94.409	94.810	95.210	95.611	96.009	96.410	96.808
stock removed:	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
sum total:	91.610	92.008	92.408	92.809	93.209	93.610	94.009	94.412	94.809	95.210	95.610	96.011	96.409	96.810	97.208
measured dia.:	91.608	92.008	92.409	92.809	93.210	93.609	94.012	94.409	94.810	95.210	95.611	96.009	96.410	96.808	97.208
Difference in $\mu\text{m}$	-2	0	+1	0	+1	-1	+3	-3	+1	0	+1	-2	+1	-2	0

Result: Average deviation per pass 1.2  $\mu\text{m}$

### B Material: Cast iron GG22

Boring bar: BZ 40×63×160 mm

Micro-adjustable cartridge:

Housing: M30 02121 (FZ25-80-3)

Turning tool: M30 52061 (U25Z3-805)

Insert: W30 26060.0521 (TOHX 140305 EL-G06 K10)

Cutting speed:  $v \sim 250 \text{ m/min}$

Feed:  $f = 0.1 \text{ mm}^{-1}$

Cutting depth:  $a = 0.2 \text{ mm}$  ( $\Delta 0.4 \text{ mm}$  in dia.)

$0.5 \text{ mm}$  ( $\Delta 1 \text{ mm}$  in dia.) see diagram

Measuring tool: TESA internal precision measuring instrument

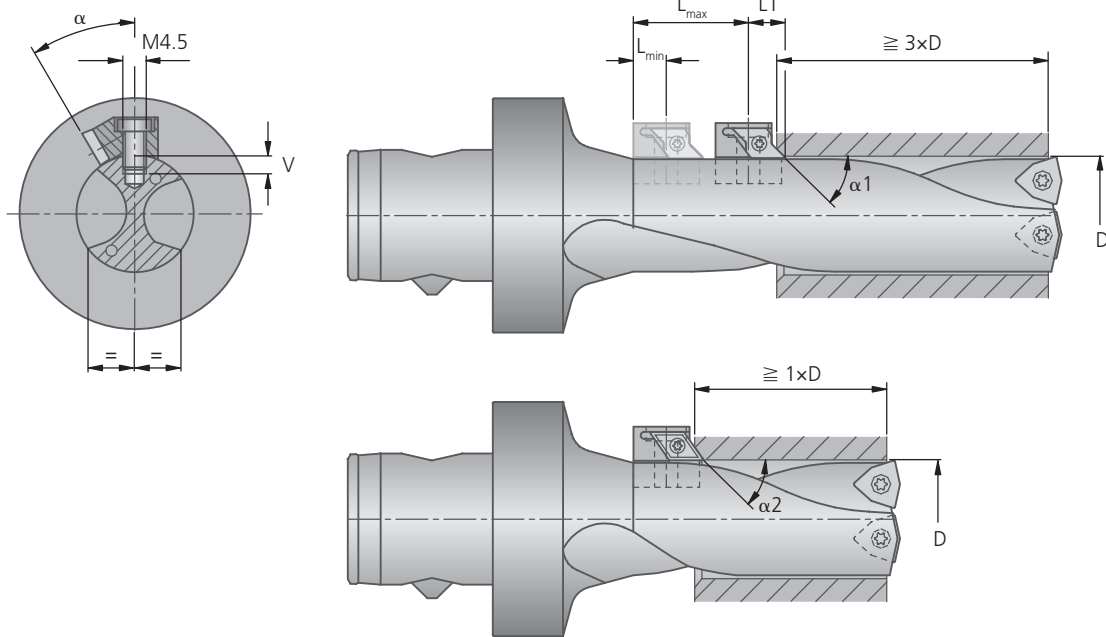
bore dia. start:	82.883	83.282	83.680	84.076	84.474	84.874	85.272	85.671	86.069	86.470	86.865	87.872	88.871	89.868	90.868
stock removed:	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	1.000	1.000	1.000	1.000	1.000
sum total:	83.283	83.682	84.080	84.476	84.874	85.274	85.672	86.071	86.469	86.870	87.865	88.872	89.871	90.868	91.868
measured dia.:	83.282	83.680	84.076	84.474	84.874	85.272	85.671	86.069	86.470	86.865	87.872	88.871	89.868	90.868	91.866
Difference in $\mu\text{m}$	-1	-2	-4	-2	0	-2	-1	-2	+1	-5	+7	-1	-3	0	-2
											0.400 mm adjustment in dia.				1.000 mm adjustment in dia.

Result: Average deviation per pass 2.2  $\mu\text{m}$

**Note:** The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

# KOMET Kometric® Addition of Chamfering Cartridge

for insert W60 / W79



Order No.	for Ø range D	max. chamfer diameter	L min	L max	L1	α	Insert		Assembly parts	Accessories	Assembly parts
							W60 / W79		Clamping screw	Screwdriver	Location screw
								Order No. Description	Order No. Description	Order No. Description	
D50 00800	20 – 24	D+5	7	30	10	26°	W60 18600.4003 W60 18420.0403 W79 18060.0403	N00 57221 S2553-7IP 0.9 Nm	L05 00820 7IP	N10 11500 Tx M4.5x10.5	
D50 00810	25 – 29		5	35	8	30°					
D50 00820*	30 – 36		5	40	8	23°					
D50 00830*	37 – 44		5	50	8	20°					
D50 00840*	45 – 52		5	60	8	19°					

\* on request

## Supply includes:

Chamfering cartridge with assembly parts. Please order accessories and inserts separately.

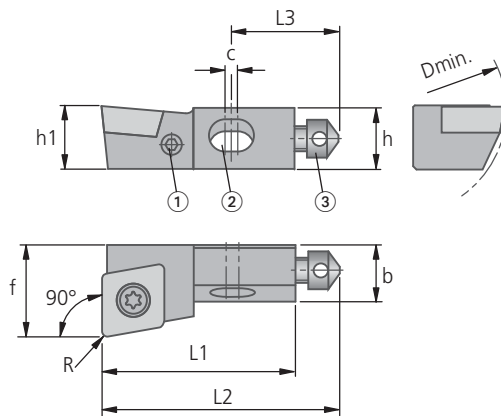
Stepped tools are an important element for minimising production costs. The new D5000 chamfering cartridge now offers an economical solution to frequent solid drilling applications where chamfer machining is required. The D5000 chamfering cartridge can be fitted to any KUB® insert drills, KUB Trigon®, KUB Quatron®, KUB Pentron® and KUB Duon®.



# KOMET Kometric® UKS Short Clamp Holder $\kappa = 90^\circ$

**N** for insert W85 (CPGW / CPTG)

- insert tilt of  $+5^\circ$  over cutting edge
- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 590-591



Description cutting form ▼	Order No.	D min	h1	h	L1	L2	L3	b	c	ISO dimension f for radius			Accessories		Countersunk screw for shim plate  Order No. Description	
										R0.2	R0.4	R0.8	Shim plate grinding 2.5 allowance 0.5	Description		Order No.
UKS8-CP0602-90R	D40 06410	25	7.6	7.8	25	32	17	6.5	2	10.03	10		0.009	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-CP09T3-90R	D40 06430	33	9.6	9.8	30	37	17	9	2		14	13.92	0.018	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS16-CP1204-90R	D40 06440	56	15.6	15.8	42	50	25	12	2		18	17.92	0.051	UKS16-5-90R	L02 20240	55021 03008 M3x8 DIN7991

for short clamp holder	Insert		Assembly parts	Accessories	Assembly parts		
	W85 L.H.  size ∇∇	W85 neutral  size ∇∇	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  DIN 916 Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS8-CP0602-90R	W85 18000.. CPG..0602..L	W85 18000.. CPGW 0602..N	N00 57221 S2553-7IP 0.9 Nm	L05 00820 7IP	55054 03006 M3x6	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-CP09T3-90R	W85 32000.. CPG..09T3..L	W85 32000.. CPGW 09T3..N	N00 57261 S3575-15IP 2.8 Nm	L05 00860 15IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-CP1204-90R	W85 44000.. CPG..1204..L	W85 44000.. CPGW 1204..N	N00 57301 S45100-20IP 6.25 Nm	L05 00870 20IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

## Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

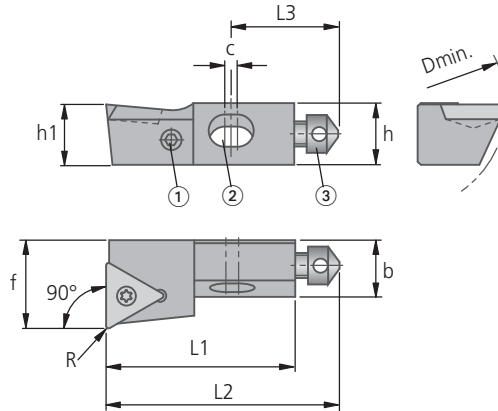
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.












# KOMET Kometric® UKS Short Clamp Holder $\alpha = 90^\circ$

for insert W32 (TPH..) / W58 (TPGX..) **N**

- insert tilt of  $+5^\circ$  over cutting edge ■
- R.H. short clamp holder as shown with left or neutral insert ■
- L.H. short clamp holder in mirror image with right or neutral insert ■
- mounting instruction see page 590-591 ■



Description cutting form ▼	Order No.	D min	h1	h	L1	L2	L3	b	c	ISO dimension f for radius R0.4 R0.8	kg	Accessories			
												Shim plate grinding allowance 2.5- 0.5	Description	Order No.	Countersunk screw for shim plate
UKS6-T06-90 R	D40 07000	20	5.8	5.9	20	24.5	12	4.5	1	7	6.7	0.04	UKS6-5-90R	L02 20200	55023 00206 M2x6 DIN965
UKS8-T09-90 R	D40 07010	25	7.6	7.8	25	32	17	6.5	2	10	9.7	0.03	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS8-T09-90 L	D40 02010												UKS8-7-75L	L02 21310	
UKS10-T11-90 R	D40 07020	33	9.6	9.8	30	37	17	9	2	14	13.7	0.04	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS10-T11-90 L	D40 02020												UKS10-5-90L	L02 21220	
UKS10-T13-90 R	D40 07030	33	9.6	9.8	30	37	17	9	2	14	13.7	0.02	UKS10-5-90R	L02 20220	55023 00206 M2x6 DIN965
UKS10-T13-90 L	D40 02030												UKS10-5-90L	L02 21220	
UKS16-T16-90 R	D40 07040	56	15.6	15.8	42	50	25	12	2	18	17.7	0.10	UKS16-5-90R	L02 20240	55021 03008 M3x8 DIN7991
UKS16-T16-90 L	D40 02040												UKS16-5-90L	L02 21240	
UKS20-T22-90 R	D40 07050	60	19.6	19.8	47	57	27	15	2	22	21.7	0.10	UKS20-5-90R	L02 20250	55021 03008 M3x8 DIN7991

for short clamp holder	Insert				Assembly parts	Accessories	Assembly parts		
	W32 L.H.  size ▽▽	W32 R.H.  size ▽▽	W32 neutral  size ▽▽	W58 neutral  size ▽▽	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-T06-90 R	W32 03150..		W32 03..... TPHB 0601..	W58 03..... TPGX 0601..	N00 56021 S/M2x3.8-6IP 0.62 Nm	L05 00810 6IP	55054 02504 M2.5x4	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS8-T09-90 R	W32 13150..		W32 13..... TPHB 0902..	W58 13..... TPGX 0902..	N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP	55054 03006 M3x6	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS8-T09-90 L		W32 13450..							
UKS10-T11-90 R	W32 18150..		W32 18..... TPHB 1102..	W58 18..... TPGX 1102..	N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-T11-90 L		W32 18450..							
UKS10-T13-90 R	W32 23150..		W32 23..... TPHB 1303..	W58 23..... TPGX 1303..	N00 56201 S/M3.5x6.2-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-T13-90 L		W32 23450..							
UKS16-T16-90 R	W32 32150..		W32 32..... TPHB 1603..	W58 32..... TPGX 1603..	N00 56301 S/M4x8-10IP 4.3 Nm	L05 00850 10IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS16-T16-90 L		W32 32450..							
UKS20-T22-90 R	W32 44150..		W32 44..... TPHB 2204..		N00 56411 S/M5x13.4-20IP 6.25 Nm	L05 00870 20IP	55054 05012 M5x12	L02 30160 UKS20-3 35 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

### Supply includes:

Short clamp holder with assembly parts. Please order insert and accessories separately.

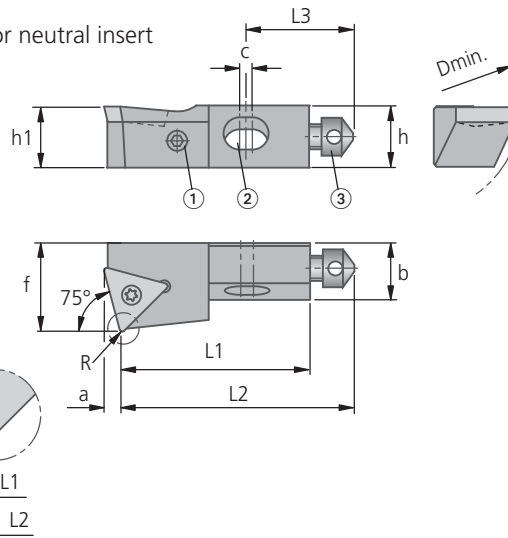
\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.











# KOMET Kometric® UKS Short Clamp Holder $\alpha = 75^\circ$

**N** for insert W32 (TPH..) / W58 (TPGX..)

- insert tilt of  $+5^\circ$  over cutting edge
- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 590-591



Description cutting form ▼	Order No.	D min	h1	h	L1	L2	L3	b	c	a	ISO dimension f for radius R0.4 R0.8	kg	Accessories			
													Description	Order No.	Order No. Description	
UKS6-T06-75 R	D40 07200	20	5.8	5.9	20	24.5	12	4.5	1	1.51	7	6.7	0.005	UKS6-5-75R	L02 20300	55023 00206 M2x6 DIN965
UKS8-T09-75 R	D40 07210	25	7.6	7.8	25	32	17	6.5	2	2.23	10	9.7	0.015	UKS8-5-75R	L02 20310	55023 00206 M2x6 DIN965
UKS10-T11-75 R	D40 07220	33	9.6	9.8	30	37	17	9	2	2.58	14	13.7	0.024	UKS10-5-75R	L02 20320	55023 00206 M2x6 DIN965
UKS10-T13-75 R	D40 07230	33	9.6	9.8	30	37	17	9	2	3.29	14	13.7	0.045	UKS10-5-75R	L02 20320	55023 00206 M2x6 DIN965
UKS16-T16-75 R	D40 07240	56	15.6	15.8	42	50	25	12	2	4	18	17.7	0.062	UKS16-5-75R	L02 20340	55021 03008 M3x8 DIN7991
UKS20-T22-75 R	D40 07250	60	19.6	19.8	47	57	27	15	2	5.43	22	21.7	0.113	UKS20-5-75R	L02 20350	55021 03008 M3x8 DIN7991

for short clamp holder	Insert			Assembly parts	Accessories	Assembly parts		
	W32 L.H.  size ▽▽	W32 neutral  size ▽▽	W58 neutral  size ▽▽	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Adjusting screw ①  Order No. Description	Location screw ②  Order No. Description	Stop screw ③  Order No. Description
UKS6-T06-75 R	W32 03150.. TPHX 0601..	W32 03..... TPHB 0601..	W58 03..... TPGX 0601..	N00 56021 S/M2.6x3.8-6IP 0.62 Nm	L05 00810 6IP	55054 02504 M2.5x4	L02 30111 UKS6-3 1.9 Nm	L02 30010 UKS6-4
UKS8-T09-75 R	W32 13150.. TPHX 0902..	W32 13..... TPHB 0902..	W58 13..... TPGX 0902..	N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP	55054 03006 M3x6	L02 30121* UKS8-3 4.1 Nm	L02 30020 UKS8-4
UKS10-T11-75 R	W32 18150.. TPHX 1102..	W32 18..... TPHB 1102..	W58 18..... TPGX 1102..	N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS10-T13-75 R	W32 23150.. TPHX 1303..	W32 23..... TPHB 1303..	W58 23..... TPGX 1303..	N00 56201 S/M3.5x6.2-10IP 2.8 Nm	L05 00850 10IP	55054 04008 M4x8	L02 30130 UKS10-3 8.5 Nm	L02 30020 UKS8-4
UKS16-T16-75 R	W32 32150.. TPHX 1603..	W32 32..... TPHB 1603..	W58 32..... TPGX 1603..	N00 56301 S/M4x8-10IP 4.3 Nm	L05 00850 10IP	55054 05012 M5x12	L02 30140 UKS12-3 14 Nm	L02 30030 UKS12-4
UKS20-T22-75 R	W32 44150.. TPHX 2204..	W32 44..... TPHB 2204..		N00 56411 S/M5x13.4-20IP 6.25 Nm	L05 00870 20IP	55054 05012 M5x12	L02 30160 UKS20-3 35 Nm	L02 30030 UKS12-4

For further details on inserts see chapter 7

## Supply includes:

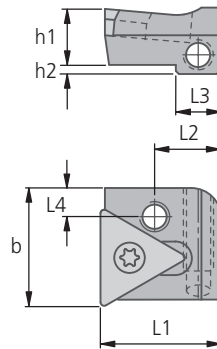
Short clamp holder with assembly parts. Please order insert and accessories separately.

\* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® FLWE Adjustable Insert Flat Bed Seatings $\kappa = 90^\circ$

for insert W32 (TPH..) / W58 (TPGX..) N








insert tilt of  $+5^\circ$  over cutting edge ■  
mounting instruction see page 624 ■



Insert seating cutting form 1  
as shown with left or neutral  
insert.

Dimension 'b' relates to the appropriate insert radius

Description cutting form ▼	Order No.	for radius R0.4 b	L1	L2	L3	L4	h1	h2	kg
FLWE-TPHB06-90°-1	D53 56400	7.8	8	4.4	3	1.9	3.6	0.6	0.004
FLWE-TPHB09-90°-1	D53 56420	11	12	7	5	2.5	5.7	0.95	0.006

for insert seating	Insert			Assembly parts	Accessories	Assembly parts	
	W32 L.H.  size ▽▽	W32 neutral  size ▽▽	W58 neutral  size ▽▽	Clamping screw  Order No. Description	Screwdriver  Order No. Description	Location screw  Order No. Description	Threaded pin  Order No. Description
FLWE-TPHB06..	W32 03150.. TPHX 0601..	W32 03..... TPHB 0601..	W58 03..... TPGX 0601..	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	N10 11200	55051 02005 M2×5
FLWE-TPHB09..	W32 13150.. TPHX 0902..	W32 13..... TPHB 0902..	W58 13..... TPGX 0902..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	N10 11310	55051 03006 M3×6

For further details on inserts see chapter 7

## Supply includes:

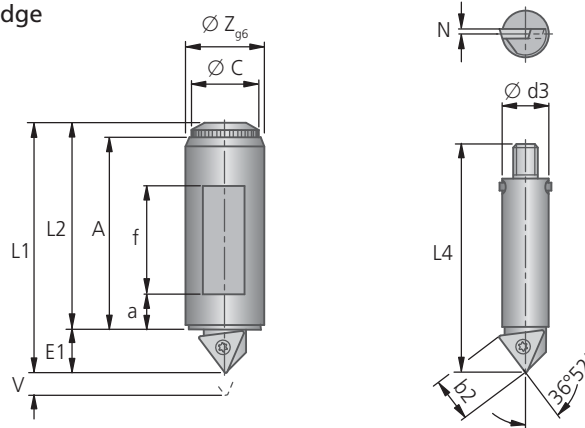
Insert seating with assembly parts. Please order insert and accessories separately.



# KOMET Kometric® FZ Micro-adjustable Cartridges Ø 28 – 68 mm

**N** for insert W32 (TPH..) / W58 (TPGX..)

■ insert tilt of +5° over cutting edge



Drilling range <sup>1)</sup>			Housing		Turning tool		Insert			Assembly parts		Accessories	
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③	Description	Order No.	Description	kg	W32 L.H.	W32 neutral	W58 neutral	Clamping screw	Screwdriver	Wrench	
							size ∇∇	size ∇∇	size ∇∇	Order No. Description	Order No. Description	Order No. Description	
28	34.4	38	FZ10-28-3	M30 02031	M30 52421	0.013				N00 56021	L05 00810	L05 01020	
32	38.4	44	FZ10-32-3	M30 02041	U10Z3-T06	0.015	W32 03150..	W32 03.....	W58 03.....	S/M2×3.8-6IP 0.62 Nm	6P	R2/N1	
36	44	48	FZ12-36-3	M30 02051	M30 52431	0.026	TPHX 0601..	TPHB 0601..	TPGX 0601..	N00 56031	L05 00810	L05 01030	
40	48	55	FZ12-40-3	M30 02061	U12Z3-T06	0.029				S/M2×4.9-6IP 0.62 Nm	6P	R2a/N2	
45	54.6	60	FZ16-45-3	M30 02071	M30 52441	0.058	W32 13150..	W32 13.....	W58 13.....	N00 56101	L05 00830	L05 01040	
50	59.6	68	FZ16-50-3	M30 02081	U16Z3-T09	0.067	TPHX 0902..	TPHB 0902..	TPGX 0902..	S/M2.6×5.2-8IP 1.28 Nm	8P	N3	

For further details on inserts see chapter 7

Drilling range <sup>1)</sup>			Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter	
D <sub>min</sub> ①	D <sub>max</sub> ②	D <sub>max</sub> ③	d1	n <sup>2)</sup>	Ø D1 <sup>2)</sup>	b	d2	Ø Z <sup>H7/g6</sup>	L1	L2	E1	V	A	Ø C	a	f	Ø d3	L4	N	b2
28	34.4	38	25	3.5	8	2	M6	10	31.5	25.5	6	4	23.3	8.9	6	12	5.7	24.8	1.2	6.5
32	38.4	44							35.5	29.5						16				
36	44	48	32	4	10	2.5	M8	12	40.3	33.5	6.8	5	31	10.9	8	16	6.7	31.3	1.2	6.5
40	48	55							45.3	38.5						21				
45	54.6	60	40	6.5	12	3	M10	16	51	42	9	6	39	13.9	10	20	8.6	39.7	1.2	9
50	59.6	68							57	48						26				

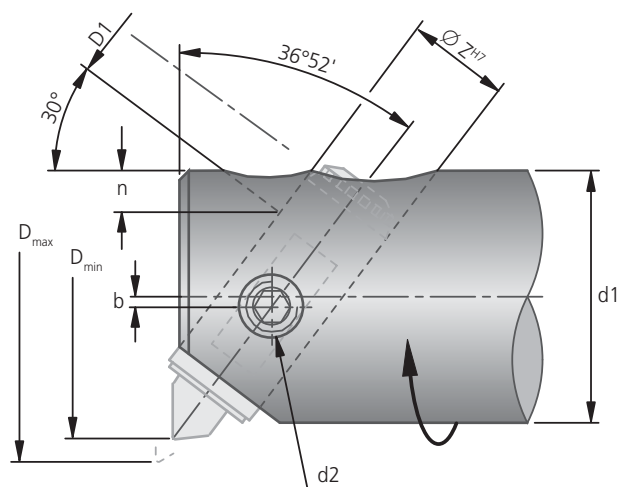
<sup>1)</sup> Value ① to ② = micro adjustment range of cartridge

Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

<sup>2)</sup> when using rough adjustment, the distance "n" must be used on the boring bar

## Angled mounting 36°52'

■ adjustment accuracy 1.6 µm Ø above vernier



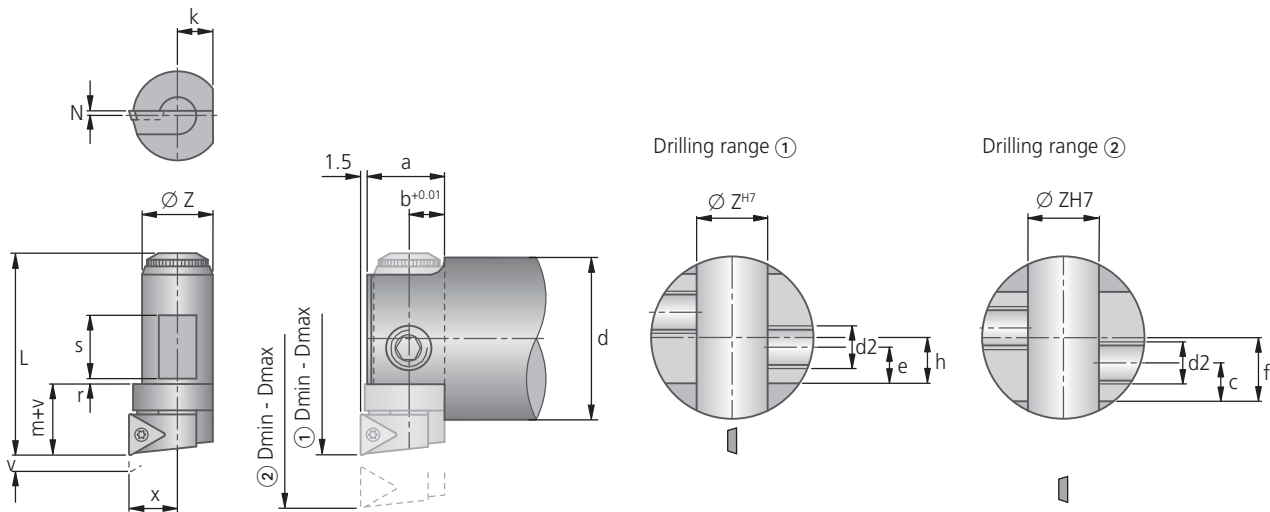
# KOMET Kometric® FF Micro-adjustable Cartridges Ø 29,5 – 66 mm

for insert W32 (TPH..) / W58 (TPGX..) **N**

- insert tilt of +5° over cutting edge ■
- adjustment accuracy 2 µm Ø above vernier ■

The FF micro adjustable cartridge is mounted radially and ideally suitable for NC tools, because the axial cutting dimensions are constant. The design and features of the cartridge are the same as type FZ (see sectional drawing), and are therefore also highly accurate. The protruding cutting edge is supported in its seating and mounting, and is therefore exceptionally robust. The adjustment is only carried out in a clamped state.

- Setting:**
1. Basic setting to be taken from drilling range ① and ②.
  2. Machining diameter set by fine adjustment device.



Drilling range ① D <sub>min</sub> -D <sub>max</sub>	Drilling range ② D <sub>min</sub> -D <sub>max</sub>	Cartridges			kg	Insert			Assembly parts	Accessories
		Description	Order No.			W32 L.H. size ∇∇	W32 neutral size ∇∇	W58 neutral size ∇∇		
29.5 – 36	35.5 – 42	FF10-T06-30	M30 20201	0.055	W32 03150..	W32 03..... TPHB 0601..	W58 03..... TPGX 0601..	N00 56021 S/M2x3.8-6IP 0.62 Nm	L05 00810 6IP	
39 – 45	44 – 50	FF12-T06-39	M30 20211	0.031						
47 – 57	56 – 66	FF16-T09-47	M30 20221	0.062	W32 13150..	W32 13..... TPHB 0902..	W58 13..... TPGX 0902..	N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP	

For further details on inserts see chapter 7

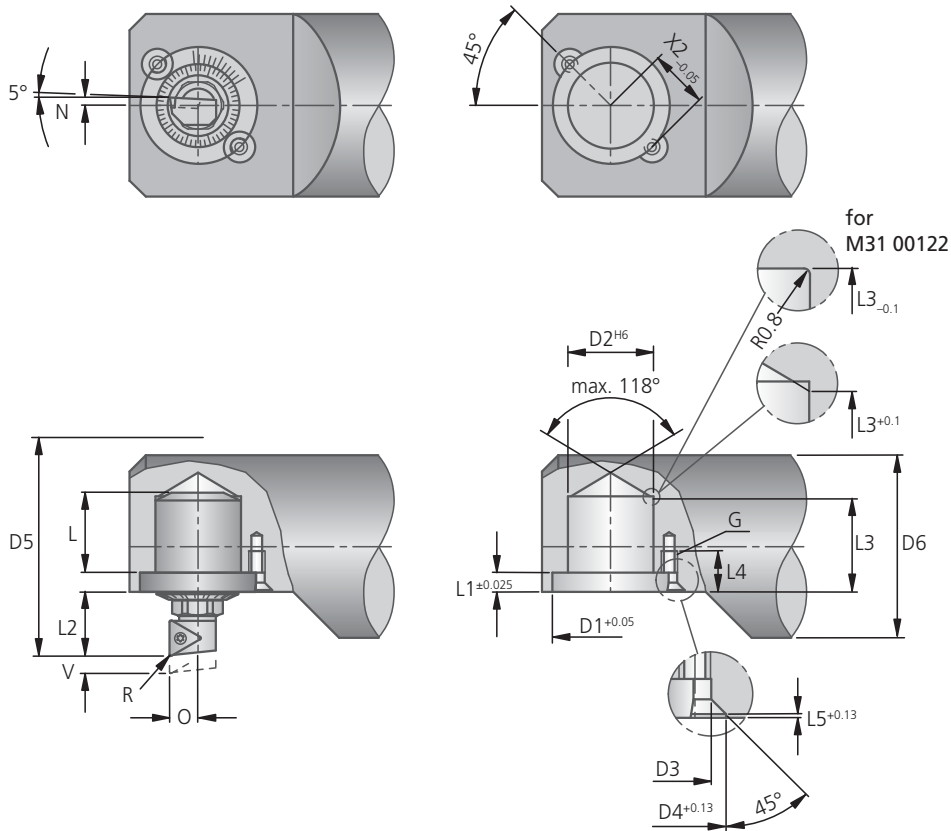
for cartridges	d	Ø Z	a	b	h	e	f	c	d2	L	x	N	k	v	m	r	s
M30 20201	25	10	11	5	3.7	3.9	6.7	3.9	M6	28.8	7.5	2.0	5	3.5	11	0.5	8
M30 20211	32	12	13.5	6	7	6	9.5	6	M8	37.75	9	1.2	6	3.5	12.5	1	11
M30 20221	40	16	17.5	8	7.5	7.5	12	8	M10	45.4	11	1.2	8	5	16	2	13



# KOMET Kometric® Micro-adjustable Cartridges up to Ø 25.4 mm

**N** for insert W32 (TPH..) / W58 (TPGX..)

■ insert tilt of +5° over cutting edge



## Radial mounting

- the smallest adjustment increment is 0.002 mm in the Ø above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

min. turning Ø D5	Order No.	kg	Insert			Assembly parts	Accessories	Assembly parts	Accessories
			W32 L.H. size ∇∇	W32 neutral size ∇∇	W58 neutral size ∇∇	Clamping screw	Screwdriver	Location screw 2x	Wrench
						Order No. Description	Order No. Description	Order No. Description	Order No. Description
25.4	M31 00122	0.02	W32 03150.. TPHX 0601..	W32 03..... TPHB 0601..	W58 03..... TPGX 0601..	N00 56021 S/M2×3.8-6IP 0.62 Nm	L05 00810 6IP	M31 00020.18 M3×6 sim. DIN7991	18589 10010 SW10
36.5	M31 00153	0.04	W32 13150.. TPHX 0902..	W32 13..... TPHB 0902..	W58 13..... TPGX 0902..	N00 56101 S/M2.6×5.2-8IP 1.28 Nm	L05 00830 8IP	55021 03008 M3×8	18589 10014 SW14
73	M31 00162	0.25	W32 23150.. TPHX 1303..	W32 23..... TPHB 1303..	W58 23..... TPGX 1303..	N00 56201 S/M3.5×6.2-10IP 2.8 Nm	L05 00850 10IP	55021 05012 M5×12	18589 10022 SW22

Supply includes:

Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

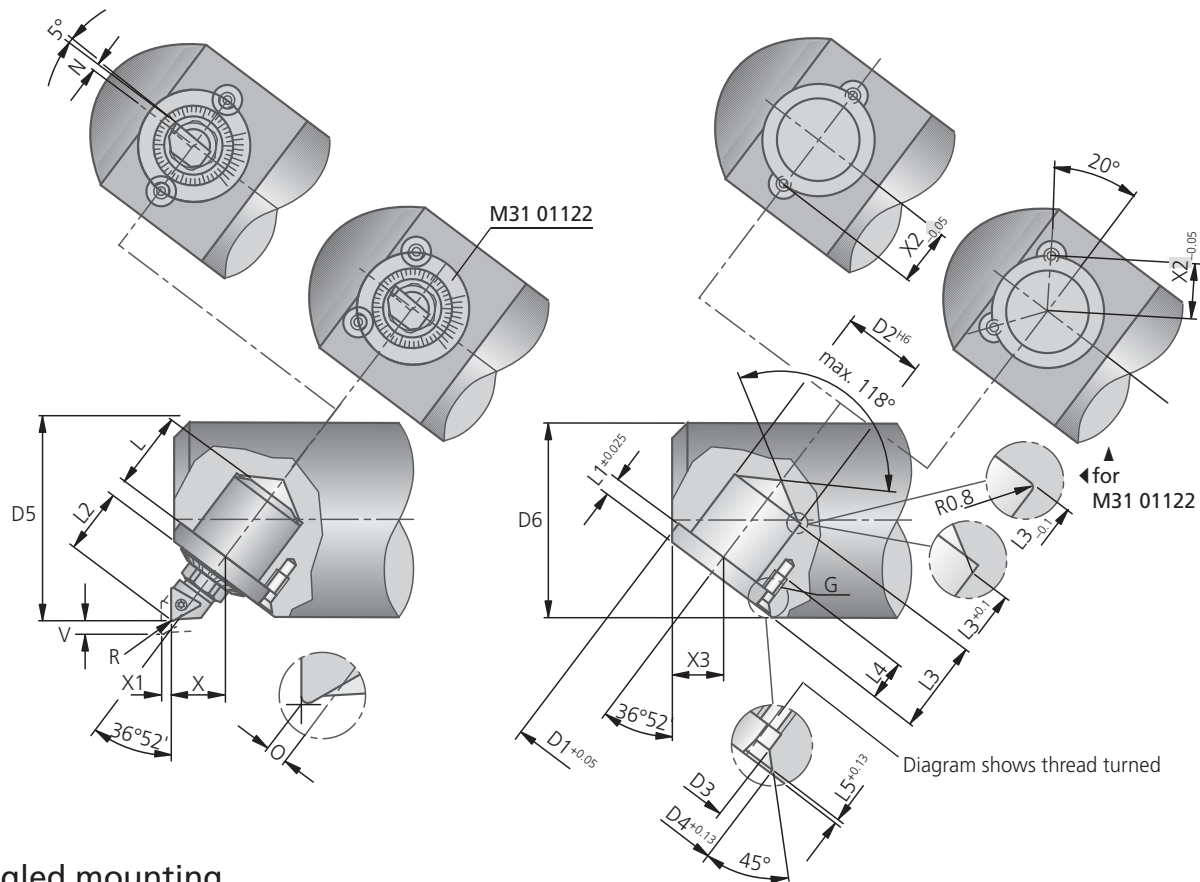
## Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	L2	L3 min.	L4	L5	G	N	R	V	O	X2
M31 00122	21	15	3.2	4.5	25	9.1	3.16	10.3	12.6	13	1.6	M3	1.5	0.4	1.0	3.6	10.5
M31 00153	24.6	19.05	4.3	6	33	14.54	3.96	13.5	19	10	1.5	M3	2	0.4	1.1	3.94	12.3
M31 00162	46	31.75	5.5	10	65	29.65	6.35	24.4	37	12	1.5	M5	2	0.4	5.5	7.1	23

# KOMET Kometric® Micro-adjustable Cartridges up to Ø 25,4 mm

for insert W32 (TPH..) / W58 (TPGX..) N

insert tilt of +5° over cutting edge ■



## Angled mounting

- the smallest adjustment increment is 0.0016 mm in the Ø above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

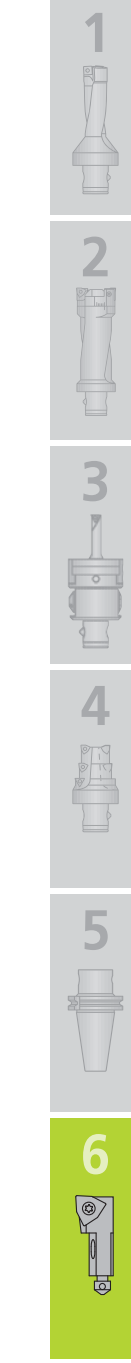
min. turning Ø D5	Order No.	kg	Insert			Assembly parts	Accessories	Assembly parts	Accessories
			W32 L.H.	W32 neutral	W58 neutral	Clamping screw	Screwdriver	Location screw 2x	Wrench
			size ∇∇	size ∇∇	size ∇∇	Order No. Description	Order No. Description	Order No. Description	Order No. Description
25.4	M31 01122	0.02	W32 03150.. TPHX 0601..	W32 03..... TPHB 0601..	W58 03..... TPGX 0601..	N00 56021 S/M2x3.8-6IP 0.62 Nm	L05 00810 6IP	M31 00020.18 M3x6 sim. DIN7991	18589 10010 SW10
36.5	M31 01153	0.04	W32 13150.. TPHX 0902..	W32 13..... TPHB 0902..	W58 13..... TPGX 0902..	N00 56101 S/M2.6x5.2-8IP 1.28 Nm	L05 00830 8IP	55021 03008 M3x8	18589 10010 SW10
73	M31 01162	0.25	W32 23150.. TPHX 1303..	W32 23..... TPHB 1303..	W58 23..... TPGX 1303..	N00 56201 S/M3.5x6.2-10IP 2.8 Nm	L05 00850 10IP	55021 05012 M5x12	18589 10017 SW17

Supply includes:

Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

## Mounting dimension

for cartridges	D1	D2	D3	D4	D6 min.	L	L1	for R0.4 L2	L3 min.	L4	L5	G	N	ISO dimension						
														for R	V	O	X	X1	X2	X3
M31 01122	19	15	3.2	4.5	23	9.1	3.2	11.1	12.7	13	1.6	M3	1.5	0.4	0.8	0.68	9.2	0.6	9.5	8.8
M31 01153	24.6	19.05	3.5	6	33	14.54	3.96	14.94	19	10	1.5	M3	2	0.4	1.3	0.9	12.15	0.95	12.3	11.3
M31 01162	46	31.75	5.5	10	65	29.65	6.35	27	37	12	1.5	M5	2	0.4	4.7	0.9	20.8	3.75	23	19.8



# Machining aluminium with DIHART® tools

## Application example: cylinder head

### The task

#### Cam shaft bores

- Machining aluminium
- Maximum tolerance requirements
- Allowance up to 1.5 mm
- Large scale production
- Solutions for machining centres and transfer lines



### Our solution

Ready-to-use solution from tool design to putting into operation

- Development of multiple insert PCD tools with up to eight cutting edges
- Pre-machining with multiple insert pilot PCD tool
- Finish machining with multiple insert PCD tool with carbide guide pad and internal coolant supply

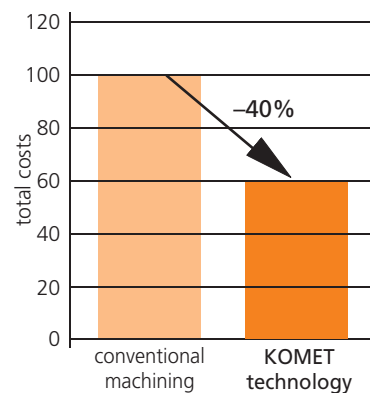


### Customer use

Complete result in just a few weeks

- 50% reduction of main time
- Increase in tool life to up to 80,000 parts per tool
- No setting
- Easy handling
- Approx. 40% reduction in production costs

### Production costs Cam shaft bores





## Machining aluminium with JEL<sup>®</sup> tools

### The future

The conventional filter will be replaced by a new generation of oil filters; these are already in use on new car models. This consists mainly of an aluminium housing fitted with the appropriate filter elements.

#### Cast aluminium filter housing:

Material: G - AlSi9Cu3

#### Machined with:

TOMILL thread milling tool GWF S80x3 with PCD inserts



#### Special solutions:

Special VABOS (variable boring and counterboring system) with PCD inserts for complete face machining on filter housing.



1



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4



5



6



KOMET®

Inserts

1



2



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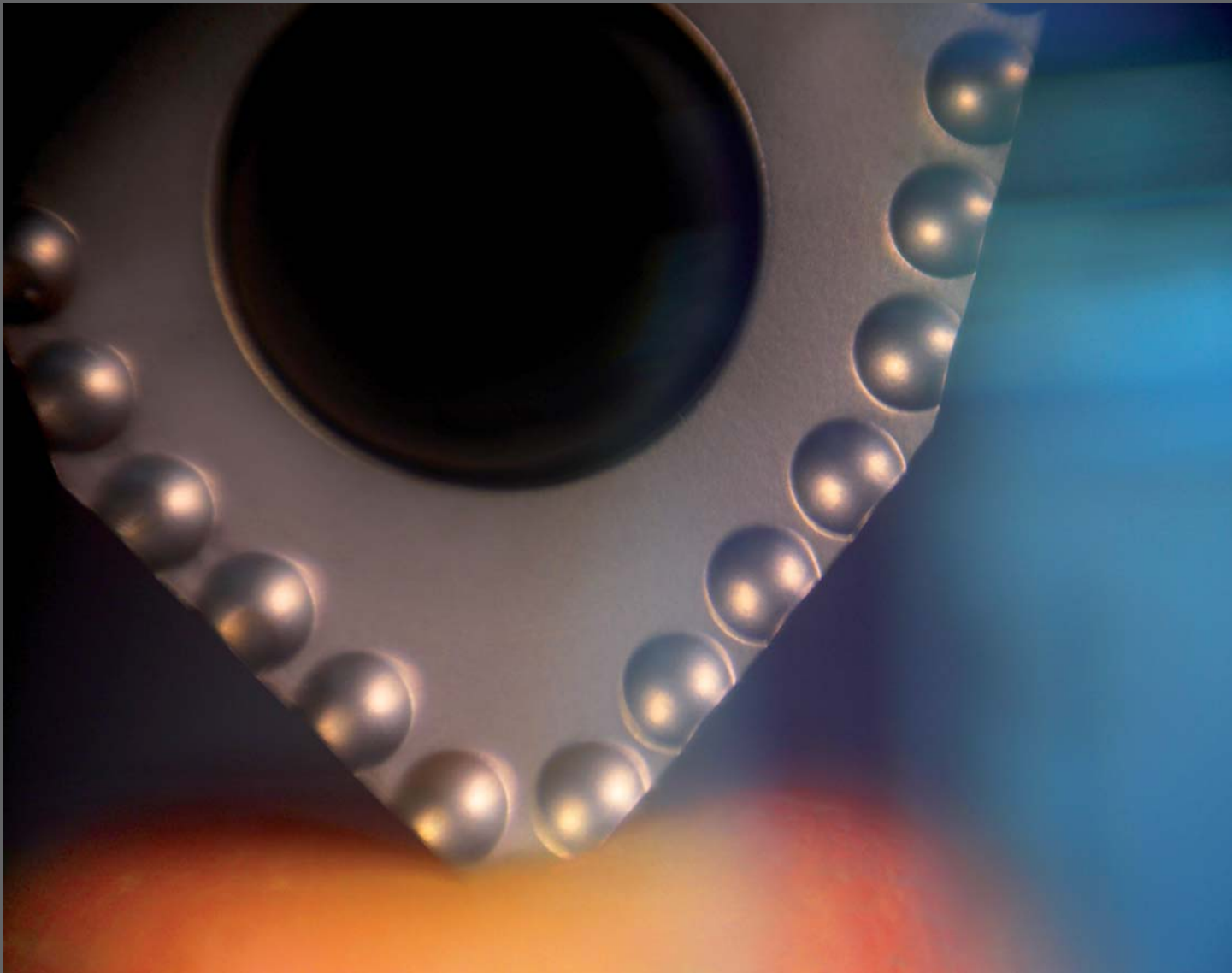
4



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6



KOMET® inserts and the appropriate tools provide the user with an efficient system for machining any materials.




**KOMET®** Page


Programme Summary 684 – 685

Cutting Materials 686 – 694

**Unisix® Inserts**

W00, W01, W04 84°  695 – 704  
W29 711 – 719

**Unisix® Inserts**

W24, W27 95°  705 – 710

**Inserts**

W30, W32, W34, W37 720 – 741  
W57, W58, W59 742 – 746  
C84 ISO insert 779  
Q12 Milling insert 793 – 796




**Inserts**

W60, W79 747 / 755  
C86 ISO insert 781



**Inserts**

W78, W89 35°  752 / 776

**Inserts**

W80, W82, W83 757 – 767  
C83 ISO insert 778  
Q09 Milling insert 790 – 792




**Inserts**

W85 768 – 775  
C85 ISO insert 780  
Q15 Milling insert 797



**Inserts**

Q36 Milling insert 85°  798 – 799

**Tangential Inserts**

Q80 90°  800

Inserts H60 / H62 782 – 788

Inserts H80 789

Numerical Coding 801 – 803

Clamping Screws Chapter 8

1



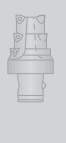
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7

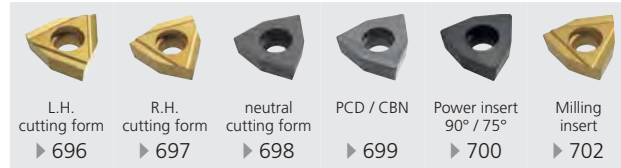


# Programme Summary – Inserts

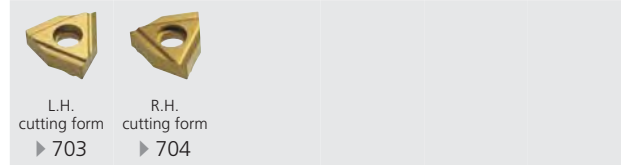
## Unisix® W00 – WOHX standard



## Unisix® W01 – WOHX strengthened



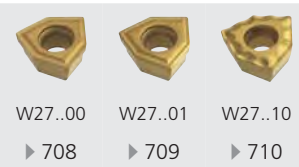
## Unisix® W04 – WNHX P6 cutting edges



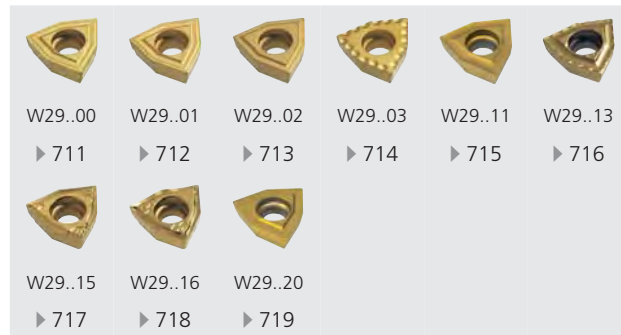
## Unisix® W24



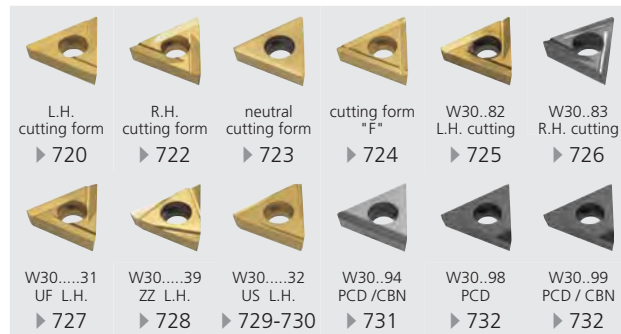
## Unisix® W27



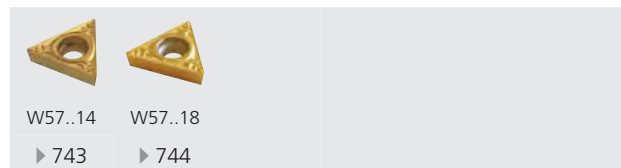
## Unisix® W29 – WOEX



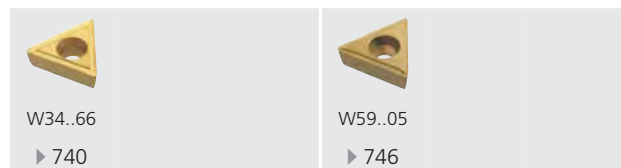
## W30 – TOHX / TOGX



## W57 – TOHX / TOGX



## W34 – TOHT



## W59 – TOHT

## W32 – TPHX machining aluminium



## W37 – TPHB



## W57 – TOGX

## W58 – TPGX

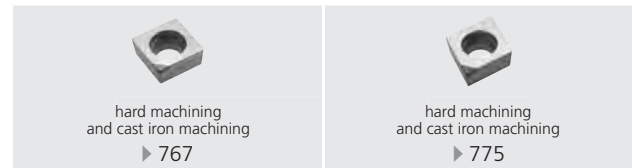
## W83 – SPGT / SPGW machining aluminium



## W85 – CPGT / CPGW machining aluminium

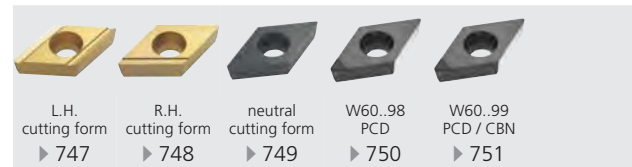


## W83 – SCGW



## W85 – CCGW

## W60 – DOHT / DOHW / DOWG

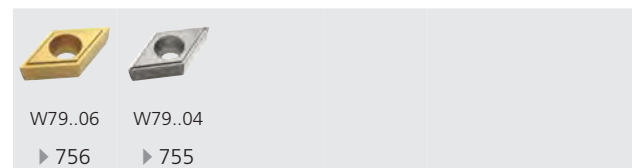


## W78 – VOHT / VOGW



## W89 – VCMT / VBMT

## W79 – DOHT



1

2

3

4

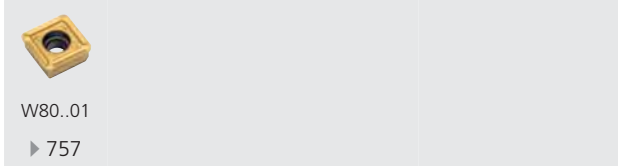
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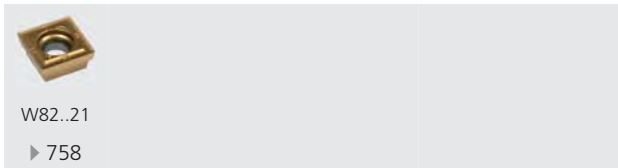
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# Programme Summary – Inserts

## W80 – SOGX



## W82 – SOHX



## W83 – SOEX



## ISO Inserts

### C83 – SCMT / SCGT



### C84 – TCMT / TCGT



### C85 – CCMT / CCGT



### C86 – DCMT / DCGT



## H60 / H62 – XOHX



## H80 – LNGU / LNHX



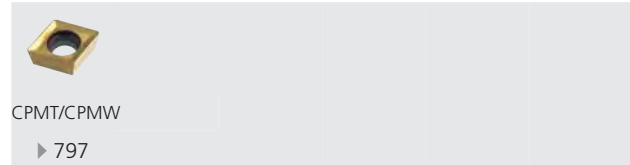
## Q09 – SPGW / SPMT / SEHW / SEHT



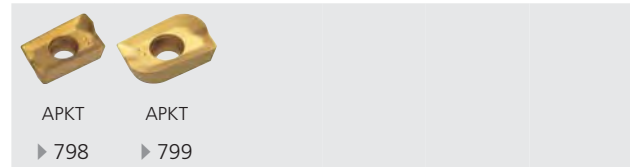
## Q12 – TCAA / TCAX / TNAА / TNAX / TPAX



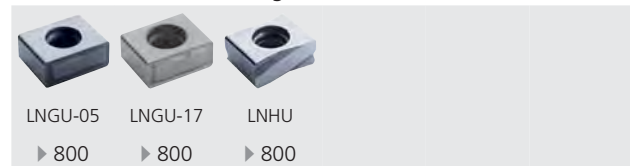
## Q15 – CPMT / CPMW



## Q36 – APKT



## Q80 – LNGU / LNHU tangential inserts



1

2

3

4

5

6

7

# Summary and list of codes

1



## Guidelines for selecting inserts

All dimensions shown are subject to tolerance in accordance with the relevant requirement.

Workpiece material	
Mild steel/tool steel	<b>P</b>
Stainless and acid-resistant steel	<b>M</b>
Grey cast iron, spheroidal cast iron	<b>K</b>
Non-ferrous metals	<b>N</b>
Heat-resistant steels	<b>S</b>
Hardened tool steel	<b>H</b>

2



3



4



5



6



7

## Key

### Abbreviations used

- d1 mm Incircle diameter
- s mm Indexable insert thickness
- l mm Theoretical usable length of cutting edge
- $\gamma$  ° Rake angle
- f mm Construction auxiliary dimension
- R mm Corner radius
- d2 mm Hole diameter

New 4-digit cutting material code e.g.

BK6115	toughness grade (05...50)
	coating type (e.g. CVD Al <sub>2</sub> O <sub>3</sub> )
	cutting material type: carbide + coating

## Selecting the top rake

Recommendations for using inserts with ground chip grooves

(W00, W01, W04, W30, W32, W34, W37, W60)

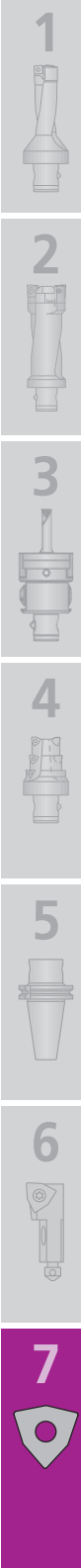
	rounded	sharp-edged	chamfered
	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>
	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>
	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>
	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>

# Summary and list of codes

uncoated																				
Cutting material code	Order No.	Application					Properties	Norm code	Application range											
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor						
									01	05	10	15	20	25	30	35	40	45	50	
P10	01					T	uncoated: • turning operations with medium to low cutting depths without interrupted cut	HW-P10	P											
									M											
									K											
									N											
									S											
									H											
P25	12					T	uncoated: • with excellent wear resistance and good toughness factor • suitable for medium to high cutting speeds for roughing and finishing • for non-alloy steel, malleable cast iron, stainless steel and cast iron	HW-P25	P											
									M											
									K											
									N											
									S											
									H											
P25M	03	D	R	F	T	M	uncoated: • with excellent wear resistance and good toughness factor • suitable for medium to high cutting speeds for roughing and finishing, also for interrupted cut • for non-alloy steel, malleable cast iron, stainless steel and cast steel	HW-P25	P											
									M											
									K											
									N											
									S											
									H											
P30	13					T	uncoated: • good toughness factor with reasonable wear resistance • for universal use	HW-P30	P											
									M											
									K											
									N											
									S											
									H											
P35	14					T	uncoated: • for turning operations with suitable toughness factor and good resistance to wear	HW-P35	P											
									M											
									K											
									N											
									S											
									H											
P40	04	D	R		T	M	uncoated: • with medium wear resistance at optimum toughness factor • low to medium cutting speeds for roughing and with heavily interrupted cut • also for unstable working conditions • for non-alloy steel, die steel and stainless steels	HW-P40	P											
									M											
									K											
									N											
									S											
									H											
K10	21	D	R	F	T	M	uncoated: • chamfered and neutral cutter geometry suitable for all grades of cast iron • positively sintered (PD) and ground geometry is used for aluminium. e.g.: 12° and 20° top rake, ground sharply and not rounded	HW-K10	P											
									M											
									K											
									N											
									S											
									H											
K10 / fine grain	23			F			uncoated: • fine grain carbide with high wear and thermal resistance • mainly for machining aluminium; PVD coated, also suitable for machining general steels and rust-resistant materials	HW-M10 HW-K15	P											
									M											
									K											
									N											
									S											
									H											
K20	22					M	uncoated: • with large application range for cast iron materials • medium to high cutting speeds for roughing and finishing • wet and dry machining also possible • for cast iron, malleable cast iron, aluminium/copper/brass and bronze alloys; main application area in milling	HW-K20	P											
									M											
									K											
									N											
									S											
									H											

■ main area of application    ▒ suitable in some cases

01 05 10 15 20 25 30 35 40 45 50



# Summary and list of codes

CVD coated																			
Cutting material code	Application						Properties	Norm code	Application range										
	Order No.	Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor					
								01	05	10	15	20	25	30	35	40	45	50	
BK50	50	D	R	F			diamond coating: • crystalline diamond coating • for cutting aluminium alloys, abrasive materials, graphite, plastics and bonded materials at high cutting speeds	HC-K10	P	M	K	N	S	H					
BK60	60	D	R	F	T		CVD-TiC-TiCN-TiN: • multiple coating on P25M carbide base • high tool life, even in the higher cutting speed range	HC-M10	P	M	K	N	S	H					
BK61	61	D	R	F			CVD-TiC-Al <sub>2</sub> O <sub>3</sub> : • aluminium oxide coating (ceramic) for higher cutting speeds in all cast iron materials • only suitable for interrupted cut to limited extent • not for use with aluminium materials !	HC-K15	P	M	K	N	S	H					
BK6110	6110			F			CVD-TiCN-TiN-Al <sub>2</sub> O <sub>3</sub> : • for final machining bores in cast iron and steel materials • excellent dimensional stability due to combination of wear resistant substrate and ceramic, surface treated coating	HC-P10 HC-K10	P	M	K	N	S	H					
BK6115	6115	D	R				CVD-TiCN-TiN-Al <sub>2</sub> O <sub>3</sub> : • high quality, surface treated coating • mainly for machining cast iron materials under standard to stable conditions, also at high cutting speeds	HC-P20 HC-K20	P	M	K	N	S	H					
BK6130	6130	D	R				CVD-TiCN-TiN-Al <sub>2</sub> O <sub>3</sub> : • high quality, surface treated coating • mainly for machining cast iron materials • thanks to stabilised cutting edge excellent suitability for steel and stainless steel	HC-P30	P	M	K	N	S	H					
BK62	62	D	R	F			CVD-TiN-TiCN-Al <sub>2</sub> O <sub>3</sub> : • for higher cutting speeds in all types of cast iron materials • only limited suitability for extreme interrupted cut • not suitable for aluminium materials	HC-K15	P	M	K	N	S	H					
BK63	63	D	R				CVD-TiCN-TiN: • multiple coating on P 25 base • only available as dimple inserts	HC-P25	P	M	K	N	S	H					
BK64	64	D	R	F	M		CVD-TiC-TiN: • multiple coating on P 40 carbide base • suitable for interrupted cut	HC-P35 HC-M15	P	M	K	N	S	H					



main area of application    
  suitable in some cases

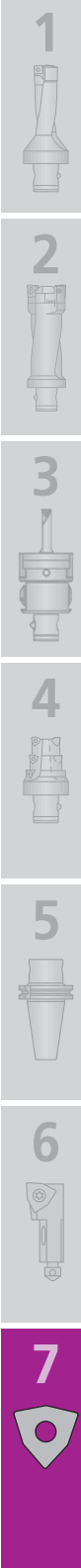


# Summary and list of codes

CVD coated																			
Cutting material code	Order No.	Application					Properties	Norm code	Application range										
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor					
								01	05	10	15	20	25	30	35	40	45	50	
BK6420	6420	D	R		T		CVD-TiCN-Al <sub>2</sub> O <sub>3</sub> -TiN: • good toughness factor with maximum wear resistance • for full cut at high cutting speeds in steel, cast steel and stainless steels	HC-P20	P										
									M										
									K										
									N										
									S										
									H										
BK6425	6425	D	R				MT-CVD-TiCN-Al <sub>2</sub> O <sub>3</sub> -TiN: • standard grades (grain) • maximum wear resistance in all steel and stainless steel materials	HC-P25 HC-M15	P										
									M										
									K										
									N										
									S										
									H										
BK66	66				T		CVD-TiC-TiCN-TiN: • for turning	HC-P35	P										
									M										
									K										
									N										
									S										
									H										
BK72	72	D	R				CVD-TiCN-TiC-Al <sub>2</sub> O <sub>3</sub> -TiN: • cutting material with tough substrate • for machining non-alloy and alloy steels, die steels and cast steel • ensures long tool life even at high cutting speeds	HC-P30	P										
									M										
									K										
									N										
									S										
									H										
BK73	73	D	R				CVD-TiCN/TiC/TiN-Al <sub>2</sub> O <sub>3</sub> -TiN: • tough carbide substrate • for machining rust-resistant and stainless steel materials, plus alloyed steels, even at higher cutting speeds	HC-M20	P										
									M										
									K										
									N										
									S										
									H										
BK74	74	D	R				CVD-TiCN-TiC-Al <sub>2</sub> O <sub>3</sub> : • extremely tough carbide substrate • for machining rust-resistant and stainless steels	HC-M25	P										
									M										
									K										
									N										
									S										
									H										
BK75	75				T		CVD-TiCN-TiC-Al <sub>2</sub> O <sub>3</sub> -TiN: • tough carbide substrate • for turning non-alloy and alloy steels, die steels and cast steel	HC-P25	P										
									M										
									K										
									N										
									S										
									H										
BK7525	7525				T		CVD-TiCN-Al <sub>2</sub> O <sub>3</sub> -TiN: • Grade for universal use with balanced wear and toughness properties	HC-P30	P										
									M										
									K										
									N										
									S										
									H										
BK76	76				T		CVD-TiCN-TiC-Al <sub>2</sub> O <sub>3</sub> : • for turning stainless steels, carbide steels with low tensile strength and cast materials	HC-P20	P										
									M										
									K										
									N										
									S										
									H										

main area of application

suitable in some cases

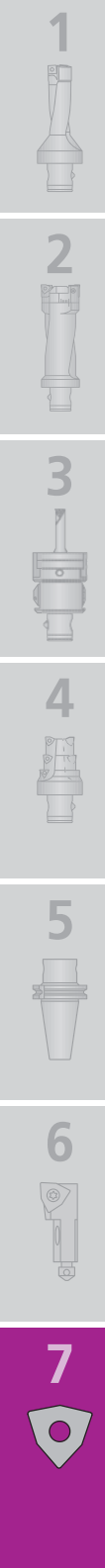


# Summary and list of codes

CVD coated																				
Cutting material code	Order No.	Application					Properties	Norm code	Application range											
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor						
									01	05	10	15	20	25	30	35	40	45	50	
BK7610	7610				T	CVD-TiCN-Al <sub>2</sub> O <sub>3</sub> : • high wear-resistant grade for machining grey cast iron, S.G. cast iron and cast iron material	HC-K10	P M K N S H												
BK7615	7615	D	R	F	M T	CVD-TiCN-Al <sub>2</sub> O <sub>3</sub> : • main high wear-resistant grade for wet and dry machining of all cast iron materials • extremely good edge stability due to new type of surface finish • can therefore also be used for interrupted cut • highly productive cutting material grade		P M K N S H												

PVD coated																				
Cutting material code	Order No.	Application					Properties	Norm code	Application range											
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor						
									01	05	10	15	20	25	30	35	40	45	50	
BK2710	2710			F		PVD-TiAlN: • extremely wear resistant carbide • for bore end machining stainless steels, structural and tool steels and cast materials • excellent dimensional stability due to combination of hard substrate and TiAlN coating with high aluminium content	HC-K10	P M K N S H												
BK2715	2715	D				PVD-TiAlN: for KUB Duon® only • extremely fine grade carbide with nano-structured coating • for maximum resistance against thermal and mechanical wear • maximum performance with double insert solid drilling in grey cast iron and SG cast iron grades and can also be used for high tensile strength steels and non ferrous metals	HC-K20	P M K N S H												
BK2730	2730	D	R			PVD-TiAlN: • extremely fine grades • extremely good edge stability and maximum wear resistance at medium and high speed ranges	HC-M25	P M K N S H												
BK2740	2740	D				PVD-TiAlN: • coating with high aluminium content on extremely tough substrate • completes the grades for solid drilling steel materials in the medium cutting speed ranges	HC-P35	P M K N S H												
BK68	68				M	PVD-TiCN: • multiple coating on carbide • medium to high cutting speeds for roughing and finishing and with interrupted cut • for non-alloy steel, cast steel, die steel and cast iron	HC-P20	P M K N S H												
BK77	77	D	R	F		PVD-TiN: • tough PVD coated grade • for cutting aluminium alloys and plastics at medium cutting speeds • tough characteristics and a high resistance to build-up of cutting edges	HC-K10	P M K N S H												

main area of application
  suitable in some cases



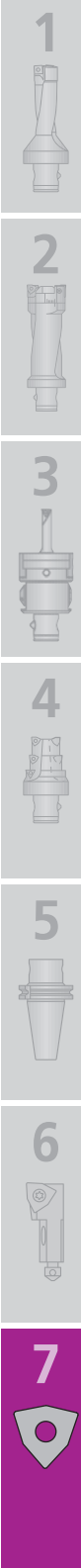
# Summary and list of codes

PVD coated																					
Cutting material code	Order No.	Application					Properties	Norm code	Application range												
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor							
									01	05	10	15	20	25	30	35	40	45	50		
BK7710	7710	D	R	F			PVD-TiB <sub>2</sub> : • coating on extremely high wear resistance K10 carbide • for finish and rough machining aluminium up to approx. 10% Si content and titanium alloys • optimum coating properties to prevent build-up on cutting edges	HC-K10	P	M	K	N	S	H							
BK78	78					M	PVD-TiAlN: • coated carbide on P25M base with extremely high wear resistance • medium to high cutting speed for roughing and finishing and with interrupted cut • for non alloy steel, cast steel and die steels	HC-P25	P	M	K	N	S	H							
BK79	79	D	R				PVD-TiAlN: • coated carbide on P40 base with extremely high wear resistance • low to medium cutting speed for roughing and finishing and with interrupted cut • for non-alloy steel, cast steel, die steels and rust-proof and stainless steels	HC-M35	P	M	K	N	S	H							
BK7930	7930	D	R				PVD-TiAlN: • extremely efficient combination of extremely fine grade carbide • for use on solid drills for stainless and acid resistant steels	HC-M25	P	M	K	N	S	H							
BK80	80					M	PVD-TiCN: • for milling with a wide range of applications in steel and cast iron materials • excellent balance between wear resistance and strength makes this suitable for universal use	HC-P35	P	M	K	N	S	H							
BK8125	8125	D					PVD-TiCN: for KUB Duon® only • coated K20/30 extremely fine grade carbide with good hardness level for extremely high resistance to fracturing • for double insert solid drilling in steel materials, particularly at low and medium cutting speeds with high requirements for cutting edge stability	HC-P25	P	M	K	N	S	H							
BK8140	8140	D					PVD-TiCN: • coating on extremely tough substrate • for optimum cutting edge stability particularly suitable for low and medium cutting speeds and also with interrupted cut and under difficult conditions	HC-P40 HC-M15	P	M	K	N	S	H							
BK82	82					T	PVD-TiN: for UniTurn® only • coated extremely fine grade carbide with extremely good wear resistance and good toughness factor • for machining cast iron and steel	HC-K15	P	M	K	N	S	H							
BK84	84	D	R	F		M	PVD-TiCN/TiN: • grade which combines toughness with good wear resistance • for machining steel, cast steel and stainless steel	HC-P25	P	M	K	N	S	H							

■ main area of application

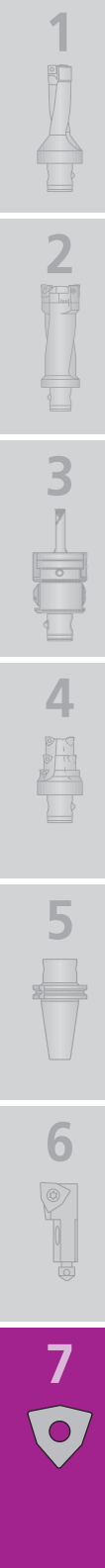
▒ suitable in some cases

01 05 10 15 20 25 30 35 40 45 50



# Summary and list of codes

PVD coated																					
Cutting material code	Order No.	Application					Properties	Norm code	Application range												
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor							
										01	05	10	15	20	25	30	35	40	45	50	
BK8425	8425	D	R	F		M	PVD-TiAlN/TiN: • grade for universal application with increased wear resistance due to innovative PVD coating	HC-P25	P M K N S H												
BK8430	8430	D	R	F			PVD-TiAlN/TiN: • extremely fine grades • extremely good edge stability and maximum wear resistance at medium and high speed ranges	HC-P30	P M K N S H												
BK8440	8440						PVD-TiCN/TiN: • coating on extremely tough substrate • for medium cutting speeds and also suitable for interrupted cut	HC-P35	P M K N S H												
BK8445	8445						PVD-TiCN/TiN: for pilot V95 only • extremely tough carbide with very fine grain • extremely good wear due to coating • for use on non-alloy and alloy steels and on stainless materials	HC-P35	P M K N S H												
BK85	85					T M	PVD-TiCN/TiN: • coated carbide with optimum wear resistance and high toughness factor • medium and high cutting speeds for roughing and finishing • for non-alloy and alloy steels and cast steel	HC-P20	P M K N S H												
BK8530	8530		R			T	PVD-TiAlN+TiN: • extremely fine grades • extremely good edge stability and maximum wear resistance at medium and high speed ranges • optimised PVD grades	HC-P30	P M K N S H												
BK87	87					M	PVD-TiN: • coated carbide on P40 base • medium to high cutting speeds for roughing and finishing and with interrupted cut • for non alloy steel, cast steel and die steels	HC-P35 coated	P M K N S H												
BK89	89						PVD-TiN: only for pilot V95 • coated HSS-E high quality, high speed steel • first choice for steel and aluminium • used for low cutting speeds with medium to high feed rates • coolant essential!	HSS-Co. coated	P M K N S H												
BK90	90						PVD-TiAlN: only for pilot V95 • coated HSS-E high quality, high speed steel • first choice for stainless steel and iron cast • good suited for unusual materials, Ti alloys, Ni and Co alloys • coolant essential!	HSS-Co.	P M K N S H												



# Summary and list of codes

Super-Hard CBN																			
Cutting material code	Order No.	Application					Properties	Norm code	Application range										
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance		Toughness factor								
SK44	44		R			M	uncoated: • silicon nitride • ceramic material with extremely high wear resistance and high toughness factor • for roughing and finishing cast iron • high to very high cutting speeds	CN-K30	01	05	10	15	20	25	30	35	40	45	50
CBN40	40			F		T	uncoated: • cubic boron nitride material • for turning hardened steels with an HRC of over 45, high heat resistant alloys on nickel or cobalt base	BN-H05	01	05	10	15	20	25	30	35	40	45	50
CBN57	57		R			T	uncoated: • cubic boron nitride • for machining cast materials, powder metallurgical materials and high temperature alloys	BN-K05	01	05	10	15	20	25	30	35	40	45	50

Super-Hard PCD																				
Cutting material code	Order No.	Application					Properties	Norm code	Application range											
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance		Toughness factor									
PKD555	55	D	R		F	T	M	uncoated: • polycrystalline diamond cutting material • for turning aluminium, ceramics and plastics	DP-K05	01	05	10	15	20	25	30	35	40	45	50
PKD5520	5520		R			T	uncoated: • polycrystalline diamond cutting material with extremely high edge stability • for machining aluminium materials also at extremely high cutting values and with interrupted cut and for other non ferrous metals	DP-K10	01	05	10	15	20	25	30	35	40	45	50	

Ceramic uncoated																			
Cutting material code	Order No.	Application					Properties	Norm code	Application range										
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance		Toughness factor								
SK44	44		R			M	uncoated: • silicon nitride • ceramic material with extremely high wear resistance and high toughness factor • for roughing and finishing cast iron • high to very high cutting speeds	CN-K30	01	05	10	15	20	25	30	35	40	45	50
SK44	44		R			M	uncoated: • silicon nitride • ceramic material with extremely high wear resistance and high toughness factor • for roughing and finishing cast iron • high to very high cutting speeds	CN-K30	01	05	10	15	20	25	30	35	40	45	50

Ceramic coated																			
Cutting material code	Order No.	Application					Properties	Norm code	Application range										
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance		Toughness factor								
SK45	45		R				CVD-Al <sub>2</sub> O <sub>3</sub> -multilayer: • coated silicon nitride cutting material • for high performance cutting of grey cast iron and SG cast iron materials • for high cutting speeds in conjunction with high feed rates; also for interrupted cut	CC-K20	01	05	10	15	20	25	30	35	40	45	50
SK45	45		R				CVD-Al <sub>2</sub> O <sub>3</sub> -multilayer: • coated silicon nitride cutting material • for high performance cutting of grey cast iron and SG cast iron materials • for high cutting speeds in conjunction with high feed rates; also for interrupted cut	CC-K20	01	05	10	15	20	25	30	35	40	45	50



# Summary and list of codes



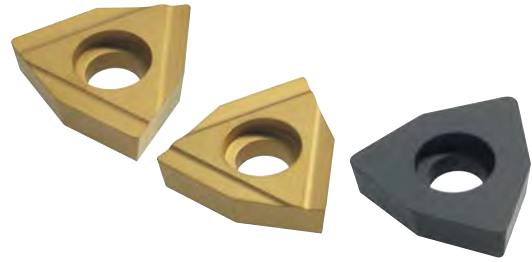
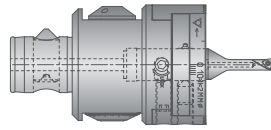
Cermert uncoated																					
Cutting material code	Order No.	Application					Properties	Norm code	Application range												
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor							
										01	05	10	15	20	25	30	35	40	45	50	
CK30	30			F			uncoated: • for fine and finish turning • high toughness factor, low wear and comparatively high cutting speeds produce longer tool life and high surface quality	HT-P15	P M K N S H												
CK32	32			F	T		uncoated: • for fine and finish turning • low wear and higher cutting speed producing longer tool life and good surface finish • cutting material for high productivity in the upper cutting speed range	HT-P15	P M K N S H												
CK3210	3210		R	F			uncoated: • for fine and finish turning • low wear and higher cutting speed producing longer tool life and good surface finish • cutting material for high productivity in the upper cutting speed range		P M K N S H												
CK3215	3215			F	T		uncoated: • wear-resistant grade with the necessary strength for machining steel and stainless steel and for cast iron materials	HT-P10	P M K N S H												
CK3230	3230		R	F			uncoated: • extremely tough behaviour and good wear resistance • also suitable for use in interrupted cut		P M K N S H												
CK37	37		R	F	T	M	uncoated: • good balance of wear resistance and toughness • allows interrupted cuts and light roughing operations	HT-P20	P M K N S H												

Cermert coated																					
Cutting material code	Order No.	Application					Properties	Norm code	Application range												
		Drilling	Roughing	Fine Boring	Turning	Milling			Wear resistance					Toughness factor							
										01	05	10	15	20	25	30	35	40	45	50	
CK38	38			F			PVD-TiCN/TiN: • high toughness factor and extremely good wear resistance • this cutting material has a wide range of applications in non-alloy and alloy steel, die steel, rust-resistant and stainless steels and cast irons	HC-P10	P M K N S H												
CK39	39				T		PVD-TiCN/TiN: • for fine and finish turning • high toughness factor, low wear and comparatively high cutting speeds produce longer tool life and high surface quality	HC-P15	P M K N S H												

main area of application
  suitable in some cases

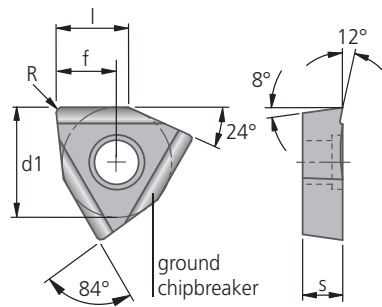
Application range:

- MicroKom *BluFlex*® and MicroKom® *hi.flex* Ø 6-8 mm
- External and internal turning
- Special tools
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength



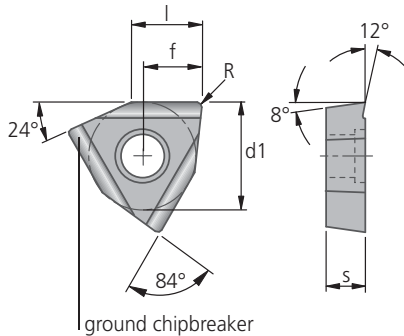
Cutter geometry:

L.H. cutting form "L"



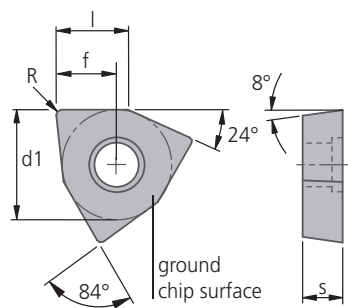
Description ISO Description	Order No.	Carbide grades					d1	s	l	γ	f	R
		uncoated	PVD coated		CVD coated							
Cutting edge design E = rounded F = sharp	enter carbide code ▼	P40 E	K10 F	BK2710 E	BK8440 E	BK6440 E						
WOHX 02T001..L-G12	W00 04120.01..	▲	▲	▲	▲	▲	4.0	1.2	2.6	12°	2.20	0.1
WOHX 02T002..L-G12	W00 04120.02..			▲	▲						2.19	0.2
Mild steel/tool steel	P	●	●	●	●	●	Order example: Description WOHX 02T001 FL-G12 Carbide grade K10 Order No. W00 04120.0121					
Stainless and acid-resistant steel	M	●	●	●	●	●						
Grey cast iron, spheroidal cast iron	K	●	●	●	●	●						
Non-ferrous metals	N	●	●	●	●	●						
Heat-resistant steels	S	●	●	●	●	●						
Hardened tool steel	H	●	●	●	●	●						

R.H. cutting form "R"



Description ISO Description	Order No.	Carbide grades			d1	s	l	γ	f	R
		uncoated	PVD coated							
Cutting edge design E = rounded	enter carbide code ▼	P40 E	BK2710 E	BK8440 E						
WOHX 02T001..R-G12	W00 04420.01..	▲	▲	▲	4.0	1.2	2.6	12°	2.20	0.1
WOHX 02T002..R-G12	W00 04420.02..		▲	▲					2.19	0.2
Mild steel/tool steel	P	●	●	●	Order example: Description WOHX 02T001 ER-G12 Carbide grade BK2710 Order No. W00 04420.012710					
Stainless and acid-resistant steel	M	●	●	●						
Grey cast iron, spheroidal cast iron	K	●	●	●						
Non-ferrous metals	N	●	●	●						
Heat-resistant steels	S	●	●	●						
Hardened tool steel	H	●	●	●						

neutral cutting form "N"



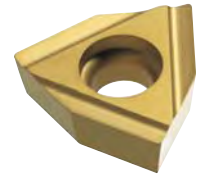
Description ISO Description	Order No.	Carbide grades					d1	s	l	f	R
		uncoated									
Cutting edge design E = rounded	enter carbide code ▼	K10 E									
WOHX 02T001 EN	W00 04600.01..	▲					4.0	1.2	2.6	2.21	0.1
Mild steel/tool steel	P	●					Order example: Description WOHX 02T001 EN Carbide grade K10 Order No. W00 04600.0121				
Stainless and acid-resistant steel	M	●									
Grey cast iron, spheroidal cast iron	K	●									
Non-ferrous metals	N	●									
Heat-resistant steels	S	●									
Hardened tool steel	H	●									

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



## Inserts

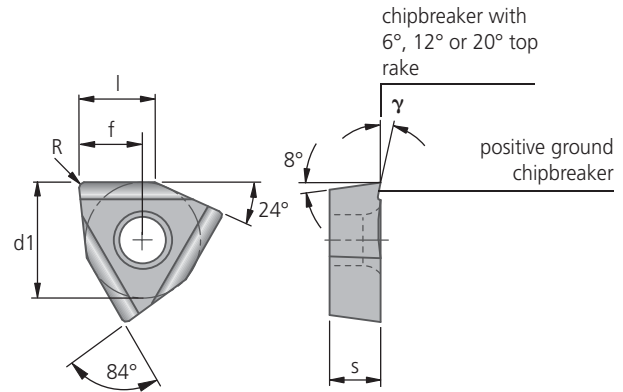
■ L.H. cutting form "L"



### Application range:

- External and internal turning
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades								d1	s	l	γ	f	R
		uncoated			CVD coated			PVD							
		P25M E	K10 E	K10 F	BK6425 E	BK7615 E	BK6115 E	BK6440 E	BK8425 E						
	enter carbide code	03	21	21	6425	7615	6115	6440	8425						
WOHX 030204..L-G06	W01 10060.04..	▲			▲	▲			▲	5.0	2.3	3.2	6°	2.73	0.4
WOHX 030204..L-G12	W01 10120.04..	▲		▲	▲				▲	5.0	2.3	3.2	12°	2.72	0.4
WOHX 040304..L-G06	W01 18060.04..	▲			▲	▲			▲	6.35	3.18	4.1	6°	3.48	0.4
WOHX 040304..L-G12	W01 18120.04..	▲		▲	▲				▲	6.35	3.18	4.1	12°	3.47	0.4
WOHX 05T302..L-G06	W01 24060.02..	▲	▲		▲				▲	8.0	3.8	5.3	6°	4.42	0.2
WOHX 05T304..L-G06	W01 24060.04..						▲			8.0	3.8	5.3	6°	4.40	0.4
WOHX 05T302..L-G12	W01 24120.02..	▲			▲				▲	8.0	3.8	5.3	12°	4.42	0.2
WOHX 05T304..L-G12	W01 24120.04..	▲		▲	▲			▲	▲	8.0	3.8	5.3	12°	4.40	0.4
WOHX 06T302..L-G06	W01 34060.02..	▲	▲		▲				▲	10.0	3.8	6.6	6°	5.53	0.2
WOHX 06T304..L-G06	W01 34060.04..						▲		▲	10.0	3.8	6.6	6°	5.51	0.4
WOHX 06T302..L-G12	W01 34120.02..	▲							▲	10.0	3.8	6.6	12°	5.53	0.2
WOHX 06T304..L-G12	W01 34120.04..	▲		▲	▲				▲	10.0	3.8	6.6	12°	5.51	0.4
WOHX 080402..L-G06	W01 42060.02..	▲			▲				▲	12.0	4.8	7.9	6°	6.64	0.2
WOHX 080404..L-G06	W01 42060.04..		▲				▲		▲	12.0	4.8	7.9	6°	6.62	0.4
WOHX 080402..L-G12	W01 42120.02..				▲				▲	12.0	4.8	7.9	12°	6.64	0.2
WOHX 080404..L-G12	W01 42120.04..	▲		▲	▲				▲	12.0	4.8	7.9	12°	6.62	0.4
WOHX 100504..L-G06	W01 50060.04..	▲	▲		▲				▲	15.0	5.3	9.9	6°	8.29	0.4
WOHX 100504..L-G12	W01 50120.04..			▲					▲	15.0	5.3	9.9	12°	8.29	0.4
WOHX 120606..L-G06	W01 58060.06..								▲	17.6	6.0	11.6	6°	9.71	0.6
WOHX 120606..L-G12	W01 58120.06..								▲	17.6	6.0	11.6	12°	9.71	0.6
Mild steel/tool steel	P	●	●	●	●		●	●	●	Order example: Description WOHX 030204 EL-G06 Carbide grade P25M Order No. W01 10060.0403					
Stainless and acid-resistant steel	M	●			●			●	●						
Grey cast iron, spheroidal cast iron	K		●	●		●	●								
Non-ferrous metals	N		●	●											
Heat-resistant steels	S		●	●											
Hardened tool steel	H					●	●								

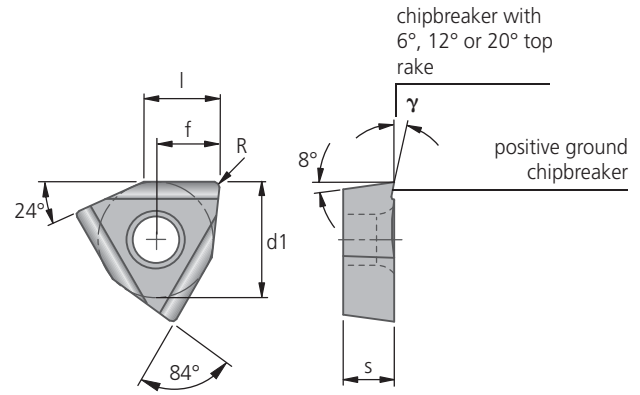




Application range:

- External and internal turning
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:



Description ISO Description	Order No.	Carbide grades						d1	s	l	γ	f	R
		uncoated		CVD coated		PVD coated							
		P25M E 03	K10 F 21	BK6425 E 6425	BK7615 E 7615	BK6115 E 6115	BK8425 E 8425						
WOHX 030204..R-G06	W01 10360.04..	▲		▲	▲		▲	5.0	2.3	3.2	6°	2.73	0.4
WOHX 030204..R-G12	W01 10420.04..	▲	▲	▲			▲				12°	2.72	0.4
WOHX 040304..R-G06	W01 18360.04..			▲	▲		▲	6.35	3.18	4.1	6°	3.48	0.4
WOHX 040304..R-G12	W01 18420.04..		▲				▲				12°	3.47	0.4
WOHX 05T304..R-G06	W01 24360.04..					▲		8.0	3.8	5.3	6°	4.40	0.4
WOHX 05T302..R-G12	W01 24420.02..	▲	▲	▲			▲				12°	4.42	0.2
WOHX 06T302..R-G06	W01 34360.02..	▲						10.0	3.8	6.6	6°	5.53	0.2
WOHX 06T304..R-G06	W01 34360.04..					▲						5.51	0.4
WOHX 06T302..R-G12	W01 34420.02..	▲		▲			▲	10.0	3.8	6.6	12°	5.53	0.2
WOHX 080402..R-G06	W01 42360.02..	▲						12.0	4.8	7.9	6°	6.64	0.2
WOHX 080404..R-G06	W01 42360.04..					▲						6.62	0.4
WOHX 080402..R-G12	W01 42420.02..	▲	▲	▲			▲	12.0	4.8	7.9	12°	6.64	0.2
WOHX 080404..R-G12	W01 42420.04..						▲					6.62	0.4
WOHX 100504..R-G06	W01 50360.04..	▲						15.0	5.3	9.9	6°	8.29	0.4
WOHX 100504..R-G12	W01 50420.04..	▲					▲				12°	8.29	0.4
Mild steel/tool steel		●	●	●		●		Order example:					
Stainless and acid-resistant steel		●	●	●		●		Description					
Grey cast iron, spheroidal cast iron			●		●			WOHX 030204 ER-G06					
Non-ferrous metals			●					Carbide grade					
Heat-resistant steels			●					P25M					
Hardened tool steel					●	●		Order No.					
					●	●		W01 10360.0403					



## Inserts

- neutral cutting form "N"

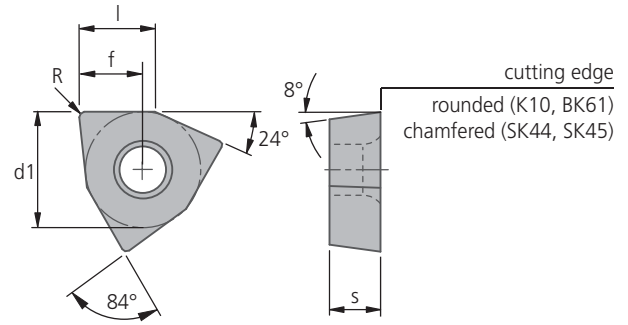


## Application range:

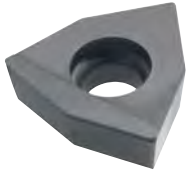
Rough boring and turning operations on grey cast iron and SG cast iron materials

- roughing and standard machining under difficult operating conditions (interrupted cut or variations in machining allowances)
- grey cast iron and SG cast iron materials
- can be used on G01 twin cutting tools and on special tools
- extremely efficient because of high cutting speeds

## Cutter geometry:



Description ISO Description	Order No.	Carbide grades		Silicon nitride		d1	s	l	f	R
		uncoated	CVD coated	uncoated	CVD coated					
Cutting edge design E = rounded T = chamfered										
	enter carbide code	K10 E 21	BK7615 E 7615	SK44 T 44	SK45 T 45					
WOHX 030204 EN	W01 10600.04..	▲	▲			5.0	2.3	3.2	2.73	0.4
WOHX 040304 EN	W01 18600.04..	▲	▲			6.35	3.18	4.1	3.48	0.4
WOHX 05T304 ..N	W01 24600.04..	▲	▲	▲	▲	8.0	3.8	5.3	4.40	0.4
WOHX 05T308 ..N	W01 24600.08..		▲	▲	▲				4.35	0.8
WOHX 06T304 EN	W01 34600.04..	▲	▲			10.0	3.8	6.6	5.51	0.4
WOHX 06T308 EN	W01 34600.08..		▲						5.47	0.8
WOHX 080404 EN	W01 42600.04..		▲			12.0	4.8	7.9	6.62	0.4
WOHX 080408 EN	W01 42600.08..		▲						6.58	0.8
Mild steel/tool steel		●				Order example: Description WOHX 030204 EN Carbide grade K10 Order No. W01 10600.0421				
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron		●	●	●	●					
Non-ferrous metals		●								
Heat-resistant steels		●								
Hardened tool steel			◐ <52HRC							



### Application range:

#### PCD application range

Machining non-ferrous metals, plastics, composites, rubber, graphite, etc.

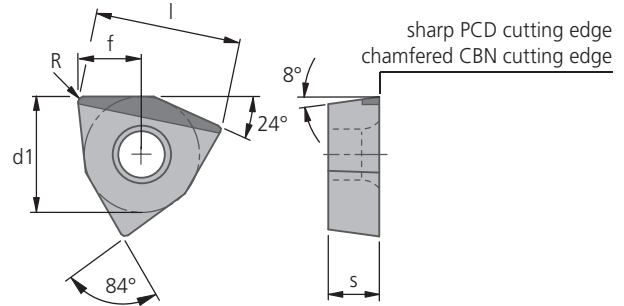
#### CBN application range (CBN57)









Machining cast iron materials etc.

Inserts with PCD and CBN cutting edges have the following advantages:

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

### Cutter geometry:



Description ISO Description	Order No.	Cutting material		d1	s	l	f	R
		PCD tipped  PKD55 F	CBN tipped  CBN57 S					
Cutting edge design F = sharp S = chamfered+rounded	enter carbide code	55	57					
WOGX 05T304 ..	W01 24940.04..	▲	▲	8.0	3.8	10.1	4.40	0.4
WOGX 06T304 ..	W01 34940.04..	▲	▲	10.0	3.8	12.7	5.51	0.4
WOGX 080404 ..	W01 42940.04..	▲	▲	12.0	4.8	15.3	6.62	0.4
Mild steel/tool steel 				Order example: Description WOGX 05T304 S Cutting material CBN57 Order No. W01 24940.0457				
Stainless and acid-resistant steel 								
Grey cast iron, spheroidal cast iron 		●	●					
Non-ferrous metals 								
Heat-resistant steels 								
Hardened tool steel 								

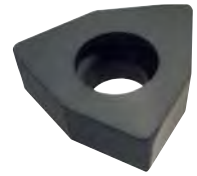


# KOMET Unisix® Power W01 – 90°

WOHX

## Inserts

- for clockwise-rotating tools
- approach angle  $\alpha = 90^\circ$
- L.H. cutting form "L"

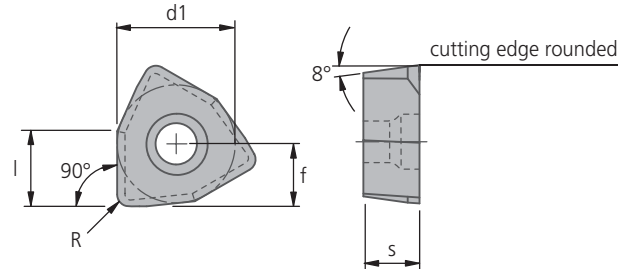


## Application range:

### Rough boring with double and multiple inserts

- roughing and finishing operations
- grey cast iron, SG cast iron and CGI materials
- high feed rates
- extremely good form and surface qualities

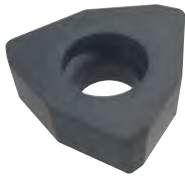
## Cutter geometry:



Description ISO Description	Order No.	Carbide grades		d1	s	l	f	R
		CVD coated						
Cutting edge design E = rounded ▼	enter carbide code ▼							
WOHX 05T3PN EL	W01 24600.90..	▲	▲	8.0	3.8	5.1	4.23	0.8
WOHX 06T3PN EL	W01 34600.90..	▲	▲	10.0	3.8	6.4	5.34	0.8
WOHX 0804PN EL	W01 42600.90..	▲	▲	12.0	4.8	7.7	6.45	0.8
WOHX 1005PN EL	W01 50600.90..	▲	▲	15.0	5.3	9.7	8.12	0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	●	Order example: Description WOHX 05T3PN EL Carbide grade BK6115 Order No. W01 24600.906115				
			◐ <52HRC					

EP 1311363 and other patents (support land)

# WOHX



# KOMET Unisix® Power W01 – 75°

## Inserts

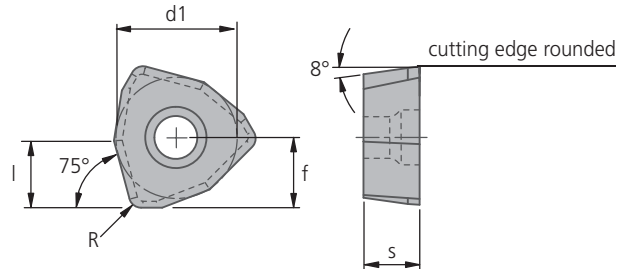
- for clockwise-rotating tools ■
- approach angle  $\alpha = 75^\circ$  ■
- L.H. cutting form "L" ■

### Application range:

#### Rough boring with double and multiple inserts

- roughing and finishing operations
- grey cast iron, SG cast iron and CGI materials
- high feed rates
- extremely good form and surface qualities

### Cutter geometry:



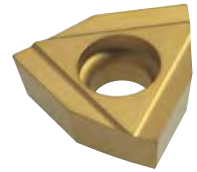
Description ISO Description	Order No.	Carbide grades		d1	s	l	f	R
		CVD coated						
Cutting edge design E = rounded	enter carbide code	BK7615 E	BK6115 E					
		7615	6115					
WOHX 05T3EN EL	W01 24600.75..	▲	▲	8.0	3.8	4.4	4.63	0.8
WOHX 06T3EN EL	W01 34600.75..	▲	▲	10.0	3.8	5.7	5.96	0.8
WOHX 0804EN EL	W01 42600.75..	▲	▲	12.0	4.8	6.9	7.29	0.8
WOHX 1005EN EL	W01 50600.75..		▲	15.0	5.3	8.9	9.29	0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	●	Order example: Description WOHX 05T3EN EL Carbide grade BK6115 Order No. W01 24600.756115				
			⊖ <52HRC					

EP 1311363 and other patents (support land)

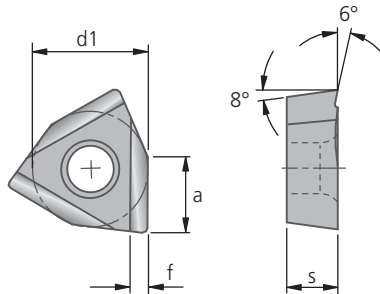


## Inserts

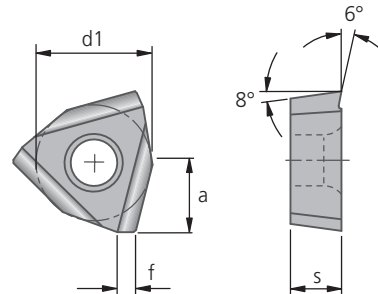
■ for corner milling cutter and face milling cutter



## Cutter geometry:



Approach angle 90°  
for corner milling cutter F020

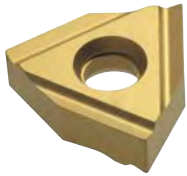


Approach angle 75°  
for face milling cutter F020

Description ISO Description	Order No.	Carbide grades			d1	s	γ	f	R
		uncoated		CVD coated					
Cutting edge design E = rounded	enter carbide code	P25M E	K10 E	BK6440 E					
		03	21	6440					
WOHX 06T3PA ER-G06	W01 34360.34..	▲	▲	▲	10.0	3.8	6°	1.4	6.0
WOHX 06T3EA ER-G06	W01 34360.35..		▲						5.9
WOHX 0804PA ER-G06	W01 42360.34..	▲	▲		12.0	4.8	6°	1.4	7.0
Mild steel/tool steel	<b>P</b>	●	●	●	Order example: Description WOHX 06T3PA ER-G06 Carbide grade P25M Order No. W01 34360.3403				
Stainless and acid-resistant steel	<b>M</b>	●	●	●					
Grey cast iron, spheroidal cast iron	<b>K</b>		●						
Non-ferrous metals	<b>N</b>		●						
Heat-resistant steels	<b>S</b>		●						
Hardened tool steel	<b>H</b>		●						



# WNHX



# KOMET Unisix® W04

## Inserts

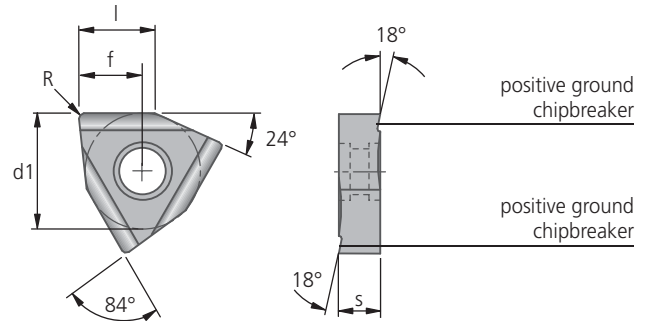
- positive ground chipbreaker ■
- L.H. cutting form "L" ■
- P6 cutting edges ■

### Application range:

#### Internal and external turning

The Unisix® insert with 6 cutting edges is an efficient and economic insert. The six cutting edges can be used because of the negative insert seating. The positively ground chipbreakers guarantee a good chip form and a soft cut.

### Cutter geometry:

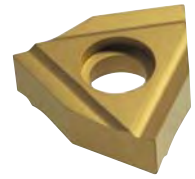


Description ISO Description	Order No.	Carbide grades				d1	s	l	f	R
Cutting edge design E = rounded F = sharp	enter carbide code	P25 E 12	P40 E 04	K10 F 21	BK6425 E 6425					
WNHX 060302..L-G18	W04 34180.02..	▲				10.0	3.5	6.5	5.53	0.2
WNHX 08T302..L-G18	W04 42180.02..	▲	▲	▲	▲	12.0	4.5	7.5	6.64	0.2
WNHX 100404..L-G18	W04 50180.04..	▲	▲		▲	15.0	5.0	9.5	8.29	0.4
Mild steel/tool steel		●	●	●	●	Order example: Description WNHX 060302 EL-G18 Carbide grade P25 Order No. W04 34180.0212				
Stainless and acid-resistant steel		●	●		●					
Grey cast iron, spheroidal cast iron				●						
Non-ferrous metals				●						
Heat-resistant steels				●						
Hardened tool steel										



## Inserts

- positive ground chipbreaker
- R.H. cutting form "R"
- P6 cutting edges

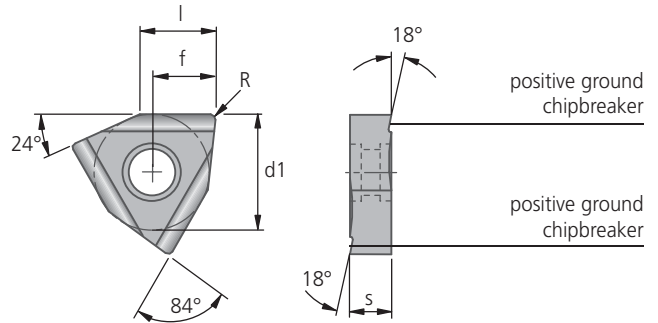


## Application range:

### Internal and external turning

The Unisix® insert with 6 cutting edges is an efficient and economic insert. The six cutting edges can be used because of the negative insert seating. The positively ground chipbreakers guarantee a good chip form and a soft cut.

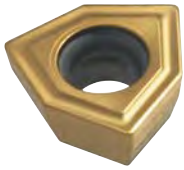
## Cutter geometry:



Description ISO Description	Order No.	Carbide grades					d1	s	l	f	R
		uncoated				CVD coated					
Cutting edge design E = rounded F = sharp	enter carbide code	P10 E 01	P25 E 12	P40 E 04	K10 F 21	BK6425 E 6425					
WNHX 060302..R-G18	W04 34480.02..		▲				10.0	3.5	6.5	5.53	0.2
WNHX 08T302..R-G18	W04 42480.02..	▲	▲	▲	▲	▲	12.0	4.5	7.5	6.64	0.2
WNHX 08T304..R-G18	W04 42480.04..		▲							6.62	0.4
WNHX 100404..R-G18	W04 50480.04..	▲	▲	▲	▲	▲	15.0	5.0	9.5	8.29	0.4
WNHX 120606..R-G18	W04 58480.06..		▲				17.6	6.0	11.5	9.71	0.6
Mild steel/tool steel		●	●	●	●	●	Order example: Description WNHX 060302ER-G18 Carbide grade P25 Order No. W04 34480.0212				
Stainless and acid-resistant steel		●	●	●	●	●					
Grey cast iron, spheroidal cast iron					●	●					
Non-ferrous metals					●	●					
Heat-resistant steels					●	●					
Hardened tool steel					●	●					





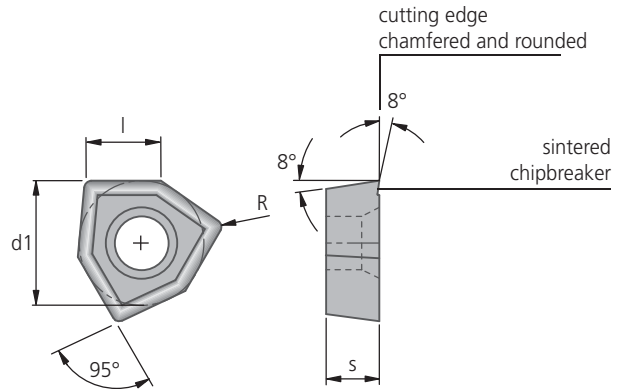


**Application range:**

- Drilling into the solid
- Special tools










Excellent for all roughing operations for which turning accuracy of peripheral ground inserts is not essential. Suitable for medium and high tensile strength steels and cast irons, subject to grade.

**Cutter geometry:**



**Please note:**

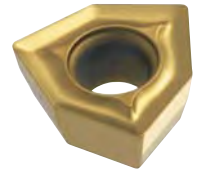
These inserts are being replaced by W27 ..01...

Order No.	Carbide grades			d1	s	l	R
	CVD coated	PVD coated					
enter carbide code ▼	 BK6440 6440	 BK7935 7935	 BK84 84				
W24 12010.04..		▲		5.5	2.3	3.40	0.4
W24 20010.04..	▲	▲	▲	7.0	3.0	4.31	0.4
Mild steel/tool steel 	●	●	●	Order example: Carbide grade BK7935 Order No. W24 12010.047935			
Stainless and acid-resistant steel 	●	●	●				
Grey cast iron, spheroidal cast iron 			●				
Non-ferrous metals 							
Heat-resistant steels 		●					
Hardened tool steel 							



# KOMET Unisix® W24..11

## Inserts



### Application range:

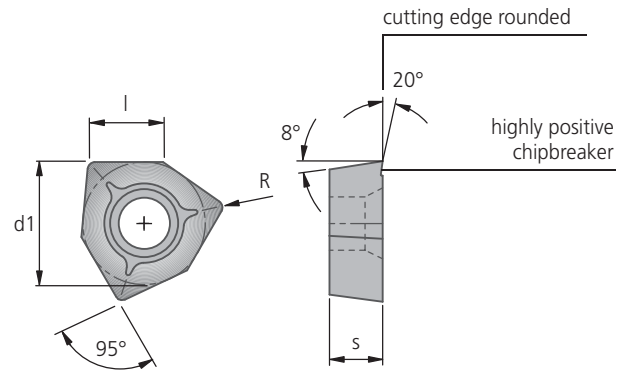
#### with BK77 coating

For cutting aluminium alloys and plastics at medium cutting speeds. Tough characteristics with a high resistance to build-up on cutting edges.

#### with BK50 coating

For cutting aluminium alloys, abrasive materials, graphite, plastics and bonded materials at high cutting speeds.

### Cutter geometry:



Order No.	Carbide grades			d1	s	l	R
	uncoated	diamond coated	PVD coated				
	K10 21	BK50 50	BK77 77				
enter carbide code ▼							
W24 12110.04..		▲	▲	5.5	2.3	3.40	0.4
W24 20110.04..	▲	▲	▲	7.0	3.0	4.31	0.4
Mild steel/tool steel				Order example: Carbide grade BK77 Order No. W24 12110.0477			
Stainless and acid-resistant steel							
Grey cast iron, spheroidal cast iron							
Non-ferrous metals							
Heat-resistant steels							
Hardened tool steel							

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**Application range:**

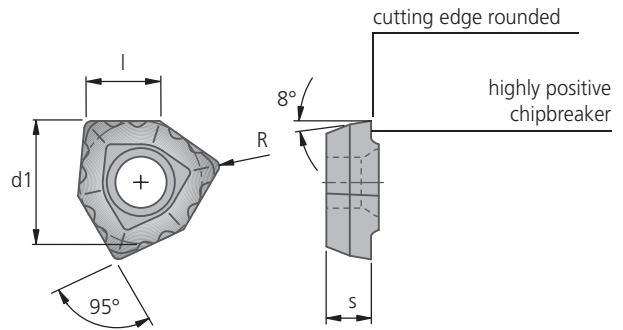
**with BK71 coating**

Multiple layer CVD coating with maximum wear resistance on a tough substrate. Drilling into the solid in the medium to high cutting speed range in structural and carbon steels and in stainless and acid-resistant steels.



**with BK79 coating**

A wear-resistant PVD coating on a tough P40 substrate. Drilling into the solid in the low to medium cutting speed range. Particularly suitable as internal inserts and with interrupted cut.

**Cutter geometry:**



**Note:** Because of the special cutting edge geometry, the inserts W24..13 can only be used for R.H. cutting KUB® drills.

Order No.	Carbide grades		d1	s	l	R
	CVD coated  BK71 71	PVD coated  BK7935 7935				
W24 12130.04..	▲	▲	5.5	2.3	3.40	0.4
W24 20130.04..	▲	▲	7.0	3.0	4.31	0.4
Mild steel/tool steel <b>P</b>	●	●	Order example: Carbide grade BK71 Order No. W24 12130.0471			
Stainless and acid-resistant steel <b>M</b>	●	●				
Grey cast iron, spheroidal cast iron <b>K</b>	●	●				
Non-ferrous metals <b>N</b>	●	●				
Heat-resistant steels <b>S</b>	●	●				
Hardened tool steel <b>H</b>	●	●				

EP 0 792 201 and other patents (geometry)



# KOMET Unisix® W27..00

## Inserts

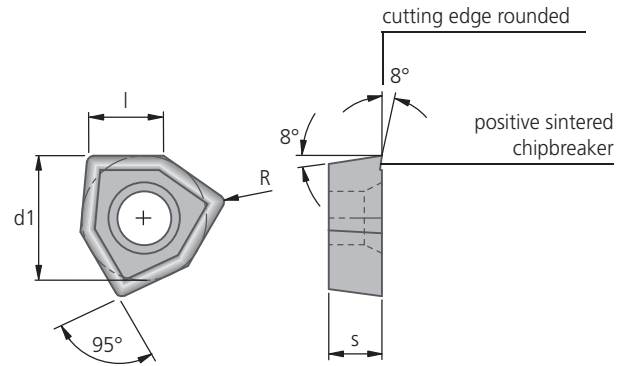
















### Application range:

#### Drilling into the solid <math>\lt; \varnothing 24 \text{ mm}</math>

A mixture of parts are normally used on solid boring tools. Here a coated insert is used as the external cutting edge and an uncoated insert for the internal cutting edge. The 95° cutting angle increases the stability of the insert and produces a clear improvement in machining safety. Optimum chip form at a feed of  $f \leq 0.06 \text{ mm}$ . Used as a central insert only.

### Cutter geometry:



Order No.	Carbide grades		d1	s	l	R
	uncoated	CVD coated				
enter carbide code ▼						
	K10 21	BK6440 6440				
W27 12000.04..		▲	5.5	2.3	3.40	0.4
W27 20000.04..	▲	▲	7.0	3.0	4.31	0.4
Mild steel/tool steel			Order example: Carbide grade BK6440 Order No. W27 12000.046440			
Stainless and acid-resistant steel						
Grey cast iron, spheroidal cast iron						
Non-ferrous metals						
Heat-resistant steels						
Hardened tool steel						

Order example:  
Carbide grade  
BK6440  
Order No.  
W27 12000.046440

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**Application range:**

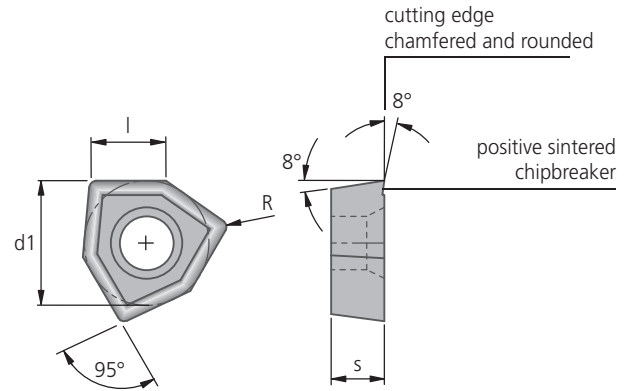
**Drilling into the solid <math>< \varnothing 24 \text{ mm}</math>**

A mixture of parts are normally used on solid boring tools. Here a coated insert is used as the external cutting edge and an uncoated insert for the internal cutting edge.

The 95° cutting angle increases the stability of the insert and produces a clear improvement in machining safety.

Additional chamfering prevents insert fracturing.

**Cutter geometry:**

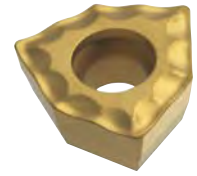


Order No.	Carbide grades									d1	s	l	R
	uncoated			CVD coated			PVD coated						
enter carbide code ▼	P25M 03	P40 04	K10 21	BK6425 6425	BK7615 7615	BK6440 6440	BK69 69	BK7935 7935	BK84 84				
W27 12010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	5.5	2.3	3.40	0.4
W27 20010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	7.0	3.0	4.31	0.4
Mild steel/tool steel	●	●	●	●		●	●	●	●	Order example: Carbide grade P25M Order No. W27 12010.0403			
Stainless and acid-resistant steel	●	●		●		●	●	●	●				
Grey cast iron, spheroidal cast iron			●		●		●	●	●				
Non-ferrous metals			●										
Heat-resistant steels			●					●					
Hardened tool steel			●					●					



# KOMET Unisix® W27..10

## Inserts



### Application range:

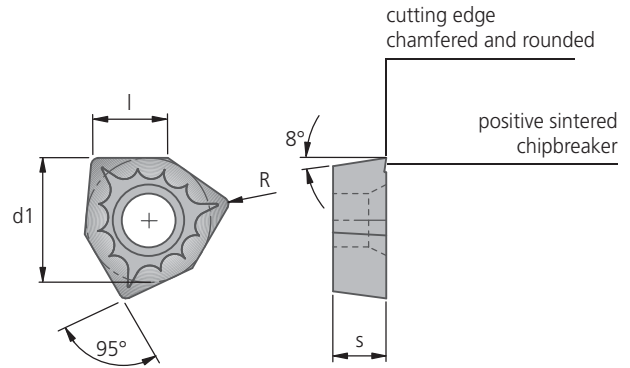
#### Drilling into the solid <math>< \varnothing 24 \text{ mm}</math>



A mixture of parts are normally used on solid boring tools. Here a coated insert is used as the external cutting edge and an uncoated insert for the internal cutting edge.

The 95° cutting angle increases the stability of the insert and produces a clear improvement in machining safety.

The chip is compressed in cross section and tends to break more easily.

### Cutter geometry:



Order No.	Carbide grades		d1	s	l	R
	CVD coated  BK6440 6440	PVD coated  BK7935 7935				
W27 12100.04..	▲	▲	5.5	2.3	3.40	0.4
W27 20100.04..	▲	▲	7.0	3.0	4.31	0.4
Mild steel/tool steel <b>P</b>	●	●	Order example: Carbide grade BK6440 Order No. W27 12100.046440			
Stainless and acid-resistant steel <b>M</b>	●	●				
Grey cast iron, spheroidal cast iron <b>K</b>	●	●				
Non-ferrous metals <b>N</b>	●	●				
Heat-resistant steels <b>S</b>	●	●				
Hardened tool steel <b>H</b>	●	●				

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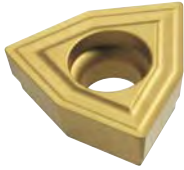


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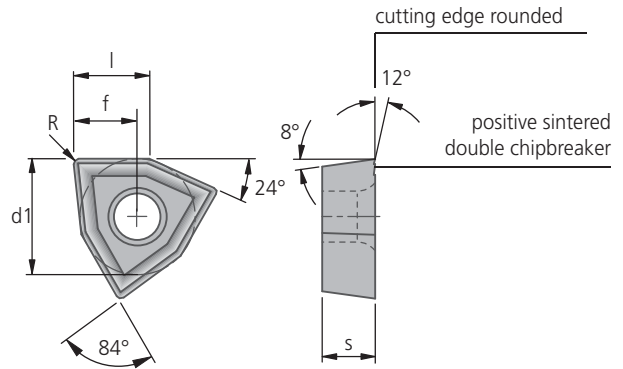




Application range:

- External and internal turning
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings
- as outer cutter with KUB® solid drill bit
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

Cutter geometry:



Description ISO Description	Order No.	Carbide grades									Cermet uncoated	d1	s	l	f	R
		uncoated		CVD coated					PVD coated							
	enter carbide code ▼	P25M 03	K10 21	BK6425 6425	BK7515 7615	BK6115 6115	BK62 62	BK6440 6440	BK8425 8425	CK37 37						
WOEX 05T304-00	W29 24000.04..	▲	▲	▲	▲	▲		▲	▲	▲	8.0	3.8	5.3	4.40	0.4	
WOEX 06T304-00	W29 34000.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	10.0	3.8	6.6	5.51	0.4	
WOEX 080404-00	W29 42000.04..	▲	▲	▲	▲	▲		▲	▲		12.0	4.8	7.9	6.62	0.4	
WOEX 100504-00	W29 50000.04..	▲	▲	▲	▲	▲		▲	▲		15.0	5.3	9.9	8.29	0.4	
WOEX 100508-00	W29 50000.08..					▲		▲						8.24	0.8	
WOEX 120608-00	W29 58000.08..	▲	▲	▲	▲	▲		▲	▲		17.6	6.0	11.6	9.69	0.8	
Mild steel/tool steel		●	●	●		●		●	●	●	Order example: Description WOEX 05T304-00 Carbide grade P25M Order No. W29 24000.0403					
Stainless and acid-resistant steel		●		●		●		●	●	●						
Grey cast iron, spheroidal cast iron			●		●	●	●		●	●						
Non-ferrous metals			●						●	●						
Heat-resistant steels			●						●	●						
Hardened tool steel						●		●		●						
External cutting edge		✓	✓	✓	✓	✓	✓	✓	✓	✓						
Internal cutting edge <i>Recommendation</i>		W29..01 – BK8425														



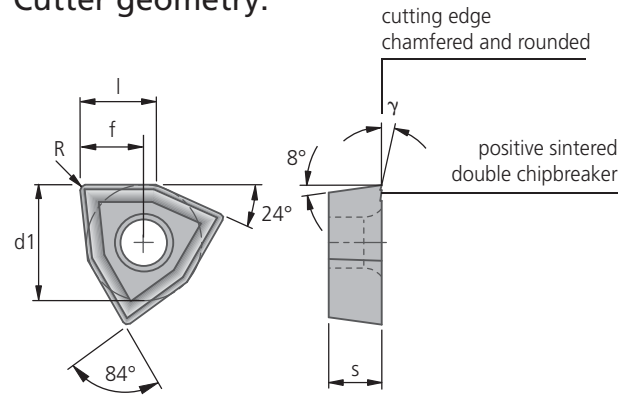
## Inserts



### Application range:

- External and internal turning
- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades												d1	s	l	γ	f	R	
		uncoated			CVD coated						PVD coated									
		P25M 03	P40 04	K10 21	BK 6425	BK 7615	BK 6115	BK 62	BK 6440	BK 6420	BK 72	BK 7935	BK 7930							BK 8425
WOEX 020102-01	W29 04010.02..											▲		▲	4.0	1.6	2.6	12°	2.19	0.2
WOEX 030204-01	W29 10010.04..		▲	▲				▲	▲				▲	▲	5.0	2.3	3.2	8°	2.73	0.4
WOEX 040304-01	W29 18010.04..		▲	▲				▲	▲				▲	▲	6.35	3.18	4.1	8°	3.48	0.4
WOEX 05T304-01	W29 24010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲	8.0	3.8	5.3	12°	4.40	0.4
WOEX 05T308-01	W29 24010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	8.0	3.8	5.3	12°	4.35	0.8
WOEX 06T304-01	W29 34010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲	10.0	3.8	6.6	12°	5.51	0.4
WOEX 06T308-01	W29 34010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	10.0	3.8	6.6	12°	5.47	0.8
WOEX 080404-01	W29 42010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲	12.0	4.8	7.9	12°	6.62	0.4
WOEX 080408-01	W29 42010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	12.0	4.8	7.9	12°	6.58	0.8
WOEX 100504-01	W29 50010.04..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲	15.0	5.3	9.9	12°	8.29	0.4
WOEX 100508-01	W29 50010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	15.0	5.3	9.9	12°	8.24	0.8
WOEX 120608-01	W29 58010.08..	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲	17.6	6.0	11.6	12°	9.69	0.8
Mild steel/tool steel	P	●	●	●	●		●		●	●	●	●	●	●	Order example: Description WOEX 05T304-01 Carbide grade P25M Order No. W29 24010.0403					
Stainless and acid-resistant steel	M	●	●		●		●		●	●	●	●	●							
Grey cast iron, spheroidal cast iron	K				●	●	●		●			●	●							
Non-ferrous metals	N			●									●							
Heat-resistant steels	S			●									●							
Hardened tool steel	H			●									●							
External cutting edge		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Internal cutting edge <i>Recommendation</i>		✓	✓	✓	✓	✓	BK 8425	✓	✓	BK 8425	✓	✓	✓	✓						

▲ Availability: for delivery see current price and stock list

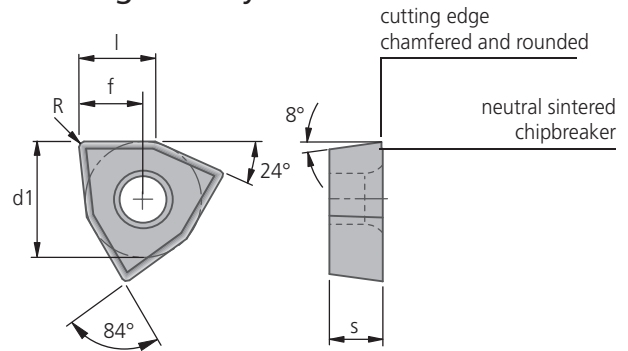




Application range:

- TwinKom® Double Insert Tools
- Special tools
- as outer cutter with KUB® solid drill bit
- excellent for interrupted cut because of stable cutting angle (82°) (top rake 0°) and chamfered cutting edge. A first class chipbreaker also produces good chip formation even from difficult materials.
- cutting edge chamfered and rounded.
- for cutting depths of < 1.5 mm

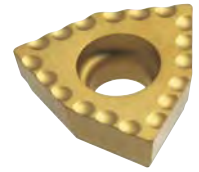
Cutter geometry:



Description ISO Description	Order No.	Carbide grades				d1	s	l	f	R
		uncoated	CVD coated							
	enter carbide code ▼									
		P25M 03	BK6425 6425	BK6115 6115	BK6440 6440					
WOEX 05T304-02	W29 24020.04..		▲	▲	▲	8.0	3.8	5.3	4.40	0.4
WOEX 05T308-02	W29 24020.08..				▲				4.35	0.8
WOEX 06T304-02	W29 34020.04..	▲	▲		▲	10.0	3.8	6.6	5.51	0.4
WOEX 06T308-02	W29 34020.08..				▲				5.47	0.8
WOEX 080404-02	W29 42020.04..	▲			▲	12.0	4.8	7.9	6.62	0.4
WOEX 080408-02	W29 42020.08..				▲				6.58	0.8
WOEX 100504-02	W29 50020.04..	▲			▲	15.0	5.3	9.9	8.29	0.4
WOEX 100508-02	W29 50020.08..				▲				8.24	0.8
WOEX 120608-02	W29 58020.08..	▲			▲	17.6	6.0	11.6	9.69	0.8
Mild steel/tool steel		●	●	●	●	Order example: Description WOEX 05T304-02 Carbide grade BK6425 Order No. W29 24020.046425				
Stainless and acid-resistant steel		●	●	●	●					
Grey cast iron, spheroidal cast iron				●	●					
Non-ferrous metals				●	●					
Heat-resistant steels				●	●					
Hardened tool steel										
External cutting edge		✓	✓	✓	✓					
Internal cutting edge <i>Recommendation</i>		W29..01 – BK8425								



## Inserts



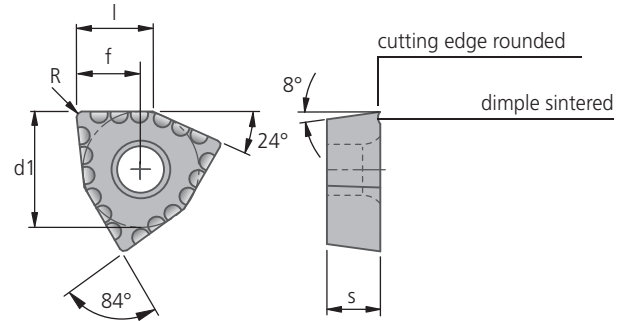
### Application range:
























- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

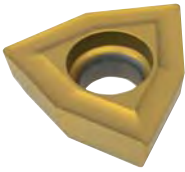
The dimple shaped chipbreaker causes a different chip flow action.

The chip is compressed in cross section and tends to break more rapidly.

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	f	R
		uncoated	CVD coated	PVD coated					
	enter carbide code ▼	 P25M 03	 BK6425 6425	 BK8425 8425					
WOEX 030204-03	W29 10030.04..		▲	▲	5.0	2.3	3.2	2.73	0.4
WOEX 040304-03	W29 18030.04..		▲	▲	6.35	3.18	4.1	3.48	0.4
WOEX 05T304-03	W29 24030.04..	▲	▲	▲	8.0	3.8	5.3	4.40	0.4
WOEX 05T308-03	W29 24030.08..		▲					4.35	0.8
WOEX 06T304-03	W29 34030.04..	▲	▲	▲	10.0	3.8	6.6	5.51	0.4
WOEX 06T308-03	W29 34030.08..		▲	▲				5.47	0.8
WOEX 080404-03	W29 42030.04..	▲	▲	▲	12.0	4.8	7.9	6.62	0.4
WOEX 080408-03	W29 42030.08..		▲	▲				6.58	0.8
WOEX 100504-03	W29 50030.04..	▲	▲	▲	15.0	5.3	9.9	8.29	0.4
WOEX 100508-03	W29 50030.08..		▲	▲				8.24	0.8
WOEX 120608-03	W29 58030.08..	▲	▲	▲	17.6	6.0	11.6	9.69	0.8
Mild steel/tool steel					Order example: Description WOEX 030201-03 Carbide grade BK6425 Order No. W29 10030.046425				
Stainless and acid-resistant steel									
Grey cast iron, spheroidal cast iron									
Non-ferrous metals									
Heat-resistant steels									
Hardened tool steel									
 External cutting edge		✓	✓	✓					
 Internal cutting edge <i>Recommendation</i>		W29..01 – BK8425							

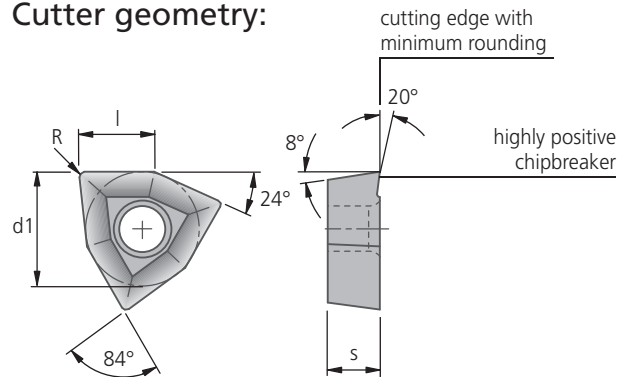



















Application range:

- KUB® solid 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

Cutter geometry:



Description ISO Description	Order No.	Carbide grades				d1	s	l	R
		uncoated	diamond coated	PVD coated					
		 K10 21	 BK50 50	 BK77 77	 BK7710 7710				
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
Mild steel/tool steel						Order example: Description WOEX 030204-11 Carbide grade K10 Order No. W29 10110.0421			
Stainless and acid-resistant steel									
Grey cast iron, spheroidal cast iron									
Non-ferrous metals									
Heat-resistant steels									
Hardened tool steel									



## Inserts



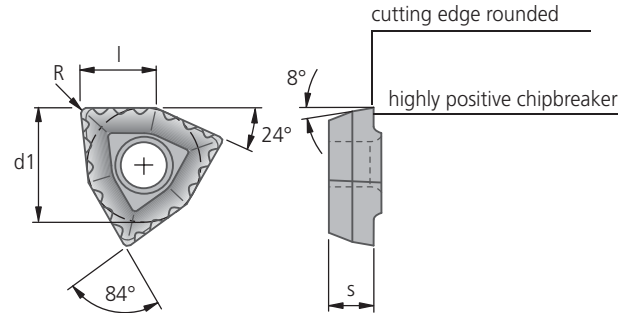
### Application range:

- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

The dimple shaped chipbreaker causes a different chip flow action.

The chip is compressed in cross section and tends to break more rapidly.

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades				d1	s	l	R
		uncoated	CVD coated	PVD coated					
		P40 04	BK7325 7325	BK7935 7935	BK8425 8425				
WOEX 030204-13	W29 10130.04..	▲	▲	▲	▲	5.0	2.3	3.2	0.4
WOEX 040304-13	W29 18130.04..	▲	▲	▲	▲	6.35	3.18	4.1	0.4
WOEX 05T304-13	W29 24130.04..	▲	▲	▲	▲	8.0	3.8	5.3	0.4
WOEX 06T304-13	W29 34130.04..	▲	▲	▲	▲	10.0	3.8	6.6	0.4
WOEX 080404-13	W29 42130.04..	▲	▲	▲	▲	12.0	4.8	7.9	0.4
WOEX 100504-13	W29 50130.04..		▲	▲	▲	15.0	5.3	9.9	0.4
WOEX 120608-13	W29 58130.08..	▲		▲	▲	17.6	6.0	11.6	0.8
Mild steel/tool steel	<b>P</b>	●	●	●	●	Order example: Description WOEX 030204-13 Carbide grade P40 Order No. W29 10130.0404			
Stainless and acid-resistant steel	<b>M</b>	●	●	●	●				
Grey cast iron, spheroidal cast iron	<b>K</b>								
Non-ferrous metals	<b>N</b>								
Heat-resistant steels	<b>S</b>			●					
Hardened tool steel	<b>H</b>								

EP 0 792 201 and other patents (geometry)

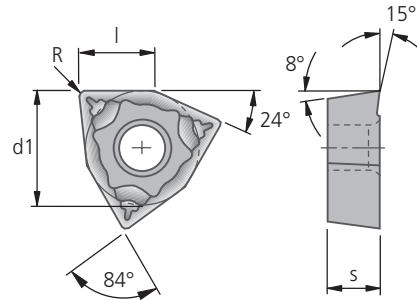





Application range:

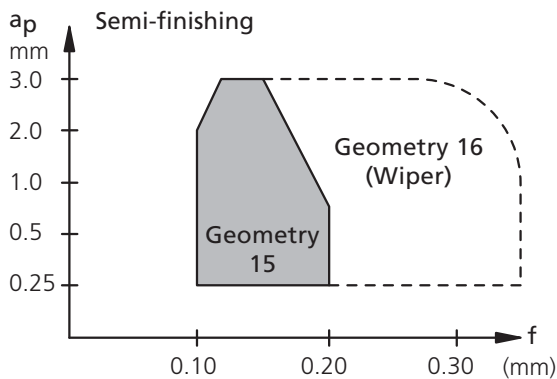
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

Optimum chip formation for cutting depths from 0.25 mm.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	R
		CVD coated	PVD coated					
	enter carbide code ▼							
		BK6425 6425	BK7325 7325	BK84 84				
WOGX 030204-15	W29 10150.04..	▲	▲	▲	5.0	2.3	3.2	0.4
WOGX 040304-15	W29 18150.04..	▲	▲	▲	6.35	3.18	4.1	0.4
WOGX 05T304-15	W29 24150.04..	▲	▲	▲	8.0	3.8	5.3	0.4
WOGX 06T304-15	W29 34150.04..	▲	▲	▲	10.0	3.8	6.6	0.4
WOGX 080404-15	W29 42150.04..	▲	▲	▲	12.0	4.8	7.9	0.4
Mild steel/tool steel	<b>P</b>	●	●	●	Order example: Description WOGX 030204-15 Carbide grade BK60 Order No. W29 10150.0460			
Stainless and acid-resistant steel	<b>M</b>		●	●				
Grey cast iron, spheroidal cast iron	<b>K</b>	●		●				
Non-ferrous metals	<b>N</b>							
Heat-resistant steels	<b>S</b>							
Hardened tool steel	<b>H</b>							



## Inserts

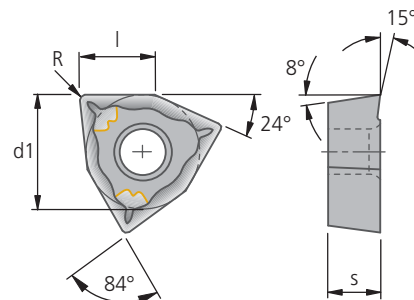





### Application range:

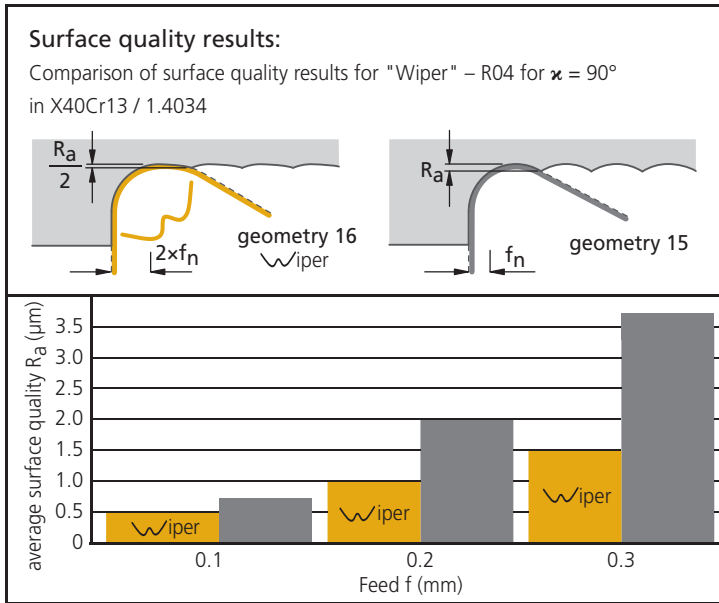
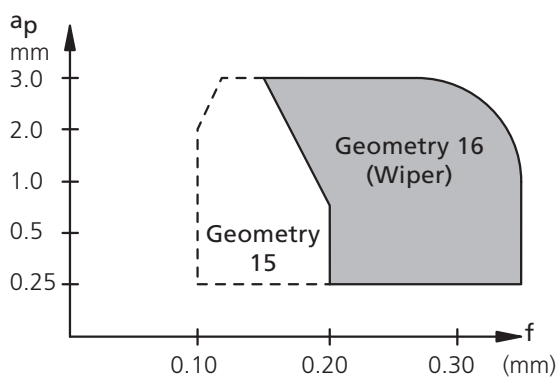
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

Optimum chip formation for cutting depths from 0.25 mm.

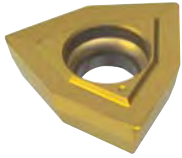
### Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	R
		CVD coated	PVD coated					
	enter carbide code ▼	 BK6425 6425	 BK7325 7325	 BK84 84				
WOGX 030204-16	W29 10160.04..	▲	▲	▲	5.0	2.3	3.2	0.4
WOGX 040304-16	W29 18160.04..	▲	▲	▲	6.35	3.18	4.1	0.4
WOGX 05T304-16	W29 24160.04..	▲	▲	▲	8.0	3.8	5.3	0.4
WOGX 06T304-16	W29 34160.04..	▲	▲	▲	10.0	3.8	6.6	0.4
WOGX 080404-16	W29 42160.04..	▲	▲	▲	12.0	4.8	7.9	0.4
Mild steel/tool steel	<b>P</b>	●	●	●	Order example: Description WOGX 030204-16 Carbide grade BK6425 Order No. W29 10160.046425			
Stainless and acid-resistant steel	<b>M</b>	●	●	●				
Grey cast iron, spheroidal cast iron	<b>K</b>	●	●	●				
Non-ferrous metals	<b>N</b>	●	●	●				
Heat-resistant steels	<b>S</b>	●	●	●				
Hardened tool steel	<b>H</b>	●	●	●				



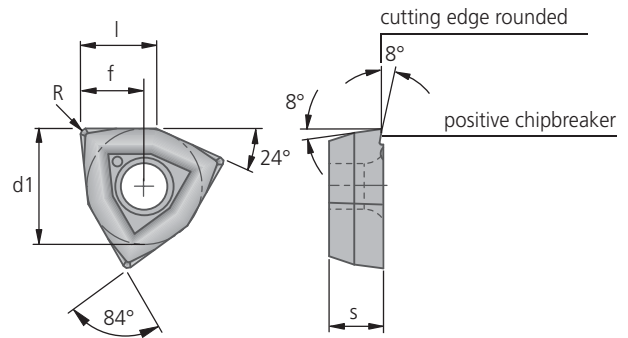
▲ Availability: for delivery see current price and stock list



Application range:

- External and internal turning
- KUB® solid drill
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

Cutter geometry:



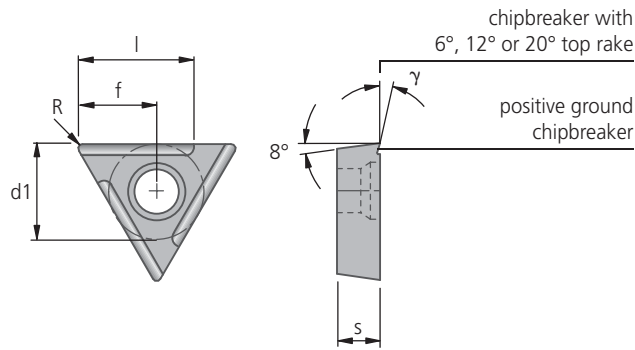
Description ISO Description	Order No.	Carbide grades		d1	s	l	R
		BK2730 2730	BK8430 8430				
WOEX 030204-20	W29 10200.04..	▲	▲	5.0	2.3	3.2	0.4
WOEX 040304-20	W29 18200.04..	▲	▲	6.35	3.18	4.1	0.4
WOEX 05T304-20	W29 24200.04..	▲	▲	8.0	3.8	5.3	0.4
WOEX 06T304-20	W29 34200.04..	▲	▲	10.0	3.8	6.6	0.4
WOEX 080404-20	W29 42200.04..	▲	▲	12.0	4.8	7.9	0.4
WOEX 100504-20	W29 50200.04..	▲	▲	15.0	5.3	9.9	0.4
Mild steel/tool steel	P	●	●	Order example: Description WOEX 030204-20 Carbide grade BK2730 Order No. W29 10200.042730			
Stainless and acid-resistant steel	M	●	●				
Grey cast iron, spheroidal cast iron	K	●	●				
Non-ferrous metals	N	●	●				
Heat-resistant steels	S	●	●				
Hardened tool steel	H	●	●				



Inserts

L.H. cutting form "L"

Cutter geometry:



Description ISO Description	Order No.	Carbide grades									
		uncoated					CVD coated				
		P10 E 01	P25M E 03	P40 E 04	K10 E 21	K10 F 21	BK6425 E 6425	BK7615* E 7615	BK6110 E 6110	BK6440 E 6440	
TOHX 06T100..L-G06	W30 04060.30..				▲		▲				
TOHX 06T102..L-G06	W30 04060.02..		▲			▲	▲	▲	▲	▲	
TOHX 06T103..L-G06	W30 04060.03..		▲	▲		▲	▲	▲	▲	▲	
TOHX 06T104..L-G06	W30 04060.04..		▲			▲	▲			▲	
TOHX 06T100..L-G12	W30 04120.30..						▲				
TOHX 06T102..L-G12	W30 04120.02..		▲			▲	▲	▲		▲	
TOHX 06T103..L-G12	W30 04120.03..		▲			▲	▲	▲		▲	
TOHX 06T104..L-G12	W30 04120.04..		▲			▲	▲			▲	
TOHX 06T102..L-G20	W30 04200.02..					▲	▲				
TOHX 06T103..L-G20	W30 04200.03..					▲	▲				
TOHX 090200..L-G06	W30 14060.30..				▲		▲				
TOHX 090202..L-G06	W30 14060.02..		▲		▲		▲	▲	▲	▲	
TOHX 090204..L-G06	W30 14060.04..		▲		▲		▲	▲	▲	▲	
TOHX 090208..L-G06	W30 14060.08..				▲		▲	▲	▲		
TOHX 090200..L-G12	W30 14120.30..				▲		▲			▲	
TOHX 090202..L-G12	W30 14120.02..		▲			▲	▲	▲		▲	
TOHX 090204..L-G12	W30 14120.04..	▲	▲		▲		▲	▲		▲	
TOHX 090208..L-G12	W30 14120.08..					▲	▲				
TOHX 090202..L-G20	W30 14200.02..		▲			▲	▲				
TOHX 090204..L-G20	W30 14200.04..					▲	▲				
TOHX 140302..L-G06	W30 26060.02..		▲		▲		▲	▲	▲		
TOHX 140304..L-G06	W30 26060.04..		▲		▲		▲	▲	▲	▲	
TOHX 140305..L-G06	W30 26060.05..		▲		▲		▲	▲	▲	▲	
TOHX 140308..L-G06	W30 26060.08..						▲	▲	▲		
TOHX 140302..L-G12	W30 26120.02..		▲			▲	▲	▲		▲	
TOHX 140304..L-G12	W30 26120.04..		▲			▲	▲				
TOHX 140305..L-G12	W30 26120.05..		▲			▲	▲			▲	
TOHX 140308..L-G12	W30 26120.08..					▲					
TOHX 140302..L-G20	W30 26200.02..					▲					
TOHX 140304..L-G20	W30 26200.04..					▲					
TOHX 140305..L-G20	W30 26200.05..					▲					
TOHX 22T308..L-G06	W30 44060.08..		▲								
TOHX 22T308..L-G12	W30 44120.08..										
Mild steel/tool steel		●	●	●	●	●		●	●	●	
Stainless and acid-resistant steel		●	●	●	●	●		●	●	●	
Grey cast iron. spheroidal cast iron					●	●	●	●	●	●	
Non-ferrous metals					●	●		●	●	●	
Heat-resistant steels					●	●		●	●	●	
Hardened tool steel							●	●			

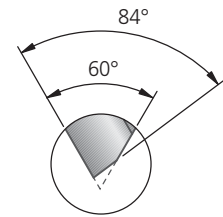
▲ Availability: for delivery see current price and stock list



Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.



Version for R = 0.0 mm

Important note! The cutting edge on Cermet inserts is rounded.

\*coating BK7615 replaced BK61

Carbide grades		Cermet				d1	s	l	γ	f	R
PVD coated		uncoated		PVD coated							
BK2710 E 2710	BK8425 E 8425	CK30 E 30	CK32 E 32	CK37 E 37	CK38 E 38						
	▲					4.0	1.8	1	6°	3.25	0.0
▲	▲									3.32	0.2
▲	▲									3.25	0.3
	▲									3.17	0.4
	▲					4.0	1.8	12°	3.25	0.0	
	▲	▲	▲	▲	▲				3.32	0.2	
	▲		▲	▲					3.25	0.3	
	▲	▲			▲				3.17	0.4	
	▲					4.0	1.8	1	20°	3.32	0.2
										3.25	0.3
	▲					5.6	2.5	2.5	6°	4.55	0.0
▲	▲									4.70	0.2
▲	▲									4.56	0.4
▲	▲									4.26	0.8
	▲					5.6	2.5	2.5	12°	4.55	0.0
	▲	▲	▲	▲	▲					4.70	0.2
	▲	▲	▲	▲	▲					4.56	0.4
	▲									4.26	0.8
	▲					5.6	2.5	2.5	20°	4.70	0.2
										4.56	0.4
	▲					8.2	3.0	4.5	6°	6.96	0.2
▲	▲									6.81	0.4
▲	▲									6.74	0.5
▲	▲									6.52	0.8
	▲	▲	▲	▲	▲	8.2	3.0	4.5	12°	6.96	0.2
	▲	▲			▲					6.81	0.4
	▲		▲	▲						6.74	0.5
	▲									6.52	0.8
						8.2	3.0	4.5	20°	6.96	0.2
										6.81	0.4
										6.74	0.5
						12.7	4.3	10.5	6°	10.41	0.8
	▲									10.41	0.8
	▲					12.7	4.3	10.5	12°	10.41	0.8
										10.41	0.8
●	●	●	●	●	●	Order example: Description TOHX 06T100 EL-G06 Carbide grade BK6425 Order No. W30 04060.306425					
●	●	●	●	●	●						
●	●	●	●	●	●						
●	●	●	●	●	●						
●	●	●	●	●	●						

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

1



2



3



4



5



6



7



## Inserts

R.H. cutting form "R"

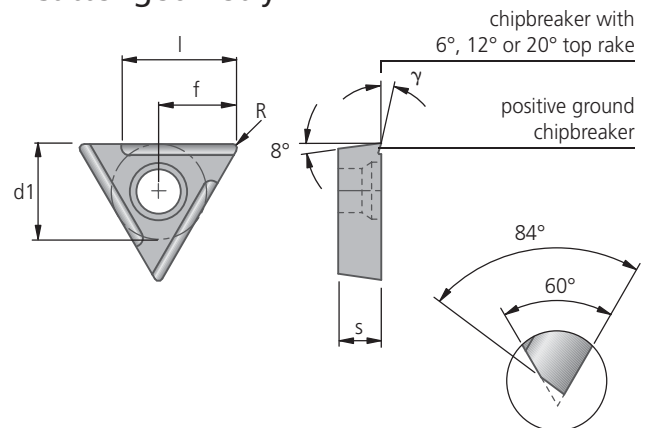


### Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

### Cutter geometry:



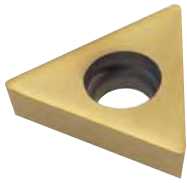
Version for R = 0.0 mm

**Important note!** The cutting edge on Cermet inserts is rounded.

Description ISO Description	Order No.	Carbide grades						Cermet				d1	s	l	γ	f	R
		uncoated		CVD coated				uncoated		PVD coated							
		P25M	K10	BK6425	BK7615*	BK6440	BK8425	CK30	CK32	CK37	CK38						
		E	E F	E F	E	E	E	E	E	E	E						
	enter carbide code ▼	03	21	6425	7615	6440	8425	30	32	37	38						
TOHX 06T102 ..R-G06	W30 04360.02..	▲	▲	▲			▲										3.32 0.2
TOHX 06T103 ..R-G06	W30 04360.03..	▲	▲	▲	▲	▲	▲					4.0	1.8	1	6°	3.25	0.3
TOHX 06T104 ..R-G06	W30 04360.04..			▲			▲										3.17 0.4
TOHX 06T102 ..R-G12	W30 04420.02..	▲	▲	▲			▲	▲	▲	▲	▲	4.0	1.8	1	12°	3.25	0.3
TOHX 06T103 ..R-G12	W30 04420.03..	▲	▲	▲		▲	▲		▲	▲							3.17 0.4
TOHX 06T104 ..R-G12	W30 04420.04..			▲			▲	▲			▲						3.32 0.2
TOHX 06T102 ..R-G20	W30 04500.02..		▲				▲					4.0	1.8	1	20°	3.25	0.3
TOHX 06T103 ..R-G20	W30 04500.03..		▲				▲										4.55 0.0
TOHX 090200 ..R-G06	W30 14360.30..	▲															4.70 0.2
TOHX 090202 ..R-G06	W30 14360.02..	▲	▲	▲			▲					5.6	2.5	2.5	6°	4.70	0.2
TOHX 090204 ..R-G06	W30 14360.04..	▲	▲	▲		▲	▲										4.56 0.4
TOHX 090202 ..R-G12	W30 14420.30..		▲														4.55 0.0
TOHX 090202 ..R-G12	W30 14420.02..	▲	▲	▲		▲		▲	▲	▲	▲	5.6	2.5	2.5	12°	4.70	0.2
TOHX 090204 ..R-G12	W30 14420.04..	▲	▲	▲		▲	▲	▲	▲	▲	▲						4.56 0.4
TOHX 090202 ..R-G20	W30 14500.02..		▲									5.6	2.5	2.5	20°	4.70	0.2
TOHX 090204 ..R-G20	W30 14500.04..		▲	▲													4.56 0.4
TOHX 140302 ..R-G06	W30 26360.02..		▲														6.96 0.2
TOHX 140304 ..R-G06	W30 26360.04..			▲								8.2	3.0	4.5	6°	6.81	0.4
TOHX 140305 ..R-G06	W30 26360.05..	▲	▲	▲		▲	▲										6.74 0.5
TOHX 140302 ..R-G12	W30 26420.02..		▲	▲			▲	▲	▲	▲	▲						6.96 0.2
TOHX 140304 ..R-G12	W30 26420.04..							▲			▲	8.2	3.0	4.5	12°	6.81	0.4
TOHX 140305 ..R-G12	W30 26420.05..	▲	▲	▲			▲		▲	▲							6.74 0.5
TOHX 140305 ..R-G20	W30 26500.05..						▲					8.2	3.0	4.5	20°	6.74	0.5
TOHX 22T308 ..R-G06	W30 44360.08..	▲					▲					12.7	4.3	10.5	6°	10.41	0.8
TOHX 22T308 ..R-G12	W30 44420.08..						▲					12.7	4.3	10.5	12°	10.41	0.8
Mild steel/tool steel	P	●	●	●		●	●	●	●	●	●						Order example:
Stainless and acid-resistant steel	M	●	●	●		●	●	●	●	●	●						Description
Grey cast iron, spheroidal cast iron	K		●		●		●	●	●	●	●						TOHX 06T102 ER-G06
Non-ferrous metals	N		●						●	●							Carbide grade
Heat-resistant steels	S		●						●	●							P25M
Hardened tool steel	H																Order No.
																	W30 04360.0203

\*coating BK7615 replaced BK61

▲ Availability: for delivery see current price and stock list

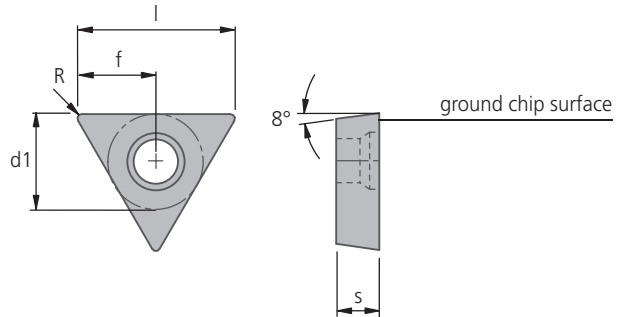


Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact.

Cutter geometry:



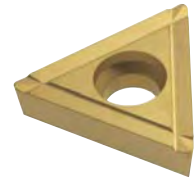
Description ISO Description	Order No.	Carbide grades						d1	s	l	f	R
		uncoated		CVD coated		PVD coated						
		P25M E 03	K10 E 21	BK6425 E 6425	BK7615* E 7615	BK62 E 62	BK8425 E 8425					
TOHX 06T102 EN	W30 04600.02..		▲					4.0	1.8	6.5	3.32	0.2
TOHX 06T103 EN	W30 04600.03..	▲	▲	▲	▲		▲			6.5	3.25	0.3
TOHX 090202 EN	W30 14600.02..		▲							9.4	4.70	0.2
TOHX 090204 EN	W30 14600.04..	▲	▲	▲	▲	▲	▲	5.6	2.5	9.1	4.56	0.4
TOHX 090208 EN	W30 14600.08..				▲					8.5	4.26	0.8
TOHX 140302 EN	W30 26600.02..				▲					13.9	6.96	0.2
TOHX 140304 EN	W30 26600.04..				▲					13.6	6.81	0.4
TOHX 140305 EN	W30 26600.05..	▲	▲		▲		▲	8.2	3.0	13.5	6.74	0.5
TOHX 140308 EN	W30 26600.08..		▲	▲	▲					13	6.52	0.8
TOHX 22T308 EN	W30 44600.08..		▲		▲			12.7	4.3	20.8	10.41	0.8
Mild steel/tool steel								Order example: Description TOHX 06T103 EN Carbide grade K10 Order No. W30 04600.0321				
Stainless and acid-resistant steel												
Grey cast iron, spheroidal cast iron												
Non-ferrous metals												
Heat-resistant steels												
Hardened tool steel												

\*coating BK7615 replaced BK61



Inserts

cutting form "F"

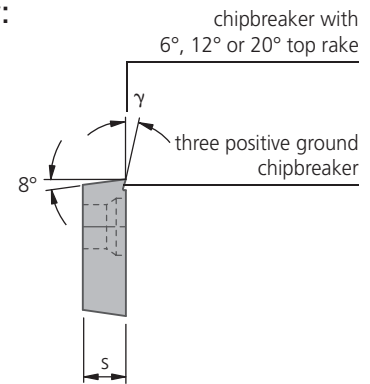
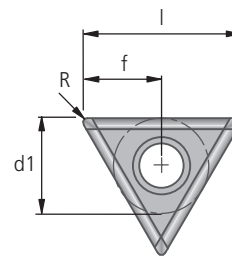


Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades								d1	s	l	γ	f	R
		uncoated				CVD coated		PVD coated							
		P25M E	P40 E	K10 E	K10 F	BK6425 E	BK7615* E	BK6440 E	BK8425 E						
	enter carbide code	03	04	21	21	6425	7615	6440	8425						
TOHX 06T103 ..N-G06	W30 04660.03..	▲		▲		▲		▲	▲	4.0	1.8	6.5	6°	3.25	0.3
TOHX 06T103 ..N-G12	W30 04720.03..	▲			▲	▲				4.0	1.8	6.5	12°	3.25	0.3
TOHX 090202 ..N-G06	W30 14660.02..								▲					4.70	0.2
TOHX 090204 ..N-G06	W30 14660.04..	▲	▲	▲		▲	▲	▲	▲	5.6	2.5	9.1	6°	4.56	0.4
TOHX 090204 ..N-U8.77	W30 14660.33..	▲		▲		▲	▲	▲	▲	5.6	2.5	9.1		4.56	0.4
TOHX 090202 ..N-G12	W30 14720.02..					▲				5.6	2.5	9.4	12°	4.70	0.2
TOHX 090204 ..N-G12	W30 14720.04..	▲			▲	▲		▲	▲	5.6	2.5	9.1	12°	4.56	0.4
TOHX 090204 ..N-G20	W30 14800.04..				▲					5.6	2.5	9.1	20°	4.56	0.4
TOHX 140305 ..N-G06	W30 26660.05..	▲		▲		▲	▲	▲	▲	8.2	3.0	13.5	6°	6.74	0.5
TOHX 140305 ..N-G12	W30 26720.05..	▲			▲	▲				8.2	3.0	13.5	12°	6.74	0.5
TOHX 22T308 ..N-G06	W30 44660.08..	▲		▲		▲	▲	▲		12.7	4.3	20.8	6°	10.41	0.8
TOHX 22T308 ..N-G12	W30 44720.08..				▲					12.7	4.3	20.8	12°	10.41	0.8
Mild steel/tool steel	P	●	●	●	●	●		●	●	Order example: Description TOHX 06T103 EN-G06 Carbide grade P25M Order No. W30 04660.0303					
Stainless and acid-resistant steel	M	●	●			●		●	●						
Grey cast iron, spheroidal cast iron	K			●	●		●	●	●						
Non-ferrous metals	N			●	●										
Heat-resistant steels	S			●	●										
Hardened tool steel	H						●								

\*coating BK7615 replaced BK61

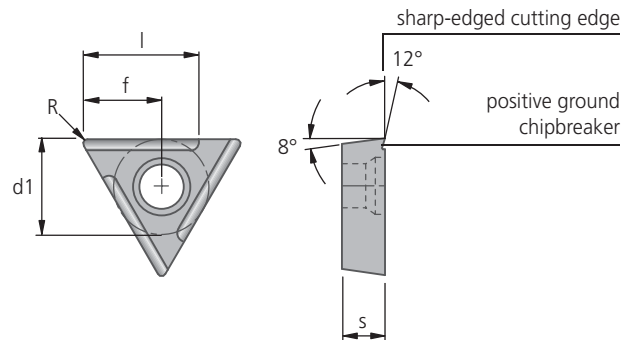


**Application range:**

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

**Cutter geometry:**

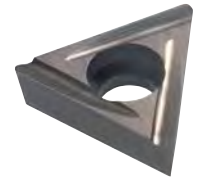


Description ISO Description	Order No.	Cermet			d1	s	l	f	R
		uncoated		PVD coated					
Cutting edge design F = sharp	enter carbide code	CK30 F	CK32 F	CK38 F					
TOHX 06T102 FL-G12	W30 04820.02..	▲	▲	▲	4.0	1.8	1	3.32	0.2
TOHX 06T103 FL-G12	W30 04820.03..		▲					3.25	0.3
TOHX 06T104 FL-G12	W30 04820.04..	▲		▲				3.17	0.4
TOHX 090202 FL-G12	W30 14820.02..	▲	▲	▲	5.6	2.5	2.5	4.70	0.2
TOHX 090204 FL-G12	W30 14820.04..	▲	▲	▲				4.56	0.4
TOHX 140302 FL-G12	W30 26820.02..	▲	▲	▲	8.2	3.0	4.5	6.96	0.2
TOHX 140304 FL-G12	W30 26820.04..	▲		▲				6.81	0.4
TOHX 140305 FL-G12	W30 26820.05..		▲					6.74	0.5
Mild steel/tool steel	P	●	●	●	Order example: Description TOHX 06T102 FL-G12 Carbide grade CK30 Order No. W30 04820.0230				
Stainless and acid-resistant steel	M	●	●	●					
Grey cast iron, spheroidal cast iron	K	●	●	●					
Non-ferrous metals	N	●	●	●					
Heat-resistant steels	S	●	●	●					
Hardened tool steel	H	●	●	●					



## Inserts

R.H. cutting form "R"

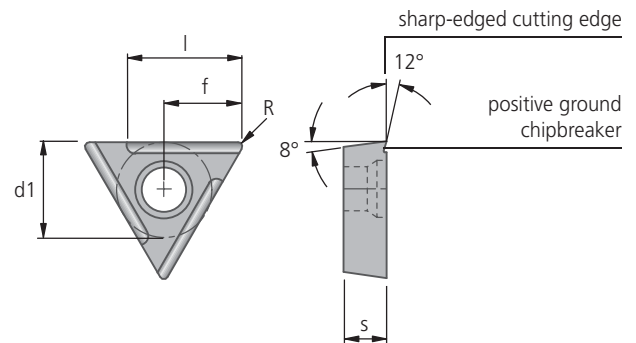


### Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

### Cutter geometry:



Description ISO Description	Order No.	Cermet uncoated		d1	s	l	f	R
		CK30 F 30	CK32 F 32					
Cutting edge design F = sharp ▼ enter carbide code ▼								
TOHX 06T102 FR-G12	W30 04830.02..		▲	4.0	1.8	1	3.32	0.2
TOHX 090202 FR-G12	W30 14830.02..		▲	5.6	2.5	2.5	4.70	0.2
TOHX 090204 FR-G12	W30 14830.04..	▲					4.56	0.4
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		● ● ●	● ● ●	Order example: Description TOHX 06T102 FR-G12 Carbide grade CK30 Order No. W30 04830.0230				

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### Application range:

#### Internal turning

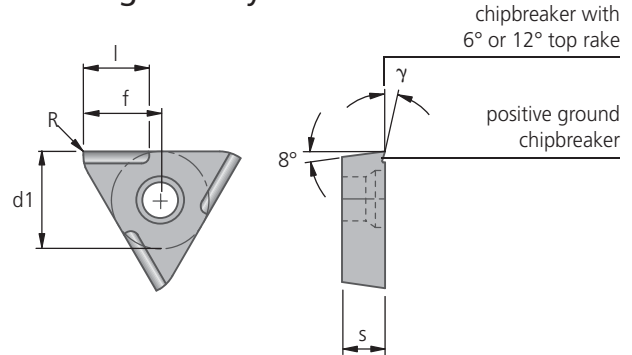
with high feed rates for stable conditions for tools up to a max. of  $2.5 \times D$

Ideal cutting depths:

Steel  $a_p = 0.1 - 0.25$  mm

Cast iron  $a_p = 0.15 - 0.3$  mm

### Cutter geometry:



#### Important note!

The cutting edge on Cermet inserts is rounded.

Description ISO Description	Order No.	Carbide grades						Cermet		d1	s	l	γ	f	R
		uncoated		CVD coated		PVD coated		uncoated	PVD coated						
		K10 E 21	K10 F 21	BK6425 E 6425	BK7615* E 7615	BK6440 E 6440	BK8425 E 8425	CK30 E 30	CK38 E 38						
TOHX 06T102..L-UF06	W30 04060.31..			▲	▲	▲				4.0	1.8	2.8	6°	3.240.15	
TOHX 06T102..L-UF12	W30 04120.31..		▲	▲			▲	▲					12°	3.240.15	
TOHX 090202..L-UF06	W30 14060.31..	▲		▲	▲	▲				5.6	2.5	4.0	6°	4.31 0.2	
TOHX 090202..L-UF12	W30 14120.31..			▲		▲	▲	▲	▲				12°	4.30 0.2	
TOHX 140302..L-UF06	W30 26060.31..	▲		▲	▲	▲	▲		▲				6°	6.46 0.2	
TOHX 140302..L-UF12	W30 26120.31..			▲		▲	▲	▲	▲	8.2	3.0	5.5	12°	6.45 0.2	
Mild steel/tool steel	P	●	●	●		●	●	●	●	Order example: Description TOHX06T102 EL-UF06 Carbide grade BK6425 Order No. W30 04060.316425					
Stainless and acid-resistant steel	M			●		●	●	●	●						
Grey cast iron, spheroidal cast iron	K	●	●		●		●	●	●						
Non-ferrous metals	N	●	●												
Heat-resistant steels	S	●	●												
Hardened tool steel	H														

\*coating BK7615 replaced BK61



Inserts

L.H. cutting form "L"



Application range:

Sharp cutting edge

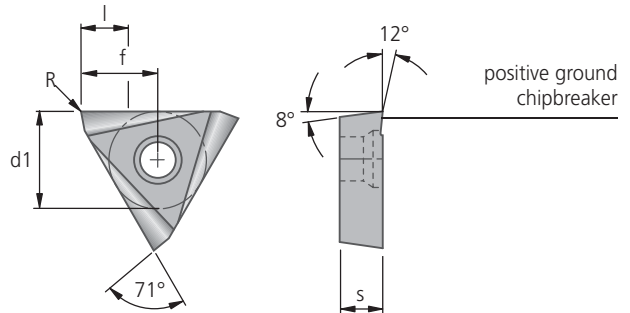
Insert with 0.05 mm centre radius for internal machining for tools with long overhang.

Ideal cutting depths:

Steel  $a_p = 0.02 - 0.1$  mm

Non-ferrous metal  $a_p = 0.05 - 0.25$  mm

Cutter geometry:



Description ISO Description	Order No.	Carbide grades					d1	s	l	f	R
		PVD coated									
Cutting edge design F = sharp	enter carbide code	 BK77 F 77									
TOHX 06T1ZZ FL-39G12	W30 04120.39..	▲					4.0	1.8	2.0	3.18	0.05
TOHX 0902ZZ FL-39G12	W30 14120.39..	▲					5.6	2.5	3.0	4.45	0.05
TOHX 1403ZZ FL-39G12	W30 26120.39..	▲					8.2	3.0	4.0	6.60	0.05
Mild steel/tool steel	<b>P</b>	●					Order example: Description TOHX 06T1ZZ FL-39G12 Carbide grade BK77 Order No. W30 04120.3977				
Stainless and acid-resistant steel	<b>M</b>	●									
Grey cast iron, spheroidal cast iron	<b>K</b>	●									
Non-ferrous metals	<b>N</b>	●									
Heat-resistant steels	<b>S</b>	●									
Hardened tool steel	<b>H</b>	●									

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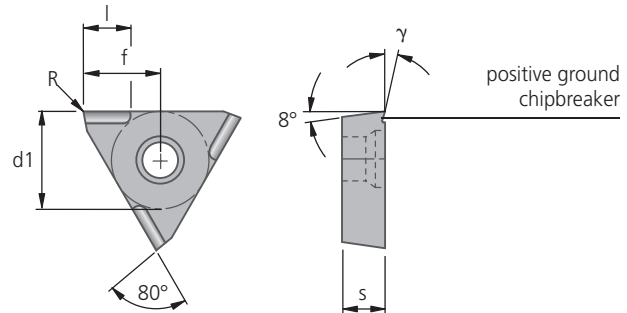
Application range:

- Small boring bars
- Internal fine machining

Because of the positive cutting edge geometry, cutting is very efficient. A deeper, narrow chipbreaker produces a controlled chip even from materials which produce long chips and at narrow cutting depths.

A flat ground secondary cutting edge provides increased corner stability.

Cutter geometry:



Important note!

The cutting edge on Cermet inserts is rounded.  
Also be supplied in Cermet for sharp-edged version.

Description ISO Description	Order No.	Carbide grades			Cermet				d1	s	l	γ	f	R
		CVD coated		PVD coated	uncoated		PVD coated							
		BK6425 E	BK6440 E	BK8425 E	CK30 E	CK32 E	CK37 E	CK38 E						
TOHX 06T102EL-US12	W30 04120.32..	▲	▲	▲	▲	▲	▲	▲	4.0	1.8	1.5	12°	2.95	0.2
TOHX 090202EL-US12	W30 14120.32..	▲	▲	▲	▲	▲	▲	▲	5.6	2.5	2.0	12°	4.28	0.2
TOHX 140302EL-US12	W30 26120.32..	▲	▲	▲	▲	▲	▲	▲	8.2	3.0	2.0	12°	6.44	0.2
Mild steel/tool steel	<b>P</b>	●	●	●	●	●	●	●	Order example: Description TOHX 06T102 EL-US12 Carbide grade BK6425 Order No. W30 04120.326425					
Stainless and acid-resistant steel	<b>M</b>	●	●	●	●	●	●							
Grey cast iron, spheroidal cast iron	<b>K</b>			●	●	●	●							
Non-ferrous metals	<b>N</b>				●	●								
Heat-resistant steels	<b>S</b>													
Hardened tool steel	<b>H</b>													

Ideal Cutting depth:

Steel  $a_p = 0.01 - 0.15$  mm

Only suitable for non-ferrous metals in certain circumstances.



## Inserts

L.H. cutting form "L"  
sharp-edged cutting edge



## Application range:

- Small boring bars
- Internal fine machining

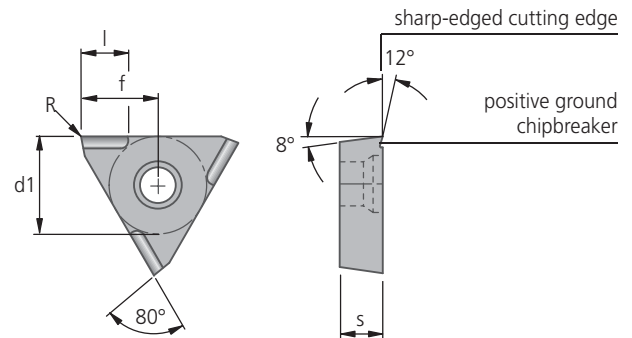
Because of the positive cutting edge geometry, cutting is very efficient. A deeper, narrow chipbreaker produces a controlled chip even from materials which produce long chips and at narrow cutting depths. A flat ground secondary cutting edge provides increased corner stability. Also be supplied in Cermet for rounded version.

Ideal Cutting depth:

Steel  $a_p = 0.01 - 0.15$  mm

Only suitable for non-ferrous metals in certain circumstances.

## Cutter geometry:



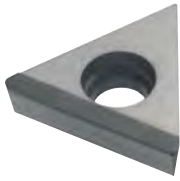
Description ISO Description	Order No.	Cermet			d1	s	l	f	R
		uncoated		PVD coated					
Cutting edge design F = sharp	enter carbide code	CK30 F 30	CK32 F 32	CK38 F 38					
TOHX 06T102 FL-US12	W30 04820.32..	▲		▲	4.0	1.8	1.5	2.95	0.2
TOHX 090202 FL-US12	W30 14820.32..	▲	▲	▲	5.6	2.5	2.0	4.28	0.2
TOHX 140302 FL-US12	W30 26820.32..	▲		▲	8.2	3.0	2.0	6.44	0.2
Mild steel/tool steel	<b>P</b>	●	●	●	Order example: Description TOHX 06T102 FL-US12 Carbide grade CK30 Order No. W30 04820.3230				
Stainless and acid-resistant steel	<b>M</b>	●	●	●					
Grey cast iron, spheroidal cast iron	<b>K</b>	●	●	●					
Non-ferrous metals	<b>N</b>	●	●	●					
Heat-resistant steels	<b>S</b>	●	●	●					
Hardened tool steel	<b>H</b>	●	●	●					

# TOGX

# KOMET® W30..94

## Inserts

PCD or CBN cutting edge



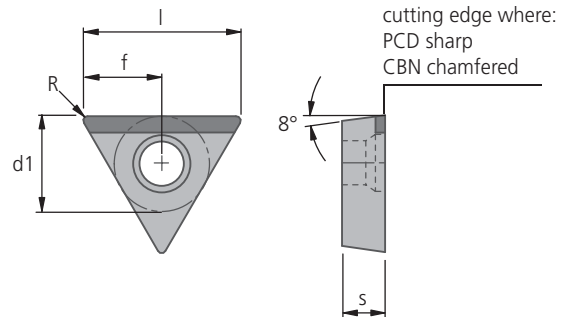
### Application range:

**PCD:** 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.

**CBN:** 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.

### Cutter geometry:



Description ISO Description	Order No.	Cutting material						
		PCD tipped	CBN tipped	d1	s	l	f	R
Cutting edge design F = sharp T = chamfered	enter carbide code	PKD55 F 55	CBN57 T 57					
TOGX 090204 ..	W30 14940.04..	▲	▲	5.6	2.5	9.12	4.56	0.4
TOGX 140305 ..	W30 26940.05..	▲	▲	8.2	3.0	13.5	6.74	0.5
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	● ● ○ < 52 HRC	Order example: Description TOGX 090204 T Cutting material CBN57 Order No. W30 14940.0457				

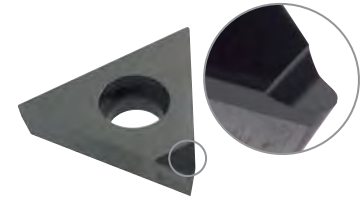


# KOMET® W30..98

## Inserts

PCD chip topography

TOGX

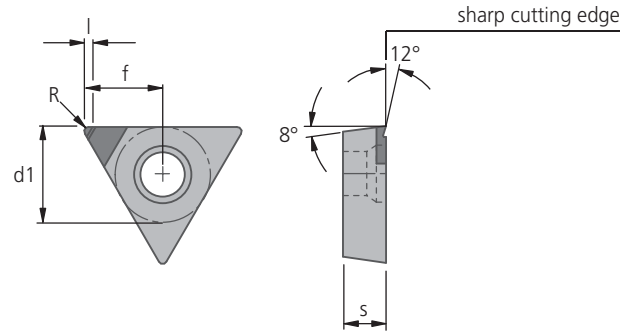


### Application range:

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.

**PCD:** 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.

### Cutter geometry:



Description ISO Description	Order No.	Cutting material					
		PCD tipped	d1	s	l	f	R
Cutting edge design F = sharp	enter carbide code	PKD55 F 55					
TOGX 06T103 FN	W30 04980.03..	▲	4.0	1.8	0.6	3.25	0.3
TOGX 090204 FN	W30 14980.04..	▲	5.6	2.5	0.6	4.56	0.4
TOGX 140305 FN	W30 26980.05..	▲	8.2	3.0	0.6	6.74	0.5
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	Order example: Description TOGX 06T103 FN Cutting material PKD55 Order No. W30 04980.0355				

7





Application range:

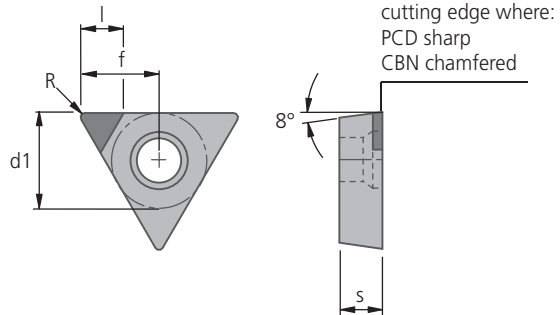
**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.









**CBN:** 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)

Cutter geometry:

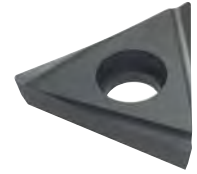


Description ISO Description	Order No.	Cutting material			d1	s	l	f	R
		PCD tipped  PKD55 F 55	CBN tipped  CBN57 T 57						
TOGX 06T102 ..N	W30 04990.02..	▲	▲	▲	4.0	1.8	1.8	3.32	0.2
TOGX 06T103 ..N	W30 04990.03..	▲	▲	▲				3.25	0.3
TOGX 06T104 ..N	W30 04990.04..	▲	▲	▲				3.17	0.4
TOGX 090202 ..N	W30 14990.02..	▲	▲	▲	5.6	2.5	2.7	4.70	0.2
TOGX 090204 ..N	W30 14990.04..	▲	▲	▲				4.56	0.4
TOGX 090208 ..N	W30 14990.08..	▲	▲	▲				4.26	0.8
TOGX 140302 ..N	W30 26990.02..	▲	▲	▲	8.2	3.0	2.7	6.96	0.2
TOGX 140304 ..N	W30 26990.04..	▲	▲	▲				6.81	0.4
TOGX 140305 ..N	W30 26990.05..	▲	▲	▲				6.74	0.5
Mild steel/tool steel					Order example: Description TOGX 06T102 TN Cutting material CBN57 Order No. W30 04990.0257				
Stainless and acid-resistant steel									
Grey cast iron, spheroidal cast iron									
Non-ferrous metals		●							
Heat-resistant steels			●						
Hardened tool steel				●	● ≥ 52 HRC				



## Inserts

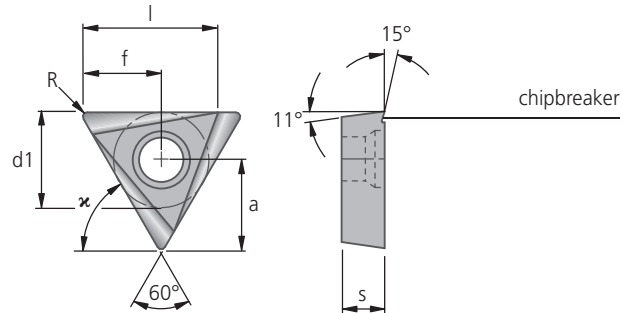
L.H. cutting form "L"  
for machining aluminium



### Application range:

11° TPBX 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.

### Cutter geometry:



#### Please note:

Should a TPXB be used instead of this insert, dimension "a" changes according to angle "κ"

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

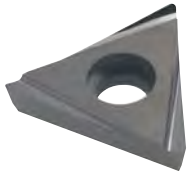
Δ 0.03 for R = 0.4

Δ 0.06 for R = 0.8

Description ISO Description	Order No.	Carbide grades			d1	s	l	f	R
		uncoated	diamond coated	PVD coated					
Cutting edge design F = sharp	enter carbide code	K10 F	BK50 F	BK7710 F				κ=90°	
		21	50	7710					
TPHX 060104 FL-P15	W32 03150.04..	▲	▲	▲	3.97	1.60	3.3	3.12	0.4
TPHX 090204 FL-P15	W32 13150.04..	▲	▲	▲	5.56	2.38	4.5	4.49	0.4
TPHX 090208 FL-P15	W32 13150.08..	▲	▲	▲			4.2	4.17	0.8
TPHX 110204 FL-P15	W32 18150.04..	▲	▲	▲	6.35	2.38	4.6	5.17	0.4
TPHX 110208 FL-P15	W32 18150.08..	▲	▲	▲			4.3	4.87	0.8
TPHX 130304 FL-P15	W32 23150.04..	▲	▲	▲	7.94	3.18	5.0	6.55	0.4
TPHX 130308 FL-P15	W32 23150.08..	▲	▲	▲			4.7	6.25	0.8
TPHX 160304 FL-P15	W32 32150.04..	▲	▲	▲	9.52	3.18	8.0	7.92	0.4
TPHX 160308 FL-P15	W32 32150.08..	▲	▲	▲			7.7	7.60	0.8
TPHX 220408 FL-P15	W32 44150.08..			▲	12.7	4.30	10.4	10.35	0.8
Mild steel/tool steel		●			Order example: Description TPHX 060104 FL-P15 Carbide grade K10 Order No. W32 03150.0421				
Stainless and acid-resistant steel									
Grey cast iron, spheroidal cast iron		●	●	●					
Non-ferrous metals		●		●					
Heat-resistant steels		●		●					
Hardened tool steel		●		●					

▲ Availability: for delivery see current price and stock list

# TPHX



# KOMET® W32..45

## Inserts

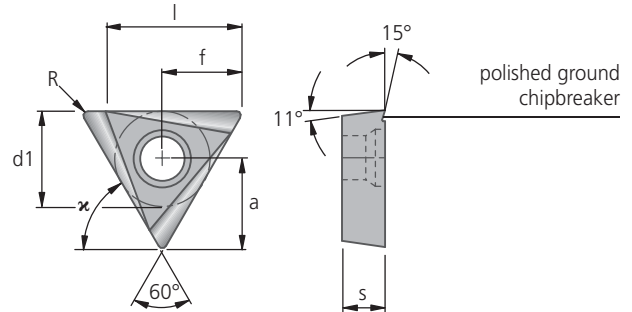
R.H. cutting form "R"  
for machining aluminium

### Application range:

11° TPBX insert with polished ground chip surface for softer aluminium materials and other non-ferrous metals.

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

### Cutter geometry:



### Please note:

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

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

Δ 0.03 for R = 0.4

Δ 0.06 for R = 0.8

Description ISO Description	Order No.	Carbide grades						
		uncoated	d1	s	l	f	R	
Cutting edge design F = sharp ▼	enter carbide code ▼	 K10 F 21						
TPHX 060104 FR-P15	W32 03450.04..	▲	3.97	1.60	3.3	3.12	0.4	
TPHX 090204 FR-P15	W32 13450.04..	▲	5.56	2.38	4.5	4.49	0.4	
TPHX 110204 FR-P15	W32 18450.04..	▲	6.35	2.38	4.6	5.17	0.4	
TPHX 130304 FR-P15	W32 23450.04..	▲	7.94	3.18	5.0	6.55	0.4	
TPHX 160304 FR-P15	W32 32450.04..	▲	9.52	3.18	8.0	7.92	0.4	
TPHX 220408 FR-P15	W32 44450.08..	▲	12.7	4.30	10.4	10.35	0.8	
Mild steel/tool steel <b>P</b>		●	Order example: Description TPHX 060104 FL-P15 Carbide grade K10 Order No. W32 03150.0421					
Stainless and acid-resistant steel <b>M</b>		●						
Grey cast iron, spheroidal cast iron <b>K</b>		●						
Non-ferrous metals <b>N</b>		●						
Heat-resistant steels <b>S</b>		●						
Hardened tool steel <b>H</b>		●						

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



## Inserts

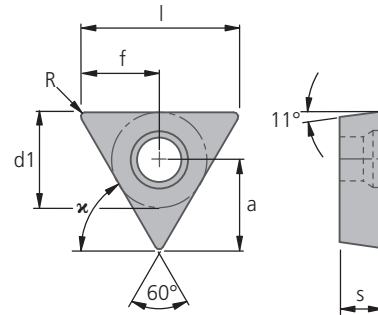
neutral cutting form "N"  
for machining aluminium



## Application range:

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  $\leq 300$  m/min.

## Cutter geometry:



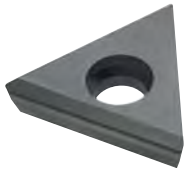
$$a = \cos(\alpha - 60^\circ) \times (d1 - 2R) + R$$

Description ISO Description	Order No.	Carbide grades		d1	s	l	f	R
		uncoated	diamond coated					
Cutting edge design F = sharp	enter carbide code	K10 F	BK50 F					
		21	50				$\alpha = 90^\circ$	
TPHB 060104 FN-P	W32 03600.04..	▲	▲	3.97	1.60	6.29	3.15	0.4
TPHB 090204 FN-P	W32 13600.04..	▲	▲	5.56	2.38	9.04	4.52	0.4
TPHB 090208 FN-P	W32 13600.08..	▲	▲			8.46	4.23	0.8
TPHB 110204 FN-P	W32 18600.04..	▲	▲	6.35	2.38	10.41	5.21	0.4
TPHB 110208 FN-P	W32 18600.08..	▲	▲			9.83	4.91	0.8
TPHB 130304 FN-P	W32 23600.04..	▲	▲	7.94	3.18	13.17	6.58	0.4
TPHB 130308 FN-P	W32 23600.08..	▲	▲			12.58	6.29	0.8
TPHB 160304 FN-P	W32 32600.04..	▲	▲	9.52	3.18	15.9	7.95	0.4
TPHB 160308 FN-P	W32 32600.08..	▲	▲			15.32	7.66	0.8
TPHB 220404 FN-P	W32 44600.04..	▲	▲	12.7	4.30	21.41	10.71	0.4
TPHB 220408 FN-P	W32 44600.08..	▲	▲			20.83	10.41	0.8
Mild steel/tool steel		●		Order example: Description TPHB 060104 FN-P Carbide grade K10 Order No. W32 03600.0421				
Stainless and acid-resistant steel		●						
Grey cast iron, spheroidal cast iron		●	●					
Non-ferrous metals		●						
Heat-resistant steels		●						
Hardened tool steel		●						

▲ Availability: for delivery see current price and stock list



# TPHB



# KOMET® W32..94

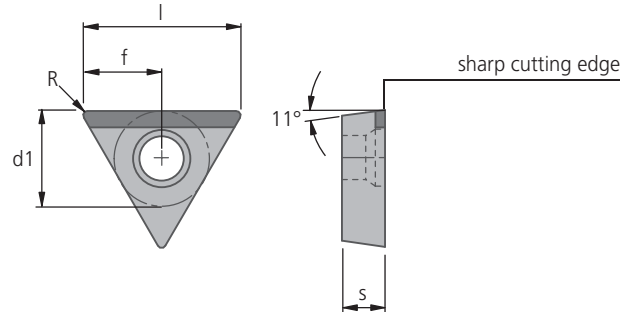
## Inserts


PCD cutting edge  
for machining aluminium

### Application range:

PCD: 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.

### Cutter geometry:



Description ISO Description	Order No.	Cutting material					
		PCD tipped					
Cutting edge design F = sharp	enter carbide code	 PKD55 F	d1	s	l	f	R
		55					
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 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
Mild steel/tool steel <b>P</b>		●	Order example: Description TPHB 090204 F Cutting material PKD55 Order No. W32 13940.0455				
Stainless and acid-resistant steel <b>M</b>							
Grey cast iron, spheroidal cast iron <b>K</b>							
Non-ferrous metals <b>N</b>							
Heat-resistant steels <b>S</b>							
Hardened tool steel <b>H</b>							

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

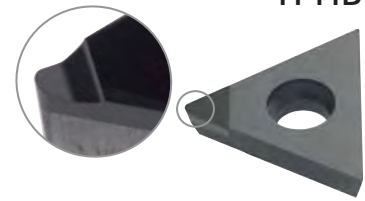


# KOMET® W32..98

TPHB

## Inserts

PCD chip topography  
for machining aluminium

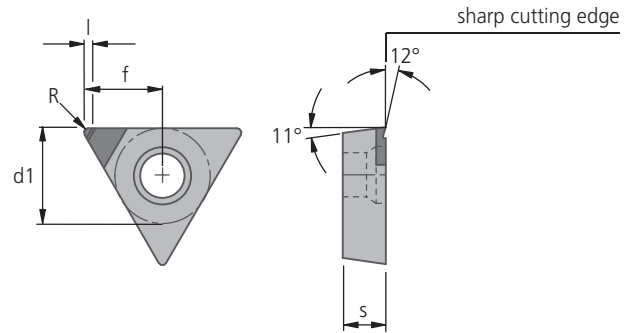


## Application range:

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.

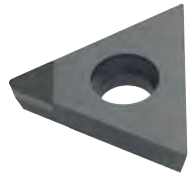
**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

## Cutter geometry:



Description ISO Description	Order No.	Cutting material					
		PCD tipped	d1	s	l	f	R
Cutting edge design F = sharp	enter carbide code	PKD55 F 55					
TPHB 060104 FN	W32 03980.04..	▲	3.97	1.60	0.6	3.15	0.4
TPHB 090204 FN	W32 13980.04..	▲	5.56	2.38	0.6	4.52	0.4
TPHB 110204 FN	W32 18980.04..	▲	6.35	2.38	0.6	5.21	0.4
TPHB 130304 FN	W32 23980.04..	▲	7.94	3.18	0.6	6.59	0.4
TPHB 160304 FN	W32 32980.04..	▲	9.52	3.18	0.6	7.95	0.4
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	Order example: Description TPHB 060104 FN Cutting material PKD55 Order No. W32 03990.0455				

▲ Availability: for delivery see current price and stock list

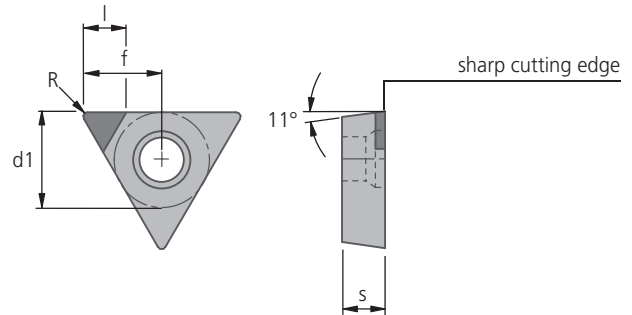



PCD cutting edge  
for machining aluminium

Application range:

PCD: 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.

Cutter geometry:



Description ISO Description	Order No.	Cutting material					
		PCD tipped					
Cutting edge design F = sharp	enter carbide code		d1	s	l	f	R
		PKD55 F 55					
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
Mild steel/tool steel <b>P</b>		●	Order example: Description TPHB 060104 FN Cutting material PKD55 Order No. W32 03990.0455				
Stainless and acid-resistant steel <b>M</b>							
Grey cast iron, spheroidal cast iron <b>K</b>							
Non-ferrous metals <b>N</b>							
Heat-resistant steels <b>S</b>							
Hardened tool steel <b>H</b>							



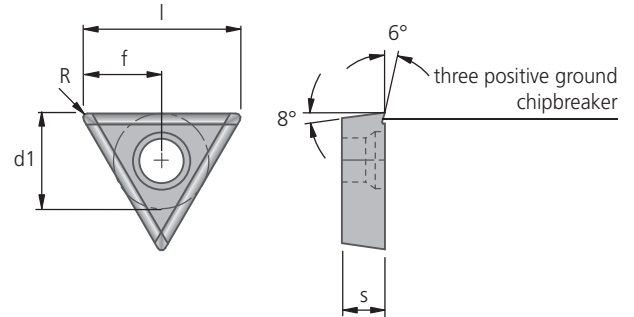
Inserts



Application range:

Peripheral and surface ground triangular insert for roughing and facing operations: 2-sided contact produces a very high changeover accuracy when changing the insert.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	f	R
		uncoated		CVD coated					
Cutting edge design E = rounded ▼	enter carbide code ▼								
		P25M E 03	K10 E 21	BK6425 E 6425					
TOHT 110304 EN-G06	W34 18660.04..	▲	▲	▲	6.35	3.18	10.4	5.21	0.4
Mild steel/tool steel		●	●	●	Order example: Description TOHT 110304 EN-G06 Carbide grade P25M Order No. W34 18660.0403				
Stainless and acid-resistant steel		●	●	●					
Grey cast iron, spheroidal cast iron		●	●	●					
Non-ferrous metals		●	●	●					
Heat-resistant steels		●	●	●					
Hardened tool steel		●	●	●					

▲ Availability: for delivery see current price and stock list

# TEHB



# KOMET® W37..60

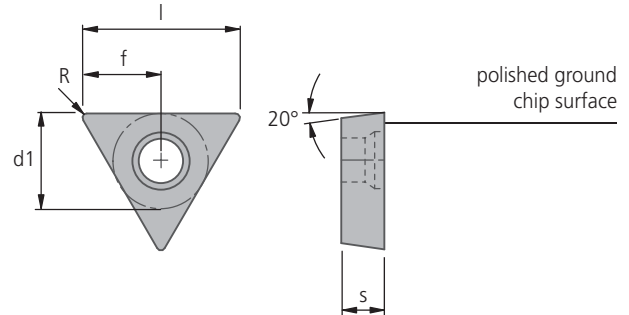
## Inserts

neutral cutting form "N"  
for machining aluminium

### Application range:

20° TEHB insert with polished chip surface for softer aluminium materials and other non-ferrous metals.  
10 – 12° top rake with axial and radial tilt.

### Cutter geometry:

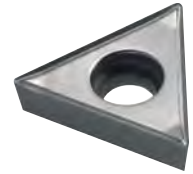


Description ISO Description	Order No.	Carbide grades					
		uncoated	d1	s	l	f	R
Cutting edge design F = sharp	enter carbide code	 K10 F 21					
TEHB 110204 FN-P	W37 18600.04..	▲	6.35	2.38	10.4	5.21	0.4
TEHB 110208 FN-P	W37 18600.08..	▲			9.8	4.91	0.8
TEHB 130308 FN-P	W37 23600.08..	▲	7.94	3.18	12.6	6.29	0.8
Mild steel/tool steel <b>P</b>		●	Order example: Description TEHB 110204 FN-P Carbide grade K10 Order No. W37 18600.0421				
Stainless and acid-resistant steel <b>M</b>		●					
Grey cast iron, spheroidal cast iron <b>K</b>		●					
Non-ferrous metals <b>N</b>		●					
Heat-resistant steels <b>S</b>		●					
Hardened tool steel <b>H</b>		●					



## Inserts

for machining aluminium

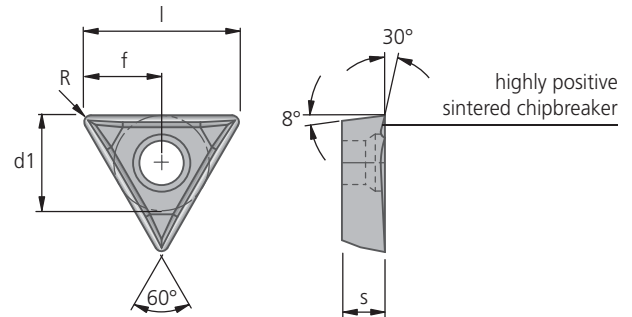


### Application range:

- Internal and external turning
- Fine finish turning for aluminium machining
- Aluminium materials, in particular soft wrought alloys

The highly positive cutting edge geometry and the peripheral ground clearance faces guarantee controlled chip formation and the best surface quality with low cutting forces.

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades		d1	s	l	f	R
		uncoated	PVD coated					
Cutting edge design F = sharp	enter carbide code	 K10 F	 BK7710 F					
		23	7710					
TOGX 06T102 FN-12	W57 04120.02..	▲	▲	4.00	1.80	6.64	3.32	0.2
TOGX 090204 FN-12	W57 14120.04..	▲	▲	5.60	2.50	9.12	4.56	0.4
TOGX 140304 FN-12	W57 26120.04..	▲	▲	8.20	3.00	13.62	6.81	0.4
Mild steel/tool steel				Order example: Description TOGX 06T102 FN-12 Carbide grade K10 Order No. W57 04120.0223				
Stainless and acid-resistant steel								
Grey cast iron, spheroidal cast iron								
Non-ferrous metals								
Heat-resistant steels								
Hardened tool steel								

▲ Availability: for delivery see current price and stock list

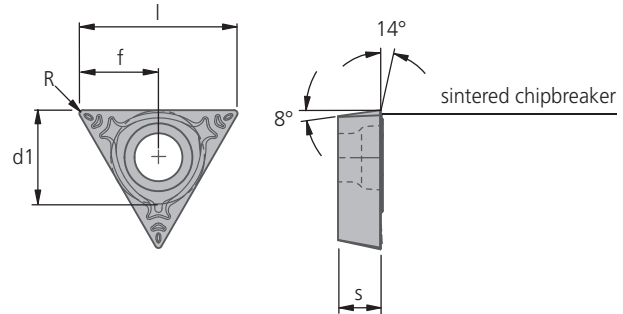


Application range:

- Internal and external machining
- Special tools
- Fine boring

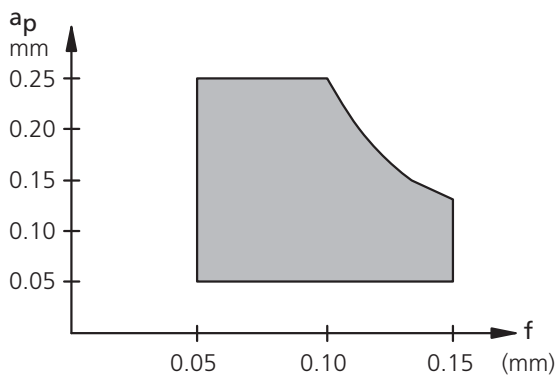
Controlled chip formation for fine and high precision machining. Wear resistant grades: CVD and PVD coated and uncoated Cermet.  
 CK3210: Extremely high resistance to wear  
 CK3230: Optimum toughness, suitable for interrupted cutting

Cutter geometry:



Description ISO Description	Order No.	Carbide grades		Cermet uncoated		d1	s	l	f	R
		CVD coated	PVD coated	CK3210	CK3230					
Cutting edge design E = rounded ▼	enter carbide code ▼	BK60 E 60	BK8430 E 8430	CK3210 E 3210	CK3230 E 3230					
TOGX 06T102 EN-14	W57 04140.02..	▲	▲	▲	▲	4.0	1.8	6.64	3.32	0.2
TOGX 06T104 EN-14	W57 04140.04..	▲	▲	▲	▲			6.35	3.17	0.4
TOGX 090202 EN-14	W57 14140.02..	▲	▲	▲	▲	5.6	2.5	9.41	4.70	0.2
TOGX 090204 EN-14	W57 14140.04..	▲	▲	▲	▲			9.12	4.56	0.4
TOGX 140302 EN-14	W57 26140.02..	▲	▲	▲	▲	8.2	3.0	13.91	6.96	0.2
TOGX 140304 EN-14	W57 26140.04..	▲	▲	▲	▲			13.62	6.81	0.4
Mild steel/tool steel	<b>P</b>	●	●	●	●	Order example: Description TOGX 06T102 EN-14 Carbide grade BK60 Order No. W57 04140.0260				
Stainless and acid-resistant steel	<b>M</b>		●	●	●					
Grey cast iron, spheroidal cast iron	<b>K</b>	●	●							
Non-ferrous metals	<b>N</b>			●	●					
Heat-resistant steels	<b>S</b>									
Hardened tool steel	<b>H</b>									

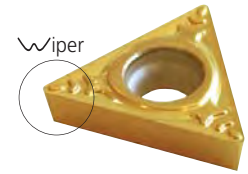
Application area



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



Inserts



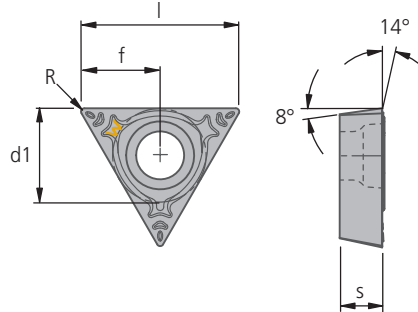
Application range:

- Internal and external machining
- Special tools
- Fine boring

Controlled chip formation for fine and high precision machining with optimised feed:surface ratio for best surface finish.

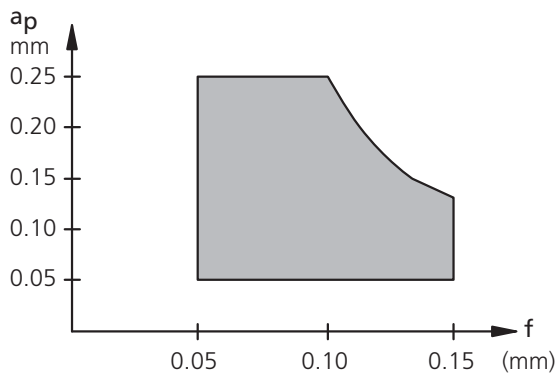
Wear resistant grades: Finest grade carbide + PVD coating and uncoated Cermet.

Cutter geometry:



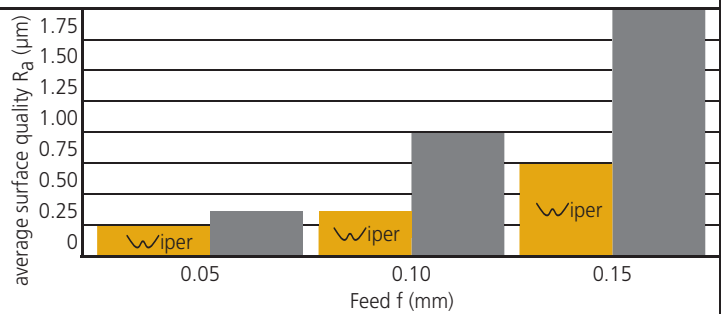
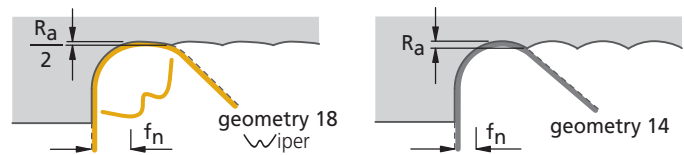
Description ISO Description	Order No.	Carbide grades		Cermet uncoated	d1	s	l	f	R
		PVD coated							
Cutting edge design E = rounded	enter carbide code	BK8430 E	CK32 E						
		8430	32						
TOGX 060104 EN-18	W57 04180.04..	▲	▲		4.0	1.8	6.3	3.17	0.4
TOGX 090204 EN-18	W57 14180.04..	▲	▲		5.6	2.5	9.1	4.56	0.4
TOGX 140304 EN-18	W57 26180.04..	▲	▲		8.2	3.0	13.6	6.81	0.4
Mild steel/tool steel	P	●	●		Order example: Description TOGX 060104 EN-18 Carbide grade BK8430 Order No. W57 04180.048430				
Stainless and acid-resistant steel	M	●	●						
Grey cast iron, spheroidal cast iron	K	●	●						
Non-ferrous metals	N	●	●						
Heat-resistant steels	S	●	●						
Hardened tool steel	H	●	●						

Application area



Surface quality results:

Comparison of surface quality results for "Wiper" – R04 for  $\alpha = 90^\circ$  in X40Cr13 / 1.4034



▲ Availability: for delivery see current price and stock list



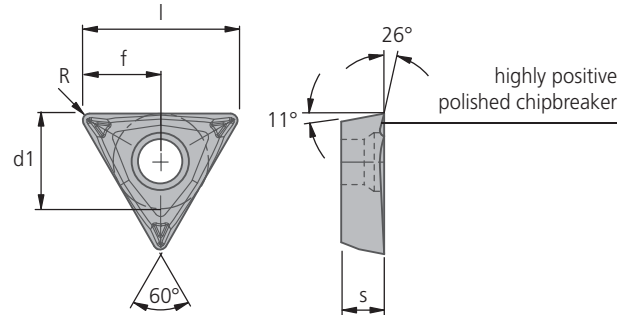




Application range:

- Internal and external turning
- Fine finish turning for aluminium machining
- Aluminium materials, in particular soft wrought alloys

The highly positive cutting edge geometry and the peripheral ground clearance faces guarantee controlled chip formation and the best surface quality with low cutting forces.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades		d1	s	l	f	R
		uncoated  K10 F 23	PVD coated  BK7710 F 7710					
TPGX 060104 FN-12	W58 03120.04..	▲	▲	3.97	1.60	6.29	3.15	0.4
TPGX 090204 FN-12	W58 13120.04..	▲	▲	5.56	2.38	9.05	4.52	0.4
TPGX 110204 FN-12	W58 18120.04..	▲	▲	6.35	2.38	10.41	5.21	0.4
TPGX 130304 FN-12	W58 23120.04..	▲	▲	7.94	3.18	13.17	6.58	0.4
TPGX 160304 FN-12	W58 32120.04..	▲	▲	9.52	3.18	15.90	7.95	0.4
Mild steel/tool steel	<b>P</b>			Order example: Description TPGX 060104 FN-12 Carbide grade K10 Order No. W58 03120.0423				
Stainless and acid-resistant steel	<b>M</b>	●						
Grey cast iron, spheroidal cast iron	<b>K</b>							
Non-ferrous metals	<b>N</b>	●	●					
Heat-resistant steels	<b>S</b>	●						
Hardened tool steel	<b>H</b>							



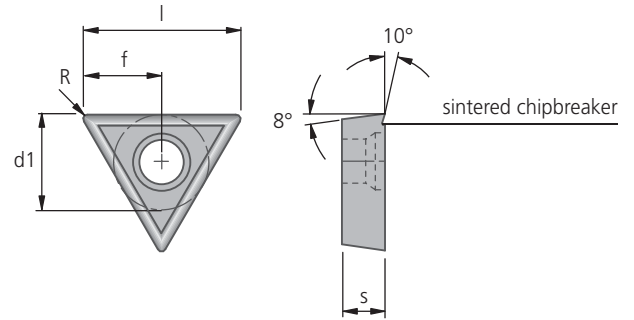
Inserts

















Application range:

Peripheral and surface ground triangular insert for roughing and facing operations:  
2-sided contact produces a very high changeover accuracy when changing the insert.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades							d1	s	l	f	R
		uncoated		CVD coated		PVD coated							
Cutting edge design E = rounded ▼	enter carbide code ▼												
		P25M E	K10 E	BK6425 E	BK7615* E	BK6440 E	BK7935 E	BK8425 E					
TOHT 110304 EN-05	W59 18050.04..	▲	▲	▲	▲	▲	▲	▲	6.35	3.18	10.4	5.21	0.4
TOHT 160405 EN-05	W59 32050.05..	▲							9.52	4.76	15.8	7.88	0.5
TOHT 160408 EN-05	W59 32050.08..	▲	▲	▲	▲	▲	▲	▲			15.3	7.66	0.8
Mild steel/tool steel		●	●	●		●	●	●	Order example: Description TOHT 110304 EN-05 Carbide grade P25M Order No. W59 18050.0403				
Stainless and acid-resistant steel		●		●		●	●	●					
Grey cast iron, spheroidal cast iron			●		●								
Non-ferrous metals			●										
Heat-resistant steels			●				●						
Hardened tool steel							●		 < 52 HRC				

\*coating BK7615 replaced BK61

▲ Availability: for delivery see current price and stock list

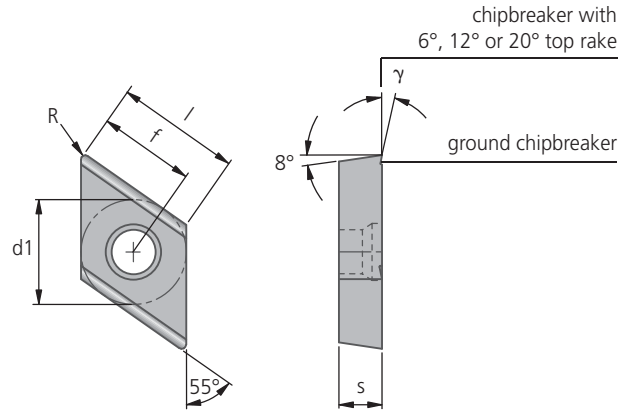


Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials. The large selection of ground chipbreakers and carbides will suit almost any materials.

Cutter geometry:

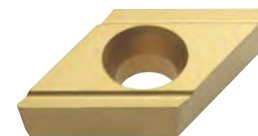


Description ISO Description	Order No.	Carbide grades				d1	s	l	γ	f	R
		uncoated		CVD coated							
		P25M E 03	K10 F 21	BK6425 E 6425	BK2710 E 2710						
DOHT 070202..L-G06	W60 18060.02..	▲				6.35	2.4	7.4	6°	5.92	0.2
DOHT 070204..L-G06	W60 18060.04..			▲						5.73	0.4
DOHT 070202..L-G12	W60 18120.02..	▲	▲	▲	▲	6.35	2.4	7.4	12°	5.92	0.2
DOHT 070204..L-G12	W60 18120.04..	▲	▲	▲	▲					5.73	0.4
DOHT 070202..L-G20	W60 18200.02..		▲			6.35	2.4	7.4	20°	5.92	0.2
DOHT 11T302..L-G12	W60 32120.02..	▲	▲	▲						8.96	0.2
DOHT 11T304..L-G12	W60 32120.04..	▲	▲	▲	▲	9.52	4.0	11.2	12°	8.78	0.4
DOHT 11T308..L-G12	W60 32120.08..			▲	▲					8.41	0.8
Mild steel/tool steel		●	●	●	●	Order example: Description DOHT 070202 EL-G06 Carbide grade P25M Order No. W60 18060.0203					
Stainless and acid-resistant steel		●	●	●	●						
Grey cast iron, spheroidal cast iron			●		●						
Non-ferrous metals			●		●						
Heat-resistant steels			●		●						
Hardened tool steel			●		●						



Inserts

R.H. cutting form "R"

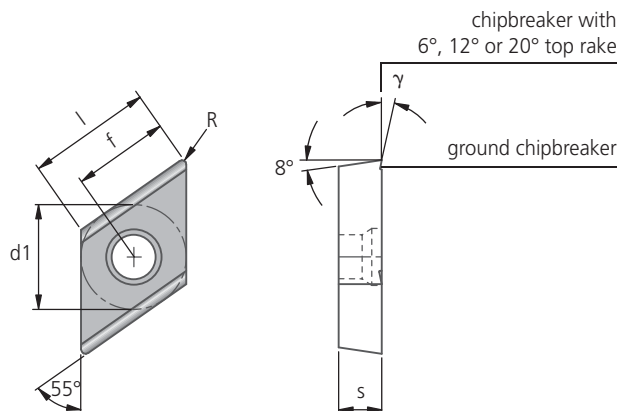


Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials. The large selection of ground chipbreakers and carbides will suit almost any materials.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	γ	f	R
		uncoated		CVD coated						
Cutting edge design E = rounded F = sharp	enter carbide code	P25M E 03	K10 F 21	BK6425 E 6425						
DOHT 070202..R-G06	W60 18360.02..	▲		▲	6.35	2.4	7.4	6°	5.92	0.2
DOHT 070204..R-G06	W60 18360.04..			▲					5.73	0.4
DOHT 070202..R-G12	W60 18420.02..	▲	▲	▲	6.35	2.4	7.4	12°	5.92	0.2
DOHT 070204..R-G12	W60 18420.04..	▲	▲	▲					5.73	0.4
DOHT 070202..R-G20	W60 18500.02..		▲		6.35	2.4	7.4	20°	5.92	0.2
DOHT 070204..R-G20	W60 18500.04..		▲						5.73	0.4
DOHT 11T308..R-G06	W60 32360.08..			▲	9.52	4.0	11.2	6°	8.41	0.8
DOHT 11T302..R-G12	W60 32420.02..	▲	▲	▲					8.96	0.2
DOHT 11T304..R-G12	W60 32420.04..	▲	▲	▲	9.52	4.0	11.2	12°	8.78	0.4
DOHT 11T308..R-G12	W60 32420.08..			▲					8.41	0.8
Mild steel/tool steel	P	●	●	●	Order example: Description DOHT 070202 ER-G06 Carbide grade P25M Order No. W60 18360.0203					
Stainless and acid-resistant steel	M	●		●						
Grey cast iron, spheroidal cast iron	K			●						
Non-ferrous metals	N			●						
Heat-resistant steels	S			●						
Hardened tool steel	H			●						

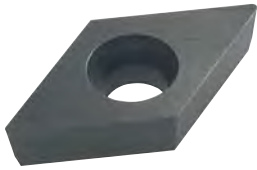
▲ Availability: for delivery see current price and stock list

# DOHW

# KOMET® W60..60

## Inserts

neutral cutting form "N"

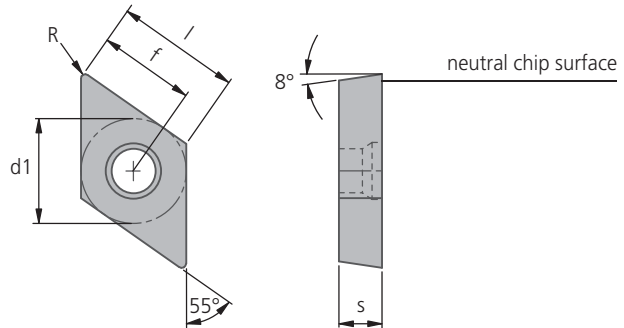


### Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials.

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades					
		uncoated	d1	s	l	f	R
Cutting edge design E = rounded	enter carbide code	 K10 E 21					
DOHW 070202 EN	W60 18600.02..	▲	6.35	2.4	7.4	5.20	0.2
DOHW 070204 EN	W60 18600.04..	▲				5.73	0.4
DOHW 11T302 EN	W60 32600.02..	▲	9.52	4.0	11.2	8.96	0.2
DOHW 11T304 EN	W60 32600.04..	▲				8.78	0.4
Mild steel/tool steel <b>P</b>		●	Order example: Description DOHW 070202 EN Carbide grade K10 Order No. W60 18600.0221				
Stainless and acid-resistant steel <b>M</b>		●					
Grey cast iron, spheroidal cast iron <b>K</b>		●					
Non-ferrous metals <b>N</b>		●					
Heat-resistant steels <b>S</b>		●					
Hardened tool steel <b>H</b>		●					



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

# KOMET® W60..98

## Inserts

PCD chip topography



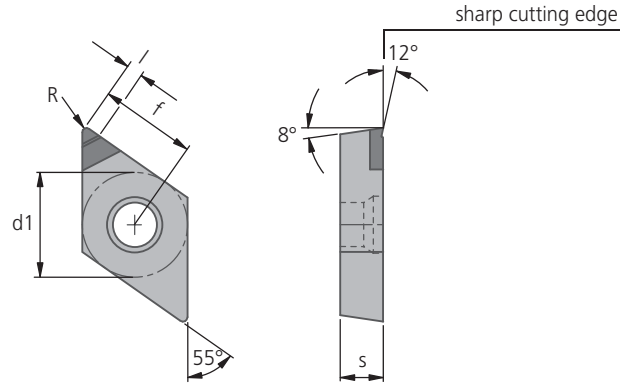
DOGW

### Application range:

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.

**PCD:** 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.

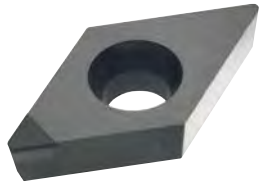
### Cutter geometry:



Description ISO Description	Order No.	Cutting material					
		PCD tipped	d1	s	l	f	R
Cutting edge design F = sharp	enter carbide code	PKD55 F 55					
DOGW 070204 FN	W60 18980.04..	▲	6.35	2.4	0.6	5.73	0.4
DOGW 11T304 FN	W60 32980.04..	▲	9.52	4.0	0.6	8.78	0.4
Mild steel/tool steel	<b>P</b>		Order example: Description DOGW 070204 FN Cutting material PKD55 Order No. W60 18980.0455				
Stainless and acid-resistant steel	<b>M</b>						
Grey cast iron, spheroidal cast iron	<b>K</b>						
Non-ferrous metals	<b>N</b>	●					
Heat-resistant steels	<b>S</b>						
Hardened tool steel	<b>H</b>						

▲ Availability: for delivery see current price and stock list

# DOGW



# KOMET® W60..99

## Inserts

PCD or CBN cutting edge

### Application range:

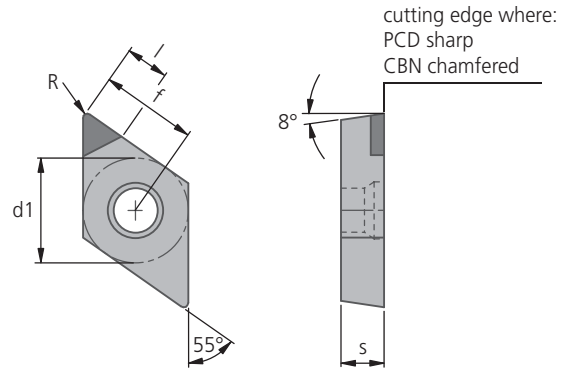
**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.


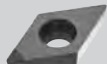




**CBN:** Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.

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

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

### Cutter geometry:



Description ISO Description	Order No.	Cutting material			d1	s	l	f	R
		PCD tipped  PKD55 F 55	CBN tipped  CBN57 T 57						
DOGW 070202 ..N	W60 18990.02..	▲	▲	▲	6.35	2.4	3.0	5.92	0.2
DOGW 070204 ..N	W60 18990.04..	▲	▲	▲				5.73	0.4
DOGW 11T302 ..N	W60 32990.02..	▲	▲	▲	9.52	4.0	3.0	8.96	0.2
DOGW 11T304 ..N	W60 32990.04..	▲	▲	▲				8.78	0.4
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>				  ≥ 52 HRC	Order example: Description DOGW 070202 FN Cutting material PKD55 Order No. W60 18990.0255				

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



Inserts

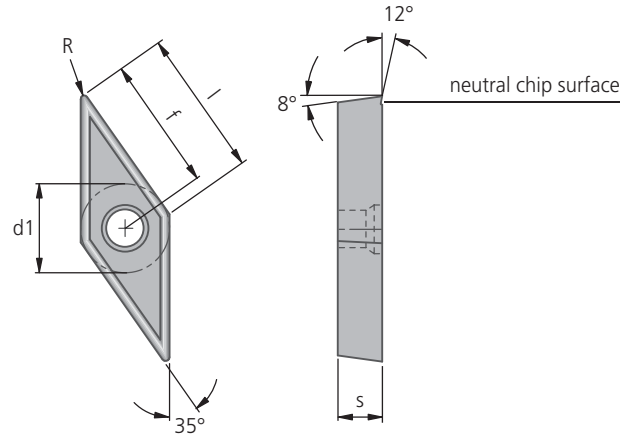


Application range:

- External and internal copy turning

The sintered chipbreaker allows universal use. The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

Cutter geometry:



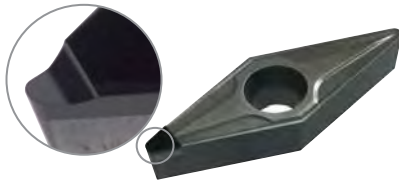
Description ISO Description	Order No.	Carbide grades		d1	s	l	f	R
		uncoated	CVD coated					
	enter carbide code ▼	 P35 14	 BK66 66					
VOHT 110302-07	W78 18070.02..	▲	▲	6.35	3.18	11	9.64	0.2
VOHT 110304-07	W78 18070.04..	▲	▲				9.20	0.4
VOHT 160404-07	W78 32070.04..	▲	▲	9.52	4.76	16	14.23	0.4
VOHT 160408-07	W78 32070.08..	▲	▲				13.36	0.8
	Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>	 	 	Order example: Description VOHT 110302-07 Carbide grade P35 Order No. W78 18070.0214				

▲ Availability: for delivery see current price and stock list





# VOGW



# KOMET® W78..98

## Inserts

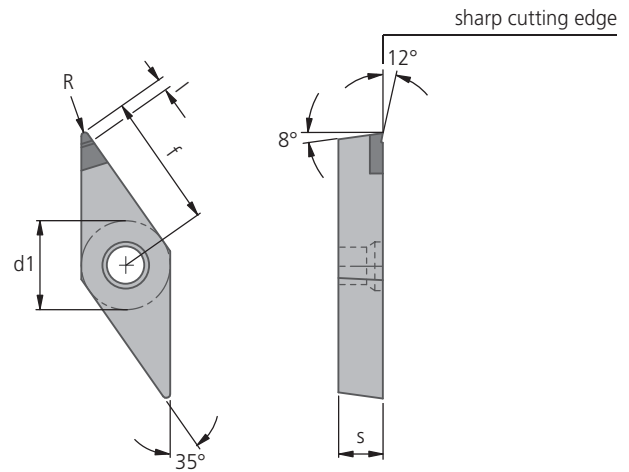
PCD chip topography


### Application range:

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.

**PCD:** 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.

### Cutter geometry:



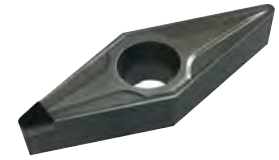
Description ISO Description	Order No.	Cutting material					
		PCD tipped	d1	s	l	f	R
Cutting edge design F = sharp	enter carbide code	 PKD55 F 55					
VOGW 110304 FN	W78 18980.04..	▲	6.35	3.18	0.6	9.20	0.4
VOGW 160408 FN	W78 32980.08..	▲	9.52	4.76	0.6	13.36	0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	Order example: Description VOGW 110304 FN Cutting material PKD55 Order No. W78 18980.0455				

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



## Inserts

PCD or CBN cutting edge



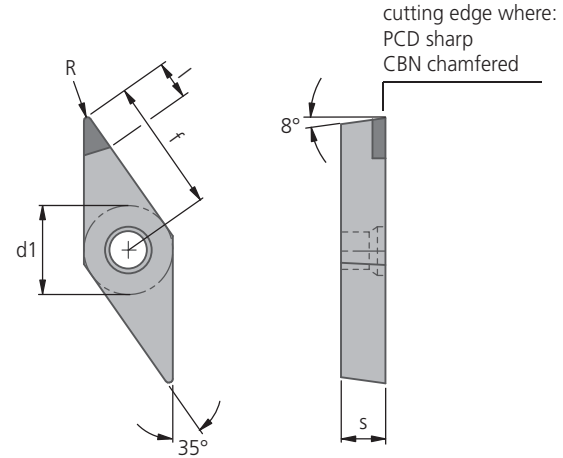
### Application range:



**PCD:** 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.

**CBN:** 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.

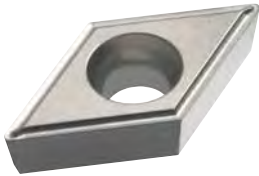
**CBN 57:** Preferably for cast materials and alloys on a nickel cobalt base.

### Cutter geometry:



Description ISO Description	Order No.	Cutting material		d1	s	l	f	R
		PCD tipped  PKD55 F 55	CBN tipped  CBN57 T 57					
VOGW 110304 ..N	W78 18990.04..	▲	▲	6.35	3.18	2.5	9.20	0.4
VOGW 160408 ..N	W78 32990.08..	▲	▲	9.52	4.76	3.5	13.36	0.8
Mild steel/tool steel	<b>P</b>			Order example: Description VOGW 110304 FN Cutting material PKD55 Order No. W78 18990.0455				
Stainless and acid-resistant steel	<b>M</b>							
Grey cast iron, spheroidal cast iron	<b>K</b>		●					
Non-ferrous metals	<b>N</b>	●						
Heat-resistant steels	<b>S</b>		●					
Hardened tool steel	<b>H</b>							

▲ Availability: for delivery see current price and stock list

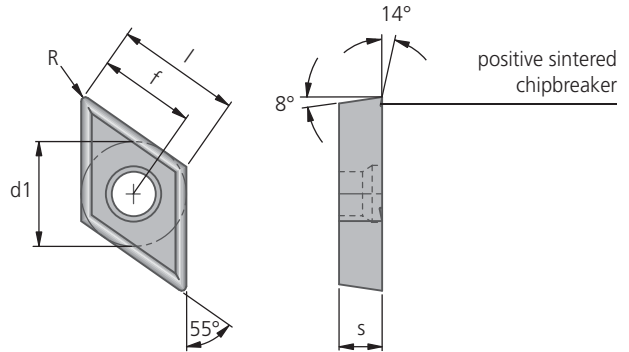


Application range:

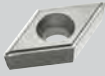
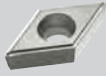


















- External and internal copy turning

The sintered chipbreaker allows universal use. The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

Cutter geometry:



Important note! The cutting edge on Cermet inserts is rounded.

Description ISO Description	Order No.  enter carbide code ▼	Cermet uncoated		d1	s	l	f	R
		 CK32 32	 CK37 37					
DOHT 070204-04	W79 18040.04..	▲	▲	6.35	2.4	7.4	5.73	0.4
DOHT 11T307-04	W79 32040.04..	▲	▲	9.52	4.0	11.2	8.78	0.4
Mild steel/tool steel				Order example: Description DOHT 070204-04 Quality CK32 Order No. W79 18040.0432				
Stainless and acid-resistant steel								
Grey cast iron, spheroidal cast iron								
Non-ferrous metals								
Heat-resistant steels								
Hardened tool steel								



Inserts

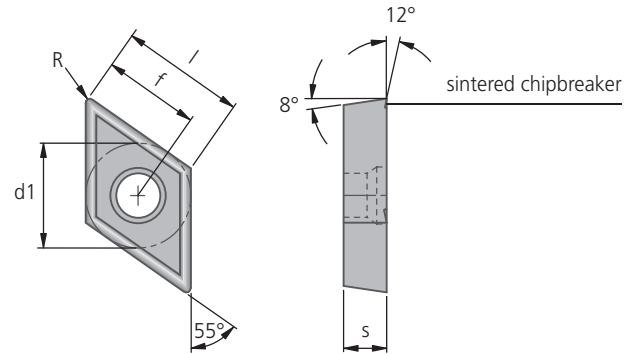


Application range:

- External and internal copy turning

The sintered chipbreaker allows universal use. The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades						d1	s	l	f	R
		uncoated		CVD coated								
	enter carbide code ▼											
		P25M 03	K10 21	BK6425 6425	BK7615 7615	BK6440 6440	BK2710 2710					
DOHT 070202-06	W79 18060.02..	▲	▲	▲		▲	▲				5.92	0.2
DOHT 070204-06	W79 18060.04..	▲	▲	▲	▲	▲	▲	6.35	2.4	7.4	5.73	0.4
DOHT 070208-06	W79 18060.08..			▲		▲					5.36	0.8
DOHT 11T302-06	W79 32060.02..	▲	▲	▲							8.96	0.2
DOHT 11T304-06	W79 32060.04..	▲	▲	▲		▲	▲	9.52	4.0	11.2	8.78	0.4
DOHT 11T308-06	W79 32060.08..	▲	▲	▲		▲	▲				8.41	0.8
Mild steel/tool steel								Order example: Description DOHT 070202-06 Carbide grade P25M Order No. W79 18060.0203				
Stainless and acid-resistant steel												
Grey cast iron, spheroidal cast iron												
Non-ferrous metals												
Heat-resistant steels												
Hardened tool steel								< 52 HRC				

\*coating BK7615 replaced BK61

▲ Availability: for delivery see current price and stock list

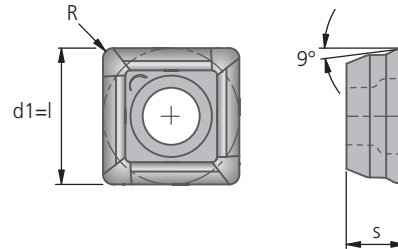


Application range:

- Solid drilling with KUB Pentron®
- Special tools

All-round geometry for KUB Pentron® : wear-resistant indexable insert for universal use

Cutter geometry:



Description ISO Description	Order No.	Carbide grades					d1	s	l	R
		CVD coated		PVD coated						
	enter carbide code ▼	BK6115 6115	BK6425 6425	BK2730 2730	BK7710 7710	BK8425 8425				
SOGX 040204-01	W80 10010.04..	▲	▲	▲	▲	▲	4.8	2.2	4.8	0.4
SOGX 050204-01	W80 12010.04..	▲	▲	▲	▲	▲	5.5	2.4	5.5	0.4
SOGX 060206-01	W80 18010.06..	▲	▲	▲	▲	▲	6.2	2.75	6.2	0.6
SOGX 07T208-01	W80 20010.08..	▲	▲	▲	▲	▲	7.1	2.97	7.1	0.8
SOGX 080308-01	W80 24010.08..	▲	▲	▲	▲	▲	8.0	3.4	8.0	0.8
SOGX 09T308-01	W80 28010.08..	▲	▲	▲	▲	▲	8.9	3.9	8.9	0.8
SOGX 100408-01	W80 32010.08..	▲	▲	▲	▲	▲	9.8	4.2	9.8	0.8
SOGX 110408-01	W80 38010.08..	▲	▲	▲	▲	▲	10.9	4.5	10.9	0.8
SOGX 120408-01	W80 42010.08..	▲	▲	▲	▲	▲	12.0	4.8	12.0	0.8
SOGX 130508-01	W80 46010.08..	▲	▲	▲	▲	▲	13.2	5.2	13.2	0.8
Mild steel/tool steel							Order example: Description SOGX 050204-01 Carbide grade BK6115 Order No. W80 12010.046115			
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										
External cutting edge		✓	✓	✓	✓	✓				
Internal cutting edge <i>Recommendation</i>		BK8425	BK8425	✓	✓	✓				

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



Inserts

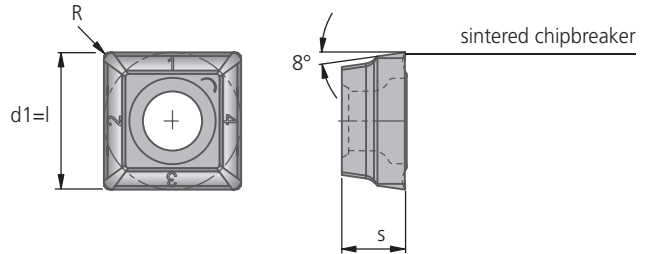


Application range:

- Special tools
- Roughing
- Precision boring
- Turning

Reduced cutting forces thanks high positive chip forming step, four effective cutting edges. High indexing and repeatability due to precision-ground circumference. Compatible with SOEX indexable inserts, additional labelling for easy identification.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	R
			PVD coated 					
	enter carbide code ▼	BK2730 2730	BK8530 8530	BK7710 7710				
SOHX 090404-21	W82 32210.04..	▲	▲	▲	9.52	4.37	9.52	0.4
SOHX 090408-21	W82 32210.08..	▲	▲					0.8
Mild steel/tool steel	<b>P</b>	●	●		Order example: Description SOHX 090404-21 Carbide grade BK2730 Order No. W82 32210.042730			
Stainless and acid-resistant steel	<b>M</b>	●	●					
Grey cast iron, spheroidal cast iron	<b>K</b>	●	●					
Non-ferrous metals	<b>N</b>			●				
Heat-resistant steels	<b>S</b>			●				
Hardened tool steel	<b>H</b>							

▲ Availability: for delivery see current price and stock list



Application range:

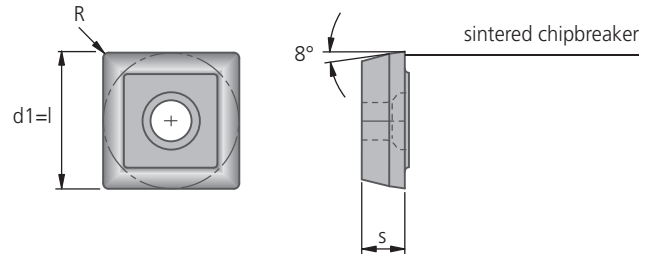
- Solid drilling
- Special tools
- TwinKom® Double Insert Tools
- Kometric® mounted seatings



















































Optimum solution for all roughing operations.  
Suitable for medium and strong steels and cast iron according to quality.

All-round geometry:

Wear-resistant insert for universal use for internal and external cutting.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades						d1	s	l	R	
		CVD coated			PVD coated							
		 BK7615 7615	 BK6115 6115	 BK6420 6420	 BK74 74	 BK7935 7935	 BK8425 8425					
SOEX 050204-01	W83 13000.01.. W83 13010.04..		▲		▲		▲		5.56	2.38	5.56	0.4
SOEX 060306-01	W83 18000.09.. W83 18010.06..	▲		▲		▲	▲		6.35	3.18	6.35	0.6
SOEX 07T308-01	W83 23000.01.. W83 23010.08..	▲		▲		▲	▲		7.94	3.58	7.94	0.8
SOEX 090408-01	W83 32000.15.. W83 32010.08..	▲		▲		▲	▲		9.52	4.37	9.52	0.8
SOEX 120508-01	W83 44000.18.. W83 44010.08..	▲		▲		▲	▲		12.7	5.16	12.7	0.8
Mild steel/tool steel Stainless and acid-resistant steel Grey cast iron, spheroidal cast iron Non-ferrous metals Heat-resistant steels Hardened tool steel	     	     	     	     	     	     	     	Order example: Description SOEX 050204-01 Carbide grade BK6420 Order No. W83 13010.046420				
 External cutting edge		✓	✓	✓	✓	✓	✓					
 Internal cutting edge Recommendation		BK8425	BK8425	BK8425	✓	✓	✓					

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



Inserts



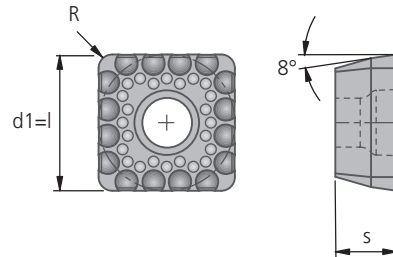
Application range:



















- Continuous drilling with KUB Quatron®
- Continuous drilling with KUB Centron® Powerline
- Special tools and Easy Special

Generally suitable for all steels, in particular for long-chipping steel materials and stainless steels. The SOEX indexable insert topography is predestined for use in long-chipping materials, and, thanks to its optimum chip formation, ensures reliable removal of chips, even with high L/D ratios.

BK8430 all-round cutting material:  
Wear-resistant, universal indexable insert for inner and outer cutters.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades		d1	s	l	R
		CVD coated  BK6730 6730	PVD coated  BK8430 8430				
SOEX 050204-03	W83 13030.04..	▲	▲	5.56	2.38	5.56	0.4
SOEX 060306-03	W83 18030.06..	▲	▲	6.35	3.18	6.35	0.6
SOEX 07T308-03	W83 23030.08..	▲	▲	7.94	3.58	7.94	0.8
SOEX 090408-03	W83 32030.08..	▲	▲	9.52	4.37	9.52	0.8
SOEX 120508-03	W83 44030.08..	▲	▲	12.7	5.16	12.7	0.8
Mild steel/tool steel 				Order example: Description SOEX 050204-03 Carbide grade BK8430 Order No. W83 13030.048430			
Stainless and acid-resistant steel 							
Grey cast iron, spheroidal cast iron 							
Non-ferrous metals 							
Heat-resistant steels 							
Hardened tool steel 							
 External cutting edge		✓	✓				
 Internal cutting edge <i>Recommendation</i>		BK8430	✓				

GSM EM 001773441 (geometry)



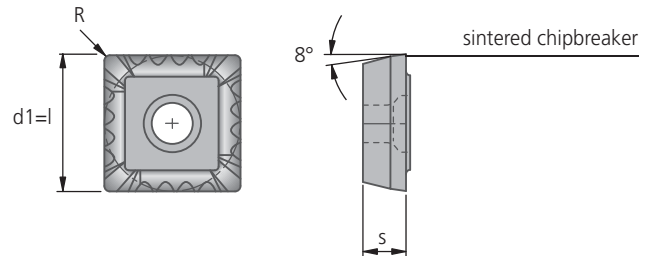














Application range:

- Solid drilling
- Special tools
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

Optimum solution for steel with low carbon content and for stainless steels. Suitable for medium to high cutting speeds for internal and external cutting edge.

Cutter geometry:

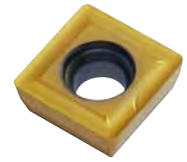


Description ISO Description	Order No.	Carbide grades				d1	s	l	R
		CVD coated		PVD coated					
	enter carbide code ▼	 BK6420 6420	 BK74 74	 BK7935 7935	 BK8425 8425				
SOEX 050204-13	W83 13000.02..		▲			5.56	2.38	5.56	0.4
	W83 13130.04..	▲		▲	▲				
SOEX 060306-13	W83 18000.10..		▲			6.35	3.18	6.35	0.6
	W83 18130.06..	▲		▲	▲				
SOEX 060308-13	W83 18130.08..	▲	▲	▲	▲				0.8
SOEX 07T308-13	W83 23000.02..		▲			7.94	3.58	7.94	0.8
	W83 23130.08..	▲		▲	▲				
SOEX 090408-13	W83 32000.17..		▲			9.52	4.37	9.52	0.8
	W83 32130.08..	▲		▲	▲				
SOEX 110508-13	W83 39130.08..	▲	▲	▲	▲	11.1	4.76	11.1	0.8
SOEX 120508-13	W83 44000.19..		▲			12.7	5.16	12.7	0.8
	W83 44130.08..	▲		▲	▲				
Mild steel/tool steel		●	●	●	●	Order example: Description SOEX 050204-13 Carbide grade BK6420 Order No. W83 13130.046420			
Stainless and acid-resistant steel		●	●	●	●				
Grey cast iron, spheroidal cast iron		●			●				
Non-ferrous metals									
Heat-resistant steels			●	●					
Hardened tool steel									
 External cutting edge		✓	✓	✓	✓				
 Internal cutting edge <i>Recommendation</i>		BK8425	✓	✓	✓				

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



Inserts

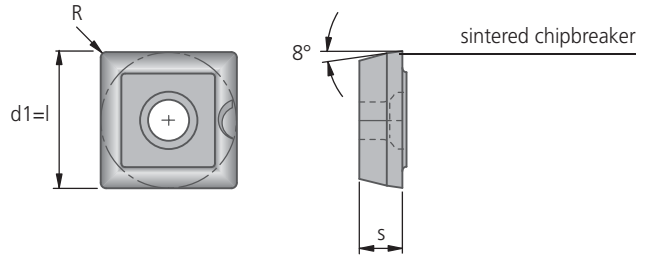


Application range:

- Solid drilling
- Special tools
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

For cutting stainless and general steels and aluminium materials.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades				d1	s	l	R
		BK8430 8430	PVD coated BK2730 2730	BK7710 7710	CVD coated BK6130 6130				
SOEX 050204-21	W83 13210.04..	▲	▲	▲	▲	5.56	2.38	5.56	0.4
SOEX 060306-21	W83 18210.06..	▲	▲	▲	▲	6.35	3.18	6.35	0.6
SOEX 060308-21	W83 18210.08..	▲	▲	▲	▲				0.8
SOEX 07T308-21	W83 23210.08..	▲	▲	▲	▲	7.94	3.58	7.94	0.8
SOEX 090408-21	W83 32210.08..	▲	▲	▲	▲	9.52	4.37	9.52	0.8
SOEX 110508-21	W83 39210.08..	▲	▲	▲	▲	11.1	4.76	11.1	0.8
SOEX 120508-21	W83 44210.08..	▲	▲	▲	▲	12.7	5.16	12.7	0.8
Mild steel/tool steel	P	●	●		●	Order example: Description SOEX 050204-21 Carbide grade BK2730 Order No. W83 13210.042730			
Stainless and acid-resistant steel	M	●	●		●				
Grey cast iron, spheroidal cast iron	K	●	●		●				
Non-ferrous metals	N	●		●					
Heat-resistant steels	S	●			●				
Hardened tool steel	H	●			●				
External cutting edge		✓	✓	✓	✓				
Internal cutting edge <i>Recommendation</i>		✓	W83..01 – BK8425	✓	W83..01 – BK8425				

▲ Availability: for delivery see current price and stock list



Application range:

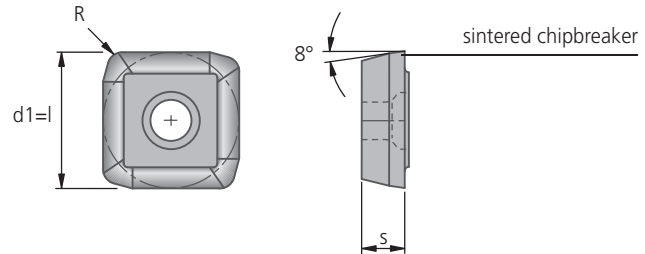
- Solid drilling
- Special tools

For cutting steel and cast iron materials.  
Minimum burring at bore entrance and exit.

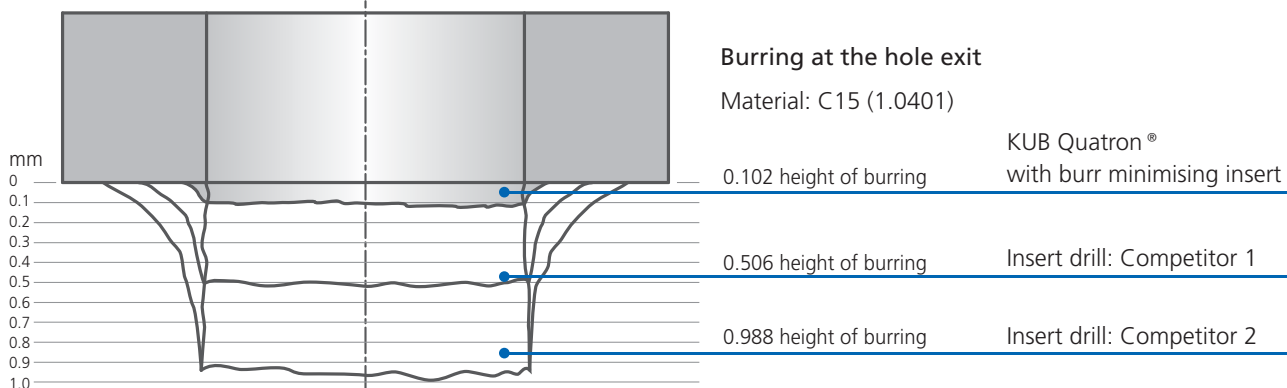
- Drive shaft machining
- Safe removal of disc produced during operation when drill is withdrawn
- Connecting rod machining C70 with minimised burring



Cutter geometry:



Description ISO Description	Order No.  enter carbide code ▼	Carbide grades		d1	s	l	R	Important Note	
		BK7935 7935	BK8425 8425					Tool-Ø	Reduction
SOEX 050204-32	W83 13320.04..	▲	▲	5.56	2.38	5.56	0.4	14.0-16.0 16.1-17.5	0.05 0.08
SOEX 060306-32	W83 18320.06..	▲	▲	6.35	3.18	6.35	0.6	17.6-21.5	0.10
SOEX 07T308-33	W83 23330.08..	▲	▲	7.94	3.58	7.94	0.8	21.6-27.0 44.1-52.0	0.09
SOEX 090408-32	W83 32320.08..	▲	▲	9.52	4.37	9.52	0.8	27.1-33.0 52.1-65.0	0.11
SOEX 120508-32	W83 44320.08..	▲	▲	12.7	5.16	12.7	0.8	33.1-44.0	0.13
Mild steel/tool steel Stainless and acid-resistant steel Grey cast iron, spheroidal cast iron Non-ferrous metals Heat-resistant steels Hardened tool steel	P M K N S H	● ● ● ● ● ●	● ● ● ● ● ●	Order example: Description SOEX 050204-32 Carbide grade BK8425 Order No. W83 13320.048425				EP 1525066 and other patents (drilling with minimum burring)	



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

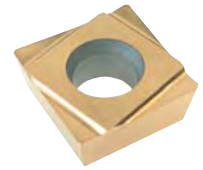


# KOMET® W83

SPGT

## Inserts

for machining aluminium

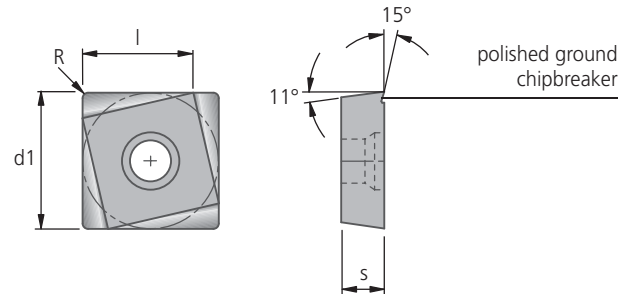







### Application range:

#### BK77-coating

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

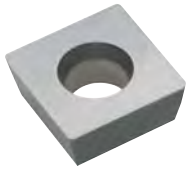
### Cutter geometry:



Description ISO Description	Order No.	Carbide grades		d1	s	l	R
		diamond coated	PVD coated				
Cutting edge design F = sharp ▼	enter carbide code ▼	 BK50 F	 BK77 F				
		50	77				
SPGT 060202 FL-P15	W83 18000.01..	▲		6.35	2.38	4.53	0.2
SPGT 120404 FL-P15	W83 44000.14..	▲	▲	12.7	4.76	8.37	0.4
SPGT 120408 FL-P15	W83 44000.15..	▲	▲			8.02	0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>			 	Order example: Description SPGT 060202 FL-P15 Carbide grade BK50 Order No. W83 18000.0150			

▲ Availability: for delivery see current price and stock list

# SPGW



# KOMET® W83

## Inserts

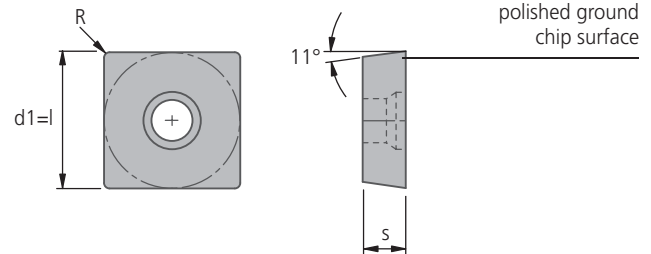
for machining aluminium












### Application range:

with K10

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

### Cutter geometry:



Description ISO Description	Order No.	Carbide grades				d1	s	l	R
		uncoated							
Cutting edge design F = sharp	enter carbide code		K10	F	21				
SPGW 060202 FN	W83 18000.15..	▲				6.35	2.38	6.35	0.2
SPGW 060204 FN	W83 18000.16..	▲							0.4
SPGW 09T304 FN	W83 32000.18..	▲				9.52	3.97	9.52	0.4
SPGW 09T308 FN	W83 32000.19..	▲							
SPGW 120408 FN	W83 44000.21..	▲				12.7	4.76	12.7	0.8
Mild steel/tool steel			Order example: Description SPGW 060202 FN Carbide grade K10 Order No. W83 18000.1521						
Stainless and acid-resistant steel									
Grey cast iron, spheroidal cast iron									
Non-ferrous metals									
Heat-resistant steels									
Hardened tool steel									

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

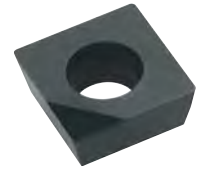


# KOMET® W83

SPGW

## Inserts

PCD cutting edge  
for machining aluminium



### Application range:

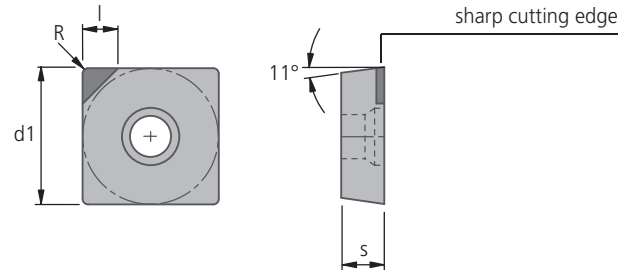
#### PCD55









Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

#### PCD5520

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

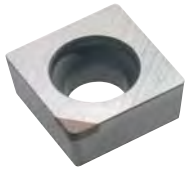
### Cutter geometry:



Description ISO Description	Order No.	Cutting material		d1	s	l	R
		PCD tipped					
Cutting edge design F = sharp	enter carbide code	 PKD55 F	 PKD5520 F				
		55	5520				
SPGW 060204 FN	W83 18000.13..		▲	6.35	2.38	3.0	0.4
SPGW 09T304 FN	W83 32000.13..	▲		9.52	3.97	3.0	0.4
SPGW 09T308 FN	W83 32000.14..		▲				0.8
SPGW 120404 FN	W83 44000.16..	▲		12.7	4.76	3.0	0.4
SPGW 120408 FN	W83 44000.17..		▲				0.8
Mild steel/tool steel 				Order example: Description SPGW 09T304 FN Cutting material PKD55 Order No. W83 32000.1355			
Stainless and acid-resistant steel 							
Grey cast iron, spheroidal cast iron 							
Non-ferrous metals 		●	●				
Heat-resistant steels 							
Hardened tool steel 							

▲ Availability: for delivery see current price and stock list

# SCGW



# KOMET® W83

## Inserts

CBN cutting edge  
for hard machining and cast iron machining

### Application range:

#### CBN57

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

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

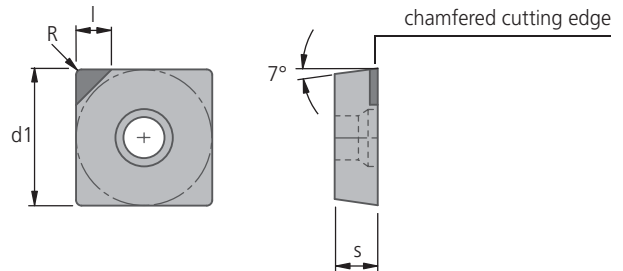
$$f = 0.1 \dots 0.5 \text{ mm}$$











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

#### CBN40

for cutting hardened steels  $\geq 52 \text{ HRC}$

### Cutter geometry:



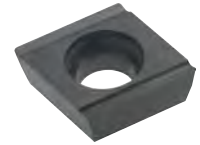
Description ISO Description	Order No.	Cutting material		d1	s	l	R
		CBN tipped					
Cutting edge design T = chamfered	enter carbide code	 CBN40 T 40	 CBN57 T 57				
SCGW 060204 TN	W83 18000.20..	▲	▲	6.35	2.38	3.0	0.4
SCGW 09T308 TN	W83 32000.25..	▲	▲	9.52	3.97	3.0	0.8
SCGW 120408 TN	W83 44000.26..	▲	▲	12.7	4.76	3.0	0.8
Mild steel/tool steel 				Order example: Description SCGW 060204 TN Cutting material CBN40 Order No. W83 18000.2040			
Stainless and acid-resistant steel 							
Grey cast iron, spheroidal cast iron 			●				
Non-ferrous metals 			●				
Heat-resistant steels 			●				
Hardened tool steel 		 $\geq 52 \text{ HRC}$					

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



## Inserts

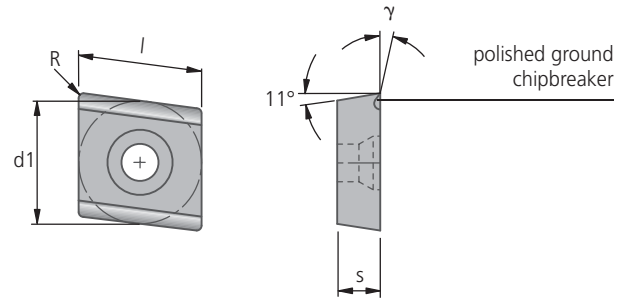
L.H. cutting form "L"  
for machining aluminium



## Application range:

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).

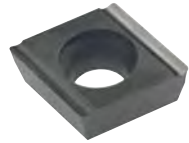
## Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	s	l	γ	R
		uncoated	diamond coated	PVD coated					
Cutting edge design F = sharp									
	enter carbide code	K10 F 21	BK50 F 50	BK77 F 77					
CPGT 040102 FL-P18	W85 09000.01..	▲	▲	▲	4.76	1.59	4.8	18°	0.2
CPGT 040104 FL-P18	W85 09000.03..	▲	▲	▲					0.4
CPGT 04T102 FL-P18	W85 09000.11..	▲			4.76	1.98	4.8	18°	0.2
CPGT 04T104 FL-P18	W85 09000.12..	▲							0.4
CPGT 060202 FL-P18	W85 18000.06..	▲	▲	▲	6.35	2.38	6.45	18°	0.2
CPGT 060204 FL-P18	W85 18000.08..	▲	▲	▲					0.4
CPGT 080302 FL-P18	W85 23000.01..	▲			7.94	3.18	8.06	18°	0.2
CPGT 080304 FL-P18	W85 23000.02..	▲							0.4
CPGT 09T304 FL-P18	W85 32000.23..	▲	▲	▲	9.52	3.97	9.65	18°	0.4
CPGT 09T308 FL-P18	W85 32000.24..	▲	▲	▲					0.8
CPGT 120404 FL-P18	W85 44000.29..	▲	▲	▲	12.7	4.76	12.9	18°	0.4
CPGT 120408 FL-P18	W85 44000.30..	▲	▲	▲					0.8
Mild steel/tool steel					Order example: Description CPGT 040102 FL-P18 Carbide grade BK50 Order No. W85 09000.0150				
Stainless and acid-resistant steel									
Grey cast iron, spheroidal cast iron									
Non-ferrous metals									
Heat-resistant steels									
Hardened tool steel									

▲ Availability: for delivery see current price and stock list



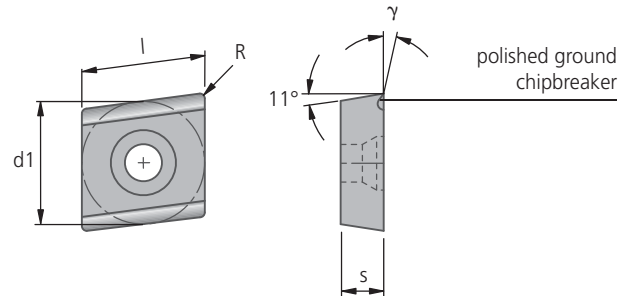










R.H. cutting form "R"  
for machining aluminium

Application range:

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).

Cutter geometry:

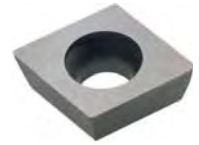


Description ISO Description	Order No.	Carbide grades					
		uncoated	d1	s	l	γ	R
Cutting edge design F = sharp	enter carbide code	 K10 F 21					
CPGT 040102 FR-P18	W85 09000.09..	▲	4.76	1.59	4.8	18°	0.2
CPGT 040104 FR-P18	W85 09000.10..	▲					0.4
CPGT 04T102 FR-P18	W85 09000.13..	▲	4.76	1.98	4.8	18°	0.2
CPGT 04T104 FR-P18	W85 09000.14..	▲					0.4
CPGT 060202 FR-P18	W85 18000.27..	▲	6.35	2.38	6.45	18°	0.2
CPGT 060204 FR-P18	W85 18000.28..	▲					0.4
CPGT 080302 FR-P18	W85 23000.03..	▲	7.94	3.18	8.06	18°	0.2
CPGT 080304 FR-P18	W85 23000.04..	▲					0.4
CPGT 09T304 FR-P18	W85 32000.34..	▲	9.52	3.97	9.65	18°	0.4
CPGT 09T308 FR-P18	W85 32000.35..	▲					0.8
CPGT 120404 FR-P18	W85 44000.38..	▲	12.7	4.76	12.9	18°	0.4
CPGT 120408 FR-P18	W85 44000.39..	▲					0.8
Mild steel/tool steel			Order example: Description CPGT 040102 FR-P18 Carbide grade K10 Order No. W85 09000.0921				
Stainless and acid-resistant steel							
Grey cast iron, spheroidal cast iron							
Non-ferrous metals							
Heat-resistant steels							
Hardened tool steel							



## Inserts

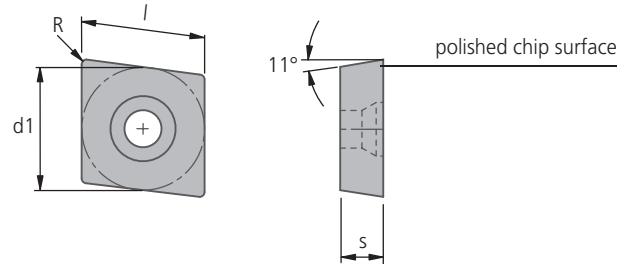
for machining aluminium








### Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

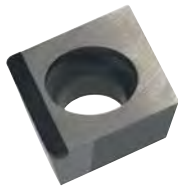
### Cutter geometry:



Description ISO Description	Order No.	Carbide grades				d1	s	l	R
		uncoated							
Cutting edge design F = sharp	enter carbide code		K10	F					
			21						
CPGW 060202 FN	W85 18000.17..		▲		6.35	2.38	6.45	0.2	
CPGW 060204 FN	W85 18000.18..		▲					0.4	
CPGW 09T304 FN	W85 32000.26..		▲		9.52	3.97	9.65	0.4	
CPGW 09T308 FN	W85 32000.27..		▲					0.8	
CPGW 120404 FN	W85 44000.32..		▲		12.7	4.76	12.9	0.4	
CPGW 120408 FN	W85 44000.33..		▲					0.8	
Mild steel/tool steel	<b>P</b>				Order example: Description CPGW 060202 FN Carbide grade K10 Order No. W85 18000.1721				
Stainless and acid-resistant steel	<b>M</b>								
Grey cast iron, spheroidal cast iron	<b>K</b>								
Non-ferrous metals	<b>N</b>								
Heat-resistant steels	<b>S</b>								
Hardened tool steel	<b>H</b>								

▲ Availability: for delivery see current price and stock list

# CPGW



# KOMET® W85

## Inserts

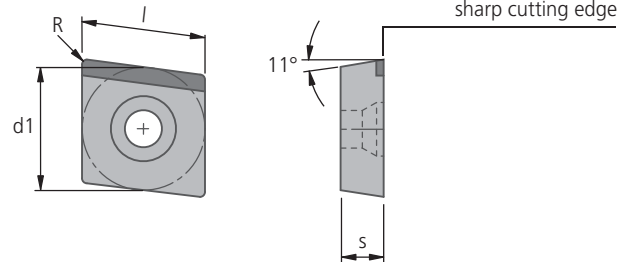
L.H. cutting form "L"  
for machining aluminium


### Application range:

#### PCD55

Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

### Cutter geometry:



Description ISO Description	Order No.	Cutting material				d1	s	l	R
		PCD tipped							
Cutting edge design F = sharp	enter carbide code		PKD55	F					
			55						
CPGW 04T102 FL	W85 09000.15..	▲			4.76	1.98	4.8	0.2	
CPGW 060202 FL	W85 18000.30..	▲			6.35	2.38	6.45	0.2	
CPGW 060204 FL	W85 18000.21..	▲						0.4	
CPGW 080302 FL	W85 23000.05..	▲			7.94	3.18	8.06	0.2	
CPGW 080304 FL	W85 23000.06..	▲						0.4	
CPGW 09T304 FL	W85 32000.19..	▲			9.52	3.97	9.65	0.4	
CPGW 09T308 FL	W85 32000.20..	▲						0.8	
CPGW 120404 FL	W85 44000.25..	▲			12.7	4.76	12.9	0.4	
CPGW 120408 FL	W85 44000.26..	▲						0.8	
Mild steel/tool steel	<b>P</b>				Order example: Description CPGW 04T102 FL Cutting material PKD55 Order No. W85 09000.1555				
Stainless and acid-resistant steel	<b>M</b>								
Grey cast iron, spheroidal cast iron	<b>K</b>								
Non-ferrous metals	<b>N</b>	●							
Heat-resistant steels	<b>S</b>								
Hardened tool steel	<b>H</b>								

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

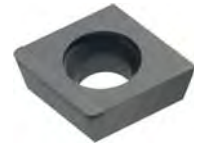


# KOMET® W85

CPGW

## Inserts

R.H. cutting form "R"  
for machining aluminium

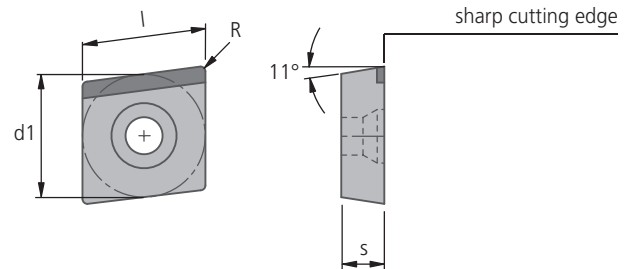



### Application range:

#### PCD55

Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

### Cutter geometry:



Description ISO Description	Order No.	Cutting material				
		PCD tipped	d1	s	l	R
Cutting edge design F = sharp	enter carbide code	 PKD55 F 55				
CPGW 04T102 FR	W85 09000.16..	▲	4.76	1.98	4.8	0.2
CPGW 060202 FR	W85 18000.31..	▲	6.35	2.38	6.45	0.2
CPGW 060204 FR	W85 18000.29..	▲				0.4
CPGW 080302 FR	W85 23000.07..	▲	7.94	3.18	8.06	0.2
CPGW 080304 FR	W85 23000.08..	▲				0.4
CPGW 09T304 FR	W85 32000.36..	▲	9.52	3.97	9.65	0.4
CPGW 09T308 FR	W85 32000.37..	▲				0.8
CPGW 120404 FR	W85 44000.40..	▲	12.7	4.76	12.9	0.4
CPGW 120408 FR	W85 44000.41..	▲				0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	Order example: Description CPGW 04T102 FL Cutting material PKD55 Order No. W85 09000.1555			

▲ Availability: for delivery see current price and stock list

# CPGW



# KOMET® W85

## Inserts

for machining aluminium

### Application range:

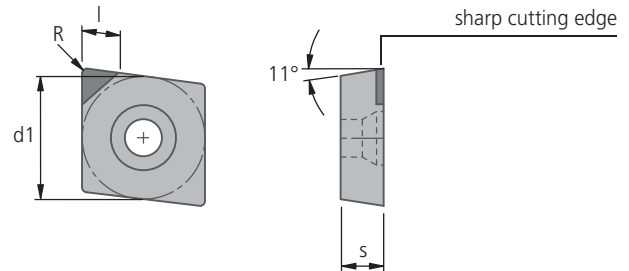
#### PCD55

Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

#### PCD5520

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

### Cutter geometry:



Description ISO Description	Order No.	Cutting material		d1	s	l	R
		PCD tipped					
Cutting edge design F = sharp	enter carbide code	PKD55 F 55	PKD5520 F 5520				
CPGW 04T102 FN	W85 09000.07..		▲	4.76	1.98	2.0	0.2
CPGW 060201 FN	W85 18000.23..		▲				0.1
CPGW 060202 FN	W85 18000.24..		▲	6.35	2.38	3.0	0.2
CPGW 060204 FN	W85 18000.16..		▲				0.4
CPGW 09T302 FN	W85 32000.30..		▲				0.2
CPGW 09T304 FN	W85 32000.21..	▲	▲	9.52	3.97	3.0	0.4
CPGW 09T308 FN	W85 32000.22..	▲	▲				0.8
CPGW 120404 FN	W85 44000.27..	▲	▲	12.7	4.76	3.0	0.4
CPGW 120408 FN	W85 44000.28..	▲	▲				0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		●	●	Order example: Description CPGW 04T102 FN Cutting material PKD5520 Order No. W85 09000.075520			

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

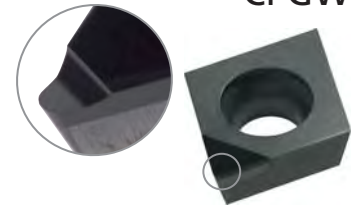


# KOMET® W85..98

## Inserts

PCD chip topography  
for machining aluminium

CPGW



### Application range:

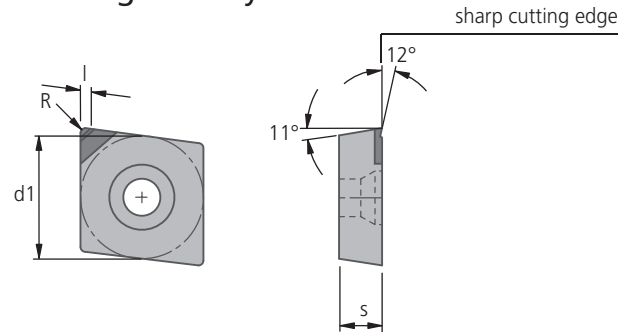
#### PCD55

Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

#### PCD5520

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

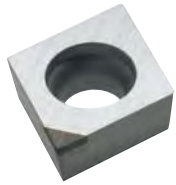
### Cutter geometry:



Description ISO Description	Order No.	Cutting material		d1	s	l	R
		PCD tipped					
Cutting edge design F = sharp	enter carbide code	PKD55 F	PKD5520 F				
CPGW 060204 FN	W85 18980.04..		▲	6.35	2.38	0.6	0.4
CPGW 09T304 FN	W85 32980.04..	▲		9.52	3.97	0.6	0.4
CPGW 120404 FN	W85 44980.04..	▲		12.7	4.76	0.6	0.4
Mild steel/tool steel Stainless and acid-resistant steel Grey cast iron, spheroidal cast iron Non-ferrous metals Heat-resistant steels Hardened tool steel	<b>P</b> <b>M</b> <b>K</b> <b>N</b> <b>S</b> <b>H</b>	●	●	Order example: Description CPGW 060204 FN Cutting material PKD5520 Order No. W85 18980.045520			

▲ Availability: for delivery see current price and stock list

# CCGW



# KOMET® W85

## Inserts

CBN cutting edge  
for hard machining and cast iron machining

### Application range:

#### CBN57

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

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

$f = 0.1 \dots 0.5$  mm

$a_p = 0.1 \dots 1$  mm

#### CBN40

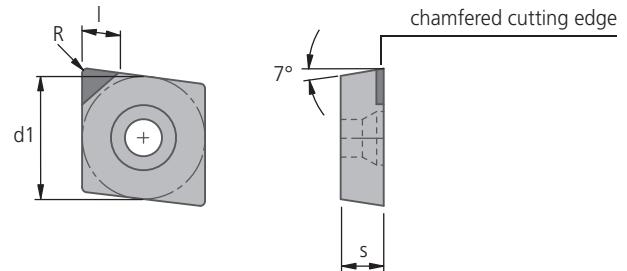
for cutting hardened steels >48 HRC

$v_c = 100 \dots 160$  m/min

$f = 0.1 \dots 0.3$  mm

$a_p = 0.1 \dots 0.5$  mm

### Cutter geometry:



Description ISO Description	Order No.	Cutting material		d1	s	l	R
		CBN tipped					
Cutting edge design T = chamfered	enter carbide code	CBN40 T	CBN57 T				
CCGW 04T102 TN	W85 09000.08..	▲	▲	4.76	1.98	2.0	0.2
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
CCGW 09T308 TN	W85 32000.32..	▲	▲				0.8
CCGW 09T312 TN	W85 32000.33..		▲				1.2
CCGW 120404 TN	W85 44000.35..		▲	12.7	4.76	3.0	0.4
CCGW 120408 TN	W85 44000.36..	▲	▲				0.8
Mild steel/tool steel	<b>P</b>			Order example: Description CCGW 04T102 TN Cutting material CBN40 Order No. W85 09000.0840			
Stainless and acid-resistant steel	<b>M</b>						
Grey cast iron, spheroidal cast iron	<b>K</b>		●				
Non-ferrous metals	<b>N</b>						
Heat-resistant steels	<b>S</b>	●	●				
Hardened tool steel	<b>H</b>	○	○				

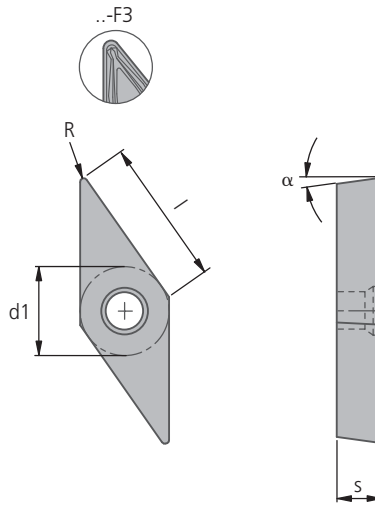
Important: See chapter 8 for more application details and safety notes!



Inserts



Cutter geometry:



Description ISO Description	Order No.  enter carbide code	Carbide grades				Cermet		f mm	ap mm	d1	s	l	α	R
		CVD coated				CK39 39 Vc m/min								
		BK75 75 Vc m/min		BK76 76 Vc m/min										
VCMT 160404-F3	W89 32000.05..	180-280	130-220	250-330	120-180	200-300	150-280	0.12-0.25	1.0-5.0	9.52	4.76	16.5	7°	0.4
VCMT 160408-F3	W89 32000.06..							0.12-0.30	1.0-5.0					0.8
VBMT 160404	W89 32000.07..	80-190	80-180	120-270	60-150			0.12-0.35	1.0-5.0	9.52	4.76	16.6	5°	0.4
VBMT 160408	W89 32000.08..							0.14-0.4	1.0-5.0					0.8
Mild steel/tool steel Stainless and acid-resistant steel Grey cast iron, spheroidal cast iron Non-ferrous metals Heat-resistant steels Hardened tool steel	P M K N S H	●	●	●	●	●	●	Order example: Description VCMT 160404-F3 Carbide grade BK75 Order No. W89 32000.0575						

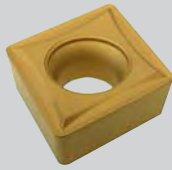




# ISO Inserts

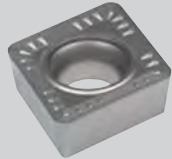
Geometries on example of ISO insertry C85

## Geometry -01



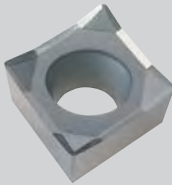
Rough machining  
 $a_p = 0.5 - 4.26 \text{ mm}$   
 $f = 0.1 - 0.36 \text{ mm}$

## Geometry -05



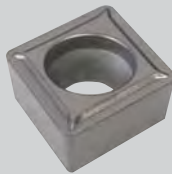
Roughing / semi-finishing  
for machining cast iron  
 $a_p = 0.5 - 4.26 \text{ mm}$   
 $f = 0.11 - 0.26 \text{ mm}$

## Geometry -12



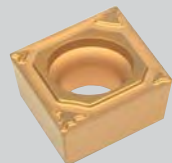
Semi-finishing  
 $a_p = 0.38 - 7.1 \text{ mm}$   
 $f = 0.05 - 0.5 \text{ mm}$

## Geometry -14



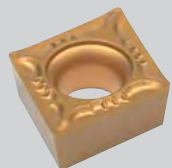
Finish machining  
for Cermet  
 $a_p = 0.05 - 2.5 \text{ mm}$   
 $f = 0.05 - 0.25 \text{ mm}$

## Geometry -14



Finish machining  
for coated carbide  
 $a_p = 0.14 - 1.16 \text{ mm}$   
 $f = 0.02 - 0.11 \text{ mm}$

## Geometry -15



Semi-finishing  
 $a_p = 0.25 - 3.23 \text{ mm}$   
 $f = 0.03 - 0.28 \text{ mm}$

1



2



3



4



5



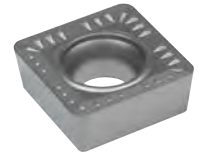
6



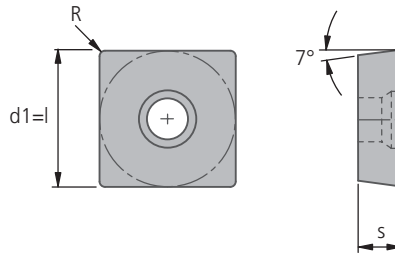
7



Figures given depend on insert size and corner radius  
(see pages 778 – 781)



Cutter geometry:

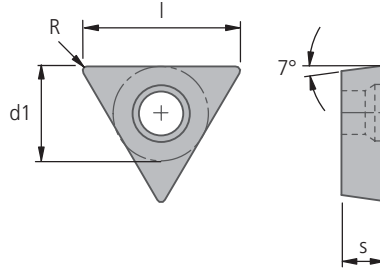


Description ISO Description	Order No.  enter carbide code	Carbide grades						Cermets			feed f mm	cutting depth a <sub>p</sub> mm	d1	s	l	R	
		uncoated		CVD coated													
		K10 23 v <sub>c</sub> m/min		BK7525 7525 v <sub>c</sub> m/min		BK7610 7610 v <sub>c</sub> m/min		CK3215 3215 v <sub>c</sub> m/min									
R SCMT 09T304-01	C83 32010.04..			80-240	100-180	60-180					0.1-0.18	0.5-3.0	9.52	3.97	9.52	0.4	
R SCMT 09T308-01	C83 32010.08..									0.2-0.36	1.0-3.0					0.8	
R/S SCMT 09T304-05	C83 32050.04..						120-270	60-270			0.1-0.2	0.5-3.14	9.52	3.97	9.52	0.4	
R/S SCMT 09T308-05	C83 32050.08..									0.2-0.4	1.0-3.14					0.8	
F SCMT 09T304-14	C83 32140.04..			80-240	100-180	60-180			120-270	100-220	160-300	BK7525: 0.1-0.2 CK3215: 0.05-0.25	BK7525: 0.05-1.5 CK3215: 0.05-2.50	9.52	3.97	9.52	0.4
F SCMT 09T308-14	C83 32140.08..								120-270	100-220	160-300					0.8	
R SCMT 120404-01	C83 44010.04..			80-240	100-180	60-180						0.1-0.18	0.5-4.2				0.4
R SCMT 120408-01	C83 44010.08..											0.2-0.36	1.0-4.2	12.7	4.76	12.7	0.8
R SCMT 120412-01	C83 44010.12..											0.3-0.45	1.5-5.0				1.2
R/S SCMT 120404-05	C83 44050.04..						120-270	60-270				0.11-0.21	0.5-4.19				0.4
R/S SCMT 120408-05	C83 44050.08..											0.24-0.42	1.0-4.19	12.7	4.76	12.7	0.8
R/S SCMT 120412-05	C83 44050.12..											0.34-0.63	1.5-4.19				1.2
S SCGT 120408FN-12	C83 44120.08..	90-200	200-600									0.2-0.55	1.5-7.5	12.7	4.76	12.7	0.8
F SCMT 120408-14	C83 44140.08..			80-240	100-180	60-180						0.15-0.45	1.5-5.0	12.7	4.76	12.7	0.8
Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>				●	●	●	●	●	●	●	Order example: Description SCMT 09T304-01 Carbide grade BK7525 Order No. C83 32010.047525						

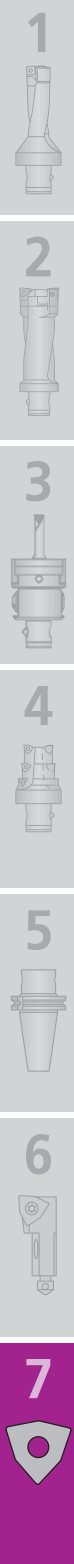




Cutter geometry:



Description ISO Description	Order No.	Carbide grades						Cermets			feed f mm	cutting depth a <sub>p</sub> mm	d1	s	l	R
		CVD coated														
R = Roughing S = Semi-Finishing F = Finishing	enter carbide code	BK7525 7525 v <sub>C</sub> m/min	BK7610 7610 v <sub>C</sub> m/min				CK3215 3215 v <sub>C</sub> m/min									
R/S TCMT 090204-05	C84 13050.04..	80-240	100-180	60-180							0.1-0.2	0.5-3.0	5.56	2.38	9.6	0.4
R TCMT 110208-01	C84 18010.08..	80-240	100-180	60-180							0.2-0.36	1.0-3.63	6.36	2.38	11.0	0.8
R/S TCMT 110204-05	C84 18050.04..					120-270	60-270				0.1-0.2	0.5-3.63	6.36	2.38	11.0	0.4
R/S TCMT 110208-05	C84 18050.08..										0.22-0.42	1.0-3.63				0.8
F TCGT 110202-14	C84 18140.02..							120-270	100-220	160-300	0.05-0.25	0.05-2.5	6.36	2.38	11.0	0.2
F TCMT 110202-14	C84 18140.02..	80-240	100-180	60-180							0.16-0.56	0.14-1.32	6.36	2.38	11.0	0.2
F TCMT 110204-14	C84 18140.04..	80-240	100-180	60-180			120-270	100-220	160-300	BK7525: 0.03-0.11 CK3215: 0.05-0.25	BK7525: 0.28-1.32 CK3215: 0.05-2.50	6.36	2.38	11.0	0.4	
F TCMT 110208-14	C84 18140.08..	80-240	100-180	60-180							0.06-0.22	0.56-1.32	6.36	2.38	11.0	0.8
S TCMT 110202-15	C84 18150.02..	80-240	100-180	60-180							0.03-0.07	0.25-2.75	6.36	2.38		0.2
S TCMT 110204-15	C84 18150.04..	80-240	100-180	60-180							0.06-0.14	0.5-2.75				0.4
R TCMT 16T304-01	C84 32010.04..	80-240	100-180	60-180							0.1-0.18	0.5-5.45	9.52	3.97	16.5	0.4
R TCMT 16T308-01	C84 32010.08..	80-240	100-180	60-180							0.2-0.36	1.0-5.45				0.8
R/S TCMT 16T304-05	C84 32050.04..					120-270	60-270				0.11-0.21	0.5-5.45	9.52	3.97	16.5	0.4
R/S TCMT 16T308-05	C84 32050.08..										0.22-0.42	1.0-5.45				0.8
F TCMT 16T304-14	C84 32140.04..	80-240	100-180	60-180							0.03-0.11	0.88-1.98	9.52	3.97	16.5	0.4
F TCMT 16T308-14	C84 32140.08..	80-240	100-180	60-180							0.06-0.22	0.56-1.98				0.8
Mild steel/tool steel		P	●		●		●				Order example: Description TCMT 090204-05 Carbide grade BK7525 Order No. C84 13050.047525					
Stainless and acid-resistant steel		M	●		●		●									
Grey cast iron, spheroidal cast iron		K		●		●										
Non-ferrous metals		N														
Heat-resistant steels		S														
Hardened tool steel		H														



ISO Inserts

1



2



3



4



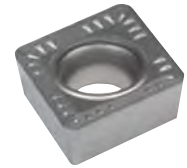
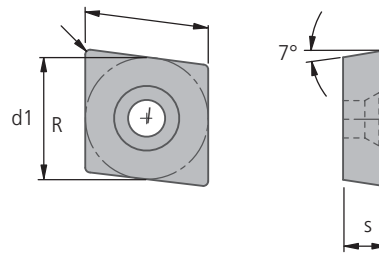
5



6

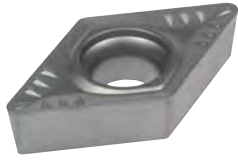


7

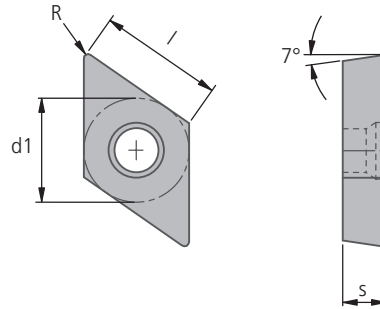


Cutter geometry:

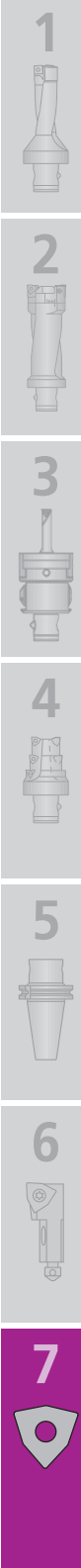
Description ISO Description	Order No.  enter carbide code	Carbide grades						Cermets			feed f mm	cutting depth ap mm	d1	s	l	R
		uncoated		CVD coated												
		K10 23 vc m/min		BK7525 7525 vc m/min	BK7325 7325 vc m/min	BK7610 7610 vc m/min	CK3215 3215 vc m/min									
R CCMT 060204-01	C85 18010.04..			80-240 100-180 60-180			120-270 60-270				0.10-0.18	0.50-2.13	6.35	2.38	6.45	0.4
S CCGT 060202-12	C85 18120.02..	90-200 200-600									0.05-0.13	0.38-3.55	6.35	2.38	6.45	0.2
S CCGT 060204-12	C85 18120.04..									0.10-0.18	0.50-3.19	0.4				
F CCGT 060202-14	C85 18140.02..							120-270 100-220 160-300			0.05-0.25	0.05-2.50	6.35	2.38	6.45	0.2
F CCMT 060202-14	C85 18140.02..			80-240 100-180 60-180							0.02-0.06	0.14-0.77	6.35	2.38	6.45	0.2
F CCMT 060204-14	C85 18140.04..			80-240 100-180 60-180				120-270 100-220 160-300			BK7525: 0.03-0.11 CK3215: 0.05-0.25	BK7525: 0.28-0.77 CK3215: 0.05-2.50	6.35	2.38	6.45	0.4
S CCMT 060202-15	C85 18150.02..					50-230 55-200					0.03-0.07	0.25-1.61	6.35	2.38	6.45	0.2
S CCMT 060204-15	C85 18150.04..									0.06-0.14	0.50-1.61	0.4				
R CCMT 09T304-01	C85 32010.04..			80-240 100-180 60-180							0.10-0.18	0.50-3.19	9.52	3.97	9.67	0.4
R CCMT 09T308-01	C85 32010.08..									0.20-0.36	1.0-3.19	0.8				
R/S CCMT 09T304-05	C85 32050.04..						120-270 60-270				0.11-0.21	0.50-3.19	9.52	3.97	9.67	0.4
R/S CCMT 09T308-05	C85 32050.08..									0.22-0.42	1.0-3.19	0.8				
S CCGT 09T304-12	C85 32120.04..	90-200 200-600									0.1-0.25	0.76-3.55	9.52	3.97	9.67	0.4
S CCGT 09T308-12	C85 32120.08..									0.2-0.5	1.52-5.32	0.8				
F CCMT 09T304-14	C85 32140.04..			80-240 100-180 60-180				120-270 100-220 160-300			BK7525: 0.03-0.11 CK3215: 0.05-0.25	BK7525: 0.28-1.16 CK3215: 0.05-2.50	9.52	3.97	9.67	0.4
F CCMT 09T308-14	C85 32140.08..							120-270 100-220 160-300			0.05-0.25	0.05-2.50	9.52	3.97	9.67	0.8
S CCMT 09T304-15	C85 32150.04..					50-230 55-200					0.06-0.14	0.50-2.42	9.52	3.97	9.67	0.4
S CCMT 09T308-15	C85 32150.08..			80-240 100-180 60-180		50-230 55-200					0.13-0.28	1.0-2.42	9.52	3.97	9.67	0.8
R CCMT 120404-01	C85 44010.04..			80-240 100-180 60-180							0.10-0.18	0.50-4.26	12.7	4.76	12.9	0.4
R CCMT 120408-01	C85 44010.08..									0.2-0.36	1.0-4.26	0.8				
R/S CCMT 120404-05	C85 44050.04..						120-270 60-270				0.11-0.21	0.50-4.26	12.7	4.76	12.9	0.4
R/S CCMT 120408-05	C85 44050.08..									0.22-0.42	1.0-3.63	0.8				
R/S CCMT 120412-05	C85 44050.12..									0.34-0.62	1.5-4.26	1.2				
S CCGT 120404-12	C85 44120.04..	90-200 200-600									0.1-0.25	0.76-7.10	12.7	4.76	12.9	0.4
S CCGT 120408-12	C85 44120.08..									0.2-0.5	1.52-7.10	0.8				
S CCMT 120404-15	C85 44150.04..			80-240 100-180 60-180							0.06-0.14	0.50-3.23	12.7	4.76	12.9	0.4
S CCMT 120408-15	C85 44150.08..									0.13-0.28	1.0-3.23	0.8				
Mild steel/tool steel		P		●		●	●	●	●				Order example: Description CCMT 060204-01 Carbide grade BK7525 Order No. C85 18010.047525			
Stainless and acid-resistant steel		M		●		●	●	●	●							
Grey cast iron, spheroidal cast iron		K	●		●											
Non-ferrous metals		N	●													
Heat-resistant steels		S														
Hardened tool steel		H														



Cutter geometry:



Description ISO Description	Order No.  enter carbide code	Carbide grades						Cermets			f feed mm	ap cutting depth mm	d1	s	l	R	
		uncoated		CVD coated			CK3215										
		K10 23 vc m/min		BK7525 7525 vc m/min	BK7610 7610 vc m/min		120-270 vc m/min	100-220 vc m/min	160-300 vc m/min								
R/S DCMT 070204-01	C86 18010.04..						120-270	60-270			0.03-0.11	0.28-2.56	6.35	2.38	7.75	0.4	
F DCGT 070202-14	C86 18140.02..								120-270	100-220	160-300	0.05-0.25	0.05-2.50	6.35	2.38	7.75	0.2
F DCMT 070202-14	C86 18140.02..			80-240	100-180	60-180						0.02-0.06	0.14-0.93	6.35	2.38	7.75	0.2
F DCMT 070204-14	C86 18140.04..			80-240	100-180	60-180			120-270	100-220	160-300	BK7525: 0.03-0.11 CK3215: 0.05-0.25	BK7525: 0.28-0.93 CK3215: 0.05-2.50	6.35	2.38	7.75	0.4
S DCMT 070202-15	C86 18150.02..			80-240	100-180	60-180						0.03-0.07	0.25-1.94	6.35	2.38	7.75	0.2
S DCMT 070204-15	C86 18150.04..			80-240	100-180	60-180						0.06-0.14	0.5-1.95				0.4
R/S DCMT 11T304-05	C86 32050.04..						120-270	60-270				0.11-0.21	0.5-3.84				0.4
R/S DCMT 11T308-05	C86 32050.08..											0.22-0.42	1.0-3.84	9.52	3.97	11.63	0.8
S DCGT 11T304-12	C86 32120.04..	90-200	200-600									0.1-0.25	0.76-6.40				0.4
S DCGT 11T308-12	C86 32120.08..											0.2-0.5	1.52-6.40	9.52	3.97	11.63	0.8
F DCMT 11T304-14	C86 32140.04..			80-240	100-180	60-180			120-270	100-220	160-300	BK7525: 0.03-0.11 CK3215: 0.05-0.25	BK7525: 0.28-1.4 CK3215: 0.05-2.50	9.52	3.97	11.63	0.4
F DCMT 11T308-14	C86 32140.08..			80-240	100-180	60-180						BK7525: 0.06-0.22 CK3215: 0.05-0.25	BK7525: 0.56-1.4 CK3215: 0.05-2.50				0.8
S DCMT 11T304-15	C86 32150.04..			80-240	100-180	60-180						0.06-0.14	0.5-2.91				0.4
S DCMT 11T308-15	C86 32150.08..			80-240	100-180	60-180						0.13-0.28	1.0-2.91	9.52	3.97	11.63	0.8
Mild steel/tool steel		P										Order example: Description DCMT 070204-01 Carbide grade BK7610 Order No. C86 18010.047610					
Stainless and acid-resistant steel		M															
Grey cast iron, spheroidal cast iron		K	●														
Non-ferrous metals		N	●														
Heat-resistant steels		S															
Hardened tool steel		H															




































# KOMET® H60 / H62

## Inserts Ø 17.3 - 21.2 mm

XOHX


































EP 1 296 793 and other patents (KUB Duon)

Description ISO Description	Order No.	Carbide grades						Description ISO Description	Order No.	PVD coated
		PVD coated								
										
enter carbide ▼ ∅		BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼ ∅	BK7710 7710	
XOHX0802-17.3....	H60 17300. ..							XOHX0802-17.3-62...	H62 17300. ..	
XOHX0802-17.4....	H60 17400. ..							XOHX0802-17.4-62...	H62 17400. ..	
XOHX0802-17.5....	H60 17500. ..	8440	2715	84	8125	2740	8140	XOHX0802-17.5-62...	H62 17500. ..	
XOHX0802-17.6....	H60 17600. ..							XOHX0802-17.6-62...	H62 17600. ..	
XOHX0802-17.7....	H60 17700. ..							XOHX0802-17.7-62...	H62 17700. ..	
XOHX0802-17.8....	H60 17800. ..							XOHX0802-17.8-62...	H62 17800. ..	
XOHX0802-17.9....	H60 17900. ..							XOHX0802-17.9-62...	H62 17900. ..	
XOHX0802-18.0....	H60 18000. ..	8440	2715	84	8125	2740	8140	XOHX0802-18.0-62...	H62 18000. ..	
XOHX0802-18.1....	H60 18100. ..							XOHX0802-18.1-62...	H62 18100. ..	
XOHX0802-18.2....	H60 18200. ..							XOHX0802-18.2-62...	H62 18200. ..	
XOHX0802-18.3....	H60 18300. ..							XOHX0802-18.3-62...	H62 18300. ..	
XOHX0802-18.4....	H60 18400. ..							XOHX0802-18.4-62...	H62 18400. ..	
XOHX0802-18.5....	H60 18500. ..	8440	2715	84	8125	2740	8140	XOHX0802-18.5-62...	H62 18500. ..	
XOHX0802-18.6....	H60 18600. ..							XOHX0802-18.6-62...	H62 18600. ..	
XOHX0802-18.7....	H60 18700. ..							XOHX0802-18.7-62...	H62 18700. ..	
XOHX0802-18.8....	H60 18800. ..							XOHX0802-18.8-62...	H62 18800. ..	
XOHX0802-18.9....	H60 18900. ..							XOHX0802-18.9-62...	H62 18900. ..	
XOHX0802-19.0....	H60 19000. ..	8440	2715	84	8125	2740	8140	XOHX0802-19.0-62...	H62 19000. ..	
XOHX0802-19.1....	H60 19100. ..							XOHX0802-19.1-62...	H62 19100. ..	
XOHX0802-19.2....	H60 19200. ..							XOHX0802-19.2-62...	H62 19200. ..	
XOHX0802-19.3....	H60 19300. ..							XOHX0802-19.3-62...	H62 19300. ..	
XOHX0802-19.4....	H60 19400. ..							XOHX0802-19.4-62...	H62 19400. ..	
XOHX0802-19.5....	H60 19500. ..	8440	2715	84	8125	2740	8140	XOHX0802-19.5-62...	H62 19500. ..	
XOHX0802-19.6....	H60 19600. ..							XOHX0802-19.6-62...	H62 19600. ..	
XOHX0802-19.7....	H60 19700. ..							XOHX0802-19.7-62...	H62 19700. ..	
XOHX0802-19.8....	H60 19800. ..							XOHX0802-19.8-62...	H62 19800. ..	
XOHX0802-19.9....	H60 19900. ..							XOHX0802-19.9-62...	H62 19900. ..	
XOHX0802-20.0....	H60 20000. ..	8440	2715	84	8125	2740	8140	XOHX0802-20.0-62...	H62 20000. ..	
XOHX0802-20.1....	H60 20100. ..							XOHX0802-20.1-62...	H62 20100. ..	
XOHX0802-20.2....	H60 20200. ..							XOHX0802-20.2-62...	H62 20200. ..	
XOHX0802-20.3....	H60 20300. ..							XOHX0802-20.3-62...	H62 20300. ..	
XOHX0802-20.4....	H60 20400. ..							XOHX0802-20.4-62...	H62 20400. ..	
XOHX0802-20.5....	H60 20500. ..	8440	2715	84	8125	2740	8140	XOHX0802-20.5-62...	H62 20500. ..	
XOHX0802-20.6....	H60 20600. ..							XOHX0802-20.6-62...	H62 20600. ..	
XOHX0802-20.7....	H60 20700. ..							XOHX0802-20.7-62...	H62 20700. ..	
XOHX1003-20.8....	H60 20800. ..							XOHX1003-20.8-62...	H62 20800. ..	
XOHX1003-20.9....	H60 20900. ..							XOHX1003-20.9-62...	H62 20900. ..	
XOHX1003-21.0....	H60 21000. ..	8440	2715	84	8125	2740	8140	XOHX1003-21.0-62...	H62 21000. ..	
XOHX1003-21.1....	H60 21100. ..							XOHX1003-21.1-62...	H62 21100. ..	
XOHX1003-21.2....	H60 21200. ..							XOHX1003-21.2-62...	H62 21200. ..	
Mild steel/tool steel								Order example: Description XOHX0802-17.5 Carbide grade BK8440 Order No. H60 17500.8440		
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										



EP 1 296 793 and other patents (KUB Duon)

Description ISO Description	Order No.	Carbide grades						Description ISO Description	Order No.	PVD coated
		PVD coated								
										
enter carbide ▼ ∅		BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼ ∅		BK7710 7710
XOHX1003-21.3....	H60 21300. ..							XOHX1003-21.3-62...	H62 21300. ..	
XOHX1003-21.4....	H60 21400. ..							XOHX1003-21.4-62...	H62 21400. ..	
XOHX1003-21.5....	H60 21500. ..	8440	2715	84	8125	2740	8140	XOHX1003-21.5-62...	H62 21500. ..	7710
XOHX1003-21.6....	H60 21600. ..							XOHX1003-21.6-62...	H62 21600. ..	
XOHX1003-21.7....	H60 21700. ..							XOHX1003-21.7-62...	H62 21700. ..	
XOHX1003-21.8....	H60 21800. ..							XOHX1003-21.8-62...	H62 21800. ..	
XOHX1003-21.9....	H60 21900. ..							XOHX1003-21.9-62...	H62 21900. ..	
XOHX1003-22.0....	H60 22000. ..	8440	2715	84	8125	2740	8140	XOHX1003-22.0-62...	H62 22000. ..	7710
XOHX1003-22.1....	H60 22100. ..							XOHX1003-22.1-62...	H62 22100. ..	
XOHX1003-22.2....	H60 22200. ..							XOHX1003-22.2-62...	H62 22200. ..	
XOHX1003-22.3....	H60 22300. ..							XOHX1003-22.3-62...	H62 22300. ..	
XOHX1003-22.4....	H60 22400. ..							XOHX1003-22.4-62...	H62 22400. ..	
XOHX1003-22.5....	H60 22500. ..	8440	2715	84	8125	2740	8140	XOHX1003-22.5-62...	H62 22500. ..	7710
XOHX1003-22.6....	H60 22600. ..							XOHX1003-22.6-62...	H62 22600. ..	
XOHX1003-22.7....	H60 22700. ..							XOHX1003-22.7-62...	H62 22700. ..	
XOHX1003-22.8....	H60 22800. ..							XOHX1003-22.8-62...	H62 22800. ..	
XOHX1003-22.9....	H60 22900. ..							XOHX1003-22.9-62...	H62 22900. ..	
XOHX1003-23.0....	H60 23000. ..	8440	2715	84	8125	2740	8140	XOHX1003-23.0-62...	H62 23000. ..	7710
XOHX1003-23.1....	H60 23100. ..							XOHX1003-23.1-62...	H62 23100. ..	
XOHX1003-23.2....	H60 23200. ..							XOHX1003-23.2-62...	H62 23200. ..	
XOHX1003-23.3....	H60 23300. ..							XOHX1003-23.3-62...	H62 23300. ..	
XOHX1003-23.4....	H60 23400. ..							XOHX1003-23.4-62...	H62 23400. ..	
XOHX1003-23.5....	H60 23500. ..	8440	2715	84	8125	2740	8140	XOHX1003-23.5-62...	H62 23500. ..	7710
XOHX1003-23.6....	H60 23600. ..							XOHX1003-23.6-62...	H62 23600. ..	
XOHX1003-23.7....	H60 23700. ..							XOHX1003-23.7-62...	H62 23700. ..	
XOHX1003-23.8....	H60 23800. ..							XOHX1003-23.8-62...	H62 23800. ..	
XOHX1003-23.9....	H60 23900. ..							XOHX1003-23.9-62...	H62 23900. ..	
XOHX1003-24.0....	H60 24000. ..	8440	2715	84	8125	2740	8140	XOHX1003-24.0-62...	H62 24000. ..	7710
XOHX1003-24.1....	H60 24100. ..							XOHX1003-24.1-62...	H62 24100. ..	
XOHX1003-24.2....	H60 24200. ..							XOHX1003-24.2-62...	H62 24200. ..	
XOHX1003-24.3....	H60 24300. ..							XOHX1003-24.3-62...	H62 24300. ..	
XOHX1003-24.4....	H60 24400. ..							XOHX1003-24.4-62...	H62 24400. ..	
XOHX1003-24.5....	H60 24500. ..	8440	2715	84	8125	2740	8140	XOHX1003-24.5-62...	H62 24500. ..	7710
XOHX1003-24.6....	H60 24600. ..							XOHX1003-24.6-62...	H62 24600. ..	
XOHX1003-24.7....	H60 24700. ..							XOHX1003-24.7-62...	H62 24700. ..	
XOHX12T3-24.8....	H60 24800. ..							XOHX12T3-24.8-62...	H62 24800. ..	
XOHX12T3-24.9....	H60 24900. ..							XOHX12T3-24.9-62...	H62 24900. ..	
XOHX12T3-25.0....	H60 25000. ..	8440	2715	84	8125	2740	8140	XOHX12T3-25.0-62...	H62 25000. ..	7710
XOHX12T3-25.1....	H60 25100. ..							XOHX12T3-25.1-62...	H62 25100. ..	
XOHX12T3-25.2....	H60 25200. ..							XOHX12T3-25.2-62...	H62 25200. ..	
Mild steel/tool steel								Order example: Description XOHX1003-21.5 Carbide grade BK8440 Order No. H60 21500.8440		
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										




































# KOMET® H60 / H62

## Inserts Ø 25.3 - 29.2 mm

# XOHX


































EP 1 296 793 and other patents (KUB Duon)

Description ISO Description	Order No.	Carbide grades						Description ISO Description	Order No.	PVD coated
		PVD coated								
										
enter carbide ▼		BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼		BK7710 7710
XOHX12T3-25.3....	H60 25300. ..							XOHX12T3-25.3-62...	H62 25300. ..	
XOHX12T3-25.4....	H60 25400. ..							XOHX12T3-25.4-62...	H62 25400. ..	
XOHX12T3-25.5....	H60 25500. ..	8440	2715	84	8125	2740	8140	XOHX12T3-25.5-62...	H62 25500. ..	7710
XOHX12T3-25.6....	H60 25600. ..							XOHX12T3-25.6-62...	H62 25600. ..	
XOHX12T3-25.7....	H60 25700. ..							XOHX12T3-25.7-62...	H62 25700. ..	
XOHX12T3-25.8....	H60 25800. ..							XOHX12T3-25.8-62...	H62 25800. ..	
XOHX12T3-25.9....	H60 25900. ..							XOHX12T3-25.9-62...	H62 25900. ..	
XOHX12T3-26.0....	H60 26000. ..	8440	2715	84	8125	2740	8140	XOHX12T3-26.0-62...	H62 26000. ..	7710
XOHX12T3-26.1....	H60 26100. ..							XOHX12T3-26.1-62...	H62 26100. ..	
XOHX12T3-26.2....	H60 26200. ..							XOHX12T3-26.2-62...	H62 26200. ..	
XOHX12T3-26.3....	H60 26300. ..							XOHX12T3-26.3-62...	H62 26300. ..	
XOHX12T3-26.4....	H60 26400. ..							XOHX12T3-26.4-62...	H62 26400. ..	
XOHX12T3-26.5....	H60 26500. ..	8440	2715	84	8125	2740	8140	XOHX12T3-26.5-62...	H62 26500. ..	7710
XOHX12T3-26.6....	H60 26600. ..							XOHX12T3-26.6-62...	H62 26600. ..	
XOHX12T3-26.7....	H60 26700. ..							XOHX12T3-26.7-62...	H62 26700. ..	
XOHX12T3-26.8....	H60 26800. ..							XOHX12T3-26.8-62...	H62 26800. ..	
XOHX12T3-26.9....	H60 26900. ..							XOHX12T3-26.9-62...	H62 26900. ..	
XOHX12T3-27.0....	H60 27000. ..	8440	2715	84	8125	2740	8140	XOHX12T3-27.0-62...	H62 27000. ..	7710
XOHX12T3-27.1....	H60 27100. ..							XOHX12T3-27.1-62...	H62 27100. ..	
XOHX12T3-27.2....	H60 27200. ..							XOHX12T3-27.2-62...	H62 27200. ..	
XOHX12T3-27.3....	H60 27300. ..							XOHX12T3-27.3-62...	H62 27300. ..	
XOHX12T3-27.4....	H60 27400. ..							XOHX12T3-27.4-62...	H62 27400. ..	
XOHX12T3-27.5....	H60 27500. ..	8440	2715	84	8125	2740	8140	XOHX12T3-27.5-62...	H62 27500. ..	7710
XOHX12T3-27.6....	H60 27600. ..							XOHX12T3-27.6-62...	H62 27600. ..	
XOHX12T3-27.7....	H60 27700. ..							XOHX12T3-27.7-62...	H62 27700. ..	
XOHX12T3-27.8....	H60 27800. ..							XOHX12T3-27.8-62...	H62 27800. ..	
XOHX12T3-27.9....	H60 27900. ..							XOHX12T3-27.9-62...	H62 27900. ..	
XOHX12T3-28.0....	H60 28000. ..	8440	2715	84	8125	2740	8140	XOHX12T3-28.0-62...	H62 28000. ..	7710
XOHX12T3-28.1....	H60 28100. ..							XOHX12T3-28.1-62...	H62 28100. ..	
XOHX12T3-28.2....	H60 28200. ..							XOHX12T3-28.2-62...	H62 28200. ..	
XOHX12T3-28.3....	H60 28300. ..							XOHX12T3-28.3-62...	H62 28300. ..	
XOHX12T3-28.4....	H60 28400. ..							XOHX12T3-28.4-62...	H62 28400. ..	
XOHX12T3-28.5....	H60 28500. ..	8440	2715	84	8125	2740	8140	XOHX12T3-28.5-62...	H62 28500. ..	7710
XOHX12T3-28.6....	H60 28600. ..							XOHX12T3-28.6-62...	H62 28600. ..	
XOHX12T3-28.7....	H60 28700. ..							XOHX12T3-28.7-62...	H62 28700. ..	
XOHX12T3-28.8....	H60 28800. ..							XOHX12T3-28.8-62...	H62 28800. ..	
XOHX12T3-28.9....	H60 28900. ..							XOHX12T3-28.9-62...	H62 28900. ..	
XOHX12T3-29.0....	H60 29000. ..	8440	2715	84	8125	2740	8140	XOHX12T3-29.0-62...	H62 29000. ..	7710
XOHX12T3-29.1....	H60 29100. ..							XOHX12T3-29.1-62...	H62 29100. ..	
XOHX12T3-29.2....	H60 29200. ..							XOHX12T3-29.2-62...	H62 29200. ..	
Mild steel/tool steel								Order example: Description XOHX12T3-25.5 Carbide grade BK8440 Order No. H60 25500.8440		
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										





EP 1 296 793 and other patents (KUB Duon)

Description ISO Description	Order No.	Carbide grades						Description ISO Description	Order No.	PVD coated
		PVD coated								
										
enter carbide ▼ ∅		BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼ ∅		BK7710 7710
XOHX12T3-29.3....	H60 29300. ..							XOHX12T3-29.3-62...	H62 29300. ..	
XOHX12T3-29.4....	H60 29400. ..							XOHX12T3-29.4-62...	H62 29400. ..	
XOHX12T3-29.5....	H60 29500. ..	8440	2715	84	8125	2740	8140	XOHX12T3-29.5-62...	H62 29500. ..	7710
XOHX12T3-29.6....	H60 29600. ..							XOHX12T3-29.6-62...	H62 29600. ..	
XOHX12T3-29.7....	H60 29700. ..							XOHX12T3-29.7-62...	H62 29700. ..	
XOHX1504-29.8....	H60 29800. ..							XOHX1504-29.8-62...	H62 29800. ..	
XOHX1504-29.9....	H60 29900. ..							XOHX1504-29.9-62...	H62 29900. ..	
XOHX1504-30.0....	H60 30000. ..	8440	2715	84	8125	2740	8140	XOHX1504-30.0-62...	H62 30000. ..	7710
XOHX1504-30.1....	H60 30100. ..							XOHX1504-30.1-62...	H62 30100. ..	
XOHX1504-30.2....	H60 30200. ..							XOHX1504-30.2-62...	H62 30200. ..	
XOHX1504-30.3....	H60 30300. ..							XOHX1504-30.3-62...	H62 30300. ..	
XOHX1504-30.4....	H60 30400. ..							XOHX1504-30.4-62...	H62 30400. ..	
XOHX1504-30.5....	H60 30500. ..	8440	2715	84	8125	2740	8140	XOHX1504-30.5-62...	H62 30500. ..	7710
XOHX1504-30.6....	H60 30600. ..							XOHX1504-30.6-62...	H62 30600. ..	
XOHX1504-30.7....	H60 30700. ..							XOHX1504-30.7-62...	H62 30700. ..	
XOHX1504-30.8....	H60 30800. ..							XOHX1504-30.8-62...	H62 30800. ..	
XOHX1504-30.9....	H60 30900. ..							XOHX1504-30.9-62...	H62 30900. ..	
XOHX1504-31.0....	H60 31000. ..	8440	2715	84	8125	2740	8140	XOHX1504-31.0-62...	H62 31000. ..	7710
XOHX1504-31.1....	H60 31100. ..							XOHX1504-31.1-62...	H62 31100. ..	
XOHX1504-31.2....	H60 31200. ..							XOHX1504-31.2-62...	H62 31200. ..	
XOHX1504-31.3....	H60 31300. ..							XOHX1504-31.3-62...	H62 31300. ..	
XOHX1504-31.4....	H60 31400. ..							XOHX1504-31.4-62...	H62 31400. ..	
XOHX1504-31.5....	H60 31500. ..	8440	2715	84	8125	2740	8140	XOHX1504-31.5-62...	H62 31500. ..	7710
XOHX1504-31.6....	H60 31600. ..							XOHX1504-31.6-62...	H62 31600. ..	
XOHX1504-31.7....	H60 31700. ..							XOHX1504-31.7-62...	H62 31700. ..	
XOHX1504-31.8....	H60 31800. ..							XOHX1504-31.8-62...	H62 31800. ..	
XOHX1504-31.9....	H60 31900. ..							XOHX1504-31.9-62...	H62 31900. ..	
XOHX1504-32.0....	H60 32000. ..	8440	2715	84	8125	2740	8140	XOHX1504-32.0-62...	H62 32000. ..	7710
XOHX1504-32.1....	H60 32100. ..							XOHX1504-32.1-62...	H62 32100. ..	
XOHX1504-32.2....	H60 32200. ..							XOHX1504-32.2-62...	H62 32200. ..	
XOHX1504-32.3....	H60 32300. ..							XOHX1504-32.3-62...	H62 32300. ..	
XOHX1504-32.4....	H60 32400. ..							XOHX1504-32.4-62...	H62 32400. ..	
XOHX1504-32.5....	H60 32500. ..	8440	2715	84	8125	2740	8140	XOHX1504-32.5-62...	H62 32500. ..	7710
XOHX1504-32.6....	H60 32600. ..							XOHX1504-32.6-62...	H62 32600. ..	
XOHX1504-32.7....	H60 32700. ..							XOHX1504-32.7-62...	H62 32700. ..	
XOHX1504-32.8....	H60 32800. ..							XOHX1504-32.8-62...	H62 32800. ..	
XOHX1504-32.9....	H60 32900. ..							XOHX1504-32.9-62...	H62 32900. ..	
XOHX1504-33.0....	H60 33000. ..	8440	2715	84	8125	2740	8140	XOHX1504-33.0-62...	H62 33000. ..	7710
XOHX1504-33.1....	H60 33100. ..							XOHX1504-33.1-62...	H62 33100. ..	
XOHX1504-33.2....	H60 33200. ..							XOHX1504-33.2-62...	H62 33200. ..	
Mild steel/tool steel								Order example: Description XOHX12T3-29.5 Carbide grade BK8440 Order No. H60 29500.8440		
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										




































# KOMET® H60 / H62

## Inserts Ø 33.3 - 37.2 mm

# XOHX


































EP 1 296 793 and other patents (KUB Duon)

Description ISO Description	Order No.	Carbide grades						Description ISO Description	Order No.	PVD coated
		PVD coated								
										
enter carbide ▼		BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼		BK7710 7710
XOHX1504-33.3....	H60 33300. ..	8440	2715	84	8125	2740	8140	XOHX1504-33.3-62...	H62 33300. ..	7710
XOHX1504-33.4....	H60 33400. ..							XOHX1504-33.4-62...	H62 33400. ..	
XOHX1504-33.5....	H60 33500. ..							XOHX1504-33.5-62...	H62 33500. ..	
XOHX1504-33.6....	H60 33600. ..	8440	2715	84	8125	2740	8140	XOHX1504-33.6-62...	H62 33600. ..	7710
XOHX1504-33.7....	H60 33700. ..							XOHX1504-33.7-62...	H62 33700. ..	
XOHX1504-33.8....	H60 33800. ..							XOHX1504-33.8-62...	H62 33800. ..	
XOHX1504-33.9....	H60 33900. ..	8440	2715	84	8125	2740	8140	XOHX1504-33.9-62...	H62 33900. ..	7710
XOHX1504-34.0....	H60 34000. ..							XOHX1504-34.0-62...	H62 34000. ..	
XOHX1504-34.1....	H60 34100. ..							XOHX1504-34.1-62...	H62 34100. ..	
XOHX1504-34.2....	H60 34200. ..	8440	2715	84	8125	2740	8140	XOHX1504-34.2-62...	H62 34200. ..	7710
XOHX1504-34.3....	H60 34300. ..							XOHX1504-34.3-62...	H62 34300. ..	
XOHX1504-34.4....	H60 34400. ..							XOHX1504-34.4-62...	H62 34400. ..	
XOHX1504-34.5....	H60 34500. ..	8440	2715	84	8125	2740	8140	XOHX1504-34.5-62...	H62 34500. ..	7710
XOHX1504-34.6....	H60 34600. ..							XOHX1504-34.6-62...	H62 34600. ..	
XOHX1504-34.7....	H60 34700. ..							XOHX1504-34.7-62...	H62 34700. ..	
XOHX1504-34.8....	H60 34800. ..	8440	2715	84	8125	2740	8140	XOHX1504-34.8-62...	H62 34800. ..	7710
XOHX1504-34.9....	H60 34900. ..							XOHX1504-34.9-62...	H62 34900. ..	
XOHX1504-35.0....	H60 35000. ..							XOHX1504-35.0-62...	H62 35000. ..	
XOHX1504-35.1....	H60 35100. ..	8440	2715	84	8125	2740	8140	XOHX1504-35.1-62...	H62 35100. ..	7710
XOHX1504-35.2....	H60 35200. ..							XOHX1504-35.2-62...	H62 35200. ..	
XOHX1504-35.3....	H60 35300. ..							XOHX1504-35.3-62...	H62 35300. ..	
XOHX1504-35.4....	H60 35400. ..	8440	2715	84	8125	2740	8140	XOHX1504-35.4-62...	H62 35400. ..	7710
XOHX1504-35.5....	H60 35500. ..							XOHX1504-35.5-62...	H62 35500. ..	
XOHX1504-35.6....	H60 35600. ..							XOHX1504-35.6-62...	H62 35600. ..	
XOHX1504-35.7....	H60 35700. ..	8440	2715	84	8125	2740	8140	XOHX1504-35.7-62...	H62 35700. ..	7710
XOHX1504-35.8....	H60 35800. ..							XOHX1504-35.8-62...	H62 35800. ..	
XOHX1504-35.9....	H60 35900. ..							XOHX1504-35.9-62...	H62 35900. ..	
XOHX1504-36.0....	H60 36000. ..	8440	2715	84	8125	2740	8140	XOHX1504-36.0-62...	H62 36000. ..	7710
XOHX1504-36.1....	H60 36100. ..							XOHX1504-36.1-62...	H62 36100. ..	
XOHX1504-36.2....	H60 36200. ..							XOHX1504-36.2-62...	H62 36200. ..	
XOHX2205-36.3....	H60 36300. ..	8440	2715	84	8125	2740	8140	XOHX2205-36.3-62...	H62 36300. ..	7710
XOHX2205-36.4....	H60 36400. ..							XOHX2205-36.4-62...	H62 36400. ..	
XOHX2205-36.5....	H60 36500. ..							XOHX2205-36.5-62...	H62 36500. ..	
XOHX2205-36.6....	H60 36600. ..	8440	2715	84	8125	2740	8140	XOHX2205-36.6-62...	H62 36600. ..	7710
XOHX2205-36.7....	H60 36700. ..							XOHX2205-36.7-62...	H62 36700. ..	
XOHX2205-36.8....	H60 36800. ..							XOHX2205-36.8-62...	H62 36800. ..	
XOHX2205-36.9....	H60 36900. ..	8440	2715	84	8125	2740	8140	XOHX2205-36.9-62...	H62 36900. ..	7710
XOHX2205-37.0....	H60 37000. ..							XOHX2205-37.0-62...	H62 37000. ..	
XOHX2205-37.1....	H60 37100. ..							XOHX2205-37.1-62...	H62 37100. ..	
XOHX2205-37.2....	H60 37200. ..							XOHX2205-37.2-62...	H62 37200. ..	
Mild steel/tool steel								Order example: Description XOHX1504-33.5 Carbide grade BK8440 Order No. H60 33500.8440		
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										



EP 1 296 793 and other patents (KUB Duon)

Description ISO Description	Order No.	Carbide grades						Description ISO Description	Order No.	PVD coated
		PVD coated								
										
enter carbide ▼ ∅	BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼ ∅	BK7710 7710		
XOHX2205-37.3....	H60 37300. ..							XOHX2205-37.3-62...	H62 37300. ..	
XOHX2205-37.4....	H60 37400. ..							XOHX2205-37.4-62...	H62 37400. ..	
XOHX2205-37.5....	H60 37500. ..	8440	2715	84	8125	2740	8140	XOHX2205-37.5-62...	H62 37500. ..	7710
XOHX2205-37.6....	H60 37600. ..							XOHX2205-37.6-62...	H62 37600. ..	
XOHX2205-37.7....	H60 37700. ..							XOHX2205-37.7-62...	H62 37700. ..	
XOHX2205-37.8....	H60 37800. ..							XOHX2205-37.8-62...	H62 37800. ..	
XOHX2205-37.9....	H60 37900. ..							XOHX2205-37.9-62...	H62 37900. ..	
XOHX2205-38.0....	H60 38000. ..	8440	2715	84	8125	2740	8140	XOHX2205-38.0-62...	H62 38000. ..	7710
XOHX2205-38.1....	H60 38100. ..							XOHX2205-38.1-62...	H62 38100. ..	
XOHX2205-38.2....	H60 38200. ..							XOHX2205-38.2-62...	H62 38200. ..	
XOHX2205-38.3....	H60 38300. ..							XOHX2205-38.3-62...	H62 38300. ..	
XOHX2205-38.4....	H60 38400. ..							XOHX2205-38.4-62...	H62 38400. ..	
XOHX2205-38.5....	H60 38500. ..	8440	2715	84	8125	2740	8140	XOHX2205-38.5-62...	H62 38500. ..	7710
XOHX2205-38.6....	H60 38600. ..							XOHX2205-38.6-62...	H62 38600. ..	
XOHX2205-38.7....	H60 38700. ..							XOHX2205-38.7-62...	H62 38700. ..	
XOHX2205-38.8....	H60 38800. ..							XOHX2205-38.8-62...	H62 38800. ..	
XOHX2205-38.9....	H60 38900. ..							XOHX2205-38.9-62...	H62 38900. ..	
XOHX2205-39.0....	H60 39000. ..	8440	2715	84	8125	2740	8140	XOHX2205-39.0-62...	H62 39000. ..	7710
XOHX2205-39.1....	H60 39100. ..							XOHX2205-39.1-62...	H62 39100. ..	
XOHX2205-39.2....	H60 39200. ..							XOHX2205-39.2-62...	H62 39200. ..	
XOHX2205-39.3....	H60 39300. ..							XOHX2205-39.3-62...	H62 39300. ..	
XOHX2205-39.4....	H60 39400. ..							XOHX2205-39.4-62...	H62 39400. ..	
XOHX2205-39.5....	H60 39500. ..	8440	2715	84	8125	2740	8140	XOHX2205-39.5-62...	H62 39500. ..	7710
XOHX2205-39.6....	H60 39600. ..							XOHX2205-39.6-62...	H62 39600. ..	
XOHX2205-39.7....	H60 39700. ..							XOHX2205-39.7-62...	H62 39700. ..	
XOHX2205-39.8....	H60 39800. ..							XOHX2205-39.8-62...	H62 39800. ..	
XOHX2205-39.9....	H60 39900. ..							XOHX2205-39.9-62...	H62 39900. ..	
XOHX2205-40.0....	H60 40000. ..	8440	2715	84	8125	2740	8140	XOHX2205-40.0-62...	H62 40000. ..	7710
XOHX2205-40.1....	H60 40100. ..							XOHX2205-40.1-62...	H62 40100. ..	
XOHX2205-40.2....	H60 40200. ..							XOHX2205-40.2-62...	H62 40200. ..	
XOHX2205-40.3....	H60 40300. ..							XOHX2205-40.3-62...	H62 40300. ..	
XOHX2205-40.4....	H60 40400. ..							XOHX2205-40.4-62...	H62 40400. ..	
XOHX2205-40.5....	H60 40500. ..	8440	2715	84	8125	2740	8140	XOHX2205-40.5-62...	H62 40500. ..	7710
XOHX2205-40.6....	H60 40600. ..							XOHX2205-40.6-62...	H62 40600. ..	
XOHX2205-40.7....	H60 40700. ..							XOHX2205-40.7-62...	H62 40700. ..	
XOHX2205-40.8....	H60 40800. ..							XOHX2205-40.8-62...	H62 40800. ..	
XOHX2205-40.9....	H60 40900. ..							XOHX2205-40.9-62...	H62 40900. ..	
XOHX2205-41.0....	H60 41000. ..	8440	2715	84	8125	2740	8140	XOHX2205-41.0-62...	H62 41000. ..	7710
XOHX2205-41.1....	H60 41100. ..							XOHX2205-41.1-62...	H62 41100. ..	
XOHX2205-41.2....	H60 41200. ..							XOHX2205-41.2-62...	H62 41200. ..	
Mild steel/tool steel								Order example: Description XOHX2205-37.5 Carbide grade BK8440 Order No. H60 37500.8440		
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										









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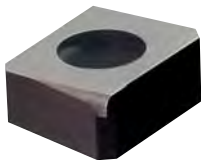
## Inserts Ø 41.3 - 44.2 mm

XOHX





EP 1 296 793 and other patents (KUB Duon)

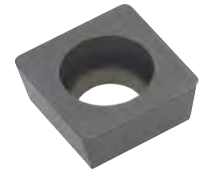
		Carbide grades								
Description ISO Description	Order No.	PVD coated						Description ISO Description	Order No.	PVD coated
										
enter carbide ▼ ∅		BK8440 8440	BK2715 2715	BK84 84	BK8125 8125	BK2740 2740	BK8140 8140	enter carbide ▼ ∅		BK7710 7710
XOHX2205-41.3....	H60 41300. ..							XOHX2205-41.3-62...	H62 41300. ..	
XOHX2205-41.4....	H60 41400. ..							XOHX2205-41.4-62...	H62 41400. ..	
XOHX2205-41.5....	H60 41500. ..	8440	2715	84	8125	2740	8140	XOHX2205-41.5-62...	H62 41500. ..	7710
XOHX2205-41.6....	H60 41600. ..							XOHX2205-41.6-62...	H62 41600. ..	
XOHX2205-41.7....	H60 41700. ..							XOHX2205-41.7-62...	H62 41700. ..	
XOHX2205-41.8....	H60 41800. ..							XOHX2205-41.8-62...	H62 41800. ..	
XOHX2205-41.9....	H60 41900. ..							XOHX2205-41.9-62...	H62 41900. ..	
XOHX2205-42.0....	H60 42000. ..	8440	2715	84	8125	2740	8140	XOHX2205-42.0-62...	H62 42000. ..	7710
XOHX2205-42.1....	H60 42100. ..							XOHX2205-42.1-62...	H62 42100. ..	
XOHX2205-42.2....	H60 42200. ..							XOHX2205-42.2-62...	H62 42200. ..	
XOHX2205-42.3....	H60 42300. ..							XOHX2205-42.3-62...	H62 42300. ..	
XOHX2205-42.4....	H60 42400. ..							XOHX2205-42.4-62...	H62 42400. ..	
XOHX2205-42.5....	H60 42500. ..	8440	2715	84	8125	2740	8140	XOHX2205-42.5-62...	H62 42500. ..	7710
XOHX2205-42.6....	H60 42600. ..							XOHX2205-42.6-62...	H62 42600. ..	
XOHX2205-42.7....	H60 42700. ..							XOHX2205-42.7-62...	H62 42700. ..	
XOHX2205-42.8....	H60 42800. ..							XOHX2205-42.8-62...	H62 42800. ..	
XOHX2205-42.9....	H60 42900. ..							XOHX2205-42.9-62...	H62 42900. ..	
XOHX2205-43.0....	H60 43000. ..	8440	2715	84	8125	2740	8140	XOHX2205-43.0-62...	H62 43000. ..	7710
XOHX2205-43.1....	H60 43100. ..							XOHX2205-43.1-62...	H62 43100. ..	
XOHX2205-43.2....	H60 43200. ..							XOHX2205-43.2-62...	H62 43200. ..	
XOHX2205-43.3....	H60 43300. ..							XOHX2205-43.3-62...	H62 43300. ..	
XOHX2205-43.4....	H60 43400. ..							XOHX2205-43.4-62...	H62 43400. ..	
XOHX2205-43.5....	H60 43500. ..	8440	2715	84	8125	2740	8140	XOHX2205-43.5-62...	H62 43500. ..	7710
XOHX2205-43.6....	H60 43600. ..							XOHX2205-43.6-62...	H62 43600. ..	
XOHX2205-43.7....	H60 43700. ..							XOHX2205-43.7-62...	H62 43700. ..	
XOHX2205-43.8....	H60 43800. ..							XOHX2205-43.8-62...	H62 43800. ..	
XOHX2205-43.9....	H60 43900. ..							XOHX2205-43.9-62...	H62 43900. ..	
XOHX2205-44.0....	H60 44000. ..	8440	2715	84	8125	2740	8140	XOHX2205-44.0-62...	H62 44000. ..	7710
XOHX2205-44.1....	H60 44100. ..							XOHX2205-44.1-62...	H62 44100. ..	
XOHX2205-44.2....	H60 44200. ..							XOHX2205-44.2-62...	H62 44200. ..	
Mild steel/tool steel	<b>P</b>	●	●	●	●	●	●	Order example: Description XOHX2205-41.5 Carbide grade BK8440 Order No. H60 41500.8440	<b>P</b>	●
Stainless and acid-resistant steel	<b>M</b>								<b>M</b>	
Grey cast iron, spheroidal cast iron	<b>K</b>		●	●	●				<b>K</b>	
Non-ferrous metals	<b>N</b>		●	●	●				<b>N</b>	
Heat-resistant steels	<b>S</b>								<b>S</b>	
Hardened tool steel	<b>H</b>								<b>H</b>	



for KOMET® PreciKom  
Patented design

Carbide grades				
Ø D	Description ISO Description	Order No.	CVD coated	PVD coated
			 BK6110	 BK2710
32 – 34.99	LNHX 09T310-01	H80 32000.01....	6110	2710
35 – 37.49	LNHX 09T310-01	H80 35000.01....		
37.5 – 39.99	LNHX 09T310-01	H80 37500.01....		
40 – 41.99	LNHX 09T310-01	H80 40000.01....		
42 – 43.99	LNHX 120510-01	H80 42000.01....	6110	2710
44 – 45.99	LNHX 120510-01	H80 44000.01....		
46 – 47.99	LNHX 120510-01	H80 46000.01....		
48 – 49.99	LNHX 120510-01	H80 48000.01....		
50 – 51.99	LNHX 120510-01	H80 50000.01....		
52 – 53.99	LNHX 120510-01	H80 52000.01....		
54 – 55.99	LNHX 120510-01	H80 54000.01....		
56 – 57.99	LNHX 120510-01	H80 56000.01....		
58 – 59.99	LNHX 120510-01	H80 58000.01....		
60 – 61.99	LNHX 120510-01	H80 60000.01....		
62 – 66.99	LNHX 120510-01	H80 62000.01....		
67 – 71.99	LNHX 120510-01	H80 67000.01....		
72 – 76.99	LNHX 120510-01	H80 72000.01....		
77 – 81.99	LNHX 120510-01	H80 77000.01....		
82 – 86.99	LNHX 120510-01	H80 82000.01....		
87 – 91.99	LNHX 120510-01	H80 87000.01....		
92 – 96.99	LNHX 120510-01	H80 92000.01....		
97 – 101.99	LNHX 120510-01	H80 97000.01....		
Order example: for Ø D 32.00 mm Carbide grade BK6110 Order No. H80 32000.016110		Mild steel/tool steel <b>P</b> Stainless and acid-resistant steel <b>M</b> Grey cast iron, spheroidal cast iron <b>K</b> Non-ferrous metals <b>N</b> Heat-resistant steels <b>S</b> Hardened tool steel <b>H</b>		



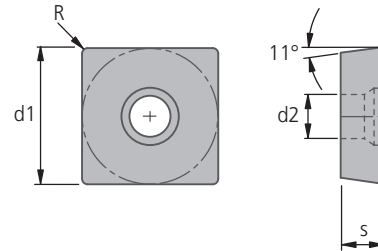









Application range:

T slot cutter

Precision inserts ground on all sides with rounded cutting edges. Suitable for machining steel and cast iron materials in conjunction with positive axial position.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades		d1	d2	s	R
		uncoated	uncoated				
							
	enter carbide code ▼	P25M 03	K20 22				
SPGW 050204	Q09 13000.01..	▲	▲	5.57	2.8	2.38	0.4
	Mild steel/tool steel			Order example: Description SPGW 050204 Carbide grade P25M Order No. Q09 13000.0103			
	Stainless and acid-resistant steel						
	Grey cast iron, spheroidal cast iron						
	Non-ferrous metals						
	Heat-resistant steels						
	Hardened tool steel						

1



2



3



4



5



6



7



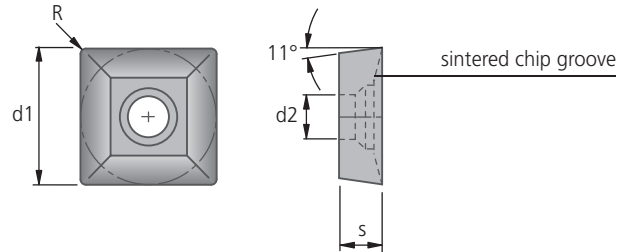

















Application range:

Chamfering

Inserts with sintered positive chip groove and rounded cutting edge. Because of its positive chip geometry, this insert produces a good cutting result even under difficult and critical cutting conditions.

Cutter geometry:



Description ISO Description	Order No.  enter carbide code	Carbide grades			d1	d2	s	R
		uncoated	PVD coated					
		 K20 22	 BK2725 2725	 BK87 87				
SPMT 060304	Q09 18000.17..	▲	▲	▲	6.35	2.8	3.18	0.4
Mild steel/tool steel					Order example: Description SPMT 060304 Carbide grade BK2725 Order No. Q09 18000.172725			
Stainless and acid-resistant steel								
Grey cast iron, spheroidal cast iron								
Non-ferrous metals								
Heat-resistant steels								
Hardened tool steel								



Inserts

1

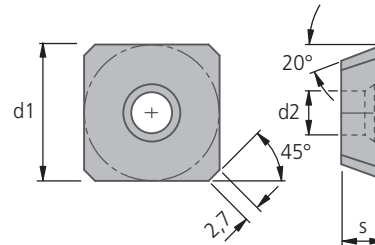


Application range:

Face milling cutter

Insert precision ground on all sides.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades					HSS	SiN	Cermet	d1	d2	s	R
		uncoated			coated		coated	Silicon nitride	uncoated				
		P25M	P40	K20	CVD BK64	PVD BK8425	BK89	SK44	CK37				
	enter carbide code	03	04	22	64	8425	89	44	37				
SEHW 1204 AFTN	Q09 44000.13..	▲		▲		▲				12.7	5.5	4.76	-
SEHW 1204 AFFN-V	Q09 44000.02..			▲					▲				1.0
SEHW 1204 AFFN-V	Q09 44000.14..						▲						1.0
SEHW 1204 AFTN-V	Q09 44000.15..	▲				▲			▲				1.0
SEHW 1204 AFTN-20V	Q09 44000.03..							▲					1.0
SEHT 1204 AFEN	Q09 44000.23..				▲								1.0
Mild steel/tool steel	P	●	●		●	●			●	Order example: Description SEHW 1204 AFTN Carbide grade P25M Order No. Q09 44000.1303			
Stainless and acid-resistant steel	M	●	●		●	●		●					
Grey cast iron, spheroidal cast iron	K			●		●		●					
Non-ferrous metals	N			●				●					
Heat-resistant steels	S							●					
Hardened tool steel	H							●					

Q09 44000.13.. : Without chamfering (blending radius) from main to secondary cutting edge, main edge chamfered. Main cutting edge stabilised by chamfering. Particularly suitable for heavy duty cutting through rolling mill or forge skin, at medium cutting speeds. Used particularly for steel and cast iron materials with medium to high tensile strength.

Q09 44000.02.. : With chamfering (blending radius) from main to secondary cutting edge, sharp edged. The insert provides a specially shaped, positive cutter geometry for machining CrNi and unusual materials. Materials which tend to produce a build-up on the cutting edge can also be successfully machined with this geometry. Used in the lower cutting speed ranges with medium chip cross sections.

Q09 44000.14.. : With chamfering (blending radius) from main to secondary cutting edge, sharp edged. The cutting edge geometry is designed for medium to high cutting speeds with medium to small chip cross section. Because of the blending radius, a finished surface is produced in conjunction with the facing chamfer. **Not suitable for heavily interrupted cut.**

Q09 44000.15.. : With chamfering (blending radius) from main to secondary cutting edge, main edge chamfered. For roughing and finishing at medium to high cutting speeds and feed rates. Main cutting edge stabilised by chamfer. The rounded transition to the sharp secondary cutting edge produces a high quality surface finish. The wide application range is particular suitable for steel and cast iron materials.

Q09 44000.03.. : With chamfering (blending radius) from main to secondary cutting edge, main and secondary edge chamfered. A chamfer around the cutting edge prevents fracturing and produces good tool life, even for heavily interrupted cutting. When machining cast material with silicon nitride at high cutting speed, this chamfer produces a high degree of stabilisation on the cutting edge.

Q09 44000.23..



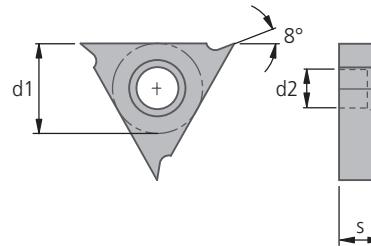


Application range:

Slot milling cutter  
Slot milling cutter adaptor

Positive chip angle produces soft cut. The cutting edge is designed for machining steel or cast iron/aluminium.

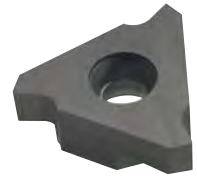
Cutter geometry:



Description ISO Description	Order No.	Carbide grades			d1	d2	s	for milling width
		uncoated		PVD coated				
	enter carbide code ▼	P25M 03	K20 22	BK8425 8425				
TCAA 1102ZZ R	Q12 18000.01..	▲	▲	▲	6.35	2.8	2.6	4 - 5
TCAA 1102ZZ L	Q12 18000.02..	▲	▲	▲	6.35	2.8	3.2	6
TCAA 1103ZZ R	Q12 18000.03..	▲	▲	▲	9.52	4.4	3.97	7
TCAA 1103ZZ L	Q12 18000.04..	▲	▲	▲	9.52	3.4	4.76	8 - 9
TNAA 16T3ZZ R	Q12 32000.05..	▲	▲	▲	9.52	4.4	4.76	8 - 9
TNAA 16T3ZZ L	Q12 32000.06..	▲	▲	▲	9.52	4.4	6.4	10 - 12
TNAA 1604ZZ N	Q12 32000.07..	▲	▲	▲				
TNAA 1604ZZ R	Q12 32000.52..		▲	▲				
TNAA 1604ZZ L	Q12 32000.53..		▲	▲				
TNAA 1606ZZ R	Q12 32000.08..	▲	▲	▲				
TNAA 1606ZZ L	Q12 32000.09..	▲	▲	▲				
Mild steel/tool steel	P	●		●	Order example: Description TCAA 1102ZZ R Carbide grade P25M Order No. Q12 18000.0103			
Stainless and acid-resistant steel	M	●		●				
Grey cast iron, spheroidal cast iron	K		●	●				
Non-ferrous metals	N		●	●				
Heat-resistant steels	S		●	●				
Hardened tool steel	H							



Inserts

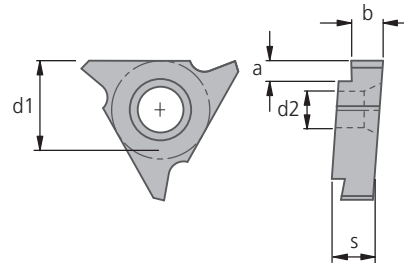


Application range:

Circular milling

Internal and external circular milling of longitudinal or annular slots for circlips/safety rings. The cutting edge geometry produces a good machining result for steel, cast iron and aluminium when used with the appropriate carbide grades.

Cutter geometry:



Design:

Dimension b is aligned with the slot width to H13 tolerance for circlips to DIN 471 and DIN 472. This relates to the upper tolerance limit for the slot widths which can be still be produced to the correct dimension after wear.

Description ISO Description	Order No.	Carbide grades		d1	d2	s	b <sup>H13</sup>	a max
		uncoated	uncoated					
	enter carbide code ▼	P25M 03	K20 22					
TCAX 1103ZZ R-160	Q12 18000.11..	▲	▲	6.35	2.8	3.2	1.60	1.4
TCAX 1103ZZ R-185	Q12 18000.12..	▲	▲				1.85	1.7
TCAX 1103ZZ R-215	Q12 18000.13..	▲	▲				2.15	2.0
TCAX 1103ZZ R-265	Q12 18000.14..	▲	▲				2.65	2.2
TNAX 1604ZZ R-265	Q12 32000.18..	▲	▲	9.52	3.4	4.76	2.65	2.2
TNAX 1604ZZ R-315	Q12 32000.19..	▲	▲				3.15	2.2
TNAX 1604ZZ R-415	Q12 32000.20..	▲	▲				4.15	3.2
TNAX 2206ZZ R-415	Q12 44000.21..	▲	▲	12.7	5.5	6.4	4.15	4.0
TNAX 2206ZZ R-465	Q12 44000.22..	▲	▲				4.65	4.5
TNAX 2206ZZ R-515	Q12 44000.23..	▲	▲				5.15	4.5
TNAX 2206ZZ R-620	Q12 44000.25..	▲	▲				6.20	6.0
Mild steel/tool steel				Order example: Description TCAX 1103ZZ R-160 Carbide grade P25M Order No. Q12 18000.1103				
Stainless and acid-resistant steel								
Grey cast iron, spheroidal cast iron								
Non-ferrous metals								
Heat-resistant steels								
Hardened tool steel								



Application range:

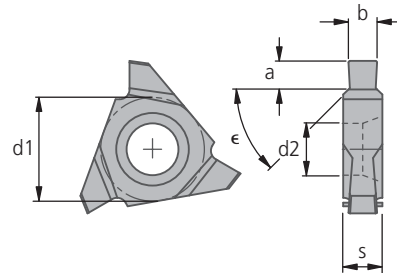
Circular milling

Internal and external circular milling of longitudinal or annular slots for circlips/safety rings. The cutting edge geometry produces a good machining result for steel, cast iron and aluminium when used with the appropriate carbide grades.

















Design:

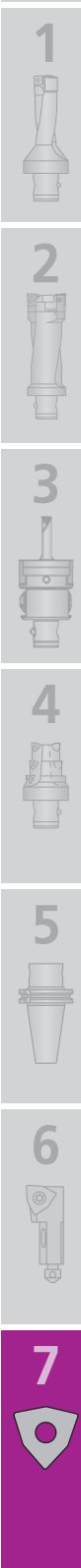
Dimension b is aligned with the slot width to H13 tolerance for circlips to DIN 471 and DIN 472. This relates to the upper tolerance limit for the slot widths which can still be produced to the correct dimension after wear.

Cutter geometry:



Dimensions "a" and "b" apply for the resulting workpiece contour.

Description ISO Description	Order No.	Carbide grades			d1	d2	s	b <sup>H13</sup>	a	chamfer ε
		uncoated		coated						
		 P25M 03	 K20 22	 BK8425 8425						
TPAX 1103ZZ R-110F	Q12 18000.10..	▲	▲	▲	6.35	2.9	3.2	1.1	0.9	–
TNAX 1103ZZ R-160F	Q12 18000.31..	▲	▲	▲	6.35	2.9	3.2	1.6	1.0	45°
TNAX 1103ZZ R-185F	Q12 18000.32..	▲	▲	▲				1.85	1.25	
TNAX 1103ZZ R-215F	Q12 18000.33..	▲	▲	▲				2.15	1.5	
TNAX 1103ZZ R-265F	Q12 18000.34..	▲	▲	▲				2.65	1.75	
TCAX 16T3ZZ R-110F	Q12 32000.15..	▲	▲	▲	9.52	4.4	3.96	1.1	0.9	–
TCAX 16T3ZZ R-130F	Q12 32000.16..	▲	▲	▲				1.3	1.3	
TCAX 16T3ZZ R-160F	Q12 32000.17..	▲	▲	▲				1.6	1.4	
TNAX 1604ZZ R-265F	Q12 32000.41..		▲	▲	9.52	4.4	4.76	2.65	1.75	45°
TNAX 1604ZZ R-315F	Q12 32000.42..	▲	▲	▲				3.15	1.75	
TNAX 1604ZZ R-415F	Q12 32000.43..	▲	▲	▲				4.15	2.5	
TNAX 2206ZZ R-415F	Q12 44000.84..		▲	▲				4.15	2.5	
TNAX 2206ZZ R-465F	Q12 44000.85..			▲	12.7	5.5	6.4	4.65	3.4	45°
TNAX 2206ZZ R-515F	Q12 44000.86..			▲				5.15	4.0	
TNAX 2206ZZ R-515F	Q12 44000.87..			▲				5.15	4.0	
Mild steel/tool steel					Order example: Description TPAX 1103ZZ R-110F Carbide grade P25M Order No. Q12 18000.1003					
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										



## Inserts



### Application range:

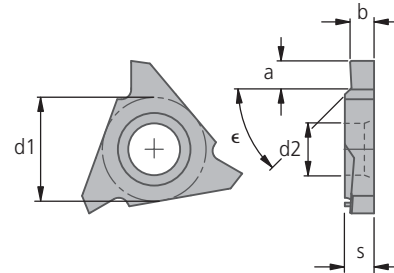
#### Circular milling

Internal and external circular milling of longitudinal or annular slots for circlips/safety rings. The cutting edge geometry produces a good machining result for steel, cast iron and aluminium when used with the appropriate carbide grades.

#### Design:

Dimension b is aligned with the slot width to H13 tolerance for circlips to DIN 471 and DIN 472. This relates to the upper tolerance limit for the slot widths which can be still be produced to the correct dimension after wear.

### Cutter geometry:



Dimensions "a" and "b" apply for the resulting workpiece contour.

Description ISO Description	Order No.	Carbide grades			d1	d2	s	b <sup>H13</sup>	a	chamfer ε
		uncoated		coated						
	enter carbide code ▼	P25M 03	K20 22	BK8425 8425						
TNAX 1103ZZ R-265F	Q12 18000.36..	▲	▲	▲	6.35	2.9	3.2	2.65	1.75	45°
TNAX 1604ZZ R-415F	Q12 32000.38..		▲	▲	9.52	4.4	4.76	4.15	2.5	45°
Mild steel/tool steel	<b>P</b>	●		●	Order example: Description TNAX 1103ZZ R-265F Carbide grade P25M Order No. Q12 18000.3603					
Stainless and acid-resistant steel	<b>M</b>	●		●						
Grey cast iron, spheroidal cast iron	<b>K</b>		●	●						
Non-ferrous metals	<b>N</b>		●	●						
Heat-resistant steels	<b>S</b>		●	●						
Hardened tool steel	<b>H</b>									

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Application range:

T slot cutter

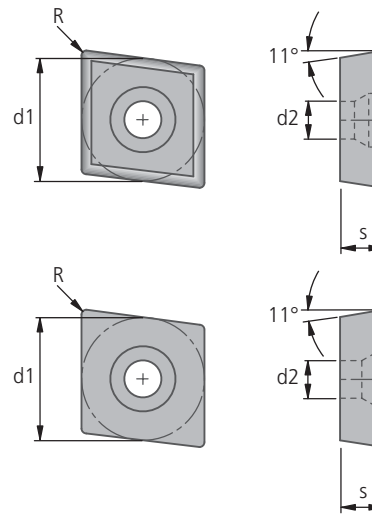
CPMT:

Inserts with sintered peripheral positive chip guide and chamfered cutting edge. Particularly suitable for T slot cutting for steel materials.

CPMW:

Insert with chamfered cutting edge. Because of its cutting geometry, particularly suitable for machining cast iron materials.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades						d1	d2	s	R
		uncoated			coated						
CPMT 060304	Q15 18000.01..		▲			▲	▲	6.35	2.8	3.18	0.4
CPMW 060304	Q15 18000.02..				▲						
CPMW 09T308	Q15 32000.03..			▲				9.52	4.3	3.97	0.8
CPMT 09T308	Q15 32000.04..	▲				▲	▲				
Mild steel/tool steel		●	●			●	●	Order example: Description CPMT 060304 Carbide grade P40 Order No. Q15 18000.0104			
Stainless and acid-resistant steel		●	●			●	●				
Grey cast iron, spheroidal cast iron				●	●	●	●				
Non-ferrous metals				●							
Heat-resistant steels											
Hardened tool steel								< 52 HRC			



Inserts

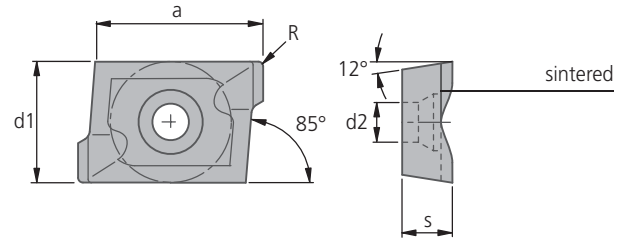


Application range:

- Corner milling cutter
- Shell end face milling cutter
- End milling cutter
- Face milling cutter 75°

Highly positive cutter geometry with specially designed face cutter allows high feed rates and a good surface quality. Soft cutting also possible even with unstable machining conditions. The special cutter geometry allows the insert to be used universally in the appropriate grades both for machining steel, cast iron and aluminium.

Cutter geometry:



Description ISO Description	Order No.	Carbide grades							d1	d2	s	a	R
		uncoated		CVD coated		PVD coated							
	enter carbide code	P25M 03	K10 21	BK6110 6110	BK64 64	BK78 78	BK80 80	BK8425 8425					
APKT 1003PD-R	Q36 18000.01..	▲	▲	▲	▲	▲	▲	▲	6.7	2.8	3.5	9	0.35
APKT 1203PD-R	Q36 24000.02..	▲	▲	▲	▲	▲	▲	▲	8.0	3.5	3.8	11	0.6
APKT 1605PD-RM	Q36 38000.07..	▲	▲	▲	▲	▲	▲	▲	11.1	4.5	5.26	15	0.8
Mild steel/tool steel	<b>P</b>	●	●	●	●	●	●	●	Order example: Description APKT 1003PD-R Carbide grade P25M Order No. Q36 18000.0103				
Stainless and acid-resistant steel	<b>M</b>	●	●	●	●	●	●	●					
Grey cast iron, spheroidal cast iron	<b>K</b>		●	●				●					
Non-ferrous metals	<b>N</b>		●										
Heat-resistant steels	<b>S</b>		●										
Hardened tool steel	<b>H</b>												





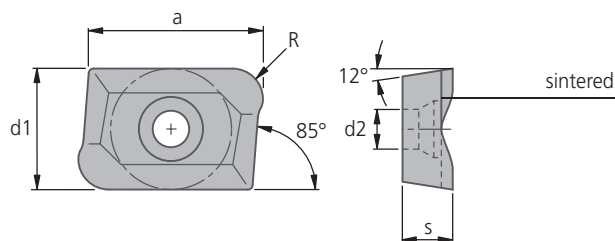
Application range:




















Copy end milling cutter

A special cutter geometry whose main feature is a positive peripheral top rake, produces a soft cut particularly in the radius range of the insert; this requires low cutting forces and produces good chip formation.

The insert can be used universally in various carbide grades both for steel and cast iron.

Cutter geometry:



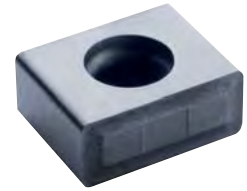
Description ISO Description	Order No.	Carbide grades				d1	d2	s	a	R
		uncoated		CVD coated	PVD coated					
	enter carbide code ▼	 P25M 03	 K10 21	 BK64 64	 BK68 68					
APKT 120316PD-R	Q36 24000.04..	▲	▲	▲	▲	8.0	3.5	3.8	11	1.6
APKT 120324PD-R	Q36 24000.05..	▲	▲	▲	▲					2.4
APKT 120332PD-R	Q36 24000.06..	▲	▲	▲	▲					3.2
Mild steel/tool steel						Order example: Description APKT 120316PD-R Carbide grade P25M Order No. Q36 24000.0403				
Stainless and acid-resistant steel										
Grey cast iron, spheroidal cast iron										
Non-ferrous metals										
Heat-resistant steels										
Hardened tool steel										



# KOMET® Q80

## Tangential Inserts

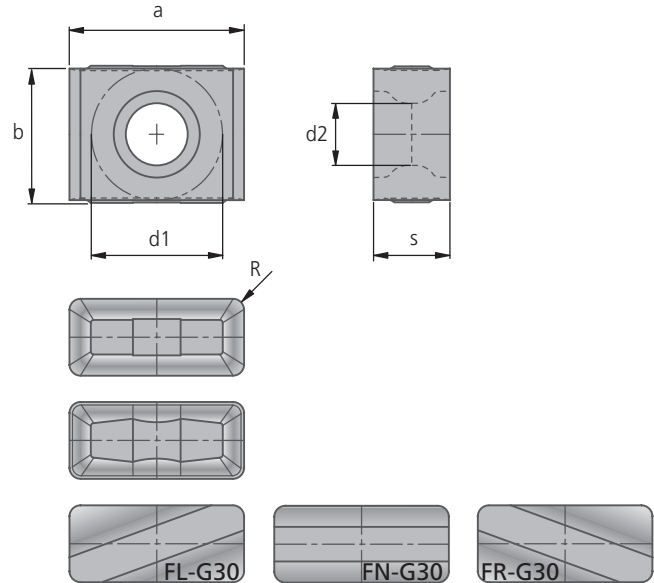
LNGU / LNHU



### Application range:

- Roughing
- Milling

### Cutter geometry:



**Geometry 05:** Cast materials, some steel materials

**Geometry 17:** Steel materials, also stainless

**Geometry -G30:** Aluminium materials, version with 30° rake angle. Left, neutral and right cutting edge shape

Description ISO Description	Order No.	Carbide grades				d1	d2	a	b	s	R
		uncoated	PVD coated		CVD coated						
	enter carbide code▼	K10 23	BK2715 2715	BK2730 2730	BK6115 6115						
LNGU 120508 EN-05	Q80 32000.01..		▲	▲	▲	9.52	4.5	12.7	9.69	5.56	0.8
LNGU 120508 EN-17	Q80 32000.02..			▲		9.52	4.5	12.7	9.69	5.56	0.8
LNHU 120508 FL-G30	Q80 32230.08..	▲									
LNHU 120508 FN-G30	Q80 32530.08..	▲				9.52	4.5	12.7	9.69	5.56	0.8
LNHU 120508 FR-G30	Q80 32630.08..	▲									
Mild steel/tool steel <b>P</b>				●	●	Order example: Description LNGU 120508 EN-05 Carbide grade BK2715 Order No. Q80 32000.012715					
Stainless and acid-resistant steel <b>M</b>				●	●						
Grey cast iron, spheroidal cast iron <b>K</b>			●	●	●						
Non-ferrous metals <b>N</b>		●									
Heat-resistant steels <b>S</b>											
Hardened tool steel <b>H</b>											



**W N M G 0 8 0 4 0 8 F L - 0 1**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Form	Code
	R
	S 90°
	L 90°
	A 85°
	T 60°
	C 80° / 100°
	E 75°
	D 55°
	V 35°
	W 80°

② Clearance angle	Code
	N 0°
	B 5°
	C 7°
	O 8°
	P 11°
	E 20°

③ Tolerance	Code		
	m	s	d
A	±0.005	±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
M	±0.08...±0.18 <sup>1)</sup>	±0.13	±0.05...±0.13 <sup>1)</sup>
U	±0.13...±0.38 <sup>1)</sup>	±0.13	±0.08...±0.25 <sup>1)</sup>

Tolerance in mm				
∅ d1	at m	at m	at d1	at d1
IC	Class M	Class U	Class M	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

④ Type	Code
	A no chipformer, with hole
	M chipformer on one side, with hole
	G chipformer both sides, with hole
	R chipformer on one side, no hole
	B no chipformer, with counter-sunk hole
	T, H chipformer on one side with countersunk hole
	P neg/pos. one or two sides, with hole
	U chipformer both sides, with countersunk hole
	X special design, drawing required

⑤ Cutting edge length l	Code									
d1	at code									
mm	A	C	D	L	R	S	T	V	W	
3.97							06		02	
4.80		04							03	
5.56		05				05	09			
6.35	10	06	07			06	11	11	04	
7.94		08				07	13	13		
8.00	12				08	08	14		05	
9.52		09	11	12		09	16	16		
10.00					10				06	
10.90	16									
12.00					12				08	
12.70		12	15			12	22	22		
15.00									10	
15.88						15	27			
16.00					16					
17.60									12	
19.05		19				19	33		13	
20.00					20					
25.00					25					
25.40						25				

⑥ Thickness s	Code
T0	1.20 mm
01	1.59 mm
T1	1.80 mm
02	2.38 mm
T2	2.97 mm
03	3.18 mm
T3	3.97 mm
04	4.76 mm
05	5.30 mm
06	6.35 mm
07	7.94 mm

⑦ Corner radius R	Code
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
12	1.2 mm
16	1.6 mm
20	2.0 mm
24	2.4 mm
ZZ	Face cutting edge

⑧ Cutting edge design	Code
	F sharp
	E rounded
	T chamfered (negative)
	S chamfered + rounded

⑨ Cutting direction of insert	Code
	R R.H.
	L L.H.
	N R.H. and L.H.

⑩ Chipformer	Code
-01	medium
-05	Cast iron
-11	Aluminium
-13	
-14	finishing
-15	semi-finishing
-21	
-32	
-33	



# Numerical Coding for Inserts C.. / W..

C	8	5	1	8	0	1	0	.	0	4	7	5	2	5
W	6	0	3	2	0	6	0	.	0	8	6	0		
W	2	9	2	4	0	1	0	.	0	4	8	4	2	5
①	②		③		④		⑤		⑥		⑦			

①	Main group for standard inserts Code
---	---

②	Secondary group number insert geometry
---	--

Code	Form	Version	peripheral	Chip groove	Clearance angle, other
00	Unisix®	standard	ground	ground	
01	Unisix®	strengthened	ground	ground	
04	Unisix®	6 edged	ground	ground	0°
05	Unisix®	6 edged	ground	ground	0°, wide flute
24	Unisix® 95°	strengthened	sintered	sintered	
25	Unisix®	standard	sintered	sintered	
27	Unisix® 95°	strengthened	ground	sintered	
28	Unisix®	standard	ground	sintered	
29	Unisix®	strengthened		sintered	
30	triangular		ground	ground	8°
32	triangular		ground	ground	11°
34	triangular	strengthened	ground	ground	
36	triangular	6 edged	ground	ground	0°
37	triangular		ground	ground	20°
57	triangular		ground	sintered	11°
58	triangular		ground	sintered	IC tolerance ±0,025
59	triangular	strengthened	ground	sintered	
60	rhomboid		ground	ground	
78	rhomboid		ground	sintered	
79	rhomboid		ground	sintered	
80	square		sintered	sintered	
82	square		ground	sintered	
83	square		sintered	sintered	

③	Inscribed circle $d_1$
---	------------------------

Code	Value
03	3.97 mm
04	4.0 mm
10	4.8 / 5.0 mm
12	5.5 mm
13	5.56 mm
14	5.6 mm
17	6.0 mm
18	6.2 / 6.35 mm
20	7.0 / 7.1 mm
22	7.7 mm
23	7.94 mm
24	8.0 mm
26	8.2 mm
28	8.9 mm
32	9.52 / 9.8 mm
34	10.0 mm
38	10.9 / 11.1 mm
42	12.0 mm
44	12.7 mm
46	13.2 mm
50	15.0 mm
53	15.88 mm
58	17.6 mm

⑤	Modification code
---	-------------------

1 ... 9	Code
---------	------

⑥	Geometry of cutting edge
---	--------------------------

Code	Value
01	R 0.1 mm
02	R 0.2 mm
03	R 0.3 mm
04	R 0.4 mm
05	R 0.5 mm
06	R 0.6 mm
08	R 0.8 mm
12	R 1.2 mm
30	U8.00 R 0
31	UF
32	US
33	U8.77 15° clearance angle additional cutt. edge form for Unisix® mill. cutter inserts
34	F / KUF 90°
35	F / KUF 75°
36	F / KUF 60°
39	R 0.05 mm
40	45° corner for chamfering cartridge
75	Support chamfer 75° L.H.
90	Support chamfer 90° L.H.

④	Type of chip groove / chip surface
---	------------------------------------

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. and R.H. cutting	32 peripheral ground with minimal burring
98 bright with flute on corner, L.H. and R.H. cutting	33 peripheral sintered with minimal burring
99 neutral, bright on corner, L.H. and R.H. cutting	

⑦	Material grade
---	----------------

Code	Material	Code	Material
03	P25M	2715	BK2715
04	P40	2730	BK2730
22	K20	6115	BK6115
60	BK60		...

# Numerical Coding for Inserts W..

Programme ISO

W 8 5 1 8 0 0 0 . 0 8 8 4 2 5

① ② ③ ④ ⑤ ⑥ ⑦

① Main group for standard inserts  
Code

② Secondary group number insert geometry

Code	ISO basic forms
83	S... square 90°
84	T... triangular 60°
85	C... rhomboid 80°
86	D... rhomboid 55°
89	V... rhomboid 35°
90	W... hexagonal 80°
95	R... round
97	threaded

③ Inscribed circle  $d1$

Code	
13	5.56 mm
18	6.35 mm
24	8.0 mm
32	9.52 mm
38	11.1 mm
44	12.7 mm
53	15.88 mm
62	19.05 mm

④ Serial number

00 ... 99 Code

⑤ Modification code

1 ... 9 Code

⑥ Serial number

01 ... 99 Code

⑦ Material grade

Code	
03	P25M
04	P40
22	K20
2715	BK2715
2730	BK2730
6115	BK6115
...	

# Numerical Coding for Inserts Q..

Q 2 1 4 4 0 0 0 . 0 1 2 7 3 0

Q 8 0 3 2 0 0 0 . 0 1 6 1 1 5

① ② ③ ④ ⑤ ⑥ ⑦

① Main group for standard inserts  
Code

② Secondary group number insert geometry

Code	ISO basic forms
09	S... square 90°
12	T... triangular 60°
15	C... rhomboid 80°
21	E... rhomboid 75°
36	A... rhomboid form
80	L... square 90°

③ Inscribed circle  $d1$

Code	
13	5.56 mm
18	6.35 mm
24	8.0 mm
32	9.52 mm
38	11.1 mm
44	12.7 mm
53	15.88 mm

④ Serial number

00 ... 99 Code

⑤ Modification code

1 ... 9 Code

⑥ Serial number

01 ... 99 Code

⑦ Material grade

Code	
03	P25M
04	P40
22	K20
2715	BK2715
2730	BK2730
6115	BK6115
...	

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3



4



5



6



7



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7



## The ideas factory

The IDEEN-FABRIK reflects the evolution of the KOMET GROUP 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 m<sup>2</sup>, 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.

Ask for our no-obligation specialist seminar brochure.



## TOOLS+IDEAS®

The KOMET GROUP is the worldwide technology leader for innovative tool concepts and complete solutions for drilling machining.

Our customers know us as a manufacturer of premium tools, and know the ideas behind our solutions. The further creativity is still unused, and remains to be discovered. We have set ourselves the objective of exploiting the added value thus created for the benefit of our customers.

We call this TOOLS+IDEAS. A new and different way of being able to offer our customers long-term, sustainable advantages through a plus in support and services.

Our IDEEN-FABRIK in Besigheim is the first step in this direction.

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KOMET GROUP International Agencies

1



2



3



4



5



6



7



8



## Performance Calculation

The  $k_c$  values depend on the feed rate. The table therefore shows the upper limits for these. This means the performance figure calculated may be slightly higher (~ 10 – 20%) than the actual performance required. This is necessary because of the variation in the effective level and provides a safeguard against bad results.

Material group	Strength Rm (N/mm <sup>2</sup> )	Hardness HB	Material	Material example, material code/DIN	Special cutting force $k_c$ lbf/in <sup>2</sup> (N/mm <sup>2</sup> )
P	1.0	≤500	non-alloy steels	St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044	252,000 (1740)
	2.0	500-900	non-alloy / low alloy steels	St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131	299,000 (2060)
	2.1	<500	lead alloys	9SMnPb28 / 1.0718	181,000 (1250)
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	42CrMo4 / 1.7225, CK60 / 1.1221	355,000 (2450)
	4.0	>900	high alloy steels	X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601	264,000 (1820)
	4.1		HSS		270,000 (1860)
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel 718 / 2.4668, Nimonic 80A / 2.4631	303,000 (2090)
	5.1	400	titanium, titanium alloys	TiAl5Sn2 / 3.7114	199,000 (1370)
M	6.0	≤600	stainless steels	X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401	348,000 (2400)
	6.1	<900	stainless steels	X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571	367,000 (2530)
	7.0	>900	stainless / fireproof steels	X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862	374,000 (2580)
K	8.0	180	gray cast iron	GG-25 / 0.6025, GG-35 / 0.6035	165,000 (1140)
	8.1	250	alloy gray cast iron	GG-NiCr202 / 0.6660	186,000 (1280)
	9.0	≤600	spheroidal graphite cast iron, ferritic	GGG-40 / 0.7040	157,000 (1080)
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055	165,000 (1135)
	10.0	>600	spheroidal graphite cast iron, perlitic malleable iron	GGG-60 / 0.7060 GTS-65 / 0.8165	152,000 (1050)
	10.1	200	alloyed spheroidal graphite cast iron	GGG-NiCr20-2 / 0.7661	171,000 (1180)
10.2	300	vermicular cast iron	GGV Ti < 0.2 GGV Ti > 0.2	152,000 (1050)	
N	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	CuZn36Pb3 / 2.1182, G-CuPb155Sn / 2.1182	113,000 (780)
	12.1	100	copper alloy, brass, bronze: average cut	CuZn40Al1 / 2.0550, E-Cu57 / 2.0060	113,000 (780)
	13.0	60	wrought aluminium alloys	AlMg1 / 3.3315, AlMnCu / 3.0517	94,000 (650)
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373	113,000 (780)
	14.0	100	cast alum.alloy: Si-content >10%	G-AlSi10Mg / 3.2381	120,000 (830)
H	15.0	1400	hardened steels < 45 HRC		418,000 (2880)
	16.0	1800	hardened steels > 45 HRC		479,000 (3300)

## Drilling

The machine power in kW

$$P_a = \frac{v_c \times f \times D \times k_c}{1000 \times 60 \times 4 \times \eta}$$

The feed  $F_f$  required is approx.:

$$F_f \approx 0.7 \times \frac{D}{2} \times f \times k_c$$

Example: Material 42CrMo4. bore 40 mm diameter

$f$ = feed in mm/rev	= 0.15 mm/rev
$k_c$ = special cutting force in N/mm <sup>2</sup>	= 2450 N/mm <sup>2</sup>
$D$ = diameter in mm	= 40 mm
$v_c$ = cutting speed in m/min	= 180 m/min
$\eta$ = machine output 0.7-0.85 (0.8)	= 0.8

$$P_a = \frac{180 \times 0.15 \times 40 \times 2450}{1000 \times 60 \times 4 \times 0.8} = 13.8 \text{ kW}$$

$$F_f \approx 0.7 \times \frac{40}{2} \times 0.15 \times 2450 = 5145 \text{ N}$$

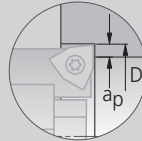
## Roughing / Fine Boring

The machine power in kW

$$P_a = \frac{a_p \times f \times k_c \times n (D - a_p)}{2000 \times 9550 \times \eta}$$

The feed  $F_f$  required is approx.:

$$F_f \approx 0.7 \times a_p \times f \times k_c$$



Example: Material 42CrMo4. bore 40 mm diameter

$a_p$ = cutting width in mm	= 5 mm
$f$ = feed in mm/rev	= 0.15 mm/rev
$k_c$ = special cutting force in N/mm <sup>2</sup>	= 2450 N/mm <sup>2</sup>
$D$ = diameter in mm	= 40 mm
$n$ = spindle speed in min <sup>-1</sup>	= 1433 min <sup>-1</sup>
$\eta$ = machine output 0.7-0.85 (0.8)	= 0.8

$$P_a = \frac{5 \times 0.15 \times 2450 \times 1433 (40 - 5)}{2000 \times 9550 \times 0.8} = 6 \text{ kW}$$

$$F_f \approx 0.7 \times 5 \times 0.15 \times 2450 = 1286.25 \text{ N}$$

1



2



3



4



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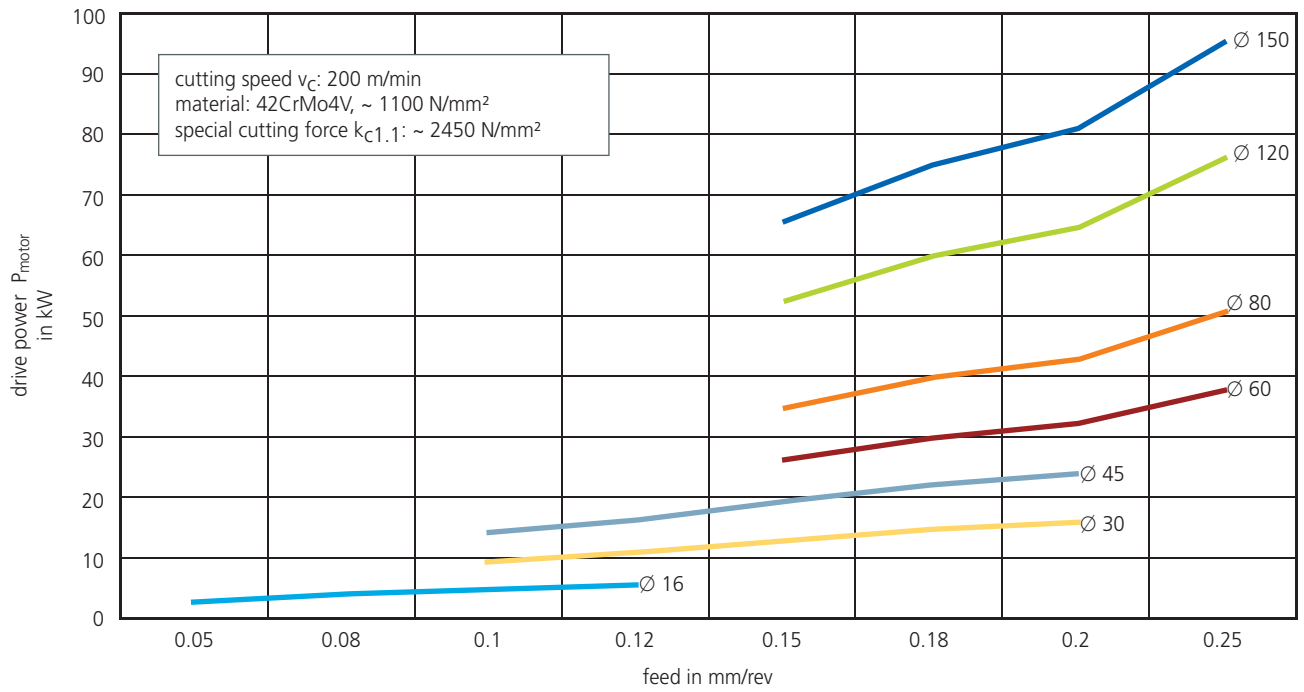
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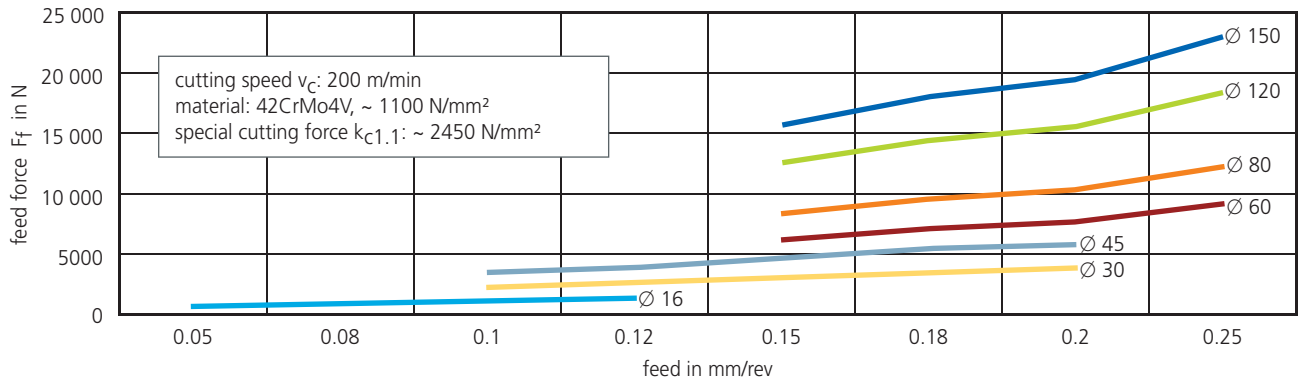
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### Drive power kW

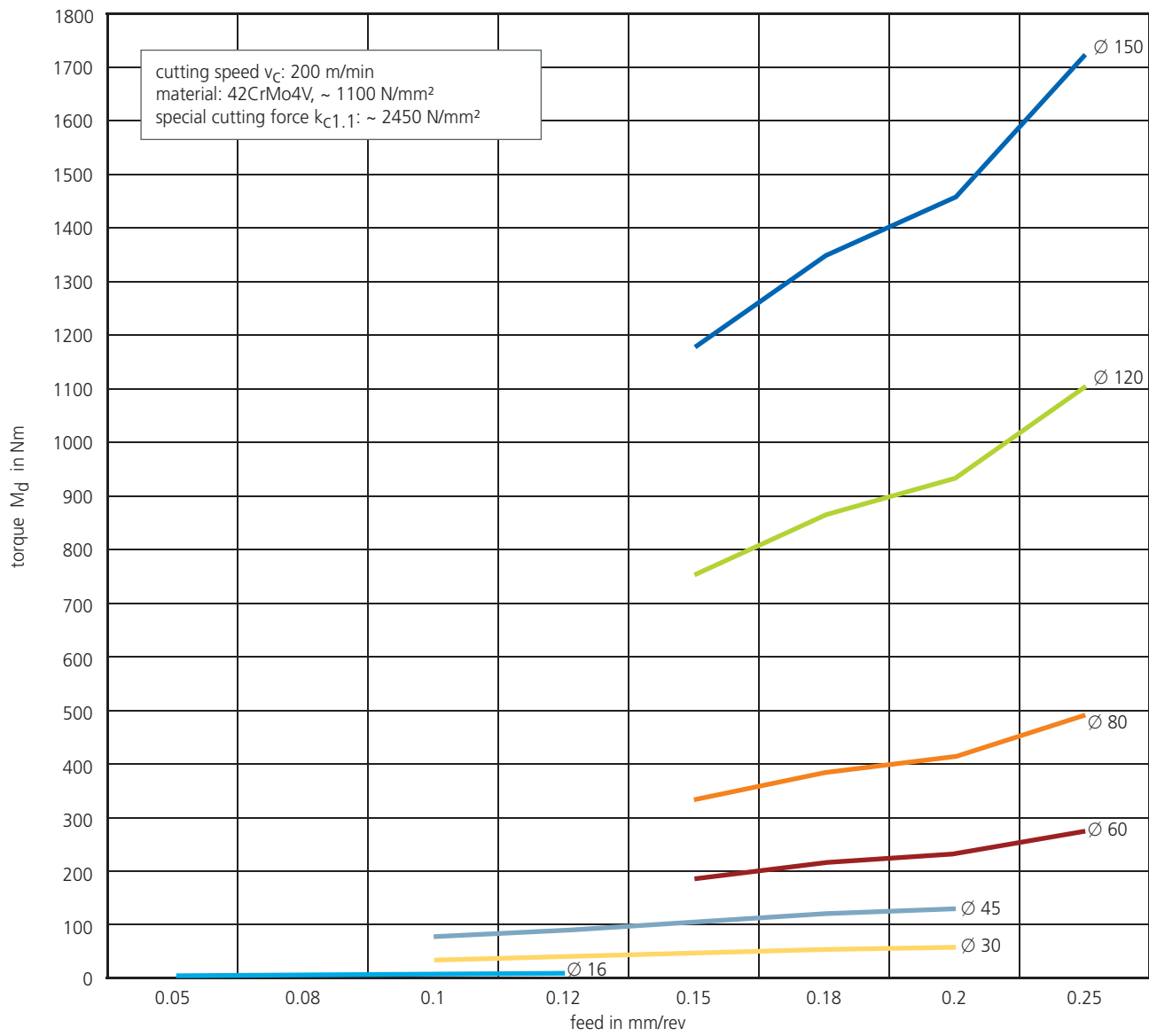


### Feed force $F_f$

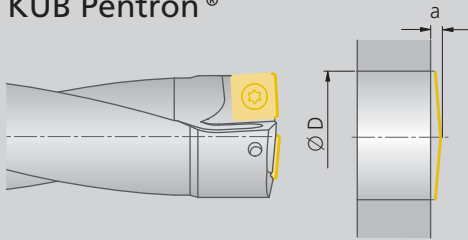




Torque  $M_d$

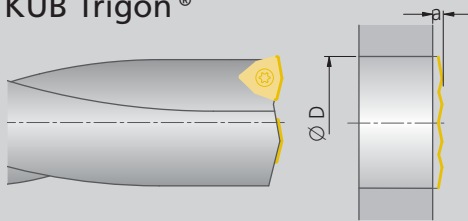


KUB Quatron®  
KUB Pentron®



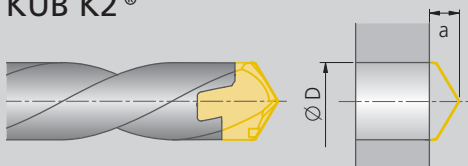
Ø D	a
14.0 – 17.5	1.5
18.0 – 21.0	1.9
22.0 – 26.5	2.4
27.0 – 33.0	2.8
34.0 – 44.0	3.0
45.0 – 52.0	3.3
53.0 – 65.0	3.7

KUB Trigon®



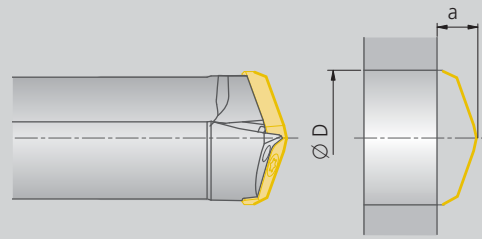
Ø D	a
14.0 – 19.5	1.3
20.0 – 24.0	1.5
24.5 – 36.0	1.7
37.0 – 44.0	2.0
45.0 – 54.0	2.4
55.0 – 68.0	2.7
69.0 – 82.0	3.5

KUB K2®



Ø D	a
10.0 – 10.9	4.00
11.0 – 11.9	4.18
12.0 – 12.9	4.87
13.0 – 13.9	5.05
14.0 – 14.9	5.23
15.0 – 15.9	5.41
16.0 – 16.9	6.09
17.0 – 17.9	6.28
18.0 – 18.9	6.46
19.0 – 20.5	6.73

KUB Duon®



Ø D	a	Ø D	a
17.3	4.0	31.0	6.8
17.5	4.1	31.5	6.9
18.0	4.1	32.0	7.0
18.5	4.2	32.5	7.1
19.0	4.3	33.0	7.1
19.5	4.4	33.5	7.2
20.0	4.5	34.0	7.3
20.5	4.5	34.5	7.4
21.0	4.8	35.0	7.5
21.5	4.9	35.5	7.5
22.0	5.0	36.0	7.6
22.5	5.1	36.5	7.7
23.0	5.1	37.0	8.0
23.5	5.2	37.5	8.1
24.0	5.3	38.0	8.1
24.5	5.4	38.5	8.2
25.0	5.7	39.0	8.3
25.5	5.7	39.5	8.4
26.0	5.8	40.0	8.5
26.5	5.9	40.5	8.5
27.0	6.0	41.0	8.6
27.5	6.1	41.5	8.7
28.0	6.1	42.0	8.8
28.5	6.2	42.5	8.9
29.0	6.3	43.0	8.9
29.5	6.4	43.5	9.0
30.0	6.7	44.0	9.1
31.5	6.7	44.2	9.2

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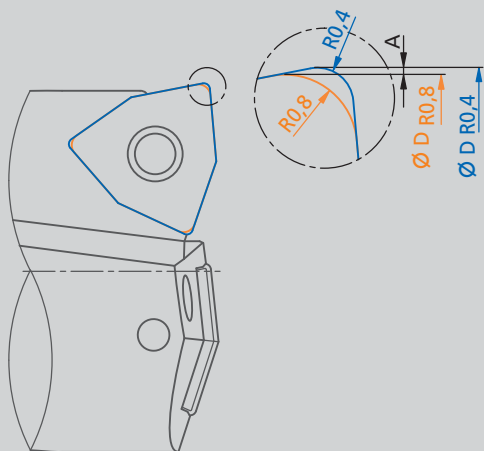
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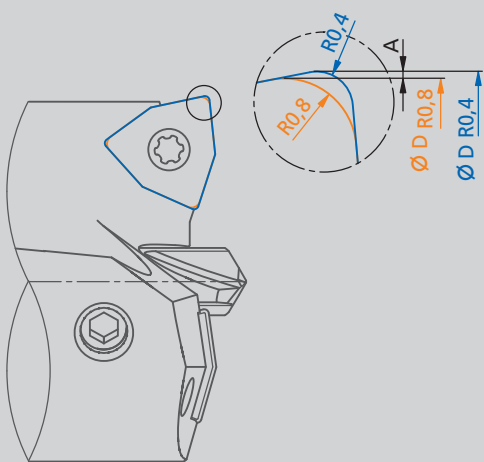
KUB Trigon®, KUB® Drill



Ø D	A
25.0 – 27.9	0.08
28.0 – 28.9	0.09
29.0 – 29.9	0.10
30.0 – 31.9	0.08
32.0 – 33.9	0.09
34.0 – 36.9	0.10
37.0 – 38.9	0.08
39.0 – 41.9	0.09
42.0 – 44.9	0.10

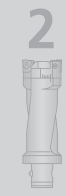
$$D_{R0,8} = D_{R0,4} - 2 \times A$$

KUB Centron®



Ø D	A
33.0 – 37.9	0.08
38.0 – 54.9	0.09
55.0 – 64.9	0.10

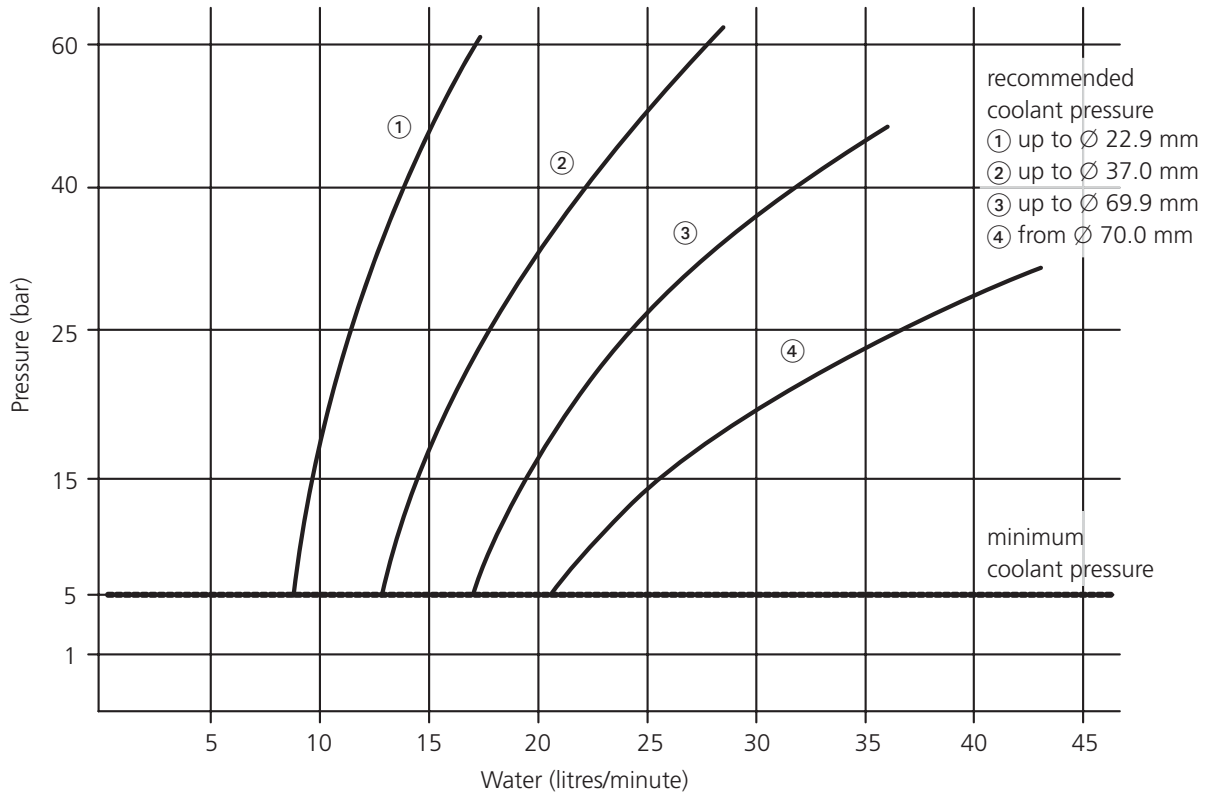
$$D_{R0,8} = D_{R0,4} - 2 \times A$$



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Coolant flow / coolant pressure:



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### 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.

**Safety notes:**

- **Important note!** On exit of the drill a disc as shown is ejected. With rotating components this can cause accidents. Please arrange suitable guarding. 
- The technical notes provided in the application details depend on the environmental and application conditions (such as machine, environmental temperature, lubrication/coolant used and desired machining results): these are based on proper application conditions, use and compliance with the spindle speed limits given for the tools.
- To prevent damage to machine and tool, we recommend that the drive power be calculated in advance (see performance calculation). The drive power which is actually available will be found in the machine manufacturer's spindle speed/performance diagram.
- Safety equipment should be provided to protect personnel from flying chips. Please see our safety note (enclosed with packing).
- To ensure the best possible tool life, the insert should be changed promptly.  
Acceptable width of flank wear marks on inserts:
 

W29 10... to W29 18...	VB max = 0.20 mm
W29 24... to W29 34...	VB max = 0.25 mm
W29 42... to W29 58...	VB max = 0.30 mm

**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.komet.com/navigation-top/download/msds.html>)

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# KOMET KUB Centron® Powerline

Maximum Drilling Performance and Dimensional Accuracy at Drilling Depths of up to 9xD



Together with the double-sided design of the cutter, this tool ensures extremely high performance in all standard materials.

The centring point of the KOMET KUB Centron® Powerline guides the tool exactly into the drill axis and thereby ensures dimensional accuracy, straightness and maximum process reliability at drilling depths of up to 9xD. The extremely stable SOEX indexable insert ensures maximum stability and optimum chip removal, even at maximum drilling depths.

The cutting division per side (from  $\varnothing 39$  mm) allows short chips to be produced even when using materials that are extremely poor for machining.

The KOMET KUB Centron® Powerline can be used in all existing KUB Centron® basic elements.

Enables drilling up to 9xD on flat even surfaces without a pilot hole.

## BENEFITS for you:

- Maximum dimensional accuracy at deep drilling depths
- Transmission of high torques
- Guaranteed central positioning of the core bit
- Doubling of the feed values
- Reduction in production times
- Stable drilling process thanks to proven cutting geometries
- Maximum tool life through the use of the most modern cutting materials and coatings
- Compatibility with proven KUB Centron® programme

### Wear on clearance face normal type of wear expected

#### remedy:

- use hardened/wear-resistant cutting materials
- reduce cutting parameters



### Pitting

#### caused by:

- coating/substrate not sufficiently wear-resistant
- chip geometry too negative

#### rectified by:

- substrate or coatings with better wear resistance
- positive chip geometries



### Microscopic fracturing

#### caused by:

- coating/substrate too brittle
- vibrations on part or tool
- interrupted cut
- build-up on cutting edges

#### correcting by:

- tougher coating
- avoidance of vibrations
- avoidance of build-up on cutting edges



### Stress fracture

#### caused by:

- wrong/excessively high cutting parameters
- no allowance for tool restrictions
- interrupted cut

#### rectified by:

- checking of cutting data
- checking of tool restrictions



### Thermal wear

#### caused by:

- cutting speed too high
- excessive heat

#### rectified by:

- reduction of cutting speed
- wear-resistant, more thermally stable coatings or substrate



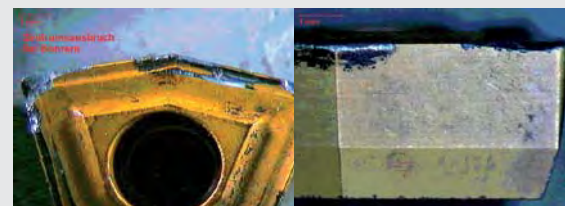
### Fracture of centre insert

#### caused by:

- basic substrate/coatings too brittle
- central position of internal insert too high (insert protrudes over centre)

#### rectified by:

- tougher coatings and substrate
- check lower central position of internal insert
- use centre plate with stronger chamfering
- use internal and external insert with same geometry



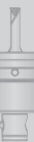
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# KOMET ABS®

## Even more perfectly joined

One benefit of the new version of the KOMET ABS® connection is substantially higher clamping forces. It is fully compatible with the existing system, and also matches the original's high precision demands. In tooling systems, the tool adapter is an important element between the tool and machine.

It must be able to transfer the machining forces safely. Moreover, tool adapters greatly influence the quality of the machining result. They also contribute to a cost efficient machining process. KOMET ABS® connections form a modular coupling system for rotating and stationary tools. The interface system is designed according to the modular principle. In this way, users can quickly and cheaply make use of modular metal cutting tools, extensions or adaptors.

Since its launch by KOMET® in 1981, the system has become established globally. It has fully developed components for each requirement.

The new KOMET ABS® is a technological leap forwards. The patented modifications have led to an increase of approx. 20 % in the clamping force. This means better transmission of power along with the corresponding effects on the machining result. During use, the new KOMET ABS® connections are quieter, and can achieve better cutting values. On the other hand, it also means reduced tightening torque at a constant required clamping force. The service life of the assembly parts are therefore longer. With 100% system compatibility, existing and new components can be combined with each other.

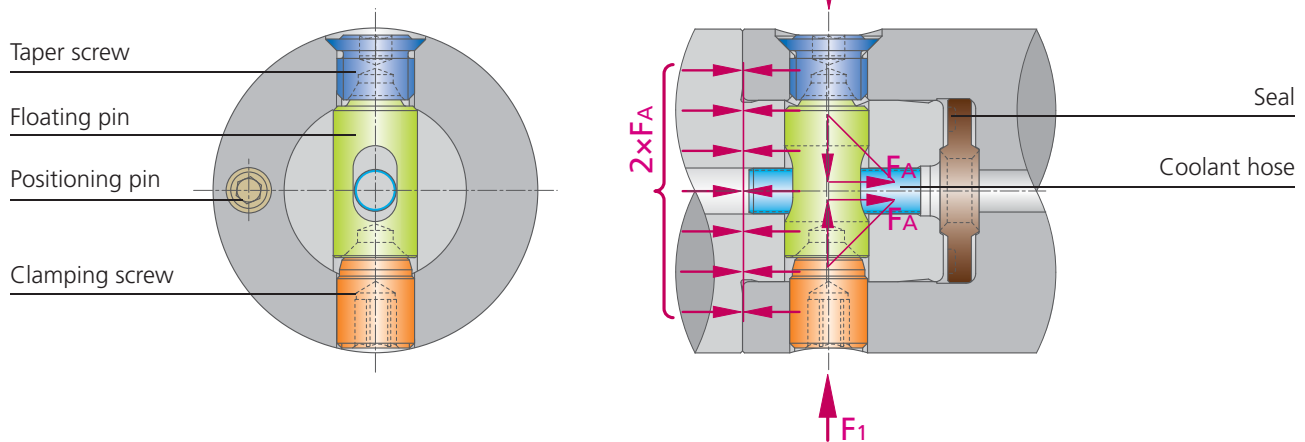
### Benefits for you:

- Better transmission of power
- Optimum machining result
- Achieves better cutting values
- Less noise during production
- System 100% upwards and downwards compatible
- Suitable for ABS®, ABS® N and ABS® T





## Operation and characteristics



The ABS® connection consists of a location (spindle) and a shank with spigot (tool). In addition to the cylindrical bore on the location, there are two cross threads with the clamping screw and the taper screw. On the shank section, in addition to the cylindrical pin with cross bore, there is a sliding pin and positioning pin.

By axially offsetting the clamping screw/taper screw and sliding pin, the tapered surfaces are brought into contact when the screws are tightened and produce double the expansion force through axial components  $2 \times FA$ . If cutting forces or moments arise, there is sufficient play between the positioning pin and the positioning bore to allow for a specific, minimum torsion. Exact positioning is achieved with a suitable positioning pin. On tools where an accurately defined cutting position is required, positioning and torque transmission is by means of 2 key slots on the holder or 2 key blocks on the tool.

The exactly adjusted dimensions of the ABS® System in conjunction with an extremely low amount of adjustment play produces minimum distortion from self-centering contact at four points. This in turn produces increased strength, a higher tool change repeatability and low vibration.

## Features / changes:

- The new ABS® is generally compatible with all conventional ABS® systems. You can see the variation possibilities illustrated above.
- Instead of a 90° tip, the floating pin now has a stepped shape at the flank towards the taper screw at which two contact parts are planned. Through the new shape, the basic body of the floating pin is longer and thus, a better guidance in the bore of the spigot is achieved.

The ABS® coupling system is protected by patent application domestically and abroad.

Tools with the Original ABS® connection system are manufactured and/or marketed exclusively by KOMET® and companies specifically authorised by KOMET®. All authorised (licensed) manufacturers are contractually bound to use manufacturing specifications supplied by KOMET®.

Original ABS® systems are identified with "ABS... under licence to KOMET". All authorised ABS manufacturers guarantee a quality standard which complies with KOMET® manufacturing specifications. Quality and safety is guaranteed subject to original ABS® tools being correctly used. No guarantee can be given where tools are used with modular connections which are not identified as original ABS® tools. This particularly applies for connections which are designed to be combined and used with original ABS® tools.

Please ensure that tools are used with original ABS® connections only.

- The taper screw was also improved by a new design with the features described above. This results in an increase of the clamping force and a higher accuracy of the ABS® system. Through the modifications mentioned, a better overall rigidity of the ABS® system is achieved in addition. More efficient cutting tools can be used with the new ABS® without any problems.

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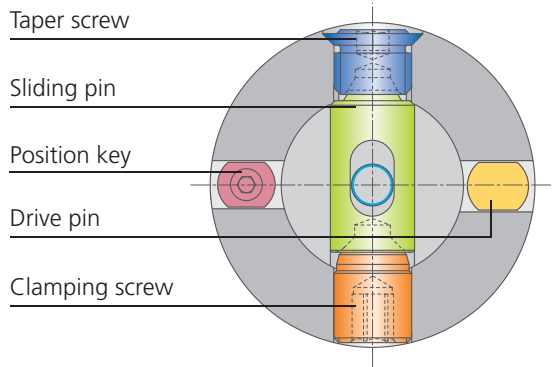


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# KOMET ABS®

## ABS® N – The slotted ABS® version

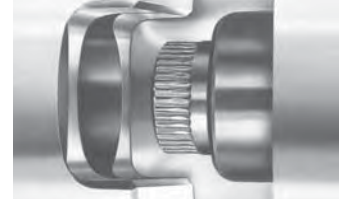


### Features:

For cutting operations which set high demands, the ABS® system has been modified so that moment and cutting forces can be absorbed by high-precision slots. This of course ensures that the results from ABS® and ABS® N are consistently high.

### Compatibility:

- Standard ABS® tools can be used in ABS® N adaptors
- Because ABS® tools can be easily converted, the tool can be held in standard adaptors.



High stability from ABS® face connection with slots

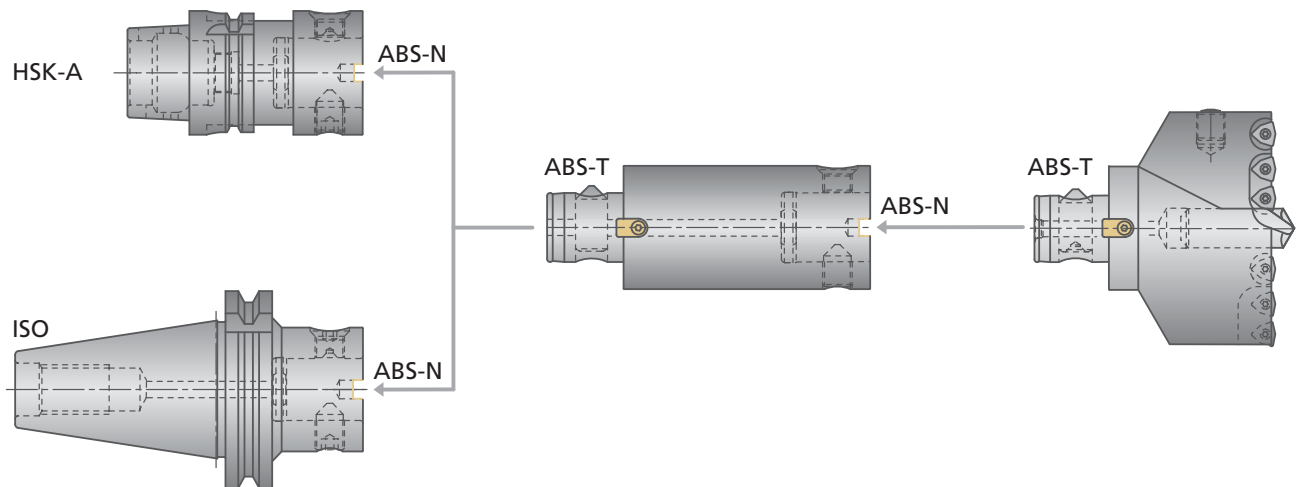
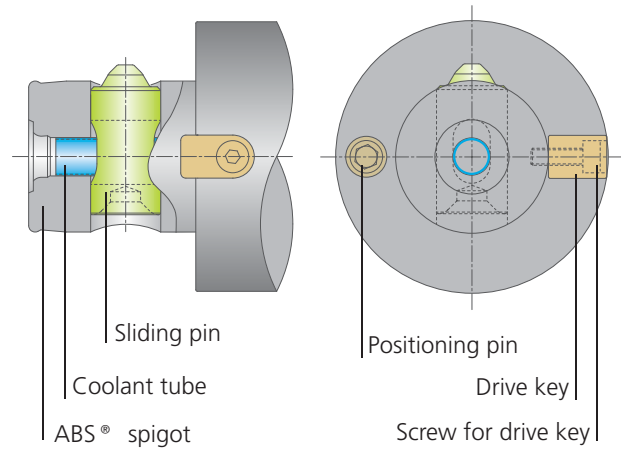
## ABS® T – for increased torque requirements

### Features:

For cutting operations which set high demands, the ABS® system has been modified so that moment and cutting forces can be absorbed by high-precision slots. This of course ensures that the results from ABS® N and ABS® T are consistently high.

### Compatibility:

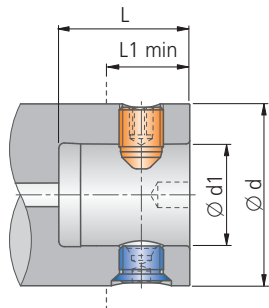
- standard ABS® T tools can be used in ABS® N adaptors
- removal the drive key, ABS® T tool can be held in standard adaptors ABS®.



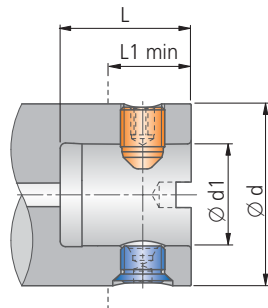
A colour code system is used for the ABS®, ABS® N and ABS® T  $\varnothing d$  size so that selection of tools with a specific location size can be made quickly and accurately.

### Location hole

ABS®



ABS® N

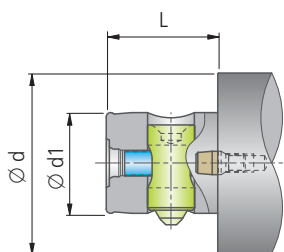


ABS® / ABS® N

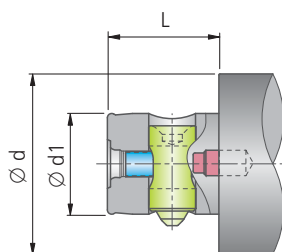
size	size	$\varnothing d$	$\varnothing d1$	L	L1 min.
ABS 25	ABS 25 N	25	13	24	13.0
ABS 32	ABS 32 N	32	16	27	16.0
ABS 40	ABS 40 N	40	20	31	18.5
ABS 50	ABS 50 N	50	28	36	22.0
ABS 63	ABS 63 N	63	34	43	28.0
ABS 80	ABS 80 N	80	46	48	34.0
ABS 100	ABS 100 N	100	56	60	40.5
ABS 125	ABS 125 N	125	70	76	51.0
ABS 160	ABS 160 N	160	90	96	65.0

### Location spigot

ABS®



ABS® N / ABS® T



ABS® / ABS® N / ABS® T

size	size	size	$\varnothing d$	$\varnothing d1$	L
ABS 25	ABS 25 N		25	13	20
ABS 32	ABS 32 N		32	16	23
ABS 40	ABS 40 N		40	20	26
ABS 50	ABS 50 N	ABS 50 T	50	28	31
ABS 63	ABS 63 N	ABS 63 T	63	34	38
ABS 80	ABS 80 N	ABS 80 T	80	46	43
ABS 100	ABS 100 N		100	56	55
ABS 125	ABS 125 N		125	70	70
ABS 160	ABS 160 N		160	90	90

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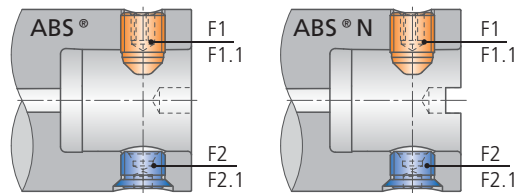
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# KOMET ABS®

Individual spares (spares assortment) are supplied for replacement purposes only. Any other use is not permitted and represents an infringement of the patent.

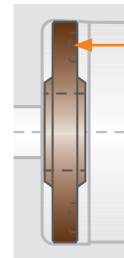
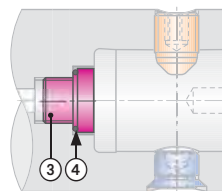
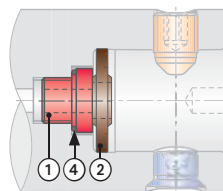
## Assembly parts ABS® / ABS® N



ABS® / ABS® N									
	25	32	40	50	63	80	100	125	160
Spares assortment ①	N00 15251 ABS25-FS-W	N00 15261 ABS32-FS-W	N00 15271 ABS40-FS-W	N00 15281 ABS50-FS-W	N00 15291 ABS63-FS-W	N00 15301 ABS80-FS-W	N00 15311 ABS100-FS-W	N00 15321 ABS125-FS-W	N00 15330 ABS160-FS-W
Clamping screw F1, F1.1	N00 02052 ABS25-F1.1	N00 02062 ABS32-F1.1	N00 02072 ABS40-F1.1	N00 02082 ABS50-F1.1	N00 02092 ABS63-F1.1	N00 02102 ABS80-F1.1	N00 02112 ABS100-F1.1	N00 02122 ABS125-F1.1	N00 02131 ABS160-F1
Taper screw F2, F2.1	N00 03052 ABS25-F2.1	N00 03062 ABS32-F2.1	N00 03072 ABS40-F2.1	N00 03082 ABS50-F2.1	N00 03092 ABS63-F2.1	N00 03102 ABS80-F2.1	N00 03112 ABS100-F2.1	N00 03122 ABS125-F2.1	N00 03131 ABS160-F2

Starting torque (Nm) for clamping screw F1									
	25	32	40	50	63	80	100	125	160
light cutting reaming, fine boring, finish milling	2.5 – 3.0	9.0 – 11.0	12.0 – 20.0	15.0 – 28.0	30.0 – 45.0	38.0 – 54.0	46.0 – 70.0	55.0 – 78.0	
heavy cutting boring, roughing, milling	3.5 – 4.5	12.0 – 14.0	21.0 – 28.0	30.0 – 40.0	46.0 – 60.0	55.0 – 70.0	75.0 – 100.0	90.0 – 120.0	

## Accessories ABS® / ABS® N

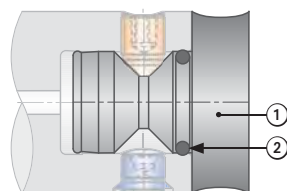


### Please note!

Up to ABS® 50, the sealing disc is provided with a ring groove. After fitting in the ABS® drilled hole, the ring groove must be visible.

ABS® / ABS® N									
	25	32	40	50	63	80	100	125	
Sealing screw ①	L02 30510 M8x1	L02 30510 M8x1	L02 30520 M10x1	L02 30520 M10x1	L02 30530 M12x1.5	L02 30540 M12x1.5	L02 30550 M16x1.5	N00 07100 M36x1.5	
Sealing disc ②	L01 02011 ABS25-E9	L01 02021 ABS32-E9	L01 02031 ABS40-E9	L01 02041 ABS50-E9	L01 02051 ABS63-E9	L01 02061 ABS80-E9	L01 02071 ABS100-E9		
Plug screw ③	55041 00810 M8x1	55041 00810 M8x1	55041 01010 M10x1	55041 01010 M10x1	55041 01215 M12x1.5	55041 01215 M12x1.5	55041 01615 M16x1.5	55041 03615 M36x1.5	
Sealing ring ④	56941 00811	56941 00811	56941 01013	56941 01013	56941 01215	56941 01215	56941 01620		

## Safety cover (for covering ABS® / ABS® N spindle adaptor when not in use)

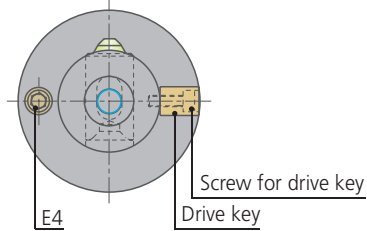
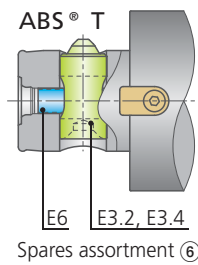
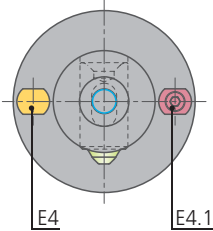
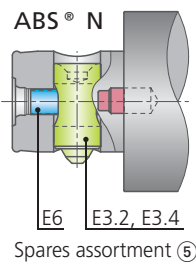
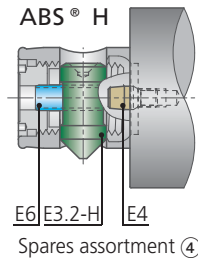
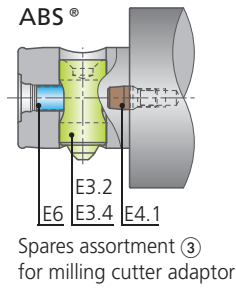
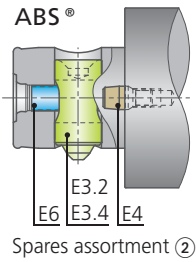


ABS® / ABS® N									
	25	32	40	50	63	80	100		
Safety cover ①	L01 03020 0.016	L01 03030 0.027	L01 03040 0.049	L01 03050 0.095	L01 03060 0.173	L01 03070 0.293	L01 03080 0.488		
Sealing ring ②	52911 01010	52911 01315	52911 01615	52911 02515	52911 03015	52911 04220	52911 05030		

Supply includes: Safety cover with sealing ring

Individual spares (spares assortment) are supplied for replacement purposes only.  
Any other use is not permitted and represents an infringement of the patent.

Assembly parts ABS® / ABS® N / ABS® T and ABS® H



ABS® / ABS® N / ABS® T / ABS® H									
	25	32	40	50	63	80	100	125	160
Spares assortment ②	N00 17651 ABS25-ES-M3	N00 17661 ABS32-ES-M3	N00 17671 ABS40-ES-M3	N00 17681 ABS50-ES-M3	N00 17691 ABS63-ES-M3	N00 17701 ABS80-ES-M3	N00 17711 ABS100-ES-M3	N00 17721 ABS125-ES-M3	N00 17730 ABS160-ES-M3
Spares assortment ③	N00 17851 ABS25-ES-M4	N00 17862 ABS32-ES-M4	N00 17872 ABS40-ES-M4	N00 17882 ABS50-ES-M4	N00 17892 ABS63-ES-M4	N00 17902 ABS80-ES-M4	N00 17912 ABS100-ES-M4		
Spares assortment ④		N00 20060 ABS32-H-ES	N00 20070 ABS40-H-ES	N00 20080 ABS50-H-ES	N00 20090 ABS63-H-ES	N00 20100 ABS80-H-ES			
Spares assortment ⑤	N00 19252 SBA25-ES-M1	N00 19263 SBA32-ES-M1	N00 19273 SBA40-ES-M1	N00 19283 SBA50-ES-M1	N00 19293 SBA63-ES-M1	N00 19303 SBA80-ES-M1	N00 19313 SBA100-ES-M1		
Spares assortment ⑥				N00 18181 ABS50-T-ES	N00 18191 ABS63-T-ES	N00 18201 ABS80-T-ES			
Sliding pin E3.2, E3.4	N00 00451 ABS25-E3.4	N00 00461 ABS32-E3.4	N00 00471 ABS40-E3.4	N00 00481 ABS50-E3.4	N00 00491 ABS63-E3.4	N00 00501 ABS80-E3.4	N00 00511 ABS100-E3.4	N00 00521 ABS125-E3.4	N00 00530 ABS160-E3.2
Sliding pin E3.2-H		N00 01661 ABS32-E3.2-H	N00 01670 ABS40-E3.2-H	N00 01680 ABS50-E3.2-H	N00 01690 ABS63-E3.2-H	N00 01700 ABS80-E3.2-H			
Positioning pin E4	N00 04050 ABS25-E4	N00 04060 ABS32-E4	N00 04070 ABS40-E4	N00 04080 ABS50-E4	N00 04090 ABS63-E4	N00 04100 ABS80-E4	N00 04110 ABS100-E4	N00 04120 ABS125-E4	N00 04130 ABS160-E4
Positioning pin E4.1	N00 04250 ABS25-E4.1	N00 04261 ABS32-E4.1	N00 04271 ABS40-E4.1	N00 04281 ABS50-E4.1	N00 04291 ABS63-E4.1	N00 04301 ABS80-E4.1	N00 04311 ABS100-E4.1		
Drive key				N12 20280 T50	N12 20290 T63	N12 20300 T80			
Screw for drive key				55011 03010	55011 04012	55011 05016			
Drive pin E4	N00 05051 SBA25-E4	N00 05062 SBA32-E4	N00 05072 SBA40-E4	N00 05082 SBA50-E4	N00 05092 SBA63-E4	N00 05102 SBA80-E4	N00 05112 SBA100-E4		
Position key E4.1	N00 05251 SBA25-E4.1	N00 05262 SBA32-E4.1	N00 05272 SBA40-E4.1	N00 05282 SBA50-E4.1	N00 05292 SBA63-E4.1	N00 05302 SBA80-E4.1	N00 05312 SBA100-E4.1		
Coolant tube E6	N00 06050 ABS25-E6	N00 06060 ABS32-E6	N00 06070 ABS40-E6	N00 06080 ABS50-E6	N00 06090 ABS63-E6	N00 06100 ABS80-E6	N00 06110 ABS100-E6	N00 06120 ABS125-E6	N00 06130 ABS160-E6
Extraction tool*		L05 01590	L05 01590	L05 01590	L05 01590	L05 01590	L05 01590	L05 01590	L05 01590
Press punch*	N75 80000	N75 80010	N75 80020	N75 80030	N75 80040	N75 80050	N75 80060	N75 80070	N75 80080
Expansion punch*	N75 80100	N75 80110	N75 80120	N75 80130	N75 80140	N75 80150	N75 80160	N75 80170	N75 80170

\* Fitting and removing coolant hose: Once coolant hoses have been removed, these must not be re-used.  
To ensure seal, always fit a new coolant hose using the press and expansion punch.

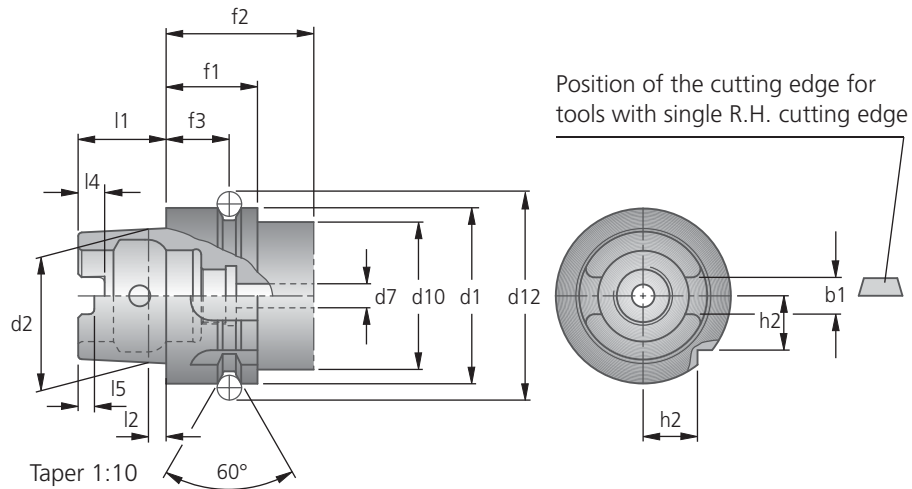


# KOMET® HSK-A

## Hollow Shank HSK-A to ISO 12164-1

(as DIN 69893-1)

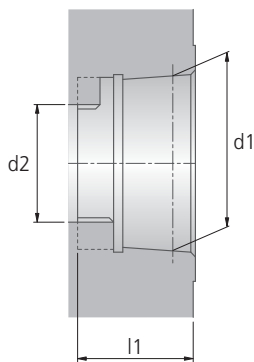
Version with hole for data carrier to DIN 69873.



Dimensions														
HSK size	d1 <sub>h10</sub>	d2	d10 <sub>max</sub>	d12	d7 <sub>max</sub>	b1±0.04	h2 <sub>-0.3</sub>	f1 <sub>-0.1</sub>	f2 <sub>min</sub>	f3±0.1	l1 <sub>-0.2</sub>	l2	l4 <sup>+0.2</sup>	l5 <sup>+0.2</sup>
HSK-A 32	32.0	24.0	26.0	37.00	4.2	7.05	9.50	20.0	35.0	16.0	16.0	3.2	3.5	3.0
HSK-A 40	40.0	30.0	34.0	45.00	5.0	8.05	12.00	20.0	35.0	16.0	20.0	4.0	6.0	5.0
HSK-A 50	50.0	38.0	42.0	59.30	6.8	10.54	15.50	26.0	42.0	18.0	25.0	5.0	7.5	4.5
HSK-A 63	63.0	48.0	53.0	72.30	8.4	12.54	20.00	26.0	42.0	18.0	32.0	6.3	10.0	6.0
HSK-A 80	80.0	60.0	67.0	88.80	10.2	16.04	25.00	26.0	42.0	18.0	40.0	8.0	12.0	8.0
HSK-A100	100.0	75.0	88.0	109.75	12.0	20.02	31.50	29.0	45.0	20.0	50.0	10.0	15.0	10.0

## Adaptors for hollow taper shanks form A and C to ISO 12164-2

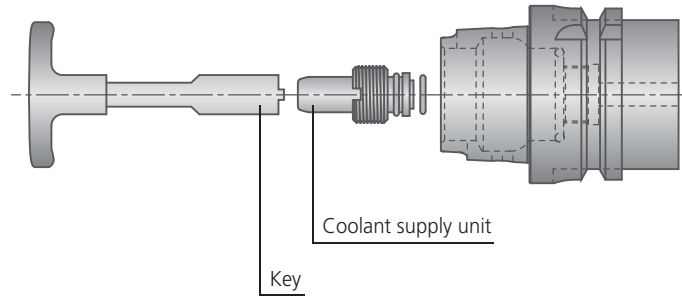
(as DIN 69063)



Dimensions			
HSK size	d1	d2	l1 <sup>+0.2</sup>
HSK-A/C 32	23.998	17	16.5
HSK-A/C 40	29.998	21	20.5
HSK-A/C 50	37.998	26	25.5
HSK-A/C 63	47.998	34	33
HSK-A/C 80	59.997	42	41
HSK-A/C 100	74.997	53	51

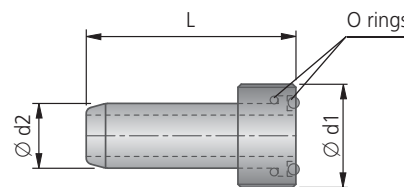


### Mounting of the coolant supply unit



**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.



HSK-A size	Key	Coolant supply unit						
	Order No.	Order No.	Ø d1	Ø d2	L	O ring face side and over tube		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

**Supply coolant supply unit includes:**  
Coolant tube, locking collar and two O rings.

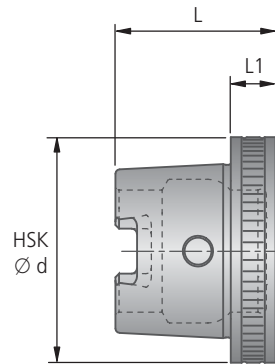
**Note re. supply:**  
The coolant supply connection for the tool adaptors must be ordered separately.  
Only use the keys listed for assembly.  
This will prevent coolant flowing back into the machine spindle/clamping system.  
A specific coolant hose for the machine can also be fitted on all HSK adaptors.



# KOMET® HSK-A

## HSK-A/C Plugs

For sealing HSK units against dirt or other contamination.

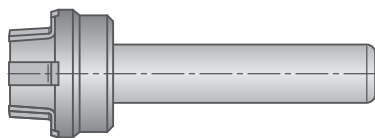


Article	Order No.	HSK Ø d	L	L1
HSK-C 40	A06 13470	40	30	10
HSK-C 50	A06 23470	50	37.5	12.5
HSK-C 63	A06 33470	63	44.5	12.5
HSK-C 80	A06 43470	80	56	16
HSK-C100	A06 53470	100	66	16

## Periphery

### Wiper for taper and face

Wiper for cleaning taper and face on machine spindle.



for HSK size	Order No.
32	5139101032
40	5139101040
50	5139101050
63	5139101063
80	5139101080
100	5139101100



## Features and advantages

- The modern connection between machine spindle and tool is the hollow taper shank system (HSK)
- HSK is standardised under ISO 12164
- The main feature of HSK is the taper and face connection
- This gives important advantages: Maximum tool change accuracy, high static rigidity, high radial rigidity, small dimensions, low weights, use at high spindle speeds, shorter tool change times because of lower weights and higher machine acceleration.
- The HSK-A version is used for automatic tool change on machining centres, turning/milling centres, milling machines and other machine tools.
- HSK-A can also be used on machines with manual tool change.
- Other HSK versions can of course be supplied by KOMET on request
- Chip bore 10x4.5 included in the standard.

### Note:

The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

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# KOMET® HSK

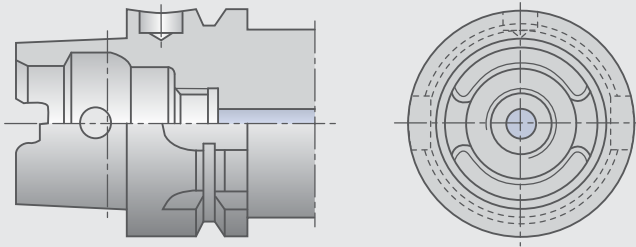
## HSK Versions

1



Hollow taper shanks  
for automatic tool change DIN 69893 Part 1 and 2 – with gripper groove

### Form A



- used on machining centres, milling machines, turning machines, special machines with automatic tool change
- central, axial coolant supply through coolant tube
- torque transmission via two key slots at end of taper
- two slots on collar for tool magazine, location edge. Hole for data carrier DIN 69873 in collar

2



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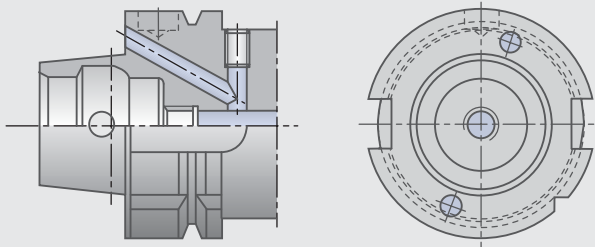


4



Hollow taper shanks  
for automatic tool change DIN 69893 Part 1 and 2 – with gripper groove

### Form B



- use on machining centres, milling machines for heavy-duty cutting, turning machines
- enlarged collar
- off-centre coolant supply through collar or central supply through coolant tube
- torque transmission via two slots on collar
- location edge
- hole for data carrier DIN 69873 in collar

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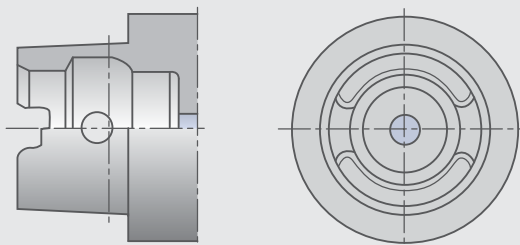


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Hollow taper shanks  
for manual tool change DIN 69893 Part 1 and 2 – without gripper groove

### Form C



- preferably used for spindles on transfer lines and special machines with no automatic tool change or for short bore spindles and tool extensions and reducers
- central, axial coolant supply
- torque transmission via two key slots at end of taper

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Hollow taper shanks  
for manual tool change DIN 69893 Part 1 and 2 – without gripper groove

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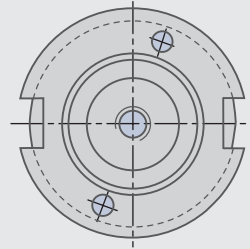
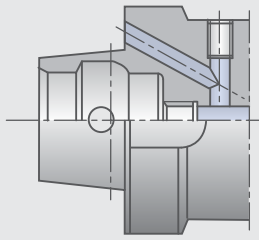
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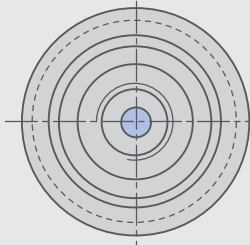
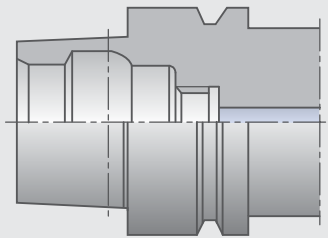
**Form D**



- for use in all areas which require better support from a large contact surface during manual tool change
- with larger collar
- off-centre coolant supply through collar or central supply through coolant tube
- torque transmission via two collar slots

Hollow taper shanks  
for higher spindle speeds (HSC). Provisional standard DIN 69893 Part 5 and 6 – with gripper groove

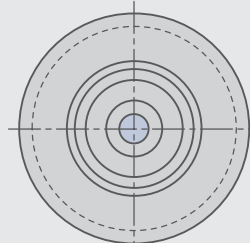
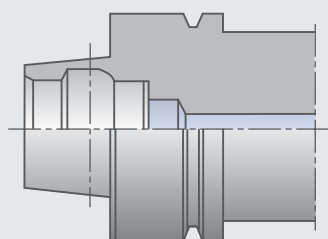
**Form E**



- used for high frequency spindles and wood machining
- rotationally symmetrical, without key slots
- torque transmission via friction resistance
- central coolant supply possible through coolant tube

Hollow taper shanks  
for higher spindle speeds (HSC). Provisional standard DIN 69893 Part 5 and 6 – with gripper groove

**Form F**



- with larger collar
- central coolant supply possible through coolant hose

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## KomLoc® clamping system

### Features of the system

- uncomplicated, low cost spindle contour
- small number of extremely sturdy components
- maximum clamping force
- specially suited to high speed machining (HSC)
- internal coolant supply
- practical ejector function

### Application area

There are numerous situations which require hollow taper shank tools to be clamped manual. The new KOMET HSK clamping device is used universally on transfer lines, machining centres, turning machines, multi-head machines and setting devices.

- direct mounting on multi-spindle boring heads and short boring spindles
- spindle mounting and adaptor flanges
- adaptors as extensions or reducers

### Using the KomLoc® clamping system

By using a hexagonal key, operating the KomLoc® clamping system is quite simple. A low draw-in moment automatically produces an excellent and stable clamping effect. In addition an axial movement or turning of the locking ring prevents dirt and chips from penetrating into the clamping mechanism.

### Ability for HSC (High Speed Cutting)

Because of the radially outward effect of the clamping action, the new KomLoc® clamping system is almost predestined for use at high clamping speeds. The clamping cartridge is designed to be completely symmetric in rotation.

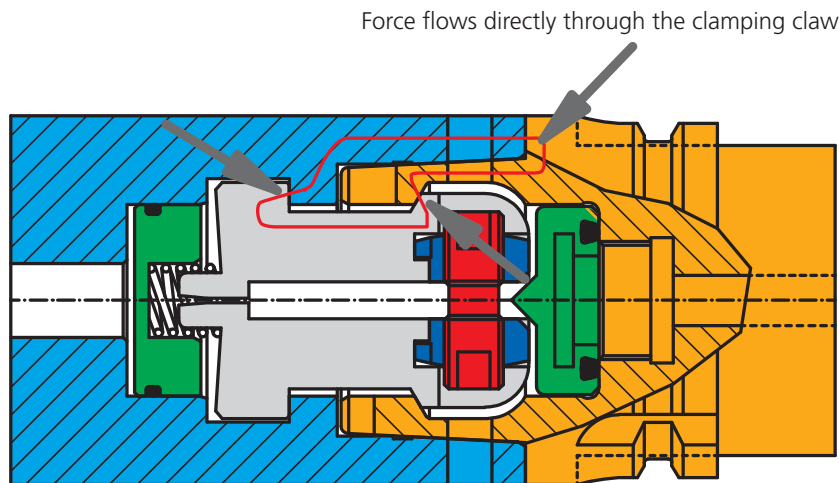
### Coolant supply

Internal coolant supply is introduced by two coolant hoses which form a cage with the ejector and the distributor. This cage is supported on floating bearings and produces a seal for a coolant pressure of  $p > 2$  bar.

### Application details

By maintaining the correct draw-in moments and clamping forces the clamping device ensures an excellent transmission of the bending and torsion moments. The direction of these moments is not affected by the position of clamping cartridge.

## Function



### Clamping mechanism

- The two clamping nuts are moved radially outwards by using a hexagonal key on the threaded spindle.
- The two clamping elements are applied to the clamping shoulder of the hollow taper shank.
- The high axial clamping force produces a positive connection.

### Release mechanism

Clamping is released by moving the two clamping elements inwards back to the block. This activates the ejector which releases the connection.

### Clamping force / Rigidity

The high clamping forces (see table) produce excellent bending resistance. Depending on the operation temperature and the lubrication on the clamping element, clamping forces may vary by  $\pm 15\%$ .



HSK size	SW for operating	Torque setting Nm	Tension force KN	Torque setting Nm	Tension force KN	KOMET standard value			
						Torque setting Nm	Tension force KN	Torque setting Nm	Tension force KN
25	2	–	–	1	3.5	1.5	5.5	2	7
32	2.5	1.5	6.5	2	8	2.5	9	3.5	11
40	3	4	16	5	18	6	20	8	25
50	4	5	19	7.5	25	10	31	15	41
63	5	10	28	12.5	32	15	40	17.5	51
80	6	15	37	20	45	25	50	30	60
100	8	30	40	50	60	60	70	60	70

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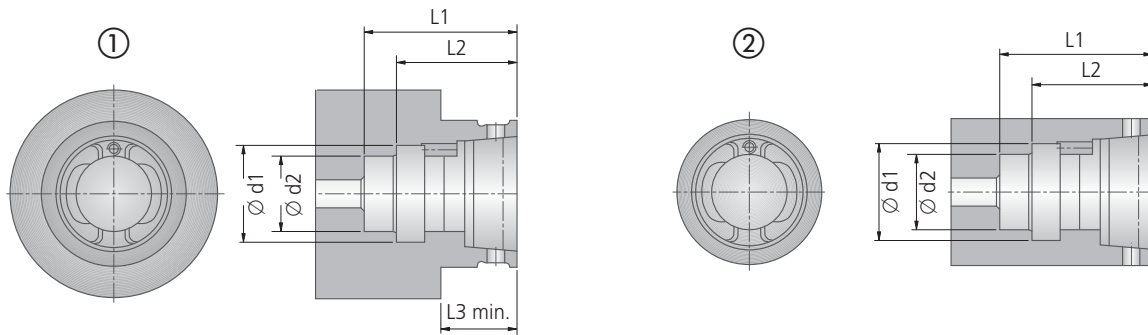
8



# KOMET KomLoc® HSK

## KomLoc® HSK clamping system – System K

### Spindle contour



### Montage

The KomLoc® clamping cartridge is extremely easy to fit. Insert the KomLoc® cartridge, rotate 90° and secure with threaded pin. This can be effected from any side and requires no alignment.

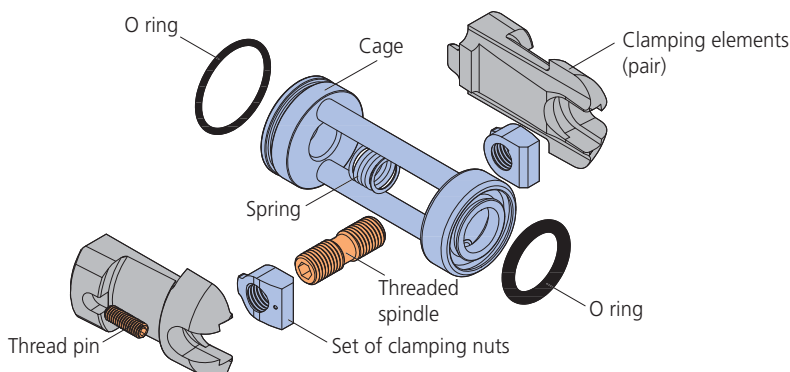
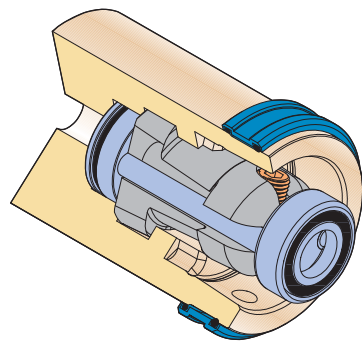
### Note

Sealing ring for use on short bore spindles to DIN 69002 in conjunction with centrifuge ring available on request.

Detailed dimensional drawings can be supplied on request (free of charge).

Fitting dimensions					①		②	
HSK size	L1	L2	Ø d1	Ø d2	Sealing ring, shifting Order No.	L3 min.	Sealing ring, turning Order No.	Ball pressure screw Order No.
32	34.3	27.3	21.1	17.0	L07 01430	16	L07 01730	N10 30737
40	42.4	33.8	26.4	21.0	L07 01440	19	L07 01740	N10 30738
50	53.0	42.2	33.0	26.0	L07 01450	24	L07 01750	N10 30739
63	65.0	52.8	42.5	34.0	L07 01460	29	L07 01761	N10 30740
80	84.8	67.6	52.8	42.0	L07 01470	37	L07 01771	N10 30741
100	106.0	84.4	66.0	52.0	L07 01480	47	L07 01780	N10 30742

### Components

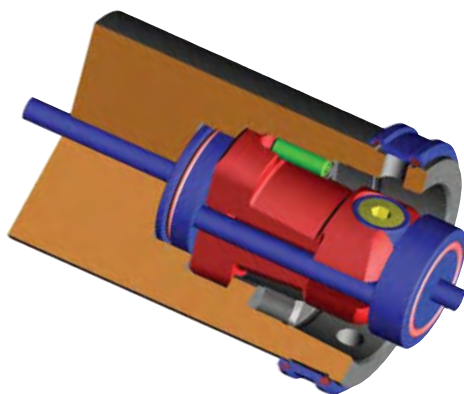


### KomLoc® Clamping cartridge

Article	Order No.
System K IKZ-HSK25	L07 01020
System K IKZ-HSK32	L07 01030
System K IKZ-HSK40	L07 01040
System K IKZ-HSK50	L07 01050
System K IKZ-HSK63	L07 01060
System K IKZ-HSK80	L07 01070
System K IKZ-HSK100	L07 01080

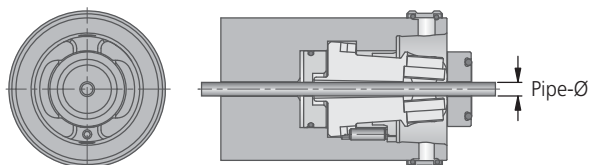
# KOMET KomLoc® HSK

## KomLoc® HSK clamping system – System K for MQL



### Description / features

- KomLoc® minimal lubrication clamping element with open central area
- through hose for supply of minimal lubrication
- high clamping force similar to KomLoc®
- integral ejector
- compatible with existing KomLoc® contour
- available in sizes HSK 40, 50, 63, 80 and 100
- operating key can be held on both sides



Article	Order No. with ejector	Pipe-Ø	Clamping force in kN
System K MQL-HSK40	L07 02040	3.9	20
System K MQL-HSK50	L07 02050	4.9	30
System K MQL-HSK63	L07 02060	6.9	40
System K MQL-HSK80	L07 02070	7.9	50
System K MQL-HSK100	L07 02080	9.9	70



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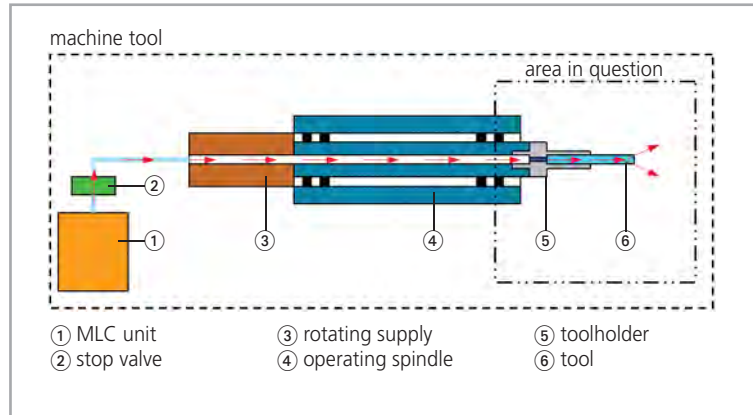


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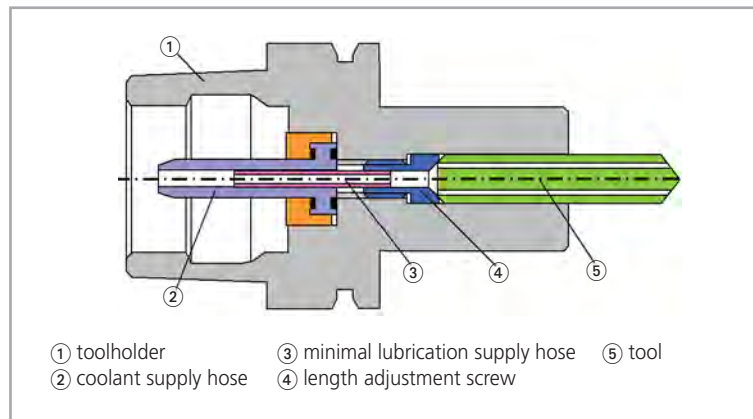
### Overall system (MLC)

One important aspect for trouble-free functioning of the MLC system is the interplay of the individual elements in the overall minimal lubrication system. It is not generally sufficient for example for the tool just to be suitable for use with minimal lubrication. In fact all the elements need to be appropriately matched with one another.

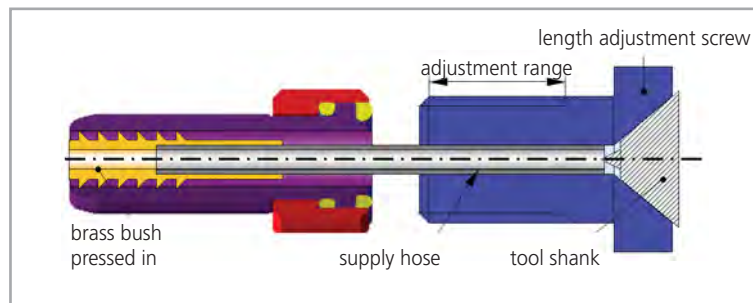


Components for an MLC machine tool

### Automatic tool change



View of elements in question using an HSK connection as an example

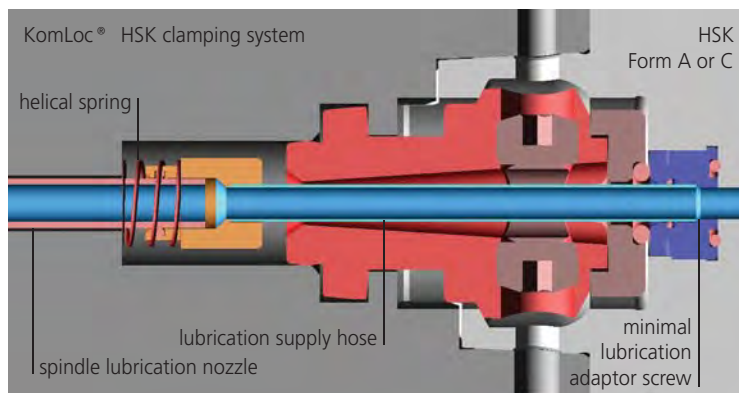


Accessories such as adjusting screws can be supplied for any chucks and supply hoses.



### Manual tool change

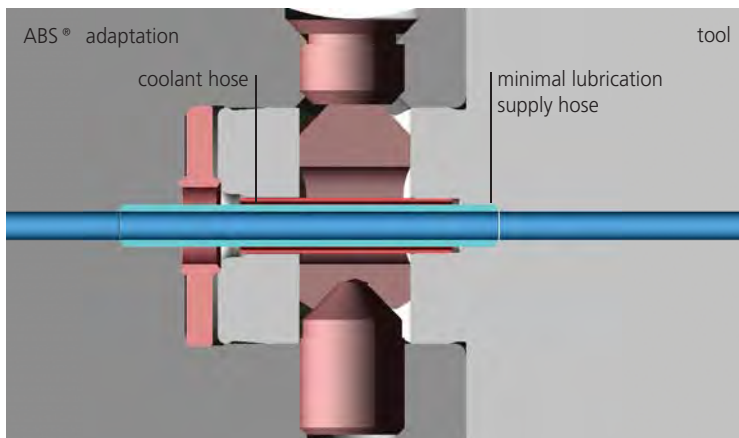
To successfully implement the manual clamping system, a solution for minimal lubrication supply on the machine was found for OEM projects. Here a system was applied which allowed the lubricant to be used in the best possible way. This solution involved connection by means of an HSK Form C adaptor with additional thread (as Form A) for the minimal lubricant adaptor screw to be fitted.



Layout for minimal lubrication with KomLoc® HSK clamping system

### ABS® modular connection

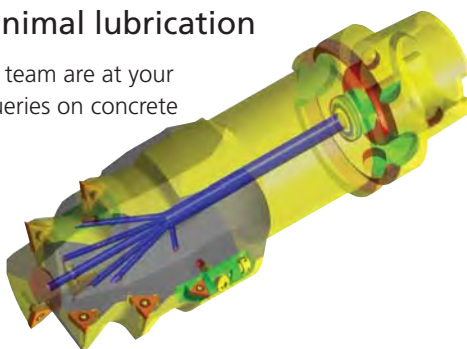
For ABS® connections and ABS® adaptors there are standard KOMET GROUP solutions. Please ask for information on the relevant projects. ABS® connections usually involve connections with a tool or a form of adaptation with which an extension or a reduction is required.



ABS® supply solution for minimal lubrication

### Tool design for minimal lubrication

Our engineers and project team are at your disposal at any time for queries on concrete projects.

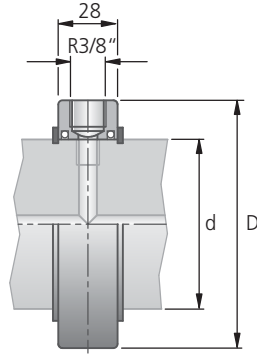


## Coolant Supply System

### Coolant Ring

KRD

- For machines with manual tool change.
- Peripheral speed: 15 - 20 m/sec.
- Coolant pressure up to approx. 10 bar.

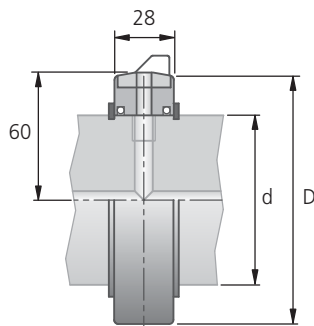


Order No. Article	d	D	kg	Assembly parts	
				Sealing ring	Retaining ring DIN 471
L01 00001 KRD 40	40	81	0.83	L01 00900	5523104017 40x1.75
L01 00011 KRD 50	50	91	1.08	L01 00910	5523105020 50x2
L01 00031 KRD 70	70	110	1.33	L01 00930	5523107025 70x2.5
L01 00041 KRD 80	80	120	1.49	L01 00940	5523108025 80x2.5
L01 00051 KRD 100	100	140	1.80	L01 00950	5523110030 100x3
L01 00061 KRD 125	125	165	2.22	L01 00960	5523112540 125x4
L01 00071 KRD 140	140	180	2.15	L01 00970	-

### Coolant Ring

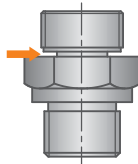
KRSD

- For machining centres and machines with automatic tool change, an automatic coolant supply system is available with coolant rings with lip seals.
- Peripheral speed: 15 - 20 m/sec.
- Coolant pressure up to approx. 10 bar.



Order No. Article	d	D	kg	Assembly parts	
				Sealing ring	Retaining ring DIN 471
L01 00411 KRSD 50	50	117	2.05	L01 00910	5523105020 50x2
L01 00431 KRSD 70	70	117	1.60	L01 00930	5523107025 70x2.5
L01 00441 KRSD 80	80	117	1.15	L01 00940	5523108025 80x2.5
L01 00451 KRSD 100	100	117		L01 00950	5523110030 100x3

### Coolant Connection



Article	Order No.
KUB-3/8	L01 00800

**NOTE:**

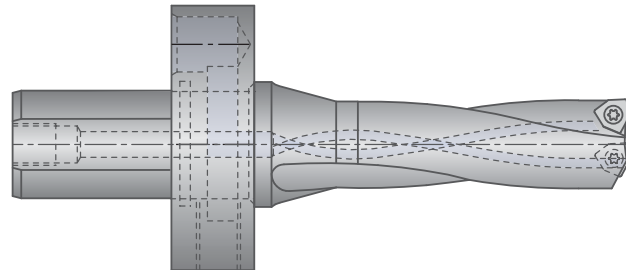
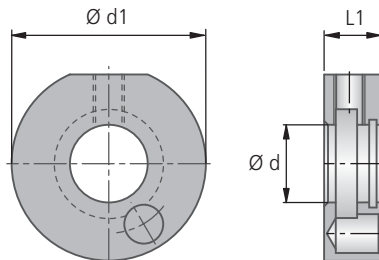
For safety reasons, only use a pipe connection with a definite shear point. Switch on coolant supply before starting operation.


We recommend use of KOMET pipe connections to prevent any risk of accident from torn pipes should the coolant ring seize.

Coolant supply ring for NC adaptors

Coolant supply ring for axial coolant supply

Coolant supply to DIN 69880



Order No.	Ø d	Ø d1	L1		Assembly parts
					Sealing ring
					Order No.
L01 01140	20	50	15	0.17	52914 02015
L01 01120	25	58	15	0.22	52914 02515
L01 01100	30	68	15	0.34	52914 03015
L01 01000	40	83	15	0.46	52914 04015

Supply includes:

Coolant supply ring with sealing ring.



## Coolant Supply System

### Mounting Instructions

1. A Taper holder with a KRSD coolant supply ring is inserted into the spindle.
2. Opposite the tool change side, i. e. where there is no obstruction, locate two taper holes on the headstock. Secure the two swivel holders (a, Fig. 2) to this and then the basic holder to the latter (b, Fig. 2). The swivel and basic holders can be assembled in several different ways. Two elongated holes on the basic holder offer additional movement so that this can always be adjusted into the correct position.
3. The holder for the hose (c, Fig. 2) is then inserted into the location bore and lightly clamped. This can be moved axially and rotated so that the location bolt inserted (d, Fig. 3) can be pushed gently and without force with its spigot piece into the coolant ring. The stop faces on the pin and coolant ring must be aligned with one another.
4. The hose holder (c, Fig. 2) is now set correctly and can be tightened accordingly. The location bolt is removed, the coolant hose inserted into the holder in its place and pressed against the coolant ring with a light force of approx. 100 g. The stop faces on the coolant hose and coolant ring must again be aligned parallel to one another (see also Fig. 1).
5. The clamping for the spindle, the coolant hose and all screws are now tightened and the supply hose connected. The fitting work is now complete (see Fig. 1).
6. Carry out a test run to check whether the fitting is functioning correctly and that there is no obstruction when changing tools.

#### Note:

The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

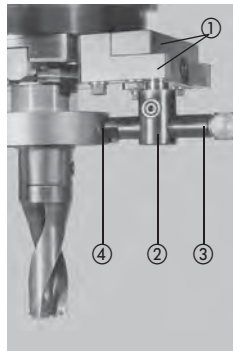


Fig. 1

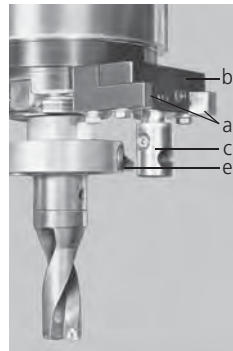


Fig. 2

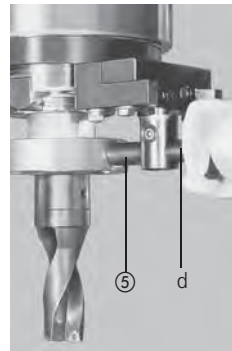


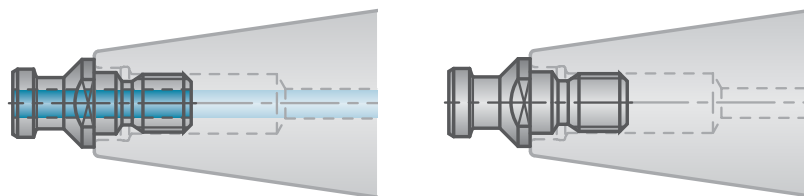
Fig. 3

This fixture provides the coolant supply to tools used on machining centres without affecting supply for manual operation.

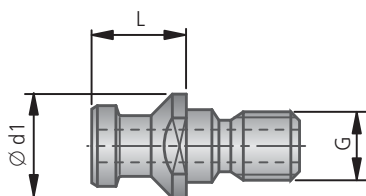
Article	Order No.
Coolant supply system complete	L01 05000 (AKV1)
① Basic body	L01 05000.11 L01 05000.12 L01 05000.18
② Hose holder	L01 05000.13 (AKV-V-004) L01 05000.17
③ Coolant hose	L01 05000.14 (AKV-Z-001)
④ Seal	L01 05000.15 (AKV-D-001)
⑤ Pins	L01 05000.16

**Note:**

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

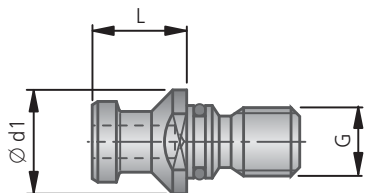


**DIN 69872 A**  
with through hole



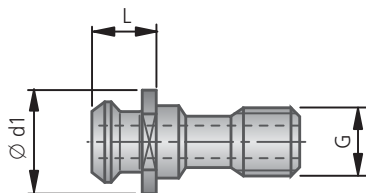
DIN 69872 A				
ISO size	Order No.	Ø d1	L	G
40	55391 01240	23	26	M16
45	55391 01645	30	30	M20
50	55391 02050	36	34	M24

**DIN 69872 B**  
sealed,  
for coolant through collar



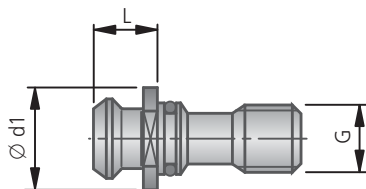
DIN 69872 B				
ISO size	Order No.	Ø d1	L	G
40	55392 01240	23	26	M16
45	55392 01645	30	30	M20
50	55392 02050	36	34	M24

**ISO 7388/2 B**  
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

**ISO 7388 B**  
sealed,  
for coolant through collar



ISO 7388 B				
ISO size	Order No.	Ø d1	L	G
40	55392 51640	22.5	16.40	M16
45	55392 52045	30.0	20.95	M20
50	55392 52450	37.0	25.55	M24



# KOMET® locking screws with TORX PLUS®

## Special features

### Improvements to detail to great effect

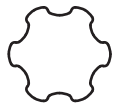
The new geometry of the head engagement with the TORX PLUS® system has been designed so that little wear is caused when the tightening moment is applied.

### Advantages:

- 100% longer life for screwdriver
- 25% higher torque transmission
- improvement to torsion resistance and production reliability

### Cross section

TORX PLUS®



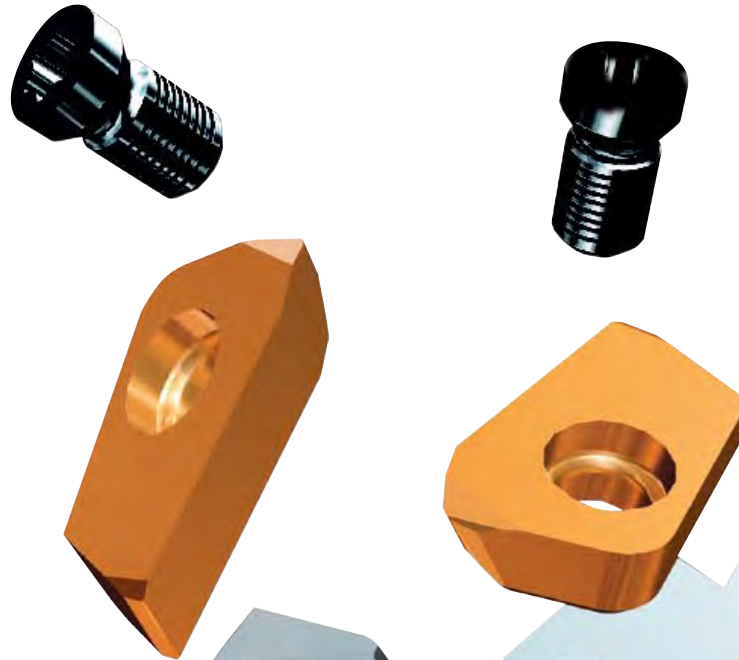
TORX



### Safer screw connections

The facility for applying greater forces (clamping torque) has a direct effect on the safety of your screw connection.

This advantage also applies when loosening existing screw connections.



1



2



3



4



5



6



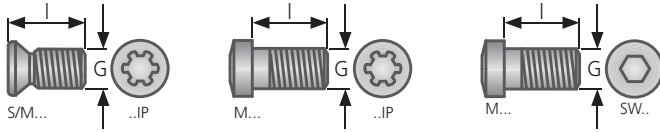
7








8



# KOMET® Clamping Screws for inserts W...

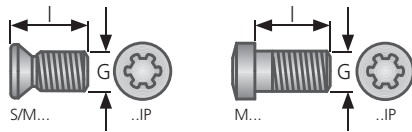




	Insert size	Clamping screw					Key			
		▼ G × l	Order No.	▼ G × l	Order No.	Nm	Size	 Order No.	 Order No.	
W00 <sub>WOHX</sub>	W00 04..	S/M1.8×2.9-5IP	N00 56011			0.38	5IP	L05 00800	L05 01110	
	W00 10..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W00 17..	M2.5×4.5-8IP	N00 55581	M2.5×2.8-8IP	N00 55551*	1.28	8IP	L05 00830	L05 01240	
				M2.5×4-8IP	N00 55561*					
	W00 24..	M2.5×6-8IP	N00 55571	M2.5×4-8IP	N00 55561*	1.28	8IP	L05 00830	L05 01240	
				M2.5×4.5-8IP	N00 55581*					
	W00 34..	M3.5×5-8IP	N00 55701			2.25	8IP	L05 00830	L05 01240	
		M3.5×7.4-8IP	N00 55711							
W00 42..	M4.5×7-10IP	N00 55811	M4.5×6-10IP	N00 55801*	4.3	10IP	L05 00850	L05 01260		
			M4.5×9-10IP	N00 55821*						
W00 50..	M4.5×7-10IP	N00 55811	M4.5×9-10IP	N00 55821*	4.3	10IP	L05 00850	L05 01260		
W00 58..	M5.5×8.5-20IP	N00 55891	M5.5×13.5-20IP	N00 55901*	6.25	20IP	L05 00870	-		
W01 <sub>WOHX</sub>	W01 10..	S/M2×4.3-6IP	N00 56041			0.62	6IP	L05 00810	L05 01120	
	W01 18..	S/M2.2×5.5-6IP	N00 57553			1.01	6IP	L05 00810	L05 01120	
	W01 24..	S/M2.5×7.2-8IP	N00 57511			1.28	8IP	L05 00830	L05 01240	
	W01 34..	S/M3.5×7.3-10IP	N00 57521			2.8	10IP	L05 00850	L05 01260	
	W01 42..	S/M4.5×9-15IP	N00 57531			6.25	15IP	L05 00860	-	
	W01 50..	S/M4.5×9-15IP	N00 57531			6.25	15IP	L05 00860	-	
W01 58..	S/M5.5×11-20IP	N00 57541			6.25	20IP	L05 00870	-		
W04 <sub>WNHX</sub>										
	W04 22..	M3×7.8 /75°	N00 55050	M3×7.8 /75°	N00 55050	1.8	SW 1.5	18591 10015		
	W04 34..	M3.5×9.4/60°	N00 55060	M3.5×11.4/60°	N00 55070	2.8				
	W04 42..	M4.5×12.4	N00 55100	M4.5×18.7	N00 55130	4.5	SW 2.5	18591 10025		
		M4.5×14.5	N00 55110							
W04 50..	M4.5×16.4	N00 55120	M4.5×22.5	N00 55140	4.5	SW 2.5	18591 10025			
W04 58..	M5.5×29.2	N00 55180	M5.5×29.2	N00 55180	6.5	SW 3	18591 10030			
W24										
	W24 12..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W24 20..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01240	
W27	W27 12..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W27 20..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01240	
W28 <sub>WOEX</sub>	W28 10..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W28 17..	M2.5×4.5-8IP	N00 55581	M2.5×2.8-8IP	N00 55551*	1.28	8IP	L05 00830	L05 01240	
				M2.5×4-8IP	N00 55561*					
	W28 24..	M2.5×6-8IP	N00 55571	M2.5×4-8IP	N00 55561*	1.28	8IP	L05 00830	L05 01240	
				M2.5×4.5-8IP	N00 55581*					
	W28 34..	M3.5×5-8IP	N00 55701	M3.5×7.4-8IP	N00 55711	2.25	8IP	L05 00830	L05 01240	
	W28 42..	M4.5×7-10IP	N00 55811	M4.5×6-10IP	N00 55801*	4.3	10IP	L05 00850	L05 01260	
				M4.5×9-10IP	N00 55821*					
W28 50..	M4.5×7-10IP	N00 55811	M4.5×9-10IP	N00 55821*	4.3	10IP	L05 00850	L05 01260		
W28 58..	M5.5×8.5-20IP	N00 55891	M5.5×13.5-20IP	N00 55901*	6.25	20IP	L05 00870	-		
W28 72..	M5.5×13.5-20IP	N00 55901			6.25	20IP	L05 00870	-		

\* only be used for special tools

# KOMET® Clamping Screws

for inserts W...

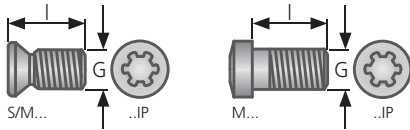


	Insert size	Clamping screw					Key			
		▼ G × l	Order No.	▼ G × l	Order No.	Nm	Size	 Order No.	 Order No.	
W29 WOEX	W29 04..	S/M1.8×3.8-5IP	N00 56051			0.38	5IP	L05 00800	L05 01110	
	W29 10..	S/M2×4.3-6IP	N00 56041			0.62	6IP	L05 00810	L05 01120	
	W29 18..	S/M2.2×5.5-6IP	N00 57553			1.01	6IP	L05 00810	L05 01120	
	W29 24..	S/M2.5×7.2-8IP	N00 57511			1.28	8IP	L05 00830	L05 01240	
	W29 34..	S/M3.5×7.3-10IP	N00 57521	S/M3.5×7.3-10IP	N00 57790**	2.8	10IP	L05 00850	L05 01260	
	W29 42..	S/M4.5×9-15IP	N00 57531			6.25	15IP	L05 00860	-	
	W29 50..									
W29 58..	S/M5.5×11-20IP	N00 57541			6.25	20IP	L05 00870	-		
W30 TOHX/TOGX	W30 04..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W30 14..	S/M2.6×6.2-8IP	N00 56111	S/M2.6×5.2-8IP	N00 56101*	1.28	8IP	L05 00830	L05 01240	
				S/M2.6×4.7-8IP	N00 56121*					
	W30 26..	S/M3.5×6.2-10IP	N00 56201	S/M3.5×7.3-10IP	N00 56211*	2.8	10IP	L05 00850	L05 01260	
W30 44..	S/M5×9.4-20IP	N00 56401	S/M5×13.4-20IP	N00 56411*	6.25	20IP	L05 00870	-		
W32 TPHX	W32 03..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W32 13..	S/M2.6×6.2-8IP	N00 56111	S/M2.6×5.2-8IP	N00 56101*	1.28	8IP	L05 00830	L05 01240	
	W32 18..			S/M2.6×4.7-8IP	N00 56121*					
	W32 23..	S/M3.5×6.2-10IP	N00 56201	S/M3.5×7.3-10IP	N00 56211*	2.8	10IP	L05 00850	L05 01260	
	W32 32..	S/M4×8-10IP	N00 56301			4.3	10IP	L05 00850	L05 01260	
W32 44..	S/M5×9.4-20IP	N00 56401	S/M5×13.4-20IP	N00 56411*	6.25	20IP	L05 00870	-		
W34 TOHT	W34 18..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01140	
	W34 32..	S3574-10IP	N00 56751	S35102-10IP	N00 56771	2.8	10IP	L05 00850	L05 01260	
W37 TPHB	W37 18..	S/M2.6×6.2-8IP	N00 56111	S/M2.6×5.2-8IP	N00 56101*	1.28	8IP	L05 00830	L05 01240	
				S/M2.6×4.7-8IP	N00 56121*					
	W37 23..	S/M3.5×6.2-10IP	N00 56201	S/M3.5×7.3-10IP	N00 56211*	2.8	10IP	L05 00850	L05 01260	
	W37 32..	S/M4×8-10IP	N00 56301			4.3	10IP	L05 00850	L05 01260	
W57 TOHX/TOGX	W57 04..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W57 14..	S/M2.6×6.2-8IP	N00 56111	S/M2.6×5.2-8IP	N00 56101*	1.28	8IP	L05 00830	L05 01240	
				S/M2.6×4.7-8IP	N00 56121*					
W57 26..	S/M3.5×6.2-10IP	N00 56201	S/M3.5×7.3-10IP	N00 56211*	2.8	10IP	L05 00850	L05 01260		
W58 TPHX	W58 03..	S/M2×4.9-6IP	N00 56031	S/M2×3.8-6IP	N00 56021*	0.62	6IP	L05 00810	L05 01120	
	W58 13..	S/M2.6×6.2-8IP	N00 56111	S/M2.6×5.2-8IP	N00 56101*	1.28	8IP	L05 00830	L05 01240	
	W58 18..			S/M2.6×4.7-8IP	N00 56121*					
	W58 23..	S/M3.5×6.2-10IP	N00 56201	S/M3.5×7.3-10IP	N00 56211*	2.8	10IP	L05 00850	L05 01260	
W58 32..	S/M4×8-10IP	N00 56301			4.3	10IP	L05 00850	L05 01260		
W59 TOHT	W59 18..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01240	
	W59 32..	S3574-10IP	N00 56751	S35102-10IP	N00 56771	2.8	10IP	L05 00850	L05 01260	
W60 DOHT	W60 18..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01140	
	W60 32..	S3574-10IP	N00 56751	S35102-10IP	N00 56771	2.8	10IP	L05 00850	L05 01260	
W78 VOH/MOGW	W78 18..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01140	
	W78 32..	S3574-10IP	N00 56751	S35102-10IP	N00 56771	2.8	10IP	L05 00850	L05 01260	
W79 DOHT	W79 18..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01140	
	W79 32..	S3574-10IP	N00 56751	S35102-10IP	N00 56771	2.8	10IP	L05 00850	L05 01260	

\* only be used for special tools; \*\* tensile strength 1600 N/mm<sup>2</sup>



# KOMET® Clamping Screws for inserts W... / C...



	Insert size	Clamping screw				Key			
		▼ G x l	Order No.	▼ G x l	Order No.	Nm	Size	Order No.	Order No.
W80 SOGX	W80 12..	S/M2x4.3-6IP	N00 56041			0.62	6IP	L05 00810	L05 01120
	W80 18..	S/M2.2x5.5-6IP	N00 57553			1.01	6IP	L05 00810	L05 01120
	W80 20..	S/M2.2x5.5-6IP	N00 57553			1.01	6IP	L05 00810	L05 01120
	W80 24..	S/M2.5x6.3-8IP	N00 57571			1.28	8IP	L05 00830	L05 01240
	W80 28..	S3076-8IP	N00 57251			2.25	8IP	L05 00830	L05 01240
	W80 32..	S3575-15IP	N00 57261			2.8	15IP	L05 00860	-
	W80 38..	S3575-15IP	N00 57261			2.8	15IP	L05 00860	-
	W80 42..	S45100-20IP	N00 57301			6.25	20IP	L05 00870	-
W80 46..	S45100-20IP	N00 57301			6.25	20IP	L05 00870	-	
W82 SOHX	W82 32...	S3575-15IP	N00 57261			2.8	15IP	L05 00860	-
W83 SOEX	W83 13..	S/M2x4.3-6IP	N00 56041			0.62	6IP	L05 00810	L05 01120
	W83 18..	S/M2.2x5.5-6IP	N00 57553	S/M2.2x5.5-6IP S/M2.2x7.5-6IP	N00 57740** N00 57760**	1.01	6IP	L05 00810	L05 01120
	W83 23..	S/M2.5x6.3-8IP	N00 57571	S/M2.5x6.3-8IP S/M2.5x8.8-8IP	N00 57730** N00 57780**	1.28	8IP	L05 00830	L05 01240
	W83 32..	S3575-15IP	N00 57261	S3575-15IP	N00 57750**	2.8	15IP	L05 00860	-
	W83 44..	S45100-20IP	N00 57301			6.25	20IP	L05 00870	-
W82 SPGT/SPWG	W83 18..	S2553-7IP	N00 57221			0.9	7IP	L05 00820	L05 01130
	W83 32..	S3575-15IP	N00 57261			2.8	15IP	L05 00860	-
	W83 44..	S45111-20IP	N00 56851			6.25	20IP	L05 00870	-
W84	W84 18000.01..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01140
	W84 32000.07..	S35102-10IP	N00 56771			2.8	10IP	L05 00850	L05 01260
W85 CPGT/CPGW	W85 09000...	S2043-6IP	N00 57191			0.62	6IP	L05 00810	L05 01120
	W85 18000.01.. / .02..	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01240
	W85 18000...	S2553-7IP	N00 57221			0.9	7IP	L05 00820	L05 01130
	W85 23000...	S3065-9IP	N00 57341			2.25	9IP	L05 00840	L05 01250
	W85 32000.02.. / .03.. / .04.. / .05..	S3574-10IP	N00 56751			2.8	10IP	L05 00850	L05 01260
	W85 32000...	S3575-15IP	N00 57261			2.8	15IP	L05 00860	-
	W85 44000...	S45111-20IP	N00 56851			6.25	20IP	L05 00870	-
W86	W86 18000...	S2560-8IP	N00 56651			1.28	8IP	L05 00830	L05 01240
	W86 32000...		16301 00537				Tx15	L05 00070	-
W89 VCMT/MBMT	W89 23000...		51560 74551				Tx9	L05 00050	-
	W89 32000.05.. / .06..		16301 00537				Tx15	L05 00070	-
	W89 32000.07.. / .08..	S3585-15IP	N00 57271			2.8	15IP	L05 00860	-

	Insert size	Clamping screw				Key			
		G x l	Article	Order No.	Nm	Size	Order No.	Order No.	
C83	C83 32.. SCMT / SCGT	3.5x7.5	S3575-15IP	N00 57261	2.8	15IP	L05 00860	-	
	C83 44.. SCMT / SCGT	4.5x11.1	S45111-20IP	N00 56851	6.25	20IP	L05 00870	-	
C84	C84 13.. TCMT / TCGT	2.2x4.8	S/M2.2x4.8-6IP	N00 57660	1.01	6IP	L05 00810	L05 01120	
	C84 18.. TCMT / TCGT	2.5x6	S2560-8IP	N00 56651	1.28	8IP	L05 00830	L05 01140	
	C84 32.. TCMT / TCGT	3.5x10.2	S35102-10IP	N00 56771	2.8	10IP	L05 00850	L05 01260	
C85	C85 18.. CCMT / CCGT	2.5x5.3	S2553-7IP	N00 57221	0.9	7IP	L05 00820	L05 01130	
	C85 32.. CCMT / CCGT	3.5x7.5	S3575-15IP	N00 57261	2.8	15IP	L05 00860	-	
	C85 44.. CCMT / CCGT	4.5x11.1	S45111-20IP	N00 56851	6.25	20IP	L05 00870	-	
C86	C86 18.. DCMT / DCGT	2.5x6	S2560-8IP	N00 56651	1.28	8IP	L05 00830	L05 01240	
	C86 32.. DCMT / DCGT	3.5x7.5	S3575-15IP	N00 57261	2.8	15IP	L05 00860	-	

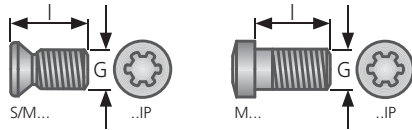
\*\* tensile strength 1600 N/mm<sup>2</sup>



\* only be used for special tools



# KOMET® Clamping Screws

for inserts H... / Q...



	Insert size	Clamping screw				Key		
		G × l	Article	Order No.	Nm	Size	 Order No.	 Order No.
H60 / H62	XOHX 0802.. (∅ 17.3 – 20.7)	2.2×4.8	S/M2.2×4.8-6IP	N00 57660	1.01	6IP	L05 00810	L05 01120
	XOHX 1003.. (∅ 20.8 – 24.7)	3×5.8	S/M3×5.8-8IP	N00 57630	2.25	8IP	L05 00830	L05 01240
	XOHX 12T3.. (∅ 24.8 – 29.7)	3.5×6.9	S/M3.5×6.9-10IP	N00 57640	2.8	10IP	L05 00850	L05 01260
	XOHX 1504.. (∅ 29.8 – 36.2)	4×8.7	S/M4×8.7-15IP	N00 57650	4.3	15IP	L05 00860	–
	XOHX 2205.. (∅ 36.3 – 44.2)	5×10.4	S/M5×10.4-20IP	N00 57670	6.25	20IP	L05 00870	–
H80	LNGU 0904 (∅ 32 – 41.99)	3×7.6	S3076-8IP	N00 57251	2.25	8IP	L05 00830	L05 01240
	LNHX 120510-01 (∅ 42 – 61.99)	4×10.1	S40101-15IP	N00 57411	4.3	15IP	L05 00860	–
Q09	Q09 13.. / Q09 18..	2.5×5.3	S2553-7IP	N00 57221	0.9	7IP	L05 00820	L05 01130
	Q09 44.. / Q09 53..	4.5×10	S45100-20IP	N00 57301	6.25	20IP	L05 00870	–
	Q12	Q12 18..	2.5×3.6	S2536-7IP	N00 57201	0.9	7IP	L05 00820
2.5×4.2			S2542-8IP	N00 57211	1.28	8IP	L05 00830	L05 01240
2.5×5.3			S2553-7IP	N00 57221	0.9	7IP	L05 00820	L05 01130
Q12 32000.05.. / .06..		3×5.6	S3056-8IP	N00 57231	2.25	8IP	L05 00830	L05 01240
Q12 32000.07..		3×7	S3070-8IP	N00 57241	2.25	8IP	L05 00830	L05 01240
Q12 32000.08.. / .09..		3.5×8.5	S3585-15IP	N00 57271	2.8	15IP	L05 00860	–
Q12 32000.15.. / .16.. / .17..		3.5×9.8	S3598-15IP	N00 57281	2.8	15IP	L05 00860	–
Q12 32000.18.. / .19.. / .20..		3×7.6	S3076-8IP	N00 57251	2.25	8IP	L05 00830	L05 01240
Q12 32000.38.. / .41.. / .42.. / .43..		3.5×9.8	S3598-15IP	N00 57281	2.8	15IP	L05 00860	–
Q12 32000.52.. / .53..		3×6.6	S3066-8IP	N00 57431	2.25	8IP	L05 00830	L05 01240
Q15	Q12 44..	4.5×10	S45100-20IP	N00 57301	6.25	20IP	L05 00870	–
	Q15 18..	2.5×5.3	S2553-7IP	N00 57221	0.9	7IP	L05 00820	L05 01130
Q21	Q15 32..	3.5×7.5	S3575-15IP	N00 57261	2.8	15IP	L05 00860	–
	Q21 24..	3×7.6	S3076-8IP	N00 57251	2.25	8IP	L05 00830	L05 01240
	Q21 32..	3.5×7.5	S3575-15IP	N00 57261	2.8	15IP	L05 00860	–
Q33	Q21 44..	4.5×10	S45100-20IP	N00 57301	6.25	20IP	L05 00870	–
	Q33 18..	2.5×6	S2560-8IP	N00 56651	1.28	8IP	L05 00830	L05 01240
	Q33 23..	3×7	S3070-8IP	N00 57241	2.25	8IP	L05 00830	L05 01240
		3×7.6	S3076-8IP	N00 57251				
Q36	Q36 18..	2.5×5.6	S2556-8IP	N00 57321	1.28	8IP	L05 00830	L05 01240
	Q36 24..	3×6.6	S3066-9IP	N00 57341	2.25	9IP	L05 00840	L05 01250
	Q36 38..	4×10.1	S40101-15IP	N00 57411	4.3	15IP	L05 00860	–
Q80	Q80 32..	4×10.1	S40101-15IP	N00 57411	4.3	15IP	L05 00860	–

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

### Torque wrench TorqueFix®

with fixed preset torque

accuracy: ± 6% release torque: + 30%

TorqueFix®			appropriate replaceable blade
Size	Torque	Order No.	Order No.
5IP	0.38 Nm	L05 00901	L05 00700
6IP	0.62 Nm	L05 00911	L05 00710
6IP	1.01 Nm	L05 03301	L05 00710
7IP	0.90 Nm	L05 00921	L05 00720
8IP	1.28 Nm	L05 00931	L05 00730
8IP	2.25 Nm	L05 03311	L05 00730
9IP	2.50 Nm	L05 00941	L05 00740
10IP	2.80 Nm	L05 00951	L05 00750
15IP	4.30 Nm	L05 00961	L05 00760
20IP	6.25 Nm	L05 00971	L05 00770

Supply includes: Torque wrench without replaceable blade.

### Torque wrench easyTorque

with fixed preset torque

accuracy: ± 10% release torque: unbounded

easyTorque			appropriate replaceable blade
Size	Torque	Order No.	Order No.
5IP	0.38 Nm	L05 00902	L05 00700
6IP	0.62 Nm	L05 00912	L05 00710
6IP	1.01 Nm	L05 00922	L05 00710
8IP	1.28 Nm	L05 00932	L05 00730
8IP	1.8 Nm	L05 03320	L05 00730
8IP	2.25 Nm	L05 00942	L05 00730
9IP	2.50 Nm	L05 00952	L05 00740
10IP	2.80 Nm	L05 00962	L05 00750
15IP	4.30 Nm	L05 00972	L05 00760

Supply includes: Torque wrench without replaceable blade.

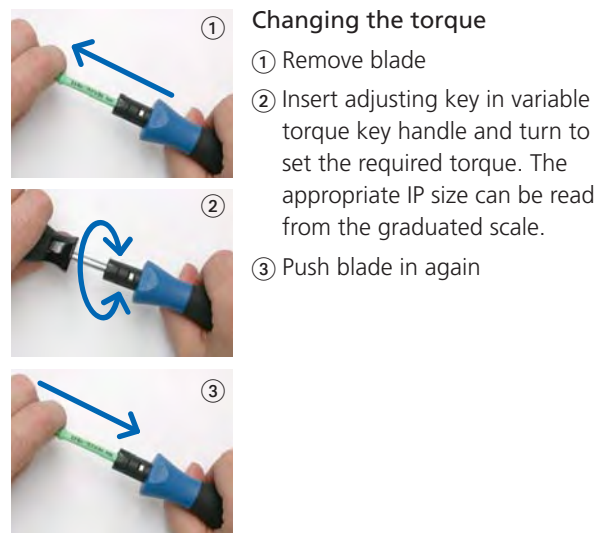
### Torque wrench TorqueVario®

adjustable with scale

TorqueVario®			appropriate replaceable blade
Size	Torque	Order No.	Order No.
5IP – 7IP	0.38 - 1.01 Nm	L05 00781	L05 00700
			L05 00710
			L05 00720
9IP – 20IP	2.25 - 6.25 Nm	L05 00791	L05 00740
			L05 00750
			L05 00760
			L05 00770

Supply includes:

Torque wrench with adjusting key L05 00990, without replaceable blade.



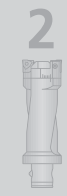
#### ① Changing the torque

- 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



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

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





TORX PLUS® is a registered trademark for the Camcar Division of Textron Inc.



# International Material Classification (to VDI 3323 standard)

Material	DIN 	AISI / SAAE 	BS EN 	AFNOR 	SS 	UNI 	UNE 	JIS 
1.0	1.0038	RSt37-2	A570-36	4360 40C	E24-2NE	1311		
1.0	1.0116	St37-3	A573-81 65	4360 40B	E24-U	1312		
1.0	1.0144	St44-3	A573-81	4360 43C	E28-4	1412		
1.0	1.0201	St36	1006		Fd5	1160		
1.0	1.0345	H1	A515 65	1 501 161	A37CP	1330		
2.0	1.0401	C15	1015;1016;1017	080M15	CC12	1350	C15C16	F.111
2.0	1.0402	C22	1020;1023	055M15;070M20 ... 2C	AF42C20;XC25;1C22	1450	C20; C21; C25	1C22F.112
2.0	1.0436	Ast45	A662C	1 501 224	A48FP	2103		S20C; S22C
2.0	1.0443	GS-45	A27 65-35	A1	E23-45M			
2.0	1.0473	19Mn6	A537 1	1 501 224	A52CP	2101		
2.0	1.0501	C35	1035	060A35	CC35	1550	C35	F.113
2.0	1.0503	C45	1043	080M46	AF65C45	1650	C45	F.5110
2.0	1.0503	C45	1045	080M46	CC45	1650	C45	F.114
2.0	1.0511	C40	1040	080M40	AF60C40		C40	F.114.A
2.0	1.0535	C55	1055	070M55		1655	C55	F.115
2.0	1.0551	GS-52	A27 70-36	A2	280-480M	1505		
2.0	1.0553	GS-60	A148 80-40	A3	320-560M	1606		
2.0	1.0577	Ast 52	A738	1 501 224	A52FP	2107		
2.0	1.0601	C60	1060	080A62 ... 43D	CC55		C60	
2.0	1.0841	St52-3	5120	150M19	20MC5	2172	Fe52	F.431
2.0	1.1121	Ck10	1010	045M10	XC10	1265	C10	F.1510-C10K
2.0	1.1133	20Mn5	1022;1518	120M19	20M5	1132	G22Mn3;20Mn7	F.1515-20Mn6
2.0	1.1141	CK 15	1015, 1017	080M15	XC18	1370		F.1511
2.0	1.1158	C25E;Ck25	1025	070M26	2C25;XC25	1450	C25	F.1120-C25k
2.0	1.1183	Cf35	1035	060A35	XC38T5	1572	C36	S25C; S28C
2.0	1.1191	Ck45	1042	080A47	XC45	1660	C45	S35C
2.0	1.1545	C105W1	W110	BW1A	Y105	1880	C36KU	F.1140
2.0	1.5415	15Mo3	ASTM A204Gr.A	1501-240	15D3	2912	16Mo3KW	F.5118
2.0	1.5423	16Mo5	4520	1503-245-420			16Mo5	SK3
2.0	1.5622	14Ni6	ASTM A350LF5		16N6		14Ni6	STBA 12
2.1	1.0715	9 SMn28	1213	230M07	S250	1912	CF9SMn28	16Mo5
2.1	1.0718	9 SMnPb28	12 L 13		S250Pb	1914	CF9SMnPb28	16Mo5
2.1	1.0722	10 SPb20	11 L 08		10PbF2		CF10 SPb20	16Mo5
2.1	1.0726	35S20	1140	212M36 ... 8M	35M F6	1957		16Mo5
2.1	1.0727	45S20	1146		45M F4	1973		16Mo5
2.1	1.0736	9SMn36	1215	240M07 ... 1b	S300		CF9SMn36	16Mo5
2.1	1.0737	9SMnPb36	12 L 14		S300Pb	1926	CF9SMnPb36	16Mo5
3.0	1.0904	55Si7	9255	250A53 ... 45	55S7	2085	55Si8	16Mo5
3.0	1.0961	60SiCr8	9262		60SC6		60SiCr8	16Mo5
3.0	1.1157	40Mn4	1039	150M36 ... 15	35M5			16Mo5
3.0	1.1167	36Mn5	1335	150M36	40M5	2120	36Mn5	16Mo5
3.0	1.1170	28Mn6	1330	150M28 ... 14A	20M5		C28Mn	16Mo5
3.0	1.1203	Ck55	1055	070M55	XC55		C50	16Mo5
3.0	1.1213	Cf53	1050	060A52	XC48T5	1674	C53	16Mo5
3.0	1.1221	Ck60	1064	060A62	XC65	1678	C60	16Mo5
3.0	1.1231	Ck67	1070	070A72	XC68	1770	C70	16Mo5
3.0	1.1248	Ck75	1080	060A78	XC75	1774		16Mo5
3.0	1.1274	Ck101	1095	060A96	XC100	1870		16Mo5
3.0	1.2713	55NiCrMoV6	L6		55NCDV7			16Mo5
3.0	1.2721	50NiCr13	L6		55NCRV6	2550		16Mo5
3.0	1.3401	G-X120Mn12	ASTM A128 75	BW10	Z120M12	2183	GX120Mn12	16Mo5
3.0	1.3505	100Cr6	52100	534A99 ... 31	100C6	2258	100Cr6	16Mo5
3.0	1.5662	X8Ni9	ASM A353	502-650	9 Ni		X10Ni9	16Mo5
3.0	1.5680	12Ni19	2515 (2517)	12Ni19	Z18N5		12Ni19	16Mo5
3.0	1.5710	36NiCr6	3135	640A35 ... 111A	35NC6			16Mo5
3.0	1.5732	14NiCr10	3415		14NC11		16NiCr11	16Mo5
3.0	1.5752	14NiCr14	3310	655M13 ... 36A	12NC15			16Mo5
3.0	1.6511	36CrNiMo4	9840	816M40 ... 110	40NCD3		36NiCrMo4(KB)	16Mo5
3.0	1.6523	21NiCrMo2	8620, 8617	805M20 ... 362	20NCD2	2506	20NiCrMo2	16Mo5
3.0	1.6546	40NiCrMo22	8740, 8640, 8742	311-Type 7	40NCD2		40NiCrMo2(KB)	16Mo5
3.0	1.6582	35CrNiMo6	4340	817M40 ... 24	35NCD6	2541	35NiCrMo6(KB)	16Mo5
3.0	1.6587	17CrNiMo6	4317	820A16	18NCD6			16Mo5
3.0	1.6657	14NiCrMo13-4	9310	832M13 ... 36C			15NiCrMo13	16Mo5
3.0	1.7015	15Cr3	5015	523M15	12C3			16Mo5
3.0	1.7033	34Cr4	5132	530A32 ... 18B	32C4		34Cr4(KB)	16Mo5
3.0	1.7035	41Cr4	5140	530M40 ... 18	42C4		41Cr4	16Mo5
3.0	1.7039	34MoCrS4 G	L1	524A14		2092	105WCR 5	16Mo5
3.0	1.7045	42Cr4	5140			2245		16Mo5
3.0	1.7131	16MnCr5	5115	(527M20)	16MC5	2511	16MnCr5	16Mo5
3.0	1.7139	16MnCr5				2127		16Mo5
3.0	1.7176	55Cr3	5155	527A60 ... 48	55C3			16Mo5
3.0	1.7218	25CrMo4	4130	1717CDS110	25CD4	2225	25CrMo4(KB)	16Mo5
3.0	1.7220	34CrMo4	4135, 4137	34CrMo4	34CD4	2234	35CrMo4	16Mo5
3.0	1.7223	41CrMo4	4142				41CrMo4	16Mo5
3.0	1.7225	42CrMo4	4140	708M40 ... 19A	42CD4	2244	42CrMo4	16Mo5
3.0	1.7262	15CrMo5			12CD4	2216	12CrMo4	16Mo5
3.0	1.7335	13CrMo4 4	ASTM A182 F-12				14CrMo4 5	16Mo5
3.0	1.7337	16CrMo44	ASTM A387 12-2	1501 620	15CD 4.5	2216	12CrMo910	16Mo5
3.0	1.7361	32CrMo12		722M24 ... 40B	30CD12	2240	32CrMo12	16Mo5
3.0	1.7715	14MoV6 3		1503-660-440				16Mo5
3.0	1.8159	50CrV4	6150				50CrV4	16Mo5
3.0	1.8509	41CrAlMo7	ASTM A290	905M39 ... 41B	40CAD6, 12	2940	41CrAlMo7	16Mo5
3.0	1.8515	31 CeMo 12		722M24	30 CD 12	2240	30CrMo12	16Mo5
3.0	1.8523	39CrMoV13 9		897M39 ... 40C			36CrMoV12	16Mo5
4.0	1.2067	100Cr6	L3	BL3	Y100C6			16Mo5
4.0	1.2080	X210Cr12	D3	BD3	Z200C12		X210Cr13KU	16Mo5
4.0	1.2083	X42Cr13			X40Cr14	2314		16Mo5
4.0	1.2344	X40CrMoV5 1	H13	BH13	Z40CDV5	2242	X40CrMoV511KU	16Mo5

# International Material Classification (to VDI 3323 standard)

Material		DIN 	AISI / SAAE 	BS EN 	AFNOR 	SS 	UNI 	UNE 	JIS 	
P	4.0 1.2363	X100CrMoV5 1	A2	BA2	Z100CDV5	2260	X100CrMoV51KU	F.5227	SKD12	
	4.0 1.2379	X155CrVMo121	D2	BD2	Z160CDV12	2310	X155CrVMo12 1KU	F.520.A	SKD11	
	4.0 1.2419	105WCr6			105WC13	2140	107WCr5	105WCr5	SKS31	
	4.0 1.2436	X210 CrW 12	D4 (D6)	BD6	Z200CD12-01	2312	X215CrW12 1KU	F.5213		
	4.0 1.2542	45WCrV7	S1	BS1	45WCrV8	2710	45WCrV8KU	F.524		
	4.0 1.2581	X30WCrV9 3	H21	BH21	Z30WCV9		X30WCrV9 3KU	F.526	SKD5	
	4.0 1.2601	X165CrMoV12				2310	X165CrMoW12KU	F.5211		
S	4.1 1.3243	S6/5/2/5	M35	BM35	6-5-2-5	2723	HS6 5 2 5	F.5613	SKH55	
	4.1 1.3343	S6/5/2	M2	BM2	Z85WDCV	2722	HS6 5 2	F.5604	SKH51	
	4.1 1.3348	S2/9/2	M7		Z 9 2	2782	HS2 9 2			
	5.0 -	CoCr22W14	AMS 5772							
	5.0 1.4362	X2CrNiN23 4	S32304							
	5.0 1.4460	X8CrNiMo27-5	S32900							
	5.0 1.4462	X2CrNiMoN2253	S31803							
	5.0 2.4375	NiCu30Al	4676	3072-76						
	5.0 2.4603	NiCr 30 FeMo	5390A							
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	5.0 2.4631	NiCr20TiAk		HR40,601						
	5.0 2.4856	NiCr22Mo9N	5666							
	5.0 2.4973	NiCr19Co11	AMS 5399							
	5.0 LW2.467	S-NiCr13A16	5391	3146-3						
	5.0 LW2.466	NiFe35Cr14	5660							
	5.0 LW2.466	NiCr19Fe19	5383	HR8						
	5.0 LW2.466	NiCr19Fe19	AMS 5544							
5.0 LW2.467	NiCo15Cr10	AMS 5397								
5.0 LW2.496	CoCr20W15	5537C								
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5.1 -	TiAl6V4ELI	AMS R56401	TA11							
5.1 3.7114	TiAl5Sn2.5	AMS R54520	TA14/17	T-A5E						
5.1 3.7164	TiAl6V4	AMS R56400	TA10-13/TA2	T-A6V						
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	6.0 1.4006	X10Cr13	410	410S21 ... 56A	Z10C14	2302	X12Cr13	F.3401	SUS410	
	6.0 1.4021	X20Cr13	420	420S37	Z20C13	2303	X20Cr13			
	6.0 1.4034	X46Cr13		420S45 ... 56D	Z40CM	2304	X40Cr14	F.3405	SUS420J2	
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	6.0 1.4104	X12CrMoS17	430F		Z10CF17	2383	X10CrS17	F.3117	SUS430F	
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	6.0 1.4113	X6CrMo17	434	434S17	Z8CD17.01	2325	X8CrMo17		SUS434	
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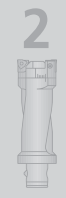


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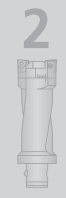


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V57 71752	94	V83 74900	124	W01 24060.04..	696				
V57 71792	94	V83 75000	124	W01 24120.02..	696	W29 04010.02..	712	W30 04060.02..	720
V57 71912	94	V83 75100	124	W01 24120.04..	696	W29 10010.04..	712	W30 04060.03..	720
V57 71942	94	V83 75200	124	W01 24360.04..	697	W29 10030.04..	714	W30 04060.04..	720
V57 71982	94	V83 75300	124	W01 24420.02..	697	W29 10110.04..	715	W30 04060.30..	720
V57 72062	94	V83 75400	124	W01 24600.04..	698	W29 10130.04..	716	W30 04060.31..	727
V57 72102	94			W01 24600.08..	698	W29 10150.04..	717	W30 04120.02..	720
V57 72142	94	V84 75500	124	W01 24600.75..	701	W29 10160.04..	718	W30 04120.03..	720
V57 72222	94	V84 75600	124	W01 24600.90..	700	W29 10200.04..	719	W30 04120.04..	720
V57 72302	94	V84 75700	124	W01 24940.04..	699	W29 18010.04..	712	W30 04120.30..	720
V57 72382	94	V84 75800	124			W29 18030.04..	714	W30 04120.31..	727
V57 72502	96	V84 75900	124	W01 34060.02..	696	W29 18110.04..	715	W30 04120.32..	729
V57 72542	96	V84 76000	124	W01 34060.04..	696	W29 18130.04..	716	W30 04120.39..	728
V57 72622	96	V84 76100	124	W01 34120.02..	696	W29 18150.04..	717	W30 04200.02..	720
V57 72702	96	V84 76200	124	W01 34120.04..	696	W29 18160.04..	718	W30 04200.03..	720
V57 72822	96	V84 76300	124	W01 34360.02..	697	W29 18200.04..	719	W30 04360.02..	722
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V57 72942	96	V84 76500	124	W01 34360.34..	702	W29 24000.04..	711	W30 04360.04..	722
V57 73022	96	V84 76600	124	W01 34360.35..	702	W29 24010.04..	712	W30 04420.02..	722
V57 73092	96	V84 76700	124	W01 34420.02..	697	W29 24010.08..	712	W30 04420.03..	722
V57 73182	96	V84 76800	124	W01 34600.04..	698	W29 24020.04..	713	W30 04420.04..	722
V57 73252	96	V84 76900	124	W01 34600.08..	698	W29 24020.08..	713	W30 04500.02..	722
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V57 73492	96	V84 77200	124	W01 34940.04..	699	W29 24110.04..	715	W30 04600.03..	723
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V57 73732	96	V84 77500	124	W01 42060.04..	696	W29 24160.04..	718	W30 04820.02..	725
V57 73812	96	V84 77600	124	W01 42120.02..	696	W29 24200.04..	719	W30 04820.03..	725
V57 73892	96	V84 77700	124	W01 42120.04..	696			W30 04820.04..	725
V57 73972	96	V84 77800	124	W01 42360.02..	697	W29 34000.04..	711	W30 04820.32..	730
V57 74132	96	V84 77900	124	W01 42360.04..	697	W29 34010.04..	712	W30 04830.02..	726
V57 74212	96	V84 78000	124	W01 42360.34..	702	W29 34010.08..	712	W30 04980.03..	732
V57 74292	96	V84 78100	124	W01 42420.02..	697	W29 34020.04..	713	W30 04990.02..	733
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V59 64600	120	V95 10022.0089	180	W01 42600.75..	701	W29 34110.04..	715	W30 14060.02..	720
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V59 64800	120	V95 10032.0089	180	W01 42940.04..	699	W29 34150.04..	717	W30 14060.08..	720
V59 64900	120	V95 10032.0090	180			W29 34160.04..	718	W30 14060.30..	720
V59 65000	120	V95 10042.0089	180	W01 50060.04..	696	W29 34200.04..	719	W30 14060.31..	727
V59 65100	120	V95 10042.0090	180	W01 50120.04..	696			W30 14120.02..	720
V59 65400	120	V95 10050.0089	181	W01 50360.04..	697	W29 42000.04..	711	W30 14120.04..	720
V59 74500	112	V95 10050.0090	181	W01 50420.04..	697	W29 42010.04..	712	W30 14120.08..	720
V59 74600	112	V95 10063.0089	186-187	W01 50600.75..	701	W29 42010.08..	712	W30 14120.30..	720
V59 74700	112	V95 10063.0090	186-187	W01 50600.90..	700	W29 42020.04..	713	W30 14120.31..	727
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V59 75200	112	V95 10330.8450	180	W04 34480.02..	704	W29 42130.04..	716	W30 14360.02..	722
V59 75300	112	V95 10340.8450	180	W04 42180.02..	703	W29 42150.04..	717	W30 14360.04..	722
V59 75400	112			W04 42480.02..	704	W29 42160.04..	718	W30 14360.30..	722
		W00 04120.01..	695	W04 42480.04..	704	W29 42200.04..	719	W30 14420.02..	722
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V71 00210	192	W00 04420.01..	695	W04 50480.04..	704	W29 50000.04..	711	W30 14420.30..	722
V71 00250	192	W00 04420.02..	695	W04 58480.06..	704	W29 50000.08..	711	W30 14500.02..	722
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