

# GÜHRING

| 01/2022

# PRODUCT NEW ADDITIONS

# OUR DIGITAL SERVICES

made by **GÜHRING**

## Our services make your job easier:

Innovative software solutions automate your procurement processes, prevent system failures and identify cost saving potentials in your production. This is how you can save time and money in your daily working procedures.

Furthermore, we provide all the necessary data and information for your processings and pass on our know-how to you in webinars and trainings. If you need any support, we provide immediate help via various digital channels.

Regardless of whether you work in work preparation, tool management, construction, manufacturing, quality assurance, purchasing, controlling or any other area in your company, here we have set up all our services which are relevant for your work area.

scan me



GTMS | Live-Video-Support | Navigator | CAD data | Cutting data | Software CNC Gühr Threadmill | Web seminars  
E-Learning | Service hotline | Expert chat | WhatsApp | Online shop & GTMS | Online shop | Data interface | EDI | OCI

Not all services are available in all countries.

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## PRODUCT ADDITIONS

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P	M	K	N	S	H	Tool illustration	Drilling depth	Shank form	Type	Standard	Tool material	Surface	d1/mm	Article no.	Page
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Ratio drills with coolant ducts

●	○	○	○	○	○		3xD	HA	RT 100 XF	DIN 6537K	VHM	F	3.000 - 20.000	6498	10
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ExclusiveLine micro-precision drills VA without coolant ducts

○	●	○	●				3xD	Cyl	VA	WN	VHM	X	0.500 - 3.000	6487	13
---	---	---	---	--	--	--	-----	-----	----	----	-----	---	---------------	------	----

ExclusiveLine micro-precision drills VA with coolant ducts

○	●	○	●				3xD	Cyl	VA	WN	VHM	X	1.000 - 3.000	6488	14
○	●	○	●				6xD	Cyl	VA	WN	VHM	X	1.000 - 3.000	6489	15
○	●	○	●				10xD	Cyl	VA	WN	VHM	X	1.000 - 3.000	6490	16
○	●	○	●				15xD	Cyl	VA	WN	VHM	X	1.000 - 3.000	6491	17

P	M	K	N	S	H	Tool illustration	Z	Hardness	Shank form	Length	Tool material	Surface	d1/mm	Article no.	Page
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Ratio end mills RF 100 Sharp

●	●	●	●				4		HA		VHM	P	1.000 - 20.000	6478	20
●	●	●	●				4		HB		VHM	P	1.000 - 20.000	6479	20
●	●	●	●				4		HA		VHM	P	1.000 - 20.000	6480	21
●	●	●	●				4		HB		VHM	P	1.000 - 20.000	6481	21

Ratio end mills RF 100 Microdiver

●	●	●	●	○			3	48 HRC	Cyl	2,5xD	VHM	X	0.790 - 3.175	6808	22
●	●	●	●	○			3	48 HRC	Cyl	5xD	VHM	X	1.000 - 3.175	6809	23

### Taps for ISO metric threads

•	○						DIN 371/376	NR45	C	6HX	HSS-E	Cb	M2 - M16	4670	26
•	○						DIN 371/376	N	B	6HX	HSS-E	Cb	M2 - M16	4672	27
•	○						DIN 371/376	NR45	E	6HX	HSS-E	Cb	M2 - M16	4671	28
•							DIN 371/376	NR15	C	6HX	VHM	Cb	M3 - M16	4673	29
•							DIN 371/376	NR15	E	6HX	VHM	Cb	M3 - M16	4674	29
•							DIN 371/376	N	C	6HX	VHM	Cb	M3 - M16	4675	30

### Taps for BSP threads

					45/55		DIN 371	H	D		HSS-E-PM	C	G1/8 - G1/2	4607	31
					≤ 62		~DIN 371	H	D		VHM	C	G1/8 - G1/2	4599	32
•	•	○	○	○			DIN 5156	VA R45	C		HSS-E	A	Rp1/16 - Rp1	4681	33
•	•	○	○	○			DIN 5156	VA	B		HSS-E	S	Rp1/16 - Rp1	4682	34

### Taps for BSW threads

•	•	○	○	○			~DIN 371	VA R45	C		HSS-E	A	W1/8 - W1	4679	35
•	•	○	○	○			~DIN 371	VA	B		HSS-E	S	W1/8 - W1	4680	36

### Fluteless taps for ISO metric threads

•							~DIN 371/376	N	C	6HX	HSS-E	Cb	M2 - M16	4676	38
•							~DIN 371/376	N	E	6HX	HSS-E	Cb	M2 - M16	4677	39
•							~DIN 371/376	N	C	6HX	VHM	Cb	M3 - M16	4678	40





































### Micro thread milling cutters

•	•	•	•	•	≤ 66		WN	MTMH3-Z			VHM	●	UNF No 1 - UNF 5/8	4700	41
•	•	•	•	•	≤ 66		WN	MTMH3-Z			VHM	●	G1/16-G1/8 - G1/2-G5/8-G3/4	4780	42

### Universal thread milling cutters for Rc threads

•	•	•	•	•	≤ 55		WN	TMU SP			VHM	C	Rc1/8 - Rc 1-Rc 2	4770	43
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New products

Tool illustration	Standard	Article no.	Page
HSK-A hydraulic chucks, slim design 3°		4596	46
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ISO taper hydraulic chucks, slim design 3°		4787	48
		4788	49
Shrink fit chuck HSK-A, slim design 3°		4789	50
		4789	50
ISO taper shrink fit chucks, slim design 3°		4476	51
		4475	52
Shrink fit chuck HSK-E, slim design 3°		4476	51
		4475	52
HSK-A precision collet holders		4574	53
		4575	54
HSK-E precision collet holders		4574	53
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Precision collets for precision collet holders		4994	55
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Roller bearing wrench head for torque wrench		4981	57
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Torque wrenches		4981	57
		4981	57

MAS/BT DC hydraulic chucks with axial plane

**4598**

59

MAS/BT DC shrink fit chucks with axial plane

**4790**

60

Square shank holder straight, external machining, without IC

**26100**

63

**26101**

63

Square shank holder straight, external machining, with IC

**26102**

64

**26103**

64

Parting off blade, without IC

**26200**

65

Parting off blade, with IC

**26201**

66

Indexable insert for parting off

**26605**

67



# **DRILLING** **TOOLS**



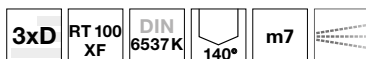




New products



## Ratio drills with coolant ducts



**P** ● relieved cone • main cutting edge form concave • optimised cutting geometry • maximum performance

**M** ○

**K** ○

**N** ○

structural and case hardened steels • free-cutting steels, heat-treatable steels • steels (alloyed/unalloyed) up to 1400 N/mm<sup>2</sup>

**S** ○

**H** ○

Tool material

Solid carbide

Surface

F

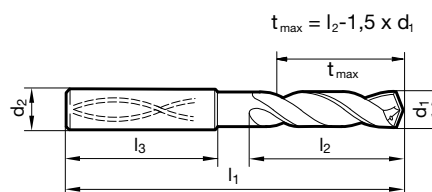
Shank form

HA

NEW

## GÜHRING NAVIGATOR

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.



Article no.

6498

d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	mm
3.000		6.000	62.000	20.000	36.000	5.900		6.000	66.000	28.000	36.000
3.100		6.000	62.000	20.000	36.000	5.950	15/64	6.000	66.000	28.000	36.000
3.170	1/8	6.000	62.000	20.000	36.000	6.000		6.000	66.000	28.000	36.000
3.200		6.000	62.000	20.000	36.000	6.100		8.000	79.000	34.000	36.000
3.250		6.000	62.000	20.000	36.000	6.200		8.000	79.000	34.000	36.000
3.300		6.000	62.000	20.000	36.000	6.300		8.000	79.000	34.000	36.000
3.400		6.000	62.000	20.000	36.000	6.350	1/4	8.000	79.000	34.000	36.000
3.500		6.000	62.000	20.000	36.000	6.400		8.000	79.000	34.000	36.000
3.570	9/64	6.000	62.000	20.000	36.000	6.500		8.000	79.000	34.000	36.000
3.600		6.000	62.000	20.000	36.000	6.530		8.000	79.000	34.000	36.000
3.700		6.000	62.000	20.000	36.000	6.550		8.000	79.000	34.000	36.000
3.800		6.000	66.000	24.000	36.000	6.600		8.000	79.000	34.000	36.000
3.900		6.000	66.000	24.000	36.000	6.700		8.000	79.000	34.000	36.000
3.970	5/32	6.000	66.000	24.000	36.000	6.750	17/64	8.000	79.000	34.000	36.000
4.000		6.000	66.000	24.000	36.000	6.800		8.000	79.000	34.000	36.000
4.040		6.000	66.000	24.000	36.000	6.900		8.000	79.000	34.000	36.000
4.100		6.000	66.000	24.000	36.000	7.000		8.000	79.000	34.000	36.000
4.200		6.000	66.000	24.000	36.000	7.100		8.000	79.000	41.000	36.000
4.300		6.000	66.000	24.000	36.000	7.140	9/32	8.000	79.000	41.000	36.000
4.370	11/64	6.000	66.000	24.000	36.000	7.200		8.000	79.000	41.000	36.000
4.400		6.000	66.000	24.000	36.000	7.300		8.000	79.000	41.000	36.000
4.500		6.000	66.000	24.000	36.000	7.400		8.000	79.000	41.000	36.000
4.600		6.000	66.000	24.000	36.000	7.500		8.000	79.000	41.000	36.000
4.650		6.000	66.000	24.000	36.000	7.540	19/64	8.000	79.000	41.000	36.000
4.700		6.000	66.000	24.000	36.000	7.550		8.000	79.000	41.000	36.000
4.760	3/16	6.000	66.000	28.000	36.000	7.600		8.000	79.000	41.000	36.000
4.800		6.000	66.000	28.000	36.000	7.650		8.000	79.000	41.000	36.000
4.900		6.000	66.000	28.000	36.000	7.700		8.000	79.000	41.000	36.000
5.000		6.000	66.000	28.000	36.000	7.800		8.000	79.000	41.000	36.000
5.100		6.000	66.000	28.000	36.000	7.900		8.000	79.000	41.000	36.000
5.110		6.000	66.000	28.000	36.000	7.940	5/16	8.000	79.000	41.000	36.000
5.160	13/64	6.000	66.000	28.000	36.000	8.000		8.000	79.000	41.000	36.000
5.200		6.000	66.000	28.000	36.000	8.100		10.000	89.000	47.000	40.000
5.300		6.000	66.000	28.000	36.000	8.200		10.000	89.000	47.000	40.000
5.400		6.000	66.000	28.000	36.000	8.300		10.000	89.000	47.000	40.000
5.410		6.000	66.000	28.000	36.000	8.330	21/64	10.000	89.000	47.000	40.000
5.500		6.000	66.000	28.000	36.000	8.400		10.000	89.000	47.000	40.000
5.550		6.000	66.000	28.000	36.000	8.500		10.000	89.000	47.000	40.000
5.560	7/32	6.000	66.000	28.000	36.000	8.600		10.000	89.000	47.000	40.000
5.600		6.000	66.000	28.000	36.000	8.700		10.000	89.000	47.000	40.000
5.700		6.000	66.000	28.000	36.000	8.730	11/32	10.000	89.000	47.000	40.000
5.800		6.000	66.000	28.000	36.000	8.800		10.000	89.000	47.000	40.000



d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm
8.900		10.000	89.000	47.000	40.000
9.000		10.000	89.000	47.000	40.000
9.100		10.000	89.000	47.000	40.000
9.130	23/64	10.000	89.000	47.000	40.000
9.200		10.000	89.000	47.000	40.000
9.250		10.000	89.000	47.000	40.000
9.300		10.000	89.000	47.000	40.000
9.340		10.000	89.000	47.000	40.000
9.400		10.000	89.000	47.000	40.000
9.500		10.000	89.000	47.000	40.000
9.520	3/8	10.000	89.000	47.000	40.000
9.550		10.000	89.000	47.000	40.000
9.600		10.000	89.000	47.000	40.000
9.700		10.000	89.000	47.000	40.000
9.800		10.000	89.000	47.000	40.000
9.900		10.000	89.000	47.000	40.000
9.920	25/64	10.000	89.000	47.000	40.000
10.000		10.000	89.000	47.000	40.000
10.100		12.000	102.000	55.000	45.000
10.200		12.000	102.000	55.000	45.000
10.300		12.000	102.000	55.000	45.000
10.320	13/32	12.000	102.000	55.000	45.000
10.400		12.000	102.000	55.000	45.000
10.500		12.000	102.000	55.000	45.000
10.600		12.000	102.000	55.000	45.000
10.700		12.000	102.000	55.000	45.000
10.720	27/64	12.000	102.000	55.000	45.000
10.800		12.000	102.000	55.000	45.000
10.900		12.000	102.000	55.000	45.000
11.000		12.000	102.000	55.000	45.000
11.100		12.000	102.000	55.000	45.000
11.110	7/16	12.000	102.000	55.000	45.000
11.200		12.000	102.000	55.000	45.000
11.300		12.000	102.000	55.000	45.000
11.400		12.000	102.000	55.000	45.000
11.500		12.000	102.000	55.000	45.000
11.510	29/64	12.000	102.000	55.000	45.000
11.550		12.000	102.000	55.000	45.000
11.600		12.000	102.000	55.000	45.000
11.700		12.000	102.000	55.000	45.000
11.800		12.000	102.000	55.000	45.000
11.900		12.000	102.000	55.000	45.000
11.910	15/32	12.000	102.000	55.000	45.000
12.000		12.000	102.000	55.000	45.000
12.100		14.000	107.000	60.000	45.000
12.200		14.000	107.000	60.000	45.000
12.300	31/64	14.000	107.000	60.000	45.000
12.400		14.000	107.000	60.000	45.000
12.500		14.000	107.000	60.000	45.000
12.600		14.000	107.000	60.000	45.000
12.700	1/2	14.000	107.000	60.000	45.000
12.800		14.000	107.000	60.000	45.000
12.900		14.000	107.000	60.000	45.000
13.000		14.000	107.000	60.000	45.000
13.100	33/64	14.000	107.000	60.000	45.000
13.200		14.000	107.000	60.000	45.000
13.300		14.000	107.000	60.000	45.000
13.400		14.000	107.000	60.000	45.000
13.490	17/32	14.000	107.000	60.000	45.000
13.500		14.000	107.000	60.000	45.000
13.600		14.000	107.000	60.000	45.000
13.700		14.000	107.000	60.000	45.000
13.800		14.000	107.000	60.000	45.000
13.890	35/64	14.000	107.000	60.000	45.000
13.900		14.000	107.000	60.000	45.000
14.000		14.000	107.000	60.000	45.000

d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm
14.100		16.000	115.000	65.000	48.000
14.200		16.000	115.000	65.000	48.000
14.290	9/16	16.000	115.000	65.000	48.000
14.300		16.000	115.000	65.000	48.000
14.400		16.000	115.000	65.000	48.000
14.500		16.000	115.000	65.000	48.000
14.600		16.000	115.000	65.000	48.000
14.680	37/64	16.000	115.000	65.000	48.000
14.700		16.000	115.000	65.000	48.000
14.800		16.000	115.000	65.000	48.000
14.900		16.000	115.000	65.000	48.000
15.000		16.000	115.000	65.000	48.000
15.080	19/32	16.000	115.000	65.000	48.000
15.100		16.000	115.000	65.000	48.000
15.200		16.000	115.000	65.000	48.000
15.300		16.000	115.000	65.000	48.000
15.400		16.000	115.000	65.000	48.000
15.480	39/64	16.000	115.000	65.000	48.000
15.500		16.000	115.000	65.000	48.000
15.550		16.000	115.000	65.000	48.000
15.600		16.000	115.000	65.000	48.000
15.700		16.000	115.000	65.000	48.000
15.800		16.000	115.000	65.000	48.000
15.870	5/8	16.000	115.000	65.000	48.000
15.900		16.000	115.000	65.000	48.000
16.000		16.000	115.000	65.000	48.000
16.270	41/64	18.000	123.000	73.000	48.000
16.300		18.000	123.000	73.000	48.000
16.500		18.000	123.000	73.000	48.000
16.670	21/32	18.000	123.000	73.000	48.000
16.700		18.000	123.000	73.000	48.000
16.900		18.000	123.000	73.000	48.000
17.000		18.000	123.000	73.000	48.000
17.070	43/64	18.000	123.000	73.000	48.000
17.460	11/16	18.000	123.000	73.000	48.000
17.500		18.000	123.000	73.000	48.000
17.550		18.000	123.000	73.000	48.000
17.700		18.000	123.000	73.000	48.000
17.860	45/64	18.000	123.000	73.000	48.000
18.000		18.000	123.000	73.000	48.000
18.260	23/32	20.000	131.000	79.000	50.000
18.500		20.000	131.000	79.000	50.000
18.700		20.000	131.000	79.000	50.000
18.900		20.000	131.000	79.000	50.000
19.000		20.000	131.000	79.000	50.000
19.050	3/4	20.000	131.000	79.000	50.000
19.250		20.000	131.000	79.000	50.000
19.300		20.000	131.000	79.000	50.000
19.450	49/64	20.000	131.000	79.000	50.000
19.500		20.000	131.000	79.000	50.000
19.550		20.000	131.000	79.000	50.000
19.700		20.000	131.000	79.000	50.000
19.800		20.000	131.000	79.000	50.000
19.840	25/32	20.000	131.000	79.000	50.000
20.000		20.000	131.000	79.000	50.000

# GÜHRING ONLINE SHOP

[webshop.guehring.de](http://webshop.guehring.de)

Improved usability ✓ Optimised for all devices ✓

Download of tool data and drawings ✓



## FUNCTIONS FOR REGISTERED USERS



Individual authorisation management and max. access security



Personal purchasing conditions and individual prices



Download of tool data and CAD drawings



Information on tool availability & stock information



Intelligent search function thanks to extended search criteria as well as ordering via own material numbers



Detailed documentation and history of order processes as well as watch lists for future purchases.



Chat function



OCI interface, ESIS® comfort interface

**NEW**

The **ESIS** interface  
**COMFORT**  
enables the data transfer between the ERP system of the user and the Gühring online shop.



**ExclusiveLine micro-precision drills VA without coolant ducts**



Tool material **Solid carbide**

Surface

Cutting direction



New products

**P** ○ web thinning ≥ Ø 0.500 • facet point grind • main cutting edge is slightly concave • optimised cutting geometry

**M** ●

**K** ●

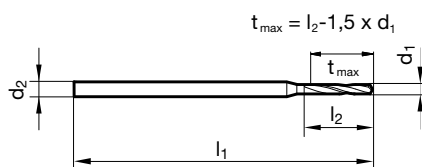
**N** ○ stainless/acid-/heat-resistant steels • Titanium and Titanium alloys  
• Inconel, Hastelloy, Monel • copper, brass and bronze alloys

**S** ●

**H** ●

**GUHRING NAVIGATOR**

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.



Article no. **6487**

d1	d2 h6	l1	l2
mm	mm	mm	mm
0.500	3.000	38.000	2.800
0.550	3.000	38.000	3.100
0.600	3.000	38.000	3.300
0.650	3.000	38.000	3.600
0.660	3.000	38.000	3.700
0.700	3.000	38.000	3.900
0.740	3.000	38.000	4.100
0.750	3.000	38.000	4.200
0.790	3.000	38.000	4.400
0.800	3.000	38.000	4.400
0.820	3.000	38.000	4.600
0.850	3.000	38.000	4.700
0.900	3.000	38.000	5.000
0.950	3.000	38.000	5.300
1.000	3.000	38.000	5.500
1.020	3.000	38.000	5.700
1.050	3.000	38.000	5.800
1.100	3.000	38.000	6.100
1.150	3.000	38.000	6.400
1.180	3.000	38.000	6.500
1.190	3.000	38.000	6.600
1.200	3.000	38.000	6.600
1.250	3.000	38.000	6.900
1.280	3.000	38.000	7.100
1.300	3.000	38.000	7.200
1.350	3.000	38.000	7.500
1.400	4.000	46.000	7.700
1.450	4.000	46.000	8.000
1.460	4.000	46.000	8.100
1.500	4.000	46.000	8.300
1.550	4.000	46.000	8.600
1.560	4.000	46.000	8.600
1.590	4.000	46.000	8.800
1.600	4.000	46.000	8.800
1.650	4.000	46.000	9.100
1.660	4.000	46.000	9.200

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.700	4.000	46.000	9.400
1.750	4.000	46.000	9.700
1.800	4.000	46.000	9.900
1.850	4.000	46.000	10.200
1.900	4.000	46.000	10.500
1.950	4.000	46.000	10.800
1.980	4.000	46.000	10.900
2.000	4.000	46.000	11.000
2.050	4.000	46.000	11.300
2.100	4.000	50.000	11.600
2.150	4.000	50.000	11.900
2.200	4.000	50.000	12.100
2.250	4.000	50.000	12.400
2.300	4.000	50.000	12.700
2.350	4.000	50.000	13.000
2.380	4.000	50.000	13.100
2.400	4.000	50.000	13.200
2.450	4.000	50.000	13.500
2.500	4.000	50.000	13.800
2.550	4.000	50.000	14.100
2.600	4.000	50.000	14.300
2.650	4.000	50.000	14.600
2.700	4.000	50.000	14.900
2.750	4.000	50.000	15.200
2.780	4.000	50.000	15.300
2.800	4.000	50.000	15.400
2.850	4.000	50.000	15.700
2.900	4.000	50.000	16.000
2.950	4.000	50.000	16.300
3.000	4.000	50.000	16.500



## ExclusivLine micro-precision drills VA with coolant ducts

Tool material **Solid carbide**

Surface

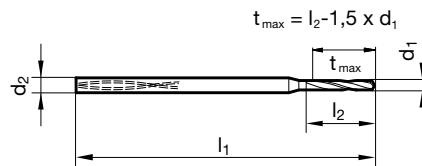
Cutting direction

**NEW**

**P** ○ web thinning  $\geq \varnothing 1.000$  • facet point grind • main cutting edge is slightly concave • optimised cutting geometry

**M** ●**K** ●

**N** ○ stainless/acid-/heat-resistant steels • Titanium and Titanium alloys  
• Inconel, Hastelloy, Monel • copper, brass and bronze alloys

**S** ●**H** ●**GUHRING NAVIGATOR**You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.Article no. **6488**

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	38.000	5.500
1.020	3.000	38.000	5.700
1.050	3.000	38.000	5.800
1.100	3.000	38.000	6.100
1.150	3.000	38.000	6.400
1.180	3.000	38.000	6.500
1.190	3.000	38.000	6.600
1.200	3.000	38.000	6.600
1.250	3.000	38.000	6.900
1.280	3.000	38.000	7.100
1.300	3.000	38.000	7.200
1.350	3.000	38.000	7.500
1.400	4.000	46.000	7.700
1.450	4.000	46.000	8.000
1.460	4.000	46.000	8.100
1.500	4.000	46.000	8.300
1.550	4.000	46.000	8.600
1.560	4.000	46.000	8.600
1.590	4.000	46.000	8.800
1.600	4.000	46.000	8.800
1.650	4.000	46.000	9.100
1.660	4.000	46.000	9.200
1.700	4.000	46.000	9.400
1.750	4.000	46.000	9.700
1.800	4.000	46.000	9.900
1.850	4.000	46.000	10.200
1.900	4.000	46.000	10.500
1.950	4.000	46.000	10.800
1.980	4.000	46.000	10.900
2.000	4.000	46.000	11.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
2.050	4.000	46.000	11.300
2.100	4.000	50.000	11.600
2.150	4.000	50.000	11.900
2.200	4.000	50.000	12.100
2.250	4.000	50.000	12.400
2.300	4.000	50.000	12.700
2.350	4.000	50.000	13.000
2.380	4.000	50.000	13.100
2.400	4.000	50.000	13.200
2.450	4.000	50.000	13.500
2.500	4.000	50.000	13.800
2.550	4.000	50.000	14.100
2.600	4.000	50.000	14.300
2.650	4.000	50.000	14.600
2.700	4.000	50.000	14.900
2.750	4.000	50.000	15.200
2.780	4.000	50.000	15.300
2.800	4.000	50.000	15.400
2.850	4.000	50.000	15.700
2.900	4.000	50.000	16.000
2.950	4.000	50.000	16.300
3.000	4.000	50.000	16.500



**ExclusiveLine micro-precision drills VA with coolant ducts**



Tool material **Solid carbide**

Surface

Cutting direction



**P** ○ web thinning ≥ Ø 1.000 • facet point grind • main cutting edge is slightly concave • optimised cutting geometry

**M** ●

**K** ●

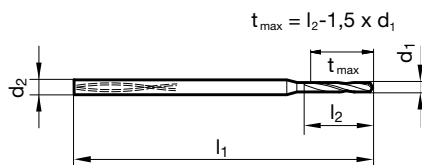
**N** ○ stainless/acid-/heat-resistant steels • Titanium and Titanium alloys  
• Inconel, Hastelloy, Monel • copper, brass and bronze alloys

**S** ●

**H** ●

**GUHRING NAVIGATOR**

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.



Article no. **6489**

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	48.000	9.000
1.050	3.000	48.000	9.500
1.100	3.000	48.000	9.900
1.150	3.000	48.000	10.400
1.190	3.000	48.000	10.800
1.200	3.000	51.000	10.800
1.250	3.000	51.000	11.300
1.300	3.000	51.000	11.700
1.350	3.000	51.000	12.200
1.400	4.000	56.000	12.600
1.450	4.000	56.000	13.100
1.500	4.000	56.000	13.500
1.550	4.000	56.000	14.000
1.590	4.000	56.000	14.400
1.600	4.000	56.000	14.400
1.650	4.000	56.000	14.900
1.700	4.000	61.000	15.300
1.750	4.000	61.000	15.800
1.800	4.000	61.000	16.200
1.850	4.000	61.000	16.700
1.900	4.000	61.000	17.100
1.950	4.000	61.000	17.600
1.980	4.000	61.000	17.900
2.000	4.000	61.000	18.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
2.050	4.000	61.000	18.500
2.100	4.000	66.000	18.900
2.150	4.000	66.000	19.400
2.200	4.000	66.000	19.800
2.250	4.000	66.000	20.300
2.300	4.000	66.000	20.700
2.350	4.000	66.000	21.200
2.380	4.000	66.000	21.500
2.400	4.000	66.000	21.600
2.450	4.000	66.000	22.100
2.500	4.000	66.000	22.500
2.550	4.000	66.000	23.000
2.600	4.000	71.000	23.400
2.650	4.000	71.000	23.900
2.700	4.000	71.000	24.300
2.750	4.000	71.000	24.800
2.780	4.000	71.000	25.100
2.800	4.000	71.000	25.200
2.850	4.000	71.000	25.700
2.900	4.000	71.000	26.100
2.950	4.000	71.000	26.600
3.000	4.000	71.000	27.000

New products



## ExclusivLine micro-precision drills VA with coolant ducts



**P** ○ web thinning  $\geq \varnothing 1.000$  • facet point grind • main cutting edge is slightly concave • optimised cutting geometry

**M** ●**K** ●**N** ○**S** ●**H** ●

stainless/acid-/heat-resistant steels • Titanium and Titanium alloys  
• Inconel, Hastelloy, Monel • copper, brass and bronze alloys

Tool material

Solid carbide

Surface



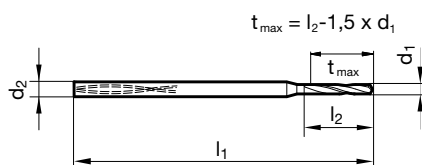
Cutting direction



NEW

## GÜHRING NAVIGATOR

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.



Article no.

6490

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	48.000	13.000
1.050	3.000	48.000	13.700
1.100	3.000	48.000	14.300
1.150	3.000	48.000	15.000
1.190	3.000	48.000	15.500
1.200	3.000	51.000	15.600
1.250	3.000	51.000	16.300
1.300	3.000	51.000	16.900
1.350	3.000	51.000	17.600
1.400	4.000	56.000	18.200
1.450	4.000	56.000	18.900
1.500	4.000	56.000	19.500
1.550	4.000	56.000	20.200
1.590	4.000	56.000	20.700
1.600	4.000	56.000	20.800
1.650	4.000	56.000	21.500
1.700	4.000	61.000	22.100
1.750	4.000	61.000	22.800
1.800	4.000	61.000	23.400
1.850	4.000	61.000	24.100
1.900	4.000	61.000	24.700
1.950	4.000	61.000	25.400
1.980	4.000	61.000	25.800
2.000	4.000	61.000	26.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
2.050	4.000	61.000	26.700
2.100	4.000	66.000	27.300
2.150	4.000	66.000	28.000
2.200	4.000	66.000	28.600
2.250	4.000	66.000	29.300
2.300	4.000	66.000	29.900
2.350	4.000	66.000	30.600
2.380	4.000	66.000	31.000
2.400	4.000	66.000	31.200
2.450	4.000	66.000	31.900
2.500	4.000	66.000	32.500
2.550	4.000	66.000	33.200
2.600	4.000	71.000	33.800
2.650	4.000	71.000	34.500
2.700	4.000	71.000	35.100
2.750	4.000	71.000	35.800
2.780	4.000	71.000	36.200
2.800	4.000	71.000	36.400
2.850	4.000	71.000	37.100
2.900	4.000	71.000	37.700
2.950	4.000	71.000	38.400
3.000	4.000	71.000	39.000





**ExclusiveLine micro-precision drills VA with coolant ducts**



- P** ○ web thinning ≥ Ø 1.000 • facet point grind • main cutting edge is slightly concave • optimised cutting geometry
- M** ●
- K** ●
- N** ○ stainless/acid-/heat-resistant steels • Titanium and Titanium alloys
- S** ● • Inconel, Hastelloy, Monel • copper, brass and bronze alloys
- H** ●

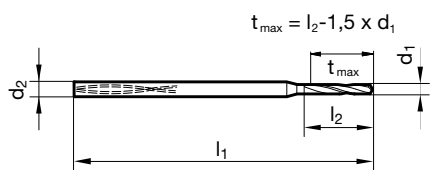
**GUHRING NAVIGATOR**

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	<b>Solid carbide</b>
Surface	⊗
Cutting direction	Ⓜ



New products



Article no. **6491**

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	54.000	18.000
1.050	3.000	54.000	18.900
1.100	3.000	54.000	19.800
1.150	3.000	54.000	20.700
1.190	3.000	54.000	21.500
1.200	3.000	58.000	21.600
1.250	3.000	58.000	22.500
1.300	3.000	58.000	23.400
1.350	3.000	58.000	24.300
1.400	4.000	64.000	25.200
1.450	4.000	64.000	26.100
1.500	4.000	64.000	27.000
1.550	4.000	64.000	27.900
1.590	4.000	64.000	28.700
1.600	4.000	64.000	28.800
1.650	4.000	64.000	29.700
1.700	4.000	71.000	30.600
1.750	4.000	71.000	31.500
1.800	4.000	71.000	32.400
1.850	4.000	71.000	33.300
1.900	4.000	71.000	34.200
1.950	4.000	71.000	35.100
1.980	4.000	71.000	35.700
2.000	4.000	71.000	36.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
2.050	4.000	71.000	36.900
2.100	4.000	79.000	37.800
2.150	4.000	79.000	38.700
2.200	4.000	79.000	39.600
2.250	4.000	79.000	40.500
2.300	4.000	79.000	41.400
2.350	4.000	79.000	42.300
2.380	4.000	79.000	42.900
2.400	4.000	79.000	43.200
2.450	4.000	79.000	44.100
2.500	4.000	79.000	45.000
2.550	4.000	79.000	45.900
2.600	4.000	87.000	46.800
2.650	4.000	87.000	47.700
2.700	4.000	87.000	48.600
2.750	4.000	87.000	49.500
2.780	4.000	87.000	50.100
2.800	4.000	87.000	50.400
2.850	4.000	87.000	51.300
2.900	4.000	87.000	52.200
2.950	4.000	87.000	53.100
3.000	4.000	87.000	54.000

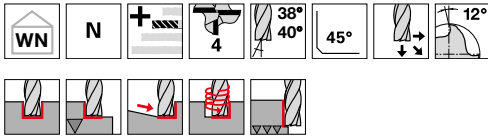


# **MILLING** TOOLS



New products

**Ratio end mills RF 100 Sharp**



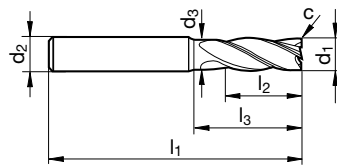
P	•
M	•
K	
N	•
S	•
H	

**GUHRING NAVIGATOR**

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

- especially for soft, tough and high-alloyed materials
- longer cutting edge than DIN 6527 L
- neck clearance
- centre cutting

Tool material	Solid carbide	
Surface	P	P
Type	N	N
Shank form	HA	HB



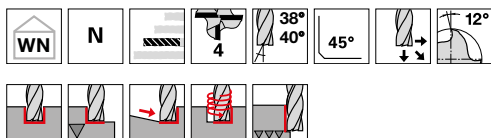
Article no. **6478** **6479**

d1 e8	d2 h6	d3	l1	l2	l3	c	Z	Code no.
mm	mm	mm	mm	mm	mm	mm x 45°		
1.00	4.00	0.92	50	3.0	4.0	0.02	4	1.000
1.50	4.00	1.40	50	4.5	6.0	0.03	4	1.500
2.00	6.00	1.85	50	6.0	8.0	0.04	4	2.000
2.50	6.00	2.35	50	7.5	10.0	0.05	4	2.500
3.00	6.00	2.85	57	10.0	15.0	0.06	4	3.000
4.00	6.00	3.80	57	14.0	18.0	0.08	4	4.000
5.00	6.00	4.80	57	15.0	20.0	0.10	4	5.000
6.00	6.00	5.70	57	16.0	20.0	0.12	4	6.000
8.00	8.00	7.70	63	21.0	26.0	0.16	4	8.000
10.00	10.00	9.50	72	25.0	30.0	0.20	4	10.000
12.00	12.00	11.50	83	28.0	36.0	0.24	4	12.000
14.00	14.00	13.50	83	28.0	36.0	0.28	4	14.000
16.00	16.00	15.50	92	36.0	42.0	0.32	4	16.000
20.00	20.00	19.50	104	41.0	52.0	0.40	4	20.000

ISO	Hardness	v <sub>c</sub>	f <sub>z</sub> (mm/z)/Ø								v <sub>c</sub>	f <sub>z</sub> (mm/z)/Ø								
			1	3	6	8	10	12	16	20		1	3	6	8	10	12	16	20	
P	< 500 N/mm <sup>2</sup>	180	0,010	0,016	0,030	0,042	0,06	0,072	0,1	0,12		210	0,011	0,018	0,036	0,048	0,069	0,08	0,11	0,14
	500-900 N/mm <sup>2</sup>		140	0,008	0,014	0,027	0,036	0,05	0,06	0,08			0,1	160	0,009	0,016	0,031	0,041	0,058	0,07
M	< 500 N/mm <sup>2</sup>	120	0,006	0,012	0,025	0,032	0,045	0,055	0,075	0,085		140	0,007	0,016	0,031	0,041	0,058	0,07	0,09	0,12
	500-900 N/mm <sup>2</sup>		80	0,005	0,010	0,021	0,028	0,04	0,048	0,06			0,07	100	0,006	0,013	0,025	0,034	0,048	0,06
S	< 900 N/mm <sup>2</sup>	45	0,004	0,008	0,016	0,022	0,032	0,04	0,05	0,065		60	0,005	0,010	0,020	0,027	0,038	0,05	0,06	0,085
N	> 250 N/mm <sup>2</sup>	350	0,012	0,020	0,038	0,05	0,08	0,095	0,13	0,16		600	0,013	0,022	0,045	0,06	0,09	0,012	0,15	0,18



Ratio end mills RF 100 Sharp



- P** •
- M** •
- K**
- N** •
- S** •
- H**

**GÜHRING NAVIGATOR**

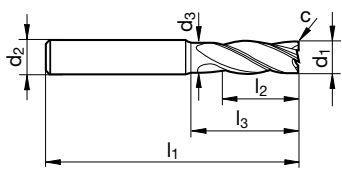
You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

- especially for soft, tough and high-alloyed materials
- medium length version
- neck clearance
- centre cutting

Tool material	Solid carbide	
Surface	<b>P</b>	<b>P</b>
Type	N	N
Shank form	HA	HB



New products

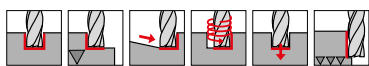
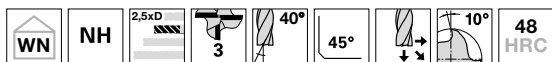


Article no. **6480** **6481**

d1 e8	d2 h6	d3	l1	l2	l3	c	Z	Code no.
mm	mm	mm	mm	mm	mm	mm x 45°		
1.00	4.00	0.92	50	3.0	5.5	0.02	4	1.000
1.50	4.00	1.40	50	4.5	8.5	0.03	4	1.500
2.00	6.00	1.85	57	6.0	11.5	0.04	4	2.000
2.50	6.00	2.35	57	7.5	14.5	0.05	4	2.500
3.00	6.00	2.85	65	10.0	20.0	0.06	4	3.000
4.00	6.00	3.80	65	14.0	27.0	0.08	4	4.000
5.00	6.00	4.80	65	15.0	28.0	0.10	4	5.000
6.00	6.00	5.70	75	19.0	38.0	0.12	4	6.000
8.00	8.00	7.70	80	21.0	43.0	0.16	4	8.000
10.00	10.00	9.50	93	26.0	51.0	0.20	4	10.000
12.00	12.00	11.50	100	28.0	53.0	0.24	4	12.000
14.00	14.00	13.50	100	28.0	53.0	0.28	4	14.000
16.00	16.00	15.50	123	38.0	73.0	0.32	4	16.000
20.00	20.00	19.50	126	41.0	74.0	0.40	4	20.000

ISO	Hardness	vc	f <sub>z</sub> (mm/z)/Ø								vc	f <sub>z</sub> (mm/z)/Ø								
			1	3	6	8	10	12	16	20		1	3	6	8	10	12	16	20	
<b>P</b>	< 500 N/mm <sup>2</sup>	<b>180</b>	0,010	0,016	0,030	0,042	0,06	0,072	0,1	0,12		<b>210</b>	0,011	0,018	0,036	0,048	0,069	0,08	0,11	0,14
	500-900 N/mm <sup>2</sup>	<b>140</b>	0,008	0,014	0,027	0,036	0,05	0,06	0,08	0,1		<b>160</b>	0,009	0,016	0,031	0,041	0,058	0,07	0,09	0,12
<b>M</b>	< 500 N/mm <sup>2</sup>	<b>120</b>	0,006	0,012	0,025	0,032	0,045	0,055	0,075	0,085		<b>140</b>	0,007	0,016	0,031	0,041	0,058	0,07	0,09	0,12
	500-900 N/mm <sup>2</sup>	<b>80</b>	0,005	0,010	0,021	0,028	0,04	0,048	0,06	0,07		<b>100</b>	0,006	0,013	0,025	0,034	0,048	0,06	0,08	0,1
<b>S</b>	< 900 N/mm <sup>2</sup>	<b>45</b>	0,004	0,008	0,016	0,022	0,032	0,04	0,05	0,065		<b>60</b>	0,005	0,010	0,020	0,027	0,038	0,05	0,06	0,085
<b>N</b>	> 250 N/mm <sup>2</sup>	<b>350</b>	0,012	0,020	0,038	0,05	0,08	0,095	0,13	0,16		<b>600</b>	0,013	0,022	0,045	0,06	0,09	0,012	0,15	0,18

**Ratio end mills RF 100 Microdiver**



Tool material	<b>Solid carbide</b>
Surface	<input checked="" type="checkbox"/>
Type	NH
Shank form	cyl.

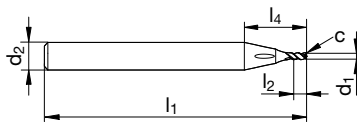


**P** • **GÜHRING NAVIGATOR**

**M** • You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

- K** •
- N** •
- S** •
- H** ○

- for extreme cutting values and cutting performance
- with internal cooling: GühroJet peripheral cooling with 6 or 4 exits
- centre cutting
- with special drill face

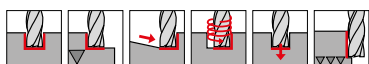


Article no. **6808**

d1 h8	d2 h5	l1	l2	l4	c	Z	Code no.
mm	mm	mm	mm	mm	mm x 45°		
0.790	4.00	38.10	1.97	9.5	0.016	3	0.790
0.800	4.00	38.00	2.00	9.5	0.016	3	0.800
1.000	4.00	38.00	2.50	9.3	0.020	3	1.000
1.190	4.00	38.10	2.97	9.4	0.024	3	1.190
1.200	4.00	38.00	3.00	9.4	0.024	3	1.200
1.500	4.00	45.00	3.75	9.7	0.030	3	1.500
1.590	4.00	44.45	3.97	9.9	0.032	3	1.590
1.800	4.00	45.00	4.50	10.2	0.036	3	1.800
1.980	6.00	50.80	4.95	14.7	0.040	3	1.980
2.000	6.00	50.00	5.00	14.6	0.040	3	2.000
2.200	6.00	50.00	5.50	14.9	0.044	3	2.200
2.380	6.00	50.80	5.95	15.2	0.048	3	2.380
2.500	6.00	50.00	6.25	15.3	0.050	3	2.500
2.780	6.00	50.80	6.95	15.8	0.056	3	2.780
2.800	6.00	50.00	7.00	15.9	0.056	3	2.800
3.000	6.00	50.00	7.50	16.2	0.060	3	3.000
3.175	6.00	50.80	7.93	17.0	0.064	3	3.175



Ratio end mills RF 100 Microdiver



Tool material	<b>Solid carbide</b>
Surface	<input checked="" type="checkbox"/>
Type	NH
Shank form	cyl.



**P** • **GÜHRING NAVIGATOR**

**M** • You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

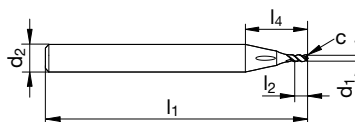
**K** •

**N** •

**S** •

**H** ○

- for extreme cutting values and cutting performance
- with internal cooling: GühroJet peripheral cooling with 6 or 4 exits
- centre cutting
- with special drill face



New products

Article no. **6809**

d1 h8	d2 h5	l1	l2	l4	c	Z	Code no.
mm	mm	mm	mm	mm	mm x 45°		
1.000	4.00	45.00	5.00	11.8	0.020	3	1.000
1.190	4.00	50.80	5.95	12.4	0.024	3	1.190
1.500	4.00	50.00	7.50	13.5	0.030	3	1.500
1.590	4.00	50.80	7.95	13.9	0.032	3	1.590
1.980	6.00	57.15	9.90	19.6	0.040	3	1.980
2.000	6.00	57.00	10.00	19.6	0.040	3	2.000
2.380	6.00	57.15	11.90	21.1	0.048	3	2.380
2.500	6.00	57.00	12.50	21.5	0.050	3	2.500
2.780	6.00	57.15	13.90	22.8	0.056	3	2.780
3.000	6.00	57.00	15.00	23.7	0.060	3	3.000
3.175	6.00	57.15	15.87	25.0	0.064	3	3.175



# **THREADING** TOOLS





New products

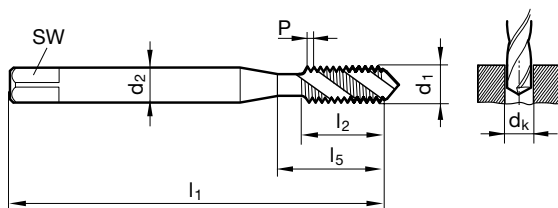
Taps for ISO metric threads



P	
M	
K	
N	•
S	○
H	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	HSS-E
Tolerance on Ø	6HX
Surface	Ⓢ
Type	N R45
Form	C
Internal cooling	☒



DIN 2184-1 DIN 371/DIN 376

Article no.

4670

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0.400	2.800	2.100	1.60	45.000	4.500	13.500
M2,5	0.450	2.800	2.100	2.05	50.000	5.000	14.500
M3	0.500	3.500	2.700	2.50	56.000	6.000	18.000
M4	0.700	4.500	3.400	3.30	63.000	7.500	21.000
M5	0.800	6.000	4.900	4.20	70.000	8.500	25.000
M6	1.000	6.000	4.900	5.00	80.000	11.000	30.000
M8	1.250	8.000	6.200	6.80	90.000	14.000	35.000
M10	1.500	10.000	8.000	8.50	100.000	16.000	39.000
M12	1.750	9.000	7.000	10.20	110.000	18.500	49.000
M14	2.000	11.000	9.000	12.00	110.000	20.000	53.000
M16	2.000	12.000	9.000	14.00	110.000	20.000	54.000



Taps for ISO metric threads



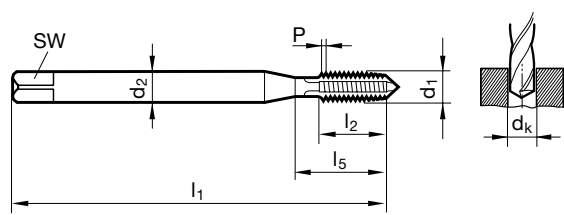
P	
M	
K	
N	•
S	○
H	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	HSS-E
Tolerance on Ø	6HX
Surface	ⓐ
Type	N
Form	B
Internal cooling	☒



New products

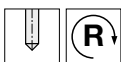


DIN 2184-1 DIN 371/DIN 376

Article no. 4672

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0.400	2.800	2.100	1.60	45.000	8.000	13.500
M2,5	0.450	2.800	2.100	2.05	50.000	9.000	14.500
M3	0.500	3.500	2.700	2.50	56.000	10.000	18.000
M4	0.700	4.500	3.400	3.30	63.000	12.000	21.000
M5	0.800	6.000	4.900	4.20	70.000	14.000	25.000
M6	1.000	6.000	4.900	5.00	80.000	16.000	30.000
M8	1.250	8.000	6.200	6.80	90.000	17.000	35.000
M10	1.500	10.000	8.000	8.50	100.000	20.000	39.000
M12	1.750	9.000	7.000	10.20	110.000	24.000	49.000
M14	2.000	11.000	9.000	12.00	110.000	26.000	53.000
M16	2.000	12.000	9.000	14.00	110.000	26.000	54.000

**Taps for ISO metric threads**



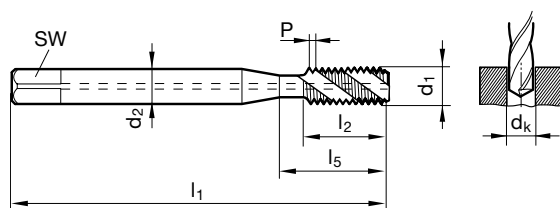
**P** You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

**M**

**K** with internal cooling  $\geq$  M5

<b>N</b>	•
<b>S</b>	○
<b>H</b>	

Tool material	<b>HSS-E</b>
Tolerance on $\varnothing$	6HX
Surface	Ⓢ
Type	N R45
Form	E
Internal cooling	

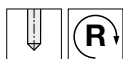


**DIN 2184-1 DIN 371/DIN 376** Article no. **4671**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0.400	2.800	2.100	1.60	45.000	4.500	13.500
M2,5	0.450	2.800	2.100	2.05	50.000	5.000	14.500
M3	0.500	3.500	2.700	2.50	56.000	6.000	18.000
M4	0.700	4.500	3.400	3.30	63.000	7.500	21.000
M5	0.800	6.000	4.900	4.20	70.000	8.500	25.000
M6	1.000	6.000	4.900	5.00	80.000	11.000	30.000
M8	1.250	8.000	6.200	6.80	90.000	14.000	35.000
M10	1.500	10.000	8.000	8.50	100.000	16.000	39.000
M12	1.750	9.000	7.000	10.20	110.000	18.500	49.000
M14	2.000	11.000	9.000	12.00	110.000	20.000	53.000
M16	2.000	12.000	9.000	14.00	110.000	20.000	54.000



Taps for ISO metric threads

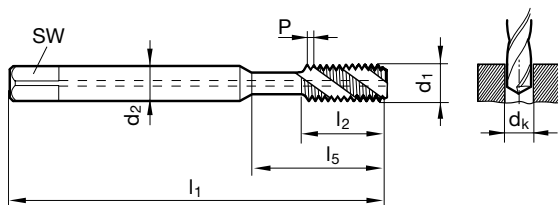


<b>P</b>	You can find the cutting data in our online navigator at <a href="https://webnavigator.guehring.de">https://webnavigator.guehring.de</a> .
<b>M</b>	
<b>K</b>	with internal cooling $\geq$ M5
<b>N</b>	•
<b>S</b>	
<b>H</b>	

Tool material	Solid carbide	
Tolerance on $\varnothing$	6HX	6HX
Surface	Ⓞ <sub>cb</sub>	Ⓞ <sub>cb</sub>
Type	N R15	N R15
Form	C	E
Internal cooling		



New products

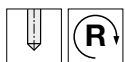


DIN 2184-1 DIN 371/DIN 376

Article no. **4673** **4674**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0.500	3.500	2.700	2.50	56.000	8.000	18.000
M4	0.700	4.500	3.400	3.30	63.000	10.000	21.000
M5	0.800	6.000	4.900	4.20	70.000	10.000	25.000
M6	1.000	6.000	4.900	5.00	80.000	12.000	30.000
M8	1.250	8.000	6.200	6.80	90.000	16.000	35.000
M10	1.500	10.000	8.000	8.50	100.000	18.000	39.000
M12	1.750	9.000	7.000	10.20	110.000	18.000	49.000
M14	2.000	11.000	9.000	12.00	110.000	20.000	53.000
M16	2.000	12.000	9.000	14.00	110.000	20.000	54.000

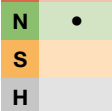
Taps for ISO metric threads



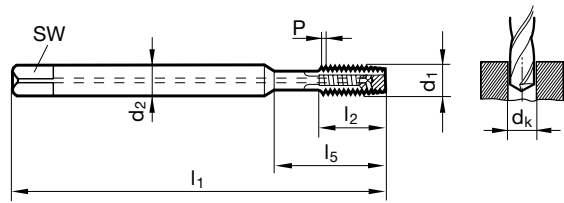
**P** You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

**M**

**K** with internal cooling  $\geq$  M5



Tool material	<b>Solid carbide</b>
Tolerance on $\varnothing$	6HX
Surface	<b>CB</b>
Type	N
Form	C
Internal cooling	

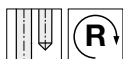


**DIN 2184-1 DIN 371/DIN 376** Article no. **4675**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0.500	3.500	2.700	2.50	56.000	8.000	18.000
M4	0.700	4.500	3.400	3.30	63.000	10.000	21.000
M5	0.800	6.000	4.900	4.20	70.000	10.000	25.000
M6	1.000	6.000	4.900	5.00	80.000	12.000	30.000
M8	1.250	8.000	6.200	6.80	90.000	16.000	35.000
M10	1.500	10.000	8.000	8.50	100.000	18.000	39.000
M12	1.750	9.000	7.000	10.20	110.000	18.000	49.000
M14	2.000	11.000	9.000	12.00	110.000	20.000	53.000
M16	2.000	12.000	9.000	14.00	110.000	20.000	54.000



Taps for BSP threads

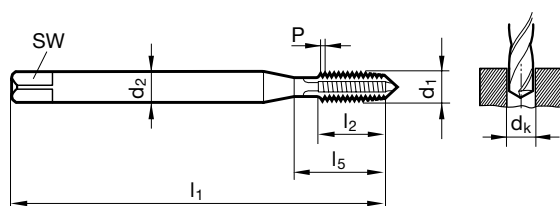


P	
M	
K	
N	
S	
H	45/55

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	<b>HSS-E-PM</b>
Tolerance on Ø	
Surface	<b>C</b>
Type	H
Form	D
Internal cooling	
	<b>NEW</b>

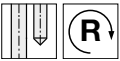
New products



**DIN 2184-1 DIN 371** Article no. **4607**

d1	P	d2	SW	dk	l1	l2	l5	Code no.
	G/inch	mm	mm	mm	mm	mm	mm	
G1/8	28	10.000	8.000	8.90	100.000	19.000	39.000	9.728
G1/4	19	14.000	11.000	11.90	110.000	28.000	49.000	13.157
G3/8	19	16.000	12.000	15.35	125.000	28.000	54.000	16.662
G1/2	14	20.000	16.000	19.00	140.000	35.000	62.000	20.955

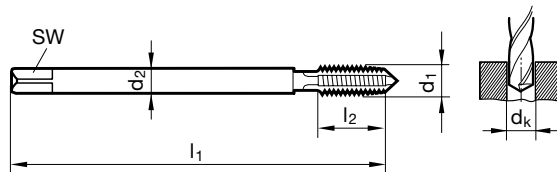
Taps for BSP threads



<b>P</b>	
<b>M</b>	
<b>K</b>	
<b>N</b>	
<b>S</b>	
<b>H</b>	≤ 62

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	<b>Solid carbide</b>
Tolerance on Ø	
Surface	<b>C</b>
Type	H
Form	D
Internal cooling	
	<b>NEW</b>



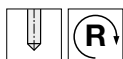
~DIN 371 Article no. **4599**

d1	P	d2	SW	dk	l1	l2	l5	Code no.
	G/inch	mm	mm	mm	mm	mm	mm	
G1/8	28	10.000	8.000	8.90	90.000	22.000	22.000	9.728
G1/4	19	14.000	11.000	11.90	100.000	30.000	30.000	13.157
G3/8	19	16.000	12.000	15.35	100.000	40.000	40.000	16.662
G1/2	14	20.000	16.000	19.00	125.000	40.000	40.000	20.955





Taps for BSP threads



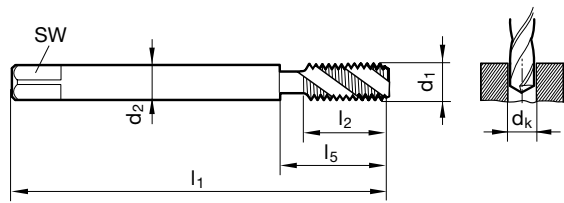
P	•
M	•
K	○
N	○
S	○
H	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	HSS-E
Tolerance on Ø	
Surface	A
Type	VA R45
Form	C
Internal cooling	



New products



DIN 2184-1 DIN 5156

Article no. 4681

d1	P	d2	SW	dk	l1	l2	l5	Code no.
	G/inch	mm	mm	mm	mm	mm	mm	
Rp1/16	28	6.000	4.900	7.75	90.000	11.000	30.000	7.723
Rp1/8	28	7.000	5.500	9.75	90.000	11.000	35.000	9.728
Rp1/4	19	11.000	9.000	13.25	100.000	14.000	40.000	13.157
Rp3/8	19	12.000	9.000	16.75	100.000	14.000	44.000	16.662
Rp1/2	14	16.000	12.000	21.00	125.000	18.000	44.000	20.955
Rp3/4	14	20.000	16.000	26.50	140.000	20.000	53.000	26.441
Rp1	11	25.000	20.000	33.25	160.000	24.000	56.000	33.249

Taps for BSP threads

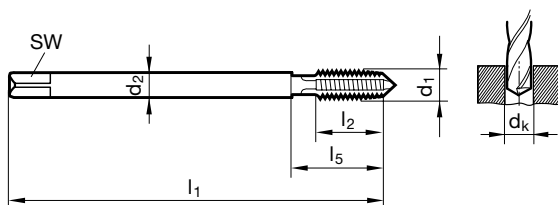


<b>P</b>	•
<b>M</b>	•
<b>K</b>	○
<b>N</b>	○
<b>S</b>	○
<b>H</b>	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	<b>HSS-E</b>
Tolerance on Ø	
Surface	<b>S</b>
Type	VA
Form	B
Internal cooling	

**NEW**



DIN 2184-1 DIN 5156

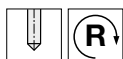
Article no.

**4682**

d1	P	d2	SW	dk	l1	l2	l5	Code no.
	G/inch	mm	mm	mm	mm	mm	mm	
Rp1/16	28	6.000	4.900	7.75	90.000	18.000	30.000	7.723
Rp1/8	28	7.000	5.500	9.75	90.000	18.000	35.000	9.728
Rp1/4	19	11.000	9.000	13.25	100.000	20.000	40.000	13.157
Rp3/8	19	12.000	9.000	16.75	100.000	22.000	44.000	16.662
Rp1/2	14	16.000	12.000	21.00	125.000	25.000	44.000	20.955
Rp3/4	14	20.000	16.000	26.50	140.000	28.000	53.000	26.441
Rp1	11	25.000	20.000	33.25	160.000	30.000	56.000	33.249



Taps for BSW threads

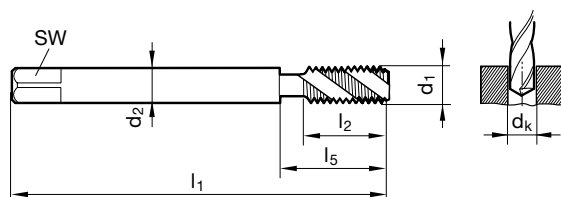


P	•
M	•
K	○
N	○
S	○
H	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	HSS-E
Tolerance on Ø	
Surface	A
Type	VA R45
Form	C
Internal cooling	

New products



DIN 2184-1 ~DIN 371

Article no.

4679

d1	P	d2	SW	dk	l1	l2	l5	Code no.
	G/inch	mm	mm	mm	mm	mm	mm	
W1/8	40	3.500	2.700	2.50	56.000	7.000	18.000	3.175
W3/16	24	6.000	4.900	3.60	70.000	11.000	25.000	4.762
W1/4	20	7.000	5.500	5.10	80.000	13.000	30.000	6.350
W5/16	18	8.000	6.200	6.50	90.000	14.000	35.000	7.938
W3/8	16	10.000	8.000	7.90	100.000	16.000	39.000	9.525
W7/16	14	8.000	6.200	9.20	100.000	18.000	42.000	11.113
W1/2	12	9.000	7.000	10.50	110.000	20.000	49.000	12.700
W5/8	11	12.000	9.000	13.50	110.000	24.000	53.000	15.876
W3/4	10	14.000	11.000	16.25	125.000	25.000	62.000	19.051
W7/8	9	18.000	14.500	19.25	140.000	28.000	62.000	22.226
W1	8	18.000	14.500	22.00	160.000	32.000	73.000	25.401

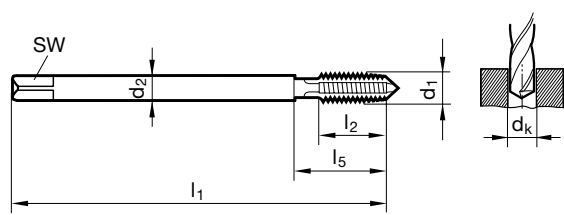
Taps for BSW threads



<b>P</b>	•
<b>M</b>	•
<b>K</b>	○
<b>N</b>	○
<b>S</b>	○
<b>H</b>	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	<b>HSS-E</b>
Tolerance on Ø	
Surface	<b>S</b>
Type	VA
Form	B
Internal cooling	



DIN 2184-1 ~DIN 371

Article no. **4680**

d1	P	d2	SW	dk	l1	l2	l5	Code no.
	G/inch	mm	mm	mm	mm	mm	mm	
W1/8	40	3.500	2.700	2.50	56.000	11.000	18.000	3.175
W3/16	24	6.000	4.900	3.60	70.000	14.000	25.000	4.762
W1/4	20	7.000	5.500	5.10	80.000	16.000	30.000	6.350
W5/16	18	8.000	6.200	6.50	90.000	18.000	35.000	7.938
W3/8	16	10.000	8.000	7.90	100.000	20.000	39.000	9.525
W7/16	14	8.000	6.200	9.20	100.000	22.000	42.000	11.113
W1/2	12	9.000	7.000	10.50	110.000	25.000	49.000	12.700
W5/8	11	12.000	9.000	13.50	110.000	30.000	53.000	15.876
W3/4	10	14.000	11.000	16.25	125.000	33.000	62.000	19.051
W7/8	9	18.000	14.500	19.25	140.000	35.000	62.000	22.226
W1	8	18.000	14.500	22.00	160.000	38.000	73.000	25.401

# GÜHRING

# TM 226

DISPENSING SYSTEM

## Tool management made easy



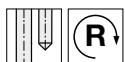
### Equipment

- ▶ electronically locked dispensing system
- ▶ manually operated drawers with full pull-out (load capacity per drawer max. 200 kg)
- ▶ 11 drawers
  - 8 x 75 mm high
  - 3 x 100 mm high
- ▶ height: 1,700 mm (incl. attachment)
- ▶ width: 800 mm
- ▶ depth: 750 mm
- ▶ 21.5" HD touchscreen monitor
- ▶ PC with WIN 10, 64 Bit
- ▶ RFID card reader for login on system
- ▶ Gühring TM software GTMS Basic

Product similar as illustrated.

[www.guehring.com](http://www.guehring.com)

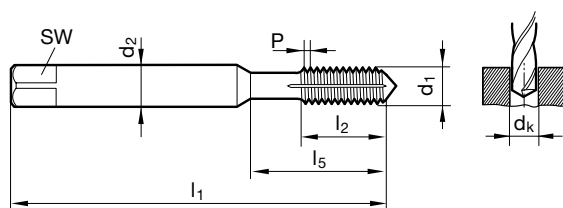
Fluteless taps for ISO metric threads



P	
M	
K	
N	•
S	
H	

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	HSS-E
Tolerance on Ø	6HX
Surface	ⓐ
Type	N
Form	C
Internal cooling	☒



DIN 2174 ~DIN 371/~DIN 376

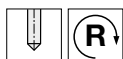
Article no.

4676

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0.400	2.800	2.100	1.85	45.000	8.000	13.500
M2,5	0.450	2.800	2.100	2.30	50.000	9.000	14.500
M3	0.500	3.500	2.700	2.80	56.000	10.000	18.000
M4	0.700	4.500	3.400	3.70	63.000	12.000	21.000
M5	0.800	6.000	4.900	4.65	70.000	14.000	25.000
M6	1.000	6.000	4.900	5.55	80.000	16.000	30.000
M8	1.250	8.000	6.200	7.40	90.000	17.000	35.000
M10	1.500	10.000	8.000	9.30	100.000	20.000	39.000
M12	1.750	9.000	7.000	11.20	110.000	24.000	49.000
M14	2.000	11.000	9.000	13.10	110.000	26.000	53.000
M16	2.000	12.000	9.000	15.10	110.000	26.000	54.000

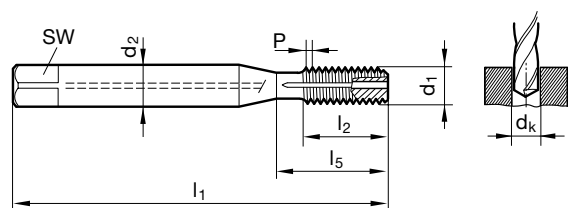


Fluteless taps for ISO metric threads



<b>P</b>	You can find the cutting data in our online navigator at <a href="https://webnavigator.guehring.de">https://webnavigator.guehring.de</a> .	
<b>M</b>		
<b>K</b>		with internal cooling $\geq$ M5
<b>N</b>		•
<b>S</b>		
<b>H</b>		

Tool material	<b>HSS-E</b>
Tolerance on $\varnothing$	6HX
Surface	<b>CB</b>
Type	N
Form	E
Internal cooling	



DIN 2174 ~DIN 371/~DIN 376 Article no. **4677**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0.400	2.800	2.100	1.85	45.000	8.000	13.500
M2,5	0.450	2.800	2.100	2.30	50.000	9.000	14.500
M3	0.500	3.500	2.700	2.80	56.000	10.000	18.000
M4	0.700	4.500	3.400	3.70	63.000	12.000	21.000
M5	0.800	6.000	4.900	4.65	70.000	14.000	25.000
M6	1.000	6.000	4.900	5.55	80.000	16.000	30.000
M8	1.250	8.000	6.200	7.40	90.000	17.000	35.000
M10	1.500	10.000	8.000	9.30	100.000	20.000	39.000
M12	1.750	9.000	7.000	11.20	110.000	24.000	49.000
M14	2.000	11.000	9.000	13.10	110.000	26.000	53.000
M16	2.000	12.000	9.000	15.10	110.000	26.000	54.000

New products

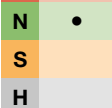
Fluteless taps for ISO metric threads



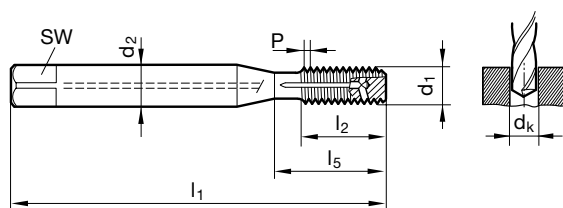
**P** You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

**M**

**K** with internal cooling  $\geq$  M5



Tool material	<b>Solid carbide</b>
Tolerance on $\varnothing$	6HX
Surface	<b>Cb</b>
Type	N
Form	C
Internal cooling	



DIN 2174 ~DIN 371/~DIN 376

Article no.

**4678**

d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M3	0.500	3.500	2.700	2.80	56.000	6.000	18.000
M4	0.700	4.500	3.400	3.70	63.000	7.500	21.000
M5	0.800	6.000	4.900	4.65	70.000	8.500	25.000
M6	1.000	6.000	4.900	5.55	80.000	11.000	30.000
M8	1.250	8.000	6.200	7.40	90.000	14.000	35.000
M10	1.500	10.000	8.000	9.30	100.000	16.000	39.000
M12	1.750	9.000	7.000	11.20	110.000	18.500	49.000
M14	2.000	11.000	9.000	13.10	110.000	20.000	53.000
M16	2.000	12.000	9.000	15.10	110.000	20.000	54.000





## Micro thread milling cutters

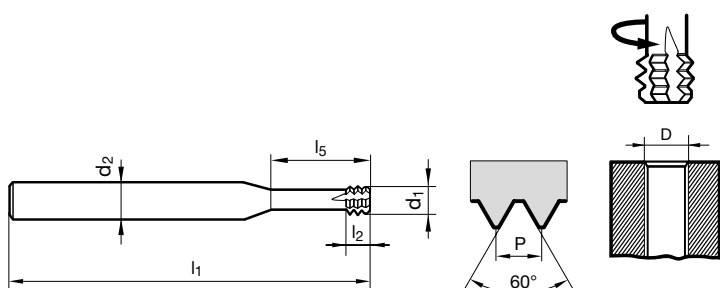


P	•
M	•
K	•
N	•
S	•
H	≤ 66

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Tool material	<b>Solid carbide</b>
Surface	
Type	MTMH3-Z
Internal cooling	
Shank form	~HA/HB

New products



Article no. **4700**

D	P	d1	d2	l1	l2	l5	Z	Code no.
	G/inch	mm	mm	mm	mm	mm		
UNF No 1	72	1.400	3.000	39.000	1.100	5.000	4	1.853
UNC No 1+UNF No 2	64	1.400	3.000	39.000	1.200	5.000	4	1.854
UNC No 2+UNF No 3	56	1.600	3.000	39.000	1.400	5.500	4	2.184
UNC No 3+UNF No 4	48	1.900	3.000	39.000	1.600	6.500	4	2.515
UNC No 4	40	2.100	6.000	58.000	1.900	7.500	4	2.845
UNC No 5+UNF No 6	40	2.400	6.000	58.000	1.900	8.000	4	3.175
UNC No 6	32	2.600	6.000	58.000	2.400	9.000	4	3.505
UNF No 8	36	3.200	6.000	58.000	2.100	10.500	4	4.165
UNC No 8	32	3.100	6.000	58.000	2.400	10.500	4	4.166
UNF No10	32	3.600	6.000	58.000	2.400	12.500	4	4.825
UNC No10+UNC No12	24	3.600	6.000	58.000	3.200	12.500	4	4.826
UNF No12	28	4.100	6.000	58.000	2.700	14.000	4	5.485
UNF 1/4	28	4.800	6.000	58.000	2.700	16.000	4	6.349
UNC 1/4	20	4.800	6.000	58.000	3.800	16.000	4	6.350
UNF 5/16+UNF 3/8	24	6.300	8.000	64.000	3.200	20.000	4	7.937
UNC 5/16	18	6.300	8.000	64.000	4.200	20.000	4	7.938
UNC 3/8	16	7.200	8.000	64.000	4.800	24.000	4	9.525
UNF 7/16	20	8.300	10.000	73.000	3.800	28.000	4	11.112
UNC 7/16	14	8.300	10.000	73.000	5.400	28.000	4	11.113
UNF 1/2	20	9.700	10.000	73.000	3.800	31.000	4	12.700
UNF 5/8	18	11.800	12.000	90.000	4.200	40.000	4	15.874

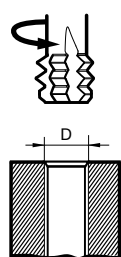
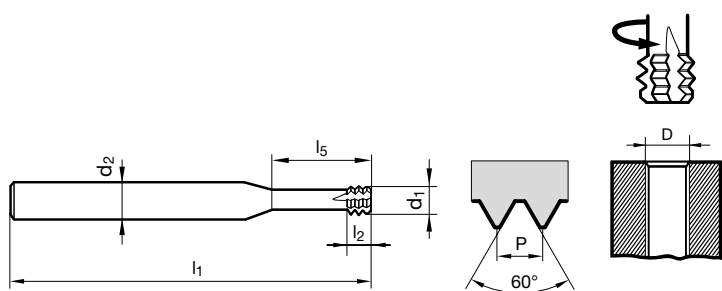
**Micro thread milling cutters**



**P** • You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

- M** •
- K** •
- N** •
- S** •
- H** ≤ 66

Tool material	<b>Solid carbide</b>
Surface	
Type	MTMH3-Z
Internal cooling	
Shank form	~HB



Article no. **4780**

D	P	d1	d2	l1	l2	l5	Z	Code no.
	G/inch	mm	mm	mm	mm	mm		
G1/16-G1/8	28	6.100	8.000	64.000	2.700	24.000	4	9.728
G1/4-G3/8	19	10.300	12.000	90.000	4.000	40.000	4	16.662
G1/2-G5/8-G3/4	14	15.700	16.000	105.000	5.400	50.000	4	26.441



Universal thread milling cutters for Rc threads

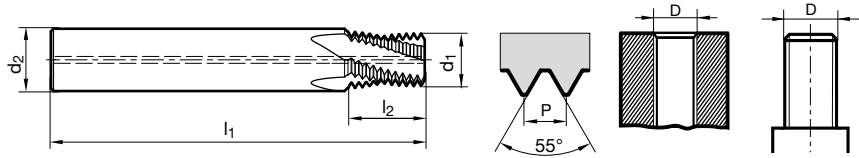


- P** • You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.
- M** •
- K** •
- N** •
- S** •
- H** ≤ 55

Tool material	<b>Solid carbide</b>
Surface	
Type	TMU SP
Internal cooling	
Shank form	~HB



New products



Article no. **4770**

D	P	d1	d2	l1	l2	Z	Code no.
	G/inch	mm	mm	mm	mm		
Rc1/8	28	7.400	8.000	64.000	8.600	3	9.728
Rc1/4-Rc3/8	19	9.120	10.000	74.000	14.040	4	13.157
Rc1/2-Rc3/4	14	14.800	16.000	90.000	19.050	5	20.955
Rc 1-Rc 2	11	18.000	20.000	105.000	33.400	5	33.249



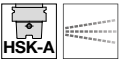
# TOOL **HOLDERS**



New products



**HSK-A hydraulic chucks, slim design 3°**



**Product information:**

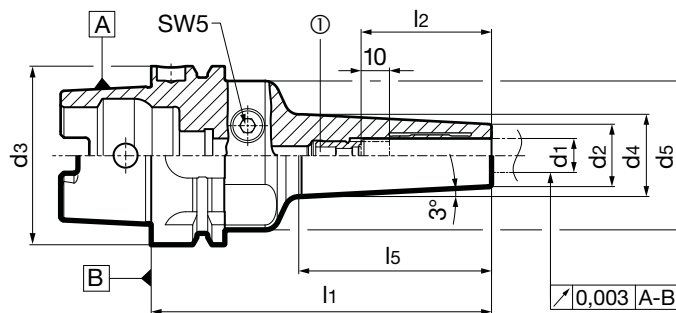
- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- axial length adjustment
- concentricity error:  
l1 = 120: max. 3 µm  
l1 = 160: max. 5 µm
- for tool shank tolerance h6
- HSK-A to ISO 12164-1 / DIN 69893-1

**Scope of delivery:**

- incl. setting screw article no. 4941
- incl. clamping key art. no. 4912

**Suitable accessories separately available:**

- for conventional cooling order coolant supply set art. no. 4949 separately
- for MQL application on request
- special dimensions on request
- order replacement clamping screws art. nr. 4241 separately



Article no. **4596**

d3	d1 h6	d2	d4	d5	l1	l5	l2	①	kg	Order no.
HSK-A 63	6	16	23.0	52.5	120	67.5	37	4941 6.041	1.1	<b>4596 6.163</b>
HSK-A 63	8	18	25.0	52.5	120	67.5	37	4941 8.040	1.1	<b>4596 8.163</b>
HSK-A 63	10	20	27.0	52.5	120	67.5	41	4941 10.050	1.1	<b>4596 10.163</b>
HSK-A 63	12	22	29.0	52.5	120	68.0	46	4941 12.100	1.2	<b>4596 12.163</b>
HSK-A 63	14	24	31.0	52.5	120	68.4	46	4941 14.100	1.2	<b>4596 14.163</b>
HSK-A 63	16	26	33.0	52.5	120	68.9	49	4941 16.100	1.2	<b>4596 16.163</b>
HSK-A 63	18	28	35.0	52.5	120	69.4	49	4941 18.100	1.2	<b>4596 18.163</b>
HSK-A 63	20	30	37.0	52.5	120	69.7	51	4941 20.100	1.3	<b>4596 20.163</b>
HSK-A 63	6	16	27.2	52.5	160	108.4	37	4941 6.041	1.2	<b>4596 6.263</b>
HSK-A 63	8	18	29.2	52.5	160	108.4	37	4941 8.040	1.3	<b>4596 8.263</b>
HSK-A 63	10	20	31.2	52.5	160	108.4	41	4941 10.050	1.3	<b>4596 10.263</b>
HSK-A 63	12	22	33.3	52.5	160	109.0	46	4941 12.100	1.4	<b>4596 12.263</b>
HSK-A 63	14	24	35.3	52.5	160	109.4	46	4941 14.100	1.5	<b>4596 14.263</b>
HSK-A 63	16	26	37.4	52.5	160	110.0	49	4941 16.100	1.5	<b>4596 16.263</b>
HSK-A 63	18	28	39.4	52.5	160	110.4	49	4941 18.100	1.6	<b>4596 18.263</b>
HSK-A 63	20	30	41.5	52.5	160	112.0	51	4941 20.100	1.6	<b>4596 20.263</b>



ISO taper hydraulic chucks, slim design 3°



**Product information:**

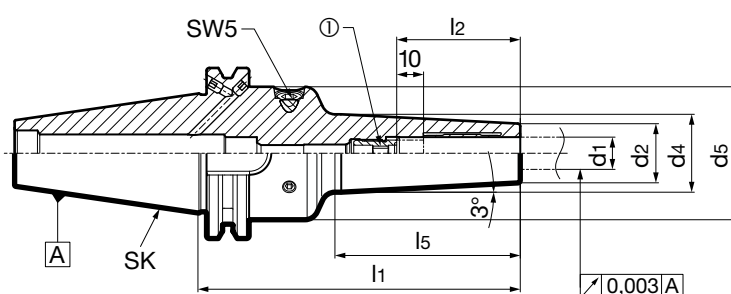
- SK to DIN ISO 7388-1 form AD/AF
- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- axial length adjustment
- concentricity error:  
l1 = 120: max. 3 µm  
l1 = 160: max. 5 µm
- for tool shank tolerance h6

**Scope of delivery:**

- incl. setting screw article no. 4941
- incl. clamping key art. no. 4912

**Suitable accessories separately available:**

- order pull studs for SK (art. no. 4925, 4926) separately
- order replacement clamping screws art. nr. 4241 separately



Article no. **4597**

SK	d1 h6	d2	d4	d5	l1	l5	l2	①	kg	Order no.
SK 40	6	16	23.0	49.5	120	68.0	37	4941 6.041	1.3	<b>4597 6.140</b>
SK 40	8	18	25.0	49.5	120	68.0	37	4941 8.040	1.3	<b>4597 8.140</b>
SK 40	10	20	27.0	49.5	120	68.5	41	4941 10.050	1.3	<b>4597 10.140</b>
SK 40	12	22	29.0	49.5	120	69.0	46	4941 12.100	1.4	<b>4597 12.140</b>
SK 40	14	24	31.0	49.5	120	69.0	46	4941 14.100	1.4	<b>4597 14.140</b>
SK 40	16	26	33.0	49.5	120	69.5	49	4941 16.100	1.4	<b>4597 16.140</b>
SK 40	18	28	35.0	49.5	120	70.0	49	4941 18.100	1.4	<b>4597 18.140</b>
SK 40	20	30	37.0	49.5	120	70.0	51	4941 20.100	1.5	<b>4597 20.140</b>
SK 40	6	16	27.3	49.5	160	109.0	37	4941 6.041	1.4	<b>4597 6.240</b>
SK 40	8	18	29.3	49.5	160	109.0	37	4941 8.040	1.5	<b>4597 8.240</b>
SK 40	10	20	31.4	49.5	160	110.0	41	4941 10.050	1.5	<b>4597 10.240</b>
SK 40	12	22	33.5	49.5	160	111.0	46	4941 12.100	1.6	<b>4597 12.240</b>
SK 40	14	24	35.6	49.5	160	112.0	46	4941 14.100	1.7	<b>4597 14.240</b>
SK 40	16	26	37.6	49.5	160	112.0	49	4941 16.100	1.7	<b>4597 16.240</b>
SK 40	18	28	39.8	49.5	160	114.0	49	4941 18.100	1.8	<b>4597 18.240</b>
SK 40	20	30	41.8	49.5	160	114.0	51	4941 20.100	1.8	<b>4597 20.240</b>

New products



**Shrink fit chuck HSK-A, slim design 3°**



**Product information:**

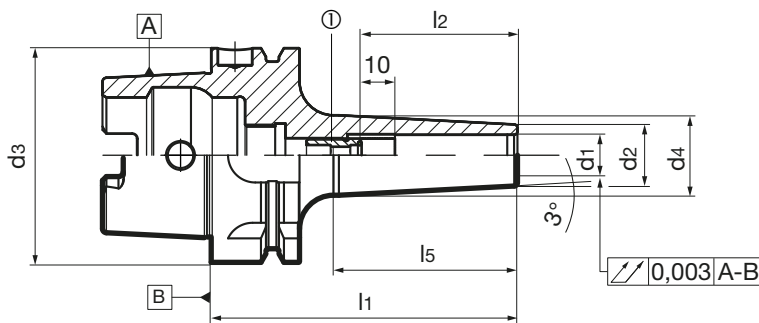
- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- for carbide tool shanks in tolerance h6 (from d1 14 mm also HSS possible)
- concentricity error max. 3 µm
- overlengths l1 = 120 mm (concentricity 4 µm) and 160 mm (concentricity 5 µm)
- HSK-A to ISO 12164-1 / DIN 69893-1

**Scope of delivery:**

- incl. setting screw with axial force art. nr. 4941 or 4904

**Suitable accessories separately available:**

- for conventional cooling order coolant supply set art. no. 4949 separately
- for MQL application on request
- special dimensions on request



Article no. **4787**

d3	d1 h6	d2	d4	l1	l2	l5	①	kg	Order no.
	mm								
HSK-A 63	3	9	13.0	80	30	40	4904 5.016	0.6	<b>4787 3.063</b>
HSK-A 63	4	10	14.0	80	35	41	4904 6.016	0.7	<b>4787 4.063</b>
HSK-A 63	5	11	15.0	80	40	41	4904 8.018	0.7	<b>4787 5.063</b>
HSK-A 63	6	12	16.0	80	36	42	4941 6.100	0.7	<b>4787 6.063</b>
HSK-A 63	8	14	18.0	80	36	42	4941 8.100	0.7	<b>4787 8.063</b>
HSK-A 63	10	16	21.0	85	41	49	4941 10.100	0.7	<b>4787 10.063</b>
HSK-A 63	12	18	23.5	90	46	54	4941 12.100	0.7	<b>4787 12.063</b>
HSK-A 63	14	20	25.5	90	46	54	4941 14.100	0.7	<b>4787 14.063</b>
HSK-A 63	16	22	28.0	95	49	59	4941 16.100	0.8	<b>4787 16.063</b>
HSK-A 63	18	24	30.0	95	49	59	4941 18.100	0.8	<b>4787 18.063</b>
HSK-A 63	20	26	32.5	100	51	64	4941 20.100	0.9	<b>4787 20.063</b>
HSK-A 63	3	9	17.0	120	30	80	4904 5.016	0.7	<b>4787 3.163</b>
HSK-A 63	4	10	18.0	120	35	81	4904 6.016	0.7	<b>4787 4.163</b>
HSK-A 63	5	11	19.0	120	40	81	4904 8.018	0.7	<b>4787 5.163</b>
HSK-A 63	6	12	20.5	120	36	82	4941 6.041	0.8	<b>4787 6.163</b>
HSK-A 63	8	14	22.5	120	36	82	4941 8.040	0.8	<b>4787 8.163</b>
HSK-A 63	10	16	24.5	120	41	82	4941 10.050	0.8	<b>4787 10.163</b>
HSK-A 63	12	18	26.5	120	46	83	4941 12.100	0.9	<b>4787 12.163</b>
HSK-A 63	14	20	28.5	120	46	83	4941 14.100	0.9	<b>4787 14.163</b>
HSK-A 63	16	22	30.5	120	49	83	4941 16.100	0.9	<b>4787 16.163</b>
HSK-A 63	18	24	32.7	120	49	84	4941 18.100	1.0	<b>4787 18.163</b>
HSK-A 63	20	26	34.7	120	51	85	4941 20.100	1.0	<b>4787 20.163</b>
HSK-A 63	3	9	21.5	160	30	121	4904 5.016	0.8	<b>4787 3.263</b>
HSK-A 63	4	10	22.5	160	35	121	4904 6.016	0.8	<b>4787 4.263</b>
HSK-A 63	5	11	23.5	160	40	121	4904 8.018	0.9	<b>4787 5.263</b>
HSK-A 63	6	12	24.5	160	36	122	4941 6.041	0.9	<b>4787 6.263</b>
HSK-A 63	8	14	26.5	160	36	122	4941 8.040	1.0	<b>4787 8.263</b>
HSK-A 63	10	16	28.5	160	41	122	4941 10.050	1.0	<b>4787 10.263</b>
HSK-A 63	12	18	30.5	160	46	123	4941 12.100	1.1	<b>4787 12.263</b>
HSK-A 63	14	20	32.8	160	46	124	4941 14.100	1.1	<b>4787 14.263</b>
HSK-A 63	16	22	34.8	160	49	125	4941 16.100	1.2	<b>4787 16.263</b>
HSK-A 63	18	24	37.0	160	49	126	4941 18.100	1.3	<b>4787 18.263</b>
HSK-A 63	20	26	39.0	160	51	127	4941 20.100	1.3	<b>4787 20.263</b>





ISO taper shrink fit chucks, slim design 3°



Product information:

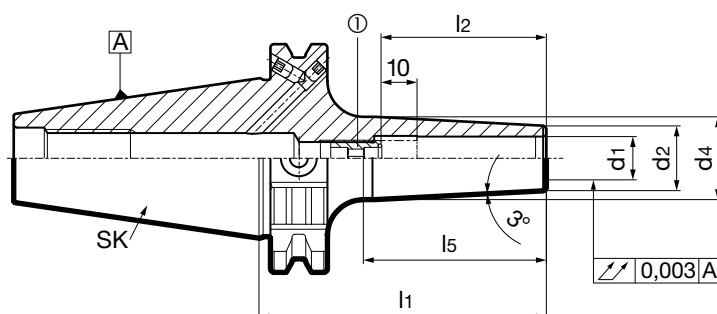
- SK to DIN ISO 7388-1 form AD/AF
- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- concentricity error:  
l1 = 80: max. 3 µm,  
l1 = 120: max. 4 µm,  
l1 = 160: max. 5 µm
- for carbide tool shanks in tolerance h6

Scope of delivery:

- incl. setting screw article no. 4904 or 4977

Suitable accessories separately available:

- order pull studs for SK (art. no. 4925, 4926) separately



Article no. 4788

SK	d1 h6	d2	d4	l1	l2	l5	①	kg	Order no.
SK 40	3	9	13.5	80	30	46	4904 5.016	0.8	4788 3.040
SK 40	4	10	14.5	80	35	46	4904 6.016	0.8	4788 4.040
SK 40	5	11	15.5	80	40	47	4904 8.018	0.8	4788 5.040
SK 40	6	12	16.5	80	36	48	4977 6.014	0.8	4788 6.040
SK 40	8	14	19.0	80	36	49	4977 8.014	0.8	4788 8.040
SK 40	10	16	21.0	80	41	50	4977 10.014	0.9	4788 10.040
SK 40	12	18	23.0	80	46	51	4977 12.014	0.9	4788 12.040
SK 40	14	20	25.0	80	46	52	4977 12.014	0.9	4788 14.040
SK 40	16	22	27.0	80	49	53	4977 16.014	0.9	4788 16.040
SK 40	18	24	29.5	80	49	54	4977 16.014	0.9	4788 18.040
SK 40	20	26	31.5	80	51	55	4977 20.114	0.9	4788 20.040
SK 40	3	9	18.0	120	30	88	4904 5.016	0.9	4788 3.140
SK 40	4	10	19.0	120	35	88	4904 6.016	0.9	4788 4.140
SK 40	5	11	20.0	120	40	89	4904 8.018	0.9	4788 5.140
SK 40	6	12	21.0	120	36	90	4977 6.014	0.9	4788 6.140
SK 40	8	14	23.5	120	36	92	4977 8.014	1.0	4788 8.140
SK 40	10	16	25.5	120	41	92	4977 10.014	1.0	4788 10.140
SK 40	12	18	27.5	120	46	93	4977 12.014	1.0	4788 12.140
SK 40	14	20	29.5	120	46	94	4977 12.014	1.1	4788 14.140
SK 40	16	22	31.5	120	49	95	4977 16.014	1.1	4788 16.140
SK 40	18	24	33.5	120	49	96	4977 16.014	1.1	4788 18.140
SK 40	20	26	36.0	120	51	97	4977 20.114	1.2	4788 20.140
SK 40	3	9	22.5	160	30	130	4904 5.016	1.0	4788 3.240
SK 40	4	10	23.5	160	35	130	4904 6.016	1.0	4788 4.240
SK 40	5	11	24.5	160	40	131	4904 8.018	1.0	4788 5.240
SK 40	6	12	25.5	160	36	132	4977 6.014	1.1	4788 6.240
SK 40	8	14	27.5	160	36	132	4977 8.014	1.1	4788 8.240
SK 40	10	16	30.0	160	41	134	4977 10.014	1.2	4788 10.240
SK 40	12	18	32.0	160	46	135	4977 12.014	1.2	4788 12.240
SK 40	14	20	34.0	160	46	136	4977 12.014	1.3	4788 14.240
SK 40	16	22	36.0	160	49	137	4977 16.014	1.4	4788 16.240
SK 40	18	24	38.0	160	49	137	4977 16.014	1.4	4788 18.240
SK 40	20	26	40.5	160	51	139	4977 20.114	1.5	4788 20.240

New products



**Shrink fit chuck HSK-E, slim design 3°**



**Product information:**

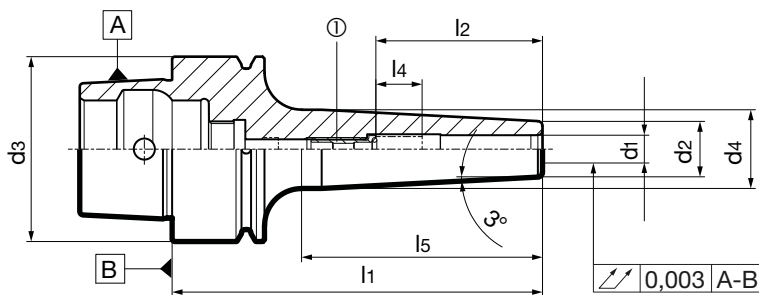
- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- for carbide tool shanks in tolerance h6
- HSK-E according to DIN 69893-5 with access hole in taper for manual tool change

**Scope of delivery:**

- incl. setting screw article no. 4904 or 4977

**Suitable accessories separately available:**

- for conventional cooling order coolant supply set art. no. 4949 separately
- special dimensions on request



Article no. **4789**

d3	d1 h6	d2	d4	l1	l5	l4	l2	①	kg	Order no.
HSK-E 40	3	9	12.0	60	30.0	10	30	4904 5.007	0.2	<b>4789 3.040</b>
HSK-E 40	4	10	13.0	60	31.0	10	35	4904 5.007	0.2	<b>4789 4.040</b>
HSK-E 40	5	11	14.0	60	31.0	10	36	4904 6.007	0.2	<b>4789 5.040</b>
HSK-E 40	6	12	15.0	60	32.0	5	36	4977 5.009	0.2	<b>4789 6.040</b>
HSK-E 40	8	14	17.0	60	32.0	5	36	4977 5.009	0.2	<b>4789 8.040</b>
HSK-E 40	10	16	19.5	60	34.0	5	38	4904 5.007	0.2	<b>4789 10.040</b>
HSK-E 40	12	18	21.5	60	34.5	3	40	4904 5.005	0.2	<b>4789 12.040</b>
HSK-E 40	3	9	14.0	80	50.0	10	30	4904 5.016	0.2	<b>4789 3.140</b>
HSK-E 40	4	10	15.0	80	51.0	10	35	4904 5.016	0.2	<b>4789 4.140</b>
HSK-E 40	5	11	16.0	80	51.0	10	40	4904 6.016	0.2	<b>4789 5.140</b>
HSK-E 40	6	12	17.0	80	52.0	10	36	4977 6.014	0.2	<b>4789 6.140</b>
HSK-E 40	8	14	19.0	80	52.5	10	36	4977 8.014	0.8	<b>4789 8.140</b>
HSK-E 40	10	16	21.5	80	54.0	10	41	4977 10.014	0.3	<b>4789 10.140</b>
HSK-E 40	12	18	23.5	80	55.0	10	46	4977 8.014	0.3	<b>4789 12.140</b>
HSK-E 50	3	9	13.0	80	40.0	10	30	4904 5.016	0.4	<b>4789 3.050</b>
HSK-E 50	4	10	14.0	80	41.0	10	35	4904 6.016	0.4	<b>4789 4.050</b>
HSK-E 50	5	11	15.0	80	41.0	10	40	4904 6.016	0.4	<b>4789 5.050</b>
HSK-E 50	6	12	16.0	80	42.0	10	36	4977 6.014	0.4	<b>4789 6.050</b>
HSK-E 50	8	14	18.0	80	42.0	10	36	4977 8.014	0.5	<b>4789 8.050</b>
HSK-E 50	10	16	20.5	80	44.0	10	41	4977 10.014	0.5	<b>4789 10.050</b>
HSK-E 50	12	18	22.5	80	44.5	10	46	4977 8.014	0.5	<b>4789 12.050</b>
HSK-E 50	14	20	24.5	80	45.5	10	46	4977 8.014	0.5	<b>4789 14.050</b>
HSK-E 50	16	22	26.5	80	46.5	10	49	4977 8.014	0.5	<b>4789 16.050</b>



## HSK-A precision collet holders



NEW

### Product information:

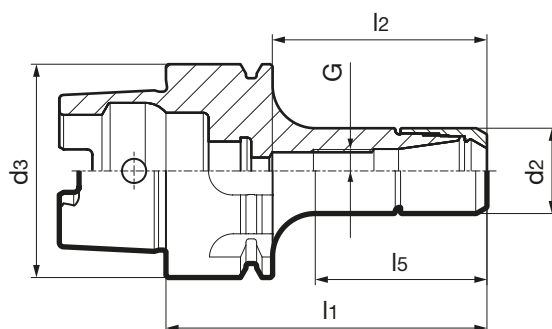
- balancing quality: G 2.5 / 25,000 rev./min or rev.  $\leq$  1 gmm
- für precision collets art. nr. 4574 and 4575
- concentricity error overall system max. 3  $\mu$ m (at 3 x clamping- $\varnothing$  max. 50 mm)
- HSK-A to ISO 12164-1 / DIN 69893-1
- observe maximum torque values of clamping nut  
clamping  $\varnothing$  1.0 - 2.5 = 7 Nm  
clamping  $\varnothing$  3.0 - 7.5 = 10 Nm

### Scope of delivery:

- incl. retaining nut art. nr. 4573
- without setting screws

### Suitable accessories separately available:

- order collets art. no. 4574 or 4575 (sealed version) separately
- order coolant supply set, article no. 4949, separately
- order roller bearing wrench art. nr. 4994 separately
- for optimal operation order torque wrench art. nr. 4981 5,025 and roller bearing wrench head art. nr. 4995 separately



Article no. **4476**

d3	Size	$\varnothing$ -range	d2	l1	l2	l5		G	Order no.
			mm	mm	mm	mm	1/min		
HSK-A 32	ER11	1.0-7.0	16	40	24	20	50000		<b>4476 11.032</b>
HSK-A 40	ER11	1.0-7.0	16	60	40	40	42000	M 8 X1	<b>4476 11.040</b>
HSK-A 40	ER11	1.0-7.0	16	130	75	110	27000	M 8 X1	<b>4476 11.140</b>
HSK-A 50	ER11	1.0-7.0	16	130	60	104	27000	M 8 X1	<b>4476 11.050</b>
HSK-A 63	ER11	1.0-7.0	16	70	48	34	25000	M 8 X1	<b>4476 11.063</b>
HSK-A 63	ER11	1.0-7.0	16	100	78	64	25000	M 8 X1	<b>4476 11.163</b>
HSK-A 63	ER11	1.0-7.0	16	130	108	94	25000	M 8 X1	<b>4476 11.263</b>
HSK-A 63	ER11	1.0-7.0	16	160	138	124	25000	M 8 X1	<b>4476 11.363</b>



## HSK-E precision collet holders



## Product information:

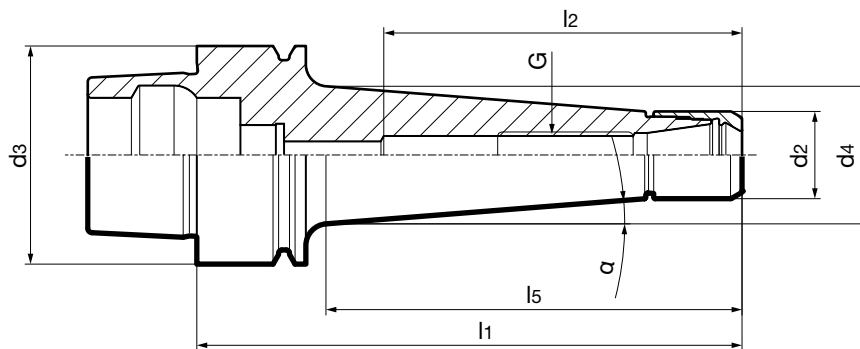
- balancing quality: G 2.5 / 25,000 rev./min or rev.  $\leq$  1 gmm
- für precision collets art. nr. 4574 and 4575
- concentricity error overall system max. 3  $\mu$ m (at 3 x clamping- $\varnothing$  max. 50 mm)
- HSK-E to DIN 69893-5, without access hole in taper
- observe maximum torque values of clamping nut  
clamping  $\varnothing$  1.0 - 2.5 = 7 Nm  
clamping  $\varnothing$  3.0 - 7.5 = 10 Nm

## Scope of delivery:

- incl. retaining nut art. nr. 4573
- without setting screws

## Suitable accessories separately available:

- order collets art. no. 4574 or 4575 (sealed version) separately
- order coolant supply set, article no. 4949, separately
- order roller bearing wrench art. nr. 4994 separately
- for optimal operation order torque wrench art. nr. 4981 5,025 and roller bearing wrench head art. nr. 4995 separately



Article no. 4475

d3	Size	$\varnothing$ -range	d2	d4	l1	l2	l5	$\alpha$	G	Order no.
			mm	mm	mm	mm	mm	$^{\circ}$	1/min	
HSK-E 25	ER11	1,0-7,5	16	20.0	35	22	22.0		60000	4475 11.025
HSK-E 32	ER11	1,0-7,5	16	17.5	50	34	27.5	4.5	50000 M 8 X1	4475 11.032
HSK-E 40	ER11	1,0-7,5	16	17.0	50	31	22.5	4.5	42000 M 8 X1	4475 11.040
HSK-E 40	ER11	1,0-7,5	16	25.5	100	65	75.5	4.5	40000 M 8 X1	4475 11.140
HSK-E 40	ER11	1,0-7,5	16	30.5	130	65	108.0	4.5	35000 M 8 X1	4475 11.240
HSK-E 40	ER11	1,0-7,5	16	32.0	160	65	139.0	4.5	27000 M 8 X1	4475 11.340
HSK-E 50	ER11	1,0-7,5	16	18.0	60	37	30.0	4.5	30000 M 8 X1	4475 11.050
HSK-E 50	ER11	1,0-7,5	16	24.5	100	73	70.0	4.5	30000 M 8 X1	4475 11.150

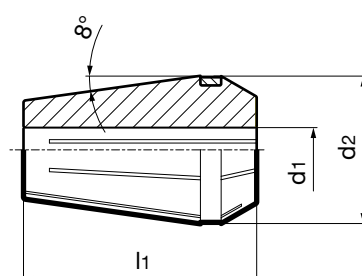


## Precision collets for precision collet holders



### Product information:

- precision collet holders ER11 sim. ISO 15488
- especially for precision collet holders  
art. nr. 4475 and 4476
- concentricity 2  $\mu\text{m}$
- no clamping bridging
- for sealed design order art. nr. 4575
- observe maximum torque values of clamping nut  
clamping  $\varnothing$  1.0 - 2.5 = 7 Nm  
clamping  $\varnothing$  3.0 - 7.5 = 10 Nm
- for tool shank tolerance h10



Article no. **4574**

Size	d1	d2	l1	Order no.
	mm	mm	mm	
ER11	1.00	11.3	18.00	<b>4574 1.011</b>
ER11	1.50	11.3	18.00	<b>4574 1.511</b>
ER11	2.00	11.3	18.00	<b>4574 2.011</b>
ER11	2.50	11.3	18.00	<b>4574 2.511</b>
ER11	3.00	11.3	18.00	<b>4574 3.011</b>
ER11	3.50	11.3	18.00	<b>4574 3.511</b>
ER11	4.00	11.3	18.00	<b>4574 4.011</b>
ER11	4.50	11.3	18.00	<b>4574 4.511</b>
ER11	5.00	11.3	18.00	<b>4574 5.011</b>
ER11	5.50	11.3	18.00	<b>4574 5.511</b>
ER11	6.00	11.3	18.00	<b>4574 6.011</b>
ER11	6.50	11.3	18.00	<b>4574 6.511</b>
ER11	7.00	11.3	18.00	<b>4574 7.011</b>

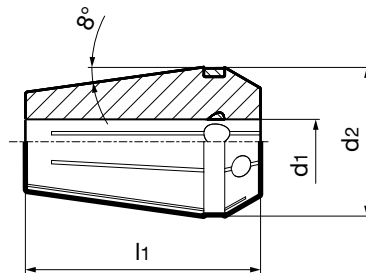


**Precision collets for precision collet holders, sealed version**



**Product information:**

- precision collet holders, sealed version ER11  
sim. ISO 15488
- especially for precision collet holders  
art. nr. 4475 and 4476
- concentricity 2 µm
- no clamping bridging
- observe maximum torque values of clamping nut  
clamping Ø 1.0 - 2.5 = 7 Nm  
clamping Ø 3.0 - 7.5 = 10 Nm
- for tool shank tolerance h8



Article no. **4575**

Size	d1	d2	l1	Order no.
	mm	mm	mm	
ER11	3.00	11.3	18.00	<b>4575 3.011</b>
ER11	4.00	11.3	18.00	<b>4575 4.011</b>
ER11	5.00	11.3	18.00	<b>4575 5.011</b>
ER11	6.00	11.3	18.00	<b>4575 6.011</b>

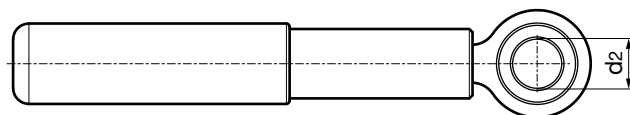


## Roller bearing wrench for precision collet holders

### Product information:

- especially for precision collet holders  
art. nr. 4475 and 4476
- observe maximum torque values of clamping nut  
clamping  $\varnothing$  1.0 - 2.5 = 7 Nm  
clamping  $\varnothing$  3.0 - 7.5 = 10 Nm

New products



Article no.

**4994**

Nominal size	d2	Order no.
	mm	<b>4994 11.000</b>
ER11	16	



**Roller bearing wrench head for torque wrench**

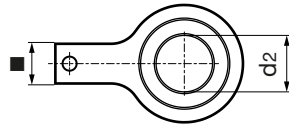


**Product information:**

- especially for precision collet holders art. nr. 4475 and 4476
- roller bearing wrench head for torque wrench
- observe maximum torque values of clamping nut  
clamping Ø 1.0 - 2.5 = 7 Nm  
clamping Ø 3.0 - 7.5 = 10 Nm

**Scope of delivery:**

- **Suitable accessories separately available:**
- torque wrench art. no. 4981 5.025



Article no. **4995**

Nominal size	d2	Drive	Order no.
	mm	■	
ER11	16	9x12	<b>4995 11.000</b>





**Torque wrenches**



**Product information:**

- torque adjustable: 5-25 Nm
- with square socket
- release accuracy  $\pm 4\%$  of the scale value

New products



Article no. **4981**

Drive	Torque	l1	Order no.
■	Nm	mm	
9x12	5-25	273	



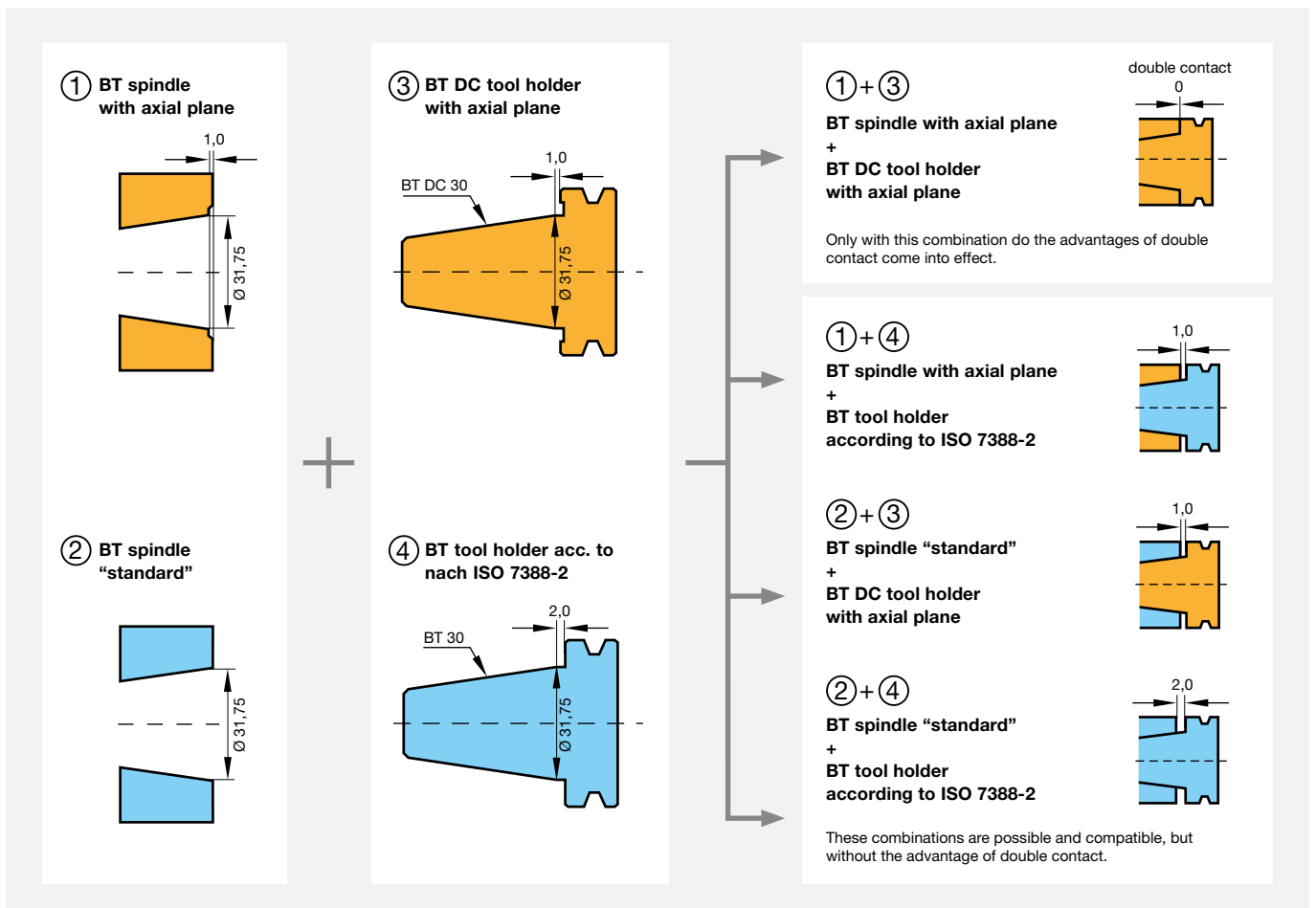
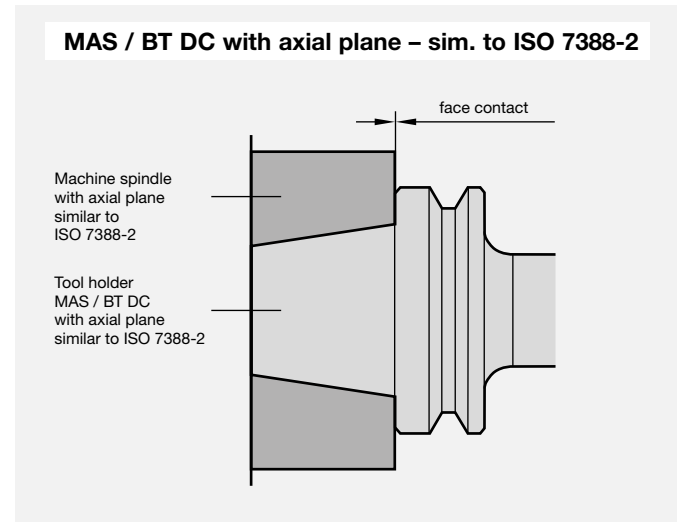
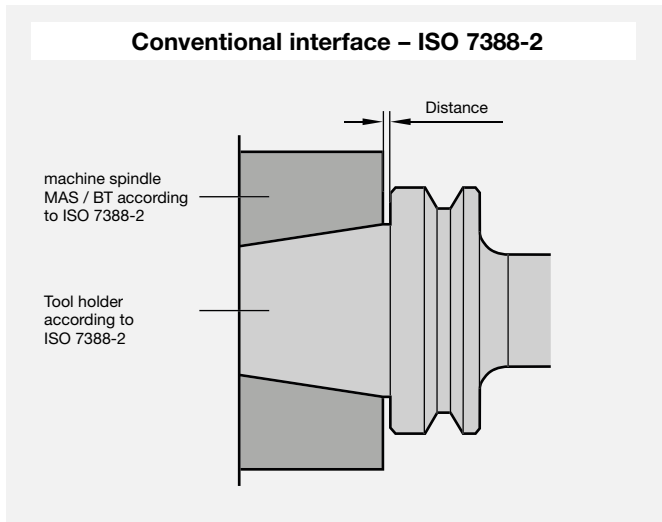
# MAS / BT DC with axial plane

## Gühring tool holders: MAS / BT DC = double contact

- suitable for machine spindles with MAS / BT spindle with axial plane as well as conventional machine spindles with MAS / BT interface according to ISO 7388-2 (JIS B 6339)
- additional axial plane compared to conventional MAS / BT tool holders according to ISO 7388-2

The combination of MAS / BT machine spindles and MAS / BT DC tool holders with axial plane ensures:

- optimised accuracy and repeatability
- better rigidity
- no axial displacing at high speeds





**MAS/BT DC hydraulic chucks with axial plane**



**Product information:**

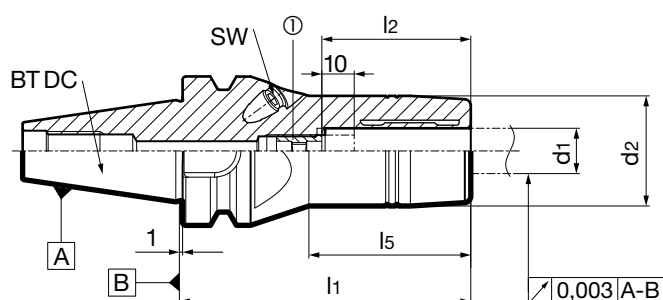
- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- axial length adjustment
- MAS/BT DC with axial plane, sim. ISO 7388-2, form JD
- for tool shank tolerance h6

**Scope of delivery:**

- incl. setting screw article no. 4900
- incl. clamping key art. no. 4912

**Suitable accessories separately available:**

- order pull studs for MAS/BT (art. no. 4927, 4928) separately



Article no. **4598**

BT DC	d1	d2	l1	l2	l5	SW	①		Order no.
	mm	mm	mm	mm	mm	mm		kg	
BT 30	6	26	51	37		4	4900 6.014	0.4	<b>4598 6.030</b>
BT 30	8	28	51	37		4	4900 8.014	0.4	<b>4598 8.030</b>
BT 30	10	30	51	41		4	4900 10.014	0.5	<b>4598 10.030</b>
BT 30	12	32	51	46	19	4	4900 12.014	0.5	<b>4598 12.030</b>
BT 30	14	34	90	46	50	4	4900 12.014	0.8	<b>4598 14.030</b>
BT 30	16	38	90	49	50	4	4900 16.014	0.8	<b>4598 16.030</b>
BT 30	18	40	90	49	50	5	4900 16.014	0.9	<b>4598 18.030</b>
BT 30	20	42	90	51	50	5	4900 20.114	0.9	<b>4598 20.030</b>

New products



**MAS/BT DC shrink fit chucks with axial plane**

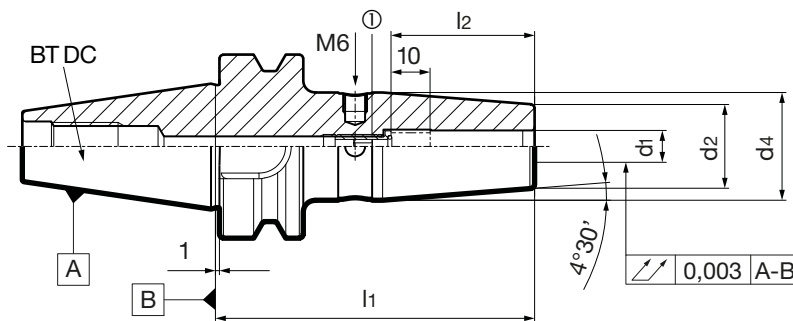


**Product information:**

- balancing quality: G 2.5 / 25,000 rev./min or rev. < 1 gmm
- incl. balancing thread 4xM6
- MAS/BT DC with axial plane, sim. ISO 7388-2, form JD
- for tool shank tolerance h6

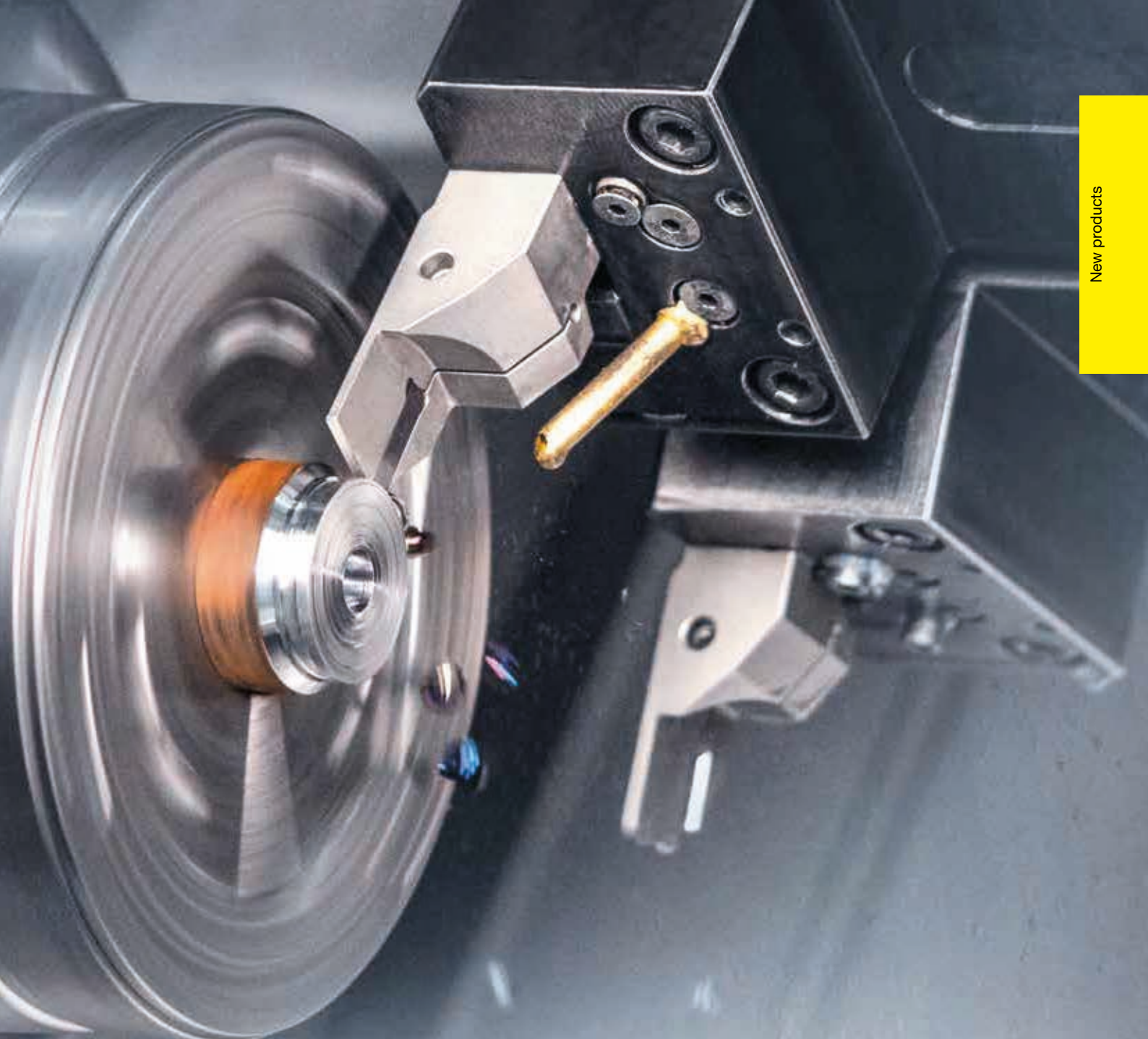
**Scope of delivery:**

- incl. setting screw article no. 4904 or 4977
- **Suitable accessories separately available:**
- order pull studs for MAS/BT (art. no. 4927, 4928) separately



Article no. **4790**

BT DC	d1	d2	d4	l1	l2	①	kg	Order no.
	mm	mm	mm	mm	mm			
BT 30	3	10	18	80	30	4904 5.016	0.6	<b>4790 3.030</b>
BT 30	4	10	18	80	35	4904 6.016	0.6	<b>4790 4.030</b>
BT 30	5	10	18	80	40	4904 8.018	0.6	<b>4790 5.030</b>
BT 30	6	21	27	80	36	4977 6.014	0.7	<b>4790 6.030</b>
BT 30	8	21	27	80	36	4977 8.014	0.7	<b>4790 8.030</b>
BT 30	10	24	32	80	41	4977 10.014	0.8	<b>4790 10.030</b>
BT 30	12	24	32	80	46	4977 12.014	0.8	<b>4790 12.030</b>
BT 30	14	27	34	80	46	4977 12.014	0.8	<b>4790 14.030</b>
BT 30	16	27	34	80	49	4977 16.014	0.8	<b>4790 16.030</b>
BT 30	18	33	42	90	49	4977 16.014	0.9	<b>4790 18.030</b>
BT 30	20	33	42	90	51	4977 20.114	0.9	<b>4790 20.030</b>



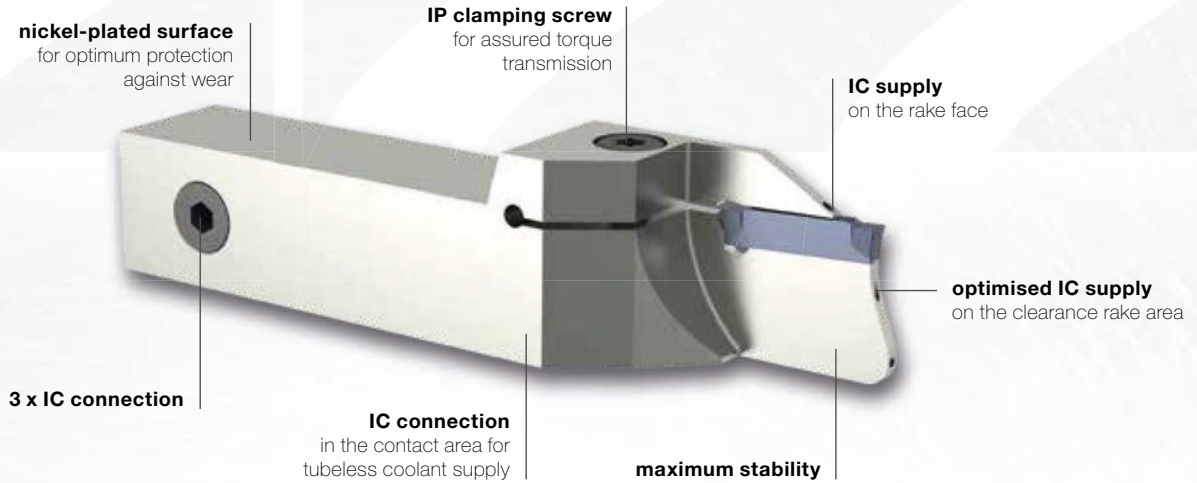
# GROOVING TOOLS

# SYSTEM 222

2 CUTTING EDGES | 22 MM LENGTH | FOR GROOVING AND PARTING OFF

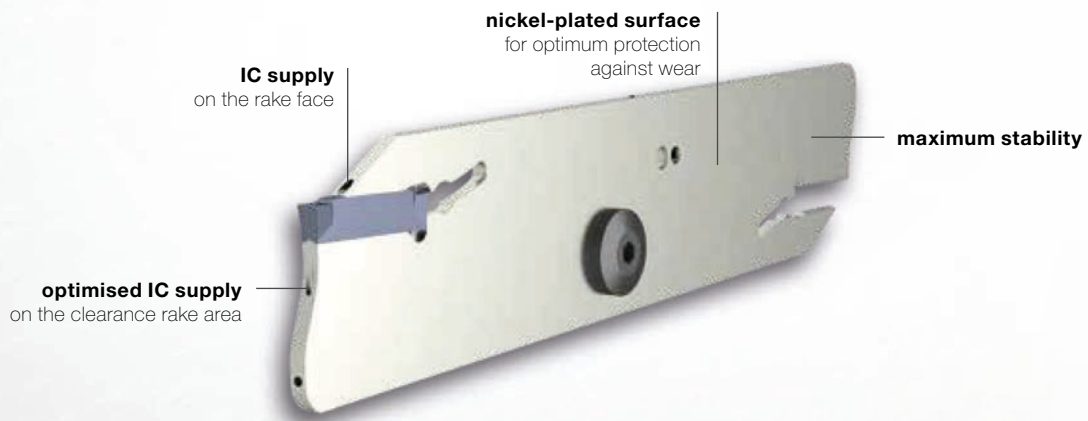
## TOOL HOLDER,

WITH AND WITHOUT INTERNAL COOLANT SUPPLY



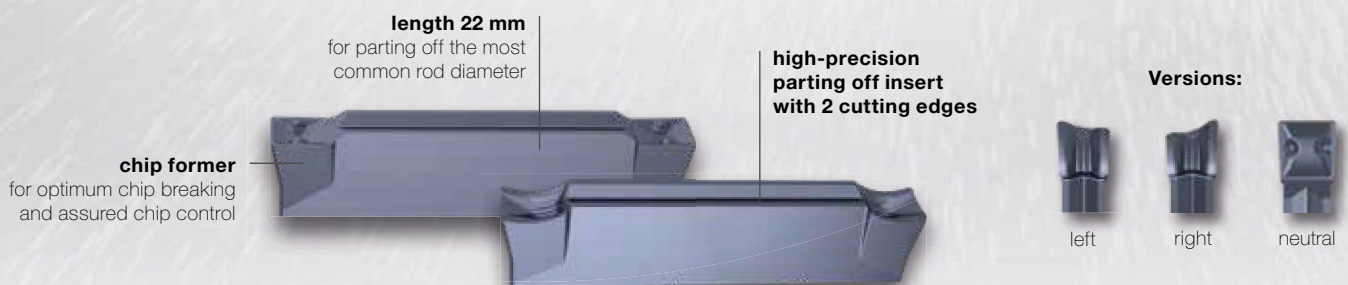
## PARTING OFF BLADE,

WITH AND WITHOUT INTERNAL COOLANT SUPPLY



## INDEXABLE INSERT,

CHIP FORMER FOR STEEL MATERIALS, **NEW:** CHIP FORMER FOR STAINLESS MATERIALS



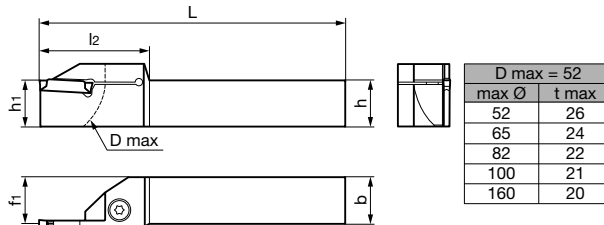


**Square shank holder straight, external machining, without IC**

- tmax: maximum grooving depth before 2nd cutting edge engages
- without internal coolant supply

Type GH 222

for indexable inserts type 222 see from page 67



Right hand version shown  
Left hand version mirror image

Article no. **26100**  
version right-hand

Code no.	Description	t max	h	b	L	l2	h1	f1	D max	Size
		mm	mm	mm	mm	mm	mm	mm	mm	
22.020	GH222.1212.125.00.03.R.00.34		12.00	12.00	125.00	34.00	12.00	10.50	34.00	03
22.030	GH222.0500.500.00.03.R.00.34	21.00	12.70	12.70	127.00	34.00	12.70	11.20	34.00	03
22.040	GH222.0625.500.00.03.R.00.45	21.00	15.87	15.87	127.00	39.50	15.87	14.37	45.00	03
22.050	GH222.1616.125.00.03.R.00.45	21.00	16.00	16.00	125.00	39.50	16.00	14.50	45.00	03
22.060	GH222.0750.500.00.03.R.00.52	21.00	19.05	19.05	127.00	45.00	19.05	19.05	52.00	03
22.070	GH222.2020.125.00.03.R.00.52	21.00	20.00	20.00	125.00	45.00	20.00	20.00	52.00	03
22.080	GH222.2525.150.00.03.R.00.52	21.00	25.00	25.00	150.00	45.00	25.00	25.00	52.00	03
22.090	GH222.1000.600.00.03.R.00.52	21.00	25.40	25.40	152.40	45.00	25.40	25.40	52.00	03

Article no. **26101**  
version left-hand

Code no.	Description	t max	h	b	L	l2	h1	f1	D max	Size
		mm	mm	mm	mm	mm	mm	mm	mm	
22.020	GH222.1212.125.00.03.L.00.34		12.00	12.00	125.00	34.00	12.00	10.50	34.00	03
22.030	GH222.0500.500.00.03.L.00.34	21.00	12.70	12.70	127.00	34.00	12.70	11.20	34.00	03
22.040	GH222.0625.500.00.03.L.00.45	21.00	15.87	15.87	127.00	39.50	15.87	14.37	45.00	03
22.050	GH222.1616.125.00.03.L.00.45	21.00	16.00	16.00	125.00	39.50	16.00	14.50	45.00	03
22.060	GH222.0750.500.00.03.L.00.52	21.00	19.05	19.05	127.00	45.00	19.05	19.05	52.00	03
22.070	GH222.2020.125.00.03.L.00.52	21.00	20.00	20.00	125.00	45.00	20.00	20.00	52.00	03
22.080	GH222.2525.150.00.03.L.00.52	21.00	25.00	25.00	150.00	45.00	25.00	25.00	52.00	03
22.090	GH222.1000.600.00.03.L.00.52	21.00	25.40	25.40	152.40	45.00	25.40	25.40	52.00	03

**Spare parts**

Article no.	Clamping screw	Tightening torque	Description
25906		Nm	
Code 4.000	M4x15.5x15IP	3.5	GH222.1212....; GH222.0500....; GH222.0625....; GH222.1616....

Article no.	Clamping screw	Tightening torque	Description
25907		Nm	
Code 5.000	M5x18x25IP	6	GH222.0750....; GH222.2020....; GH222.2525....; GH222.1000....

Article no.	Torx-Plus Wrench
25904	
Code 15.001	T15IP

Article no.	Torx-Plus Wrench
25922	
Code 15.000	T25IP

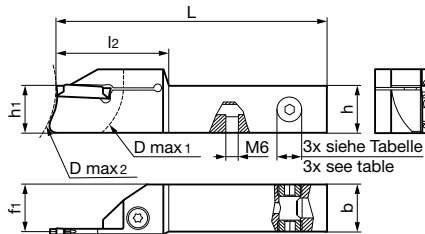
**Square shank holder straight, external machining, with IC**

**tmax: maximum grooving depth before 2nd cutting edge engages**

- with internal coolant supply from above and below
- TL (tubeless): tubeless coolant supply from location face

Type GH 222

for indexable inserts type 222 see from page 67



□	⊗	D max 1 = 52	
		max Ø	t max
12/12	M8x1	52	26
12,7/12,7	M8x1	65	24
15,87/15,87	G1/8	82	22
16/16	G1/8	100	21
19,05/19,05	G1/8	120	20
20/20	G1/8		
25/25	G1/8		
25,4/25,4	G1/8		



Right hand version shown  
Left hand version mirror image

Article no. **26102**  
version right-hand

Code no.	Description	t max	h	b	L	l2	h1	f1	TL	D max 1	D max 2	Size
		mm	mm	mm	mm	mm	mm	mm		mm	mm	
22.020	GH222.1212.125.00.03.R.IK.34		12.00	12.00	125.00	34.00	12.00	10.50	3x	34.00	65.00	03
22.030	GH222.0500.500.00.03.R.IK.34	21.00	12.70	12.70	127.00	34.00	12.70	11.20	3x	34.00	65.00	03
22.040	GH222.0625.500.00.03.R.IK.45	21.00	15.87	15.87	127.00	39.50	15.87	14.37	3x	45.00	82.00	03
22.050	GH222.1616.125.00.03.R.IK.45	21.00	16.00	16.00	125.00	39.50	16.00	14.50	3x	45.00	82.00	03
22.060	GH222.0750.500.00.03.R.IK.52	21.00	19.05	19.05	108.50	45.00	19.05	19.05	4x	52.00	82.00	03
22.070	GH222.2020.109.00.03.R.IK.52	21.00	20.00	20.00	108.50	45.00	20.00	20.00	4x	52.00	82.00	03
22.080	GH222.2525.120.00.03.R.IK.52	21.00	25.00	25.00	120.50	45.00	25.00	25.00	4x	52.00	120.00	03
22.090	GH222.1000.600.00.03.R.IK.52	21.00	25.40	25.40	120.50	45.00	25.40	25.40	4x	52.00	120.00	03

Article no. **26103**  
version left-hand

Code no.	Description	t max	h	b	L	l2	h1	f1	TL	D max 1	D max 2	Size
		mm	mm	mm	mm	mm	mm	mm		mm	mm	
22.020	GH222.1212.125.00.03.L.IK.34		12.00	12.00	125.00	34.00	12.00	10.50	3x	34.00	65.00	03
22.030	GH222.0500.500.00.03.L.IK.34	21.00	12.70	12.70	127.00	34.00	12.70	11.20	3x	34.00	65.00	03
22.040	GH222.0625.500.00.03.L.IK.45	21.00	15.87	15.87	127.00	39.50	15.87	14.37	3x	45.00	82.00	03
22.050	GH222.1616.125.00.03.L.IK.45	21.00	16.00	16.00	125.00	39.50	16.00	14.50	3x	45.00	82.00	03
22.060	GH222.0750.500.00.03.L.IK.52	21.00	19.05	19.05	108.50	45.00	19.05	19.05	4x	52.00	82.00	03
22.070	GH222.2020.109.00.03.L.IK.52	21.00	20.00	20.00	108.50	45.00	20.00	20.00	4x	52.00	82.00	03
22.080	GH222.2525.120.00.03.L.IK.52	21.00	25.00	25.00	120.50	45.00	25.00	25.00	4x	52.00	120.00	03
22.090	GH222.1000.600.00.03.L.IK.52	21.00	25.40	25.40	120.50	45.00	25.40	25.40	4x	52.00	120.00	03

**Spare parts**

Article no.	Clamping screw	Tightening torque	Description
25906		Nm	
Code 4.000	M4x15.5x15IP	3.5	GH222.1212....; GH222.0500....; GH222.0625....; GH222.1616....
Article no.	Clamping screw	Tightening torque	Description
25907		Nm	
Code 5.000	M5x18x25IP	6	GH222.0750....; GH222.2020....; GH222.2525....; GH222.1000....
Article no.	Torx-Plus Wrench		
25904			
Code 15.001	T15IP		
Article no.	Torx-Plus Wrench		
25922			
Code 15.000	T25IP		



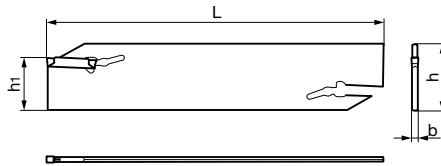


**Parting off blade, without IC**

- without internal coolant supply

Type GS 222

for indexable inserts type 222 see from page 67



Article no. **26200**

Code no.	Description	t max	b	h	h1	L	Size
		mm	mm	mm	mm	mm	
22.002	GS222.0026.120.03.02.N	35.00	2.25	26.00	21.40	120.00	03
22.003	GS222.0032.150.03.02.N	45.00	2.25	32.00	25.00	150.00	03

**Spare parts**

Article no.	Mounting key
25921	
Code 15.000	

New products



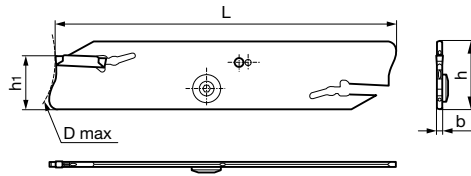
**Parting off blade, with IC**

- with internal coolant supply from above and below

Type

GS 222

for indexable inserts type 222 see from page 67



Article no. **26201**

Code no.	Description	t max	b	h	h1	L	D max	Size
		mm	mm	mm	mm	mm	mm	
22.002	GS222.0026.118.03.02.N.IK	35.00	2.25	26.00	21.40	118.00	70.00	03
22.003	GS222.0032.147.03.02.N.IK	45.00	2.25	32.00	25.00	147.50	90.00	03

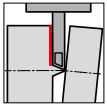
**Spare parts**

Article no.	Mounting key
25921	
Code 15.000	

Article no.	IC locking screw
25909	
Code 4.000	



**Indexable insert for parting off**



• with chip former

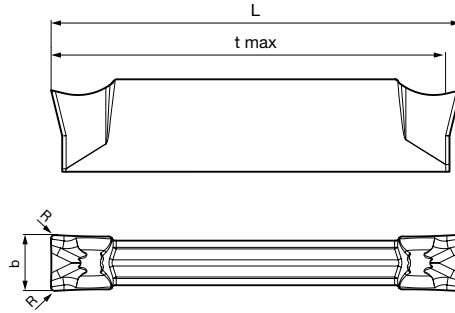
Tool material	<b>Solid carbide</b>
Type	GZ 222
Surface	<b>a</b> TiAlN-nanoA

New products

**GUHRING NAVIGATOR**


You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

<b>P</b>	○
<b>M</b>	●
<b>K</b>	
<b>N</b>	
<b>S</b>	
<b>H</b>	



Article no. **26605**

Code no.	Description	b ±0,02	L ±0,1	R
		mm	mm	mm
22.030	GZ222.0300.020.MP.02.N	3.00	22.00	0.20



**PRODUCT  
ADDITIONS**



Product additions

P	M	K	N	S	H	Tool illustration	Standard	Type	Form	Tolerance on Ø	Tool material	Surface	d1/mm	Article no.	Page
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### ExclusiveLine micro-precision drills with coolant ducts

•	•	•	○	○			5xD	Cyl	N	WN	VHM	A	1.000 - 3.000	6405	71
•	•	•	○	○			8xD	Cyl	N	WN	VHM	A	1.000 - 3.000	6408	72
•	•	•	○	○			15xD	Cyl	N	WN	VHM	A	1.000 - 3.000	6412	73

P	M	K	N	S	H	Tool illustration	Standard	Type	Form	Tolerance on Ø	Tool material	Surface	d1/mm	Article no.	Page
---	---	---	---	---	---	-------------------	----------	------	------	----------------	---------------	---------	-------	-------------	------

### Fluteless taps for ISO metric fine threads

•	•	•	○	•			~DIN 374	N	C	6HX	HSS-E-PM	C	M3 x 0,35 - M24 x 2	4489	74
---	---	---	---	---	--	--	----------	---	---	-----	----------	---	---------------------	------	----

### Thread milling cutters without chamfer for ISO metric threads

•	○	•	•	○	≤ 55		WN	TM SP			VHM	C	M3 - M20 x 1,5	3743	75
•	○	•	•	○	≤ 55		WN	TM SP			VHM	C	M3 - M20 x 1,5	3737	75

### External thread milling cutters

•	•	•	•	•	≤ 55		WN	TMU SP			VHM	C	≥ 3 - ≥ 24	4163	76
---	---	---	---	---	------	--	----	--------	--	--	-----	---	------------	------	----

Tool illustration													Standard	Article no.	Page
-------------------	--	--	--	--	--	--	--	--	--	--	--	--	----------	-------------	------

### HSK-A precision clamping chucks



4300

77

### ISO taper precision clamping chucks



4301

78



**ExclusiveLine micro-precision drills with coolant ducts**



Tool material **Solid carbide**

Surface **A**

Cutting direction **R**

**P** • web thinning  $\geq \varnothing 1.000$  • facet point grind • main cutting edge form straight • with cutting lip honing

**M** •

**K** •

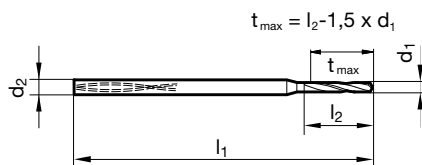
**N** ○ structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm<sup>2</sup> • stainless steels • cast materials

**S** ○

**H**

**GUHRING NAVIGATOR**

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.



Article no. **6405**

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	48.000	8.000
1.020	3.000	48.000	8.500
1.050	3.000	48.000	8.500
1.100	3.000	48.000	9.000
1.150	3.000	48.000	9.500
1.180	3.000	48.000	9.500
1.190	3.000	48.000	10.000
1.200	3.000	48.000	10.000
1.250	3.000	48.000	10.000
1.280	3.000	48.000	10.500
1.300	3.000	48.000	10.500
1.350	3.000	48.000	11.000
1.400	4.000	52.000	11.000
1.450	4.000	52.000	12.000
1.500	4.000	52.000	12.000
1.550	4.000	52.000	12.000
1.590	4.000	52.000	13.000
1.600	4.000	52.000	13.000
1.650	4.000	52.000	13.000
1.700	4.000	56.000	14.000
1.750	4.000	56.000	14.000
1.800	4.000	56.000	14.000
1.850	4.000	56.000	15.000
1.900	4.000	56.000	15.000
1.950	4.000	56.000	16.000
1.980	4.000	56.000	16.000
2.000	4.000	56.000	16.000
2.050	4.000	56.000	16.000
2.100	4.000	62.000	17.000
2.150	4.000	62.000	17.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
2.200	4.000	62.000	18.000
2.250	4.000	62.000	18.000
2.300	4.000	62.000	18.000
2.350	4.000	62.000	19.000
2.380	4.000	62.000	19.000
2.400	4.000	62.000	19.000
2.450	4.000	62.000	20.000
2.500	4.000	62.000	20.000
2.550	4.000	62.000	20.000
2.600	4.000	66.000	21.000
2.650	4.000	66.000	21.000
2.700	4.000	66.000	22.000
2.750	4.000	66.000	22.000
2.780	4.000	66.000	22.000
2.800	4.000	66.000	22.000
2.850	4.000	66.000	23.000
2.900	4.000	66.000	23.000
2.950	4.000	66.000	24.000
3.000	4.000	66.000	24.000

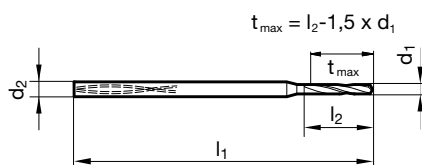
Product additions



## Exclusiveline micro-precision drills with coolant ducts

Tool material **Solid carbide**Surface **A**Cutting direction **R****P** • web thinning  $\geq \varnothing 1.000$  • facet point grind • main cutting edge form straight • with cutting lip honing**M** •**K** •**N** ○ structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm<sup>2</sup> • stainless steels • cast materials**S** ○**H****GUHRING NAVIGATOR**You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

Product additions

Article no. **6408**

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	48.000	11.000
1.020	3.000	48.000	11.500
1.050	3.000	48.000	12.000
1.100	3.000	48.000	12.500
1.150	3.000	48.000	13.000
1.180	3.000	48.000	13.000
1.190	3.000	48.000	13.500
1.200	3.000	48.000	13.500
1.250	3.000	48.000	14.000
1.280	3.000	48.000	14.500
1.300	3.000	48.000	14.500
1.350	3.000	48.000	15.000
1.400	4.000	52.000	15.000
1.450	4.000	52.000	16.000
1.500	4.000	52.000	17.000
1.550	4.000	52.000	17.000
1.590	4.000	52.000	18.000
1.600	4.000	52.000	18.000
1.650	4.000	52.000	18.000
1.700	4.000	56.000	19.000
1.750	4.000	56.000	19.000
1.800	4.000	56.000	20.000
1.850	4.000	56.000	20.000
1.900	4.000	56.000	21.000
1.950	4.000	56.000	21.000
1.980	4.000	56.000	22.000
2.000	4.000	56.000	22.000
2.050	4.000	56.000	23.000
2.100	4.000	62.000	23.000
2.150	4.000	62.000	24.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
2.200	4.000	62.000	24.000
2.250	4.000	62.000	25.000
2.300	4.000	62.000	25.000
2.320	4.000	62.000	26.000
2.350	4.000	62.000	26.000
2.380	4.000	62.000	26.000
2.400	4.000	62.000	26.000
2.450	4.000	62.000	27.000
2.500	4.000	62.000	28.000
2.550	4.000	62.000	28.000
2.600	4.000	66.000	29.000
2.650	4.000	66.000	29.000
2.700	4.000	66.000	30.000
2.750	4.000	66.000	30.000
2.780	4.000	66.000	31.000
2.800	4.000	66.000	31.000
2.850	4.000	66.000	31.000
2.900	4.000	66.000	32.000
2.950	4.000	66.000	32.000
3.000	4.000	66.000	33.000





**ExclusiveLine micro-precision drills with coolant ducts**



Tool material **Solid carbide**

Surface **A**

Cutting direction **R**

**P** • web thinning  $\geq \varnothing 1.000$  • facet point grind • main cutting edge form straight • with cutting lip honing

**M** •

**K** •

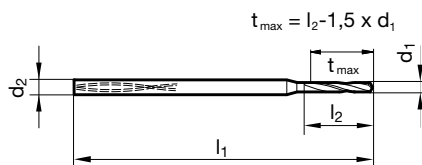
**N** ○ structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm<sup>2</sup> • stainless steels • cast materials

**S** ○

**H**

**GUHRING NAVIGATOR**

You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.



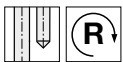
Article no. **6412**

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.000	3.000	56.000	18.000
1.020	3.000	56.000	18.500
1.050	3.000	56.000	19.000
1.100	3.000	56.000	20.000
1.150	3.000	56.000	21.000
1.180	3.000	56.000	21.500
1.190	3.000	56.000	21.500
1.200	3.000	56.000	22.000
1.250	3.000	56.000	22.500
1.280	3.000	56.000	23.500
1.300	3.000	56.000	23.500
1.350	3.000	56.000	24.500
1.400	4.000	62.000	25.000
1.500	4.000	62.000	27.000
1.590	4.000	62.000	29.000
1.600	4.000	62.000	29.000
1.700	4.000	70.000	31.000
1.750	4.000	70.000	32.000

d1	d2 h6	l1	l2
mm	mm	mm	mm
1.800	4.000	70.000	32.000
1.900	4.000	70.000	34.000
1.980	4.000	70.000	36.000
2.000	4.000	70.000	36.000
2.100	4.000	78.000	38.000
2.200	4.000	78.000	40.000
2.300	4.000	78.000	42.000
2.380	4.000	78.000	44.000
2.400	4.000	78.000	44.000
2.500	4.000	78.000	45.000
2.600	4.000	87.000	47.000
2.700	4.000	87.000	48.000
2.780	4.000	87.000	50.000
2.800	4.000	87.000	50.000
2.900	4.000	87.000	52.000
3.000	4.000	87.000	54.000

Product additions

Fluteless taps for ISO metric fine threads

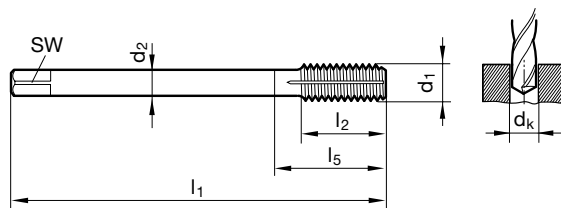


**P** • You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.

- M** •
- K** •
- N** ○
- S** •
- H** □

Tool material	<b>HSS-E-PM</b>
Tolerance on Ø	6HX
Surface	<b>C</b>
Type	N
Form	C
Internal cooling	

Product additions



DIN 2174 ~DIN 374

Article no.

**4489**

d1	d2	SW	dk	l1	l2	l5	Code no.
	mm	mm	mm	mm	mm	mm	
<b>M3 x 0.35</b>	<b>2.200</b>	<b>1.800</b>	<b>2.85</b>	<b>56.000</b>	<b>7.000</b>	<b>18.000</b>	<b>3.002</b>
<b>M4 x 0.35</b>	<b>2.800</b>	<b>2.100</b>	<b>3.85</b>	<b>63.000</b>	<b>8.000</b>	<b>21.000</b>	<b>4.002</b>
<b>M4 x 0.5</b>	<b>2.800</b>	<b>2.100</b>	<b>3.80</b>	<b>63.000</b>	<b>8.000</b>	<b>21.000</b>	<b>4.003</b>
<b>M5 x 0.5</b>	<b>3.500</b>	<b>2.700</b>	<b>4.80</b>	<b>70.000</b>	<b>10.000</b>	<b>25.000</b>	<b>5.003</b>
<b>M6 x 0.5</b>	<b>4.500</b>	<b>3.400</b>	<b>5.75</b>	<b>80.000</b>	<b>13.000</b>	<b>30.000</b>	<b>6.003</b>
<b>M6 x 0.75</b>	<b>4.500</b>	<b>3.400</b>	<b>5.65</b>	<b>80.000</b>	<b>13.000</b>	<b>30.000</b>	<b>6.004</b>
<b>M8 x 0.75</b>	<b>6.000</b>	<b>4.900</b>	<b>7.65</b>	<b>80.000</b>	<b>14.000</b>	<b>30.000</b>	<b>8.004</b>
<b>M9 x 1</b>	<b>7.000</b>	<b>5.500</b>	<b>8.55</b>	<b>90.000</b>	<b>16.000</b>	<b>35.000</b>	<b>9.005</b>
<b>M10 x 0.75</b>	<b>7.000</b>	<b>5.500</b>	<b>9.65</b>	<b>90.000</b>	<b>16.000</b>	<b>35.000</b>	<b>10.004</b>
M10 x 1	7.000	5.500	9.55	90.000	16.000	35.000	10.005
M10 x 1.25	7.000	5.500	9.40	100.000	20.000	39.000	10.006
<b>M11 x 1</b>	<b>8.000</b>	<b>6.200</b>	<b>10.55</b>	<b>90.000</b>	<b>20.000</b>	<b>33.000</b>	<b>11.005</b>
<b>M12 x 1</b>	<b>9.000</b>	<b>7.000</b>	<b>11.55</b>	<b>100.000</b>	<b>20.000</b>	<b>40.000</b>	<b>12.005</b>
M12 x 1.25	9.000	7.000	11.40	100.000	20.000	40.000	12.006
M12 x 1.5	9.000	7.000	11.30	100.000	20.000	40.000	12.007
<b>M14 x 1</b>	<b>11.000</b>	<b>9.000</b>	<b>13.55</b>	<b>100.000</b>	<b>20.000</b>	<b>40.000</b>	<b>14.005</b>
M14 x 1.25	11.000	9.000	13.40	100.000	20.000	40.000	14.006
M14 x 1.5	11.000	9.000	13.30	100.000	20.000	40.000	14.007
<b>M16 x 1</b>	<b>12.000</b>	<b>9.000</b>	<b>15.55</b>	<b>100.000</b>	<b>22.000</b>	<b>44.000</b>	<b>16.005</b>
M16 x 1.5	12.000	9.000	15.30	100.000	22.000	44.000	16.007
<b>M18 x 1</b>	<b>14.000</b>	<b>11.000</b>	<b>17.55</b>	<b>110.000</b>	<b>25.000</b>	<b>44.000</b>	<b>18.005</b>
<b>M18 x 1.5</b>	<b>14.000</b>	<b>11.000</b>	<b>17.30</b>	<b>110.000</b>	<b>25.000</b>	<b>44.000</b>	<b>18.007</b>
<b>M18 x 2</b>	<b>14.000</b>	<b>11.000</b>	<b>17.10</b>	<b>125.000</b>	<b>30.000</b>	<b>58.000</b>	<b>18.008</b>
<b>M20 x 1</b>	<b>16.000</b>	<b>12.000</b>	<b>19.55</b>	<b>125.000</b>	<b>25.000</b>	<b>44.000</b>	<b>20.005</b>
M20 x 1.5	16.000	12.000	19.30	125.000	25.000	44.000	20.007
<b>M20 x 2</b>	<b>16.000</b>	<b>12.000</b>	<b>19.10</b>	<b>140.000</b>	<b>32.000</b>	<b>60.000</b>	<b>20.008</b>
<b>M22 x 1</b>	<b>18.000</b>	<b>14.500</b>	<b>21.55</b>	<b>125.000</b>	<b>25.000</b>	<b>44.000</b>	<b>22.005</b>
<b>M22 x 1.5</b>	<b>18.000</b>	<b>14.500</b>	<b>21.30</b>	<b>125.000</b>	<b>25.000</b>	<b>44.000</b>	<b>22.007</b>
<b>M22 x 2</b>	<b>18.000</b>	<b>14.500</b>	<b>21.10</b>	<b>140.000</b>	<b>32.000</b>	<b>62.000</b>	<b>22.008</b>
<b>M24 x 1</b>	<b>18.000</b>	<b>14.500</b>	<b>23.55</b>	<b>140.000</b>	<b>28.000</b>	<b>48.000</b>	<b>24.005</b>
<b>M24 x 1.5</b>	<b>18.000</b>	<b>14.500</b>	<b>23.30</b>	<b>140.000</b>	<b>28.000</b>	<b>48.000</b>	<b>24.007</b>
<b>M24 x 2</b>	<b>18.000</b>	<b>14.500</b>	<b>23.10</b>	<b>140.000</b>	<b>28.000</b>	<b>48.000</b>	<b>24.008</b>

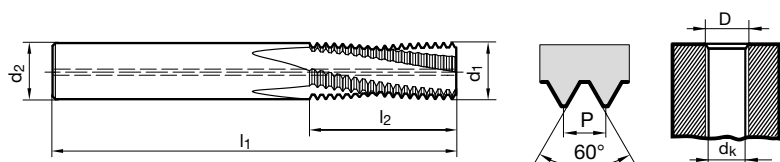


**Thread milling cutters without chamfer for ISO metric threads**



- P** ● You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.
- M** ○
- K** ●
- N** ●
- S** ○
- H** ≤ 55

Tool material	Solid carbide	
Surface	Ⓢ	Ⓢ
Type	TM SP	TM SP
Internal cooling		
Shank form	HB	HA



Product additions

<b>Company std.</b>	Article no.	<b>3743</b>	<b>3737</b>
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D	P	d1	d2	dk	l1	l2	Z	Code no.
	mm	mm	mm	mm	mm	mm		
<b>M3</b>	<b>0.500</b>	<b>2.300</b>	<b>4.000</b>	<b>2.50</b>	<b>40.000</b>	<b>6.800</b>	<b>3</b>	<b>3.000</b>
<b>M4</b>	<b>0.700</b>	<b>3.000</b>	<b>6.000</b>	<b>3.30</b>	<b>48.000</b>	<b>8.800</b>	<b>3</b>	<b>4.000</b>
<b>M5</b>	<b>0.800</b>	<b>4.000</b>	<b>6.000</b>	<b>4.20</b>	<b>54.000</b>	<b>10.800</b>	<b>3</b>	<b>5.000</b>
M6	1.000	4.800	6.000	5.00	54.000	13.500	3	6.000
M8	1.250	6.400	8.000	6.80	62.000	18.100	3	8.000
M8 x 1	1.000	6.400	8.000	7.00	62.000	17.500	3	8.005
M10	1.500	7.950	10.000	8.50	74.000	21.800	3	10.000
M10 x 1	1.000	7.950	10.000	9.00	74.000	21.500	3	10.005
M10 x 1,25	1.250	7.950	10.000	8.80	74.000	21.900	3	10.006
M12	1.750	9.950	10.000	10.20	74.000	25.400	4	12.000
M12 x 1,5	1.500	9.950	10.000	10.50	74.000	26.300	4	12.007
M14	2.000	11.200	12.000	12.00	90.000	31.000	4	14.000
M14 x 1,5	1.500	11.200	12.000	12.50	90.000	30.800	4	14.007
M16	2.000	12.800	14.000	14.00	90.000	35.000	4	16.000
M16 x 1,5	1.500	12.800	14.000	14.50	90.000	33.800	4	16.007
M20	2.500	14.950	16.000	17.50	102.000	41.300	4	20.000
M20 x 1,5	1.500	14.950	16.000	18.50	102.000	42.800	4	20.007

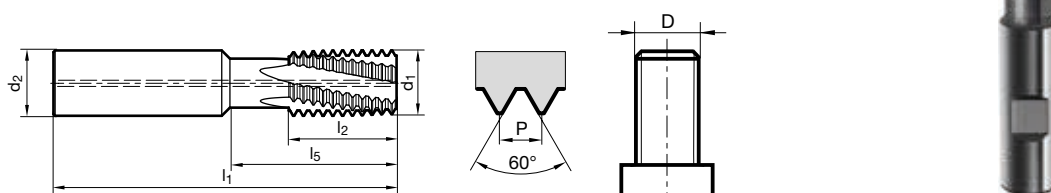
External thread milling cutters



- P** • You can find the cutting data in our online navigator at <https://webnavigator.guehring.de>.
- M** •
- K** •
- N** •
- S** •
- H** ≤ 55

Tool material	<b>Solid carbide</b>
Surface	<b>C</b>
Type	TMU SP
Internal cooling	
Shank form	HB

Product additions



<b>Company std.</b>	Article no.	<b>4163</b>
---------------------	-------------	-------------

P	D	d1	d2	l1	l5	l2	Z	Code no.
mm		mm	mm	mm	mm	mm		
0.500	≥ 3	9.950	10.000	70.000	25.000	16.000	4	10.050
<b>0.700</b>	≥ <b>4</b>	<b>9.950</b>	<b>10.000</b>	<b>70.000</b>	<b>25.000</b>	<b>16.000</b>	<b>4</b>	<b>10.070</b>
0.750	≥ 5	9.950	10.000	70.000	25.000	16.000	4	10.075
<b>0.800</b>	≥ <b>5</b>	<b>9.950</b>	<b>10.000</b>	<b>70.000</b>	<b>25.000</b>	<b>16.000</b>	<b>4</b>	<b>10.080</b>
1.000	≥ 6	11.950	12.000	80.000	31.000	20.000	4	12.100
1.250	≥ 8	11.950	12.000	80.000	31.000	20.000	4	12.125
1.500	≥ 10	11.950	12.000	80.000	31.000	20.000	4	12.150
1.500	≥ 10	15.950	16.000	90.000	40.000	25.000	5	16.150
<b>1.750</b>	≥ <b>12</b>	<b>15.950</b>	<b>16.000</b>	<b>90.000</b>	<b>40.000</b>	<b>25.000</b>	<b>5</b>	<b>16.175</b>
2.000	≥ 14	15.950	16.000	90.000	40.000	25.000	5	16.200
2.500	≥ 18	15.950	16.000	90.000	40.000	25.000	5	16.250
3.000	≥ 24	19.950	20.000	105.000	50.000	33.000	5	20.300



**HSK-A precision clamping chucks**



**Product information:**

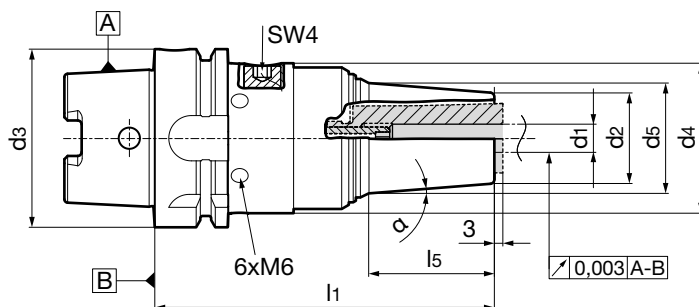
- for heavy-duty cutting as well as HSC and HPC
- HSK-A to ISO 12164-1 / DIN 69893-1
- balance quality values: G 2.5 / 20,000 U/min or U < 1.2 gmm
- for tool shank tolerance h6
- incl. balancing thread 6xM6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 10 Nm
- suitable for internal cooling up to 80 bar

**Scope of delivery:**

- hexagon clamping key art. no. 4912 4,600

**Suitable accessories separately available:**

- order clamping sleeves art. no. 4302, 4235, 4236, 4237 separately
- order coolant supply set, article no. 4949, separately
- for optimal operation order torque wrench 10 Nm art. no. 4987 10,000 and sockets art. no. 4916 4,000 separately



Product additions

Article no. **4300**

d3	Nominal size	d1 h6 mm	d2 mm	d5 mm	d4 mm	l1 mm	l5 mm	α °	Order no.
HSK-A 63	20	3.0-20.0	40	53	40	92	20		<b>4300 20.063</b>
<b>HSK-A 63</b>	<b>20</b>	<b>3.0-20.0</b>	<b>32</b>	<b>53</b>	<b>39</b>	<b>120</b>	<b>44</b>	<b>4</b>	<b>4300 20.163</b>
<b>HSK-A 63</b>	<b>20</b>	<b>3.0-20.0</b>	<b>32</b>	<b>53</b>	<b>40</b>	<b>142</b>	<b>69</b>	<b>4</b>	<b>4300 20.263</b>
HSK-A 100	20	3.0-20.0	52	70	40	100	18		<b>4300 20.100</b>
HSK-A 100	25	16.0-32.0	52	70	70	139			<b>4300 25.100</b>



ISO taper precision clamping chucks



**Product information:**

- for heavy-duty cutting as well as HSC and HPC
- SK to DIN ISO 7388-1 Form AD
- balance quality values: G 2.5 / 20,000 U/min or U < 1.2 gmm
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 10 Nm
- suitable for internal cooling up to 80 bar central coolant supply form AD

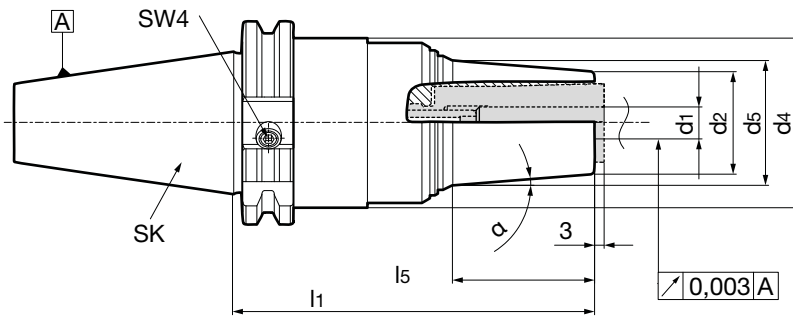
**Scope of delivery:**

- hexagon clamping key art. no. 4912 4,600

**Suitable accessories separately available:**

- order clamping sleeves art. no. 4302, 4235, 4236, 4237 separately
- order pull studs art. nr. 4925 or 4926 separately
- for optimal operation order torque wrench 10 Nm art. no. 4987 10,000 and sockets art. no. 4916 4,000 separately
- form AD/AF on request

Product additions



Article no. **4301**

SK	Nominal size	d1 h6 mm	d2 mm	d5 mm	d4 mm	l1 mm	l5 mm	α °	Order no.
SK 40	20	3.0-20.0	40	50	40	62	20		<b>4301 20.040</b>
<b>SK 40</b>	<b>20</b>	<b>3.0-20.0</b>	<b>32</b>	<b>50</b>	<b>39</b>	<b>91</b>	<b>44</b>	<b>4</b>	<b>4301 20.140</b>
<b>SK 40</b>	<b>20</b>	<b>3.0-20.0</b>	<b>32</b>	<b>50</b>	<b>40</b>	<b>112</b>	<b>69</b>	<b>4</b>	<b>4301 20.240</b>
SK 50	20	3.0-20.0	40	63	40	62	18		<b>4301 20.050</b>
SK 50	25	16.0-32.0	52	70	70	101			<b>4301 25.050</b>

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