

Milling Tools Accessories

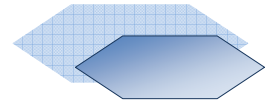


AG
GRIMME
SERVICE GmbH & Co. KG

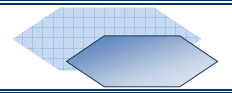
Osterweg 23
D - 86879 Wiedergeltingen
Tel.: +49 82 41 96 08 0
Fax.: +49 82 41 96 08 55
email: info@hg-grimme.de
web: www.hg-grimme.de

Version No. 1500-12

INDEX



General information	5
Single helical milling cutter - straight.....	6
Single helical milling cutter - sliding	7
Single helical milling cutter - drawing.....	8
Dual helical milling cutter - straight	9
Dual helical milling cutter - sliding.....	10
Dual helical milling cutter - drawing	11
Double equal-angle milling cutters – with radial tooling	12
Double equal-angle milling cutters – with 135° acute angle.....	14
Forming and multiple-diameter milling cutters	16
Disk milling cutters with hard metal cutters	17
Disk milling cutter mount.....	17
Accessories for spindle Jäger WK19	18
Accessories for spindle Jäger WK25	19
Collet chucks for Jäger WK19 / WK25	20
Tool cone for spindle Ibag HF60	21
Tool cone for spindle Ibag HF80	22
Collet chucks for Ibag HF60 / HF80.....	24
Tool cone for spindle Ibag HF100	25
Tool cone for spindle Ibag HF100 + IMT Classic100.....	26
Tool cone for spindle IMT Classic100 Duo 6	29
Collet chucks for Ibag HF100, IMT Classic100, IMT Classic100 Duo 6...	30
Tool cone for spindle Ibag HF120 + IMT Classic120.....	31
Tool cone for spindle IMT Classic120	32
Collet chucks for Ibag HF120 + IMT Classic120	33
Accessories for double spindle Ibag HF90 / Perske	34
Collet chucks for double spindle Ibag HF90 and Perske	35
Accessories general	36
Cellular rubber.....	37
Trouble shooting.....	38
Quote request – Discount rates – Delivery times	39



Cutters

The material of our cutters is solid hard metal.

The cutting geometry, i.e. cutting angle, chips clearance, relief-ground cutting and helical angle are adapted to most plastics.

All standard milling cutters with a maximum projecting length of 35 mm are suitable for a maximum rotational speed of up to 40.000 rpm. Please observe manufacturer specifications in case of special milling cutters.

Coatings

The cutters can be given a special coating:

TINALOX[®] TINALOX (Titan-Aluminumoxyd)

DIAMANT Diamante is the hardest known material. It's hardness and low friction coefficient render it the ideal material for protecting against wear and tear and machining purposes. Diamond coatings permit top cutting speeds, high processing, maximum productivity, quality and surface quality.

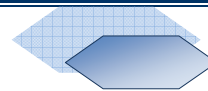
Cutter notation for your order

- G** = straight cutter
- S** = sliding (pushing) cutter
- Z** = drawing (pulling) cutter
- R** = right cutter
- L** = left cutter

- /L** = long version
- /2** = dual cutter
- /2L** = dual cutter – long version

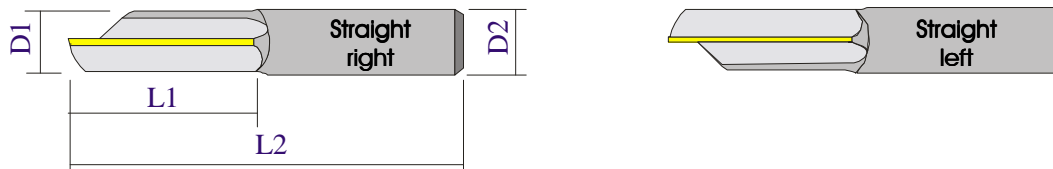
For example: **ZR8/L**: drawing, right, Ø8mm, long

Single helical milling cutter - straight



Straight - Standard

Use: Especially for thin plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight right					
103 157	GR2	2	6	8	50
103 161	GR3	3	6	10	50
103 166	GR4	4	6	12	50
103 170	GR5	5	6	14	50
103 174	GR6	6	6	16	50
103 179	GR8	8	8	20	50

Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight left					
103 126	GL2	2	6	8	50
103 129	GL3	3	6	10	50
103 133	GL4	4	6	12	50
103 137	GL5	5	6	14	50
103 141	GL6	6	6	16	50
103 147	GL8	8	8	20	50

Straight - long

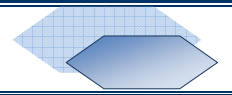
Use: Especially for thin plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight right					
103 165	GR3 / L	3	8	15	75
103 169	GR4 / L	4	8	20	75
103 173	GR5 / L	5	8	22	75
103 177	GR6 / L	6	8	25	75
103 182	GR8 / L	8	8	30	75

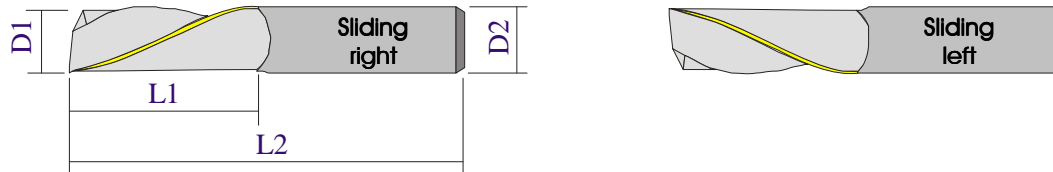
Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight left					
103 132	GL3 / L	3	8	15	75
103 136	GL4 / L	4	8	20	75
103 140	GL5 / L	5	8	22	75
103 145	GL6 / L	6	8	25	75
103 150	GL8 / L	8	8	30	75

Single helical milling cutter - sliding



Sliding - Standard

Use: Especially for thin plastics.



Art. No.	Designation	Dimension (mm)			
		D1	D2	L1	L2
Sliding right					
107 767	SR2	2	6	8	50
107 771	SR3	3	6	10	50
107 776	SR4	4	6	12	50
107 780	SR5	5	6	14	50
107 786	SR6	6	6	16	50
107 794	SR8	8	8	20	50

Art. No.	Designation	Dimension (mm)			
		D1	D2	L1	L2
Sliding left					
107 666	SL2	2	6	8	50
107 668	SL3	3	6	10	50
107 674	SL4	4	6	12	50
107 679	SL5	5	6	14	50
107 685	SL6	6	6	16	50
107 691	SL8	8	8	20	50

Sliding - long

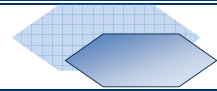
Use: Especially suitable for thin plastics.



Art. No.	Designation	Dimension (mm)			
		D1	D2	L1	L2
Sliding right					
107 775	SR3 / L	3	8	15	75
107 779	SR4 / L	4	8	20	75
107 785	SR5 / L	5	8	22	75
107 790	SR6 / L	6	8	25	75
107 797	SR8 / L	8	8	30	75

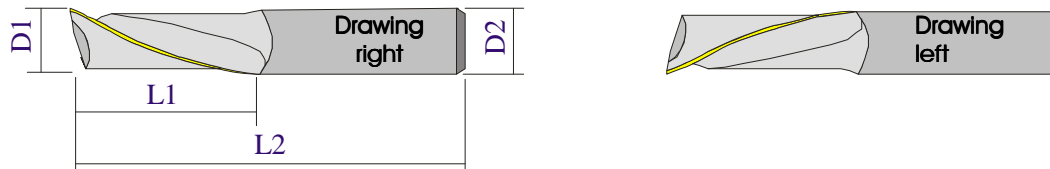
Art. No.	Designation	Dimension (mm)			
		D1	D2	L1	L2
Sliding left					
107 673	SL3 / L	3	8	15	75
107 678	SL4 / L	4	8	20	75
107 684	SL5 / L	5	8	22	75
107 688	SL6 / L	6	8	25	75
107 694	SL8 / L	8	8	30	75

Single helical milling cutter - drawing



Drawing - Standard

Use: Especially for thick plastics.



Art. No.	Designation	Dimensions (mm)			
Drawing right		D1	D2	L1	L2
108 830	ZR2	2	6	8	50
108 832	ZR3	3	6	10	50
108 837	ZR4	4	6	12	50
108 843	ZR5	5	6	14	50
108 849	ZR6	6	6	16	50
108 856	ZR8	8	8	20	50

Drawing left		D1	D2	L1	L2
108 792	ZL2	2	6	8	50
108 794	ZL3	3	6	10	50
108 800	ZL4	4	6	12	50
108 805	ZL5	5	6	14	50
108 811	ZL6	6	6	16	50
108 818	ZL8	8	8	20	50

Drawing - long

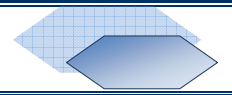
Use: Especially for thick plastics.



Art. No.	Designation	Dimensions (mm)			
Drawing right		D1	D2	L1	L2
104 375	ZR2 / L	2	8	12	75
108 836	ZR3 / L	3	8	15	75
108 842	ZR4 / L	4	8	20	75
108 848	ZR5 / L	5	8	22	75
108 852	ZR6 / L	6	8	25	75
108 863	ZR8 / L	8	8	30	75

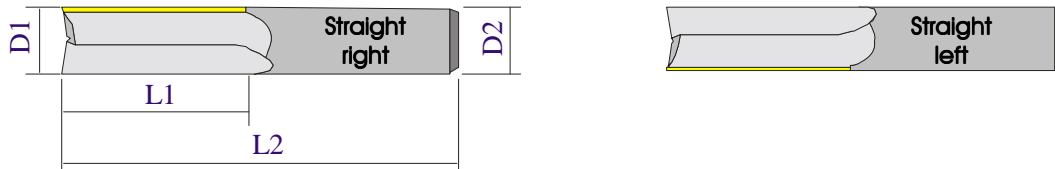
Drawing left		D1	D2	L1	L2
108 799	ZL3 / L	3	8	15	75
108 804	ZL4 / L	4	8	20	75
108 810	ZL5 / L	5	8	22	75
108 814	ZL6 / L	6	8	25	75
108 821	ZL8 / L	8	8	30	75

Dual helical milling cutter - straight



Straight - Standard

Use: Especially for thin plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight right					
103 163	GR3 / 2	3	6	10	50
103 167	GR4 / 2	4	6	12	50
103 171	GR5 / 2	5	6	14	50
103 175	GR6 / 2	6	6	16	50
103 180	GR8 / 2	8	8	20	50

Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight left					
103 130	GL3 / 2	3	6	10	50
103 134	GL4 / 2	4	6	12	50
103 138	GL5 / 2	5	6	14	50
103 143	GL6 / 2	6	6	16	50
103 148	GL8 / 2	8	8	20	50

Straight - long

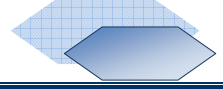
Use: Especially for thin plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight right					
103 164	GR3 / 2L	3	8	15	75
103 168	GR4 / 2L	4	8	20	75
103 172	GR5 / 2L	5	8	22	75
103 176	GR6 / 2L	6	8	25	75
103 181	GR8 / 2L	8	8	30	75

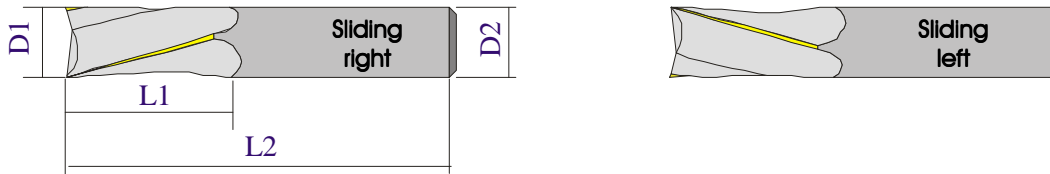
Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Straight left					
103 131	GL3 / 2L	3	8	15	75
103 135	GL4 / 2L	4	8	20	75
103 139	GL5 / 2L	5	8	22	75
103 144	GL6 / 2L	6	8	25	75
103 149	GL8 / 2L	8	8	30	75

Dual helical milling cutter - sliding



Sliding - Standard

Use: Especially for thin plastics.

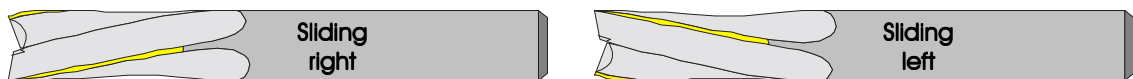


Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Sliding right					
107 773	SR3 / 2	3	6	10	50
107 777	SR4 / 2	4	6	12	50
107 783	SR5 / 2	5	6	14	50
107 788	SR6 / 2	6	6	16	50
107 795	SR8 / 2	8	8	20	50

Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Sliding left					
107 671	SL3 / 2	3	6	10	50
107 676	SL4 / 2	4	6	12	50
107 682	SL5 / 2	5	6	14	50
107 686	SL6 / 2	6	6	16	50
107 692	SL8 / 2	8	8	20	50

Sliding - long

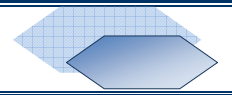
Use: Especially for thin plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Sliding right					
107 774	SR3 / 2L	3	8	15	75
107 778	SR4 / 2L	4	8	20	75
107 784	SR5 / 2L	5	8	22	75
107 789	SR6 / 2L	6	8	25	75
107 796	SR8 / 2L	8	8	30	75

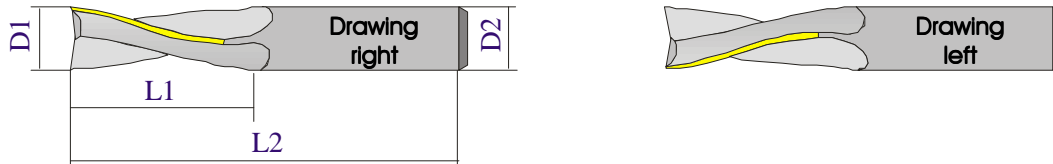
Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Sliding left					
107 672	SL3 / 2L	3	8	15	75
107 677	SL4 / 2L	4	8	20	75
107 683	SL5 / 2L	5	8	22	75
107 687	SL6 / 2L	6	8	25	75
107 693	SL8 / 2L	8	8	30	75

Dual helical milling cutter - drawing



Drawing - Standard

Use: Especially for thick plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Drawing right					
108 834	ZR3 / 2	3	6	10	50
108 840	ZR4 / 2	4	6	12	50
108 846	ZR5 / 2	5	6	14	50
108 850	ZR6 / 2	6	6	16	50
108 857	ZR8 / 2	8	8	20	50

Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Drawing left					
108 797	ZL3 / 2	3	6	10	50
108 802	ZL4 / 2	4	6	12	50
108 808	ZL5 / 2	5	6	14	50
108 812	ZL6 / 2	6	6	16	50
108 819	ZL8 / 2	8	8	20	50

Drawing - long

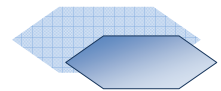
Use: Especially for thick plastics.



Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Drawing right					
108 835	ZR3 / 2L	3	8	15	75
108 841	ZR4 / 2L	4	8	20	75
108 847	ZR5 / 2L	5	8	22	75
108 851	ZR6 / 2L	6	8	25	75
108 858	ZR8 / 2L	8	8	30	75

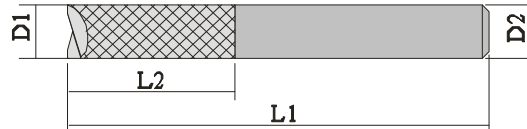
Art. No.	Designation	Dimensions (mm)			
		D1	D2	L1	L2
Drawing left					
108 798	ZL3 / 2L	3	8	15	75
108 803	ZL4 / 2L	4	8	20	75
108 809	ZL5 / 2L	5	8	22	75
108 813	ZL6 / 2L	6	8	25	75
108 820	ZL8 / 2L	8	8	30	75

Double equal-angle milling cutters – with radial toothing



Fine toothed

Use: Plastic, light metal, non-ferrous materials, FRP

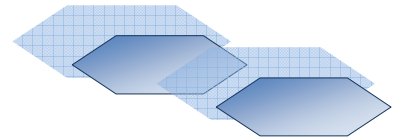


Short version

Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 306	PR-3.3/ST-FE	3	3	40	10
104 309	PR-3.6/ST-FE	3	6	50	10
104 234	PR-4.4/ST-FE	4	4	40	15
104 312	PR-4.6/ST-FE	4	6	50	12
104 237	PR-5.5/ST-FE	5	5	50	16
104 315	PR-5.6/ST-FE	5	6	50	14
104 240	PR-6.6/ST-FE	6	6	50	18
104 246	PR-8.8/ST-FE	8	8	63	25

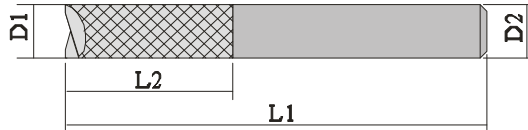
Long version

Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 318	PR-3.3/ST-FE / L	3	3	75	10
104 321	PR-3.8/ST-FE / L	3	8	75	10
104 250	PR-4.4/ST-FE / L	4	4	75	15
104 324	PR-4.8/ST-FE / L	4	8	75	15
104 253	PR-5.5/ST-FE / L	5	5	75	16
104 327	PR-5.8/ST-FE / L	5	8	75	16
104 256	PR-6.6/ST-FE / L	6	6	75	18
104 262	PR-8.8/ST-FE / L	8	8	75	25



Medium toothed

Use: Plastic, light metal, non-ferrous materials, FRP



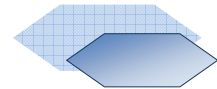
Short version

Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 308	PR-3.3/ST-MI	3	3	40	10
104 311	PR-3.6/ST-MI	3	6	50	10
104 236	PR-4.4/ST-MI	4	4	40	15
104 314	PR-4.6/ST-MI	4	6	50	12
104 239	PR-5.5/ST-MI	5	5	50	16
104 317	PR-5.6/ST-MI	5	6	50	14
104 242	PR-6.6/ST-MI	6	6	50	18
104 248	PR-8.8/ST-MI	8	8	63	25

Long version

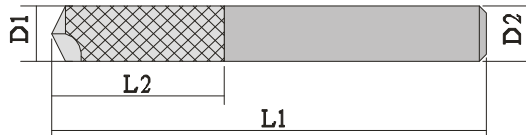
Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 320	PR-3.3/ST-MI / L	3	3	75	10
104 323	PR-3.8/ST-MI / L	3	8	75	10
104 252	PR-4.4/ST-MI / L	4	4	75	15
104 326	PR-4.8/ST-MI / L	4	8	75	15
104 255	PR-5.5/ST-MI / L	5	5	75	16
104 329	PR-5.8/ST-MI / L	5	8	75	16
104 258	PR-6.6/ST-MI / L	6	6	75	18
104 332	PR-6.8/ST-MI / L	6	8	75	18
104 264	PR-8.8/ST-MI / L	8	8	75	25

Double equal-angle milling cutters – with 135° acute angle



Medium toothed

Use: Plastic, light metal, non-ferrous materials, FRP

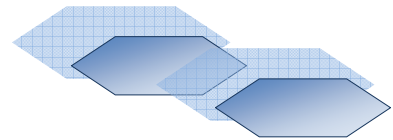


Short version

Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 336	PR-3.3/SW-FEL	3	3	40	10
104 339	PR-3.8/SW-FE	3	6	50	10
104 267	PR-4.4/SW-FE	4	4	40	15
104 342	PR-4.8/SW-FE	4	6	50	12
104 271	PR-5.5/SW-FE	5	5	50	16
104 345	PR-5.8/SW-FE	5	6	50	14
104 275	PR-6.6/SW-FE	6	6	50	18
104 282	PR-8.8/SW-FE	8	8	63	25

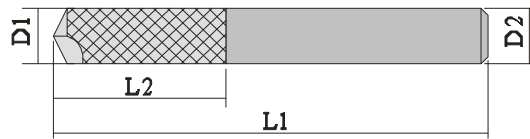
Long version

Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 348	PR-3.3/SW-FE / L	3	3	75	10
104 351	PR-3.8/SW-FE / L	3	8	75	10
104 287	PR-4.4/SW-FE / L	4	4	75	15
104 354	PR-4.8/SW-FE / L	4	8	75	15
104 290	PR-5.5/SW-FE / L	5	5	75	16
104 357	PR-5.8/SW-FE / L	5	8	75	16
104 293	PR-6.6/SW-FE / L	6	6	75	18
104 299	PR-8.8/SW-FE / L	8	8	75	25



Medium toothed

Use: Plastic, light metal, non-ferrous materials, FRP

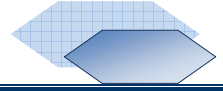


Short version

Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 338	PR-3.3/SW-MI	3	3	40	10
104 341	PR-3.6/SW-MI	3	6	50	10
104 269	PR-4.4/SW-MI	4	4	40	15
104 344	PR-4.6/SW-MI	4	6	50	12
104 273	PR-5.5/SW-MI	5	5	50	16
104 347	PR-5.6/SW-MI	5	6	50	14
104 277	PR-6.6/SW-MI	6	6	50	18
104 285	PR-8.8/SW-MI	8	8	63	25

Long version

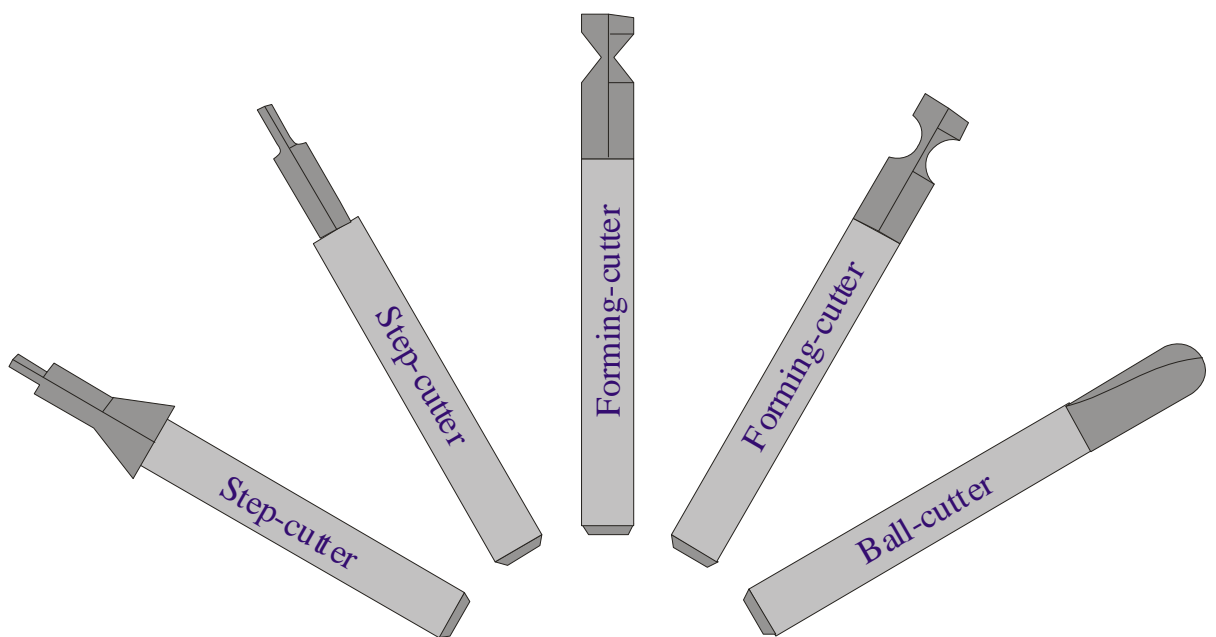
Art. No.	Designation	Dimensions (mm)			
		D1	D2 h6	L1	L2
104 350	PR-3.3/SW-MI / L	3	3	75	10
104 353	PR-3.8/SW-MI / L	3	8	75	10
104 289	PR-4.4/SW-MI / L	4	4	75	15
104 356	PR-4.8/SW-MI / L	4	8	75	15
104 292	PR-5.5/SW-MI / L	5	5	75	16
104 359	PR-5.8/SW-MI / L	5	8	75	16
104 295	PR-6.6/SW-MI / L	6	6	75	18
104 301	PR-8.8/SW-MI / L	8	8	75	25



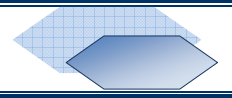
Use:

These cutters are specially adapted to the requirements of the work pieces to be processed.

It is needed a drawing, because it's no article in stock.

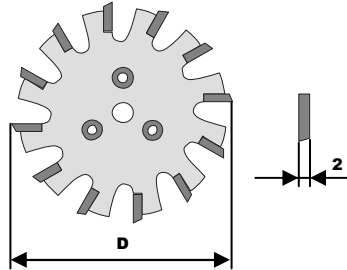


Disk milling cutters with hard metal cutters



Disk milling cutters with hard metal cutters and maximum concentricity. The cutting geometry permits a high standard of cutting quality.

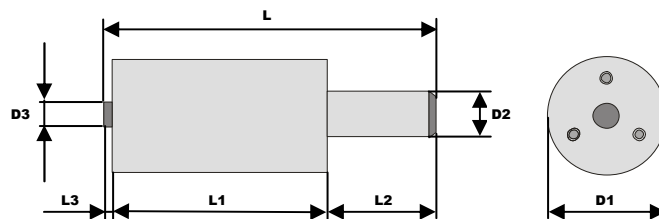
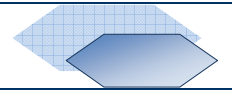
Attention: Please observe the maximum permissible tool speed (engraved on each disk).



Art. No.	Designation	Diameter
Right cutting		D
107 316	SF – 30 / R	D=30 / 6 Cutters
107 318	SF – 40 / R	D=40 / 8 Cutters
107 320	SF – 50 / R	D=50 / 10 Cutters
107 322	SF – 60 / R	D=60 / 12 Cutters

Art. No.	Designation	Diameter
Left cutting		D
107 315	SF – 30 / L	D=30 / 6 Cutters
107 317	SF – 40 / L	D=40 / 8 Cutters
107 319	SF – 50 / L	D=50 / 10 Cutters
107 321	SF – 60 / L	D=60 / 12 Cutters

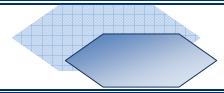
Disk milling cutter mount



Art. No.	Designation	Diameter			
For disk milling cutter SF-30 / SF-40					
104 881	SFA – 30 / 40 incl. 3 countersunk head bolt M3	L=67	L1=40 D1=16	L2=25 D2=10	L3=2 D3=3
108 770	3 countersunk head bolt	M3			

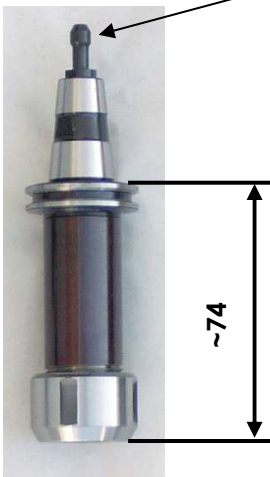
Art. No.	Designation	Diameter			
For disk milling cutter SF-50 / SF-60					
104 882	SFA – 50 / 60 incl. 3 countersunk head bolt M4	L=67	L1=40 D1=24	L2=25 D2=10	L3=2 D3=6
108 771	3 countersunk head bolt	M4			

Accessories for spindle Jäger WK19

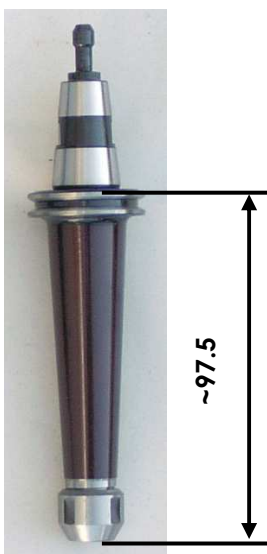


Art. No.	Designation	Size
104 746	Tool cone WK 19-10/35 including clamping nut and clamping pin	
See page 20	Collet chuck 404 E	D = 17,2 mm Clamping diameter See page 20
104 774	Clamping nut BBF10	D = 30 mm
105 955	Hook wrench	30 – 32 mm
104 767	Clamping device	WK19
104 769	Clamping pin, thread length ~ 13 mm	Length = 28 mm
104 798	Clamping pin, thread length ~ 18 mm	Length = 33 mm

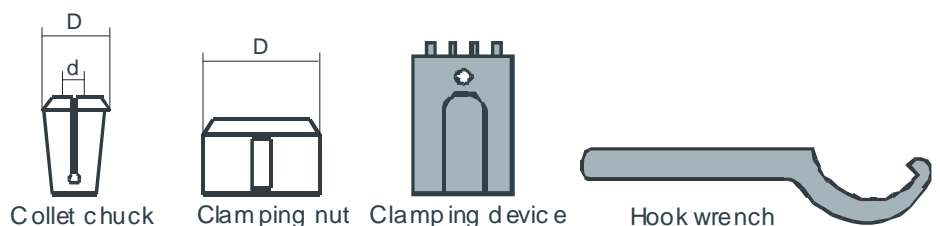
Clamping pin



Art. No.	Designation	Size
104 747	Tool cone WK 19-10/74 including clamping nut and clamping pin	
See page 20	Collet chuck 404 E	D = 17,2 mm Clamping diameter See page 20
104 774	Clamping nut BBF10	D = 30 mm
105 955	Hook wrench	30 – 32 mm
104 767	Clamping device	WK19
104 769	Clamping pin, thread length ~ 13 mm	Length = 28 mm
104 798	Clamping pin, thread length ~ 18 mm	Length = 33 mm



Art. No.	Designation	Size
104 748	Tool cone WK 19-10/97,5 including clamping nut and clamping pin	
See page 20	Collet chuck 400 E	D = 11,5 mm Clamping diameter See page 20
104 773	Clamping nut BBF6	D = 18 mm
105 953	Hook wrench	16 – 20 mm
104 767	Clamping device	WK19
104 769	Clamping pin, thread length ~ 13 mm	Length = 28 mm
104 798	Clamping pin, thread length ~ 18 mm	Length = 33 mm



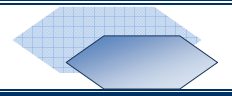
Collet chuck

Clamping nut

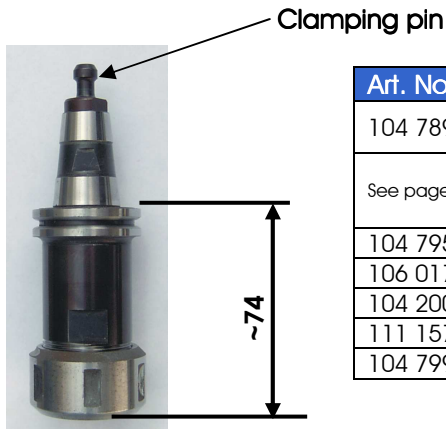
Clamping device

Hook wrench

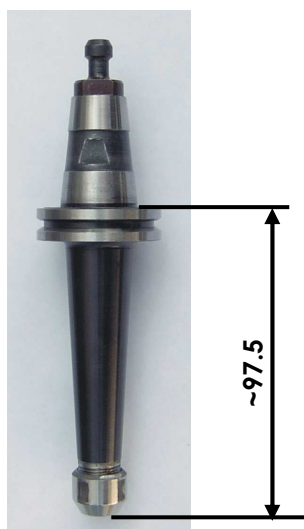
Accessories for spindle Jäger WK25



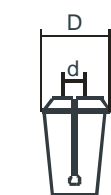
Art. No.	Designation	Size
104 778	Tool cone WK 25-16/50 including clamping nut and clamping pin	
See page 20	Collet chuck 415 E	D = 25,5 mm Clamping diameter See page 20
104 795	Clamping nut BBF16	D = 43 mm
106 017	Hook wrench	40 – 42 mm
104 200	Open-end wrench	30 mm
111 157	Clamping device	WK25
104 799	Clamping pin, thread length ~ 17 mm	Length = 36 mm



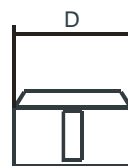
Art. No.	Designation	Size
104 789	Tool cone WK 25-16/74 including clamping nut and clamping pin	
See page 20	Collet chuck 415 E	D = 25,5 mm Clamping diameter See page 20
104 795	Clamping nut BBF16	D = 43 mm
106 017	Hook wrench	40 – 42 mm
104 200	Open-end wrench	30 mm
111 157	Clamping device	WK25
104 799	Clamping pin, thread length ~ 17 mm	Length = 36 mm



Art. No.	Designation	Size
104 790	Tool cone WK 25-6/97,5 including clamping nut and clamping pin	
See page 20	Collet chuck 400 E	D = 11,5 mm Clamping diameter See page 20
104 773	Clamping nut BBF6	D = 18 mm
105 953	Hook wrench	16 – 20 mm
104 211	Open-end wrench	19 mm
111 157	Clamping device	WK25
104 799	Clamping pin, thread length ~ 17 mm	Length = 36 mm



Collet chuck



Clamping nut



Clamping device

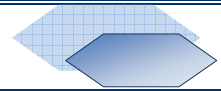


Open-end wrench



Hook wrench

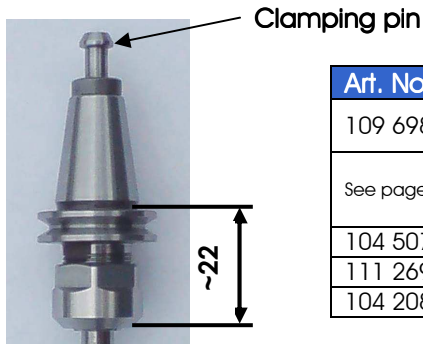
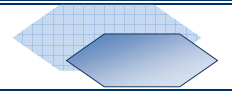
Collet chucks for Jäger WK19 / WK25



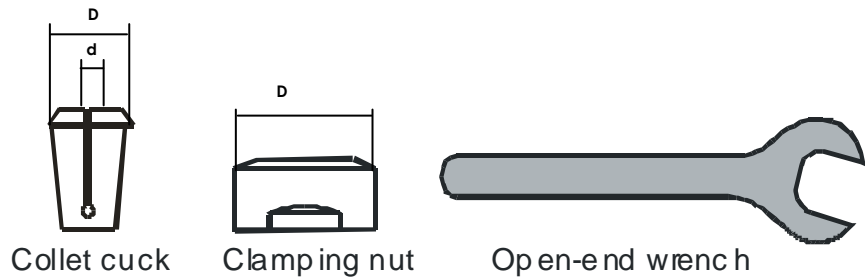
	Tool cone					
	WK19-10/35	WK19-10/74	WK19-10/97,5	WK25-16/50	WK25-16/74	WK25-6/97,5
						
d=Ø	Collet chuck - Art. No.					
Typ	404 E	404 E	400 E	415 E	415 E	400 E
1 mm	111 160	111 160	106 023	106 021	106 021	106 023
2 mm	105 963	105 963	105 964	106 022	106 022	105 964
3 mm	105 967	105 967	105 968	106 016	106 016	105 968
4 mm	105 971	105 971	105 972	106 001	106 001	105 972
5 mm	105 974	105 974	105 985	106 003	106 003	105 985
6 mm	105 976	105 976	105 977	106 005	106 005	105 977
8 mm	105 981	105 981		106 007	106 007	
10 mm	105 959	105 959		106 009	106 009	
12 mm				106 011	106 011	
14 mm				106 013	106 013	
16 mm				106 015	106 015	

Clamping diameters 6mm, 8mm, 10mm, 12mm, 14mm and 16mm are in stock.
Other clamping diameters are on request – not in stock.

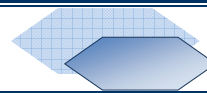
Tool cone for spindle lbag HF60



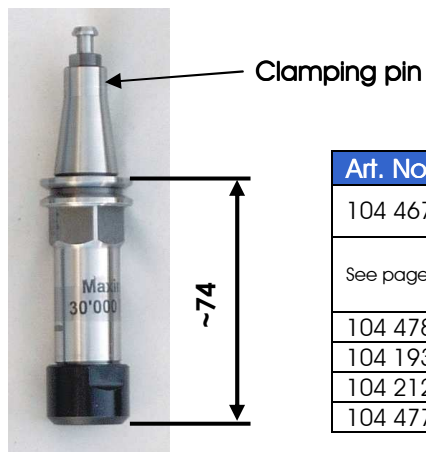
Art. No.	Designation	Size
109 698	Tool cone SKI 16 including clamping nut and clamping pin	
See page 24	Collet chuck ER11-UP	D = 11.8 mm Clamping diameter See page 24
104 507	Clamping nut EXPE 12	D = 16.8 mm
111 269	Open-end wrench	11 mm
104 208	Open-end wrench	15 mm



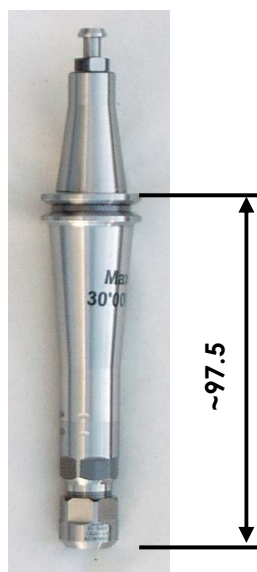
Tool cone for spindle Ibag HF80



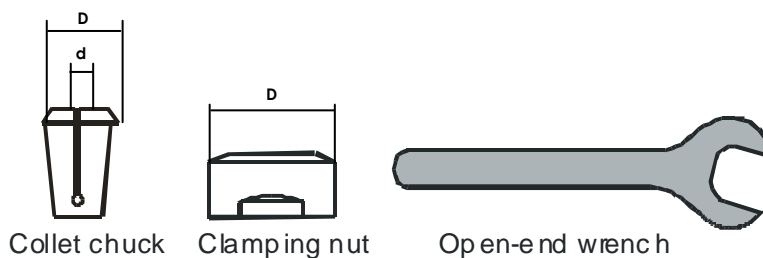
Art. No.	Designation	Size
104 469	Tool cone SKI 20/35 including clamping nut and clamping pin	
See page 24	Collet chuck ER16-UP	D = 16.8 mm Clamping diameter See page 24
104 478	Clamping nut EXPE 16	D = 16.8 mm
104 207	Open-end wrench	18 mm
104 212	Open-end wrench	22 mm
104 477	Clamping pin	Length = 26 mm

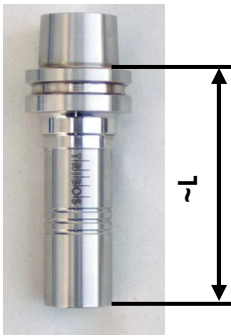
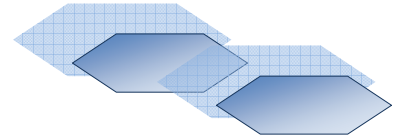


Art. No.	Designation	Size
104 467	Tool cone SKI 20/74 including clamping nut and clamping pin	
See page 24	Collet chuck ER16-UP	D = 16.8 mm Clamping diameter See page 24
104 478	Clamping nut EXPE 16	D = 25 mm
104 193	Open-end wrench	21 mm
104 212	Open-end wrench	22 mm
104 477	Clamping pin	Length = 26 mm



Art. No.	Designation	Size
104 468	Tool cone SKI 20/97.5 including clamping nut and clamping pin	
See page 24	Collet chuck ER11-UP	D = 11.8 mm Clamping diameter See page 24
104 507	Clamping nut EXPE 12	D = 16.8 mm
104 208	2piece Open-end wrench	15 mm
104 477	Clamping pin	Length = 26 mm





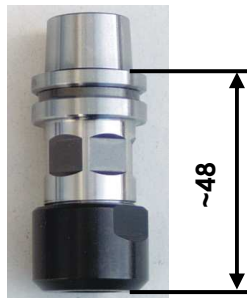
Art. No.	Designation	Size
111 330	Tool holder HSK E25 Tribos S	6.0 mm L=50 mm
111 331	Tool holder HSK E25 Tribos S	8.0 mm L=50 mm
111 332	Tool holder HSK E25 Tribos S	10.0 mm L=55 mm

Tool holder HSK E25 Tribos S is on request– not in stock.

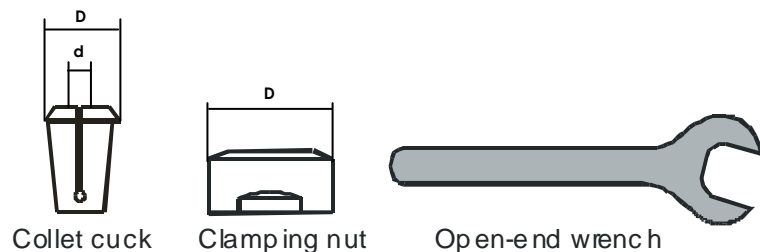


Art. No.	Designation	Size
111 333	Tool holder HSK E25 Tribos RM	6.0 mm
111 334	Tool holder HSK E25 Tribos RM	8.0 mm
111 335	Tool holder HSK E25 Tribos RM	10.0 mm

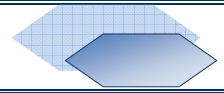
Tool holder HSK E25 Tribos RM is on request – not in stock.





Art. No.	Designation	Size
104 529	Tool cone HSK E25 ER16 including clamping nut	
See page 24	Collet chuck ER16-UP	D = 16.8 mm Clamping diameter See page 24
104 478	Clamping nut EXPE 16	D = 25 mm
104 207	Open-end wrench	18 mm
104 212	Open-end wrench	22 mm



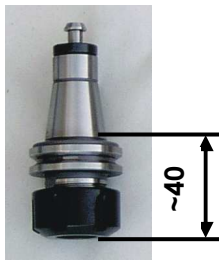
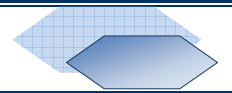
Collet chucks for Ibag HF60 / HF80



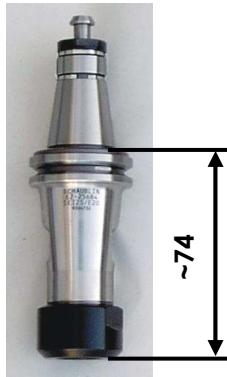
	Tool cone				
	SKI 16	SKI 20/35	SKI 20/74	SKI 20/97.5	HSK E25 ER16
					
d=Ø	Collet chuck - Art. No.				
Typ	ER 11-UP	ER 16-UP	ER 16-UP	ER 11-UP	ER 16-UP
1 mm	112 051	112 060	112 060	112 051	112 060
2 mm	112 053	112 062	112 062	112 053	112 062
3 mm	112 055	112 064	112 064	112 055	112 064
4 mm	112 056	112 066	112 066	112 056	112 066
5 mm	112 057	112 067	112 067	112 057	112 067
6 mm	104 587	112 068	112 068	104 587	112 068
8 mm		112 070	112 070		112 070
10 mm		112 061	112 061		112 061

Clamping diameters 6mm, 8mm and 10mm are in stock.
Other clamping diameters are on request – not in stock.

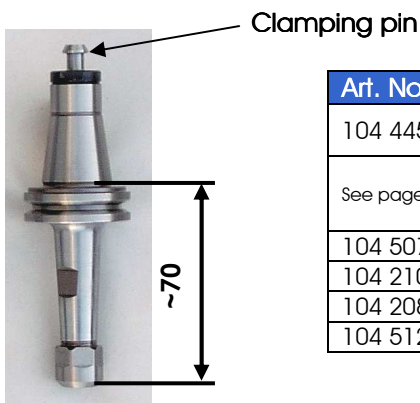
Tool cone for spindle lbag HF100



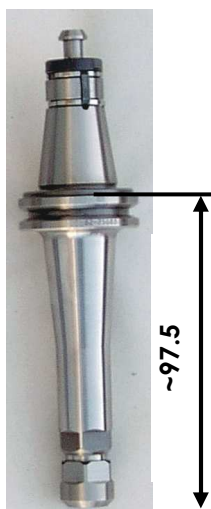
Art. No.	Designation	Size
104 440	Tool cone SKI 25/40 including clamping nut and clamping pin	
See page 30	Collet chuck ER20-UP	D = 20.8 mm Clamping diameter See page 30
104 508	Clumping nut EXE20	D = 25 mm
104 212	Open-end wrench	22 mm
104 486	Hook wrench Type E	E20
104 512	Clamping pin SKI 25	Length = 29 mm



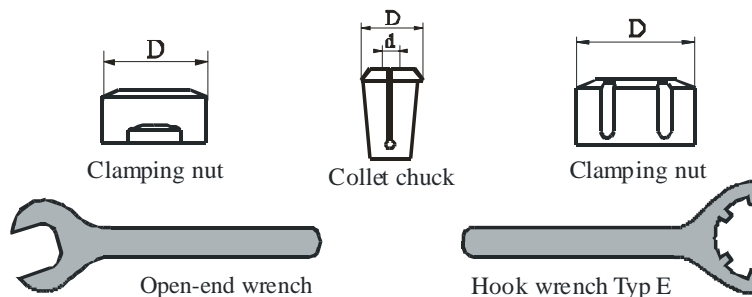
Art. No.	Designation	Size
104 502	Tool cone SKI 25/74 including clamping nut and clamping pin	
See page 30	Collet chuck ER20-UP	D = 20.8 mm Clamping diameter See page 30
111 290	Clumping nut EXP20	D = 32 mm
104 212	Open-end wrench	22 mm
104 194	Open-end wrench	27 mm
104 512	Clamping pin SKI 25	Length = 29 mm



Art. No.	Designation	Size
104 445	Tool cone SKI 25/70 including clamping nut and clamping pin	
See page 30	Collet chuck ER11-UP	D = 11.8 mm Clamping diameter See page 30
104 507	Clumping nut EXPE12	D = 16.8 mm
104 210	Open-end wrench	12 mm
104 208	Open-end wrench	15 mm
104 512	Clamping pin SKI 25	Length = 29 mm

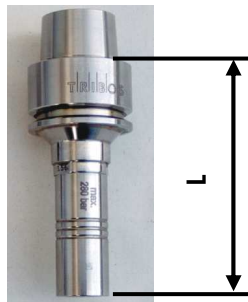


Art. No.	Designation	Size
104 506	Tool cone SKI 25/97.5 including clamping nut and clamping pin	
See page 30	Collet chuck ER11-UP	D = 11.8 mm Clamping diameter See page 30
104 507	Clumping nut EXPE12	D = 16.8 mm
104 208	2 piece Open-end wrench	15 mm
104 512	Clamping pin SKI 25	Length = 29 mm



Tool cone for spindle Ibag HF100 + IMT Classic100

HSK E32



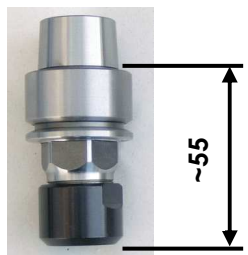
Art. No.	Designation	Size
111 291	Tool holder HSK E32 Tribos S	6.0 mm L=45 mm
111 292	Tool holder HSK E32 Tribos S	8.0 mm L=65 mm
111 293	Tool holder HSK E32 Tribos S	10.0 mm L=70 mm
111 294	Tool holder HSK E32 Tribos S	12.0 mm L=75 mm

Tool holder HSK E32 Tribos S is on request – not in stock.



Art. No.	Designation	Size
111 295	Tool holder HSK E32 Tribos RM	6.0 mm
111 296	Tool holder HSK E32 Tribos RM	8.0 mm
111 297	Tool holder HSK E32 Tribos RM	10.0 mm
111 298	Tool holder HSK E32 Tribos RM	12.0 mm

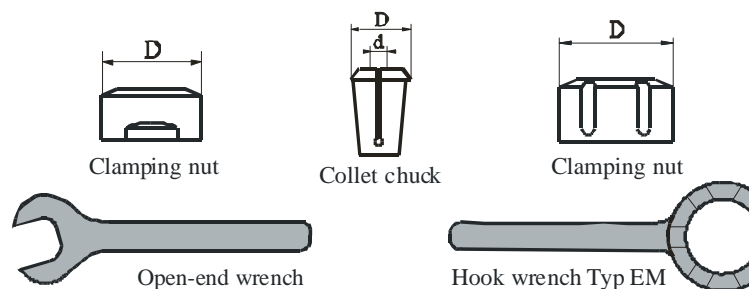
Tool holder HSK E32 Tribos S is on request – not in stock.



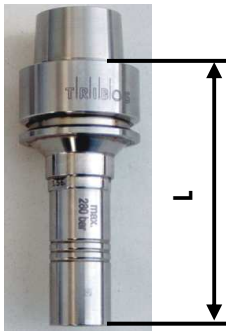
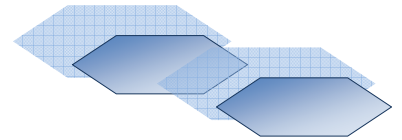
Art. No.	Designation	Size
104 525	Tool cone HSK E32 ER16 including clamping nut	
See page 30	Collet chuck ER16-UP	D = 16.8 mm Clamping diameter See page 30
104 478	Clamping nut EXPE16	D = 25 mm
104 193	Open-end wrench	21 mm
104 212	Open-end wrench	22 mm



Art. Nr.	Designation	Size
104 527	Tool cone HSK E32 ER20 including clamping nut	
See page 30	Collet chuck ER20-UP	D = 21 mm Clamping diameter See page 30
104 553	Clamping nut M-EX20	D = 28 mm
104 212	Open-end wrench	22 mm
104 532	Hook wrench Type EM	E20M



HSK E40



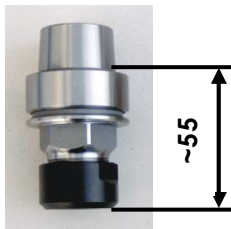
Art. No.	Designation	Size
111 299	Tool holder HSK E40 Tribos S	6.0 mm L=70 mm
111 300	Tool holder HSK E40 Tribos S	8.0 mm L=70 mm
111 301	Tool holder HSK E40 Tribos S	10.0 mm L=80 mm
111 302	Tool holder HSK E40 Tribos S	12.0 mm L=85 mm
111 303	Tool holder HSK E40 Tribos S	16.0 mm L=85 mm

Tool holder HSK E40 Tribos S is on request – not in stock.

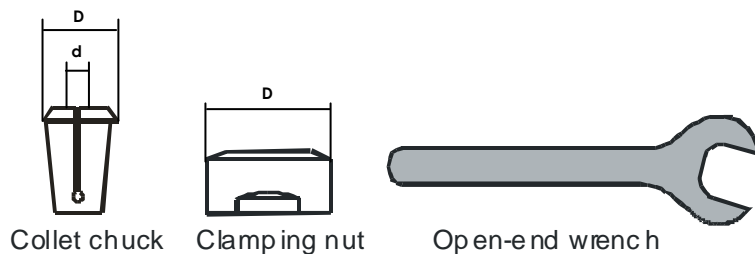


Art. No.	Designation	Size
111 304	Tool holder HSK E40 Tribos RM	6.0 mm
111 305	Tool holder HSK E40 Tribos RM	8.0 mm
111 306	Tool holder HSK E40 Tribos RM	10.0 mm
111 307	Tool holder HSK E40 Tribos RM	12.0 mm
111 308	Tool holder HSK E40 Tribos RM	16.0 mm

Tool holder HSK E40 Tribos RM is on request – not in stock.



Art. No.	Designation	Size
104 559	Tool cone HSK E40 ER 20 including clamping nut	
See page 30	Collet chuck ER20-UP	D = 16.8 mm Clamping diameter See page 29
111 278	Clamping nut EXPE20	D = 32 mm
104 194	2piece Open-end wrench	27 mm

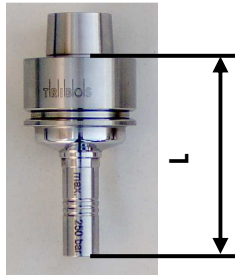
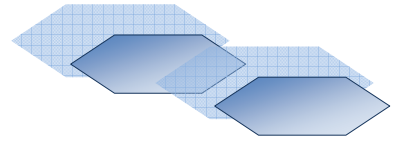


Collet chuck

Clamping nut

Open-end wrench

HSK 40F



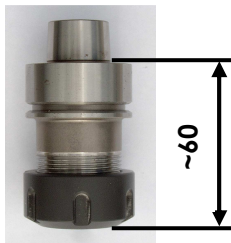
Art. No.	Designation	Size
111 309	Tool holder HSK 40 F Tribos S	6.0 mm L=70 mm
111 310	Tool holder HSK 40 F Tribos S	8.0 mm L=70 mm
111 311	Tool holder HSK 40 F Tribos S	10.0 mm L=80 mm
111 312	Tool holder HSK 40 F Tribos S	12.0 mm L=85 mm

Tool holder HSK 40F Tribos S is on request – not in stock.



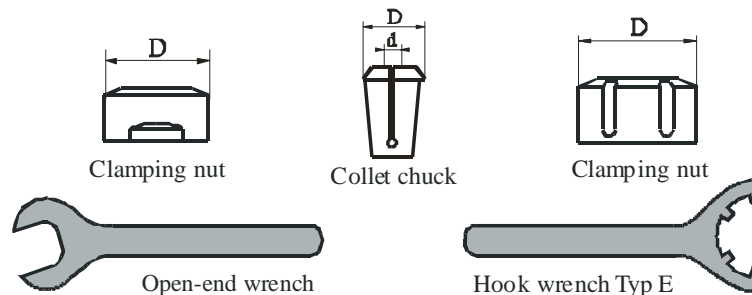
Art. No.	Designation	Size
104 525	Tool cone HSK 40F ER20 including clamping nut	
See page 30	Collet chuck ER20-UP	D = 20.8 mm Clamping diameter See page 30
104 508	Clamping nut EXPE20	D = 34 mm
104 554	Open-end wrench	30 mm

Tool cone HSK 40F ER20 and accessory are on request – not in stock.

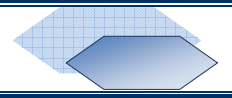


Art. No.	Designation	Size
111 313	Tool cone HSK 40F ER25 including clamping nut	
See page 30	Collet chuck ER25-UP	D = 25.8 mm Clamping diameter See page 30
111 323	Clamping nut EXPE25	D = 42 mm
111 324	Hook wrench	E25

Tool cone HSK 40F ER25 and accessory are on request – not in stock.



Tool cone for spindle IMT Classic 100 Duo 6



HSK C40

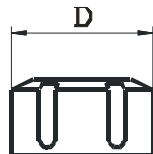


Art. Nr.	Designation	Size
112 564	Tool cone HSK C40 ER25 including clamping nut	
see page 30	Collet chuck ER25-UP	D = 25.8 mm Clamping diameter See page 30
111 323	Clamping nut EXPE25	D = 42 mm
111 324	Hook wrench	E25

Tool cone HSK C40 ER25 and accessory are on request – not in stock.



Collet chuck



Clamping nut



Hook wrench Typ E

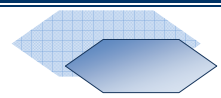


Tool mounting block HSK



Torque screwdriver 6 Nm
fort Inbus 3mm

Collet chucks for Ibag HF100, IMT Classic100, IMT Classic100 Duo 6



	Tool cone									
	SKI 25/40	SKI 25/74	SKI 25/70	SKI 25/97.5	HSK E32 ER16	HSK E32 ER20	HSK E40 ER20	HSK 40F ER20	HSK 40F ER25	HSK C40 ER25
										
d=Ø	Collet chuck – Art. No.									
Type	ER20-UP	ER20-UP	ER11-UP	ER11-UP	ER16-UP	ER20-UP	ER20-UP	ER20-UP	ER25-UP	ER25-UP
1 mm	112 074	112 074	112 051	112 051	112 060	112 074	112 074	112 074	111 336	111 336
2 mm	112 078	112 078	112 053	112 053	112 062	112 078	112 078	112 078	111 337	111 337
3 mm	112 080	112 080	112 055	112 055	112 064	112 080	112 080	112 080	111 338	111 338
4 mm	112 125	112 125	112 056	112 056	112 066	112 125	112 125	112 125	111 339	111 339
5 mm	112 081	112 081	112 057	112 057	112 067	112 081	112 081	112 081	111 340	111 340
6 mm	112 127	112 127	104 587	104 587	112 068	112 127	112 127	112 127	111 341	111 341
8 mm	112 126	112 126			112 070	112 126	112 126	112 126	111 343	111 343
10 mm	112 072	112 072			112 061	112 072	112 072	112 072	111 345	111 345
12 mm	112 073	112 073				112 073	112 073	112 073	111 347	111 347
16 mm									111 349	111 349

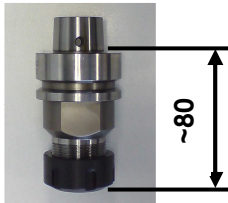
Clamping diameters 6mm, 8mm, 10mm and 12mm are in stock.

Collet chucks Type ER25-UP are on request – not in stock.

Other clamping diameters are on request – not in stock.

Tool cone for spindle lbag HF120 + IMT Classic120

HSK 50F



Art. No.	Designation	Size
111 316	Tool cone HSK 50F ER25 including clamping nut	
See page 33	Collet chuck ER25-UP	D = 25.8 mm Clamping diameter See page 33
111 323	Clamping nut EXPE25	D = 42 mm
111 324	Hook wrench Tye E	E25

Tool cone HSK 50F ER25 and accessory are on request – not in stock.

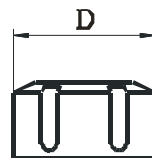


Art. No.	Designation	Size
111 319	Tool cone HSK 50F ER32 including clamping nut	
See page 33	Collet chuck ER32-UP	D = 32.8 mm Clamping diameter See page 33
111 320	Clamping nut EXPE32	D = 50 mm
111 321	Hook wrench Type E	E32

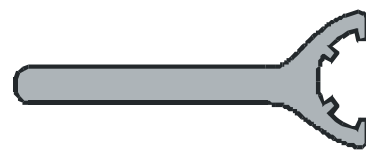
Tool cone HSK 50F ER32 and accessory are on request – not in stock.



Collet chuck

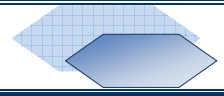


Clamping nut

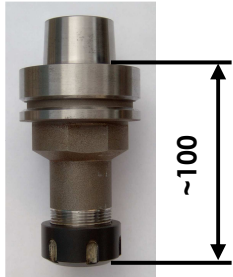


Hook wrench Typ E

Tool cone for spindle IMT Classic 120

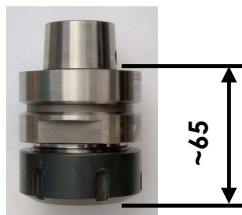


HSK 63F



Art. No.	Designation	Size
111 322	Tool cone HSK 63F ER25 including clamping nut	
See page 33	Collet chuck ER25-UP	D = 25.8 mm Clamping diameter See page 33
111 323	Clamping nut EXPE25	D = 42 mm
111 324	Hook wrench Type E	E25

Tool cone HSK 63F ER25 and accessory are on request – not in stock.

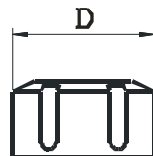


Art. No.	Designation	Size
111 325	Tool cone HSK 63F ER40 including clamping nut	
See page 33	Collet chuck ER40-UP	D = 40.8 mm Clamping diameter See page 33
111 326	Clamping nut EXPE40	D = 63 mm
111 327	Hook wrench Type E	E40

Tool cone HSK 63F ER40 and accessory are on request – not in stock.



Collet chuck

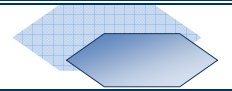


Clamping nut



Hook wrench Typ E

Collet chucks for Ibag HF120 + IMT Classic120



	Tool cone			
	HSK 50F ER25	HSK 50F ER32	HSK 63F ER25	HSK 63F ER40
				
d=Ø	Collet chuck - Art. No.			
Type	ER25-UP	ER32-UP	ER25-UP	ER40-UP
1 mm	111 336	111 351	111 336	111 366
2 mm	111 337	111 352	111 337	111 367
3 mm	111 338	111 353	111 338	111 368
4 mm	111 339	111 354	111 339	111 369
5 mm	111 340	111 355	111 340	111 370
6 mm	111 341	111 356	111 341	111 371
8 mm	111 343	111 358	111 343	111 373
10 mm	111 345	111 360	111 345	111 375
12 mm	111 347	111 362	111 347	111 377
16 mm	111 349	111 364	111 349	111 379
20 mm	111 350	111 365	111 350	111 380

Collet chucks Type ER25-UP, ER32_UP and ER40-UP are on request – not in stock.
Other clamping diameters are on request – not in stock.

Ibag HF90



Art. No.	Designation	Size
See page 35	Collet chuck ER16-UP	D = 16.8 mm Clamping diameter See page 35
104 555	Clamping nut EXE16	D = 32 mm
104 211	Open-end wrench	19 mm
104 556	Hook wrench Type E	E16

Perske

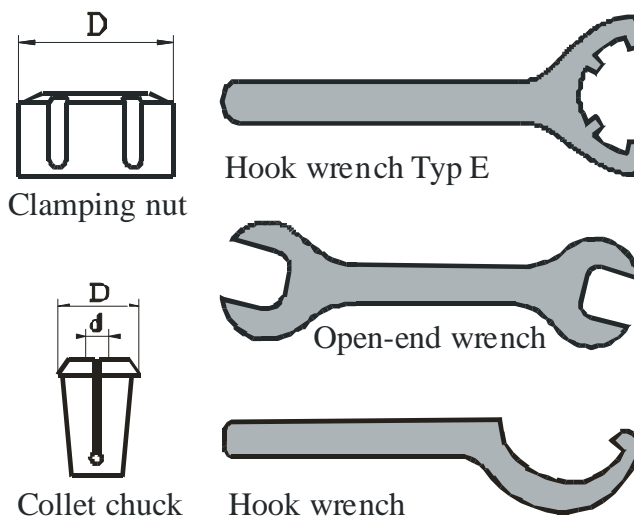
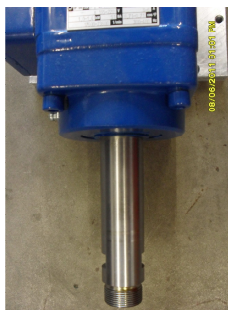
Thin shaft end



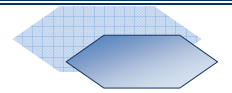
Art. No.	Designation	Size
Thin shaft end		
See page 35	Collet chuck 401 E	D = 14.5 mm Clamping diameter See page 35
105 991	Clamping nut BBF 8	D = 26 mm
105 954	Hook wrench 401 E	25 - 28 mm
104 198	Double open-end wrench	22 - 24 mm



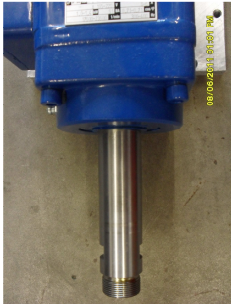
Thick shaft end		
See page 35	Collet chuck 407 E	D = 20 mm Clamping diameter See page 35
105 992	Clamping nut BBF 12	D = 35 mm
105 956	Hook wrench 407 E	34 - 36 mm
104 198	Double open-end wrench	22 - 24 mm

Thick shaft end

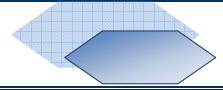


Collet chucks for double spindle Ibag HF90 and Perske



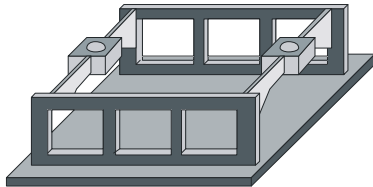
	Ibag HF90	Perske Thin shaft end	Perske Thick shaft end
			
d =	Collet chuck - Art. No.		
Ø	ER16-UP	401 E	407 E
1 mm	112 060	105 993	105 994
2 mm	112 062	105 960	105 965
3 mm	112 064	105 966	105 969
4 mm	112 066	105 970	105 988
5 mm	112 067	105 973	105 989
6 mm	112 068	105 975	105 990
8 mm	112 070	105 980	105 982
10 mm	112 061		105 986
12 mm			105 987

Other clamping diameters are on request – not on stock.



Base structure

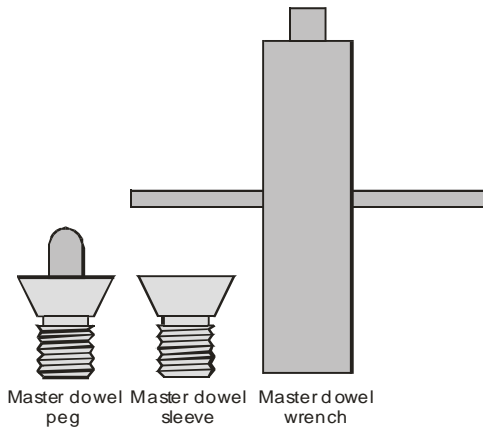
For a quick changing of vacuum clamping devices.
With two separate vacuum loops.



Art. No	Designation	Size
108 657	Base structure U2	500 x 500 mm
108 658	Base structure U3	350 x 650 mm

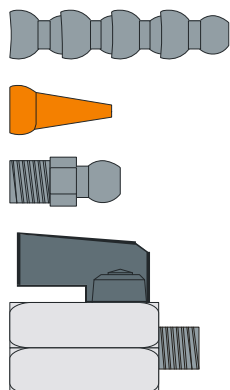
Steel master dowels

For easy fixing of clamping devices.

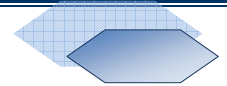


Art. No	Designation	Size
104 163	Master dowel, peg	8 mm
104 161	Master dowel, sleeve	8 mm
104 162	Master dowel wrench	

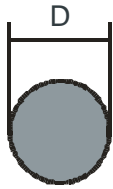
Fan air accessories



Art. No	Designation	Size
106 049	Snap-Loc articulated hose	ca. 30 cm
106 047	Air nozzle yellow (hose end piece)	
106 051	Threaded nipple (hose connection)	1/4"
103 125	Ball valve	1/4"



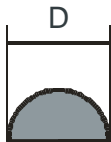
Circular



Art. No.	Designation	Size
105 108	Cellular rubber, circular, black	D = 3 mm
105 110	Cellular rubber, circular, black	D = 4 mm
107 473	Cellular rubber, circular, grey	D = 5 mm
105 112	Cellular rubber, circular, black	D = 6 mm
105 116	Cellular rubber, circular, black	D = 8 mm
111 328	Silicone – round cord, white	D = 8 mm

Minimum order quantity 100 metres

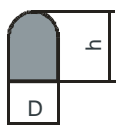
Semi circular



Art. No.	Designation	Size
105 109	Cellular rubber, circular, black	D = 3 mm
105 111	Cellular rubber, circular, black	D = 4 mm
105 113	Cellular rubber, circular, black	D = 6 mm
105 118	Cellular rubber, circular, black	D = 8 mm

Minimum order quantity 100 metres

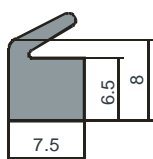
Even rounded down



Art. No.	Designation	Size
105 114	Cellular rubber, even rounded down, grey D=4, h=6	4
111 329	Cellular rubber, even rounded down, grey D=6, h=8	6

Minimum order quantity 50 metres

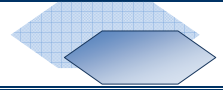
Rubber lip



Art. No.	Designation	Size
106 955	Rubber lip	8

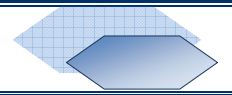
Minimum order quantity 10 metres

Trouble shooting



To your support – when using HG GRIMME hard metal milling cutters – we have compiled the following list of possible problems and their solutions.

PROBLEM	Decrease	SOLUTION	Increase
Cutter wear and tear	Feed per tooth	Cutting speed Hard metal resilience Cutting phase	
Cutter cracks	Cutting speed	Feed per tooth Hard metal resistance Cutting phase	
Decarburisation	Cutting speed Feed per tooth	Hard metal wear resistance Cooling medium pressure	
Poor surface quality of work piece	Feed per tooth Cutting depth Cutting phase	Cutting speed Angle of twist Quantity of cutters Concentricity of cutter	
Vibrations Rattling	Cutting depth Cutting speed Rotation speed	Tension concentricity Quantity of cutters	
Broken edge on Work piece	Feed per tooth Cutting depth Cutting phase	Material quality	
Machine overloading	Cutting speed Feed per tooth Cutting depth		



Quote request

- Tel.: +49 82 41 96 08 0
- Fax: +49 82 41 96 08 55
- email: info@hg-grimme.de

Discount rates

Our discount rates are valid for all standard milling cutters and disk milling cutters.

Special equipments are without discount.

1	-	9	pieces	=	0%
10	-	19	pieces	=	10% discount
20	-	29	pieces	=	15% discount
30	-	39	pieces	=	20% discount
More than 39			pieces	=	25% discount

DELIVERY EX WORKS

Delivery times

Standard milling cutting tools can be delivered in short times.

The delivery time for special versions is approx. 3-4 weeks.

For further information, don't hesitate to contact us. We are at your disposal.

Errors and technical modifications accepted.