

RUNDSCHAFT-WERKZEUGE ROUND SHANK TOOLS



Stand 2019-09

INHALTSVERZEICHNIS SUMMERY

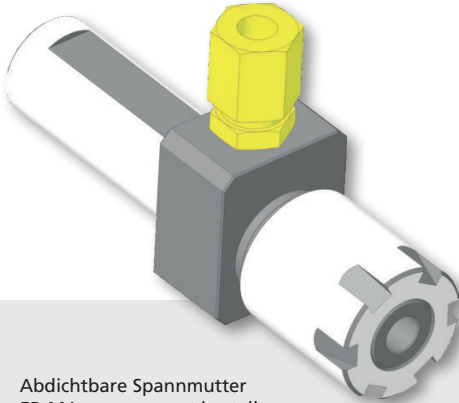
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INHALTSVERZEICHNIS

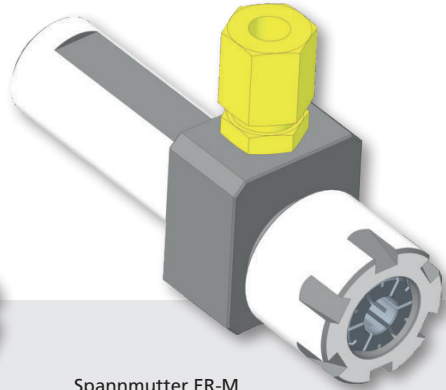
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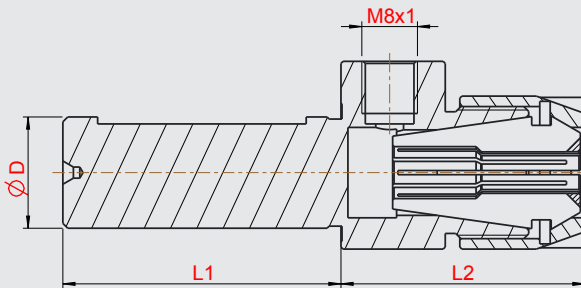
**Spannzangenhalter Typ GZ 65
mit Innenkühlung**
chuck holder type GZ 65
with coolant supply



Abdichtbare Spannmutter
ER-MA muss separat bestellt
werden, siehe Seite 4.18!
Sealed chucking nut ER-MA
must be ordered separately,
see page 4.18!



Spannmutter ER-M
ist inklusive!
Chucking nut ER-M
is inclusive!

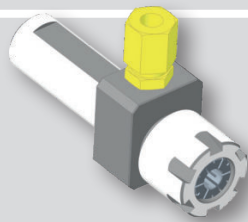


Beispiel:
mit Spannmutter ER-M
Example:
with chucking nut ER-M

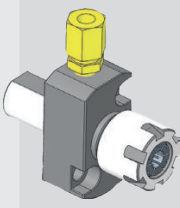
Längen Differenz zwischen normaler und
abdichtbarer Spannmutter in L2

Length difference between normal and
sealed chucking nut in L2

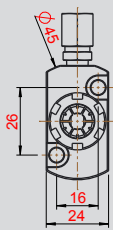
Zange chuck	L2 mit abgedichteter Zange L2 with sealed chucking nut
ER 16	+ 6,5 mm
ER 20	+ 7,5 mm
ER 25	+ 7,5 mm



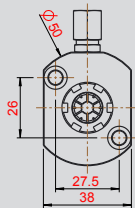
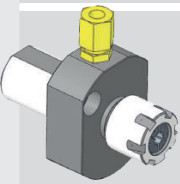
Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
11-0379	GZ 65.1640.16	16	ER 16	40	35
11-1030	GZ 65.3440.11	3/4"	ER 11	40	33
11-0377	GZ 65.3440.16	3/4"	ER 16	40	35
11-0376	GZ 65.2040.16	20	ER 16	40	35
11-0490	GZ 65.2080.16	20	ER 16	80	35
11-0489	GZ 65.2240.16	22	ER 16	40	35
11-1024	GZ 65.2528.25	25	ER 25	28	40
11-1028	GZ 65.2528.20	25	ER 20	28	43
11-1275	GZ 65.2528.16	25	ER 16	28	40
11-1042	GZ 65.2560.25	25	ER 25	60	52
11-1276	GZ 65.2560.20	25	ER 20	60	48
11-1277	GZ 65.2560.16	25	ER 16	60	40
11-0474	GZ 65.1060.16	1"	ER 16	60	40
11-0443	GZ 65.1080.20	1"	ER 20	80	45
11-0439	GZ 65.1080.25	1"	ER 25	80	48
11-0378	GZ 65.10100.16	1"	ER 16	100	40
11-0475	GZ 65.10100.20	1"	ER 20	100	48
11-0380	GZ 65.3260.20	32	ER 20	60	45
11-0416	GZ 65.3260.25	32	ER 25	60	48



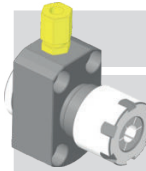
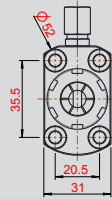
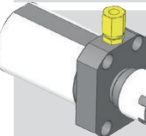
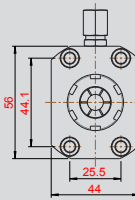
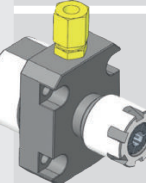
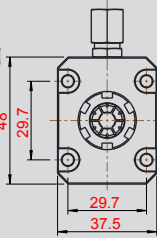
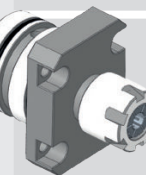
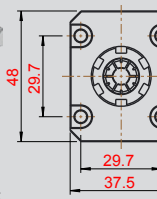
STAR



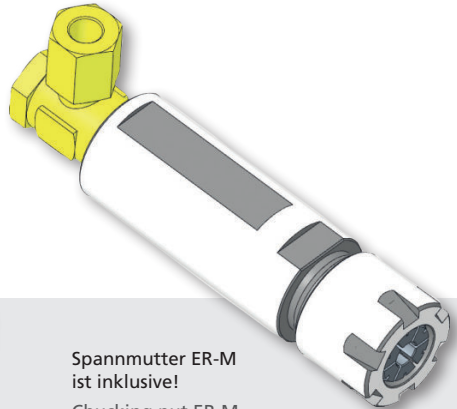
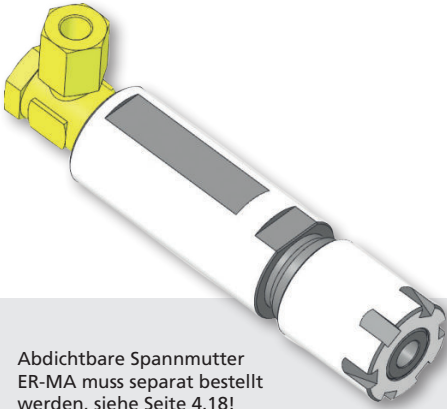
11-0473	GZ 65.1621.16 (SR16/20R)	16	ER 16	21	40
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11-0469	GZ 65.2230.16 SR32	22	ER 16	30	40
11-0486	GZ 65.2230.20 SR32	22	ER 20	30	50
11-0487	GZ 65.2230.25 SR32	22	ER 25	30	50

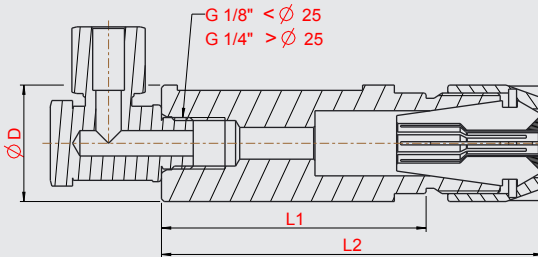
	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
 <p data-bbox="291 247 392 271">HANWHA</p> 	11-0803	GZ 65.2806.20	28	ER 20	6	50
	11-0802	GZ 65.2806.25	28	ER 25	6	55
 	11-0688	GZ 65.4260.20	42	ER20	60	44
 <p data-bbox="291 742 358 766">MAIER</p> 	11-0506	GZ 65.3420.16	34	ER 16	20	42
	11-0505	GZ 65.3420.20	34	ER 20	20	45
	11-0508	GZ 65.3420.25	34	ER 25	20	50
	11-0585	GZ 65.3444.25	34	ER25	44	82
  <p data-bbox="95 1316 240 1356">IK durch den Schaft IC trough the shank</p>	11-0507	GZ 65.3425.16	34	ER16	25	34
	11-0582	GZ 65.3425.20	34	ER20	25	36
	11-0424	GZ 65.3425.25	34	ER25	25	3

**Spannzangenhalter Typ GZ 66
mit Innenkühlung**
chuck holder type GZ 66
with coolant supply



Abdichtbare Spannmutter
ER-MA muss separat bestellt
werden, siehe Seite 4.18!
Sealed chucking nut ER-MA
must be ordered separately,
see page 4.18!

Spannmutter ER-M
ist inklusive!
Chucking nut ER-M
is inclusive!



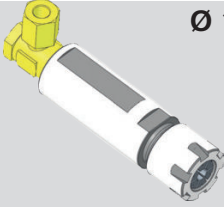
Beispiel:
mit Spannmutter ER-M

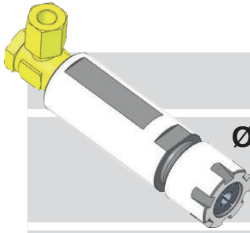
Example:
with chucking nut ER-M

Längen Differenz zwischen normaler und
abdichtbarer Spannmutter in L2

Length difference between normal and
sealed chucking nut in L2

Zange chuck	L2 mit abgedichteter Zange L2 with sealed chucking nut
ER 16	+ 6,5 mm
ER 20	+ 7,5 mm
ER 25	+ 7,5 mm

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
 <p>Ø 16</p>	11-0138	GZ 66.1620.11	16	ER 11	20	37
	11-0139	GZ 66.1626.16	16	ER 16	26	46
	11-0148	GZ 66.1630.11	16	ER 11	30	47
	11-0586	GZ 66.1660.11	16	ER 11	60	77
	11-0536	GZ 66.1660.16	16	ER 16	60	95
	11-0462	GZ 66.16100.11	16	ER 11	100	117
<p>Ø 3/4" (19,05)</p>	11-0232	GZ 66.3440.11	3/4"	ER 11	40	57
	11-0233	GZ 66.3440.16	3/4"	ER 16	40	62
	11-0472	GZ 66.3450.11	3/4"	ER 11	50	67
	11-0234	GZ 66.3450.16	3/4"	ER 16	50	72
	11-0457	GZ 66.3460.11	3/4"	ER 11	60	77
	11-0235	GZ 66.3470.16	3/4"	ER 16	70	92
	11-0237	GZ 66.3470.20	3/4"	ER 20	70	94
	11-0236	GZ 66.34120.16	3/4"	ER 16	120	142
<p>Ø 20</p>	11-0664	GZ 66.2030.20	20	ER 20	30	54
	11-0228	GZ 66.2040.11	20	ER 11	40	57
	11-0230	GZ 66.2040.16	20	ER 16	40	62
	11-0663	GZ 66.2045.20	20	ER 20	45	69
	11-0229	GZ 66.2060.11	20	ER 11	60	77
	11-0231	GZ 66.2060.16	20	ER 16	60	84
	11-1250	GZ 66.2080.16	20	ER 16	80	102
	11-1043	GZ 66.2090.11	20	ER 11	90	107
	11-0435	GZ 66.20100.11	20	ER 11	100	117
	11-0436	GZ 66.20100.16	20	ER 16	100	122
	11-0437	GZ 66.20100.20	20	ER 20	100	124
	<p>Ø 22</p>	11-0150	GZ 66.2238.16	22	ER 16	38
11-0151		GZ 66.2250.16	22	ER 16	50	72
11-0149		GZ 66.2270.11	22	ER 11	70	87
11-0152		GZ 66.2270.16	22	ER 16	70	92
11-0154		GZ 66.2270.20	22	ER 20	70	94
11-0156		GZ 66.2274.25	22	ER 25	74	122
11-1038		GZ 66.2280.16	22	ER 16	80	102
11-1127		GZ 66.2290.16	22	ER 16	90	112

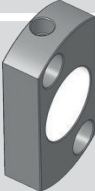
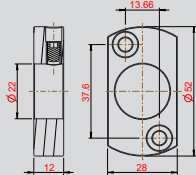

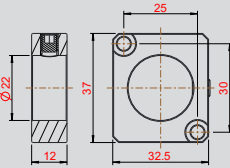
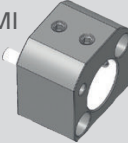
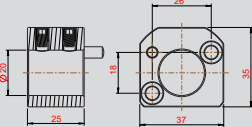

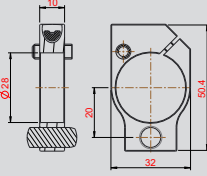

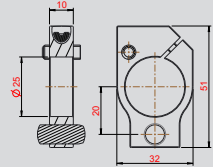


	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
Ø 22	11-0153	GZ 66.22120.16	22	ER 16	120	142
	11-0155	GZ 66.22120.20	22	ER 20	120	144
	11-0157	GZ 66.22120.25	22	ER 25	120	168
Ø 25	11-0478	GZ 66.2560.16	25	ER 16	60	82
	11-0578	GZ 66.2560.20	25	ER 20	60	84
	11-0859	GZ 66.2580.16	25	ER 16	80	102
	11-0440	GZ 66.25100.16	25	ER 16	100	122
	11-0343	GZ 66.25100.20	25	ER 20	100	124
	11-0334	GZ 66.25150.20	25	ER 20	150	174
	11-0441	GZ 66.25150.25	25	ER 25	150	189
Ø 1" (25,4)	11-1284	GZ 66.1050.11	1"	ER 11	50	67
	11-0241	GZ 66.1050.16	1"	ER 16	50	72
	11-0244	GZ 66.1050.20	1"	ER 20	50	74
	11-0243	GZ 66.1060.16	1"	ER 16	60	82
	11-0245	GZ 66.1060.20	1"	ER 20	60	84
	11-1084	GZ 66.1090.16	1"	ER 16	90	112
	11-1083	GZ 66.1090.20	1"	ER 20	90	114
	11-1283	GZ 66.10100.11	1"	ER 11	100	117
	11-0242	GZ 66.10100.16	1"	ER 16	100	122
	11-0246	GZ 66.10100.20	1"	ER 20	100	124
	11-0247	GZ 66.10130.20	1"	ER 20	130	154
Ø 28	11-0140	GZ 66.2880.16	28	ER 16	80	102
	11-0141	GZ 66.2880.20	28	ER 20	80	104
	11-0434	GZ 66.2880.25	28	ER 25	80	115
Ø 32	11-0658	GZ 66.3260.20	32	ER 20	60	86
	11-1126	GZ 66.3270.25	32	ER 25	70	106
	11-1143	GZ 66.3280.20	32	ER 20	80	108
	11-1082	GZ 66.3280.16	32	ER 16	90	112
	11-0846	GZ 66.32120.20	32	ER 20	120	144
	11-0555	GZ 66.32120.25	32	ER 25	120	156

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
<p>STAR</p> <p>kein IK no IC</p>	11-0485	GZ 66.1621.16-ST	16	ER 16	21	48
<p>MAIER</p> <p>IK-Anschluss G¼ IC-connection G¼</p>	11-0335	GZ 66.3444.16	34	ER16	44	78
	11-0336	GZ 66.3444.20	34	ER20	44	80
	11-0337	GZ 66.3444.25	34	ER25	44	82

Klemmringe für Rundschaftwerkzeuge

clamping ring for round shank tools

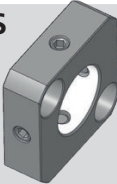
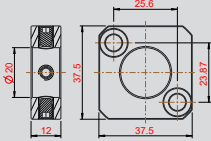
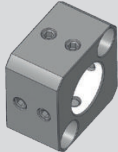
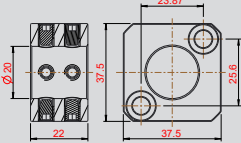
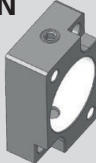
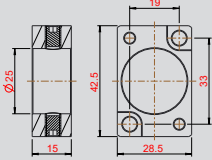

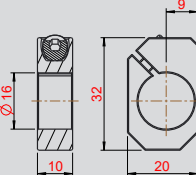
	Art. Nummer Art. Number	Bezeichnung Description
<p>Für STAR for STAR</p> <p>Bohrbild S3 hole pattern S3</p>  	4130	Klemmring 4.130
 	4341	Klemmring 4.341
<p>Für TSUGAMI for TSUGAMI</p>  	4201	Klemmring 4.201
<p>Für TRAUB for TRAUB</p>  	4220	Klemmring 4.220
 	4278	Klemmring 4.278

Hinweis / Note:

Die Klemmringe sind verwendbar an allen Rundschaftwerkzeugen, welche den passenden Durchmesser aufweisen.

The clamping rings can be used for all round shank tools, which have the suitable diameter.

Klemmringe für Rundschaftwerkzeuge
clamping ring for round shank tools

		Art. Nummer Art. Number	Bezeichnung Description
<p>Für TORNOS for TORNOS</p>  		4283	Klemmring 4.283
 		4285	Klemmring 4.285
<p>Für CITIZEN for CITIZEN</p> <p>Bohrbild C2 hole pattern C2</p>  		4351	Klemmring 4.351
 		4337	Klemmring 4.337

Hinweis / Note:

Die Klemmringe sind verwendbar an allen Rundschaftwerkzeugen, welche den passenden Durchmesser aufweisen.

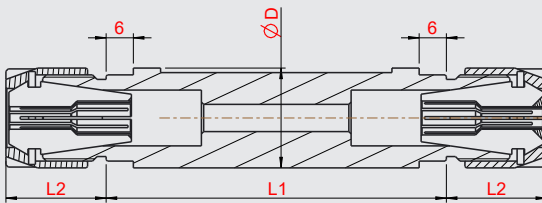
The clamping rings can be used for all round shank tools, which have the suitable diameter.

Doppel-Spannzangenhalter Typ GZ 67

double chuck holder type GZ 67

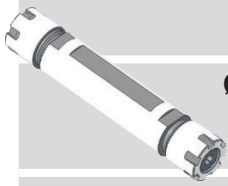


Spannmutter ER-M
ist inklusive!
Chucking nut ER-M
is inclusive!



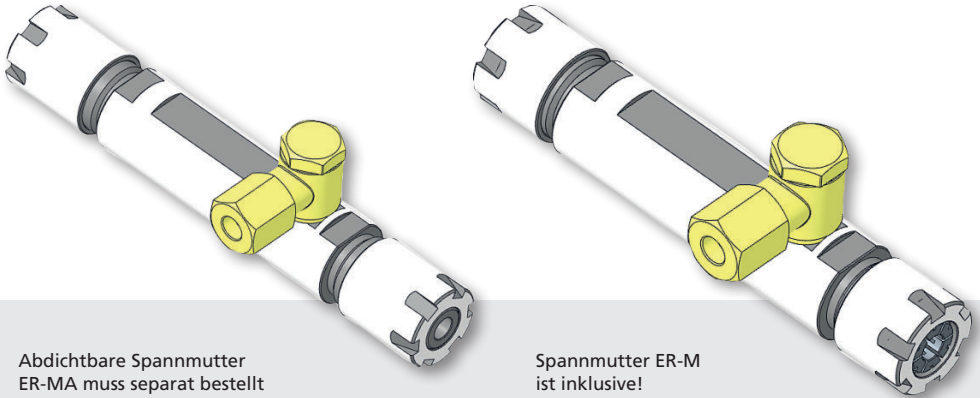
Beispiel:
mit GZ67.2275.16

Example:
with GZ67.2275.16



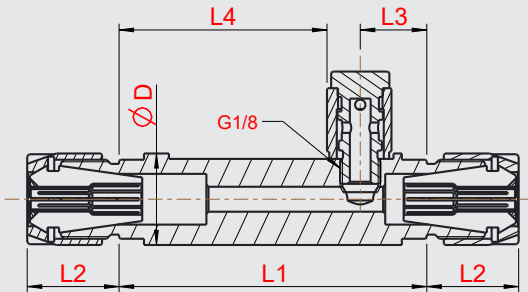
	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
Ø 16	11-0158	GZ 67.1632.11	16	ER 11	32	17
	11-0159	GZ 67.1650.11	16	ER 11	50	17
Ø ¾" (19,05)	11-0253	GZ 67.3440.11	¾"	ER 11	40	17
	11-0454	GZ 67.3440.16	¾"	ER 16	40	22
	11-0256	GZ 67.3455.16	¾"	ER 16	55	22
	11-0254	GZ 67.3462.11	¾"	ER 11	62	17
	11-0257	GZ 67.3470.16	¾"	ER 16	70	22
	11-0255	GZ 67.3475.11	¾"	ER 11	75	17
Ø 20	11-0460	GZ 67.2030.11	20	ER 11	30	17
	11-0541	GZ 67.2040.16	20	ER 16	40	22
	11-0614	GZ 67.2040.11	20	ER 11	40	17
	11-0250	GZ 67.2050.16	20	ER 16	50	22
	11-0583	GZ 67.2050.11	20	ER 11	50	17
	11-0251	GZ 67.2065.16	20	ER 16	65	22
	11-0249	GZ 67.2065.11	20	ER 11	65	17
	11-0636	GZ 67.2080.16	20	ER 16	80	22
Ø 22	11-1113	GZ 67.2265.16	22	ER 16	65	22
	11-0161	GZ 67.2275.16	22	ER 16	75	22
	11-0160	GZ 67.22110.11	22	ER 11	110	17
	11-0162	GZ 67.22110.16	22	ER 16	110	22
Ø 25	11-0341	GZ 67.2580.16	25	ER 16	80	22
	11-0342	GZ 67.2580.20	25	ER 20	80	24
Ø 1" (25,4)	11-0259	GZ 67.1060.20	1"	ER 20	60	24
	11-0258	GZ 67.1065.16	1"	ER 16	65	22
	11-0260	GZ 67.1075.20	1"	ER 20	75	24
Ø 32	11-0164	GZ 67.3265.20	32	ER 20	65	24
	11-0165	GZ 67.3285.20	32	ER 20	85	24

**Doppel-Spannzangenhalter Typ GZ 79
mit Innenkühlung**
double chuck holder type GZ 79
with coolant supply



Abdichtbare Spannmutter
ER-MA muss separat bestellt
werden, siehe Seite 4.18!
Sealed chucking nut ER-MA
must be ordered separately,
see page 4.18!

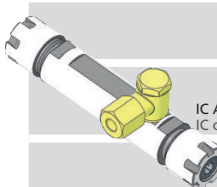
Spannmutter ER-M
ist inklusive!
Chucking nut ER-M
is inclusive!



Beispiel:
mit Spannmutter ER-M
Example:
with chucking nut ER-M

Längen Differenz zwischen normaler und
abdichtbarer Spannmutter in L2
Length difference between normal and
sealed chucking nut in L2

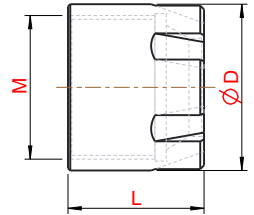
Zange	L2 mit abgedichteter Zange L2 with sealed chucking nut
ER 16	+ 6,5 mm
ER 20	+ 7,5 mm
ER 25	+ 7,5 mm



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2	L3	L4
Ø 16 IC Anschluss M8x1 IC connection M8x1	11-1012	GZ 79.1660.11	16	ER 11	60	17	14	39
Ø 3/4"	11-0871	GZ 79.3470.16	3/4"	ER 16	70	22	16	59
Ø 20	11-0770	GZ 79.2065.16	20	ER 16	65	22	16	54
	11-1104	GZ 79.2090.16	20	ER 16	90	22	24	59
Ø 22	11-0692	GZ 79.2262.16	22	ER 16	62	22	16	50
	11-0807	GZ 79.22100.16	22	ER 16	100	22	15	90
Ø 25	11-1001	GZ 79.2580.16	25	ER 16	80	22	12	61
	11-0860	GZ 79.2595.20	25	ER 20	95	24	19	69
Ø 1"	11-1150	GZ 79.1055.16	1"	ER 16	55	22	12	36
	11-0683	GZ 79.1065.16	1"	ER 16	65	22	12	45
	11-1050	GZ 79.1075.20	1"	ER 20	75	24	20	48
Ø 32	11-0861	GZ 79.3295.25	32	ER 25	95	26	22	66
	11-0862	GZ 79.3297.20	32	ER 20	97	24	19	71

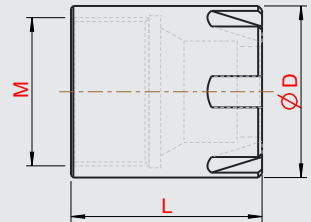
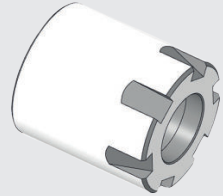
Spannmutter ER-M
chucking nut ER-M

Art. Nummer Art. Number	Bezeichnung Description	Ø D	L	M7x1
620008	62 000 8 ER8	12	10,8	M10x0,75
6200011	62 000 11 ER11	16	12	M13x0,75
6200016	62 000 16 ER16	22	18	M19x1
6200020	62 000 20 ER20	28	19	M24x1
6200025	62 000 25 ER25	35	20	M30x1



GRAF Spannmutter abdichtbar ER-MA
GRAF chucking nut sealed ER-MA

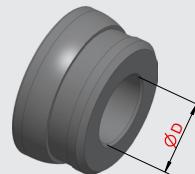
Art. Nummer Art. Number	Bezeichnung Description	Ø D	L	M7x1
6260016	62 600 16 ER16	22	18	M19x1
6260020	62 600 20 ER20	28	19	M24x1
6260025	62 600 25 ER25	35	20	M30x1



Dichtscheiben für abdichtbare Spannmutter ER-MA
 Sealing ring for chucking nut ER-MA

Art. Nummer Art. Number	Bezeichnung Description	Ø D
11-0002	Dichtscheibe ER16 - 3.5 - 4.0	4
11-0019	Dichtscheibe ER20 - 4.5 - 5.0	5
11-0059	Dichtscheibe ER25 - 8.5 - 9.0	9

Beim Bestellen bitte den Durchmesser angeben siehe Beispiel in der Tabelle
 By order please specify the diameter see example in the table



Ein Dichtscheiben Satz kann auch bestellt werden.
 A sealing ring set can also be ordered.

Spannzangen
collet chuck

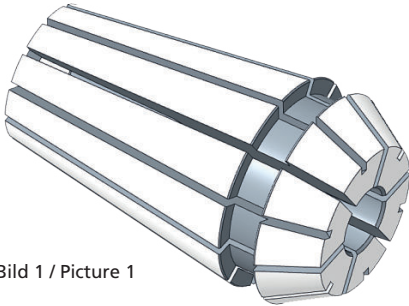


Bild 1 / Picture 1

Die Spannzangen sind erhältlich als Standard (Bild1) und auch als Abgedichtet (Bild 2)

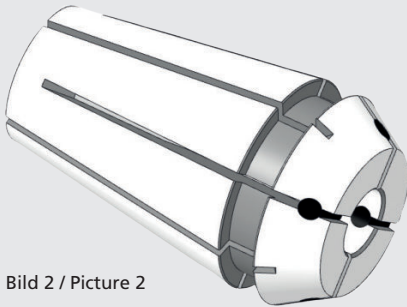


Bild 2 / Picture 2

The collet are available as standard (picture 1) and also as sealed (picture 2)

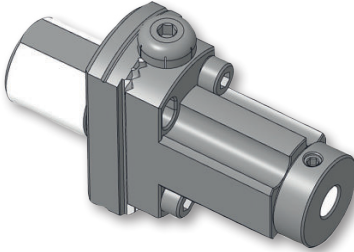
$P_{max} = 40\text{bar}$

Verfügbare Zangen Größe available chuck sizes		Lieferbar mit Innen-Ø available with inner diameter		Steigung in mm pitch in mm	
Standard default	Abgedichtet sealed	Standard default	Abgedichtet sealed	Standard default	Abgedichtet sealed
ER8		1 - 4.5		0.5	
ER11	ER11	3 - 7	1 - 6	0.5	0.5
ER16	ER16	3 - 10	3 - 10	0.5	0.5
ER20	ER20	3 - 13	3 - 13	0.5	0.5
ER25	ER25	2 - 16	6 - 16	0.5	0.5

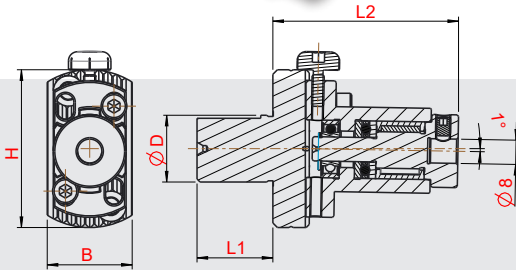
Beim Bestellen bitte Durchmesser angeben
By order please specify the diameter

Mehrkant-Drückgerät zum Innendrücker
 multi-sided hitting equipment for interior pressing

Typ GD 76



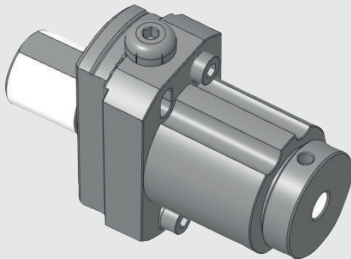
GD 76.002.01



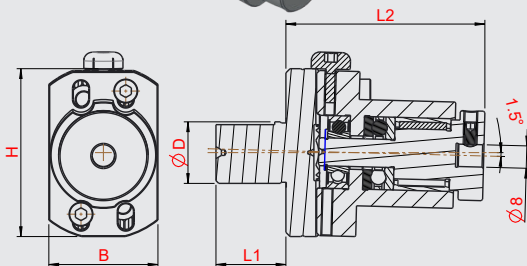
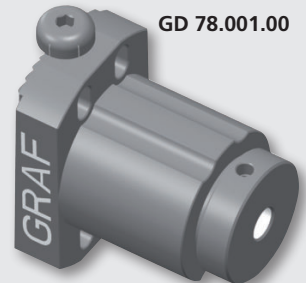
**GD 76.005.01
 mit Aussparung
 with gap**

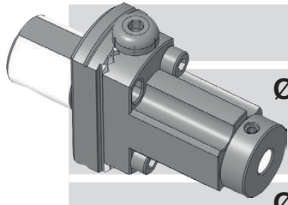


Typ GD 78



GD 78.001.00





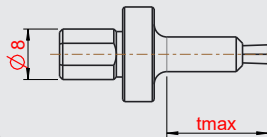
	Art. Nummer Art. Number	Bezeichnung Description	Ø D	L1	L2	B	H
Ø 16	11-0219	GD 76.1621.08	16	21	55	24	45
	11-1269	GD 78.1640.08	16	40	71	39	60
Ø 20	11-0306	GD 76.2030.08	20	30	57	24	45
	11-0125	GD 76.20100.08	20	100	57	24	45
Ø ¾ (19,05)	11-0307	GD 76.3440.08	¾"	40	55	24	45
	11-0718	GD 76.3450.08	¾"	50	57	24	45
Ø 22	11-0221	GD 76.2238.08	22	38	57	24	45
	11-0222	GD 76.2250.08	22	50	57	24	45
	11-0223	GD 76.2270.08	22	70	57	24	45
Ø 25	11-1076	GD 76.2570.08	25	70	57	24	45
	11-0691	GD 78.2570.08	25	70	71	39	60
Ø 1" (25,4)	11-0309	GD 76.1060.08	1"	60	57	24	45
	11-0799	GD 78.1060.08	1"	60	71	39	60

Mehrkant-Stößel zum
Innendrücken ASP

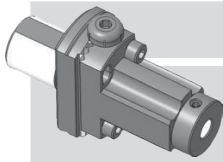
Multi-sided rams for
interior pressing ASP

Abmasse und Stosstiefe
(t_{max} = 15) nach Kundenwunsch

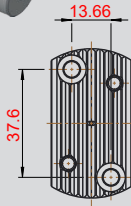
Dimensions (t_{max} = 15) according to
customer drawing



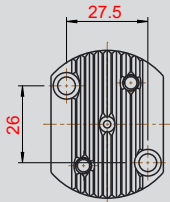
Bestell-Nr.	SW
GM 77.008.02	SK/SW 2
GM 77.008.03	SK/SW 3
GM 77.008.04	SK/SW 4
GM 77.008.05	SK/SW 5
GM 77.008.06	SK/SW 6
GM 77.008.08	SK/SW 8
GM 77.008.10	SK/SW 10



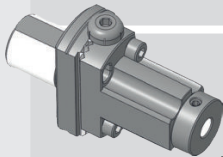
STAR



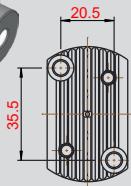
Art. Nummer Art. Number	Bezeichnung Description	Ø D	L1	L2	B	H
11-0225	GD 76.2225.08.S3	22	25	61	28	52
11-0775	GD 78.2225.08.S3	22	25	71	39	60



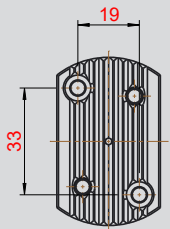
11-0226	GD 76.2225.08.SR32	22	25	61	38	50
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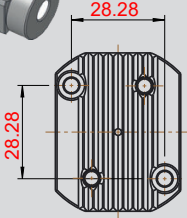
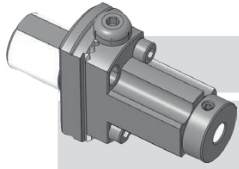
HANWHA



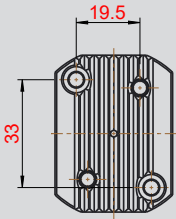
11-0127	GD 76.2540.08	25	40	58	31	52
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11-0146	GD 76.2560.08	25	60	61	32	52
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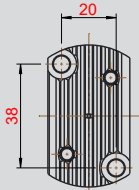


Art. Nummer Art. Number	Bezeichnung Description	Ø D	L1	L2	B	H
11-0310	GD 76.3225.08.H5	32	25	61	36	48

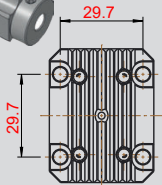
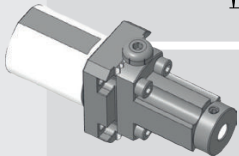


11-0574	GD 76.3335.08.H3	33	35	61	36	48
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TRAUB



11-0547	GD 76.2880.08	28	80	61	30	52
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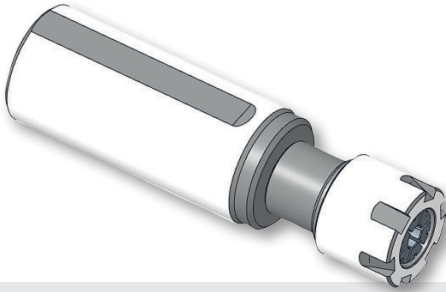


MAIER

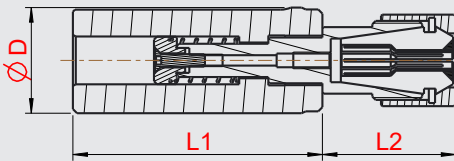
11-0371	GD 76.3444.08	34	44	64	37,5	48
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**Gewindebohrerhalter Typ GB 68
Vierkantgeführt mit Längenausgleich**

square leaded tap holder type GB 68
with length compensation

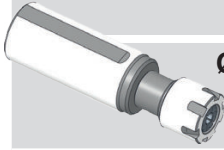


Spannmutter ER-M
ist inklusive!
Chucking nut ER-M
is inclusive!



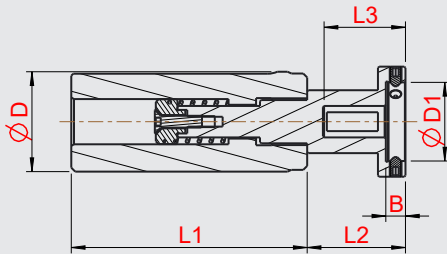
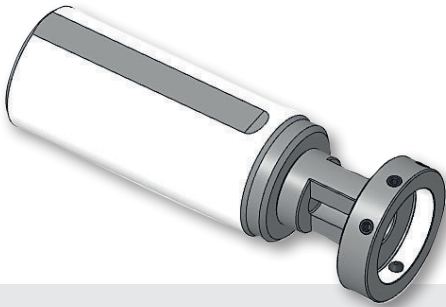
max. Auszug 7 mm
max. excerpt is 7 mm

Beispiel:
mit GB68.1060.16-D
Example:
with GB68.1060.16-D

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2
 Ø 16	11-0180	GB 68.1642.11-D	16	ER 11	42	22
	11-0181	GB 68.1642.16-D	16	ER 16	42	32
	11-0996	GB 68.1642.20-D	16	ER 20	42	42
Ø ¾" (19,05)	11-0273	GB 68.3440.11-D	¾"	ER 11	40	22
	11-0274	GB 68.3440.16-D	¾"	ER 16	40	32
	11-0992	GB 68.3440.20-D	¾"	ER 20	40	41
	11-0275	GB 68.3470.11-D	¾"	ER 11	70	22
	11-0276	GB 68.3470.16-D	¾"	ER 16	70	32
Ø 20	11-0271	GB 68.2030.11-D	20	ER 11	30	22
	11-0272	GB 68.2030.16-D	20	ER 16	30	32
	11-0481	GB 68.2050.11-D	20	ER 11	50	22
	11-0482	GB 68.2050.16-D	20	ER 16	50	22
	11-0809	GB 68.2050.20-D	20	ER 20	50	41
Ø 22	11-0182	GB 68.2225.11-D	22	ER 11	25	22
	11-0183	GB 68.2225.16-D	22	ER 16	25	32
	11-0184	GB 68.2270.11-D	22	ER 11	70	22
	11-0185	GB 68.2270.16-D	22	ER 16	70	32
	11-0857	GB 68.2270.20-D	22	ER 20	70	41
	11-0186	GB 68.22120.11-D	22	ER 11	120	22
	11-0187	GB 68.22120.16-D	22	ER 16	120	32
	11-1267	GB 68.22120.20-D	22	ER 20	120	41
Ø 25	11-0175	GB 68.2570.11-D	25	ER 11	70	22
	11-0178	GB 68.2570.16-D	25	ER 16	70	32
	11-1020	GB 68.25150.11-D	25	ER 11	150	22
	11-0332	GB 68.25150.16-D	25	ER 16	150	32
	11-0333	GB 68.25150.20-D	25	ER 20	150	41
Ø 1" (25,4)	11-0279	GB 68.10100.16-D	1"	ER 16	100	32
	11-1147	GB 68.10100.20-D	1"	ER 20	100	41
	11-1105	GB 68.1060.11-D	1"	ER 11	60	22
	11-1106	GB 68.1060.16-D	1"	ER 16	60	32
	11-1128	GB 68.1060.20-D	1"	ER 20	60	41

Gewindeschneideisenhalter Typ GS 69 mit Längenausgleich

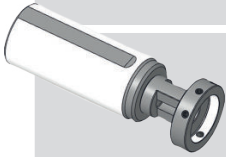
screw threading holder type GS 69
with length compensation



max. Auszug 7 mm
max. excerpt is 7 mm

Beispiel:
mit GS69.1060.2020-D

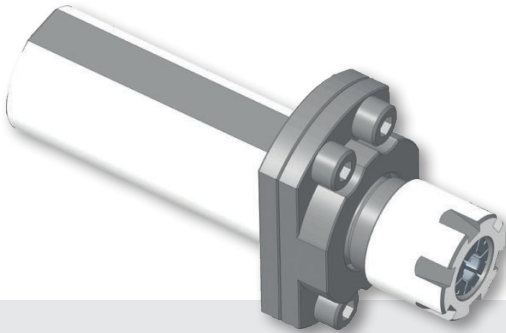
Example:
with GS69.1060.2020-D



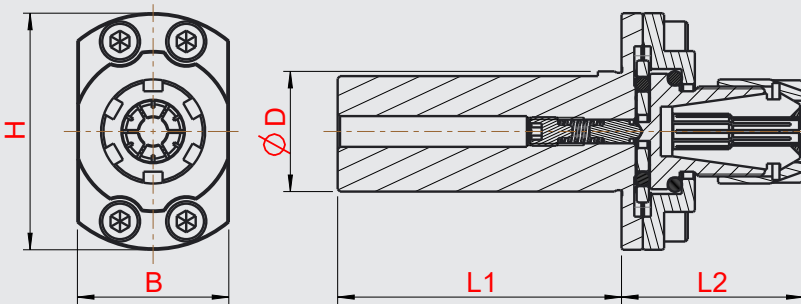
	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	L3	B
Ø 16	11-0215	GS 69.1642.1620-D	16	16	42	25	20	5
	11-0216	GS 69.1642.2020-D	16	20	42	25	20	5
	11-0352	GS 69.1642.2030-D	16	20	42	35	30	6
Ø ¾" (19,05)	11-0300	GS 69.3440.1620-D	¾"	16	40	25	20	5
	11-0539	GS 69.3440.2020-D	¾"	20	40	25	20	5
	11-0301	GS 69.3440.2030-D	¾"	20	40	35	30	6
	11-1112	GS 69.3470.1620-D	¾"	16	70	25	20	5
	11-1258	GS 69.3470.2020-D	¾"	20	70	25	20	5
	11-0813	GS 69.3470.2030-D	¾"	20	70	35	30	6
Ø 20	11-0298	GS 69.2030.1620-D	20	16	30	25	20	5
	11-0771	GS 69.2030.2020-D	20	20	30	25	20	5
	11-0299	GS 69.2030.2030-D	20	20	30	35	30	6
	11-0695	GS 69.2050.1620-D	20	16	50	25	20	5
	11-1187	GS 69.2050.2020-D	20	20	50	25	20	5
	11-0484	GS 69.2050.2030-D	20	20	50	35	30	6
Ø 22	11-0217	GS 69.2270.1620-D	22	16	70	25	20	5
	11-0841	GS 69.2270.2020-D	22	20	70	25	20	5
	11-0218	GS 69.2270.2030-D	22	20	70	35	30	6
Ø 25	11-1041	GS 69.2570.1620-D	25	16	70	25	20	5
	11-1049	GS 69.2570.2020-D	25	20	70	25	20	5
	11-1044	GS 69.2570.2030-D	25	20	70	35	30	6
Ø 1" (25,4)	11-1099	GS 69.1060.1620-D	1"	16	60	25	20	5
	11-0296	GS 69.1060.2020-D	1"	20	60	25	20	5
	11-1100	GS 69.1060.2030-D	1"	20	60	35	30	6

**Pendelhalter Typ GP 70
für Reibahlen mit zylindrischem Schaft**

floating holder type GP 70
for reamers with cylindrical shaft

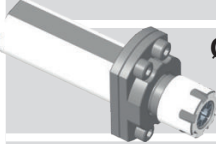
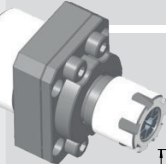
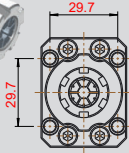
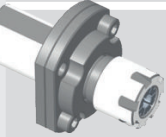
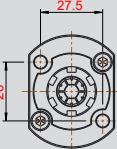


Spannmutter ER-M
ist inklusive!
Chucking nut ER-M
is inclusive!



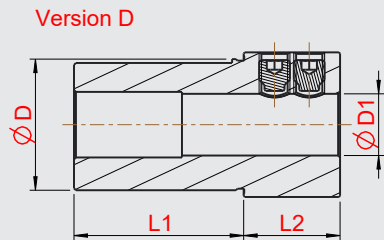
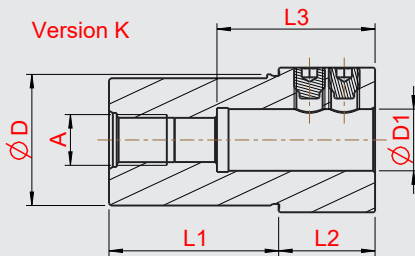
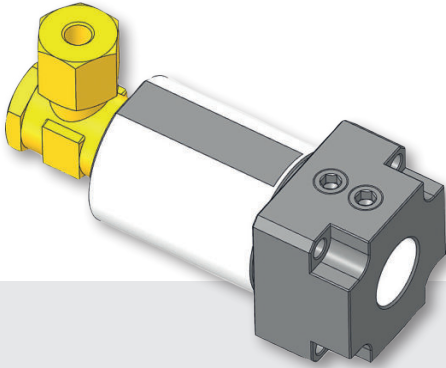
Beispiel:
mit GP70.1060.16

Example:
with GP70.1060.16

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Zange Chuck	L1	L2	B	H
	Ø 16	11-0188 GP 70.1621.11	16	ER11	21	33	24	45
		11-0563 GP 70.1630.16	16	ER16	30	39	32	50
		11-0540 GP 70.1650.11	16	ER11	50	33	24	45
	Ø ¾" (19,05)	11-0282 GP 70.3440.11	¾"	ER11	40	33	24	45
		11-3219 GP 70.3440.16	¾"	ER16	40	39	32	50
		11-0283 GP 70.3470.11	¾"	ER11	70	33	24	45
	Ø 20	11-0281 GP 70.2030.11	20	ER11	30	33	24	45
		11-0101 GP 70.2065.16	20	ER16	65	39	32	50
		11-0147 GP 70.20100.11	20	ER11	100	33	24	45
		11-0354 GP 70.20185.11	20	ER16	185	39	32	50
	Ø 22	11-0191 GP 70.2270.11	22	ER11	70	33	24	45
		11-0453 GP 70.2270.16	22	ER16	70	39	32	50
		11-1265 GP 70.22120.11	22	ER11	120	33	24	45
		11-1055 GP 70.22120.16	22	ER16	120	39	32	50
	Ø 25	11-0089 GP 70.2570.11	25	ER11	70	33	24	45
		11-0356 GP 70.25150.16	25	ER16	150	39	32	50
	Ø 1" (25,4)	11-0284 GP 70.1060.11	1"	ER11	60	33	25	45
		11-1000 GP 70.1060.16	1"	ER16	60	39	32	50
	Ø 28	11-0451 GP 70.2880.16	28	ER16	80	39	32	50
	MAIER	11-0438 GP 70.3420.16	34	ER16	20	46	37,5	48
								
	STAR	11-0196 GP 70.2230.16 (SR32)	22	ER16	30	39	38	50
								

**Bohrstangenhalter Typ BS 71
auch mit Innenkühlung**

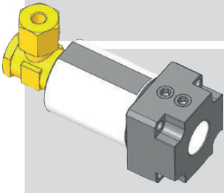
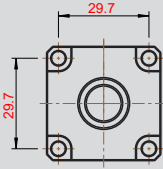
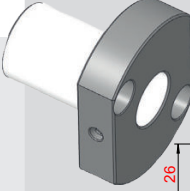
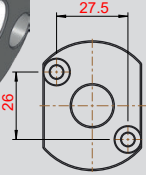
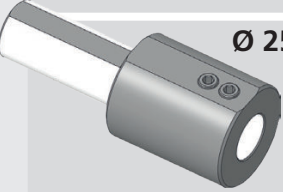
boring bar holder type BS 71
also with coolant supply



Beispiel:
mit BS71.3334.16

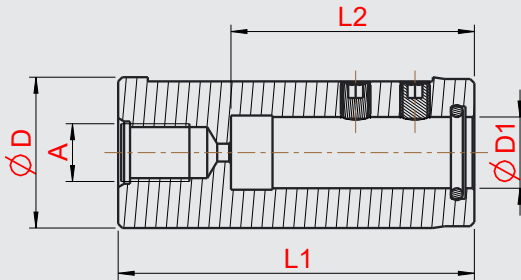
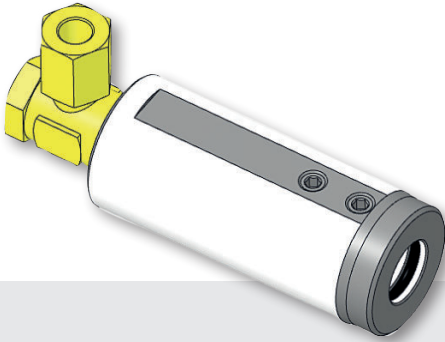
Example:
with BS71.3334.16

Hierfür passende Reduzierhülsen, siehe Seite 4.38!
suitable adapter sleeve, see page 4.38!

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	L3	A
 <p>MAIER</p> 	11-0425	BS71.3420.16-D	34	16	20	25		
	11-0426	BS71.3420.20-D	34	20	20	25		
	11-1211	BS71.3444.12-D	34	12	44	25		
	11-0531	BS71.3444.16-D	34	16	44	25		
	11-0532	BS71.3444.20-D	34	20	44	25		
	11-0533	BS71.3444.25-D	34	25	44	25		
	11-0344	BS71.3444.16-K	34	16	44	25	41	G¼
	11-0534	BS71.3444.20-K	34	20	44	25	41	G¼
	11-0432	BS71.3444.25-K	34	25	44	25	41	G¼
	11-0446	BS71.3444.25,4-K	34	1"	44	25	41	G¼
 <p>STAR</p> 	11-0458	BS71.2230.16-K (SR32)						
 <p>Ø 25</p>	11-1061	BS71.2558.20-K	25	20	58	55	41	G1/8

Bohrstangenhalter Typ BHE 72 mit Innenkühlung

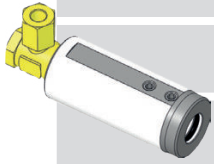
boring bar holder type BHE 72
with coolant supply



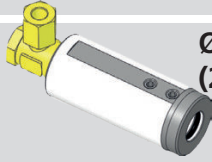
Beispiel:
mit BHE72.1060.12

Example:
with BHE72.1060.12

Hierfür passende Reduzierhülsen, siehe Seite 4.38!
suitable adapter sleeve, see page 4.38!



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	A
Ø 16	11-0386	BHE72.1660.10	16	10	60	30	G1/8
Ø 3/4" (19,05)	11-0433	BHE72.3450.06	3/4"	6	50	30	G1/8
	11-0840	BHE72.3450.08	3/4"	8	50	30	G1/8
	11-1158	BHE72.3450.10	3/4"	10	50	30	G1/8
	11-0382	BHE72.3460.10	3/4"	10	60	41	G1/8
	11-0383	BHE72.34100.10	3/4"	10	100	41	G1/8
Ø 20	11-0384	BHE72.2050.10	20	10	50	30	G1/8
	11-0463	BHE72.2060.10	20	10	60	38	G1/8
	11-1151	BHE72.20150.06	20	6	150	40	G1/8
	11-1023	BHE72.20150.08	20	8	150	40	G1/8
Ø 22	11-0571	BHE72.2260.06	22	6	60	36	G1/8
	11-0588	BHE72.2260.08	22	8	60	36	G1/8
	11-0387	BHE72.2260.10	22	10	60	40	G1/8
	11-0637	BHE72.2260.12	22	12	60	40	G1/8
	11-1129	BHE72.2260.14	22	14	60	40	G1/8
	11-0609	BHE72.2275.16	22	16	75	40	G1/4
	11-0551	BHE72.2295.16	22	16	95	45	G1/4
	11-0388	BHE72.22100.10	22	10	100	40	G1/8
	11-1142	BHE72.22100.12	22	12	100	45	G1/8
	11-0091	BHE72.22125.12	22	12	125	45	G1/8
Ø 25	11-1241	BHE72.2560.06	25	6	60	35	G1/8
	11-1240	BHE72.2560.08	25	8	60	36	G1/8
	11-1239	BHE72.2560.10	25	10	60	40	G1/8
	11-1238	BHE72.2560.12	25	12	60	41	G1/8
	11-1279	BHE72.2560.14	25	14	60	41	G1/8
	11-0611	BHE72.2560.16	25	16	60	41	G1/8
	11-1195	BHE72.2580.06	25	6	80	30	G1/8

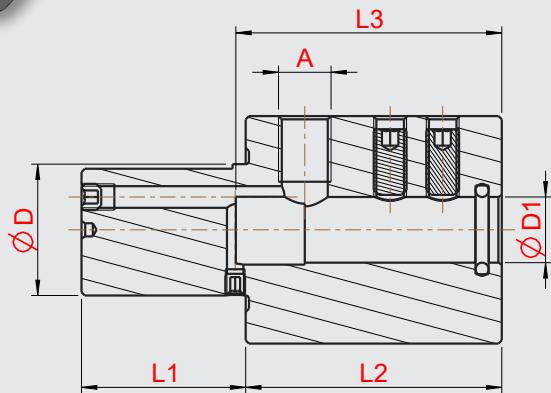
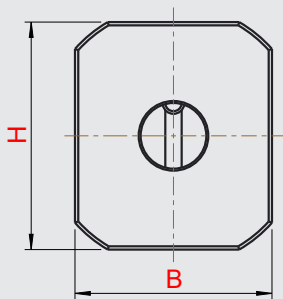
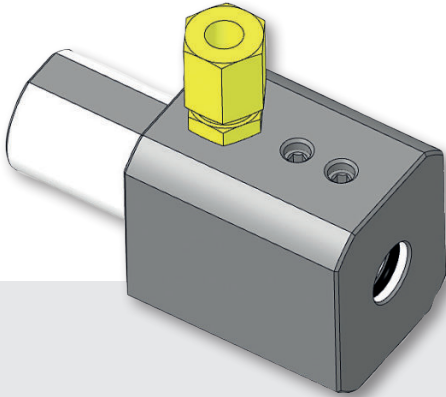


**Ø 1"
(25,4)**

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	A
Ø 1" (25,4)	11-0620	BHE72.1060.10	1"	10	60	41	G1/8
	11-1006	BHE72.1060.12	1"	12	60	41	G1/8
	11-0986	BHE72.1060.14	1"	14	60	41	G1/8
	11-0621	BHE72.1060.16	1"	16	60	41	G1/8
	11-0730	BHE72.10100.06	1"	6	100	36	G1/8
	11-0731	BHE72.10100.08	1"	8	100	36	G1/8
	11-0732	BHE72.10100.10	1"	10	100	40	G1/8
	11-0733	BHE72.10100.12	1"	12	100	45	G1/8
	11-1091	BHE72.10100.16	1"	16	100	48	G¼
Ø 28	11-0495	BHE72.28100.06	28	6	100	36	M12x1,5
	11-0496	BHE72.28100.08	28	8	100	36	M12x1,5
	11-0684	BHE72.28100.10	28	10	100	36	M12x1,5
	11-0567	BHE72.28100.12	28	12	100	36	M12x1,5
	11-1048	BHE72.28100.16	28	16	100	36	M12x1,5
Ø 32	11-0864	BHE72.3260.12	32	12	60	46	G1/8
	11-0455	BHE72.3260.16	32	16	80	48	G¼
	11-0418	BHE72.32100.06	32	6	100	36	G1/8
	11-0415	BHE72.32100.08	32	8	100	36	G1/8
	11-0414	BHE72.32100.10	32	10	100	41	G1/8
	11-0413	BHE72.32100.12	32	12	100	45	G1/8
	11-0409	BHE72.32100.16	32	16	100	48	G1/8
	11-0411	BHE72.32100.20	32	20	100	50	G¼
	11-1022	BHE72.32150.16	32	16	150	45	G¼
Ø 33	11-1132	BHE72.3360.16	33	16	60	41	G¼

**Bohrstangenhalter Typ BHE 73
mit Innenkühlung**

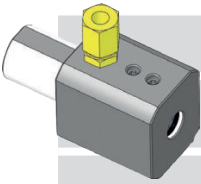
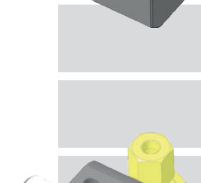
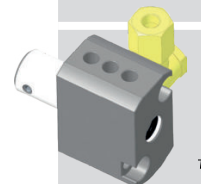
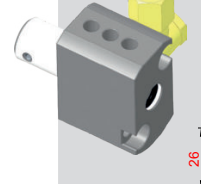
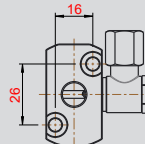
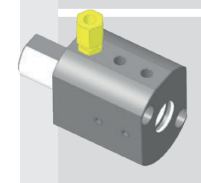
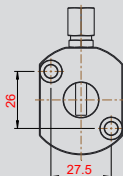
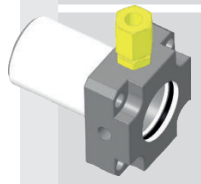
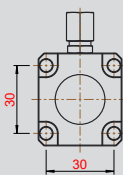
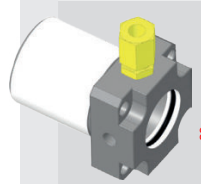
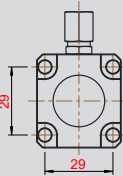
boring bar holder type BHE 73
with coolant supply

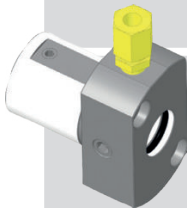
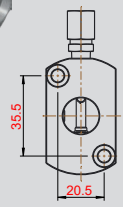
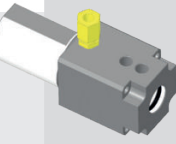
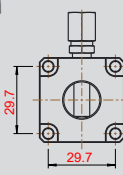


Beispiel:
mit BHE73.2025.10

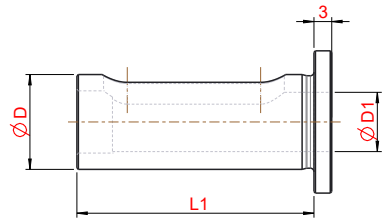
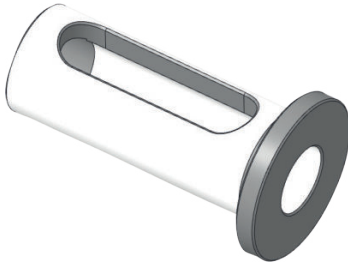
Example:
with BHE73.2025.10

Hierfür passende Reduzierhülsen, siehe Seite 4.38!
suitable adapter sleeve, see page 4.38!

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	L3	B	H	A	
	Ø 22	11-1060	BHE73.2025.10	20	10	25	39	40	30	35	M8x1
		11-1047	BHE73.2025.16	20	16	25	39	37	30	35	M8x1
	Ø 25	11-0805	BHE73.2530.06	25	6	30	14	30	28	50	M8x1
		11-0868	BHE73.2530.16	25	16	30	20	42	31	49	M8x1
	Ø 1" (25,4)	11-0834	BHE73.1060.16	1"	16	60	20	42	31	49	M8x1
 	STAR	11-0553	BHE73.1621.10	16	10	21	33	48	24	44	G1/8
 		11-1121	BHE73.2225.16 (SR32)	22	16	30	50	41	38	49	M8x1
 	NEXTURN	11-1138	BHE73.2535.22	25	22	35	18	50	37	41	M8x1
 		11-1139	BHE73.3235.22	32	22	35	18	50	36	40	M8x1

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	L3	B	H	A	
 	HANWHA	11-0584	BHE73.2830.12	28	12	30	20	42	31	52	M8x1
	11-0576	BHE73.2830.16	28	16	25	39	37	30	35	M8x1	
	11-1125	BHE73.2840.18	28	18	40	35	41	32	48	M8x1	
	11-1124	BHE73.2840.25	28	25	40	45	41	32	48	M8x1	
 	MAIER	11-0535	BHE73.3444.16	34	16	44	52	44	37,5	37,5	M8x1
	11-0572	BHE73.3444.20	34	20	44	52	44	37,5	37,5	M8x1	
	11-0589	BHE73.3444.25	34	25	44	52	52	37,5	37,5	M8x1	
	11-0573	BHE73.3444.1	34	1"	44	52	44	37,5	37,5	M8x1	

Reduzierhülsen adapter sleeve



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1
Ø 10	11-1090	RH 10 0324	10	3	24
	11-0445	RH 10 0424	10	4	24
	11-0501	RH 10 0524	10	5	24
	11-0502	RH 10 0624	10	6	24
	11-0504	RH 10 0824	10	8	24
Ø 16	11-0518	RH 16 0640	16	6	40
	11-0517	RH 16 0840	16	8	40
	11-0375	RH 16 1040	16	10	40
	11-0406	RH 16 1240	16	12	40
	11-0499	RH 16 1440	16	14	40
Ø ¾" (19,05)	11-0889	RH 034 0640	¾"	6	40
	11-0876	RH 034 0840	¾"	8	40
	11-0649	RH 034 1040	¾"	10	40
	11-0602	RH 034 1240	¾"	12	40
	11-0603	RH 034 1640	¾"	16	40
Ø 20	11-1256	RH 20 0640	20	6	40
	11-1045	RH 20 0840	20	8	40
	11-0865	RH 20 1040	20	10	40
	11-0660	RH 20 1140	20	11	40
	11-0650	RH 20 1240	20	12	40
	11-1257	RH 20 1440	20	14	40
	11-0869	RH 20 1640	20	16	40
	11-0659	RH 20 1840	20	18	40

	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1
Ø 22	11-1272	RH 022 0640	22	6	40
	11-1273	RH 022 0840	22	8	40
	11-1146	RH 022 1040	22	10	40
	11-1237	RH 022 1240	22	12	40
	11-1063	RH 022 1450	22	14	50
	11-1034	RH 022 1640	22	16	40
	11-1064	RH 022 1850	22	18	50
	11-1065	RH 022 2050	22	20	50
Ø 25	11-0550	RH 25 0850	25	8	50
	11-0559	RH 25 1050	25	10	50
	11-0560	RH 25 1250	25	12	50
	11-1039	RH 25 1450	25	14	50
	11-1040	RH 25 1650	25	16	50
	11-3216	RH 25 2050	25	20	50
Ø 1" (25,4)	11-1025	RH 010 0650	1"	6	50
	11-1013	RH 010 0850	1"	8	50
	11-0749	RH 010 1050	1"	10	50
	11-0750	RH 010 1250	1"	12	50
	11-1026	RH 010 1450	1"	14	50
	11-0882	RH 010 1640	1"	16	40
	11-0800	RH 010 1650	1"	16	50
	11-1172	RH 010 1850	1"	18	50
	11-0883	RH 010 3450	1"	3/4"	50
	11-0801	RH 010 2050	1"	20	50

Reduzierhülsen mit IK Adapter sleeve with IC

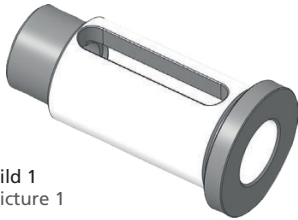


Bild 1
picture 1

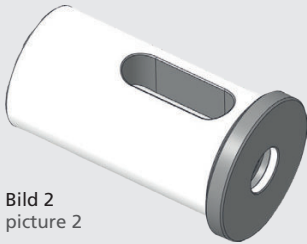
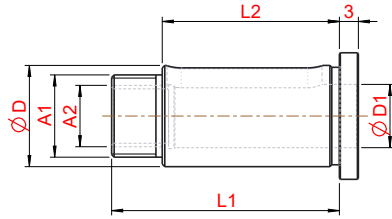
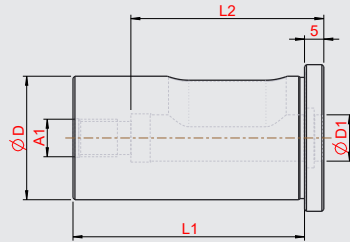


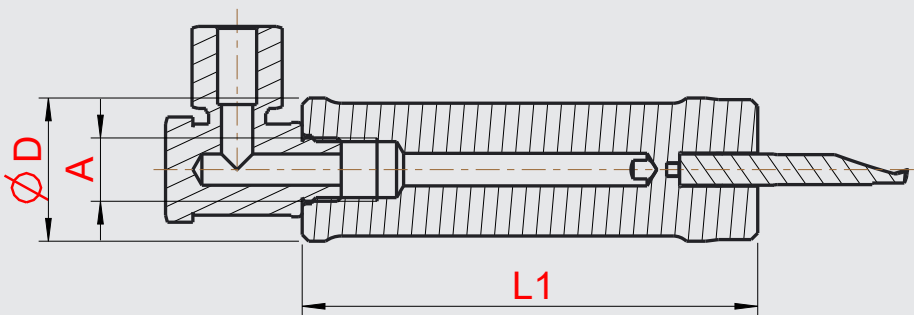
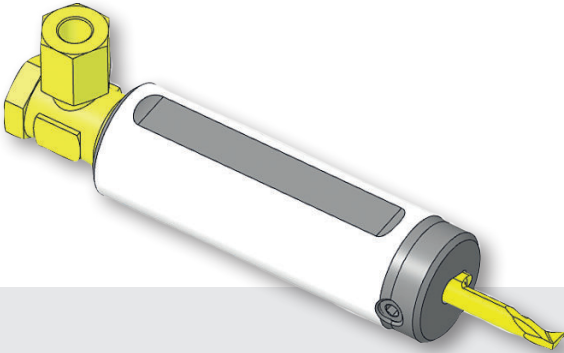
Bild 2
picture 2



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	Ø D1	L1	L2	A1	A2	
Bild 1 picture 1	Ø 10	11-0520	RH 10 0105 24IK	10	Horn Typ 105	31	23	M10x1	M7x1
		11-0519	RH 10 0324 IK	10	3	30	22	M10x1	M7x1
		11-0500	RH 10 0424 IK	10	4	30	22	M10x1	M7x1
		11-0511	RH 10 0524 IK	10	5	30	22	M10x1	M7x1
		11-0512	RH 10 0624 IK	10	6	30	22	M10x1	M7x1
		11-0514	RH 10 0824 IK	10	8	30	22	M10x1	M7x1
Bild 2 picture 2	Ø 32	11-1135	RH 32 1260	32	12	60	50	G1/4"	
		11-1136	RH 32 2060	32	20	60	50	G1/4"	

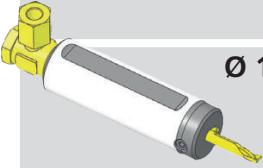
**Innendreh-Rundschafthalter Typ IR 105
für HORN-Supermini Typ 105, mit Innenkühlung**

boring-round shank holder type IR 105
for HORN-Supermini type 105, with coolant supply



Beispiel:
mit IR105.22.70

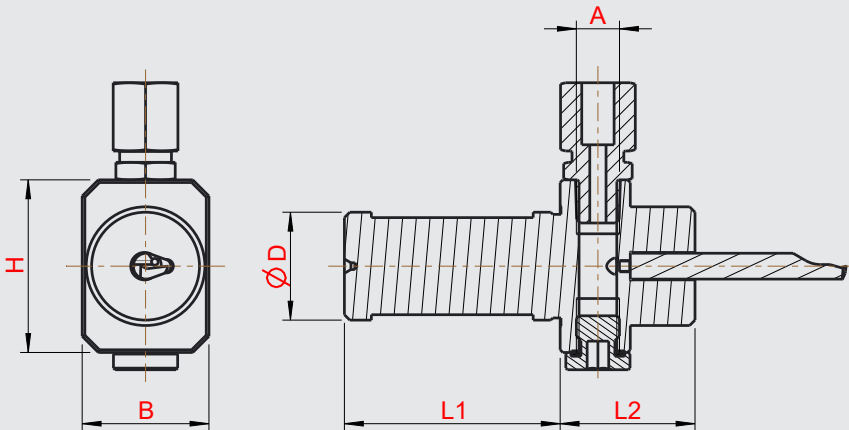
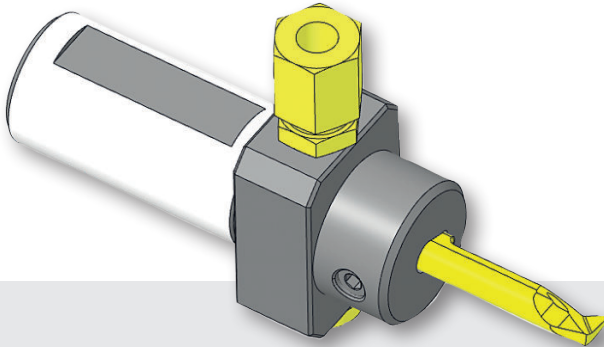
Example:
with IR105.22.70



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	L1	A
Ø 16	06-1007	IR 105.16.30	16	30	G1/8
	06-1008	IR 105.16.50	16	50	G1/8
	06-1009	IR 105.16.70	16	70	G1/8
	06-1041	IR 105.16.100	16	100	G1/8
Ø 3/4" (19,05)	06-1021	IR 105.34.40	3/4"	40	G1/8
	06-1017	IR 105.34.50	3/4"	50	G1/8
	06-1022	IR 105.34.70	3/4"	70	G1/8
	06-1027	IR 105.34.100	3/4"	100	G1/8
Ø 20	06-1020	IR 105.20.30	20	30	G1/8
	06-1028	IR 105.20.50	20	50	G1/8
	06-1075	IR 105.20.100	20	100	G1/8
	06-1015	IR 105.20.170	20	170	G1/8
	06-1023	IR 105.20.185	20	185	G1/8
Ø 22	06-1010	IR 105.22.38	22	38	G1/8
	06-1011	IR 105.22.50	22	50	G1/8
	06-1012	IR 105.22.70	22	70	G1/8
	06-1018	IR 105.22.100	22	100	G1/8
	06-1013	IR 105.22.120	22	120	G1/8
	06-1077	IR 105.22.120.3 (Plattensitz Versatz 3mm)	22	120	G1/8
	06-1040	IR 105.22.150	22	150	G1/8
Ø 25	06-1019	IR 105.25.100	25	100	G1/4
	06-1016	IR 105.25.150	25	100	G1/4
Ø 1" (25,4)	06-1024	IR 105.10.60	1"	60	G1/4
	06-1025	IR 105.10.100	1"	100	G1/4
Ø 25	06-2007	IR 105.28.80	28	80	G1/4

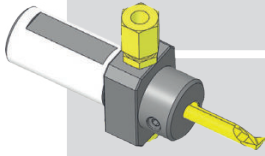
**Innendreh-Rundschafthalter Typ IR 105... IKV
für HORN-Supermini Typ 105, mit Innenkühlung**

boring-round shank holder type IR 105... IKV
for HORN-Supermini type 105, with coolant supply



Beispiel:
mit IR105.2040.IKV

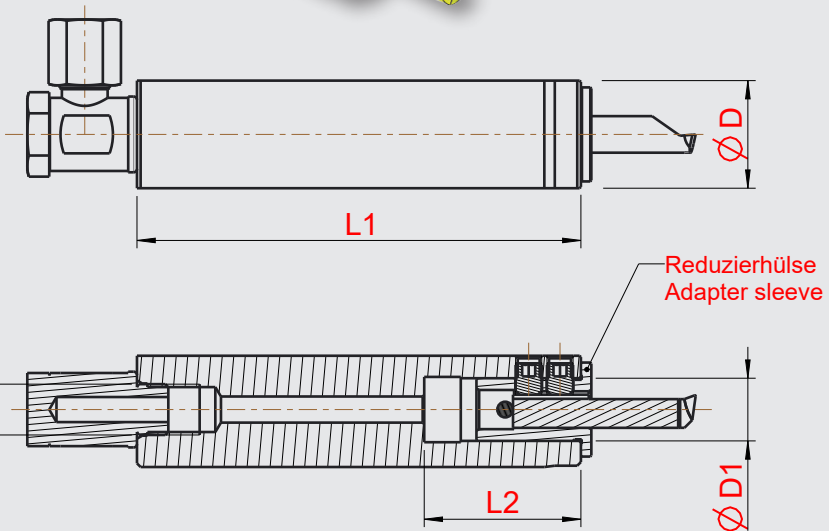
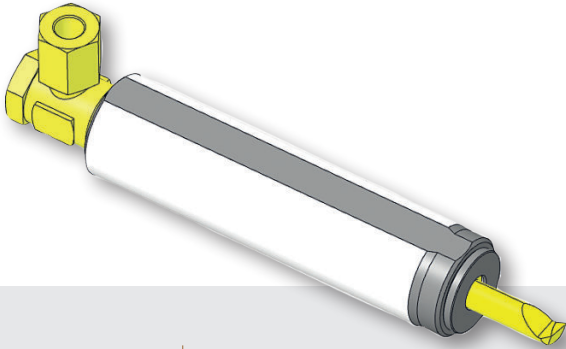
Example:
with IR105.2040.IKV



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	L1	L2	B	H	A
Ø 16	06-1031	IR 105.1640.IKV	16	40	25	24	32	M8x1
Ø ¾" (19,05)	06-1029	IR 105.3440.IKV	¾"	40	25	24	32	M8x1
	06-1044	IR 105.3480.IKV	¾"	80	25	24	32	M8x1
Ø 20	06-1033	IR 105.2040.IKV	20	40	25	24	32	M8x1
Ø 22	06-1032	IR 105.2240.IKV	22	40	25	24	32	M8x1
Ø 25	06-1036	IR 105.2560.IKV	25	100	25	28	34	M8x1
Ø 1" (25,4)	06-1030	IR 105.1060.IKV	1"	60	25	28	34	M8x1
Ø 32	06-1038	IR 105.3260.IKV	32	60	25	36	40	M8x1
Ø 33	06-1043	IR 105.3337.IKV	33	37	25	38	42	M8x1

**Innendreh-Rundschafthalter Typ BS 75
für ISCAR-Schneidplatten Typ Picco, mit Innenkühlung**

boring-round shank holder type BS 75
for ISCAR-insert type Picco, with coolant supply



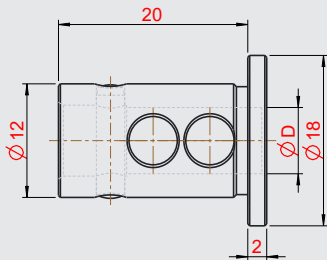
Beispiel:
mit BS75.2285.12

Example:
with BS75.2285.12



	Art. Nummer Art. Number	Bezeichnung Description	Ø D	L1	L2	A
Ø 3/4" (19,05)	11-1087	BS 75.34100.12	3/4"	100	30	G1/8
Ø 20	11-0995	BS 75.2080.12	20	80	30	G1/8
Ø 22	11-0755	BS 75.2270.12	22	70	30	G1/8
	11-1036	BS 75.2285.12	22	85	30	G1/8
	11-0818	BS 75.22130.12	22	130	30	G1/8
Ø 25	11-0858	BS 75.25100.12	25	100	30	G1/8
Ø 1" (25,4)	11-1054	BS 75.10100.12	1"	100	30	G1/4

Reduzierhülsen für Innendreh-Rundschafthalter Typ Picco
Adapter sleeve for boring-round shank holder type Picco

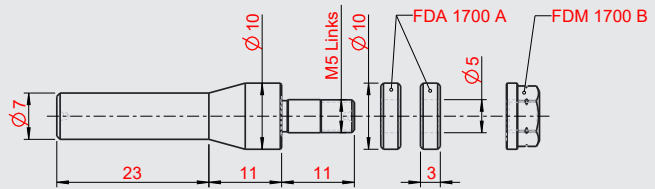
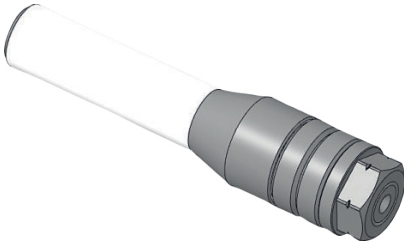


Art. Nummer Art. Number	Bezeichnung Description	Ø D
11-0819	RH 12 0420	4
11-0821	RH 12 0520	5
11-0824	RH 12 0620	6
11-0825	RH 12 0720	7
11-1037	RH 12 0820	8

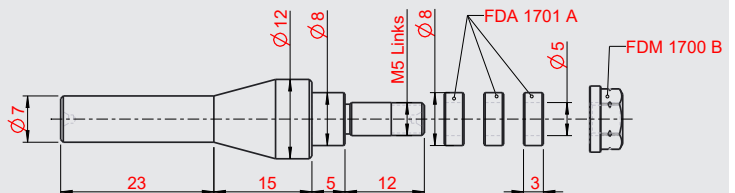
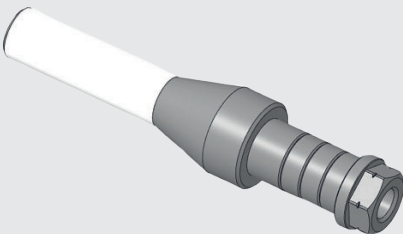
Fräsdorne

milling arbors

FD1709
Art.Nr. 10-0010



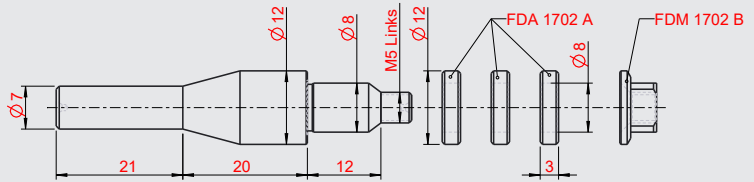
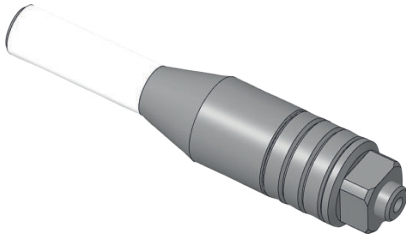
FD1710
Art.Nr. 10-0011



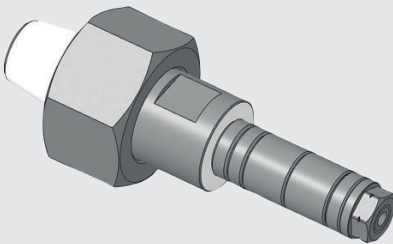
Fräsdorne

milling arbors

FD1711
Art.Nr. 10-0012

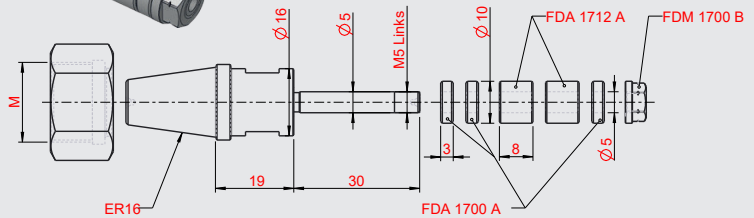


FD1712
Art.Nr. 10-0013



Hinweis/Note:
Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

Spannmutter
clamping nut
FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)

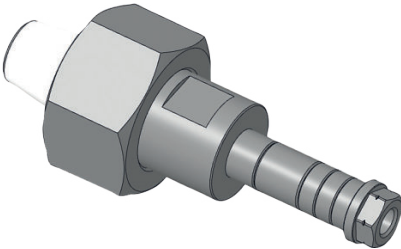


Fräsdorne

milling arbors

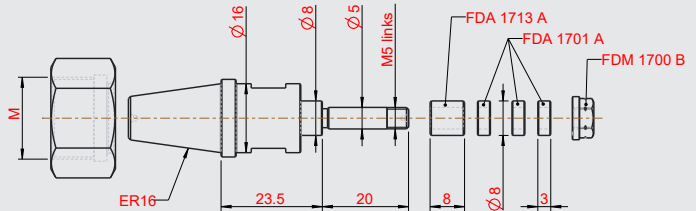
FD1713

Art.Nr. 10-0014



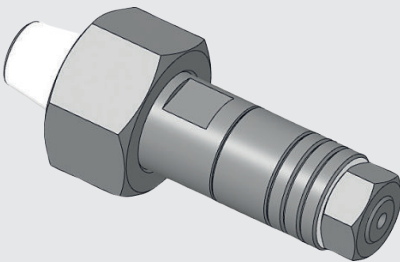
Spannmutter
clamping nut

FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)



FD1714

Art.Nr. 10-0015

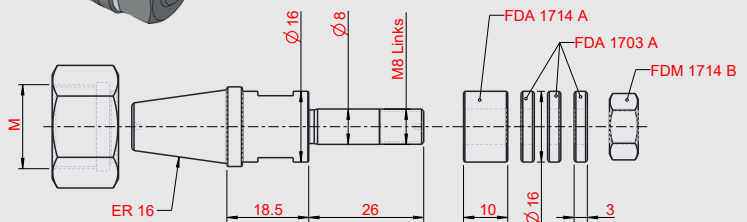


Spannmutter
clamping nut

FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)

Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

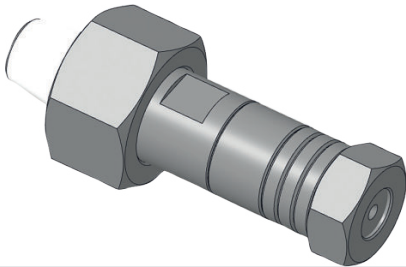


Fräsdorne

milling arbors

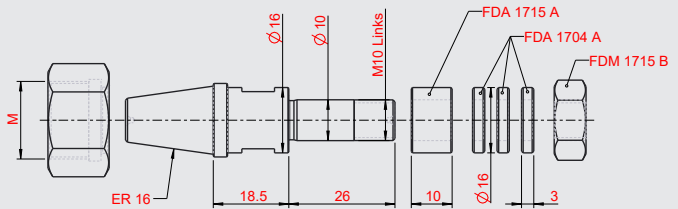
FD1715

Art.Nr. 10-0016



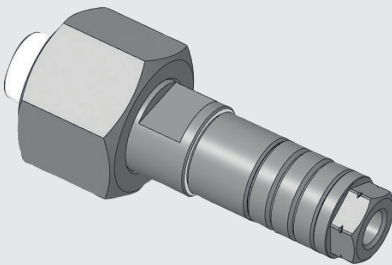
Spannmutter
clamping nut

FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)



FD1716

Art.Nr. 10-0017

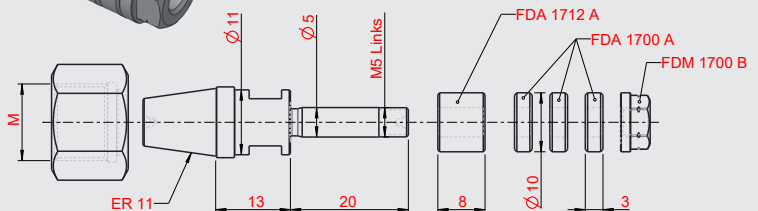


Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

Spannmutter
clamping nut

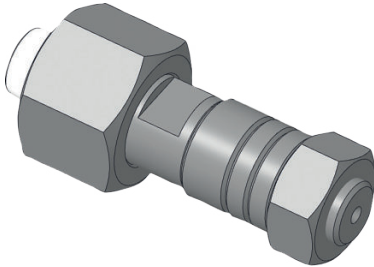
FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)



Fräsdorne

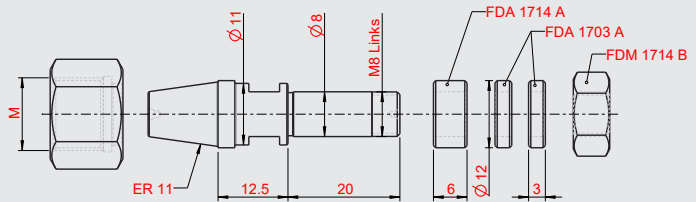
milling arbors

FD1717
Art.Nr. 10-0018

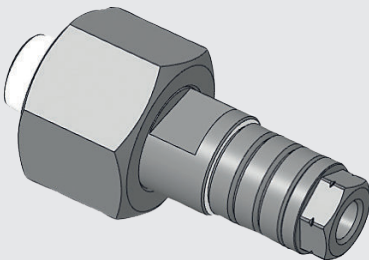


Spannmutter
clamping nut

FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)



FD1718
Art.Nr. 10-0019

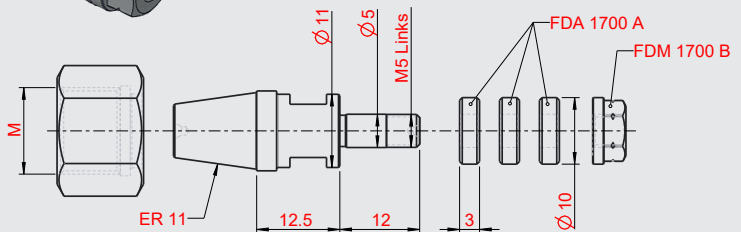


Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

Spannmutter
clamping nut

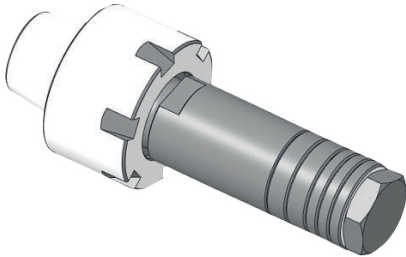
FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)



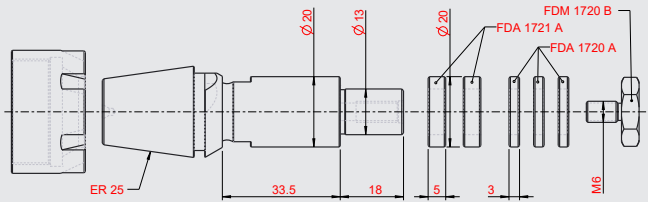
Fräsdorne

milling arbors

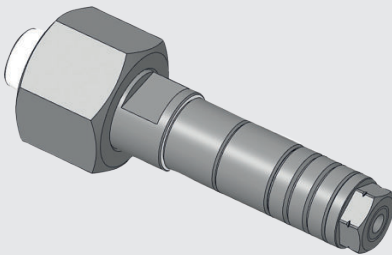
FD1720
Art.Nr. 10-0021



Spannmutter
clamping nut
ER25



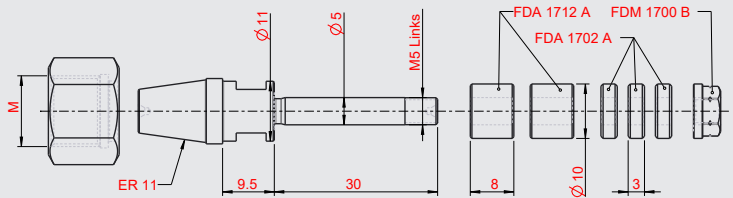
FD1721
Art.Nr. 10-0022



Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

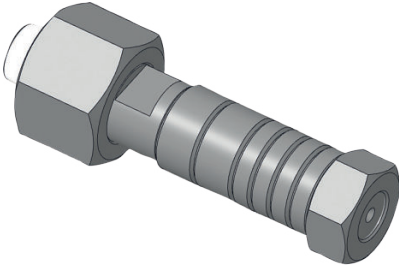
Spannmutter
clamping nut
FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)



Fräsdorne

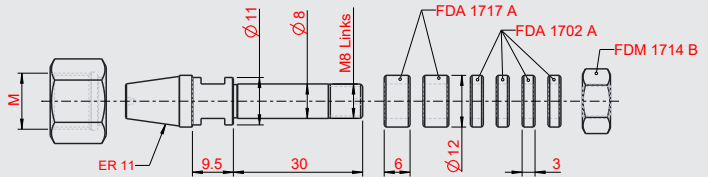
milling arbors

FD1722
Art.Nr. 10-0023



Spannmutter
clamping nut

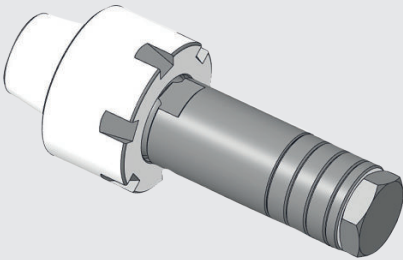
FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)



Hinweis/Note:

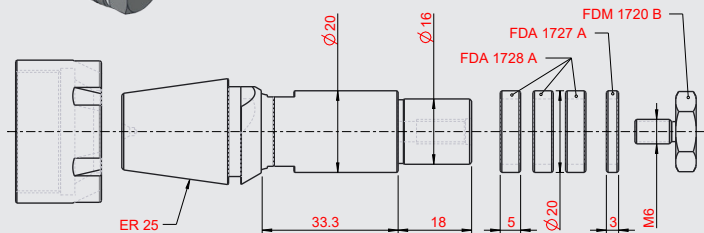
Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

FD1723
Art.Nr. 10-0034



Spannmutter
clamping nut

ER25

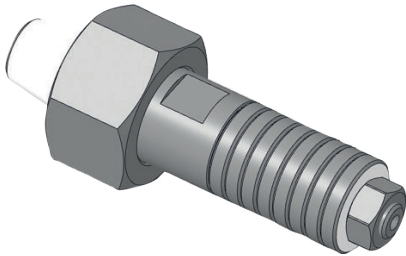


Fräsdorne

milling arbors

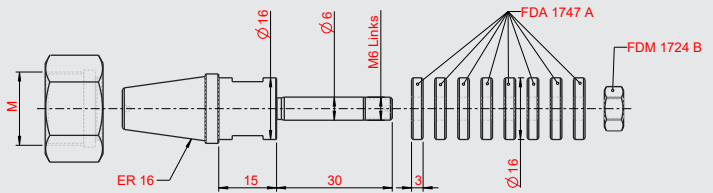
FD1725

Art.Nr. 10-0025



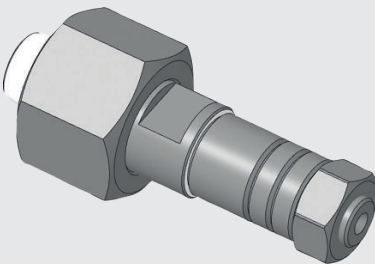
Spannmutter
clamping nut

FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)



FD1726

Art.Nr. 10-0026

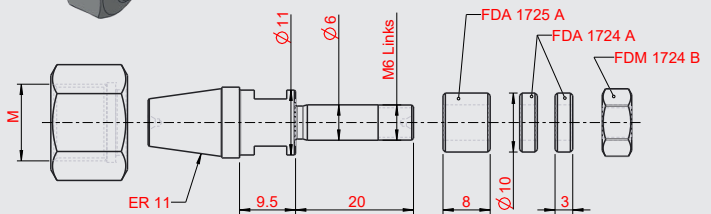


Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

Spannmutter
clamping nut

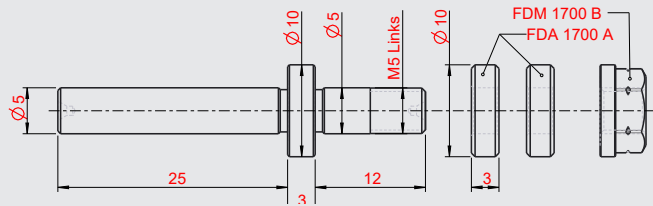
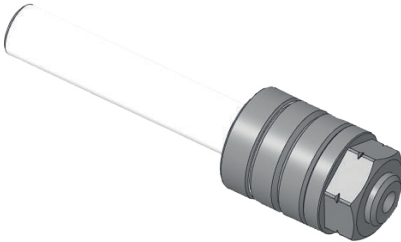
FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)



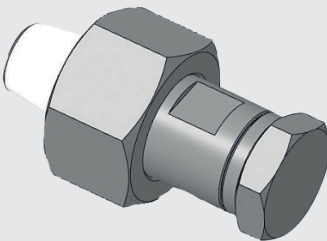
Fräsdorne

milling arbors

FD1729
Art.Nr. 10-0029



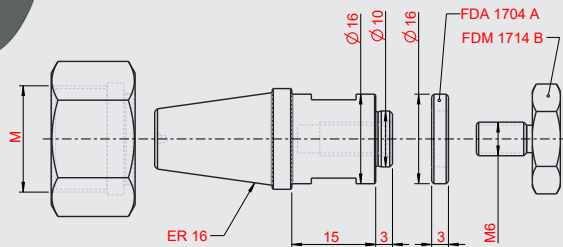
FD1731
Art.Nr. 10-0031



Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

Spannmutter
clamping nut
FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)

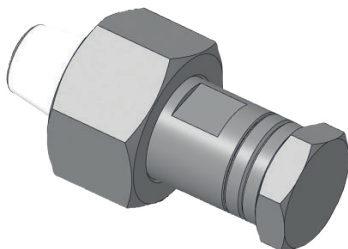


Fräsdorne

milling arbors

FD1732

Art.Nr. 10-0032



Spannmutter
clamping nut

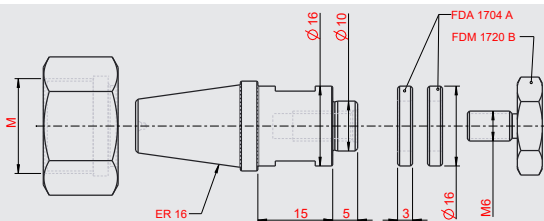
FDM 1714C

(M=M19x1)

o.

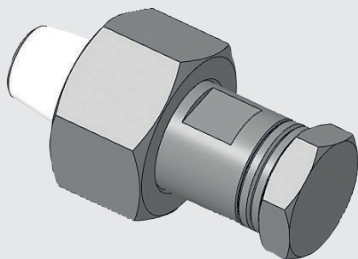
FDM 1714D

(M=M22x1,5)



FD1733

Art.Nr. 10-0033



Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

Spannmutter
clamping nut

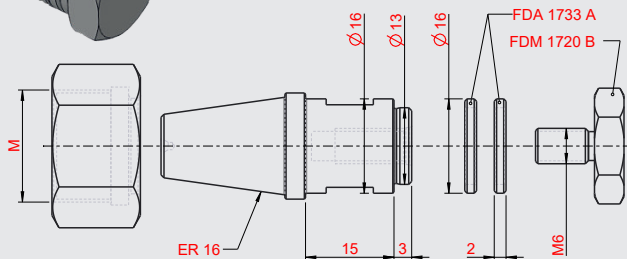
FDM 1714C

(M=M19x1)

o.

FDM 1714D

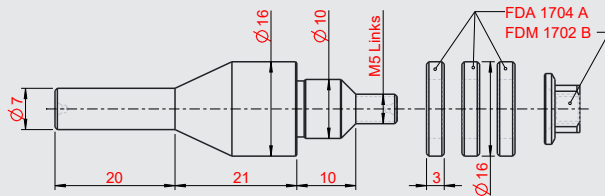
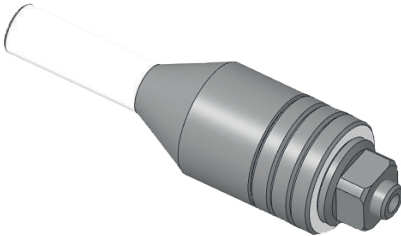
(M=M22x1,5)



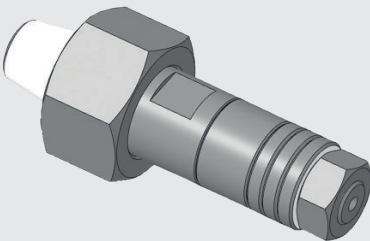
Fräsdorne

milling arbors

FD1734
Art.Nr. 10-0061



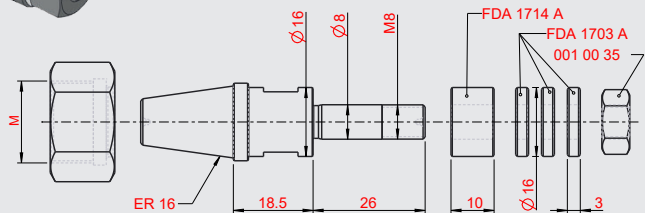
FD1735
Art.Nr. 10-0068



Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

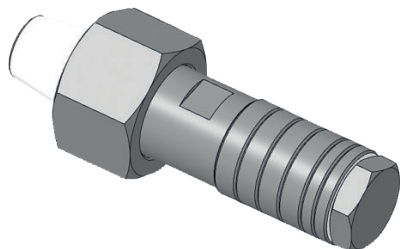
Spannmutter
clamping nut
FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)



Fräsdorne

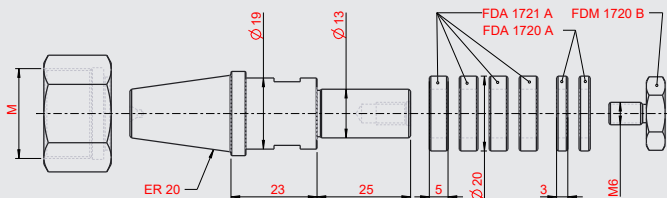
milling arbors

FD1736
Art.Nr. 10-0063

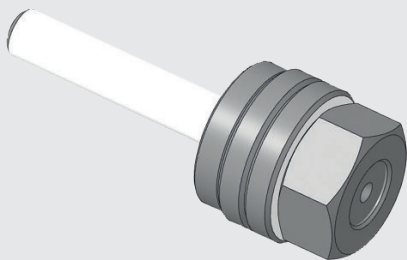


Spannmutter
clamping nut

FDM 1736B
(M=M24x1)
o.
FDM 1736B
(M=M25x1,5)

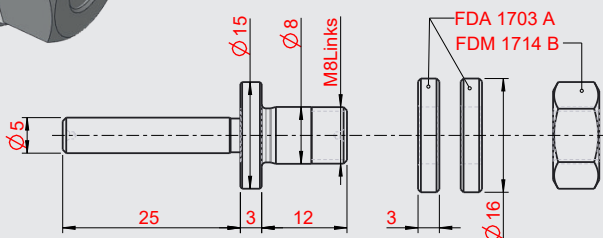


FD1738
Art.Nr. 10-0065



Hinweis/Note:

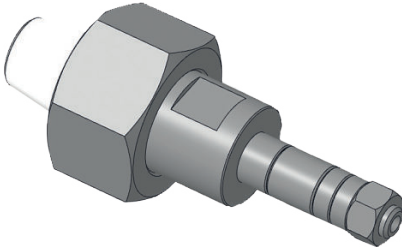
Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.



Fräsdorne

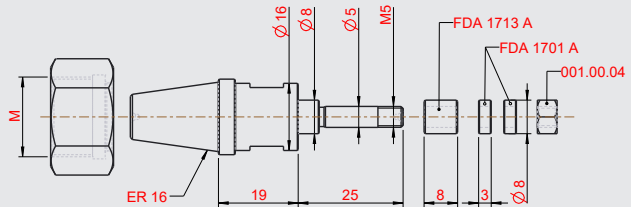
milling arbors

FD1745
Art.Nr. 10-0072

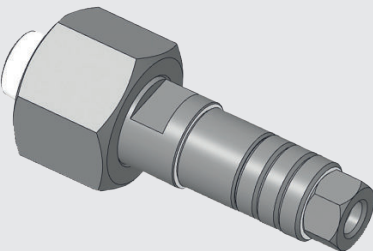


Spannmutter
clamping nut

FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)



FD1746
Art.Nr. 10-0073

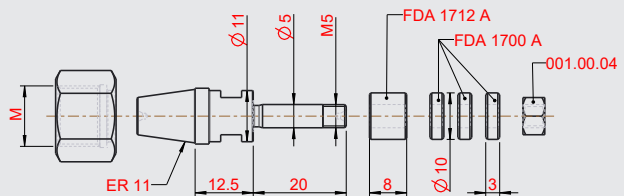


Spannmutter
clamping nut

FDM 1716C
(M=M13x0,75)
o.
FDM 1716D
(M=M14x0,75)

Hinweis/Note:

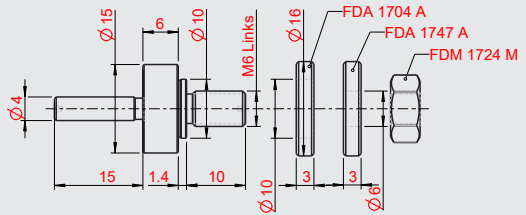
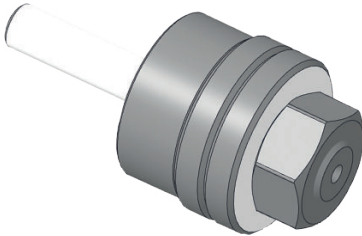
Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.



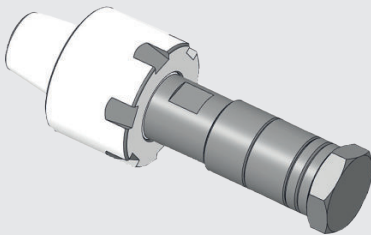
Fräsdorne

milling arbors

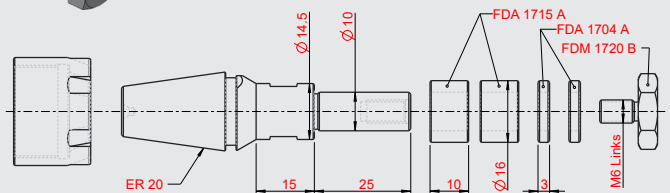
FD1747
Art.Nr. 10-0074



FD1748
Art.Nr. 10-0075



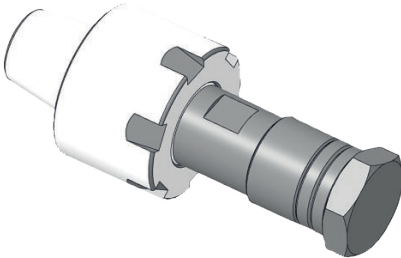
Spannmutter
clamping nut
ER20



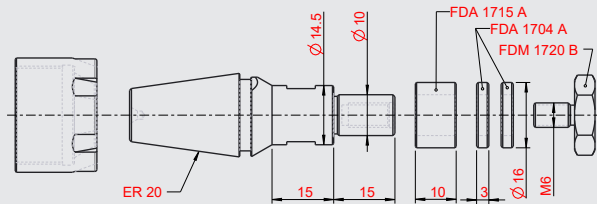
Fräsdorne

milling arbors

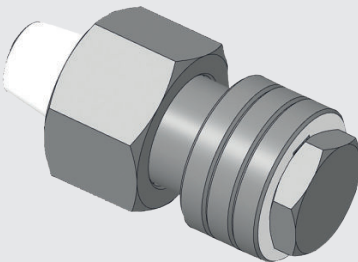
FD1749
Art.Nr. 10-0076



Spannmutter
clamping nut
ER20



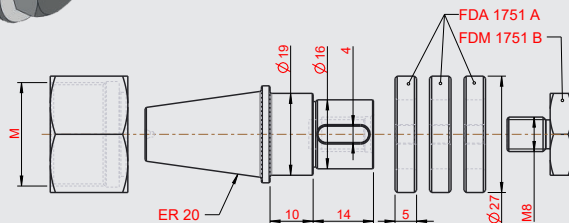
FD1751
Art.Nr. 10-0081



Spannmutter
clamping nut
FDM 1736B
(M=M24x1)
o.
FDM 1736C
(M=M25x1,75)

Hinweis/Note:

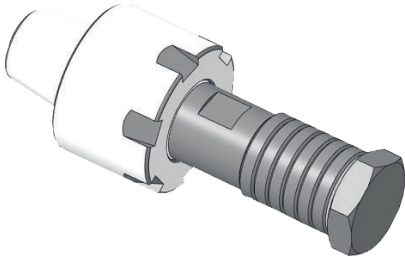
Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.



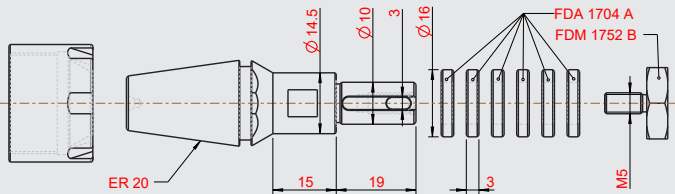
Fräsdorne

milling arbors

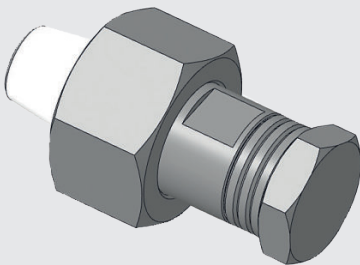
FD1752
Art.Nr. 10-0086



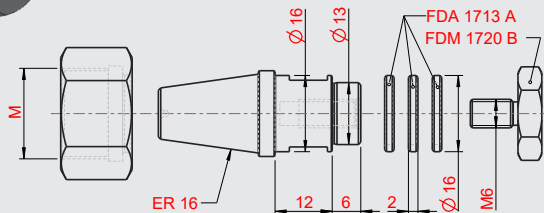
Spannmutter
clamping nut
ER20



FD1753
Art.Nr. 10-0087



Spannmutter
clamping nut
FDM 1714C
(M=M19x1)
o.
FDM 1714D
(M=M22x1,5)



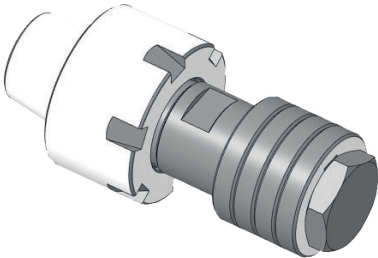
Hinweis/Note:

Beim bestellen die Mutter-Gewindegröße angeben.
By order please specify the nut thread size.

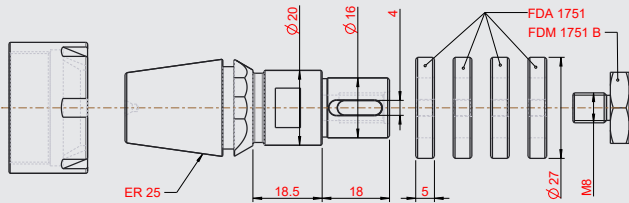
Fräsdorne

milling arbors

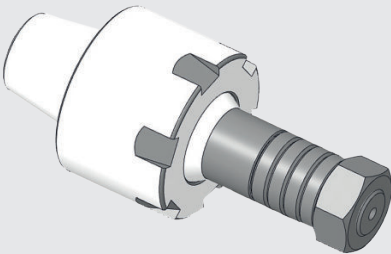
FD1755
Art.Nr. 10-0093



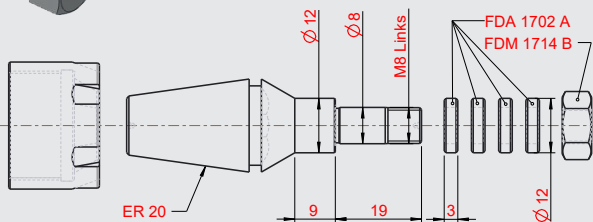
Spannmutter
clamping nut
ER25



FD1756
Art.Nr. 10-0030



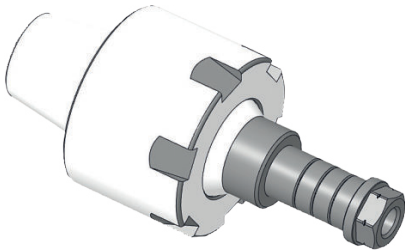
Spannmutter
clamping nut
ER20



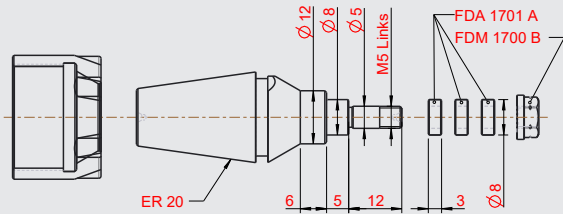
Fräsdorne

milling arbors

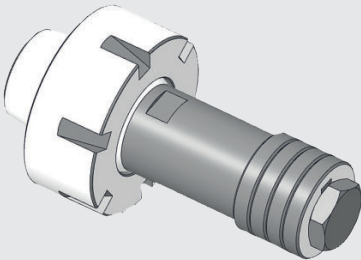
FD1757
Art.Nr. 10-0094



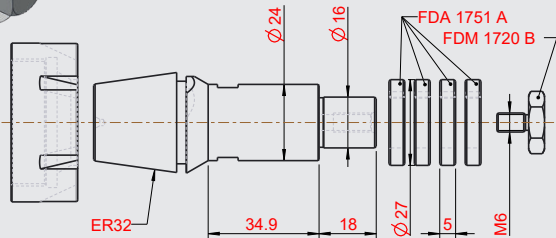
Spannmutter
clamping nut
ER20



FD1761
Art.Nr. 10-0171

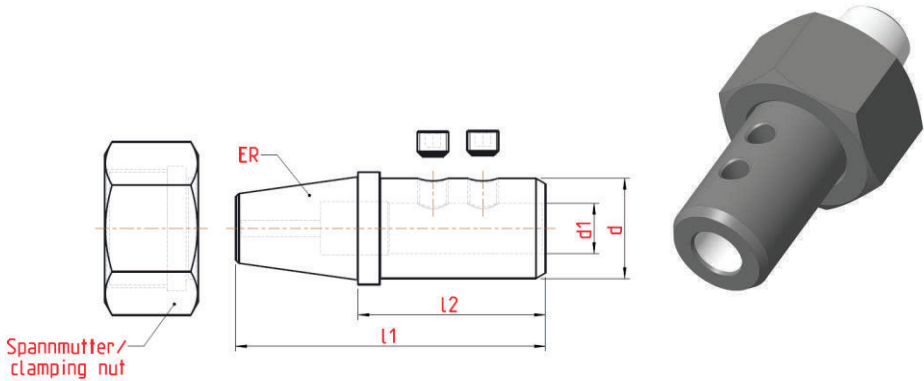


Spannmutter
clamping nut
ER32



Fräsweldon ER16
milling weldon ER16

Passend für alle ER16 Spannzangen Aufnahmen
Suitable for al ER16 chuck holder



Art der Spannmutter muss beim bestellen angegeben werden. Typ of the clamping nut must be specified when ordering.


Bestellnummer Part number	Bezeichnung Description	ER	l1	l2	d	d1	Spannmutter Clamping nut
10-0200	FWD.1630.06	16	49,5	30	14	6	
10-0201	FWD.1630.08	16	49,5	30	14	8	FDM 1714 C (M19x1)
10-0202	FWD.1630.04	16	49,5	30	14	4	FDM 1714 C (M19x1,5)
10-0206	FWD.1630.03	16	49,5	30	14	3	

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

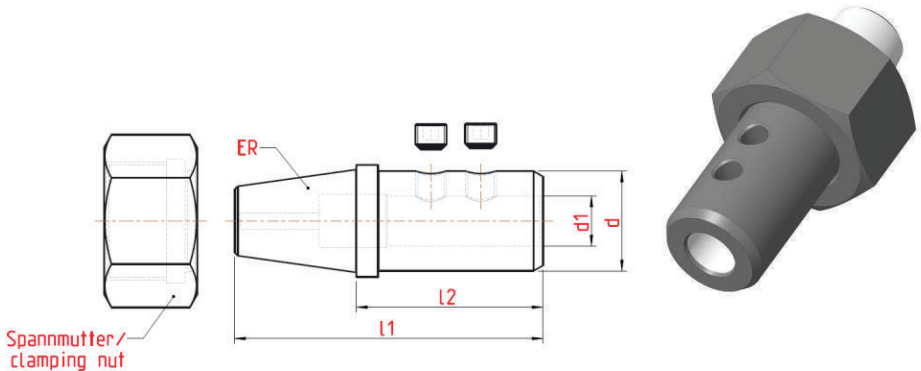
IK durch den Halter möglich.
coolant through the holder is possible

Ersatzteile / Spare parts

Für Halter for holder	
FWD.1630.06	002.00.40
FWD.1630.08	002.00.77
FWD.1630.04	002.00.28
FWD.1630.03	002.00.28

Fräsweldon ER20 milling weldon ER20

Passend für alle ER20 Spannzangen Aufnahmen
Suitable for al ER20 chuck holder



Art der Spannmutter muss beim bestellen angegeben werden. Typ of the clamping nut must be specified when ordering.


Bestellnummer Part number	Bezeichnung Description	ER	l1	l2	d	d1	Spannmutter Clamping nut
10-0202	FWD.2030.06	20	57	30	16	6	
10-0203	FWD.2030.08	20	57	30	19	8	FDM 1736 B (M24x1)
10-0204	FWD.2030.10	20	57	30	19	10	FDM 1736 C (M25x1,5)
10-0207	FWD.2025.03	20	57	26	12	3	
01-0208	FWD.2025.04	20	57	26	12	4	

Hinweis/Note:

IK durch den Halter möglich.
coolant through the holder is possible

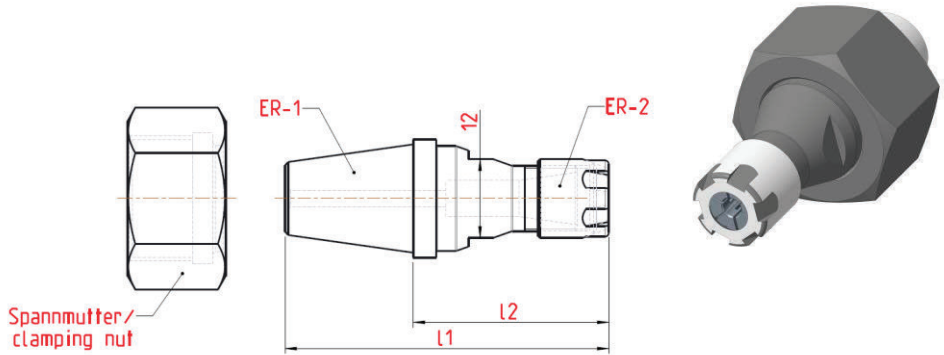
Abmessungen in mm
Dimensions in mm

Ersatzteile / Spare parts

Für Halter for holder	
FWD.2030.06	002.00.40
FWD.2030.08	002.00.11
FWD.2030.10	002.00.70
FWD.2025.03	002.00.47
FWD.2025.04	002.00.46

Fräsreduzierung ER11 milling reduction ER11

Passend für alle ER11 Spannzangen Aufnahmen
Suitable for all ER11 chuck holder



Art der Spannmutter muss beim bestellen angegeben werden. Typ of the clamping nut must be specified when ordering.

Bestellnummer Part number	Bezeichnung Description	ER-1	I1	I2	ER-2	Spannmutter Clamping nut
10-0305	FRZ.1125.08	11	37	25	8	FDM 1716 C (M13x0,75) FDM 1716 D (M15x0,75)

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK durch den Halter möglich.
coolant through the holder is possible

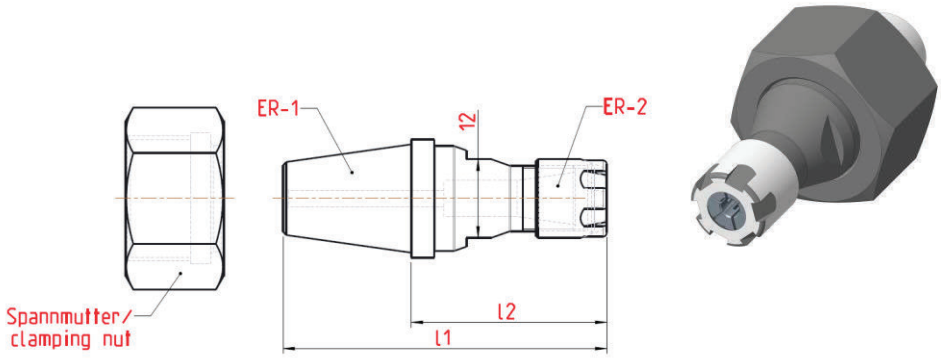
Ersatzteile / Spare parts



62.000.8

Fräsreduzierung ER16 milling reduction ER16

Passend für alle ER11 Spannzangen Aufnahmen
Suitable for all ER11 chuck holder



Art der Spannmutter muss beim bestellen angegeben werden. Typ of the clamping nut must be specified when ordering.

Bestellnummer Part number	Bezeichnung Description	ER-1	l1	l2	ER-2	Spannmutter Clamping nut
10-0300	FRZ.1630.08	16	49	30	8	FDM 1714 C (M19x1)
10-0302	FRZ.1630.11	16	50	30	11	FDM 1714 D (M11x1,5)

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK durch den Halter möglich.
coolant through the holder is possible

Ersatzteile / Spare parts

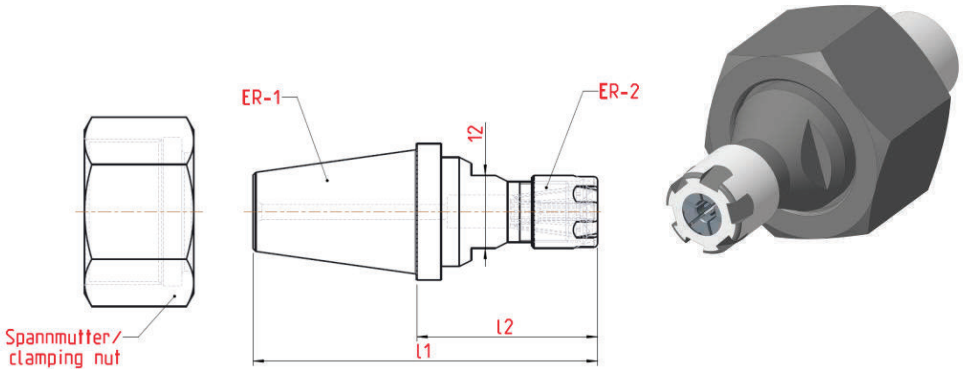


62.000.8

62.000.11

Fräsreduzierung ER20 milling reduction ER20

Passend für alle ER20 Spannzangen Aufnahmen
Suitable for all ER20 chuck holder



Art der Spannmutter muss beim bestellen angegeben werden. Typ of the clamping nut must be specified when ordering.

Bestellnummer Part number	Bezeichnung Description	ER-1	l1	l2	ER-2	Spannmutter Clamping nut
10-0301	FRZ.2030.08	20	57	30	8	FDM 1736 B (M24x1) FDM 1736 C (M25x1,5)
10-0304	FRZ.2030.11	20	57	30	11	
10-0303	FRZ.2032.16	20	59	32	16	

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK durch den Halter möglich.
coolant through the holder is possible

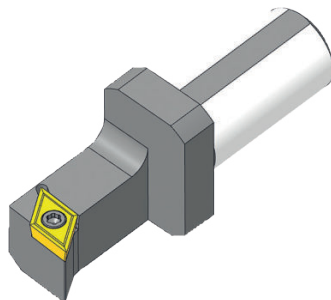
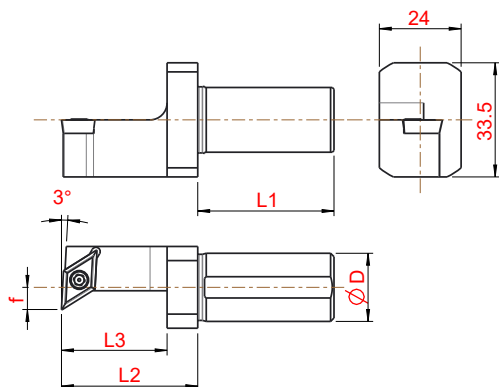
Ersatzteile / Spare parts

ER8		ER11		ER16	
62.000.8		62.000.11		62.000.16	

Rundschaft-Wendeplattenhalter Typ DC... Platte

Round shank turner plate holder type DC... insert

Rundschaft $\varnothing 20$
Round shank $\varnothing 20$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendeplatte for cutting insert
01-1398	SDUC.R.2040.B11	20	40	40	31	6,5	DC... 11...
01-1399	SDUC.L.2040.B11	20	40	40	31	6,5	DC... 11...
01-1404	SDUC.R.2040.C11	20	40	50	40	6,5	DC... 11...
01-1405	SDUC.L.2040.C11	20	40	50	40	6,5	DC... 11...

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

ohne IK
without IK

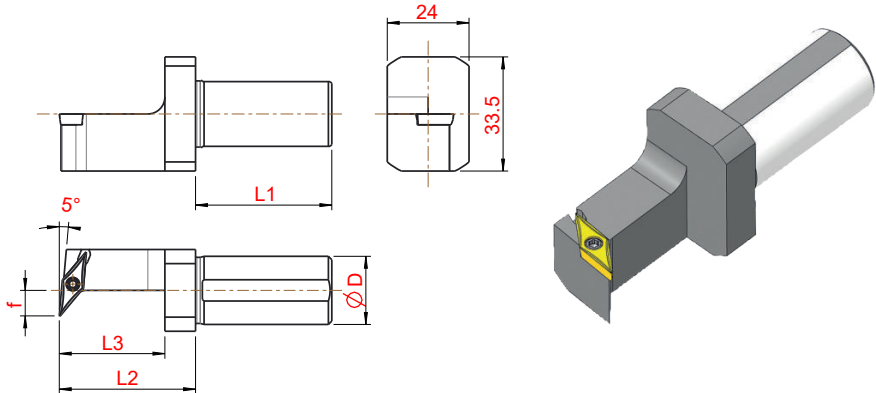
Ersatzteile / Spare parts



001.01.15

Rundschaft-Wendeplattenhalter Typ VC... Platte
Round shank turner plate holder type VC... insert

Rundschaft $\varnothing 20$
Round shank $\varnothing 20$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendschneidplatte for cutting insert
01-1400	SVUC.R.2040.B11	20	40	40	31	7,5	VC... 11...
01-1401	SVUC.L.2040.B11	20	40	40	31	7,5	VC... 11...
01-1406	SVUC.R.2040.C11	20	40	50	40	7,5	VC... 11...
01-1407	SVUC.L.2040.C11	20	40	50	40	7,5	VC... 11...

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

ohne IK
without IK

Ersatzteile / Spare parts

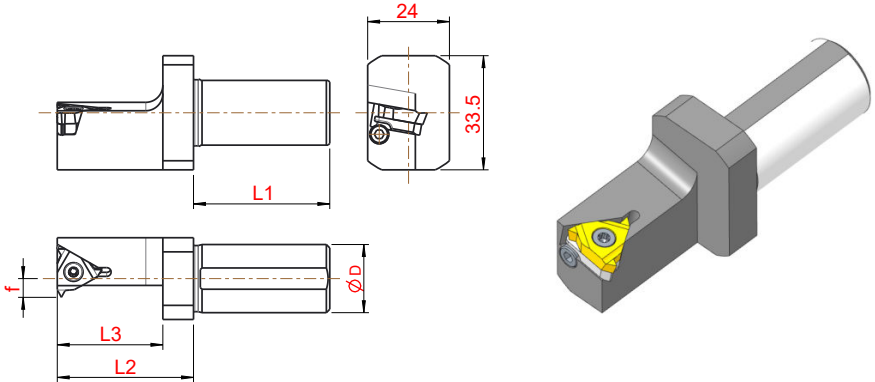


001.01.08

Rundschaft-Wendeplattenhalter Typ 16ER/16EL

Round shank turner plate holder type 16ER/16EL

Rundschaft $\varnothing 20$
Round shank $\varnothing 20$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendeplatte for cutting insert
01-1402	SER.2040.B16	20	40	40	31	5,5	16ER
01-1403	SEL.2040.B16	20	40	40	31	5,5	16EL
01-1408	SER.2040.C16	20	40	50	40	5,5	16ER
01-1409	SEL.2040.C16	20	40	50	40	5,5	16EL

Abmessungen in mm
Dimensions in mm

Hinweis/Note:
ohne IK
without IK

Ersatzteile / Spare parts



001.01.08

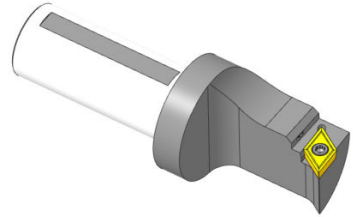
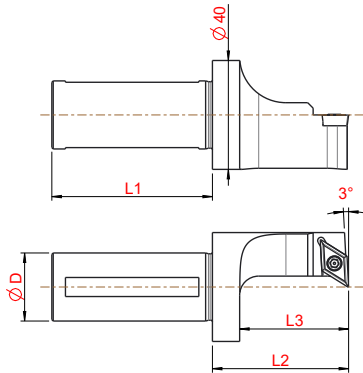
Unterlegplatte / Shim

	3° N	2° N	1° N	0°	1° P	2° P
Art. Nr. R	00200185	00200184	00200183	00200180	00200182	00200181
Art. Nr. L	00200195	00200194	00200193	00200190	00200192	00200191

Berechnung
Steigungswinkel
Seite 4.82-4.83!

Rundschaft-Wendeplattenhalter Typ DC... Platte
Round shank turner plate holder type DC... insert

Rundschaft \varnothing 25
Round shank \varnothing 25



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendschneidplatte for cutting insert
01-1380	SDUC.R.2559.C11.IK	25	59	50	40	-	DC... 11...

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

Ersatzteile / Spare parts

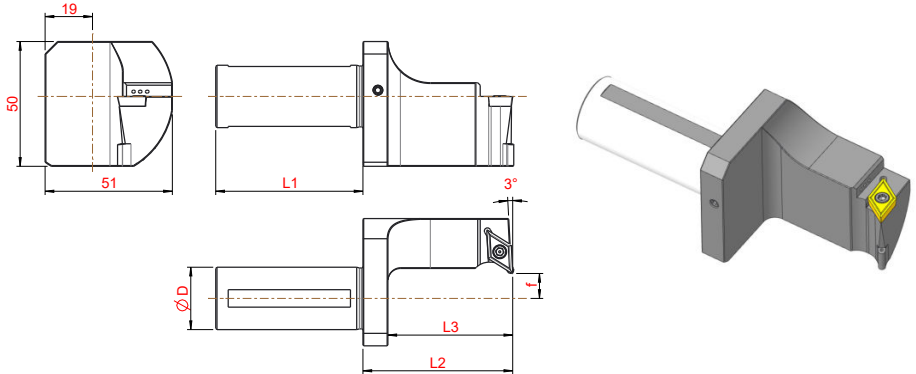


001.01.15

Rundschaft-Wendeplattenhalter Typ DC... Platte

Round shank turner plate holder type DC... insert

Rundschaft $\varnothing 25$
Round shank $\varnothing 25$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wende­schneid­platte for cutting insert
01-1372	SDUC.R.2559.C11.2IK	25	59	60	50	10	DC... 11...

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

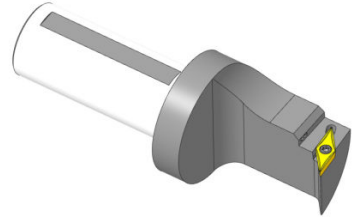
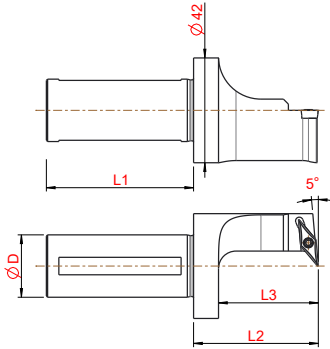
Ersatzteile / Spare parts



001.01.15

Rundschaft-Wendeplattenhalter Typ VC... Platte
Round shank turner plate holder type VC... insert

Rundschaft \varnothing 25
Round shank \varnothing 25



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendschneidplatte for cutting insert
01-1382	SVUC.R.2559.C11.IK	25	59	50	40	-	VC... 11...

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

Ersatzteile / Spare parts

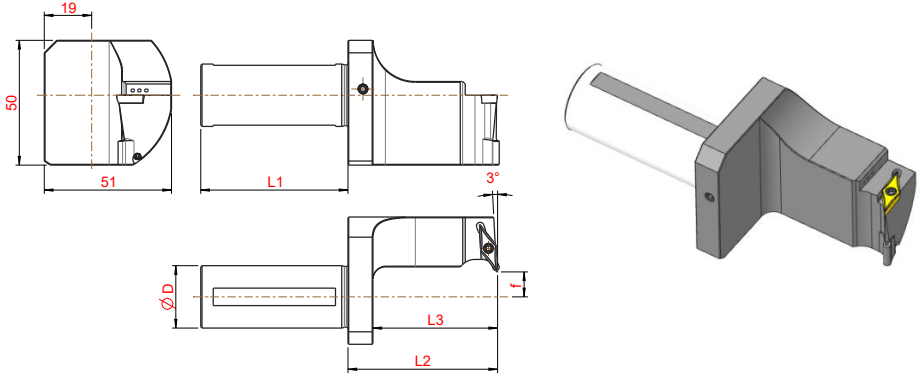


001.01.08

Rundschaft-Wendeplattenhalter Typ VC... Platte

Round shank turner plate holder type VC... insert

Rundschaft $\varnothing 25$
 Round shank $\varnothing 25$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendeschneidplatte for cutting insert
01-1373	SVUC.R.2559.C11.2IK	25	59	60	50	10	VC... 11...

Weitere Halter auf Anfrage
 Additional holders on request

Abmessungen in mm
 Dimensions in mm

Hinweis/Note:

IK druch den Schaft
 IK through the shaft

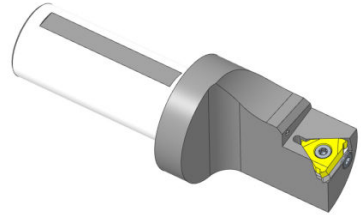
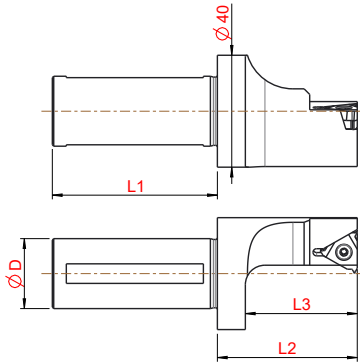
Ersatzteile / Spare parts



001.01.08

Rundschaft-Wendeplattenhalter Typ 16ER/16EL
Round shank turner plate holder type 16ER/16EL

Rundschaft $\varnothing 25$
Round shank $\varnothing 25$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendeschneidplatte for cutting insert
01-1383	SER.2559.C16.IK	25	59	50	40	-	16ER

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

Ersatzteile / Spare parts



001.01.65

Unterlegplatte / Shim

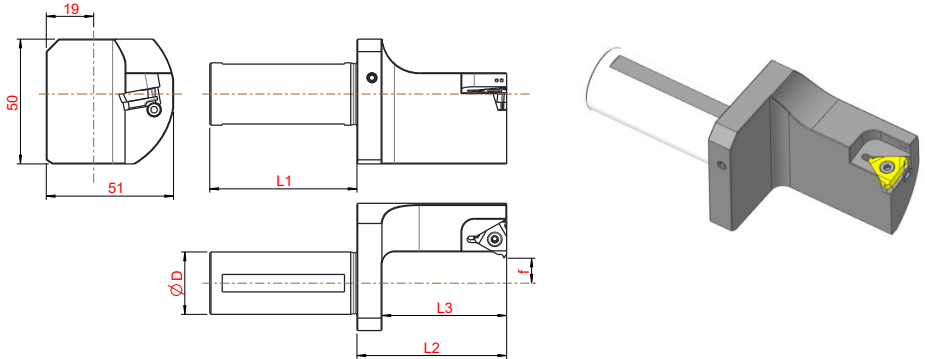
	3° N	2° N	1° N	0°	1° P	2° P
Art. Nr. R	00200185	00200184	00200183	00200180	00200182	00200181
Art. Nr. L	00200195	00200194	00200193	00200190	00200192	00200191

Berechnung
Steigungswinkel
Seite 4.82-4.83!

Rundschaft-Wendeplattenhalter Typ 16ER/16EL

Round shank turner plate holder type 16ER/16EL

Rundschaft $\varnothing 25$
Round shank $\varnothing 25$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendeplatte for cutting insert
01-1375	SER.2559.D16.IK	25	59	60	50	10	16ER

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

Ersatzteile / Spare parts



001.01.65

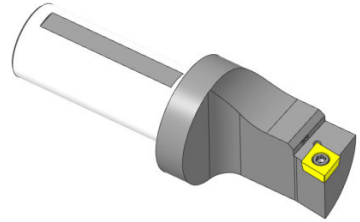
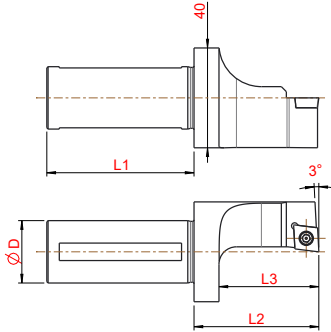
Unterlegplatte / Shim

	3° N	2° N	1° N	0°	1° P	2° P
Art. Nr. R	00200185	00200184	00200183	00200180	00200182	00200181
Art. Nr. L	00200195	00200194	00200193	00200190	00200192	00200191

Berechnung
Steigungswinkel
Seite 4.82-4.83!

Rundschaft-Wendeplattenhalter Typ CC... Platte
Round shank turner plate holder type CC... insert

Rundschaft \varnothing 25
Round shank \varnothing 25



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendschneidplatte for cutting insert
01-1381	SCUC.R.2559.C09.IK	25	59	50	40	-	CC... 11...

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

Ersatzteile / Spare parts

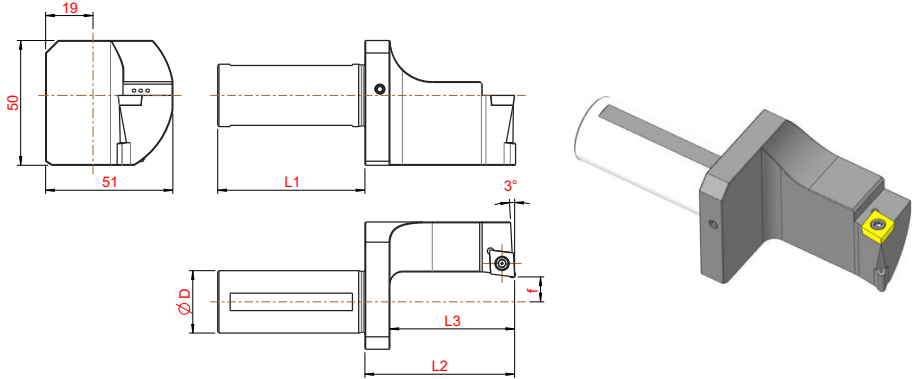


001.01.15

Rundschaft-Wendeplattenhalter Typ CC... Platte

Round shank turner plate holder type CC... insert

Rundschaft $\varnothing 25$
Round shank $\varnothing 25$



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	$\varnothing D$	l1	l2	l3	f	für Wendeplatte for cutting insert
01-1374	SCUC.R.2559.C09.2IK	25	59	60	50	10	CC... 11...

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

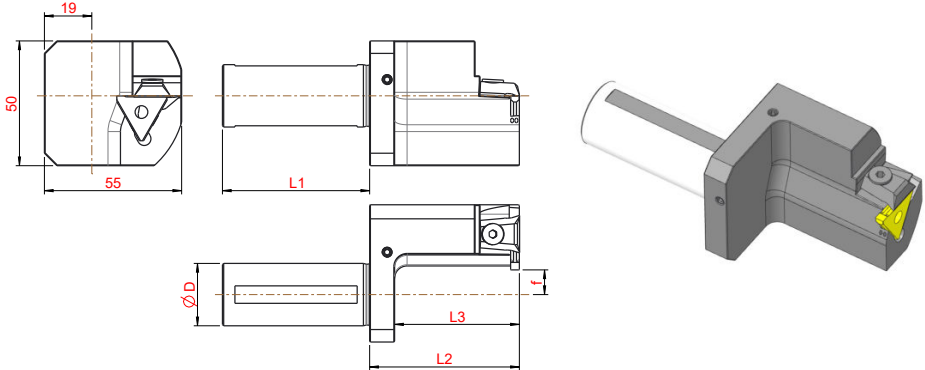
Ersatzteile / Spare parts



001.01.15

Rundschaft-Wendeplattenhalter Typ Horn 312
Round shank turnet plate holder type Horn 312

Rundschaft ø 25
Round shank ø 25



Ausführung linksschneidend, wie dargestellt · left cutting version shown

Art. Nummer Art. Number	Bezeichnung Description	øD	l1	l2	l3	f	für Wendschneidplatte for cutting insert
01-1385	912.R.2559.D03.IK	25	59	60	50	10	Horn Typ 312/03
01-1384	912.R.2559.D04.IK	25	59	60	50	10	Horn Typ 312/04

Weitere Halter auf Anfrage
Additional holders on request

Abmessungen in mm
Dimensions in mm

Hinweis/Note:

IK druch den Schaft
IK through the shaft

Ersatzteile / Spare parts

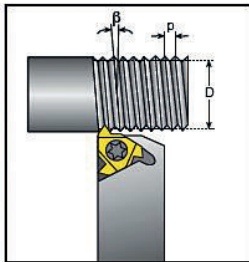


001.01.15



001.01.81

Berechnung des Steigungswinkel β



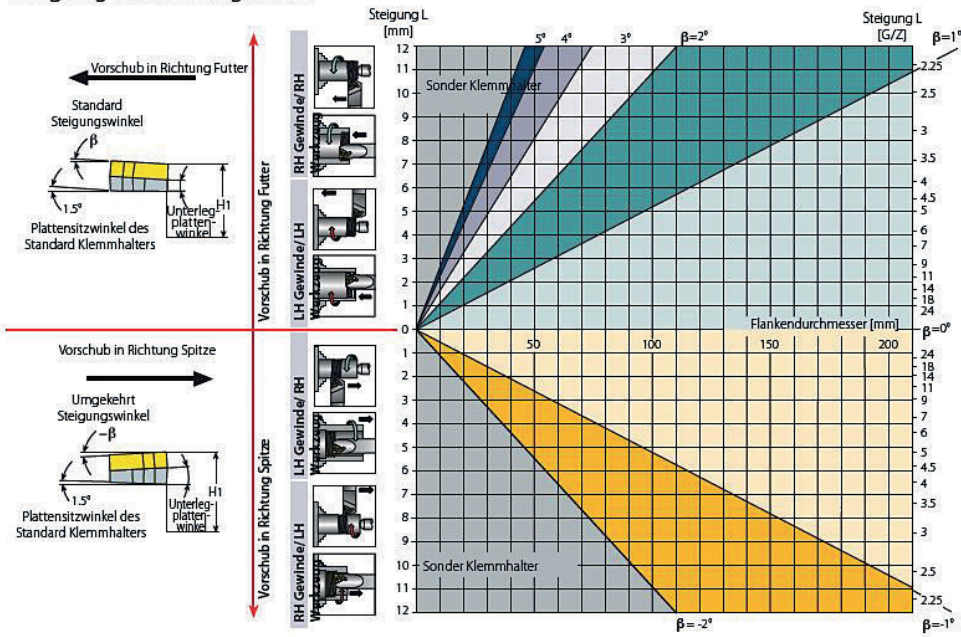
Der Steigungswinkel wird mit folgender Formel berechnet:

$$\beta = \arctan \frac{P \times N}{\pi \times D}$$

β - Steigungswinkel [°]
 P - Teilung [mm]
 N - Anzahl der Gänge
 D - Flankendurchmesser [mm]
 Steigung L = P x N

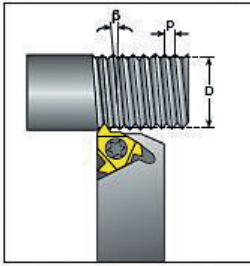
Der Steigungswinkel kann ebenfalls aus dem untenstehenden Diagramm abgelesen werden.

Steigungswinkeldiagramm



Resultierender Steigungswinkel		4,5°	3,5°	2,5°	1,5°	0,5°	0°	-0,5°	-1,5°
Plattengröße 16 mm	Plattenwinkel	3°P	2°P	1°P	0°	1°N	1,5°N	2°N	3°N
	Artikelnummer R	002.00.186	002.00.181	002.00.182	002.00.180	002.00.183	002.00.187	002.00.184	002.00.185
	Artikelnummer L	002.00.196	002.00.191	002.00.192	002.00.190	002.00.193	002.00.197	002.00.194	002.00.195

Calculating the Helix Angle β



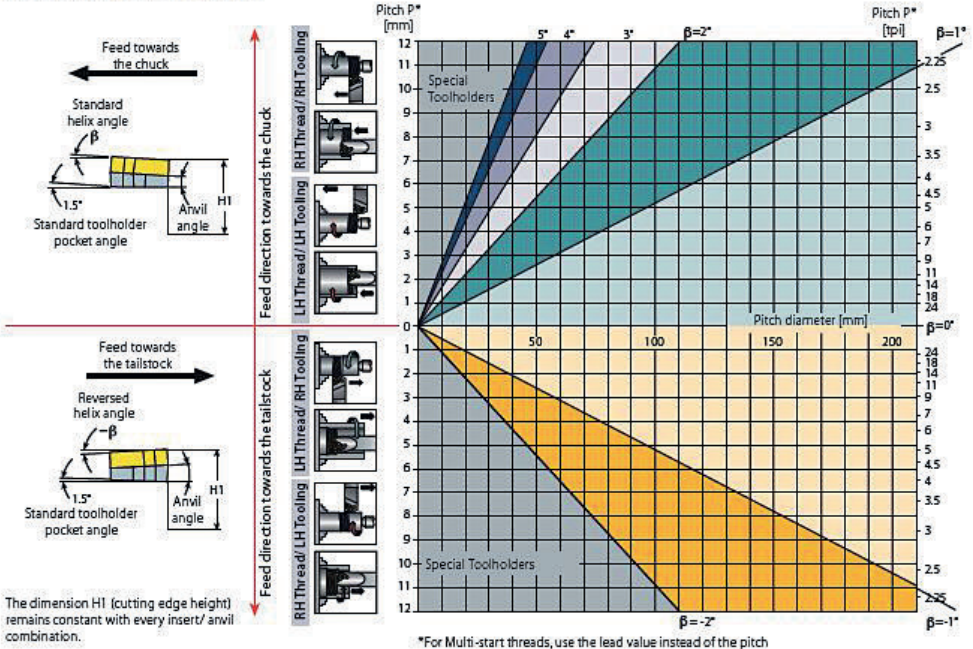
The helix angle is calculated by the following formula:

$$\beta = \arctan \frac{P \times N}{\pi \times D}$$

β - Helix angle [°]
P - Pitch [mm]
N - No. of starts
D - Pitch diameter [mm]
Lead = P x N

The helix angle can also be found from the diagram below.

Helix Angle Diagram



resultant pitch angle		4,5°	3,5°	2,5°	1,5°	0,5°	0°	-0,5°	-1,5°
Insert size 16 mm	shim angle	3°P	2°P	1°P	0°	1°N	1,5°N	2°N	3°N
	article number R	002.00.186	002.00.181	002.00.182	002.00.180	002.00.183	002.00.187	002.00.184	002.00.185
	article number L	002.00.196	002.00.191	002.00.192	002.00.190	002.00.193	002.00.197	002.00.194	002.00.195

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