

rineck

• Werkzeugtechnik



- Fräswerkzeuge/Werkzeugaufnahmen
Cutting tools/Tool holders

FEBAMETAL

TOOLS ARE OUR PASSION | MADE IN GERMANY

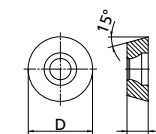
INHALTSVERZEICHNIS

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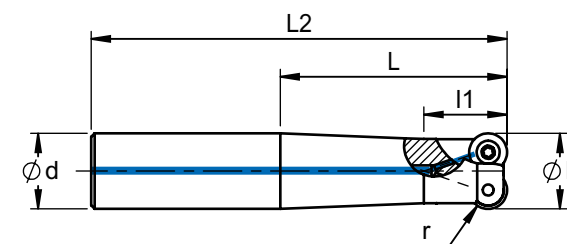
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Cutting tools / inserts

shank type cutter, R2,5 RD__



Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37



D	Bestell-Nr. order number	L	l1	L2	d	d3	z	WSP DxS	r			
10	2 10 951	30	30	75	10	9	2	5x1,5	2,5	x	993 01	994 06
12	3 12 950	30	30	75	12	11	3	5x1,5	2,5	x	993 01	994 06
15	4 15 949	30	30	80	16	15	4	5x1,5	2,5	x	993 01	994 06

shank type cutters / modular screw in cutters / shell cutters RD__

shank type cutters / modular screw in cutters ROHX

modular screw in cutters / shell cutters XDHWS

modular screw in cutters / shell cutters VCGT / VDG

modular screw in cutters / shell cutters SEKX / OFMT

shell cutters PDHX

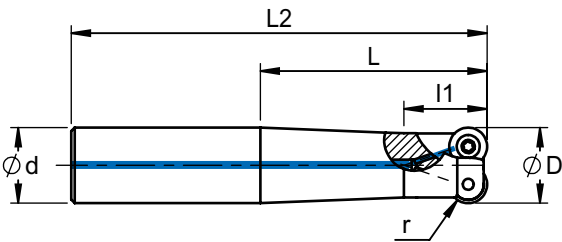
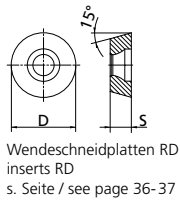
shank type cutters / modular screw in cutters / shell cutters ADKT / APKT

modular screw in cutters / shell cutters AXMT

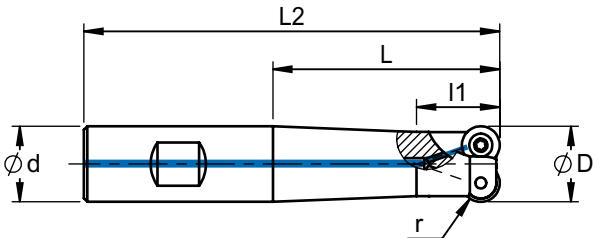
inserts

Specials on request.

Schaftfräser, R3,5 RD__
shank type cutter, R3,5 RD__

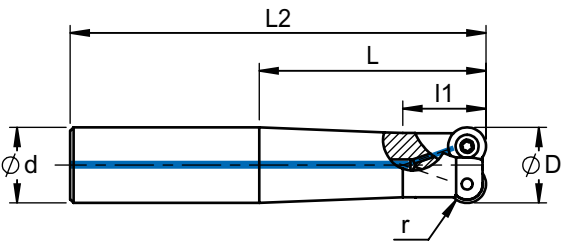
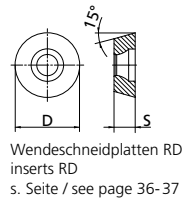


D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
12	2 12 948	30	-	75	10	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 947	30	-	75	12	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 942	40	16	88	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 941	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 940	80	16	128	16	-	2	7x1,99	3,5	x	993 02K	994 15
15	2 15 938	40	20	88	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 937	60	20	108	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 936	80	22	130	20	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 935	100	22	150	20	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 934	120	22	176	25	-	2	7x2,38	3,5	x	993 02	994 15

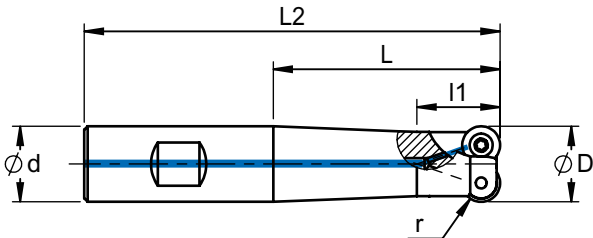


D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
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12	2 12 945	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 944	80	16	128	16	-	2	7x1,99	3,5	x	993 02K	994 15
15	2 15 961	40	20	88	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 960	60	20	108	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 959	80	22	130	20	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 958	100	22	150	20	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 957	120	22	176	25	-	2	7x2,38	3,5	x	993 02	994 15

Schaftfräser, R5 RD__
shank type cutter, R5 RD__

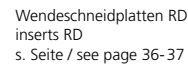


D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
20	2 20 933	40	20	90	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 932	60	22	110	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 931	80	25	136	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 930	100	25	156	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 929	120	25	176	25	-	2	10x3,18	5	x	993 04	994 15



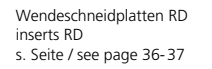
D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
20	2 20 956	40	20	90	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 955	60	22	110	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 954	80	25	136	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 953	100	25	156	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 952	120	25	176	25	-	2	10x3,18	5	x	993 04	994 15

modular screw in cutter R2,5 RD__

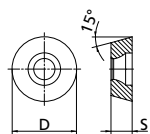


8 rineck

modular screw in cutter R3,5 RD__

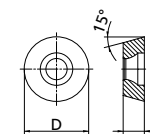
rineck 9

modular screw in cutter R4 RD__

[illegible]

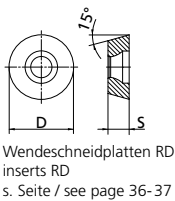
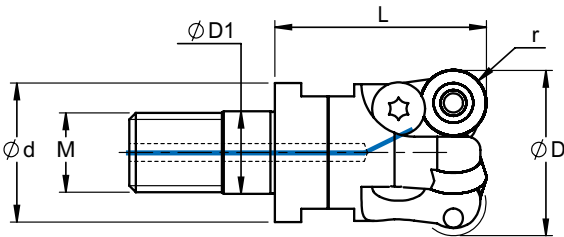
Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37

modular screw in cutter R5 RD__

[illegible]

Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37

Einschraubfräser R6 RD__
modular screw in cutter R6 RD__

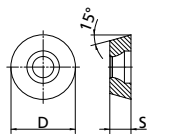
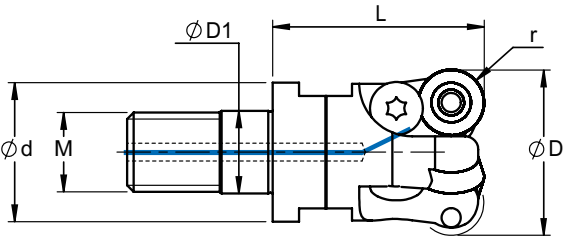


Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37



D	Bestell-Nr. order number	L	D1	d	Z	M	WSP DxS	r					
24	2 24 980	32	12,5	21	2	12	12x3,97	6	x	-	995 05	993 04	994 15
24	2 24 980-35	35	12,5	21	2	12	12x3,97	6	x	-	-	993 04	994 15
30	3 30 816	42	17	29	3	16	12x3,97	6	x	-	995 05	993 04	994 15
32	3 32 816	42	17	29	3	16	12x3,97	6	x	-	995 05	993 04	994 15
35	3 35 979	42	17	29	3	16	12x3,97	6	x	-	995 05	993 04	994 15
35	4 35 978	42	17	29	4	16	12x3,97	6	x	-	-	993 04	994 15
42	4 42 977	42	17	29	4	16	12x3,97	6	x	-	995 05	993 04	994 15
42	5 42 976	42	17	29	5	16	12x3,97	6	x	-	-	993 04	994 15
42	5 42 976-37	42	17	37	5	16	12x3,97	6	x	-	-	993 04	994 15

Einschraubfräser R8 RD__
modular screw in cutter R8 RD__



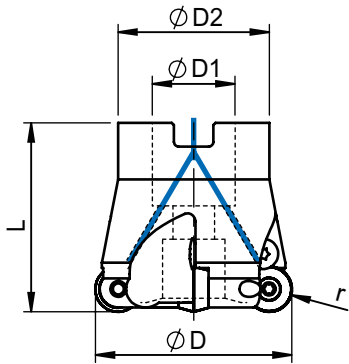
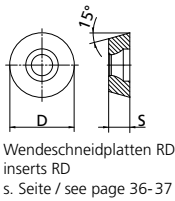
Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37



D	Bestell-Nr. order number	L	D1	d	Z	M	WSP DxS	r					
32	2 32 975	42	17	29	2	16	16x4,76	8	x	-	-	993 06	994 20
32	2 32 852	42	17	29	2	16	16x4,76	8	x	995 01	-	993 06	994 20
35	3 35 853	42	17	29	3	16	16x4,76	8	x	-	-	993 06	994 20

Aufsteckfräser R4-R5-R6-R8 RD__

shell cutter R4-R5-R6-R8 RD__



D	Bestell-Nr. order number	L	D1	D2	Z	WSP DxS	r					
42	7 42RD08A16	42	16	35	7	8x2,78	4	x	-	-	993 12	994 08
52	8 52RD08A22	42	22	40	8	8x2,78	4	x	-	-	993 12	994 08

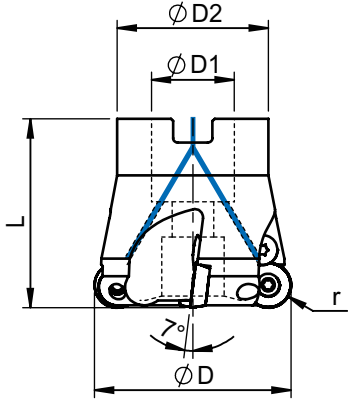
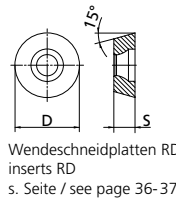
42	6 42 RD10A16	42	16	35	6	10x3,18	5	x	-	-	993 04	994 15
52	6 52 RD10A22	50	22	40	6	10x3,18	5	x	-	-	993 04	994 15
52	7 52 998	50	22	40	7	10x3,18	5	x	-	-	993 04	994 15
66	7 66 RD10A27	50	27	48	7	10x3,18	5	x	-	-	993 04	994 15

42	4 42 858	42	16	35	4	12x3,97	6	x	-	-	993 04	994 15
42	5 42 996	42	16	35	5	12x3,97	6	x	-	-	993 04	994 15
50	5 50 RD12A22	50	22	40	5	12x3,97	6	x	-	995 05	993 04	994 15
52	5 52 995	50	22	40	5	12x3,97	6	x	-	995 05	993 04	994 15
66	6 66 854	50	27	48	6	12x3,97	6	x	-	995 05	993 04	994 15
80	7 80 851	50	27	60	7	12x3,97	6	x	-	995 05	993 04	994 15

52	4 52 994	50	22	40	4	16x4,76	8	x	995 01	-	993 06	994 20
52	5 52 993	50	22	40	5	16x4,76	8	x	-	-	993 06	994 20
66	5 66 992	50	27	48	5	16x4,76	8	x	995 01	-	993 06	994 20
80	5 80 RD16A27	52	27	60	5	16x4,76	8	x	-	-	993 06	994 20
80	6 80 991	52	27	60	6	16x4,76	8	x	995 01	-	993 06	994 20
100	7 100 990	52	32	70	7	16x4,76	8	-	995 01	-	993 06	994 20
125	8 125 989	52	40	90	8	16x4,76	8	-	995 01	-	993 06	994 20
160	9 160 988	52	40	120	9	16x4,76	8	-	995 01	-	993 06	994 20
200	11 200 RD16A40	52	40	160	11	16x4,76	8	-	995 01	-	993 06	994 20

Aufsteckfräser R5-R6-R8 RD__ 7° pos.

shell cutter R5-R6-R8 RD__



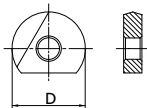
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42	6 42 RD10A16/7	42	16	35	6	10x3,18	5	x	-	-	993 04	994 15
52	7 52 850	50	22	40	7	10x3,18	5	x	-	-	993 04	994 15

40	4 40 856	42	16	35	4	12x3,97	6	x	-	-	993 04	994 15
50	5 50 RD12A22/7	50	22	40	5	12x3,97	6	x	-	-	993 04	994 15
52	5 52 928	52	22	40	5	12x3,97	6	x	-	995 05	993 04	994 15
66	6 66 927	52	27	48	6	12x3,97	6	x	-	995 05	993 04	994 15
80	7 80 926	52	27	60	7	12x3,97	6	x	-	995 05	993 04	994 15

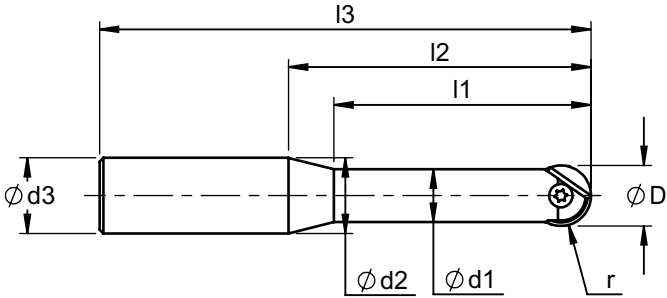
52	4 52 835	50	22	40	4	16x4,76	8	x	995 01	-	993 06	994 20
66	5 66 925	50	27	48	5	16x4,76	8	x	995 01	-	993 06	994 20
80	6 80 924	52	27	60	6	16x4,76	8	x	995 01	-	993 06	994 20
100	7 100 923	52	32	70	7	16x4,76	8	-	995 01	-	993 06	994 20
125	8 125 922	52	40	90	8	16x4,76	8	-	995 01	-	993 06	994 20
160	9 160 921	52	40	120	9	16x4,76	8	-	995 01	-	993 06	994 20

Kugelbahnschaftfräser ROHX

ball nose cutter ROHX



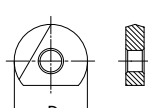
Wendeschneidplatten RO
inserts RO
s. Seite / see page 37



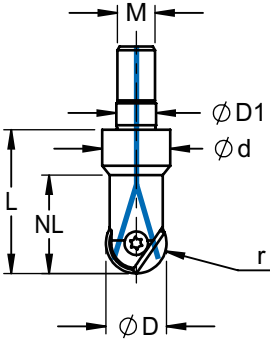
D	Bestell-Nr. order number	I1	I2	I3	d1	d2	d3	Z	r		
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8	880RO8G12	30	80	125	7,3	12	12	2	4	993 22	994 07
10	1060RO10G16	40	60	108	9	16	16	2	5	993 23	994 08
10	1080RO10G16	40	80	128	9	16	16	2	5	993 23	994 08
12	1240RO12G12	40	40	85	10,5	12	12	2	6	993 24	994 10
12	1260RO12G16	50	60	108	10,5	16	16	2	6	993 24	994 10
12	1280RO12G16	60	80	128	10,5	16	16	2	6	993 24	994 10
12	12100RO12G16	70	100	148	10,5	16	16	2	6	993 24	994 10
16	1640RO16G16	40	40	88	14	16	16	2	8	993 25	994 15
16	1660RO16G16	60	60	108	14	16	16	2	8	993 25	994 15
16	1680RO16G20	60	80	130	14	20	20	2	8	993 25	994 15
16	16100RO16G20	80	100	150	14	20	20	2	8	993 25	994 15

Kugelbahneinschraubfräser ROHX

modular screw in cutter ROHX

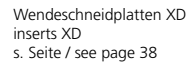


Wendeschneidplatten RO
inserts RO
s. Seite / see page 37

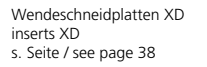


D	Bestell-Nr. order number	L	NL	d	D1	M	r		
8	823RO8M6	23	13	9,8	6,5	6	4	993 22	994 07
10	1023RO10M6	23	23	9,8	6,5	6	5	993 23	994 08
10	1033RO10M8	33	18	13	8,5	8	5	993 23	994 08
12	1223RO12M6	23	23	9,8	6,5	6	6	993 24	994 10
12	1233RO12M8	33	18	13	8,5	8	6	993 24	994 10
16	1628RO16M8	28	28	13,6	8,5	8	8	993 25	994 15
16	1628RO16M10	28	28	15,4	10,5	10	8	993 25	994 15
16	1638RO16M10	38	26	18	10,5	10	8	993 25	994 15
20	2028RO20M10	28	28	18	10,5	10	10	993 27	994 20

modular screw in cutter for insert - XDHW - XDHT

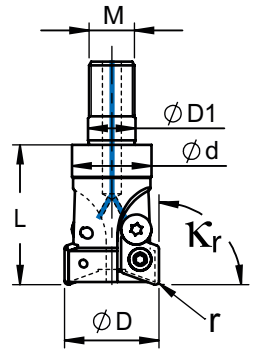
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modular screw in cutter for insert - XDHW - XDHT

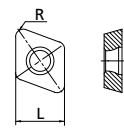
[illegible]

Eck-Einschraubfräser für Rhombus WSP - XDHW - XDHT

modular screw in cutter for insert - XDHW - XDHT



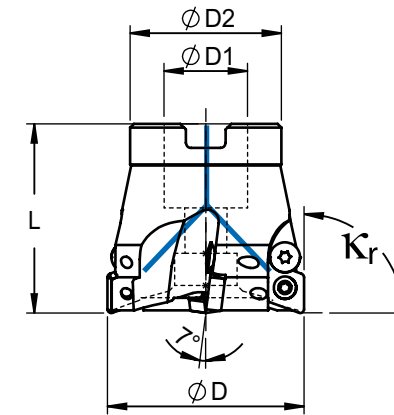
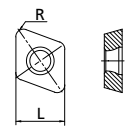
D	Bestell-Nr. order number	L	D1	d	Z	M	K _r	WSP L	r				
12	2 12 899	20	6,5	9,8	2	6	90°	4	-	x	-	993 00	994 06
15	2 15 920	23	8,5	13,6	2	8	90°	6,5	-	x	-	993 02	994 07
16	2 16 901	23	8,5	13,6	2	8	90°	6,5	-	x	-	993 02	994 07
20	3 20 919	30	10,5	18	3	10	90°	6,5	-	x	-	993 02	994 07
25	3 25 918	35	12,5	21	3	12	90°	6,5	-	x	-	993 02	994 07
25	2 25 917	35	12,5	21	2	12	90°	10	-	x	995 05	993 04	994 15
35	3 35 916	43	17	29	3	16	90°	10	-	x	995 05	993 04	994 15
42	4 42 915	43	17	29	4	16	90°	10	-	x	995 05	993 04	994 15



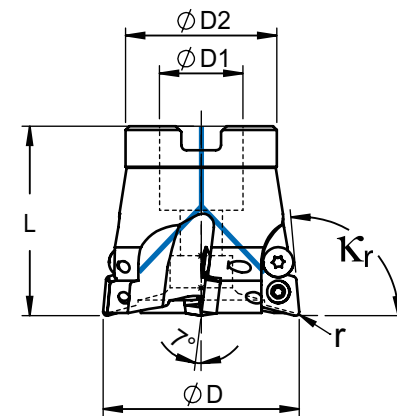
Wendeschneidplatten XD
inserts XD
s. Seite / see page 38

Eck-Aufsteckfräser für Rhombus WSP - XDHW - XDHT

shell cutter for insert - XDHW - XDHT

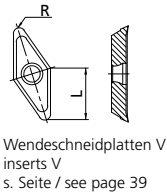
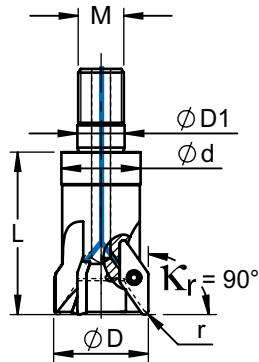
[illegible]

Wendeschneidplatten XD
inserts XD
s. Seite / see page 38

[illegible]

Einschraub-Tauchfräser für Aluminium, Kupfer, Kunststoff, Graphit
VDGT/VCGT

modular screw in cutter for aluminium, copper, plastic, graphite VDGT/VCGT



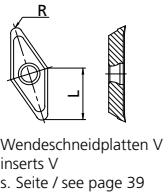
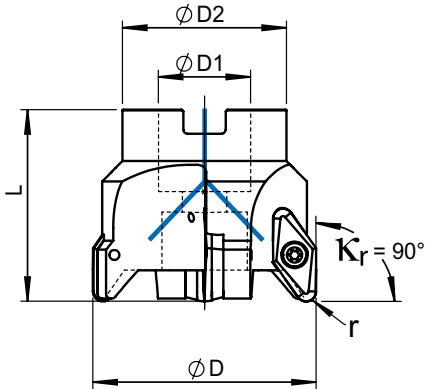
Wendeschneidplatten V
inserts V
s. Seite / see page 39



D	Bestell-Nr. order number	L	D1	d	Z	M	WSP L	r			
15	2 15VD11-05M8	36	8,5	13,5	2	8	11	0,5	x	993 02	994 07
16	2 16VD11-05M8	36	8,5	13,5	2	8	11	0,5	x	993 02	994 07
20	2 20VD11-05M10	36	10,5	18	2	10	11	0,5	x	993 02	994 07
25	3 25VD11-05M12	41	12,5	21	3	12	11	0,5	x	993 02	994 07
32	4 32VD11-05M16	45	17	29	4	16	11	0,5	x	993 02	994 07
42	5 42VD11-05M16	45	17	34	5	16	11	0,5	x	993 02	994 07
15	2 15 879	36	8,5	13,5	2	8	11	1	x	993 02	994 07
16	2 16 815	36	8,5	13,5	2	8	11	1	x	993 02	994 07
16	2 16 815-M10	36	10,5	15,4	2	10	11	1	x	993 02	994 07
20	2 20 878	36	10,5	18	2	10	11	1	x	993 02	994 07
25	3 25 877	41	12,5	21	3	12	11	1	x	993 02	994 07
32	4 32 876	45	17	29	4	16	11	1	x	993 02	994 07
42	5 42 875	45	17	34	5	16	11	1	x	993 02	994 07
32	2 32 874	48	17	29	2	16	22	3	x	993 06	994 20
42	3 42 873	48	17	34	3	16	22	3	x	993 06	994 20
42	3 42 873-37	48	17	37	3	16	22	3	x	993 06	994 20

Aufsteck-Tauchfräser für Aluminium, Kupfer, Kunststoff, Graphit
VCGT

shell cutter for aluminium, copper, plastic, graphite VCGT



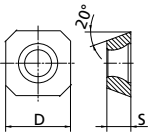
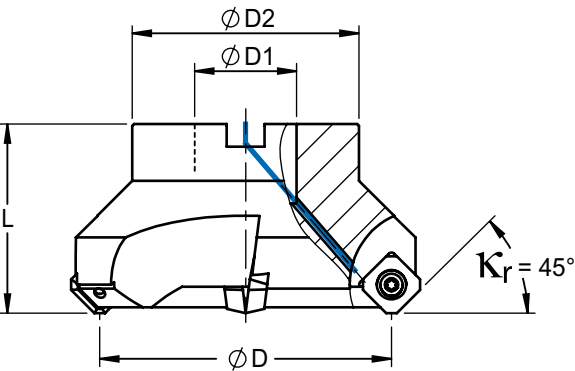
Wendeschneidplatten V
inserts V
s. Seite / see page 39



D	Bestell-Nr. order number	L	D1	D2	Z	WSP L	r			
42	3 42 872	57	16	35	3	22	3	x	993 06	994 20
50	3 50 871	57	22	40	3	22	3	x	993 06	994 20
52	3 52 871	57	22	40	3	22	3	x	993 06	994 20
66	4 66 870	57	27	48	4	22	3	x	993 06	994 20
80	4 80 869	57	27	60	4	22	3	x	993 06	994 20
100	5 100 868	55	32	70	5	22	3	-	993 06	994 20
125	6 125 867	55	40	90	6	22	3	-	993 06	994 20

Planmesserkopf 45° SEKX

face milling cutter 45° SEKX



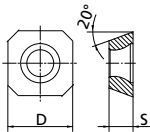
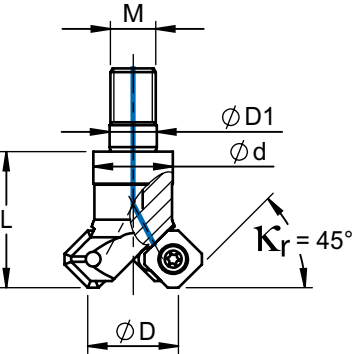
Wendeschneidplatten SE
inserts SE
s. Seite / see page 40



D	Bestell-Nr. order number	L	W	D1	D2	Z	WSP L			
40	340SE12A16-45	40	45°	16	35	3	12,7	x	993 07	994 20
50	450SE12A22-45	45	45°	22	44	4	12,7	x	993 07	994 20
63	563SE12A22-45	45	45°	22	50	5	12,7	x	993 07	994 20
80	680SE12A27-45	50	45°	27	60	6	12,7	x	993 07	994 20
100	6100SE12A32-45	50	45°	32	80	6	12,7	-	993 07	994 20

45° Fasen-Einschraubfräser SEKX

modular screw in cutter for chamfering SEKX

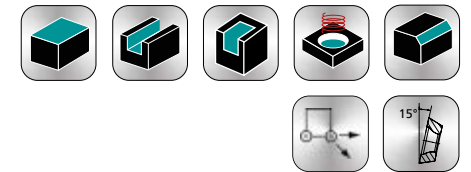
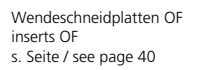


Wendeschneidplatten SE
inserts SE
s. Seite / see page 40

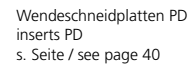


D	Bestell-Nr. order number	L	W	D1	d	M	Z	WSP L			
24	2 24 814	36	45°	12,5	21	12	2	12,7	x	993 06	994 20

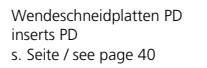
shell cutter OFMT



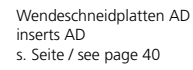
shell cutter for pentagon insert PDHX



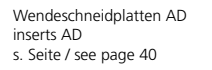
shell cutter for pentagon insert PDHX



modular screw in cutter, ADKT

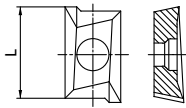
30 rineck

shell cutter ADKT

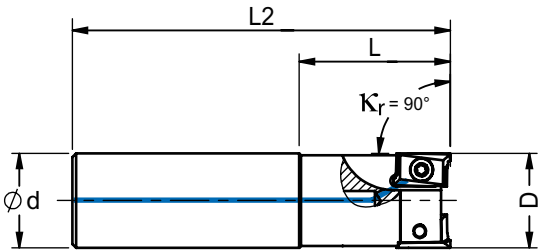
rineck 31

Schaftfräser APKT 1003 PD...

shank type cutter APKT 1003 PD...



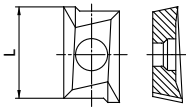
Wendeschneidplatten AP
inserts AP
s. Seite / see page 40



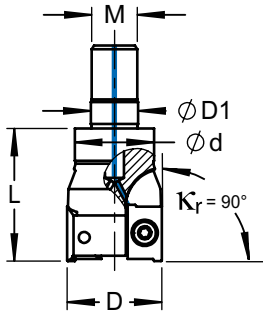
D	Bestell-Nr. order number	L	L2	d	Z	WSP L			
10	110AP10G12A80	25	80	12	1	10	x	993 12	994 08
10	110AP10G12A120	40	120	12	1	10	x	993 12	994 08
12	112AP10G12A80	25	80	12	1	10	x	993 12	994 08
12	112AP10G12A120	40	120	12	1	10	x	993 12	994 08
13	113AP10G12A120	-	120	12	1	10	x	993 12	994 08
16	216AP10G16A85	30	85	16	2	10	x	993 12	994 08
16	216AP10G16A180	50	180	16	2	10	-	993 12	994 08
17	217AP10G16A180	-	180	16	2	10	-	993 12	994 08
20	320AP10G20A90	35	90	20	3	10	x	993 12	994 08
20	320AP10G20A180	50	180	20	3	10	-	993 12	994 08
21	321AP10G20A180	-	180	20	3	10	-	993 12	994 08
25	425AP10G25A100	40	100	25	4	10	x	993 12	994 08
25	425AP10G25A180	70	180	25	4	10	-	993 12	994 08
26	426AP10G25A180	-	180	25	4	10	-	993 12	994 08

Einschraubfräser APKT 1003 PD...

modular screw in cutter APKT 1003 PD...



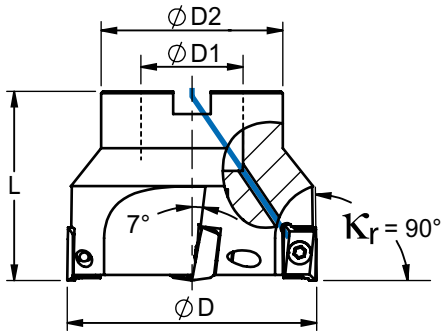
Wendeschneidplatten AP
inserts AP
s. Seite / see page 40



D	Bestell-Nr. order number	L	D1	d	M	Z	WSP L			
16	216AP10M8	25	8,5	13,8	8	2	10	x	993 12	994 08
20	320AP10M10	30	10,5	18	10	3	10	x	993 12	994 08
25	425AP10M12	35	12,5	21	12	4	10	x	993 12	994 08

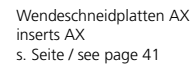
Aufsteckfräser APKT 1003 PD...

shell cutter, APKT 1003 PD...



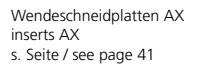
D	Bestell-Nr. order number	L	D1	D2	Z	WSP L			
40	640AP10A16	40	16	35	6	10	x	993 12	994 08
50	750AP10A22	50	22	40	7	10	x	993 12	994 08
52	752AP10A22	50	22	40	7	10	x	993 12	994 08
63	863AP10A27	50	27	48	8	10	x	993 12	994 08
66	866AP10A27	50	27	48	8	10	x	993 12	994 08

modular screw in cutter, AXMT



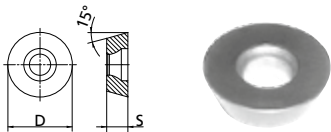
34 nineck

shell cutter AXMT

rineck 35

Runde-Fräswendeschnidplatten RDHX - präzisionsgeschliffen

inserts RDHX - precision ground insert

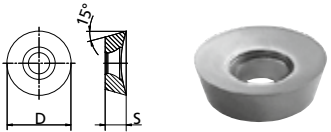


WSP rund, TIALN-beschichtet
inserts round, TIALN-coated



Wendeschnidplatte insert	WSP DxS	P 40	P 25	K 10	K 03
RDHX 05 01 MOT	5x1,5	-	80 111	-	80 113
RDHX 07 01 MOT	7x1,99	-	80 131	80 132	-
RDHX 07 02 MOT	7x2,38	-	80 141	80 142	-
RDHX 08 T2 MOE	8x2,78	80 254	80 255	-	-
RDHX 10 03 MOT	10x3,18	80 264	80 265	80 162	-
RDHX 12 T3 MOT	12x3,97	80 274	80 275	80 172	-
RDHX 16 04 MOT	16x4,76	80 180	80 181	80 182	80 183

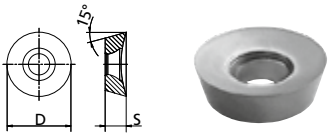
Wendeschnidplatte insert	WSP DxS	TIALN-beschichtet hartfräsen bis 60HRc TIALN-coated hardmilling up to 60HRc	RK 15F
RDHX 05 01 MOT	5x1,5		80 217
RDHX 07 01 MOT	7x1,99		80 237
RDHX 07 02 MOT	7x2,38		80 247
RDHX 08 T2 MOE	8x2,78		80 257
RDHX 10 03 MOT	10x3,18		80 267
RDHX 12 T3 MOT	12x3,97		80 277



WSP rund mit Hohlkehle, für Alu, Kupfer, Kunststoff, beschichtet
for alu, copper, plastic, coated



Wendeschnidplatte insert	WSP DxS				K 05
RDHT 07 01 MOE	7x1,99	-	-	-	82 132
RDHT 07 02 MOE	7x2,38	-	-	-	82 142
RDHT 10 03 MOE	10x3,18	-	-	-	82 162
RDHT 12 T3 MOE	12x3,97	-	-	-	82 172
RDHT 16 04 MOE	16x4,76	-	-	-	82 182



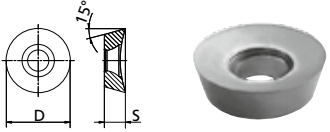
WSP rund mit polierter Hohlkehle,
für Alu, Kupfer, Kunststoff, unbeschichtet
hollow ground polished, uncoated



Wendeschnidplatte insert	WSP DxS				K 05
RDHT 07 01 MOE	7x1,99	-	-	-	82 032
RDHT 07 02 MOE	7x2,38	-	-	-	82 042
RDHT 10 03 MOE	10x3,18	-	-	-	82 062
RDHT 12 T3 MOE	12x3,97	-	-	-	82 072
RDHT 16 04 MOE	16x4,76	-	-	-	82 082

Runde-Fräswendeschnidplatten mit Hohlkehle RDHT

inserts RDHT



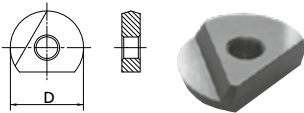
WSP rund mit Hohlkehle, Diamant beschichtet
Diamond coated



Wendeschnidplatte insert	WSP DxS			K 10	
RDHT 07 01 MOE	7x1,99	-	-	82 832	-
RDHT 07 02 MOE	7x2,38	-	-	82 842	-
RDHT 10 03 MOE	10x3,18	-	-	82 862	-
RDHT 12 T3 MOE	12x3,97	-	-	82 872	-

Kugelbahn-Wechselplatten ROHX

inserts ROHX



Kugelplatte, TIALN-beschichtet
TIALN-coated



Wendeschnidplatte insert	WSP D	R		P 40	P 25	K 10	K 05
ROHX 08	8	4		-	83 111	-	83 113
ROHX 10	10	5		-	83 121	-	83 123
ROHX 12	12	6		-	83 131	-	83 133
ROHX 16	16	8		-	83 151	-	83 153
ROHX 20	20	10		-	83 161	-	83 163

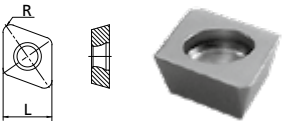
Kugelplatte, Diamant beschichtet
diamond-coated



Wendeschnidplatte insert	WSP D	R		P 40	P 25	K 10	K 05
ROHX 08	8	4		-	-	83 812	-
ROHX 10	10	5		-	-	83 822	-
ROHX 12	12	6		-	-	83 832	-
ROHX 16	16	8		-	-	83 852	-

Rhombus-Wendeschneidplatten XDHW

inserts XDHW - rhombic



WSP rhombisch, TIALN-beschichtet
inserts rhombic, TIALN-coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 03
XDHW 01 04-05	4	0,5	-	-	-	84 103.05
XDHW 01 04-10	4	1	-	84 101.10	-	84 103.10
XDHW 02 06-05	6,5	0,5	-	84 111.05	84 112.05	84 113.05
XDHW 02 06-10	6,5	1	84 110	84 111	84 112	-
XDHW 02 06-20	6,5	2	-	84 111.20	84 112.20	84 113.20
XDHW 03 10-10	10	1	84 120	84 121	84 122	-

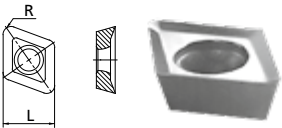
WSP rhombisch, Diamant beschichtet
inserts rhombic, diamond-coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 03
XDHW 01 04-10	-	1	-	-	84 802.10	-
XDHW 02 06-10	-	1	-	-	84 812	-

Rhombus-Wendeschneidplatten XDHT, mit Spanformer

inserts XDHT - rhombic



WSP rhombisch, poliert, beschichtet
inserts rhombic, polished, coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 05
XDHT 02 06-10	6,5	1	-	-	-	84 142
XDHT 03 10-10	10	1	-	-	-	84 152

WSP rhombisch, poliert unbeschichtet
inserts rhombic, uncoated polished



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 05
XDHT 02 06-10	6,5	1	-	-	-	84 042
XDHT 03 10-10	10	1	-	-	-	84 052

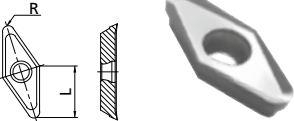
WSP rhombisch, Diamant beschichtet
inserts rhombic, diamond-coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 05
XDHT 02 06-10	6,5	1	-	-	84 842	-
XDHT 03 10-10	10	1	-	-	84 852	-

Fräs-Wendeschneidplatten für Alu-Tauchfräser VDGT/VC GT

insert VDGT/VC GT



WSP für Alu, Kupfer und Kunststoff, poliert, beschichtet
for alu, copper, plastic, polished, coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 05
VDGT 11 02-05	11	0,5	-	-	85 112.05	-
VDGT 11 02	11	1	-	-	85 112	-
VC GT 22 05	22	3	-	-	85 122	-

WSP für Alu, Kupfer und Kunststoff, poliert unbeschichtet
for alu, copper, plastic, uncoated polished



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 05
VDGT 11 02-05	11	0,5	-	-	85 012.05	-
VDGT 11 02	11	1	-	-	85 012	-
VC GT 22 05	22	3	-	-	85 022	-

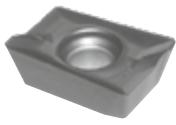
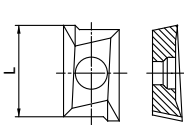
WSP für Alu, Kupfer und Kunststoff, Diamant beschichtet
for alu, copper, plastic, diamond coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	K 05
VDGT 11 02	11	1	-	-	85 812	-
VC GT 22 05	22	3	-	-	85 822	-

Wendeschneidplatten APKT / ADKT / SEKX / SEET / PDHX / OFKT / OFEX

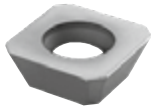
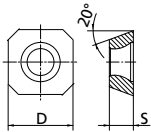
inserts APKT / ADKT / SEKX / SEET / PDHX / OFKT / OFEX



WSP beschichtet
inserts coated



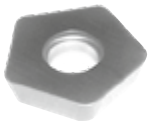
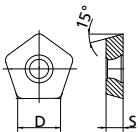
Wendeschneidplatte insert	WSP L		P 40	P 25	K 10	K 20
APKT 10 03PDER	10		-	90 111	90 112	-
APKT 10 03PDFR-ALP	10		-	-	90 012	-
APKT 10 03PDSR	10		90 110	-	-	-
APHT 10 03PDFR-AL	10					90 114
ADKT 15 05	15		91 110	91 111	91 112	-



WSP beschichtet
inserts coated



Wendeschneidplatte insert	WSP L		P 40	P 25	K 10	
SEKX 12 04	12,7		-	87 171	-	
SEET 12 04	12,7		-	87 151	87 152	



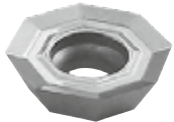
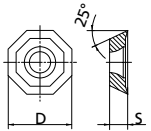
WSP 5 kant, TIALN-beschichtet
inserts 5 edge, TIALN-coated



Wendeschneidplatte insert	WSP L		P 40	P 25	K 10	
PDHX 12 04	12		87 180	87 181	87 182	

Fräs-Wendeschneidplatten Octa-Cut für Aluminiumbearbeitung OFKT

insert Octa-Cut for aluminium machining OFKT



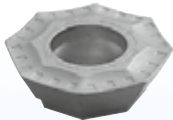
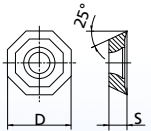
WSP, poliert unbeschichtet
inserts, uncoated polished



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	
OFKT-05T3-FNALP	12,7	-	-	-	93 062	

Fräs-Wendeschneidplatten Octa-Cut für Stahlbearbeitung OFEX

insert Octa-Cut for steel machining OFEX



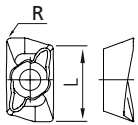
WSP beschichtet;
inserts coated



Wendeschneidplatte insert	WSP L	R	P 40	P 25	K 10	
OFEX-05T35N	12,7	-	-	93 161	-	

Wendeschneidplatten AXMT

inserts AXMT



WSP beschichtet
inserts coated



Wendeschneidplatte insert	WSP L	R	RM 20	P 40	P 25	K 10
AXMT 070204	7	0,4	88 246.04	-	88 245.04	88 042.04
AXMT 11T304	11	0,4	88 266.04	-	-	88 062.04
AXMT 11T308	11	0,8	88 266.08	-	88 265.08	-
AXMT 160604	16	0,4	-	-	-	88 082.04
AXMT 160608	16	0,8	88 286.08	88 284.08	88 285.08	88 082.08

Werkzeugaufnahmen HSK-A

Tool holders HSK-A

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Fräsaufnahmen für Einschraubfräser
Modular screw on holder

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Fräsdorne
Arbors for shell cutters

54 - 61

Fräserhülsen / Zwischenhülsen
Morse taper adaptors

62 - 63

Weldonfutter
Side lock adapter

64 - 67

Spannzangenfutter
Collet chucks

68 - 71

CNC-Bohrfutter
CNC-drill chucks

73

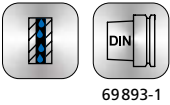
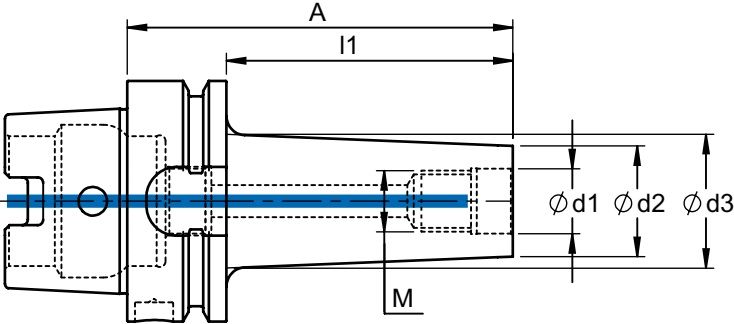
Rohlinge
Blanks

74

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

Fräsaufnahme HSK-A32 für Einschraubfräser

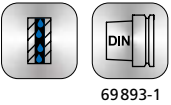
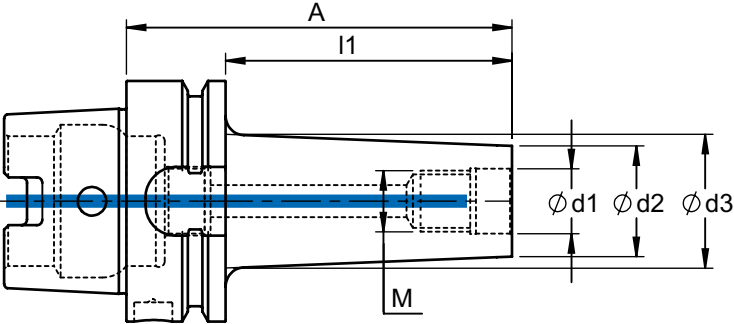
modular screw on holder HSK-A32



Bestell-Nr. order number	M	d1	d2	d3	A	l1	
920 - A320625	M6	6,5	10	15	45	25	G2,5/15.000 oder/or U<1gmm
920 - A320650	M6	6,5	10	22	70	50	
920 - A320825	M8	8,5	13,8	17	45	25	
920 - A320850	M8	8,5	13,8	24	70	50	
920 - A321025	M10	10,5	18	23	45	25	
920 - A321050	M10	10,5	18	25	70	50	
920 - A321225	M12	12,5	21	25	45	25	G2,5/15.000 oder/or U<1gmm

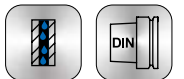
Fräsaufnahme HSK-A40 für Einschraubfräser

modular screw on holder HSK-A40



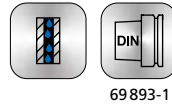
Bestell-Nr. order number	M	d1	d2	d3	A	l1	
920 - A400825	M8	8,5	13,8	18	45	25	G2,5/15.000 oder/or U<1gmm
920 - A400850	M8	8,5	13,8	23	70	50	
920 - A400875	M8	8,5	13,8	25	95	75	
920 - A401025	M10	10,5	18	23	45	25	
920 - A401050	M10	10,5	18	25	70	50	
920 - A401075	M10	10,5	18	30	95	75	
920 - A4010100	M10	10,5	18	34	120	100	
920 - A401225	M12	12,5	21	24	45	25	
920 - A401250	M12	12,5	21	30	70	50	
920 - A401275	M12	12,5	21	34	95	75	
920 - A401625	M16	17	29	34	45	25	
							G2,5/15.000 oder/or U<1gmm

modular screw on holder HSK-A50

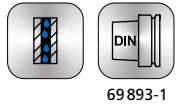


2,5/15.000
oder/or
U<1gmm

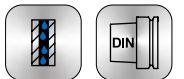
modular screw on holder HSK-A63

48 nineck

modular screw on holder HSK-A63

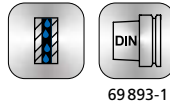
nineck 49

modular screw on holder HSK-A80

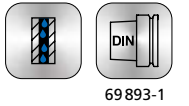


2,5/15.000
oder/or
U<1gmm

modular screw on holder HSK-A100

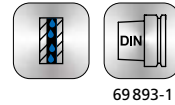
52 nineck

modular screw on holder HSK-A100

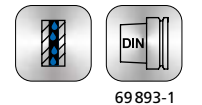
rineck 53

arbor HSK-A50 for shell cutter

delivery: with drive keys and retaining screw

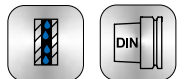
54 nineck

delivery: with drive keys and retaining screw

rineck 55

arbors HSK-A80 for shell cutter

delivery: with drive keys and retaining screw

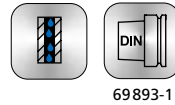


69893-1

G6,3/8.000

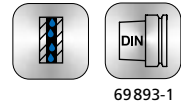
arbors HSK-A63 for shell cutter

delivery: with drive keys and retaining screw



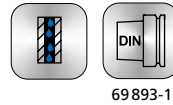
arbors HSK-A63 for shell cutter

delivery: with drive keys and retaining screw



arbors HSK-A63 - 100 with enlarged contact surface diameter

delivery: with drive keys and retaining screw



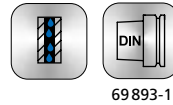
G6,3/8.000

delivery: with drive keys and retaining screw



G6,3/8.000

morse taper adaptor HSK-A63 - 100

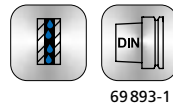
62 rineck

morse taper adaptor, HSK-A50 - 100

rineck 63

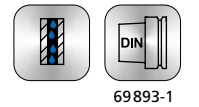
side lock adapter HSK-A50

Lieferumfang: HSK-Aufnahme mit Spannschraube
delivery: side lock adapter with tightening screw

[illegible]

side lock adapter HSK-A63

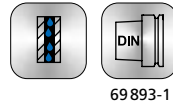
Lieferumfang: HSK-Aufnahme mit Spannschraube
delivery: side lock adapter with tightening screw



Bestell-Nr. order number	d1	D	I1	I2	A		
903 - A6306	6	25	39	38	65	949-M6	G6,3/8.000
903 - A6308	8	28	39	38	65	949-M8	
903 - A6310	10	35	39	42	65	949-M10	
903 - A6312	12	42	54	47	80	949-M12	
903 - A6314	14	44	54	47	80	949-M12	
903 - A6316	16	48	54	50	80	949-M14	
903 - A6318	18	50	54	50	80	949-M14	
903 - A6320	20	52	54	52	80	949-M16	
903 - A6325	25	65	84	60	110	949-M18X2	
903 - A6332	32	72	84	64	110	949-M20X2	
903 - A6340	40	80	94	74	120	949-M20X2	
903 - A6306A125	6	25	99	38	125	949-M6	
903 - A6308A125	8	28	99	38	125	949-M8	
903 - A6310A125	10	35	99	42	125	949-M10	
903 - A6312A125	12	42	99	47	125	949-M12	
903 - A6314A125	14	44	99	47	125	949-M12	
903 - A6316A125	16	48	99	50	125	949-M14	
903 - A6318A125	18	50	99	50	125	949-M14	
903 - A6320A125	20	52	99	52	125	949-M16	
903 - A6306A160	6	25	134	38	160	949-M6	
903 - A6308A160	8	28	134	38	160	949-M8	
903 - A6310A160	10	35	134	42	160	949-M10	
903 - A6312A160	12	42	134	47	160	949-M12	
903 - A6314A160	14	44	134	47	160	949-M12	
903 - A6316A160	16	48	134	50	160	949-M14	
903 - A6318A160	18	50	134	50	160	949-M14	
903 - A6320A160	20	52	134	52	160	949-M16	
903 - A6325A160	25	65	134	60	160	949-M18X2	
903 - A6332A160	32	72	134	64	160	949-M20X2	
903 - A6340A160	40	80	134	74	160	949-M20X2	
903 - A6306A200	6	25	174	38	200	949-M6	
903 - A6308A200	8	28	174	38	200	949-M8	
903 - A6310A200	10	35	174	42	200	949-M10	
903 - A6312A200	12	42	174	47	200	949-M12	
903 - A6316A200	16	48	174	50	200	949-M14	
903 - A6320A200	20	52	174	52	200	949-M16	

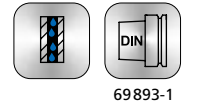
side lock adapter HSK-A80

Lieferumfang: HSK-Aufnahme mit Spannschraube
delivery: side lock adapter with tightening screw

[illegible]

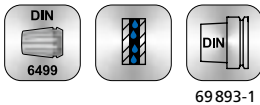
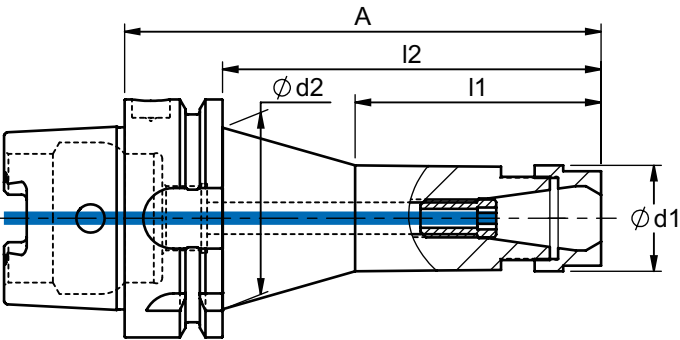
side lock adapter HSK-A100

Lieferumfang: HSK-Aufnahme mit Spannschraube
delivery: side lock adapter with tightening screw

[illegible]

Spannzangenfutter HSK-A50 - 100
für Spannzangen ER 16 mit Spannmutter UM
collet chucks HSK type-A50 - 100 for collets ER 16 with nut UM

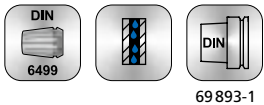
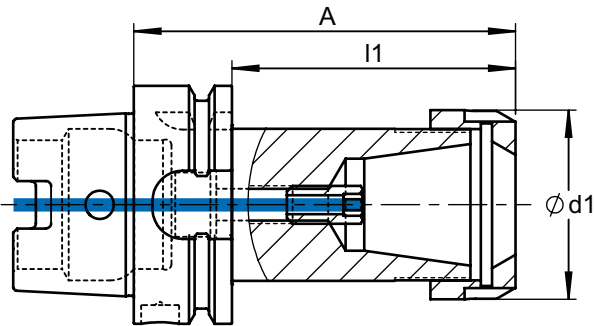
Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM



Bestell-Nr. order number	HSK	d1	d2	l1	l2	A				
910 - A3230	A32	28	28	-	30	50	953-UM16	-	954-034	G6,3/8.000
910 - A3260	A32	28	28	-	60	80	953-UM16	-	954-034	
910 - A5050	A50	28	42	43	50	76	953-UM16	-	954-034	
910 - A50100	A50	28	42	65	100	126	953-UM16	948-M10	954-034	
910 - A6350	A63	28	42	43	50	76	953-UM16	-	954-034	
910 - A63100	A63	28	48	65	100	126	953-UM16	948-M10	954-034	
910 - A63100ZY	A63	28	28	100	100	126	953-UM16	948-M10	954-034	
910 - A63150	A63	28	53	65	150	176	953-UM16	948-M10	954-034	
910 - A63150ZY	A63	28	28	150	150	176	953-UM16	948-M10	954-034	
910 - A100A100	A100	28	28	61	71	100	953-UM16	948-M10	954-034	
910 - A100A120	A100	28	28	81	91	120	953-UM16	948-M10	954-034	
910 - A100A200	A100	28	28	161	171	200	953-UM16	948-M10	954-034	
910 - A100100	A100	28	48	65	100	129	953-UM16	948-M10	954-034	G6,3/8.000

Spannzangenfutter HSK-A32 - 100
für Spannzangen ER 25/32/40 mit Spannmutter UM
collet chucks HSK-A32 - 100 for collets ER 25/32/40 with nut UM

Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM



Bestell-Nr. order number	HSK	ER	d1	l1	A				
912 - A3245	A32	25	42	45	45	953-UM25	-	954-013ER25	G6,3/8.000
913 - A3260	A32	32	50	60	80	953-UM32	-	954-014ER32	
912 - A4060	A40	25	42	60	80	953-UM25	948-M12	954-013ER25	
913 - A4060	A40	32	50	60	80	953-UM32	948-M16	954-014ER32	
912 - A5050	A50	25	42	50	76	953-UM25	-	954-013ER25	
913 - A5050	A50	32	50	50	76	953-UM32	-	954-014ER32	
912 - A6350	A63	25	42	50	76	953-UM25	-	954-013ER25	
912 - A6375	A63	25	42	75	101	953-UM25	-	954-013ER25	
912 - A63100	A63	25	42	100	126	953-UM25	948-M12	954-013ER25	
913 - A6350	A63	32	50	50	76	953-UM32	-	954-014ER32	
913 - A6375	A63	32	50	75	101	953-UM32	948-M16	954-014ER32	G6,3/8.000
913 - A63100	A63	32	50	100	126	953-UM32	948-M16	954-014ER32	
914 - A6350	A63	40	63	50	76	953-UM40	-	954-015ER40	
914 - A6390	A63	40	63	90	116	953-UM40	948-M16	954-015ER40	
914 - A63A120	A63	40	63	94	120	953-UM40	948-M16	954-015ER40	
914 - A63A160	A63	40	63	134	160	953-UM40	948-M16	954-015ER40	
913 - A8075	A80	32	50	75	101	953-UM32	948-M16	954-014ER32	
914 - A8075	A80	40	63	75	101	953-UM40	948-M16	954-015ER40	
914 - A80A120	A80	40	63	94	120	953-UM40	948-M16	954-015ER40	
912 - A10070	A100	25	42	70	99	953-UM25	948-M12	954-013ER25	G6,3/8.000
912 - A100100	A100	25	42	100	129	953-UM25	948-M12	954-013ER25	
912 - A100A160	A100	25	42	131	160	953-UM25	948-M12	954-013ER25	
912 - A100A200	A100	25	42	171	200	953-UM25	948-M12	954-013ER25	
913 - A10050	A100	32	50	50	79	953-UM32	-	954-014ER32	
913 - A10070	A100	32	50	70	99	953-UM32	948-M16	954-014ER32	
913 - A100100	A100	32	50	100	129	953-UM32	948-M16	954-014ER32	
913 - A100A100	A100	32	50	71	100	953-UM32	948-M16	954-014ER32	
913 - A100A120	A100	32	50	91	120	953-UM32	948-M16	954-014ER32	
913 - A100A160	A100	32	50	131	160	953-UM32	948-M16	954-014ER32	
913 - A100A200	A100	32	50	171	200	953-UM32	948-M16	954-014ER32	G6,3/8.000
914 - A10075	A100	40	63	75	104	953-UM40	948-M16	954-015ER40	
914 - A10090	A100	40	63	90	119	953-UM40	948-M16	954-015ER40	
914 - A100100	A100	40	63	100	129	953-UM40	948-M16	954-015ER40	
914 - A100A120	A100	40	63	91	120	953-UM40	948-M16	954-015ER40	

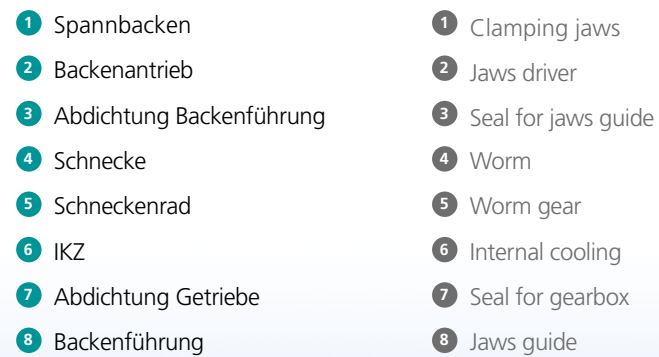
collet chucks HSK-A32 - 100 for collets ER 11/16/20 with nut HS

delivery: collet chuck with nut HS

[illegible]

CNC- drill chucks HSK-A40 - 100 for clockwise and anti clockwise rotation

Technical drawing of a tapered roller bearing showing dimensions: A_{max} , A , L , d , $D1$, and $D2$.



G6,3/8.000

blanks HSK-A32 - 100

Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.
Execution: taper and collar hardened and ground.
Application: For producing your own special tools.

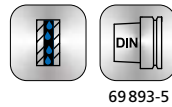
[illegible]

Tool holders HSK-E

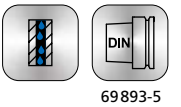
Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

90

modular screw on holder HSK-E32

76 nineck

modular screw on holder HSK-E40

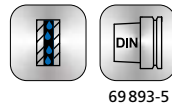
rineck 77

modular screw on holder HSK-E50

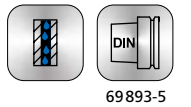


2,5/15.000
oder/or
U<1gmm

modular screw on holder HSK-E63

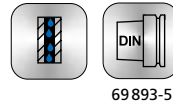
80 nineck

modular screw on holder HSK-E63

nineck 81

arbors HSK-E40 - 63 for shell cutter

delivery: with drive keys and retaining screw



G6,3/8.000

combi-arbors with tenon and parallel key drive, HSK-E50

delivery: with drive keys and retaining screw



G6,3/8.000

morse taper adaptor, HSK-E50

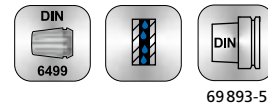
84 nineck

weldon chuck HSK-E40 - 63

rineck 85

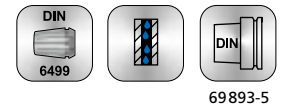
collet chucks HSK type-E32 - 50 for collets ER 16 with nut UM

Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM

86 rineck

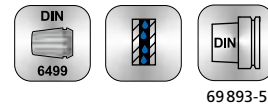
collet chucks HSK-E40 - 63 for collets ER 25/32/40 with nut UM

Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM

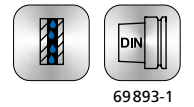
rineck 87

collet chucks HSK-E25 - 63 for collets ER 11/16/20 with nut MS

Lieferumfang: HSK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS



CNC- drill chucks HSK-E40 - 63 for clockwise and anti clockwise rotation



blanks HSK-E50 - 63

Execution: taper and collar hardened and ground.
Application: For producing your own special tools.



90 nineck

Tool holders HSK-F

92 - 93

Modular screw on holder

94

95

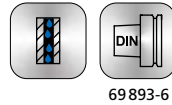
96

97 - 98

99

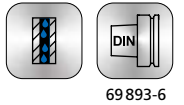
Specials on request.

modular screw on holder HSK-F63



G2,5/15.000
oder/or
U<1gmm

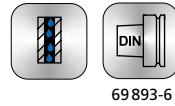
modular screw on holder HSK-F63 with thread for coolant tube



G2,5/15.000
oder/or
U<1gmm

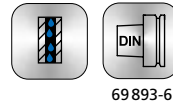
arbors HSK-F63 for shell cutter

delivery: with drive keys and retaining screw

94 nineck

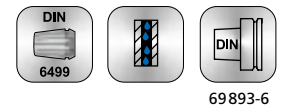
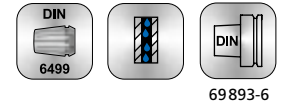
weldon chuck HSK-F63

Lieferumfang: HSK-Aufnahme mit Spannschraube
delivery: weldon chuck with tightening screw



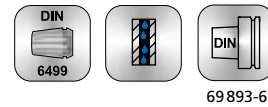
collet chucks HSK-F63 for collets ER 16/25/32/40 with nut UM

Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM

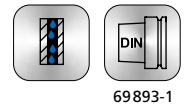


collet chucks HSK-F63 for collets ER 1 1/20 with nut MS

Lieferumfang: HSK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS



CNC- drill chucks HSK-F40 - 63 for clockwise and anti clockwise rotation



Werkzeugaufnahmen PSC

Tool holders PSC

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Fräsaufnahmen für Einschraubfräser
Modular screw on holder

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Fräsdorne
Arbors for shell cutters

103

Weldonfutter
Side lock adapter

104

Spannzangenfutter
Collet chucks

105

CNC-Bohrfutter
CNC-drill chucks

106

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

shank PSC-63 for threaded type cutter



arbors PSC-63 for shell cutter



weldon chuck HSK-F63

104 rineck

collet chucks for collets ER PSC-63

rineck 105

CNC- drill chucks PSC40 - 80 for clockwise and anti clockwise rotation

106 rineck

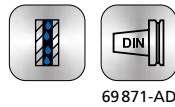
Tool holders SK

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

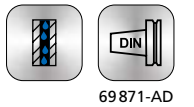
modular screw on holder SK30

[illegible]

modular screw on holder SK40

110 rineck

modular screw on holder SK40

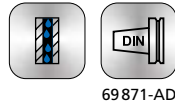
rineck 111

modular screw on holder SK40

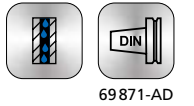


66,3/10.000

modular screw on holder SK50



modular screw on holder SK50

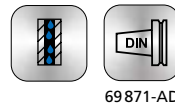


modular screw on holder SK50

[illegible]

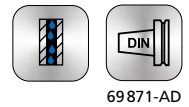
arbors SK40 for shell cutter

delivery: with drive keys and retaining screw

118 rineck

arbors SK50 for shell cutter

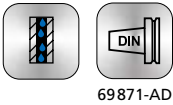
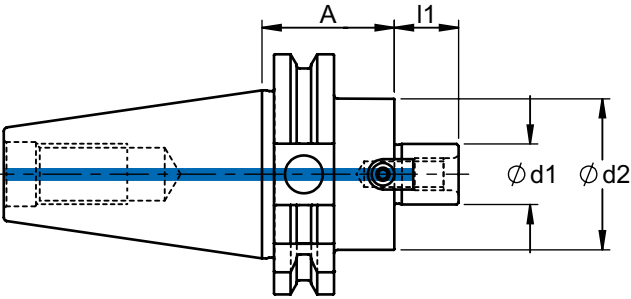
delivery: with drive keys and retaining screw

rineck 119

Fräsdorne SK40, 50
mit vergrößertem Anlagedurchmesser

arbors SK40, 50 with enlarged contact surface diameter

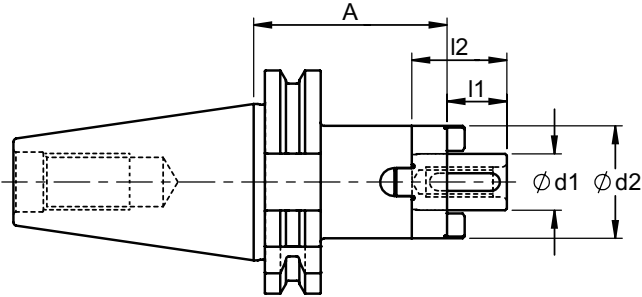
Lieferumfang: SK-Aufnahme mit Anzugsschraube
und Mitnehmersteinen
delivery: with drive keys and retaining screw



Bestell-Nr. order number	SK	d1	d2	l1	A					
968 - SK4016	SK40	16	40	17	35	x	959-16	957-16	958-16	G6,3/8.000
968 - SK4022	SK40	22	50	19	35	x	959-22	957-22	958-22	
968 - SK4027	SK40	27	50	21	35	x	959-27	957-27	958-27	
968 - SK4032	SK40	32	78	24	50	x	959-32	957-32	958-32	
968 - SK5022	SK50	22	50	19	35	x	959-22	957-22	958-22	
968 - SK5027	SK50	27	60	21	35	x	959-27	957-27	958-27	
968 - SK5032	SK50	32	78	24	35	x	959-32	957-32	958-32	
968 - SK5040	SK50	40	89	27	50	x	959-40	957-40	958-40	
968 - SK5050	SK50	50	120	30	70	x	959-50	957-50	958-50	

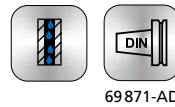
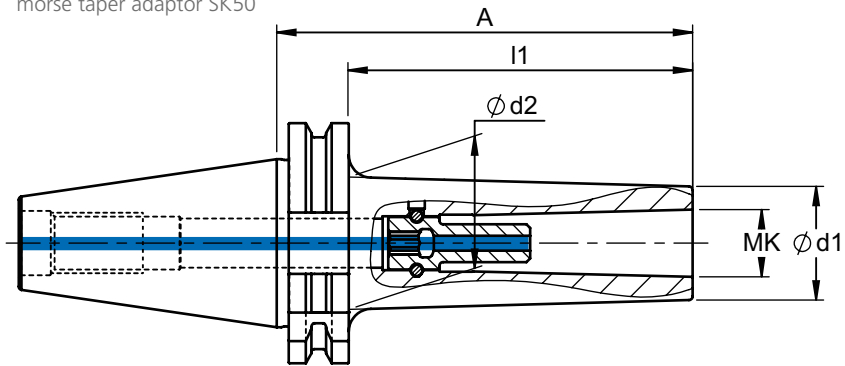
Kombi - Aufsteckfräserdorne SK40, 50
combi-arbors with tenon and parallel key drive, SK40, 50

Lieferumfang: SK-Aufnahme mit Anzugsschraube
und Mitnehmersteinen
delivery: with drive keys and retaining screw

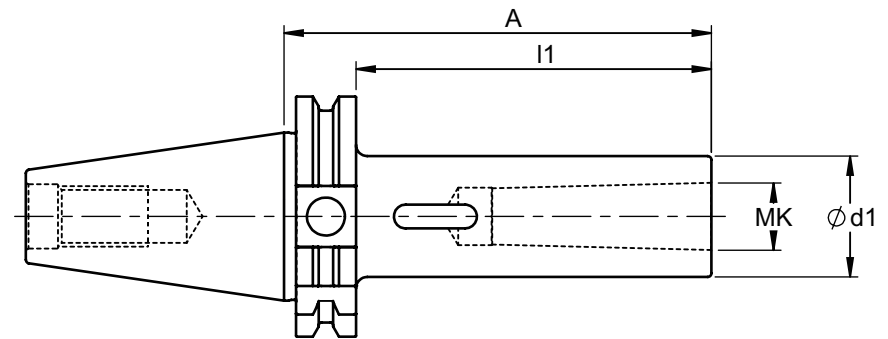


Bestell-Nr. order number	SK	d1	d2	l1	l2	A					
966 - SK4016	SK40	16	32	17	27	55	955-16	956-16	957-16	958-16	G6,3/8.000
966 - SK4022	SK40	22	40	19	31	55	955-22	956-22	957-22	958-22	
966 - SK4027	SK40	27	48	21	33	55	955-27	956-27	957-27	958-27	
966 - SK4032	SK40	32	58	24	38	60	955-32	956-32	957-32	958-32	
966 - SK5016	SK50	16	32	17	27	55	955-16	956-16	957-16	958-16	
966 - SK5022	SK50	22	40	19	31	55	955-22	956-22	957-22	958-22	
966 - SK5027	SK50	27	48	21	33	55	955-27	956-27	957-27	958-27	
966 - SK5032	SK50	32	58	24	38	55	955-32	956-32	957-32	958-32	
966 - SK5040	SK50	40	70	27	41	55	955-40	956-40	957-40	958-40	

morse taper adaptor SK50

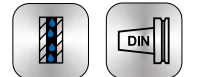
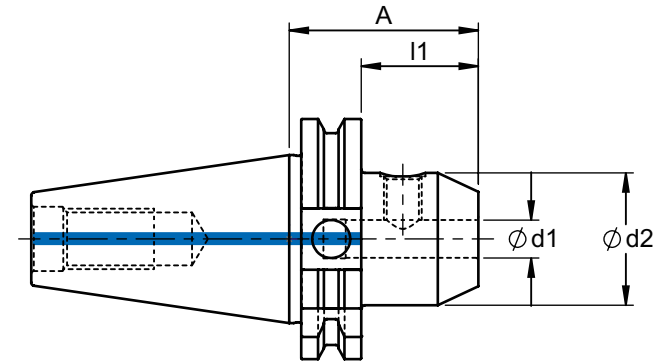


morse taper adaptor, SK40, 50



weldon chuck SK40, 50

Lieferumfang: SK-Aufnahme mit Spannschraube
delivery: weldon chuck with tightening screw

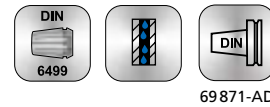


69871-AD

[illegible]

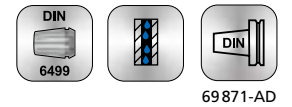
collet chucks SK30 - 50 for collets ER 16/25/32/40 with nut type UM

Lieferumfang: SK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM



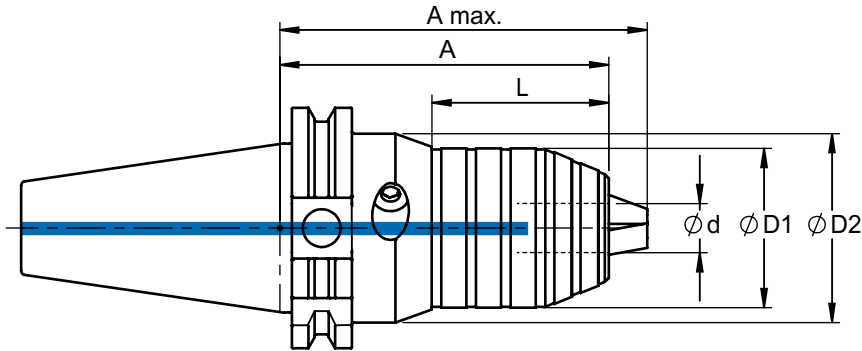
collet chucks SK30, 40 for collets ER 1 1/16/20 with nut type MS

Lieferumfang: SK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS



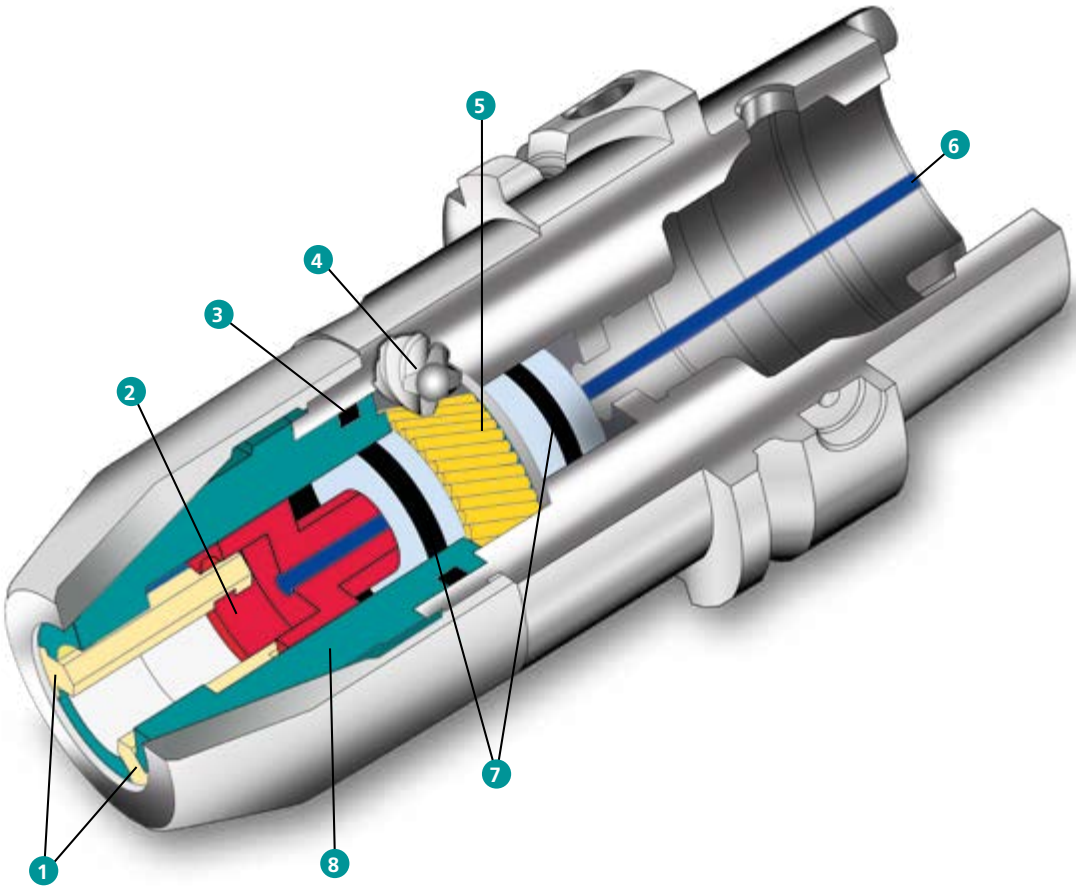
CNC- Bohrfutter SK30 - 50 für Rechts- und Linkslauf

CNC- drill chucks SK30 - 50 for clockwise and anti clockwise rotation



69871 AD/B

Bestell-Nr. order number	SK	d	D1	D2	L	A	A max.	
407 - SK3008A80	30	0,5 - 8	34,5	45,0	40,0	80,0	82,5	G6,3/8.000
407 - SK4008A80	40	0,5 - 8	34,5	45,0	40,0	80,0	82,5	
407 - SK4013A87	40	1 - 13	42,0	50,0	47,0	87,0	96,0	
407 - SK4013A160	40	1 - 13	42,0	50,0	47,0	160,0	169,0	
407 - SK4016A87	40	2,5 - 16	49,0	50,0	50,0	87,0	98,0	
407 - SK4016A160	40	2,5 - 16	49,0	50,0	50,0	160,0	171,0	
407 - SK5013A100	50	1 - 13	42,0	50,0	47,0	100,0	109,0	
407 - SK5016A100	50	2,5 - 16	49,0	50,0	50,0	100,0	111,0	



- 1

Spannbacken
- 2

Backenantrieb
- 3

Abdichtung Backenführung
- 4

Schnecke
- 5

Schneckenrad
- 6

IKZ
- 7

Abdichtung Getriebe
- 8

Backenführung

1

Clamping jaws

2

Jaws driver

3

Seal for jaws guide

4

Worm

5

Worm gear

6

Internal cooling

7

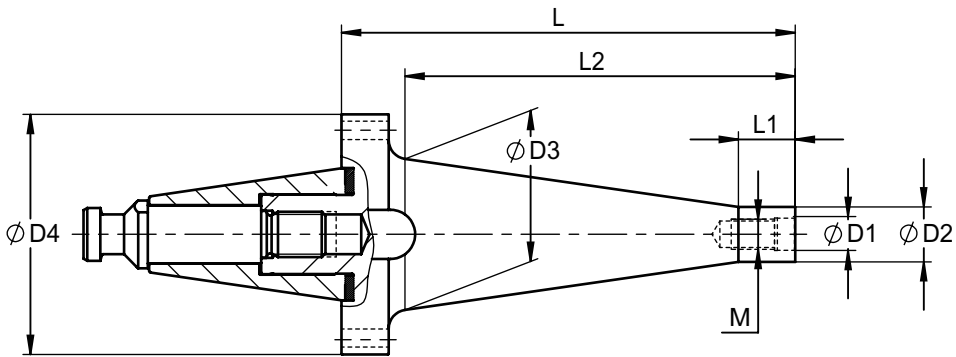
Seal for gearbox

8

Jaws guide

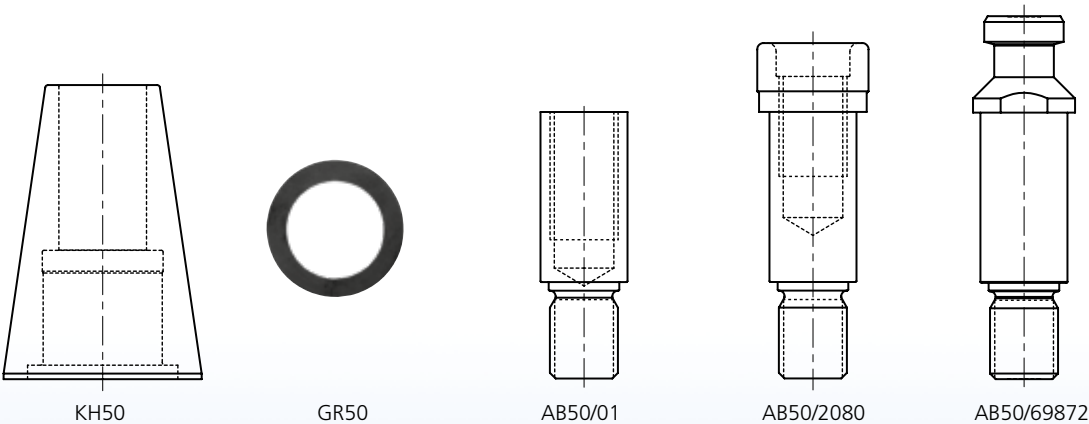
Steilkegel-Plananlagen SK50 für Einschraubfräser

modular screw on holder SK50 with face contact



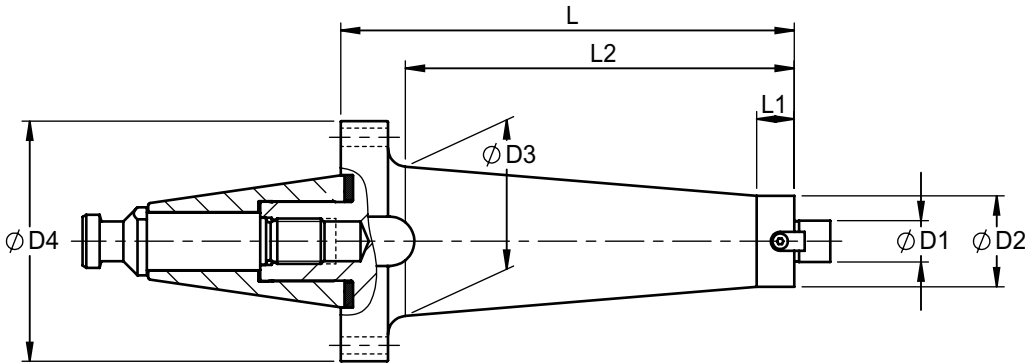
Bestell-Nr. order number	M	d1	d2	d3	d4	L	L1	L2	
963P - SK5016 250	16	17	29	78	127	290	30	250	
963P - SK5016 300	16	17	29	78	127	340	30	300	
963P - SK5016 350	16	17	29	78	127	390	30	350	
963P - SK5016 400	16	17	29	78	127	440	30	400	
963P - SK5016 450	16	17	29	78	127	490	30	450	
963P - SK5016 500	16	17	29	78	127	540	30	500	

Die Zubehöerteile sind nicht im Lieferumfang enthalten und müssen separat bestellt werden.
Accessories have to be ordered seperatly.



Steilkegel-Plananlagen SK50 für Aufsteckfräser

arbors SK50 with face contact for shell cutters



Bestell-Nr. order number	D	D1	D2	D3	L	L1	L2		
972P - SK5022 150ZY	22	48	48	127	190	-	150	959-22	957-M10
972P - SK5022 200	22	48	78	127	240	20	200	959-22	957-M10
972P - SK5022 200ZY	22	48	48	127	240	-	200	959-22	957-M10
972P - SK5022 225ZY	22	48	48	127	265	-	225	959-22	957-M10
972P - SK5022 250	22	48	78	127	290	20	250	959-22	957-M10
972P - SK5022 300	22	48	78	127	340	20	300	959-22	957-M10
972P - SK5022 350	22	48	78	127	390	20	350	959-22	957-M10
972P - SK5022 400	22	48	78	127	440	20	400	959-22	957-M10
972P - SK5022 450	22	48	78	127	490	20	450	959-22	957-M10
972P - SK5022 500	22	48	78	127	540	20	500	959-22	957-M10
972P - SK5027 200	27	58	78	127	240	20	200	959-27	957-M12
972P - SK5027 250	27	58	78	127	290	20	250	959-27	957-M12
972P - SK5027 300	27	58	78	127	340	20	300	959-27	957-M12
972P - SK5027 350	27	58	78	127	390	20	350	959-27	957-M12
972P - SK5027 400	27	58	78	127	440	20	400	959-27	957-M12
972P - SK5027 450	27	58	78	127	490	20	450	959-27	957-M12
972P - SK5027 500	27	58	78	127	540	20	500	959-27	957-M12

blanks SK40, 50

Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.
Execution: taper and collar hardened and ground.
Application: For producing your own special tools.

[illegible]

Tool holders SK50 DIN 2080

Fräsaufnahmen für Einschraubfräser

Modular screw on holder

Fräsdorne
Arbors for shell cutters

Fräserhülsen / Zwischenhülsen
Morse taper adaptors

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

modular screw on holder SK50 DIN 2080

134 nineck

arbors SK50 for shell cutter



DIN
2080

rineck 135

morse taper adaptor SK50

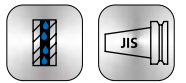
136 rineck

Tool holders BT

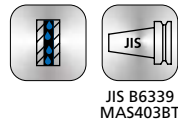
152

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

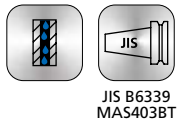
modular screw on holder BT30

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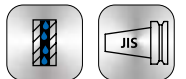
modular screw on holder BT40



modular screw on holder BT40



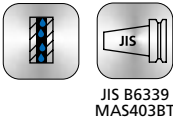
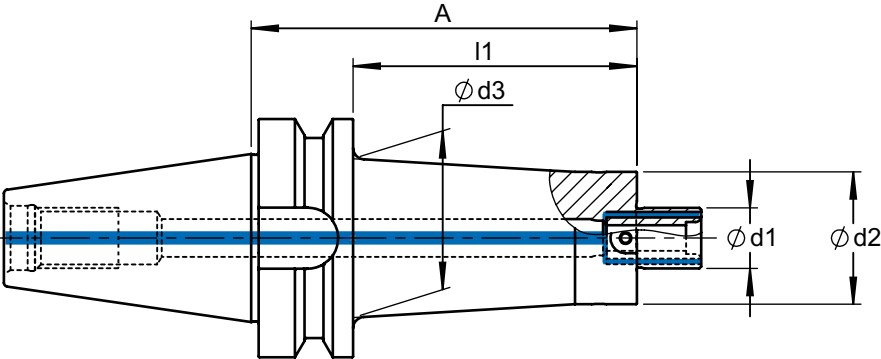
modular screw on holder BT50



Fräsdorne BT40

arbors BT40 for shell cutter

Lieferumfang: BT-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw



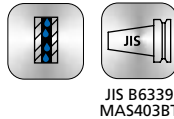
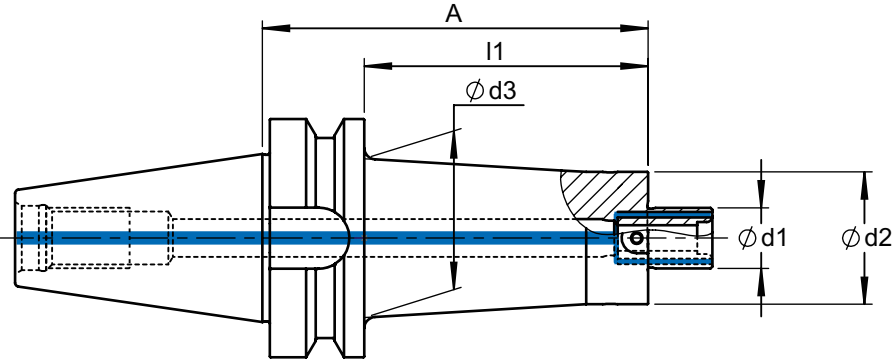
Bestell-Nr. order number	d1	d2	d3	l1	A					
972-BT401625	16	35	35	25	52	x	959-16	-	957-M8	-
972-BT401650	16	35	42	50	77	x	959-16	-	957-M8	-
972-BT401675	16	35	45	75	102	x	959-16	-	957-M8	-
972-BT4016100	16	35	50	100	127	x	959-16	-	957-M8	-
972-BT4016150	16	35	50	150	177	x	959-16	-	957-M8	-
972-BT4016200	16	35	50	200	227	x	959-16	-	957-M8	-
972-BT402225	22	40	40	25	52	x	959-22	-	957-M10	-
972-BT402250	22	40	45	50	77	x	959-22	-	957-M10	-
972-BT402275	22	40	50	75	102	x	959-22	-	957-M10	-
972-BT4022100	22	40	50	100	127	x	959-22	-	957-M10	-
972-BT4022150	22	40	50	150	177	x	959-22	-	957-M10	-
972-BT4022200	22	40	50	200	227	x	959-22	-	957-M10	-
972-BT402725	27	45	45	25	52	x	959-27	-	957-M12	-
972-BT402750	27	45	45	50	77	x	959-27	-	957-M12	-
972-BT402775	27	45	45	75	102	x	959-27	-	957-M12	-
972-BT4027100	27	45	45	100	127	x	959-27	-	957-M12	-

G6,3/8.000

Fräsdorne BT50

arbors BT50 for shell cutter

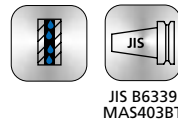
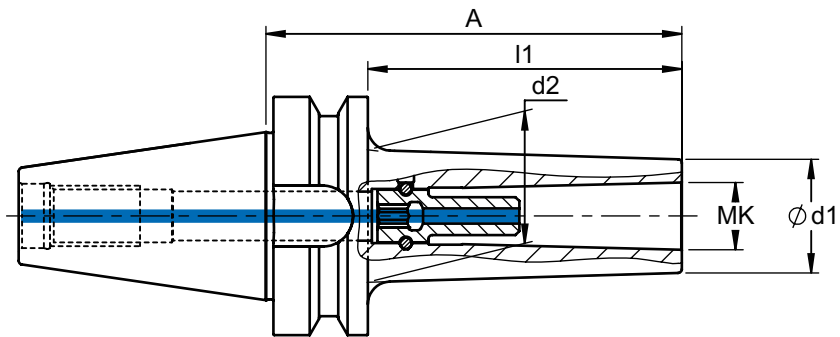
Lieferumfang: BT-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw



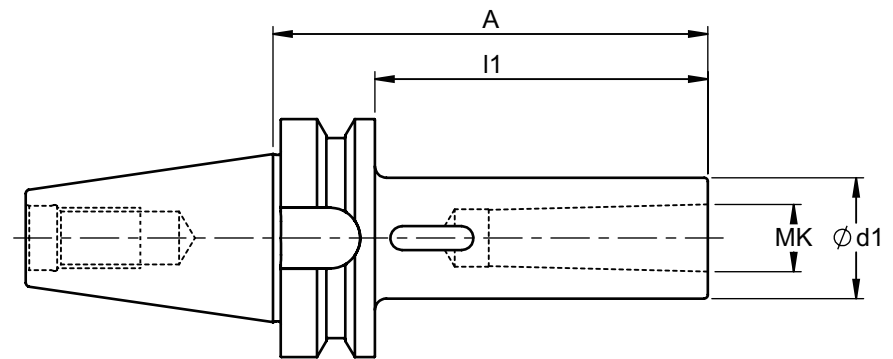
Bestell-Nr. order number	d1	d2	d3	l1	A					
972-BT501650	16	35	40	50	88	x	959-16	-	957-M8	-
972-BT5016100	16	35	50	100	138	x	959-16	-	957-M8	-
972-BT5016150	16	35	53	150	188	-	959-16	-	957-M8	-
972-BT5016200	16	35	60	200	238	-	959-16	-	957-M8	-
972-BT5022250	22	40	40	50	88	x	959-22	-	957-M10	-
972-BT5022100	22	40	50	100	138	x	959-22	-	957-M10	-
972-BT5022150	22	40	62	150	188	-	959-22	-	957-M10	-
972-BT5022200	22	40	68	200	238	-	959-22	-	957-M10	-
972-BT502720	27	60	60	20	58	x	959-27	-	957-M12	-
972-BT502750	27	60	60	50	88	x	959-27	-	957-M12	-
972-BT5027100	27	60	70	100	138	x	959-27	-	957-M12	-
972-BT5027150	27	60	78	150	188	-	959-27	-	957-M12	-
972-BT5027200	27	60	78	200	238	-	959-27	-	957-M12	-
972-BT503250	32	70	70	50	88	-	959-32	957-32	-	958-32
972-BT5032100	32	70	95	100	138	-	959-32	957-32	-	958-32
972-BT5032150	32	70	95	150	188	-	959-32	957-32	-	958-32
972-BT504050	40	95	95	50	88	-	959-40	957-40	-	958-40
972-BT5040100	40	95	95	100	138	-	959-40	957-40	-	958-40

G6,3/8.000

morse taper adaptor BT40, 50

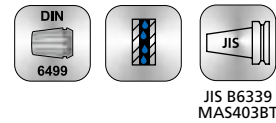
[illegible]

morse taper adaptor BT40, 50

[illegible]

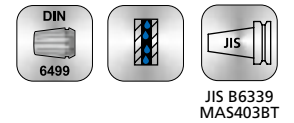
collet chucks BT30 - 50 for collets ER 16/25/32/40 with nut type UM

Lieferumfang: BT-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM

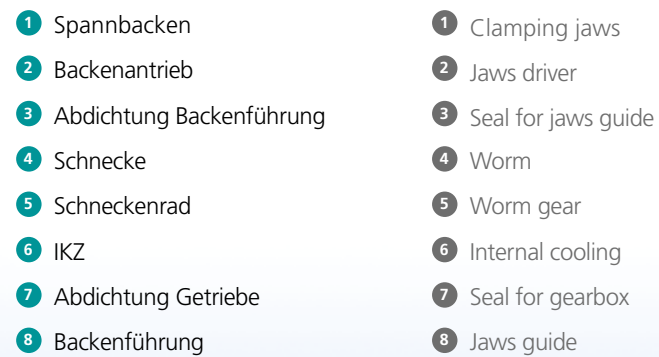
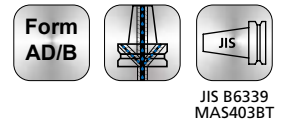
[illegible]

collet chucks BT30, 40 for collets ER 20 with nut type MS

Lieferumfang: BT-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS

[illegible]

CNC- drill chucks BT30 - 50 for clockwise and anti clockwise rotation

150 rineck

blanks BT40, 50

Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.
Execution: taper and collar hardened and ground.
Application: For producing your own special tools.

[illegible]

extensions/reducers for threaded type cutters

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Hartmetallverlängerungen für Einschraubfräser
Carbide modular screw on extension

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Frässtangen mit zyl. Schaft für Einschraubfräser
Modular screw on extension

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Verlängerungen / Reduzierungen für Einschraubfräser
Extensions for modular screw in cutter

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Frässtangen MK für Einschraubfräser
Adapters with morse taper for modular screw in cutter

160 - 161

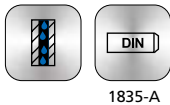
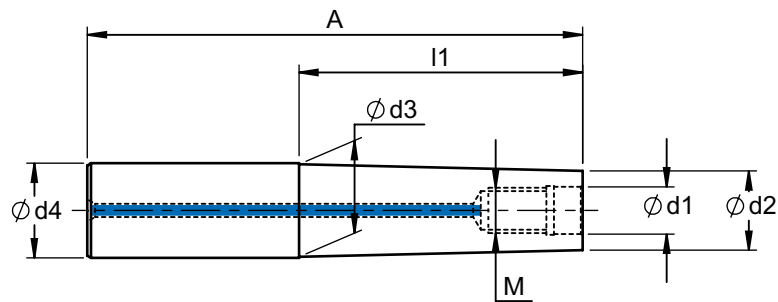
Einschraubadapter für ER-Spannzangen
Modular screw on adapter for ER-collets

162

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

Hartmetallverlängerungen für Einschraubfräser

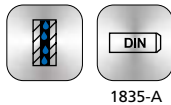
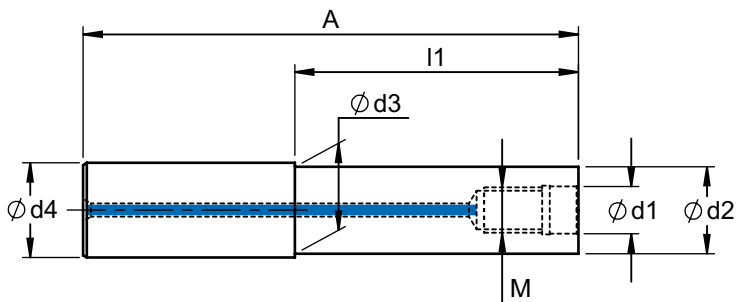
modular screw on carbide extensions



Bestell-Nr. order number	M	d1	d2	d3	d4	A	l1
979HM - 120620ZY	M6	6,5	9,8	9,8	12	65	20
979HM - 120640	M6	6,5	9,8	11,5	12	85	40
979HM - 120640ZY	M6	6,5	9,8	9,8	12	85	40
979HM - 120660	M6	6,5	9,8	11,5	12	105	60
979HM - 120660ZY	M6	6,5	9,8	9,8	12	105	60
979HM - 120680	M6	6,5	9,8	11,5	12	125	80
979HM - 120680ZY	M6	6,5	9,8	9,8	12	125	80
979HM - 1206100	M6	6,5	9,8	11,5	12	145	100
979HM - 120720ZY	M7	7,5	11,5	11,5	12	65	20
979HM - 120740ZY	M7	7,5	11,5	11,5	12	85	40
979HM - 120760ZY	M7	7,5	11,5	11,5	12	105	60
979HM - 120780ZY	M7	7,5	11,5	11,5	12	125	80
979HM - 1607100	M7	7,5	11,5	15,5	16	148	100
979HM - 160820ZY	M8	8,5	13,6	13,6	16	68	20
979HM - 160840	M8	8,5	13,6	15,5	16	88	40
979HM - 160840ZY	M8	8,5	13,6	13,6	16	88	40
979HM - 160840ZY-12,5	M8	8,5	12,5	12,5	16	88	40
979HM - 160860	M8	8,5	13,6	15,5	16	108	60
979HM - 160860ZY	M8	8,5	13,6	13,6	16	108	60
979HM - 160860ZY-12,5	M8	8,5	12,5	12,5	16	108	60
979HM - 160880	M8	8,5	13,6	15,5	16	128	80
979HM - 160880ZY	M8	8,5	13,6	13,6	16	128	80
979HM - 160880ZY-12,5	M8	8,5	12,5	12,5	16	128	80
979HM - 1608100	M8	8,5	13,6	15,5	16	148	100
979HM - 1608100ZY	M8	8,5	13,6	13,6	16	148	100
979HM - 1608120	M8	8,5	13,6	15,5	16	168	120
979HM - 161020ZY-15,4	M10	10,5	15,4	15,4	16	68	20
979HM - 161040ZY-15,4	M10	10,5	15,4	15,4	16	88	40
979HM - 161060ZY-15,4	M10	10,5	15,4	15,4	16	108	60
979HM - 161080ZY-15,4	M10	10,5	15,4	15,4	16	128	80
979HM - 1610100ZY-15,4	M10	10,5	15,4	15,4	16	148	100
979HM - 1610120ZY-15,4	M10	10,5	15,4	15,4	16	168	120
979HM - 1610205ZY-15,4	M10	10,5	15,4	15,4	16	250	205

Hartmetallverlängerungen für Einschraubfräser

modular screw on carbide extensions



Bestell-Nr. order number	M	d1	d2	d3	d4	A	l1
979HM - 201040	M10	10,5	18	19,5	20	90	40
979HM - 201060	M10	10,5	18	19,5	20	110	60
979HM - 201080	M10	10,5	18	19,5	20	130	80
979HM - 201080-15,4	M10	10,5	15,4	19,5	20	130	80
979HM - 2010100	M10	10,5	18	19,5	20	150	100
979HM - 2010100-15,4	M10	10,5	15,4	19,5	20	150	100
979HM - 2010120	M10	10,5	18	19,5	20	170	120
979HM - 2010120-15,4	M10	10,5	15,4	19,5	20	170	120
979HM - 2010150	M10	10,5	18	19,5	20	200	150
979HM - 2010150-15,4	M10	10,5	15,4	19,5	20	200	150
979HM - 2010200	M10	10,5	19	19	20	250	200
979HM - 251240ZY	M12	12,5	23	23	25	96	40
979HM - 251275	M12	12,5	21	24,5	25	131	75
979HM - 251275ZY	M12	12,5	23	23	25	131	75
979HM - 2512100	M12	12,5	21	24,5	25	156	100
979HM - 2512100ZY	M12	12,5	23	23	25	156	100
979HM - 2512125	M12	12,5	21	24,5	25	181	125
979HM - 2512150	M12	12,5	21	24,5	25	206	150
979HM - 2512175	M12	12,5	21	24,5	25	231	175
979HM - 3216100	M16	17	29	31,5	32	160	100
979HM - 3216150	M16	17	29	31,5	32	210	150
979HM - 3216200	M16	17	29	31,5	32	260	200

modular screw on extensions



modular screw on extensions



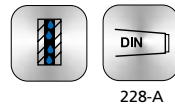
modular screw on extensions

158 rineck

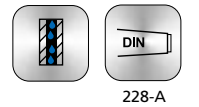
modular screw on reducers

rineck 159

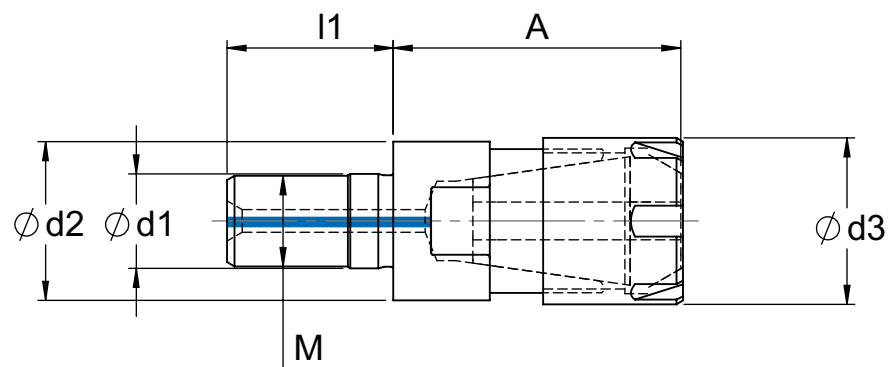
modular screw on extension, morse taper

160 rineck

modular screw on extension, morse taper

rineck 161

modular screw on adapter for ER-collets

[illegible]

Accessories

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ER - Spannzangen / Standard nach DIN 6499 Form B
Collets type ER DIN 6499 form B

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Montageblock

Tightening fixtures

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Torxschrauben / Torxschlüssel
Clamping screws / torx wrenches

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Kühlmittelübergaberohre / Schlüssel
Coolant tubes / wrenches

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Anzugsbolzen
Pull studs

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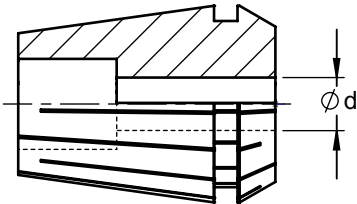
172 - 173

Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

ER 11 - 25 Spannzangen / Standard nach DIN 6499 Form B

collets type ER 11 - 25 DIN 6499 form B

Ausführung:
Rundlauf 0,010 mm
Execution:
Admissable concentricity 0,010 mm



Spannzangen ER11 Spannbereich d max / min	Bestell-Nr. order number
1,0 - 0,5	950 - 1101
1,5 - 1,0	950 - 11015
2,0 - 1,5	950 - 1102
2,5 - 2,0	950 - 11025
3,0 - 2,5	950 - 1103
3,5 - 3,0	950 - 11035
4,0 - 3,5	950 - 1104
4,5 - 4,0	950 - 11045
5,0 - 4,5	950 - 1105
5,5 - 5,0	950 - 11055
6,0 - 5,5	950 - 1106
6,5 - 6,0	950 - 11065
7,0 - 6,5	950 - 1107

Holzsockel für ER11	950 - 1198
Standard Satz = 13 Stk. d = 1,0... 7,0	950 - 1199

Spannzangen ER20 Spannbereich d max / min	Bestell-Nr. order number
1,0 - 0,5	950 - 2001
2,0 - 1,0	950 - 2002
3,0 - 2,0	950 - 2003
4,0 - 3,0	950 - 2004
5,0 - 4,0	950 - 2005
6,0 - 5,0	950 - 2006
7,0 - 6,0	950 - 2007
8,0 - 7,0	950 - 2008
9,0 - 8,0	950 - 2009
10,0 - 9,0	950 - 2010
11,0 - 10,0	950 - 2011
12,0 - 11,0	950 - 2012
13,0 - 12,0	950 - 2013

Holzsockel für ER20	950 - 2098
Standard Satz = 12 Stk. d = 2,0... 13,0	950 - 2099

Spannzangen ER16 Spannbereich d max / min	Bestell-Nr. order number
1,0 - 0,5	950 - 1601
2,0 - 1,0	950 - 1602
3,0 - 2,0	950 - 1603
4,0 - 3,0	950 - 1604
5,0 - 4,0	950 - 1605
6,0 - 5,0	950 - 1606
7,0 - 6,0	950 - 1607
8,0 - 7,0	950 - 1608
9,0 - 8,0	950 - 1609
10,0 - 9,0	950 - 1610

Holzsockel für ER16	950 - 1698
Standard Satz = 10 Stk. d = 1,0... 10,0	950 - 1699

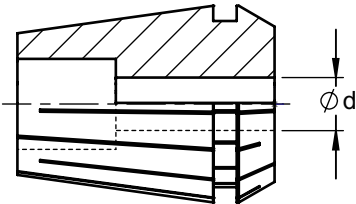
Spannzangen ER25 Spannbereich d max / min	Bestell-Nr. order number
1,0 - 0,5	950 - 2501
2,0 - 1,0	950 - 2502
3,0 - 2,0	950 - 2503
4,0 - 3,0	950 - 2504
5,0 - 4,0	950 - 2505
6,0 - 5,0	950 - 2506
7,0 - 6,0	950 - 2507
8,0 - 7,0	950 - 2508
9,0 - 8,0	950 - 2509
10,0 - 9,0	950 - 2510
11,0 - 10,0	950 - 2511
12,0 - 11,0	950 - 2512
13,0 - 12,0	950 - 2513
14,0 - 13,0	950 - 2514
15,0 - 14,0	950 - 2515
16,0 - 15,0	950 - 2516

Holzsockel für ER25	950 - 2598
Standard Satz = 15 Stk. d = 2,0... 16,0	950 - 2599

ER 32, 40 Spannzangen / Standard nach DIN 6499 Form B

collets type ER 32, 40 DIN 6499 form B

Ausführung:
Rundlauf 0,010 mm
Execution:
Admissable concentricity 0,010 mm



Spannzangen ER32 Spannbereich d max / min	Bestell-Nr. order number
2,0 - 1,0	950 - 3202
3,0 - 2,0	950 - 3203
4,0 - 3,0	950 - 3204
5,0 - 4,0	950 - 3205
6,0 - 5,0	950 - 3206
7,0 - 6,0	950 - 3207
8,0 - 7,0	950 - 3208
9,0 - 8,0	950 - 3209
10,0 - 9,0	950 - 3210
11,0 - 10,0	950 - 3211
12,0 - 11,0	950 - 3212
13,0 - 12,0	950 - 3213
14,0 - 13,0	950 - 3214
15,0 - 14,0	950 - 3215
16,0 - 15,0	950 - 3216
17,0 - 16,0	950 - 3217
18,0 - 17,0	950 - 3218
19,0 - 18,0	950 - 3219
20,0 - 19,0	950 - 3220

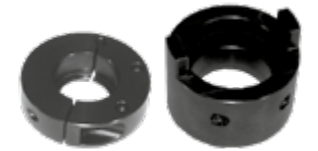
Holzsockel für ER32	950 - 3298
Standard Satz = 18 Stk. d = 3,0... 20,0	950 - 3299

Spannzangen ER40 Spannbereich d max / min	Bestell-Nr. order number
3,0 - 2,0	950 - 4003
4,0 - 3,0	950 - 4004
5,0 - 4,0	950 - 4005
6,0 - 5,0	950 - 4006
7,0 - 6,0	950 - 4007
8,0 - 7,0	950 - 4008
9,0 - 8,0	950 - 4009
10,0 - 9,0	950 - 4010
11,0 - 10,0	950 - 4011
12,0 - 11,0	950 - 4012
13,0 - 12,0	950 - 4013
14,0 - 13,0	950 - 4014
15,0 - 14,0	950 - 4015
16,0 - 15,0	950 - 4016
17,0 - 16,0	950 - 4017
18,0 - 17,0	950 - 4018
19,0 - 18,0	950 - 4019
20,0 - 19,0	950 - 4020
21,0 - 20,0	950 - 4021
22,0 - 21,0	950 - 4022
23,0 - 22,0	950 - 4023
24,0 - 23,0	950 - 4024
25,0 - 24,0	950 - 4025
26,0 - 25,0	950 - 4026
27,0 - 26,0	950 - 4027
28,0 - 27,0	950 - 4028
29,0 - 28,0	950 - 4029
30,0 - 29,0	950 - 4030

Holzsockel für ER40	950 - 4098
Standard Satz = 23 Stk. d = 4,0... 26,0	950 - 4099

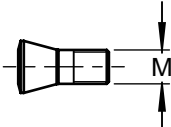
Alle unter Standard-Ausführung aufgeführten Spannzangen sind auch als Ultrapräzisions-Ausführung erhältlich.
Bei der Bestellung bitte vor die Bestell-Nr. ein „U“ setzen.
All above collets also available in high precision. Put a “U” in front of the order number.
Order example: U 950-3220

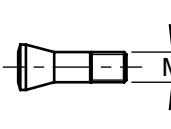
tightening fixtures and flange for tightening fixture



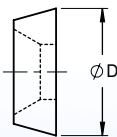
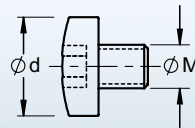
Zubehör

accessories

Torxschrauben clamping screws	Bestell-Nr. order number	Größe (Gewinde) size
	993 00	M 1,8
	993 01	M 2
	993 02	M 2,5
	993 02K	M 2,5
	993 12	M 2,5
	993 03	M 3
	993 04	M 3,5
	993 15	M 4
	993 06	M 4,5
	993 07	M 5
	993 31	M 2
	993 32	M 2,5
	993 35	M 4

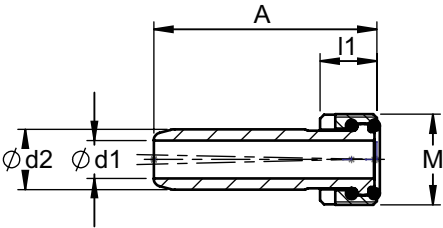
Passschrauben clamping screws	Bestell-Nr. order number	Größe (Gewinde) size
	993 22	M 2,5 x 0,35
	993 23	M 3 x 0,35
	993 24	M 3,5
	993 25	M 4
	993 27	M 5

Torxschlüssel torx wrenches	Bestell-Nr. order number	Größe (Gewinde) size
	994 06	T 6
	994 07	T 7
	994 08	T 8
	994 10	T 10
	994 15	T 15
	994 20	T 20
	994 06IP	T 6IP
	994 07IP	T 7IP
	994 15IP	T 15IP

Klemmscheiben, -schrauben clamp washer	Bestell-Nr. order number	Größe size	M	Torxschlüssel torx wrenches	Bezeichnung name
					
	995 01	Ø12			Klemmscheibe
					
	995 05	Ø 8	3,5	994 15	Klemmschraube für WSP Ø 12

Kühlmittelübergaberohre für HSK- Aufnahmen

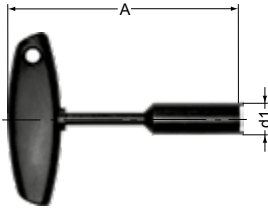
coolant tubes



Bestell-Nr. order number	HSK	d1	d2	M	l1	A
951 - A32	A - 32	3,5	6	M 10x 1,0	5,5	25,7
951 - A40	A - 40	5	8	M 12x 1,0	7,5	29,2
951 - A50	A - 50	6,4	10	M 16x 1,0	9,5	32,7
951 - A63	A - 63	8	12	M 18x 1,0	11,5	36,2
951 - A80	A - 80	10	14	M 20x 1,5	13,5	39,7
951 - A100	A - 100	12	16	M 24x 1,5	15,5	43,6

Schlüssel für Kühlmittelübergaberohre

wrench for collant pipe



Bestell-Nr. order number	HSK	d1	L			
952 - A32	A - 32	8,8	110			
952 - A40	A - 40	10,8	110			
952 - A50	A - 50	14,5	120			
952 - A63	A - 63	16,5	130			
952 - A80	A - 80	18	140			
952 - A100	A - 100	22	140			

pull studs

[illegible]

pull studs

[illegible]

PIKTOGRAMME

Pictograms



Bearbeitungsrichtung
machining direction



Bearbeitungsrichtung
machining direction



Bearbeitungsrichtung
machining direction



Planfräsen
face milling



Nutfräsen
slot milling



Eckfräsen / Umfangfräsen
step milling / side milling



Fasfräsen
chamfering



Freiformflächenfräsen
contour milling



Eintauchwinkel
ramping



Zirkularfräsen
helix milling



Innenkühlung wahlweise, zentral oder über Bund
through coolant either central or radial



Guss
cast iron



Stahl
steel



Mit Innenkühlung
through coolant



Ohne Innenkühlung
without coolant



Wendeplatteneinstellung 0°
rake angle of insert pocket 0°



Wendeplatteneinstellung 7° positiv
rake angle of insert pocket 7° positiv



Wendeplatteneinstellung 12° positiv
rake angle of insert pocket 12° positiv



Diamant beschichtet
diamond coated



Diamant beschichtet
diamond coated



beschichtet / unbeschichtet
coated / uncoated



Unbeschichtet
uncoated

PIKTOGRAMME

Pictograms



Aluminium und Nichteisenwerkstoffe
aluminium and non ferrous material



R-Cut beschichtet
R-Cut coated



TIALN beschichtet
TIALN coated



Schaftausführung DIN 6535-HA
shank DIN 6535-HA



Schaftausführung DIN 6535-HB
shank DIN 6535-HB



Morsekegel DIN 228-A
morse taper DIN 228-A



Steilkegel DIN 2080
shank DIN 2080



Spannzange DIN 6499
collet DIN 6499



Steilkegel DIN 69 871 A
shank DIN 69 871 A



Steilkegel DIN 69 871 AD
shank DIN 69 871 AD



Steilkegel DIN 69 871 AD/B
shank DIN 69 871 AD/B



Hohlschaftkegel DIN 69 893-1
hollow taper shank DIN 69 893-1



Hohlschaftkegel DIN 69 893-5
hollow taper shank DIN 69 893-5



Hohlschaftkegel DIN 69 893-6
hollow taper shank DIN 69 893-6



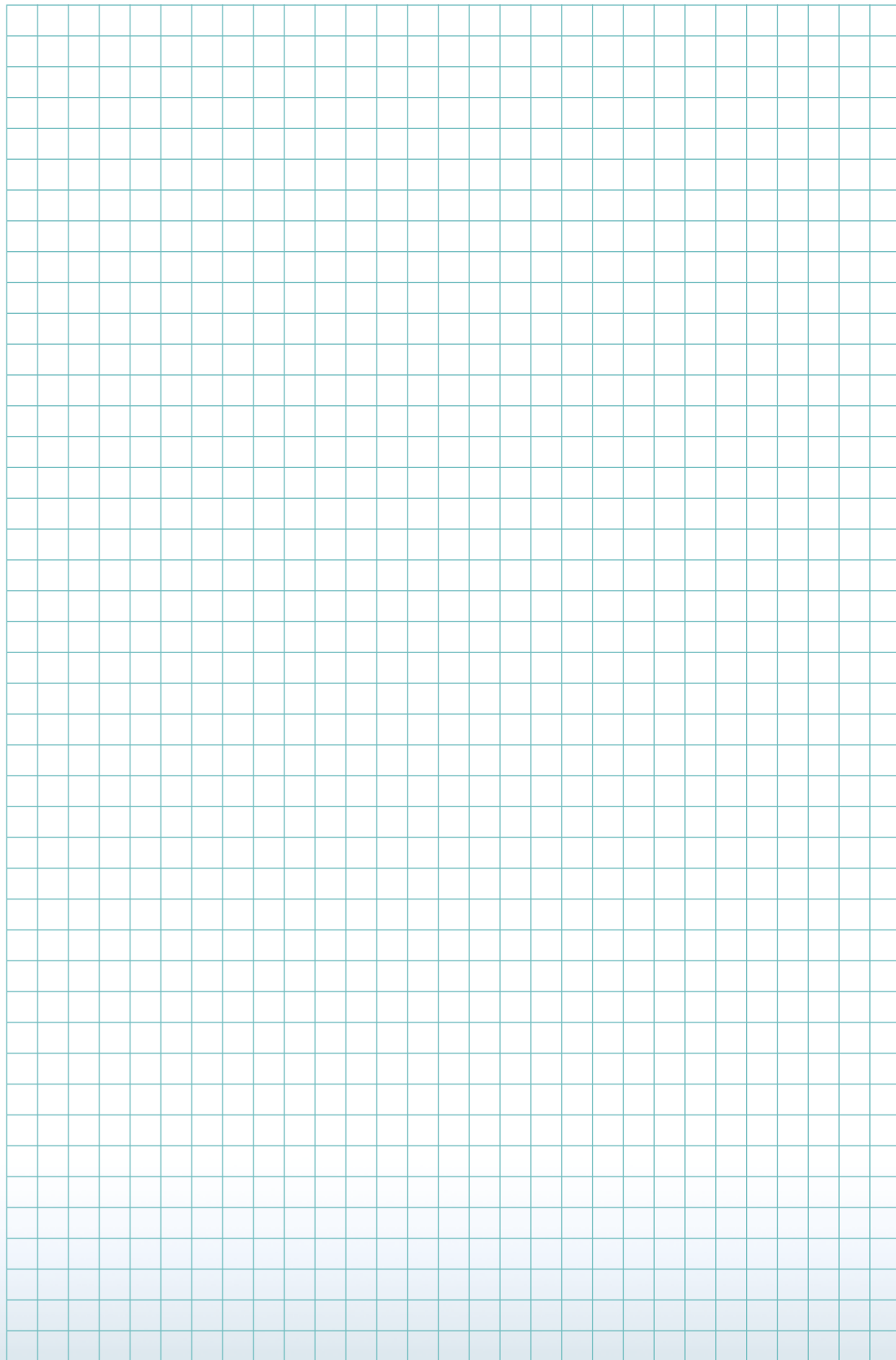
Steilkegel MAS-BT JIS B 6339
shank MAS-BT JIS B 6339



Polygonschaftkegel ISO 26623-1
Polygonal taper interface ISO 26623-1



Polygonschaftkegel ISO 26623-1
Polygonal taper interface ISO 26623-1



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