

rineck

• Werkzeugtechnik



- Fräswerkzeuge/Werkzeugaufnahmen
Cutting tools/Tool holders

 **FEBAMETAL**

TOOLS ARE OUR PASSION  MADE IN GERMANY

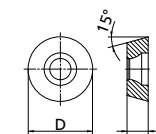
INHALTSVERZEICHNIS

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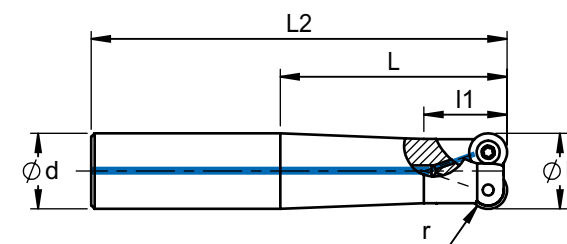
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Cutting tools / inserts

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

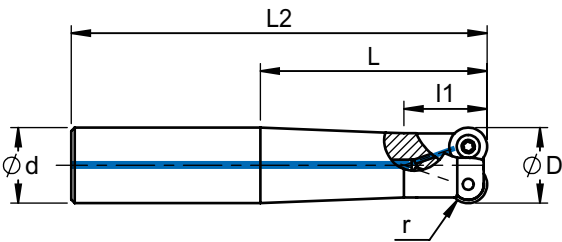
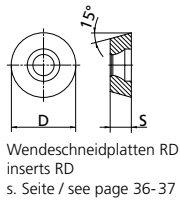
shank type cutters / modular screw in cutters / shell cutters ADKT / APKT

modular screw in cutters / shell cutters AXMT

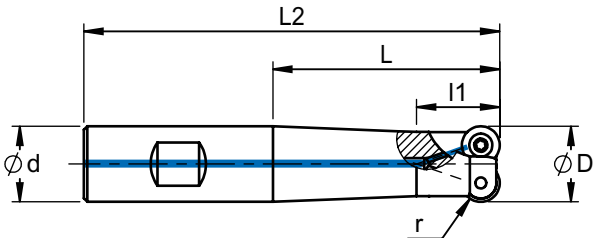
inserts

Specials on request.

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

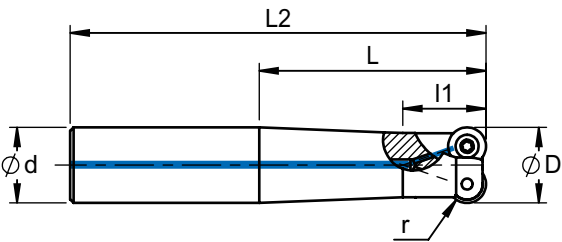
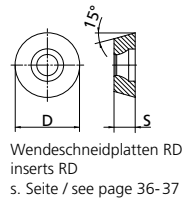


D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
12	2 12 948	30	-	75	10	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 947	30	-	75	12	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 942	40	16	88	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 941	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 940	80	16	128	16	-	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

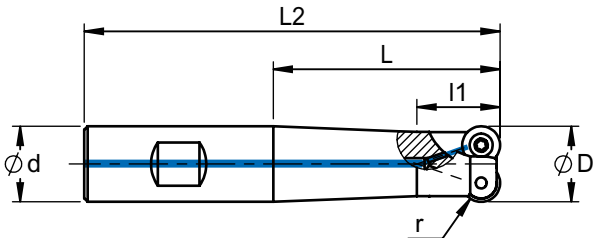


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12	2 12 945	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 944	80	16	128	16	-	2	7x1,99	3,5	x	993 02K	994 15
15	2 15 961	40	20	88	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 960	60	20	108	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 959	80	22	130	20	-	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__

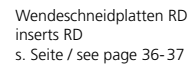


D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
20	2 20 933	40	20	90	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 932	60	22	110	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 931	80	25	136	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 930	100	25	156	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 929	120	25	176	25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



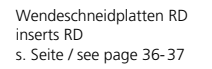
D	Bestell-Nr. order number	L	I1	L2	d	d3	z	WSP DxS	r			
20	2 20 956	40	20	90	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 955	60	22	110	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 954	80	25	136	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 953	100	25	156	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 952	120	25	176	25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

modular screw in cutter R2,5 RD__



8 rineck

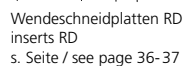
modular screw in cutter R3,5 RD__

rineck 9

modular screw in cutter R4 RD__



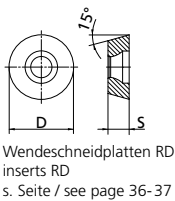
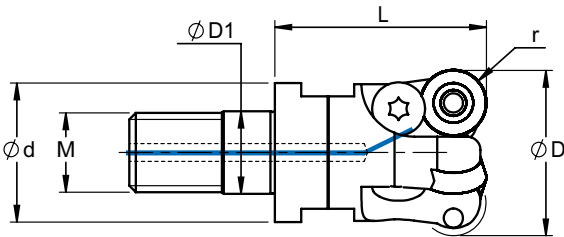
10 rineck



modular screw in cutter R5 RD__

rineck 11

Einschraubfräser R6 RD__
modular screw in cutter R6 RD__

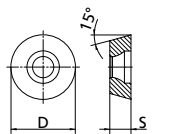
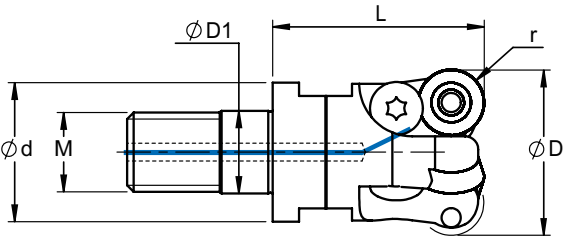


Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37



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__



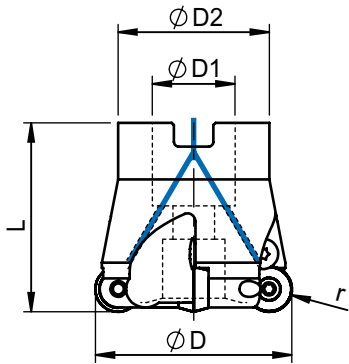
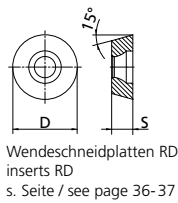
Wendeschneidplatten RD
inserts RD
s. Seite / see page 36-37



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

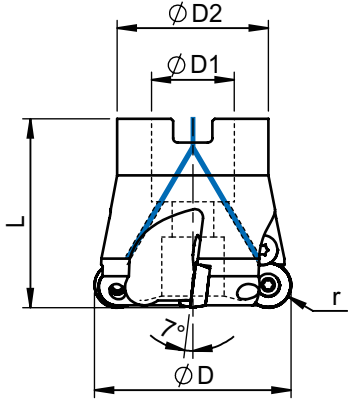
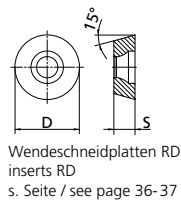
42	6 42 RD10A16	42	16	35	6	10x3,18	5	x	-	-	993 04	994 15
52	6 52 RD10A22	50	22	40	6	10x3,18	5	x	-	-	993 04	994 15
52	7 52 998	50	22	40	7	10x3,18	5	x	-	-	993 04	994 15
66	7 66 RD10A27	50	27	48	7	10x3,18	5	x	-	-	993 04	994 15

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__

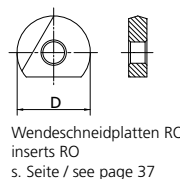


D	Bestell-Nr. order number	L	D1	D2	Z	WSP DxS	r					
42	6 42 RD10A16/7	42	16	35	6	10x3,18	5	x	-	-	993 04	994 15
52	7 52 850	50	22	40	7	10x3,18	5	x	-	-	993 04	994 15

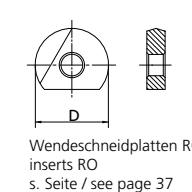
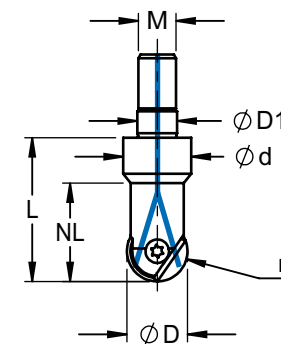
40	4 40 856	42	16	35	4	12x3,97	6	x	-	-	993 04	994 15
50	5 50 RD12A22/7	50	22	40	5	12x3,97	6	x	-	-	993 04	994 15
52	5 52 928	52	22	40	5	12x3,97	6	x	-	995 05	993 04	994 15
66	6 66 927	52	27	48	6	12x3,97	6	x	-	995 05	993 04	994 15
80	7 80 926	52	27	60	7	12x3,97	6	x	-	995 05	993 04	994 15

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

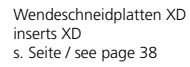
ball nose cutter ROHX



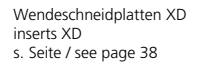
modular screw in cutter ROHX



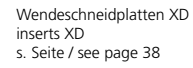
modular screw in cutter for insert - XDHW - XDHT

[illegible]

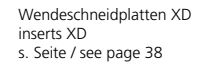
modular screw in cutter for insert - XDHW - XDHT

[illegible]

modular screw in cutter for insert - XDHW - XDHT

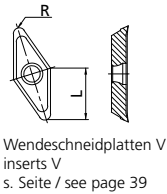
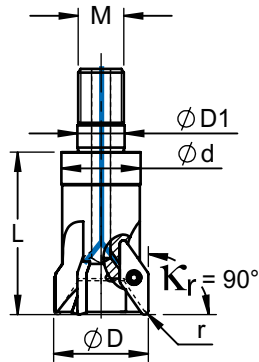
20 nineck

shell cutter for insert - XDHW - XDHT



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

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



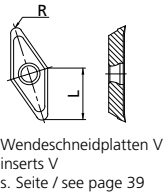
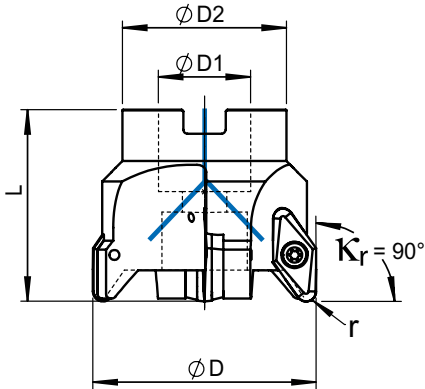
Wendeschneidplatten V
inserts V
s. Seite / see page 39



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

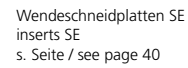


Wendeschneidplatten V
inserts V
s. Seite / see page 39

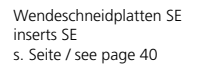


D	Bestell-Nr. order number	L	D1	D2	Z	WSP L	r			
42	3 42 872	57	16	35	3	22	3	x	993 06	994 20
50	3 50 871	57	22	40	3	22	3	x	993 06	994 20
52	3 52 871	57	22	40	3	22	3	x	993 06	994 20
66	4 66 870	57	27	48	4	22	3	x	993 06	994 20
80	4 80 869	57	27	60	4	22	3	x	993 06	994 20
100	5 100 868	55	32	70	5	22	3	-	993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

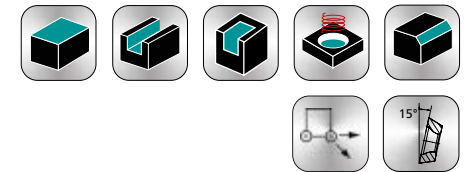
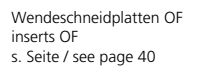
face milling cutter 45° SEKX



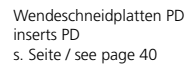
modular screw in cutter for chamfering SEKX



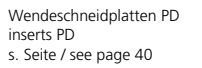
shell cutter OFMT



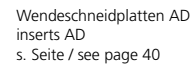
shell cutter for pentagon insert PDHX



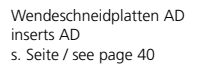
shell cutter for pentagon insert PDHX



modular screw in cutter, ADKT

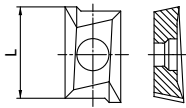


shell cutter ADKT

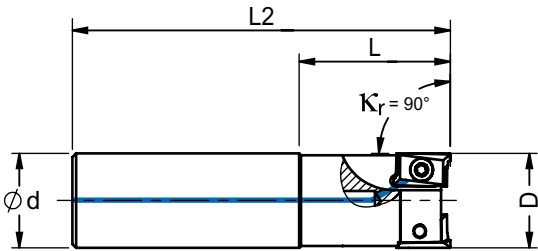


Schaftfräser APKT 1003 PD...

shank type cutter APKT 1003 PD...



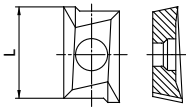
Wendeschneidplatten AP
inserts AP
s. Seite / see page 40



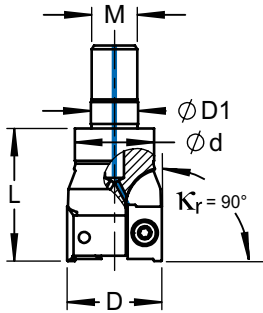
D	Bestell-Nr. order number	L	L2	d	Z	WSP L			
10	110AP10G12A80	25	80	12	1	10	x	993 12	994 08
10	110AP10G12A120	40	120	12	1	10	x	993 12	994 08
12	112AP10G12A80	25	80	12	1	10	x	993 12	994 08
12	112AP10G12A120	40	120	12	1	10	x	993 12	994 08
13	113AP10G12A120	-	120	12	1	10	x	993 12	994 08
16	216AP10G16A85	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...



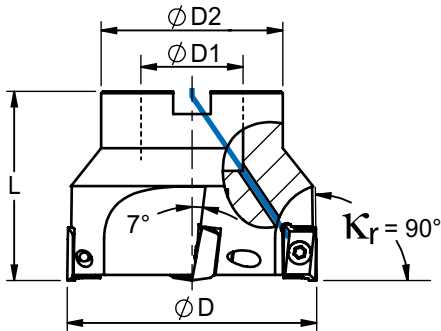
Wendeschneidplatten AP
inserts AP
s. Seite / see page 40



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

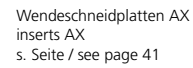
Aufsteckfräser APKT 1003 PD...

shell cutter, APKT 1003 PD...

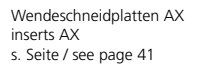


D	Bestell-Nr. order number	L	D1	D2	Z	WSP L			
40	640AP10A16	40	16	35	6	10	x	993 12	994 08
50	750AP10A22	50	22	40	7	10	x	993 12	994 08
52	752AP10A22	50	22	40	7	10	x	993 12	994 08
63	863AP10A27	50	27	48	8	10	x	993 12	994 08
66	866AP10A27	50	27	48	8	10	x	993 12	994 08

modular screw in cutter, AXMT

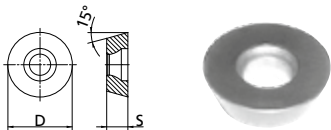
34 nineck

shell cutter AXMT

rineck 35

Runde-Fräswendeschnidplatten RDHX - präzisionsgeschliffen

inserts RDHX - precision ground insert

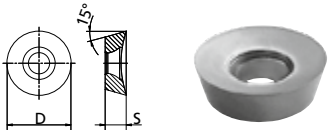


WSP rund, TIALN-beschichtet
inserts round, TIALN-coated



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

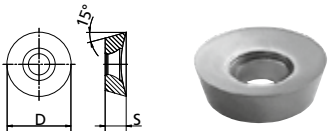
Wendeschnidplatte insert	WSP DxS	TIALN-beschichtet hartfräsen bis 60HRc TIALN-coated hardmilling up to 60HRc	RK 15F
RDHX 05 01 MOT	5x1,5		80 217
RDHX 07 01 MOT	7x1,99		80 237
RDHX 07 02 MOT	7x2,38		80 247
RDHX 08 T2 MOE	8x2,78		80 257
RDHX 10 03 MOT	10x3,18		80 267
RDHX 12 T3 MOT	12x3,97		80 277



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



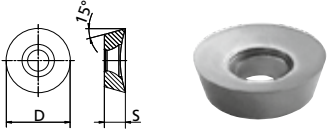
WSP rund mit polierter Hohlkehle,
für Alu, Kupfer, Kunststoff, unbeschichtet
hollow ground polished, uncoated



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



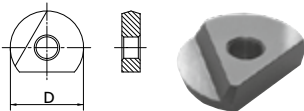
WSP rund mit Hohlkehle, Diamant beschichtet
Diamond coated



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	-

Kugelhahn-Wechselpplatten 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

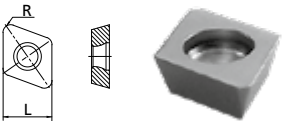
Kugelplatte, Diamant beschichtet
diamond-coated



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	-

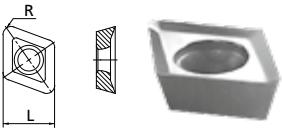
WSP rhombisch, Diamant beschichtet
inserts rhombic, diamond-coated



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

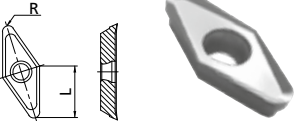
WSP rhombisch, Diamant beschichtet
inserts rhombic, diamond-coated



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	-

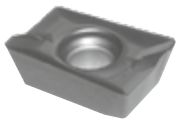
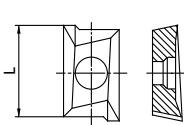
WSP für Alu, Kupfer und Kunststoff, Diamant beschichtet
for alu, copper, plastic, diamond coated



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

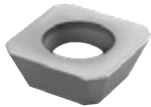
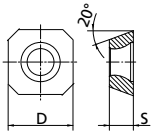
inserts APKT / ADKT / SEKX / SEET / PDHX / OFKT / OFEX



WSP beschichtet
inserts coated



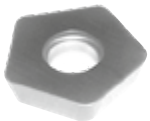
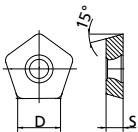
Wendeschneidplatte insert	WSP L		P 40	P 25	K 10	K 20
APKT 10 03PDER	10		-	90 111	90 112	-
APKT 10 03PDFR-ALP	10		-	-	90 012	-
APKT 10 03PDSR	10		90 110	-	-	-
APHT 10 03PDFR-AL	10					90 114
ADKT 15 05	15		91 110	91 111	91 112	-



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	



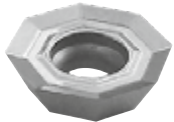
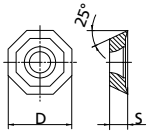
WSP 5 kant, TIALN-beschichtet
inserts 5 edge, TIALN-coated



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



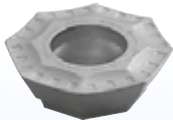
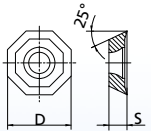
WSP, poliert unbeschichtet
inserts, uncoated polished



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



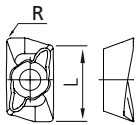
WSP beschichtet;
inserts coated



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
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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

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CNC-Bohrfutter
CNC-drill chucks

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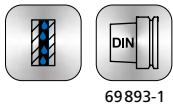
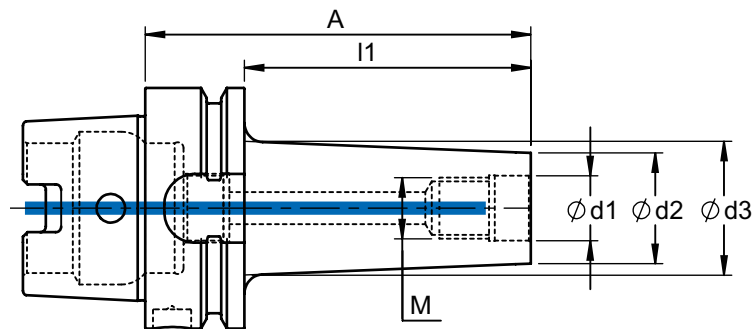
Rohlinge
Blanks

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

Fräsaufnahme HSK-A32 für Einschraubfräser

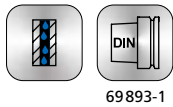
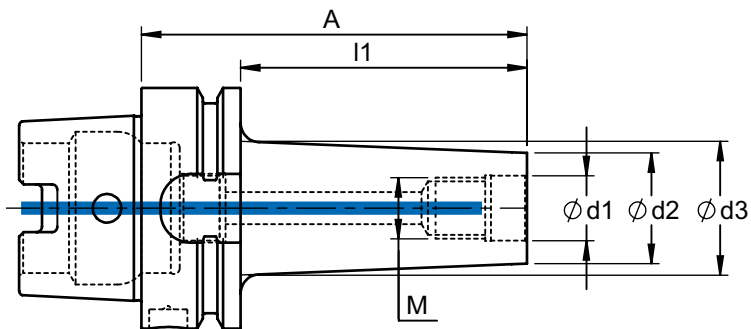
modular screw on holder HSK-A32



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

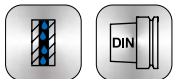
Fräsaufnahme HSK-A40 für Einschraubfräser

modular screw on holder HSK-A40

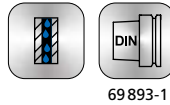


Bestell-Nr. order number	M	d1	d2	d3	A	l1	
920 - A400825	M8	8,5	13,8	18	45	25	G2,5/15.000 oder/or U<1gmm
920 - A400850	M8	8,5	13,8	23	70	50	
920 - A400875	M8	8,5	13,8	25	95	75	
920 - A401025	M10	10,5	18	23	45	25	
920 - A401050	M10	10,5	18	25	70	50	
920 - A401075	M10	10,5	18	30	95	75	
920 - A4010100	M10	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	

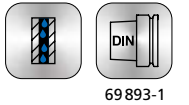
modular screw on holder HSK-A50

[illegible]

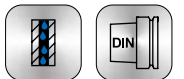
modular screw on holder HSK-A63

48 rineck

modular screw on holder HSK-A63

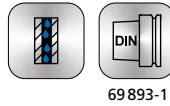
ineck 49

modular screw on holder HSK-A80

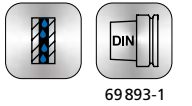


2,5/15.000
oder/or
U<1gmm

modular screw on holder HSK-A100

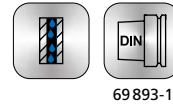
52 nineck

modular screw on holder HSK-A100

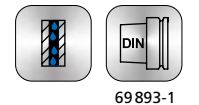
ineck 53

arbor HSK-A50 for shell cutter

delivery: with drive keys and retaining screw

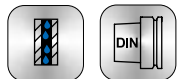
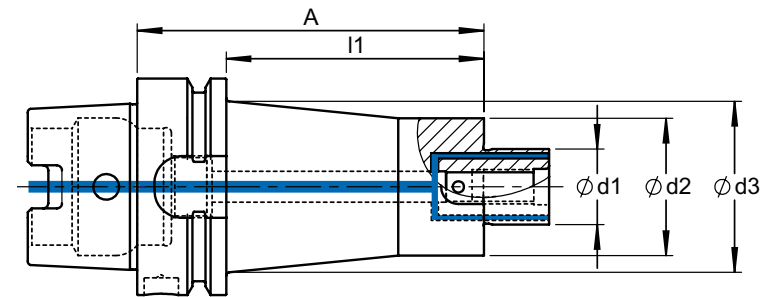
54 nineck

delivery: with drive keys and retaining screw

rineck 55

arbors HSK-A80 for shell cutter

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

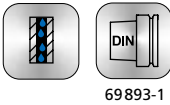
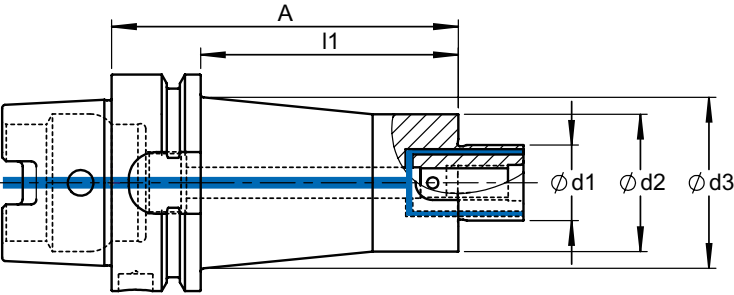


69893-1

[illegible]

Fräsdorne HSK-A100
arbors HSK-A63 for shell cutter

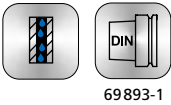
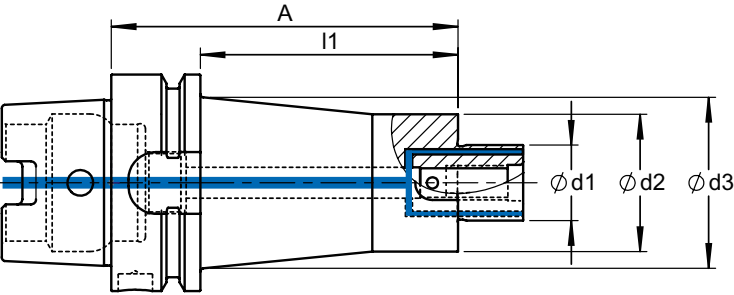
Lieferumfang: HSK-Aufnahme mit Anzugsschraube
und Mitnehmersteinen
delivery: with drive keys and retaining screw



Bestell-Nr. order number	d1	d2	d3	l1	A						
901 - A1001625	16	35	35	25	54	x	959-16	-	957-M8	-	G6,3/8.000
901 - A1001650	16	35	45	50	79	x	959-16	-	957-M8	-	
901 - A1001650ZY-35	16	35	35	50	79	x	959-16	-	957-M8	-	
901 - A10016100	16	35	50	100	129	x	959-16	-	957-M8	-	
901 - A10016100ZY-35	16	35	35	100	129	x	959-16	-	957-M8	-	
901 - A10016150	16	35	60	150	179	x	959-16	-	957-M8	-	
901 - A10016150ZY-35	16	35	35	150	179	x	959-16	-	957-M8	-	
901 - A10016200	16	35	60	200	229	x	959-16	-	957-M8	-	
901 - A10016200ZY-35	16	35	35	200	229	x	959-16	-	957-M8	-	
901 - A1002225	22	40	40	25	54	x	959-22	-	957-M10	-	
901 - A1002250	22	40	45	50	79	x	959-22	-	957-M10	-	G6,3/8.000
901 - A1002275	22	40	50	75	104	x	959-22	-	957-M10	-	
901 - A10022100	22	40	50	100	129	x	959-22	-	957-M10	-	
901 - A10022100ZY-48	22	48	48	100	129	x	959-22	-	957-M10	-	
901 - A10022125	22	40	50	125	154	x	959-22	-	957-M10	-	
901 - A10022150	22	40	60	150	179	x	959-22	-	957-M10	-	
901 - A10022150ZY-48	22	48	48	150	179	x	959-22	-	957-M10	-	
901 - A10022200	22	40	68	200	229	x	959-22	-	957-M10	-	
901 - A10022200ZY-48	22	48	48	200	229	x	959-22	-	957-M10	-	
901 - A10022250ZY-48	22	48	48	250	279	x	959-22	-	957-M10	-	
901 - A10022300	22	48	70	300	329	x	959-22	-	957-M10	-	G6,3/8.000
901 - A10022300ZY-48	22	48	48	300	329	x	959-22	-	957-M10	-	
901 - A10022350ZY-48	22	48	48	350	379	x	959-22	-	957-M10	-	

Fräsdorne HSK-A100
arbors HSK-A63 for shell cutter

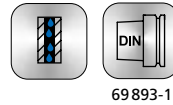
Lieferumfang: HSK-Aufnahme mit Anzugsschraube
und Mitnehmersteinen
delivery: with drive keys and retaining screw



Bestell-Nr. order number	d1	d2	d3	l1	A						
901 - A1002725	27	60	60	25	54	x	959-27	-	957-M12	-	G6,3/8.000
901 - A1002750ZY-60	27	60	60	50	79	x	959-27	-	957-M12	-	
901 - A1002750ZY-76	27	76	76	50	79	x	959-27	-	957-M12	-	
901 - A10027100	27	60	70	100	129	x	959-27	-	957-M12	-	
901 - A10027100ZY-60	27	60	60	100	129	x	959-27	-	957-M12	-	
901 - A10027100ZY-76	27	76	76	100	129	x	959-27	-	957-M12	-	
901 - A10027150	27	60	75	150	179	x	959-27	-	957-M12	-	
901 - A10027150ZY-60	27	60	60	150	179	x	959-27	-	957-M12	-	
901 - A10027150ZY-76	27	76	76	150	179	x	959-27	-	957-M12	-	
901 - A10027200	27	60	80	200	229	x	959-27	-	957-M12	-	G6,3/8.000
901 - A10027200ZY-60	27	60	60	200	229	x	959-27	-	957-M12	-	
901 - A10027200ZY-76	27	76	76	200	229	x	959-27	-	957-M12	-	
901 - A10027250	27	60	80	250	279	x	959-27	-	957-M12	-	
901 - A10027250ZY-60	27	60	60	250	279	x	959-27	-	957-M12	-	
901 - A10027250ZY-76	27	76	76	250	279	x	959-27	-	957-M12	-	
901 - A10027300	27	60	85	300	329	x	959-27	-	957-M12	-	
901 - A10027300ZY-60	27	60	60	300	329	x	959-27	-	957-M12	-	
901 - A10027300ZY-76	27	76	76	300	329	x	959-27	-	957-M12	-	
901 - A1003250	32	70	70	50	79	-	959-32	957-32	-	958-32	G6,3/8.000
901 - A10032100	32	70	85	100	129	-	959-32	957-32	-	958-32	
901 - A10032100ZY-85	32	85	85	100	129	-	959-32	957-32	-	958-32	
901 - A10032150ZY-85	32	85	85	150	179	-	959-32	957-32	-	958-32	
901 - A10032200ZY-85	32	85	85	200	229	-	959-32	957-32	-	958-32	

arbors HSK-A63 - 100 with enlarged contact surface diameter

delivery: with drive keys and retaining screw



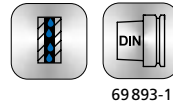
G6,3/8.000

delivery: with drive keys and retaining screw



G6,3/8.000

morse taper adaptor HSK-A63 - 100

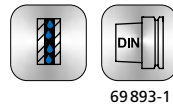
62 rineck

morse taper adaptor, HSK-A50 - 100

rineck 63

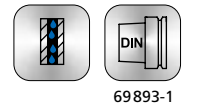
side lock adapter HSK-A50

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

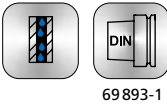
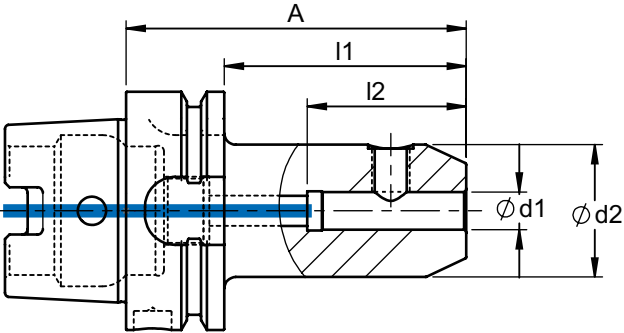


Bestell-Nr. order number	d1	D	I1	I2	A		
903 - A6306	6	25	39	38	65	949-M6	G6,3/8.000
903 - A6308	8	28	39	38	65	949-M8	
903 - A6310	10	35	39	42	65	949-M10	
903 - A6312	12	42	54	47	80	949-M12	
903 - A6314	14	44	54	47	80	949-M12	
903 - A6316	16	48	54	50	80	949-M14	
903 - A6318	18	50	54	50	80	949-M14	
903 - 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	

Weldonfutter HSK-A80

side lock adapter HSK-A80

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

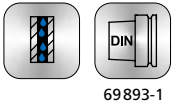
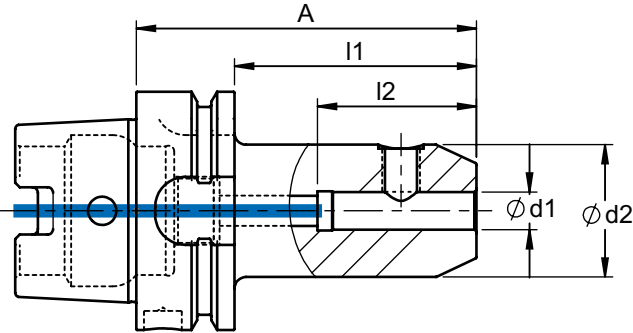


Bestell-Nr. order number	d1	D	l1	l2	A		
903 - A8006	6	25	54	38	80	949-M6	G6,3/8.000
903 - A8008	8	28	54	38	80	949-M8	
903 - A8010	10	35	54	42	80	949-M10	
903 - A8012	12	42	54	47	80	949-M12	
903 - A8014	14	44	54	47	80	949-M12	
903 - A8016	16	48	74	50	100	949-M14	
903 - A8018	18	50	74	50	100	949-M14	
903 - A8020	20	52	74	52	100	949-M16	
903 - A8025	25	65	74	60	100	949-M18X2	
903 - A8032	32	72	84	64	110	949-M20X2	
903 - A8040	40	80	94	74	120	949-M20X2	
							G6,3/8.000
							G6,3/8.000

Weldonfutter HSK-A100

side lock adapter HSK-A100

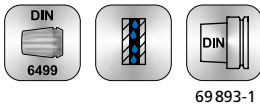
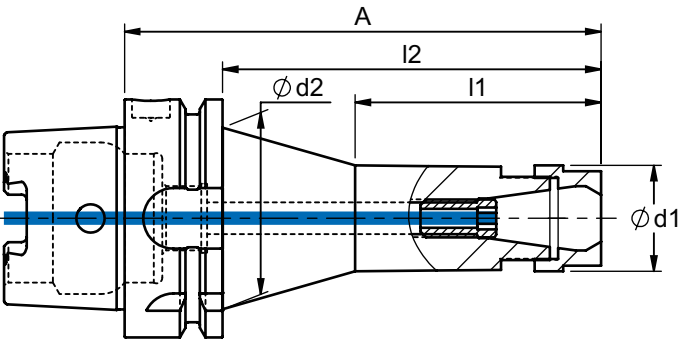
Lieferumfang: HSK-Aufnahme mit Spannschraube
delivery: side lock adapter with tightening screw



Bestell-Nr. order number	d1	D	l1	l2	A		
903 - A10006	6	25	51	38	80	949-M6	G6,3/8.000
903 - A10008	8	28	51	38	80	949-M8	
903 - A10010	10	35	51	42	80	949-M10	
903 - A10012	12	42	51	47	80	949-M12	
903 - A10014	14	44	51	47	80	949-M12	
903 - A10016	16	48	71	50	100	949-M14	
903 - A10018	18	50	71	50	100	949-M14	
903 - A10020	20	52	71	52	100	949-M16	
903 - A10025	25	65	71	60	100	949-M18X2	
903 - A10032	32	72	71	64	100	949-M20X2	
903 - A10040	40	80	91	74	120	949-M20X2	
903 - A10006A160	6	25	131	38	160	949-M6	G6,3/8.000
903 - A10008A160	8	28	131	38	160	949-M8	
903 - A10010A160	10	35	131	42	160	949-M10	
903 - A10012A160	12	42	131	47	160	949-M12	
903 - A10014A160	14	44	131	47	160	949-M12	
903 - A10016A160	16	48	131	50	160	949-M14	
903 - A10018A160	18	50	131	50	160	949-M14	
903 - A10020A160	20	52	131	52	160	949-M16	
903 - A10025A160	25	65	131	60	160	949-M18X2	
903 - A10032A160	32	72	131	64	160	949-M20X2	
903 - A10040A160	40	80	131	74	160	949-M20X2	
903 - A10006A200	6	25	171	38	200	949-M6	G6,3/8.000
903 - A10008A200	8	28	171	38	200	949-M8	
903 - A10010A200	10	35	171	42	200	949-M10	
903 - A10012A200	12	42	171	47	200	949-M12	
903 - A10014A200	14	44	171	47	200	949-M12	
903 - A10016A200	16	48	171	50	200	949-M14	
903 - A10018A200	18	50	171	50	200	949-M14	
903 - A10020A200	20	52	171	52	200	949-M16	
903 - A10025A200	25	65	171	60	200	949-M18X2	
903 - A10032A200	32	72	171	64	200	949-M20X2	
903 - A10040A200	40	80	171	74	200	949-M20X2	
							G6,3/8.000

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

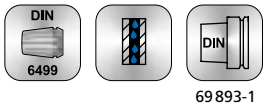
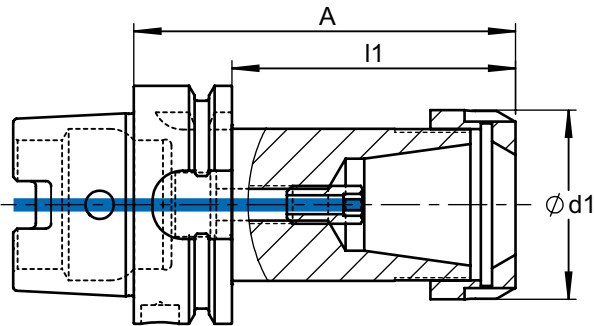
Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM



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

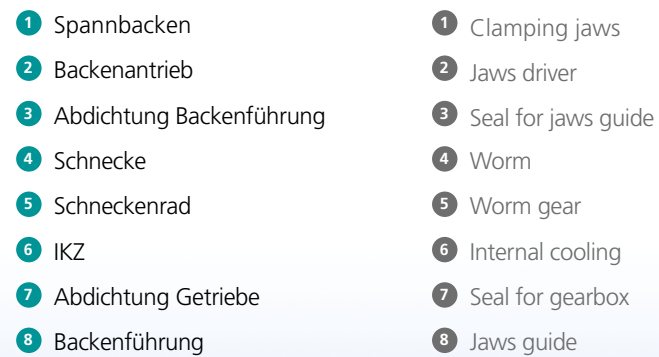
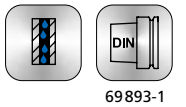


69 893-1

[illegible]

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

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



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]

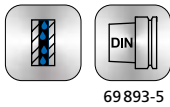
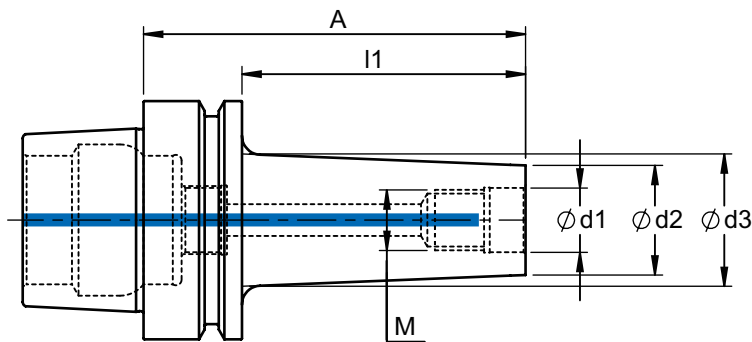
Tool holders HSK-E

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

90

Fräsaufnahme HSK-E32 für Einschraubfräser

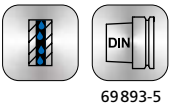
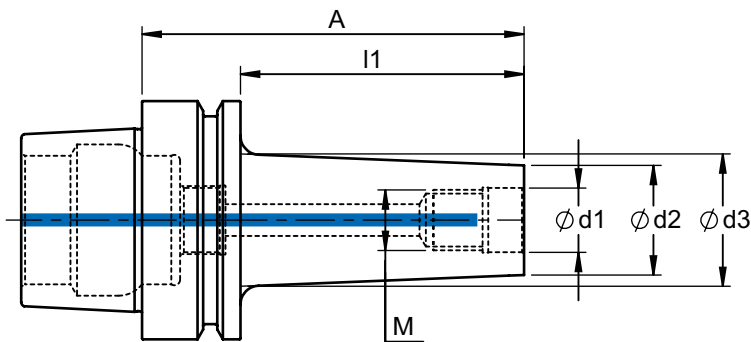
modular screw on holder HSK-E32



Bestell-Nr. order number	M	d1	d2	d3	A	l1	
920 - E320650	M6	6,5	10	22	70	50	G2,5/15.000 oder/or U<1gmm
920 - E320825	M8	8,5	13,8	17	45	25	
920 - E320850	M8	8,5	13,8	24	70	50	
920 - E321025	M10	10,5	18	23	45	25	
920 - E321050	M10	10,5	18	25	70	50	
920 - E321225	M12	12,5	21	25	45	25	G2,5/15.000 oder/or U<1gmm

Fräsaufnahme HSK-E40 für Einschraubfräser

modular screw on holder HSK-E40



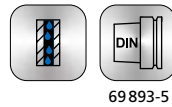
Bestell-Nr. order number	M	d1	d2	d3	A	l1	
920 - E400525	M5	5,5	10	18	45	25	G2,5/15.000 oder/or U<1gmm
920 - E400550	M5	5,5	10	22	70	50	
920 - E400575	M5	5,5	10	26	95	75	
920 - E400625	M6	6,5	10	18	45	25	
920 - E400650	M6	6,5	10	22	70	50	
920 - E400675	M6	6,5	10	26	95	75	
920 - E400825	M8	8,5	13,8	18	45	25	
920 - E400850	M8	8,5	13,8	23	70	50	
920 - E400875	M8	8,5	13,8	25	95	75	
920 - E4008100	M8	8,5	13,8	30	120	100	
920 - E401025	M10	10,5	18	23	45	25	
920 - E401050	M10	10,5	18	25	70	50	
920 - E401075	M10	10,5	18	30	95	75	
920 - E4010100	M10	10,5	18	34	120	100	
920 - E401225	M12	12,5	21	24	45	25	
920 - E401250	M12	12,5	21	30	70	50	
920 - E401275	M12	12,5	21	34	95	75	
920 - E401625	M16	17	29	34	45	25	

modular screw on holder HSK-E50

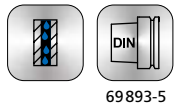


2,5/15.000
oder/or
U<1gmm

modular screw on holder HSK-E63

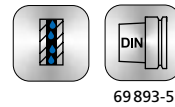
80 nineck

modular screw on holder HSK-E63

nineck 81

arbors HSK-E40 - 63 for shell cutter

delivery: with drive keys and retaining screw

82 rineck

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

delivery: with drive keys and retaining screw

rineck 83

morse taper adaptor, HSK-E50

84 nineck

weldon chuck HSK-E40 - 63

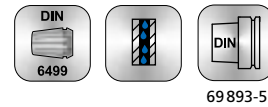



69893-5

rineck 85

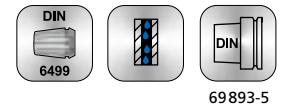
collet chucks HSK type-E32 - 50 for collets ER 16 with nut UM

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

[illegible]

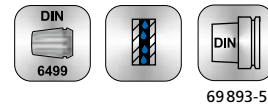
collet chucks HSK-E40 - 63 for collets ER 25/32/40 with nut UM

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

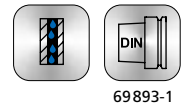
[illegible]

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

88 rineck

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

rineck 89

blanks HSK-E50 - 63

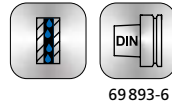
Execution: taper and collar hardened and ground.
Application: For producing your own special tools.

[illegible]

Tool holders HSK-F

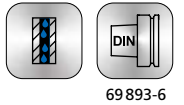
Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

modular screw on holder HSK-F63



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

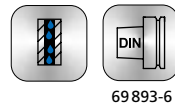
modular screw on holder HSK-F63 with thread for coolant tube



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

arbors HSK-F63 for shell cutter

delivery: with drive keys and retaining screw

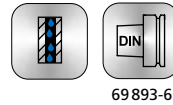
94 nineck

morse taper adaptor, HSK-F63

rineck 95

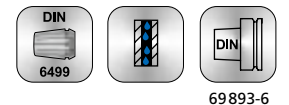
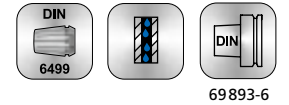
weldon chuck HSK-F63

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



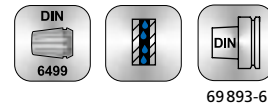
collet chucks HSK-F63 for collets ER 16/25/32/40 with nut UM

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

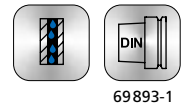


collet chucks HSK-F63 for collets ER 1 1/20 with nut MS

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

102

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

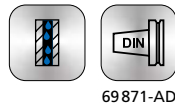
Tool holders SK

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

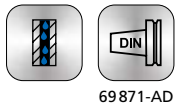
modular screw on holder SK30

[illegible]

modular screw on holder SK40

110 rineck

modular screw on holder SK40

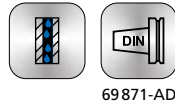
rineck 111

modular screw on holder SK40

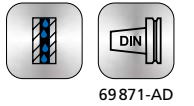


6,3/10.000

modular screw on holder SK50



modular screw on holder SK50

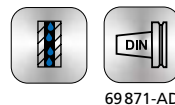
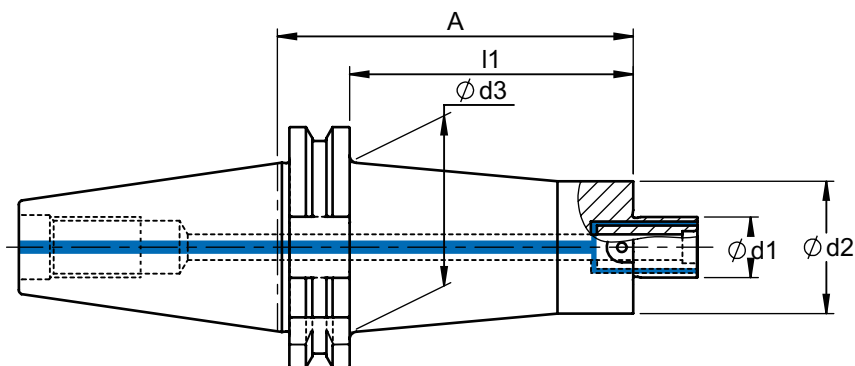


modular screw on holder SK50

[illegible]

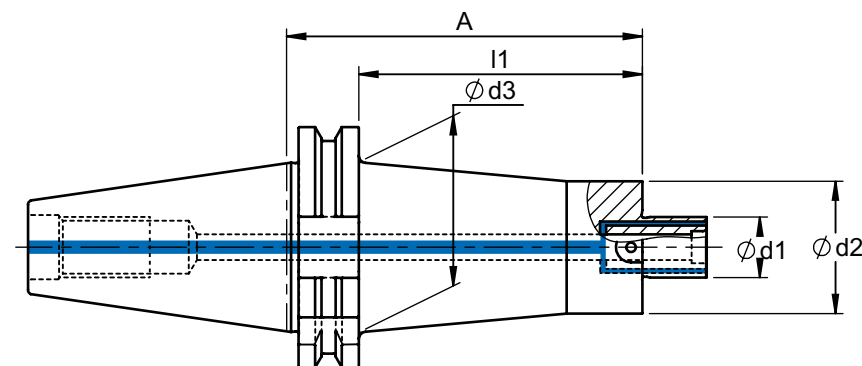
arbors SK40 for shell cutter

delivery: with drive keys and retaining screw

[illegible]

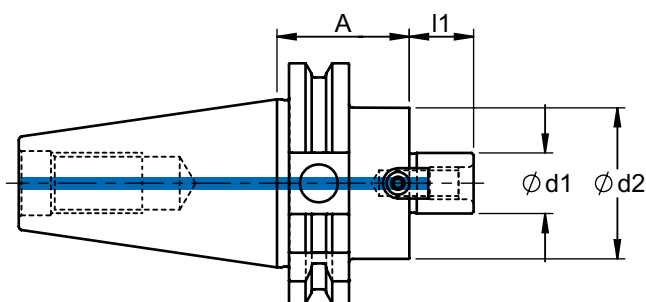
arbors SK50 for shell cutter

delivery: with drive keys and retaining screw

[illegible]

arbors SK40, 50 with enlarged contact surface diameter

delivery: with drive keys and retaining screw

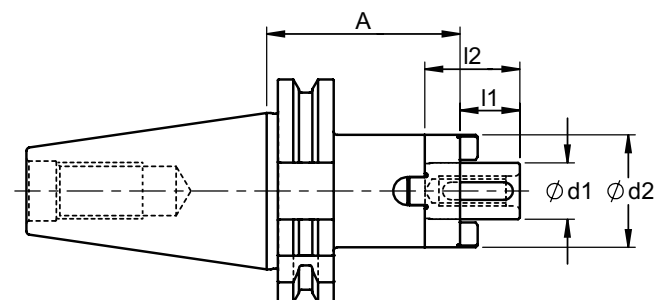


69871-AD

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	

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

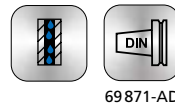
delivery: with drive keys and retaining screw



69 871 A

[illegible]

morse taper adaptor SK50

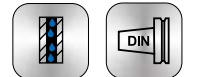
122 rineck

morse taper adaptor, SK40, 50

rineck 123

weldon chuck SK40, 50

delivery: weldon chuck with tightening screw

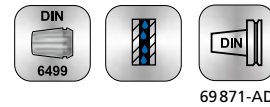


69871-AD

[illegible]

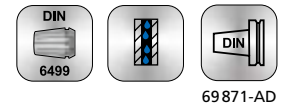
collet chucks SK30 - 50 for collets ER 16/25/32/40 with nut type UM

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



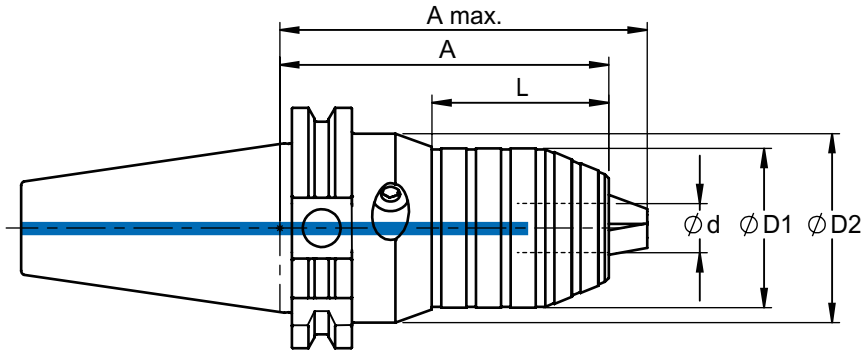
collet chucks SK30, 40 for collets ER 1 1/16/20 with nut type MS

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



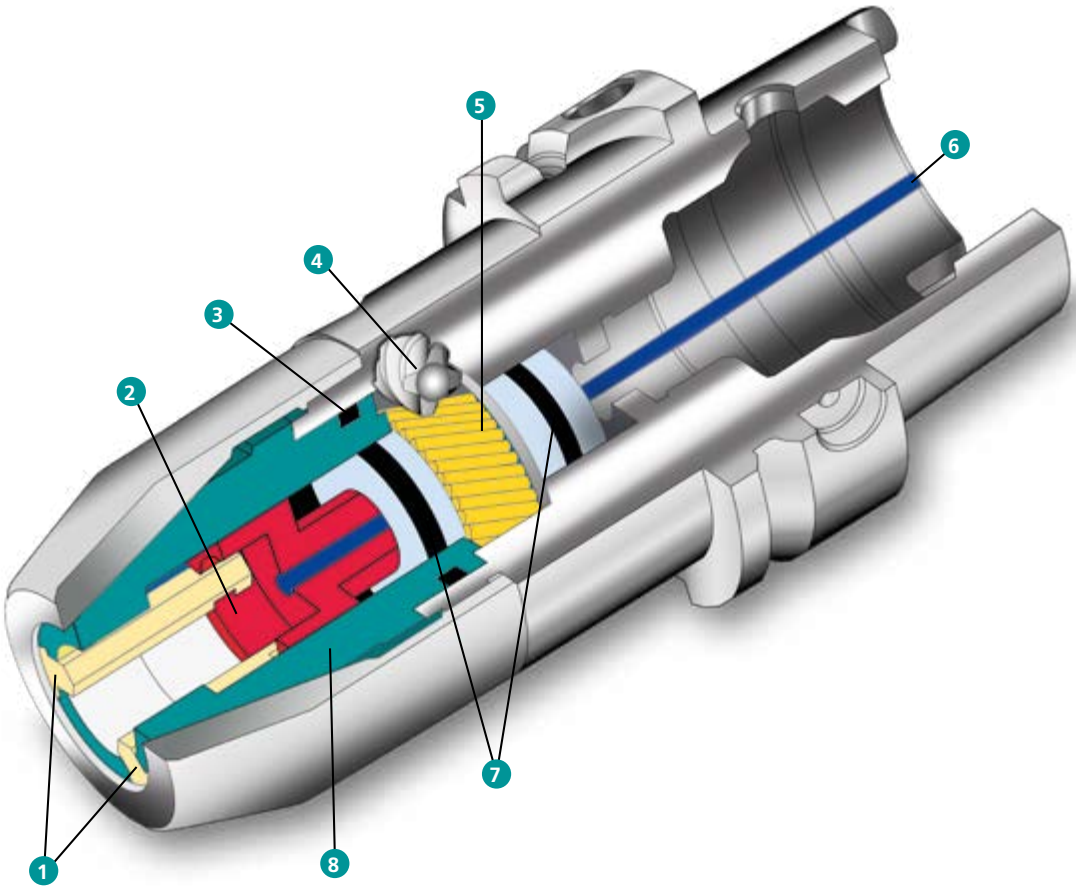
CNC- Bohrfutter SK30 - 50 für Rechts- und Linkslauf

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

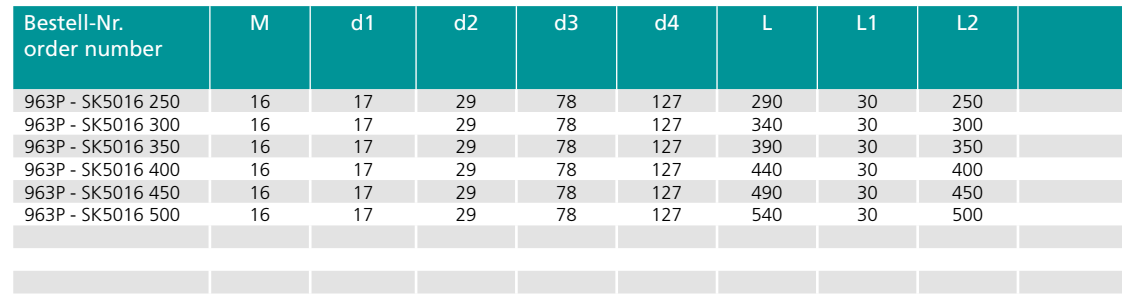
7

Seal for gearbox

8

Jaws guide

modular screw on holder SK50 with face contact



KH50

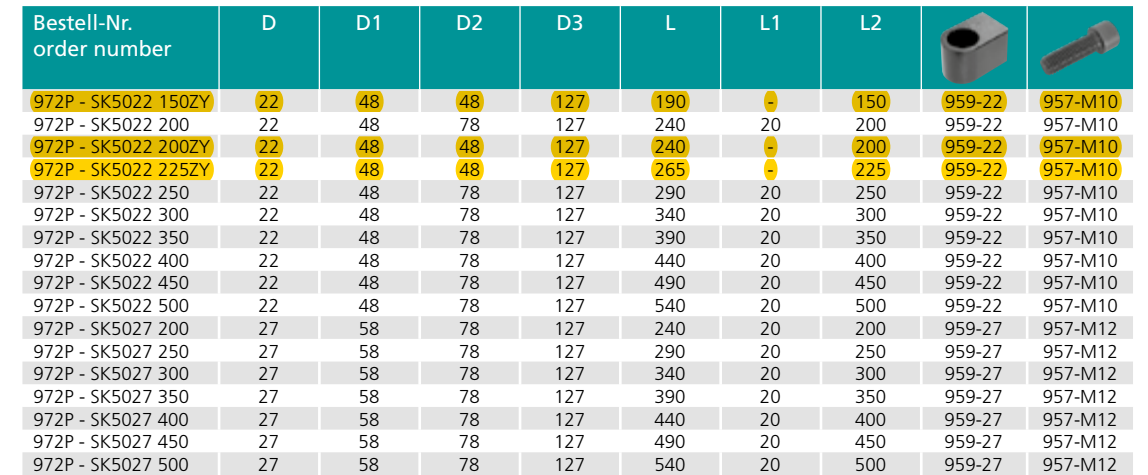
GR50

AB50/01

AB50/2080

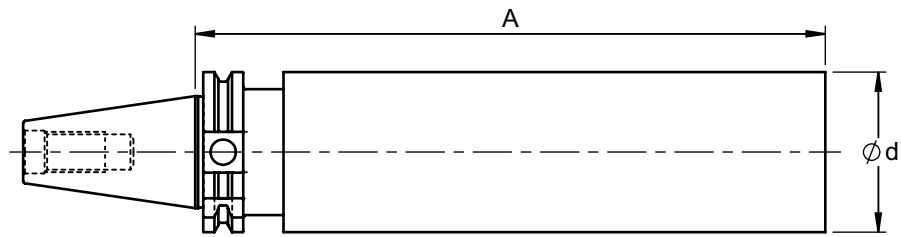
AB50/69872

arbors SK50 with face contact for shell cutters



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.



69871 A

[illegible]

Werkzeugaufnahmen SK50 DIN 2080

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



2080

rineck 135

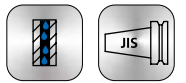
morse taper adaptor SK50

136 rineck

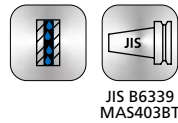
Tool holders BT

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

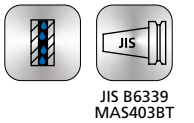
modular screw on holder BT30

[illegible]

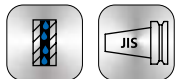
modular screw on holder BT40



modular screw on holder BT40



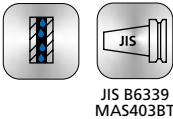
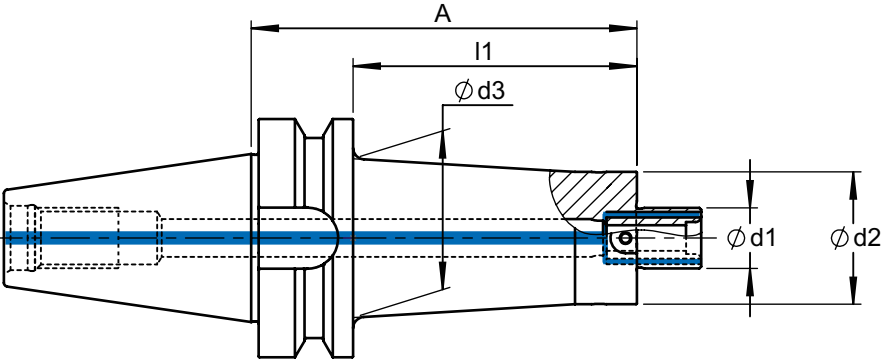
modular screw on holder BT50



Fräsdorne BT40

arbors BT40 for shell cutter

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

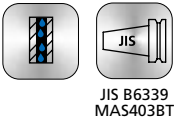
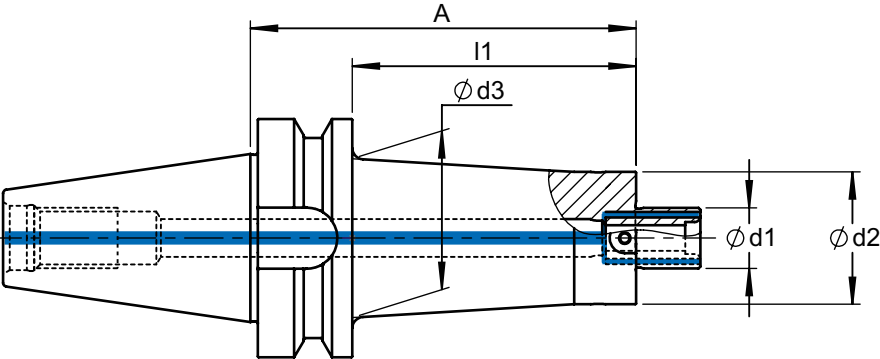


Bestell-Nr. order number	d1	d2	d3	l1	A						
972-BT401625	16	35	35	25	52	x	959-16	-	957-M8	-	
972-BT401650	16	35	42	50	77	x	959-16	-	957-M8	-	
972-BT401675	16	35	45	75	102	x	959-16	-	957-M8	-	
972-BT4016100	16	35	50	100	127	x	959-16	-	957-M8	-	
972-BT4016150	16	35	50	150	177	x	959-16	-	957-M8	-	
972-BT4016200	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	-	

Fräsdorne BT50

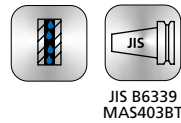
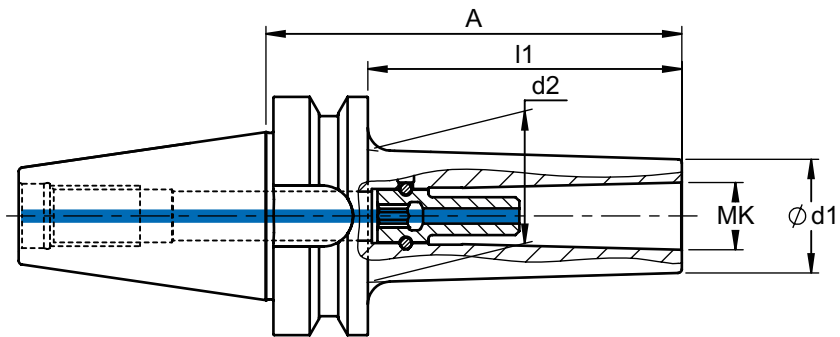
arbors BT50 for shell cutter

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



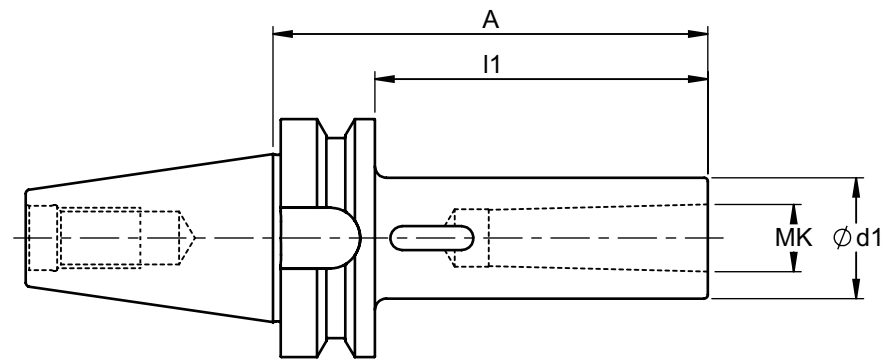
Bestell-Nr. order number	d1	d2	d3	l1	A						
972-BT501650	16	35	40	50	88	x	959-16	-	957-M8	-	
972-BT5016100	16	35	50	100	138	x	959-16	-	957-M8	-	
972-BT5016150	16	35	53	150	188	-	959-16	-	957-M8	-	
972-BT5016200	16	35	60	200	238	-	959-16	-	957-M8	-	
972-BT5022250	22	40	40	50	88	x	959-22	-	957-M10	-	
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	

morse taper adaptor BT40, 50



Bestell-Nr. order number	MK	d1	d2	l1	A			
405 - BT50 MK2A60	MK 2	30	35	22	60	957-MK2-SW6	952-SW6-490	G6,3/8.000
405 - BT50 MK2A110	MK 2	30	40	72	110	957-MK2-SW6	952-SW6-490	
405 - BT50 MK2A160	MK 2	30	45	122	160	957-MK2-SW6	952-SW6-490	
405 - BT50 MK3A65	MK 3	36	43	27	65	957-MK3-SW7	952-SW7-450	
405 - BT50 MK3A120	MK 3	36	50	82	120	957-MK3-SW7	952-SW7-450	
405 - BT50 MK3A170	MK 3	36	60	132	170	957-MK3-SW7	952-SW7-450	
405 - BT50 MK3A220	MK 3	36	70	182	220	957-MK3-SW7	952-SW7-450	
405 - BT50 MK4A100	MK 4	44	55	62	100	957-MK4-SW8	952-SW8-450	
405 - BT50 MK4A150	MK 4	44	60	112	150	957-MK4-SW8	952-SW8-450	
405 - BT50 MK4A200	MK 4	44	70	162	200	957-MK4-SW8	952-SW8-450	
405 - BT50 MK5A120	MK 5	56	70	82	120	957-MK5-SW10	952-SW10-355	
405 - BT50 MK5A170	MK 5	56	70	132	170	957-MK5-SW10	952-SW10-355	
405 - BT50 MK5A220	MK 5	56	75	182	220	957-MK5-SW10	952-SW10-355	

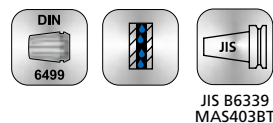
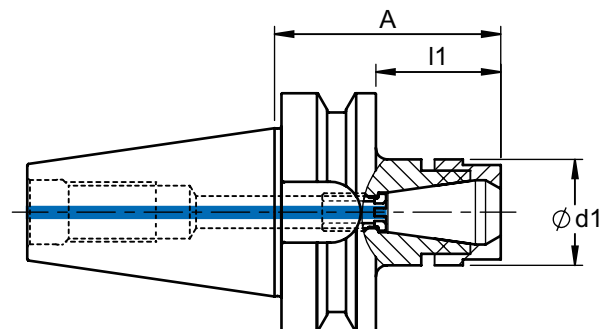
morse taper adaptor BT40, 50



Bestell-Nr. order number	MAS	MK	d1	l1	A	
906 - BT40MK150	BT40	MK1	25	23	50	G6,3/8.000
906 - BT40MK250	BT40	MK2	32	23	50	
906 - BT40MK370	BT40	MK3	40	43	70	
906 - BT40MK495	BT40	MK4	48	68	95	
906 - BT50MK260	BT50	MK2	32	22	60	
906 - BT50MK365	BT50	MK3	40	27	65	
906 - BT50MK495	BT50	MK4	48	57	95	
906 - BT50MK5105	BT50	MK5	63	67	105	

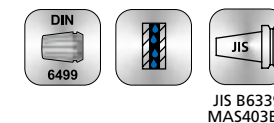
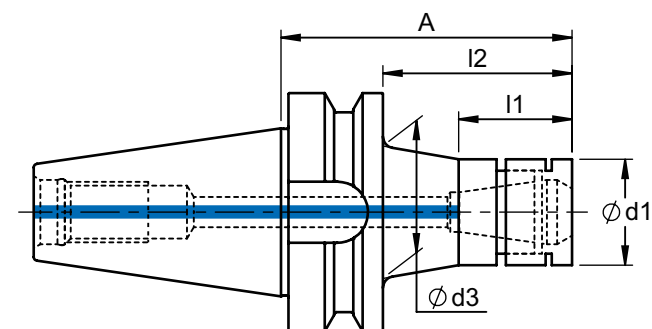
collet chucks BT30 - 50 for collets ER 16/25/32/40 with nut type UM

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

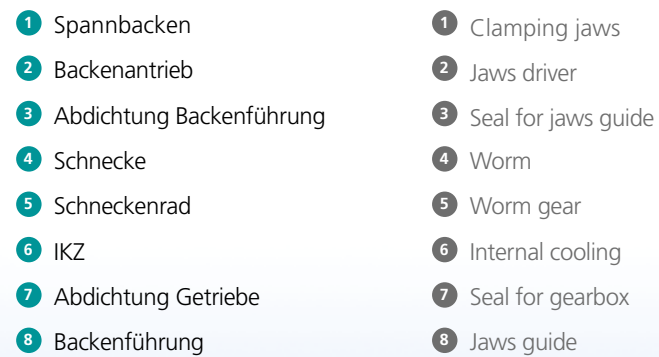
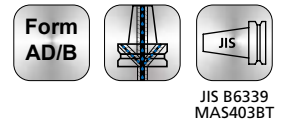
[illegible]

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

rineck 151

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

158 - 159

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

160 - 161

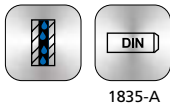
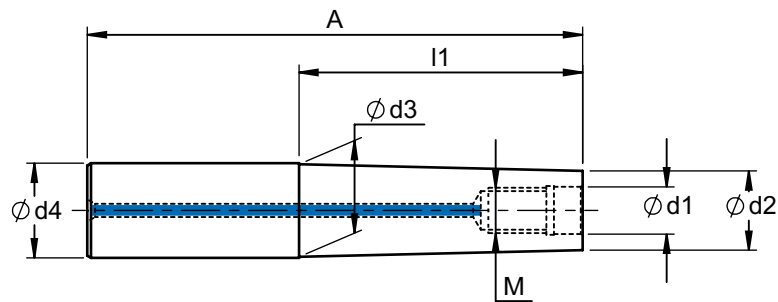
Einschraubadapter für ER-Spannzangen
Modular screw on adapter for ER-collets

162

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

Hartmetallverlängerungen für Einschraubfräser

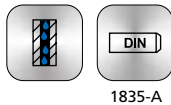
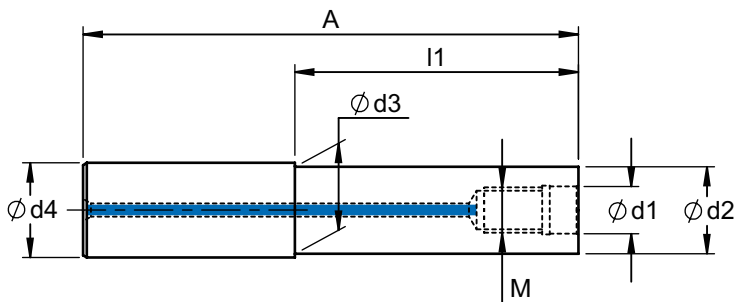
modular screw on carbide extensions



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



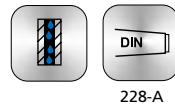
modular screw on extensions

158 nineck

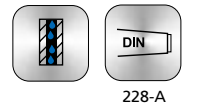
modular screw on reducers

rineck 159

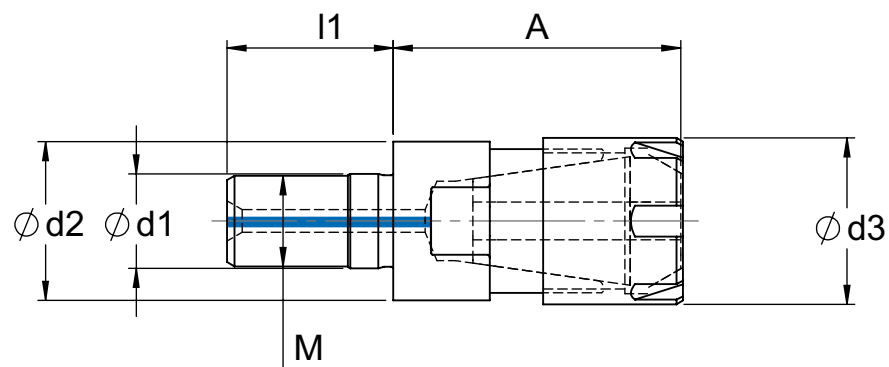
modular screw on extension, morse taper

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

169

Anzugsbolzen
Pull studs

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Pictogramme Pictograms

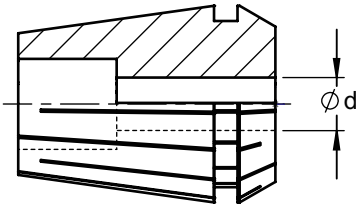
172 - 173

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

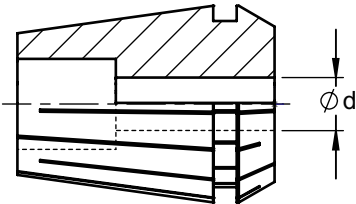
Spannzangen ER25 Spannbereich d max / min	Bestell-Nr. order number
1,0 - 0,5	950 - 2501
2,0 - 1,0	950 - 2502
3,0 - 2,0	950 - 2503
4,0 - 3,0	950 - 2504
5,0 - 4,0	950 - 2505
6,0 - 5,0	950 - 2506
7,0 - 6,0	950 - 2507
8,0 - 7,0	950 - 2508
9,0 - 8,0	950 - 2509
10,0 - 9,0	950 - 2510
11,0 - 10,0	950 - 2511
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

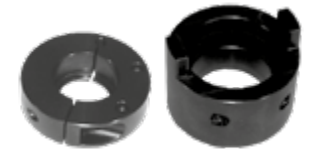
Holzsockel für ER32	950 - 3298
Standard Satz = 18 Stk. d = 3,0... 20,0	950 - 3299

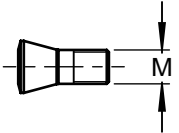
Spannzangen ER40 Spannbereich d max / min	Bestell-Nr. order number
3,0 - 2,0	950 - 4003
4,0 - 3,0	950 - 4004
5,0 - 4,0	950 - 4005
6,0 - 5,0	950 - 4006
7,0 - 6,0	950 - 4007
8,0 - 7,0	950 - 4008
9,0 - 8,0	950 - 4009
10,0 - 9,0	950 - 4010
11,0 - 10,0	950 - 4011
12,0 - 11,0	950 - 4012
13,0 - 12,0	950 - 4013
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

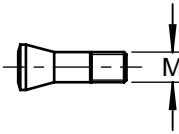
Holzsockel für ER40	950 - 4098
Standard Satz = 23 Stk. d = 4,0... 26,0	950 - 4099

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

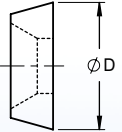
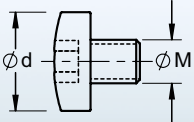
tightening fixtures and flange for tightening fixture

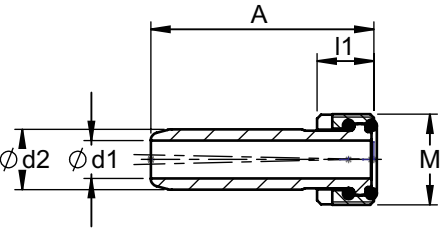


Torxschrauben clamping screws	Bestell-Nr. order number	Größe (Gewinde) size
	993 00	M 1,8
	993 01	M 2
	993 02	M 2,5
	993 02K	M 2,5
	993 12	M 2,5
	993 03	M 3
	993 04	M 3,5
	993 15	M 4
	993 06	M 4,5
	993 07	M 5
	993 31	M 2
	993 32	M 2,5
	993 35	M 4

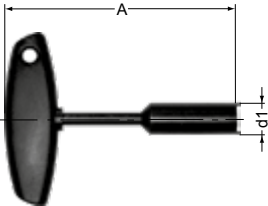
Passschrauben clamping screws	Bestell-Nr. order number	Größe (Gewinde) size
	993 22	M 2,5 x 0,35
	993 23	M 3 x 0,35
	993 24	M 3,5
	993 25	M 4
	993 27	M 5

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



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



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

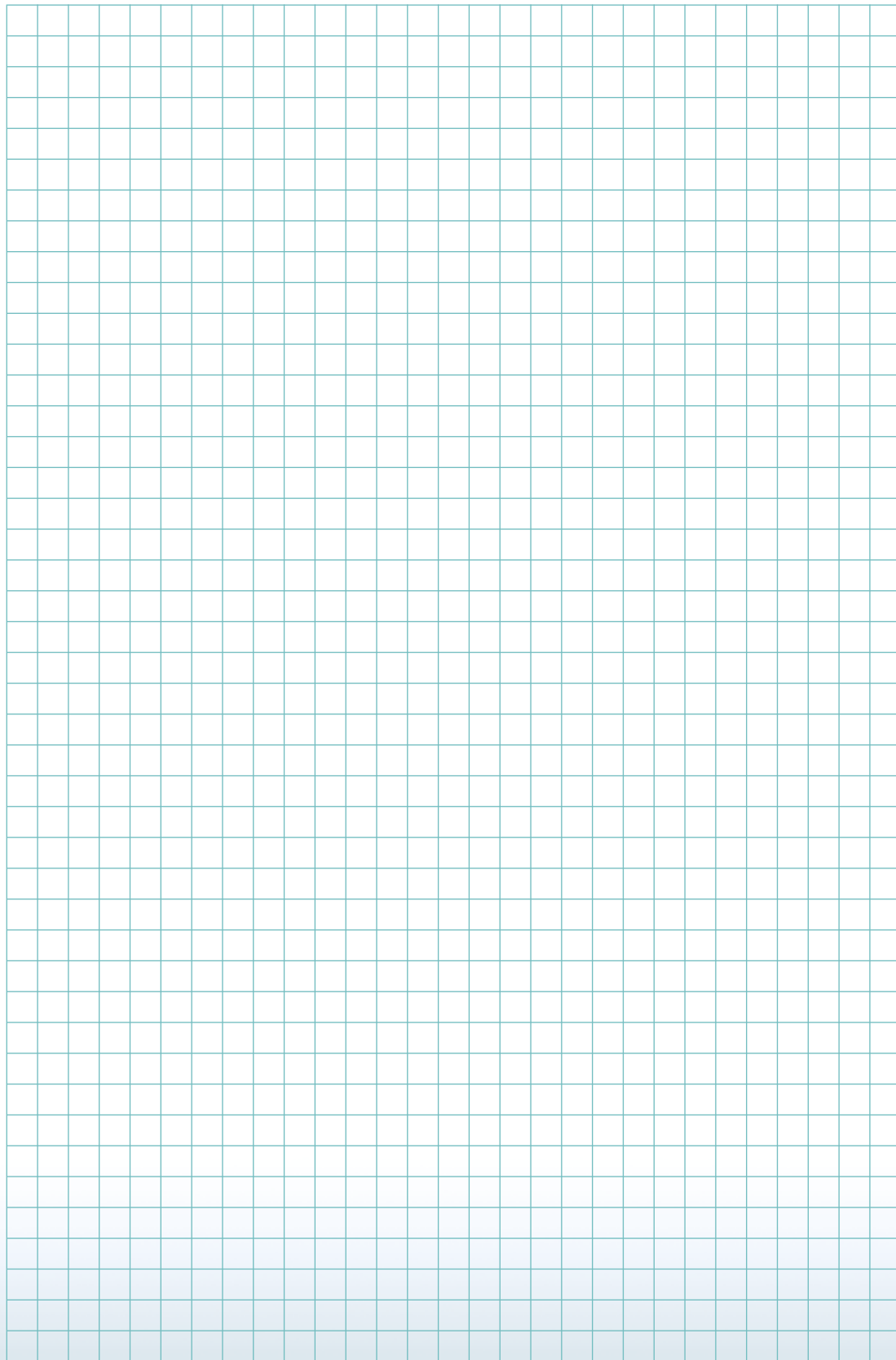
	Bearbeitungsrichtung machining direction
	Bearbeitungsrichtung machining direction
	Bearbeitungsrichtung machining direction
	Planfräsen face milling
	Nutfräsen slot milling
	Eckfräsen / Umfangfräsen step milling / side milling
	Fasfräsen chamfering
	Freiformflächenfräsen contour milling
	Eintauchwinkel 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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