

Tyson Tool®

rineck
• Werkzeugtechnik



- Cutting tools/Tool holders

TOOLS ARE OUR PASSION |  MADE IN GERMANY

INHALTSVERZEICHNIS

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Fräswerkzeuge / Wendeschneidplatten

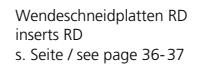
Cutting tools / inserts

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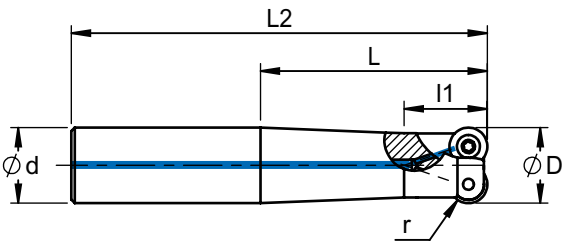
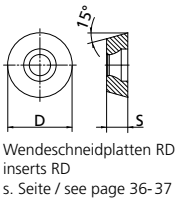
Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

shank type cutter, R2,5 RD__

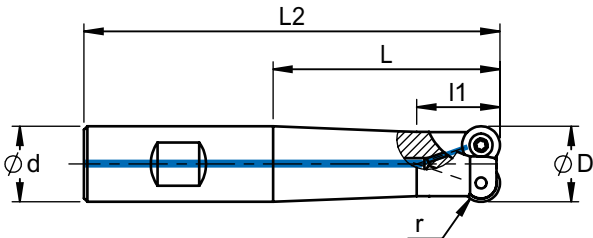


Schaftfräser, R3,5 RD__

shank type cutter, R3,5 RD__



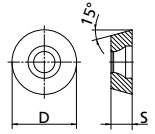
D	Bestell-Nr. order number	L	l1	L2	d	d3	z	WSP DxS	r			
12	2 12 948	30	-	75	10	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 947	30	-	75	12	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 942	40	16	88	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 941	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 940	80	16	128	16	-	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



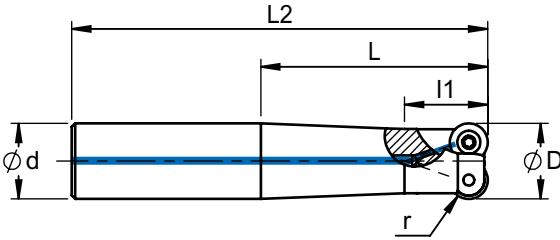
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12	2 12 946	40	16	88	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 945	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 944	80	16	128	16	-	2	7x1,99	3,5	x	993 02K	994 15
15	2 15 961	40	20	88	16	-	2	7x2,38	3,5	x	993 02	994 15
15	2 15 960	60	20	108	16	-	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__

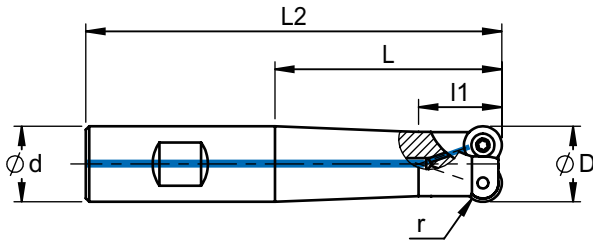
shank type cutter, R5 RD__



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

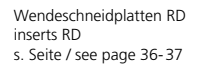


D	Bestell-Nr. order number	L	l1	L2	d	d3	z	WSP DxS	r			
20	2 20 933	40	20	90	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 932	60	22	110	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 931	80	25	136	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 930	100	25	156	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 929	120	25	176	25	-	2	10x3,18	5	x	993 04	994 15



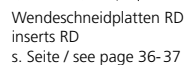
D	Bestell-Nr. order number	L	l1	L2	d	d3	z	WSP DxS	r			
20	2 20 956	40	20	90	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 955	60	22	110	20	-	2	10x3,18	5	x	993 04	994 15
20	2 20 954	80	25	136	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 953	100	25	156	25	-	2	10x3,18	5	x	993 04	994 15
20	2 20 952	120	25	176	25	-	2	10x3,18	5	x	993 04	994 15

modular screw in cutter R2,5 RD__

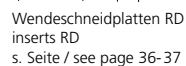


8 nineck

modular screw in cutter R3,5 RD__

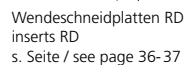
rineck 9

modular screw in cutter R4 RD__

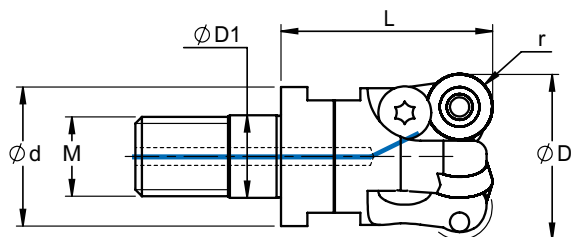
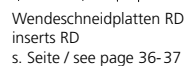


10 rineck

modular screw in cutter R5 RD__

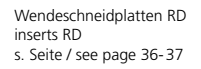


modular screw in cutter R6 RD__



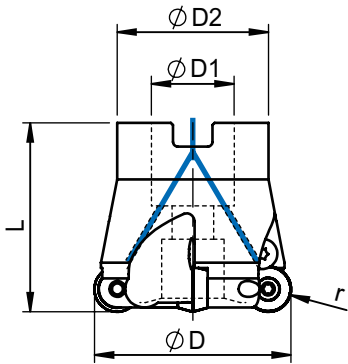
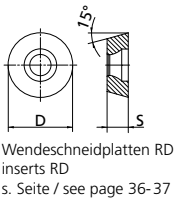
D	Bestell-Nr. order number	L	D1	d	Z	M	WSP DxS	r					
24	2 24 980	32	12,5	21	2	12	12x3,97	6	x	-	995 05	993 04	994 15
24	2 24 980-35	35	12,5	21	2	12	12x3,97	6	x	-	-	993 04	994 15
30	3 30 816	42	17	29	3	16	12x3,97	6	x	-	995 05	993 04	994 15
32	3 32 816	42	17	29	3	16	12x3,97	6	x	-	995 05	993 04	994 15
35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

modular screw in cutter R8 RD__



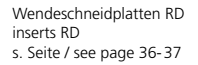
Aufsteckfräser R4-R5-R6-R8 RD__

shell cutter R4-R5-R6-R8 RD__

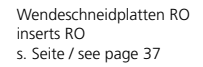


D	Bestell-Nr. order number	L	D1	D2	Z	WSP DxS	r					
42	7 42RD08A16	42	16	35	7	8x2,78	4	x	-	-	993 12	994 08
52	8 52RD08A22	42	22	40	8	8x2,78	4	x	-	-	993 12	994 08
42	6 42 RD10A16	42	16	35	6	10x3,18	5	x	-	-	993 04	994 15
52	6 52 RD10A22	50	22	40	6	10x3,18	5	x	-	-	993 04	994 15
52	7 52 998	50	22	40	7	10x3,18	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

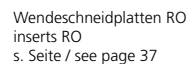
shell cutter R5-R6-R8 RD__

rineck 15

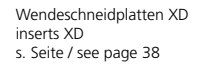
ball nose cutter ROHX



modular screw in cutter ROHX

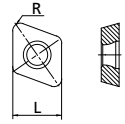


modular screw in cutter for insert - XDHW - XDHT

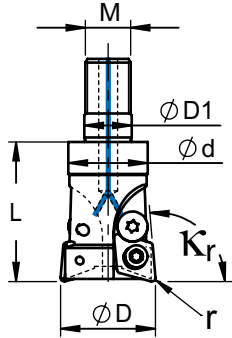
18 nineck

Eck-Einschraubfräser für Rhombus WSP - XDHW - XDHT

modular screw in cutter for insert - XDHW - XDHT



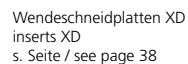
Wendeschneidplatten XD
inserts XD
s. Seite / see page 38



D	Bestell-Nr. order number	L	D1	d	Z	M	K _r	WSP L	r				
10	2 10 897	20	6,5	9,8	2	6	95°	4	1	x	-	993 00	994 06
12	2 12 896	20	6,5	10	2	6	95°	4	1	x	-	993 00	994 06
15	3 15 870	23	8,5	13,6	3	8	95°	4	1	x	-	993 00	994 06
15	2 15 855	23	8,5	13,6	2	8	91°	6,5	1	x	-	993 02	994 07
16	2 16 914	23	8,5	13,6	2	8	95°	6,5	1	x	-	993 02	994 07
16	2 16 XD71M10-95	23	10,5	15,4	2	10	95°	6,5	1	x	-	993 02	994 07
20	3 20 913	30	10,5	18	3	10	95°	6,5	1	x	-	993 02	994 07
25	3 25 912	35	12,5	21	3	12	95°	6,5	1	x	-	993 02	994 07
25	2 25 911	35	12,5	21	2	12	95°	10	1	x	995 05	993 04	994 15
35	3 35 910	43	17	29	3	16	95°	10	1	x	995 05	993 04	994 15
42	4 42 909	43	17	29	4	16	95°	10	1	x	995 05	993 04	994 15

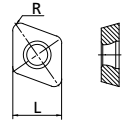
16	216XD72M8-95	23	8,5	13,6	2	8	95°	6,5	2	x	-	993 02	994 07
20	320XD72M10-95	30	10,5	18	3	10	95°	6,5	2	x	-	993 02	994 07

modular screw in cutter for insert - XDHW - XDHT

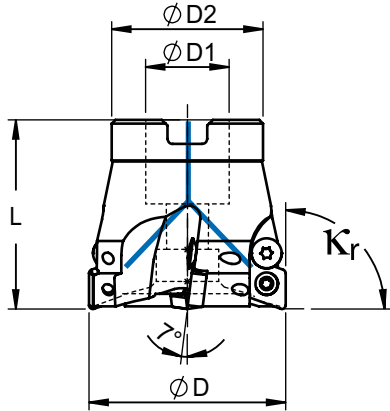
20 rineck

Eck-Aufsteckfräser für Rhombus WSP - XDHW - XDHT

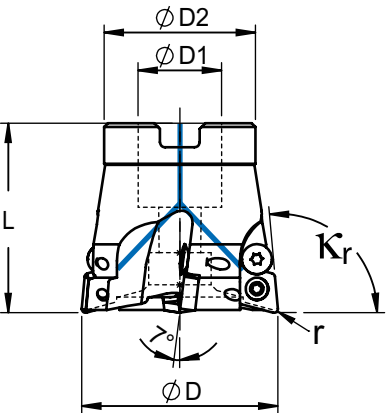
shell cutter for insert - XDHW - XDHT



Wendeschneidplatten XD
inserts XD
s. Seite / see page 38



D	Bestell-Nr. order number	L	D1	D2	Z	K _r	WSP DxS	r				
52	5 52 908	50	22	40	5	90°	10	-	x	995 05	993 04	994 15
66	6 66 907	50	27	48	6	90°	10	-	x	995 05	993 04	994 15
80	7 80 906	50	27	60	7	90°	10	-	x	995 05	993 04	994 15



D	Bestell-Nr. order number	L	D1	D2	Z	K _r	WSP DxS	r				
52	5 52 904	50	22	40	5	95°	10	1	x	995 05	993 04	994 15
66	6 66 903	50	27	48	6	95°	10	1	x	995 05	993 04	994 15
80	7 80 902	50	27	60	7	95°	10	1	x	995 05	993 04	994 15
100	7 100 901	50	32	70	7	95°	10	1	x	995 05	993 04	994 15

VDGT/VC GT

Technical drawing of a shaft-hub assembly. The shaft has a diameter ϕd and is subjected to a torque M . The hub has an outer diameter ϕD and an inner bore diameter $\phi D1$. The length of the hub is L . The fit is indicated as $K_r = 90^\circ$. A detail view shows the fillet radius r at the transition between the shaft and the hub.

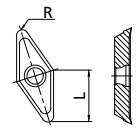


D	Bestell-Nr. order number	L	D1	d	Z	M	WSP L	r			
15	2 15VD11-05M8	36	8,5	13,5	2	8	11	0,5	x	993 02	994 07
16	2 16VD11-05M8	36	8,5	13,5	2	8	11	0,5	x	993 02	994 07
20	2 20VD11-05M10	36	10,5	18	2	10	11	0,5	x	993 02	994 07
25	3 25VD11-05M12	41	12,5	21	3	12	11	0,5	x	993 02	994 07
32	4 32VD11-05M16	45	17	29	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

shell cutter for aluminium, copper, plastic, graphite VCGT



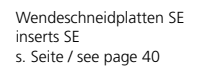
Technical drawing of a mechanical part showing dimensions and a fillet radius. The drawing includes the following labels and dimensions:

- $\phi D2$: Outer diameter of the top section.
- $\phi D1$: Inner diameter of the top section.
- L : Total height of the part.
- ϕD : Diameter of the base.
- $K_r = 90^\circ$: Fillet radius dimension.
- r : Fillet radius.
- θ : Angle of the fillet.

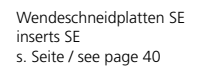


D	Bestell-Nr. order number	L	D1	D2	Z	WSP L	r			
42	3 42 872	57	16	35	3	22	3	x	993 06	994 20
50	3 50 871	57	22	40	3	22	3	x	993 06	994 20
52	3 52 871	57	22	40	3	22	3	x	993 06	994 20
66	4 66 870	57	27	48	4	22	3	x	993 06	994 20
80	4 80 869	57	27	60	4	22	3	x	993 06	994 20
100	5 100 868	55	32	70	5	22	3	-	993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

face milling cutter 45° SEKX

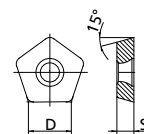


modular screw in cutter for chamfering SEKX

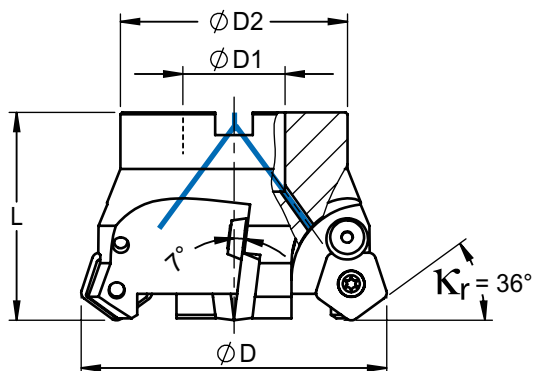
rineck 25

shell cutter OFMT

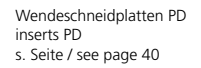
shell cutter for pentagon insert PDHX



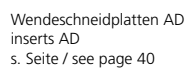
Wendeschneidplatten PD
inserts PD
s. Seite / see page 40

28 rineck

shell cutter for pentagon insert PDHX

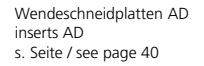
rineck 29

modular screw in cutter, ADKT

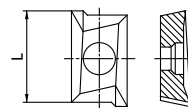


30 rineck

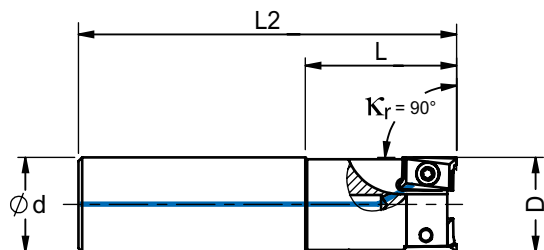
shell cutter ADKT

rineck 31

shank type cutter APKT 1003 PD...

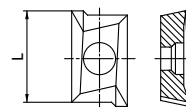


Wendeschneidplatten AP
inserts AP
s. Seite / see page 40

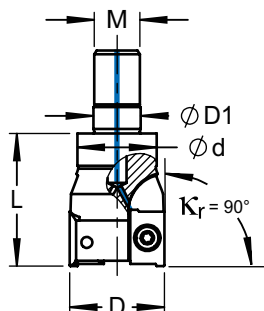
[illegible]

Einschraubfräser APKT 1003 PD...

modular screw in cutter APKT 1003 PD...



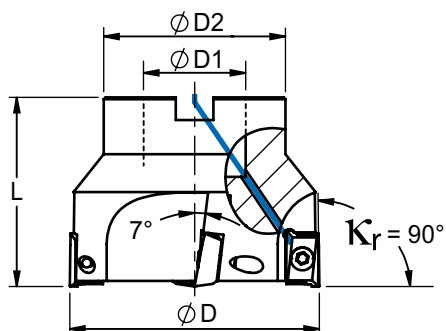
Wendeschneidplatten AP
inserts AP
s. Seite / see page 40



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

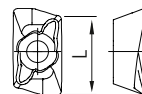
Aufsteckfräser APKT 1003 PD...

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

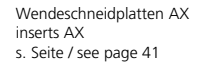


Technical drawing of a ball joint (Kugelgelenk) showing dimensions and components. The drawing includes a side view and a cross-section view. Key dimensions and labels are:

- M : Dimension of the upper nut/bushing.
- $\phi D1$: Outer diameter of the upper nut/bushing.
- ϕd : Inner diameter of the upper nut/bushing.
- L : Total length of the assembly.
- ϕD : Outer diameter of the lower housing.
- $K_r = 90^\circ$: Angle of the lower housing.

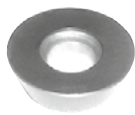
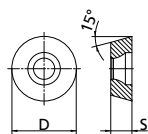
34 rineck

shell cutter AXMT

rineck 35

Runde-Fräswendeschnidplatten RDHX - präzisionsgeschliffen

inserts RDHX - precision ground insert

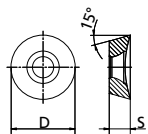


WSP rund, TIALN-beschichtet
inserts round, TIALN-coated

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

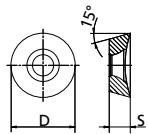
Wendeschnidplatte insert	WSP DxS	TIALN-beschichtet hartfräsen bis 60HRc TIALN-coated hardmilling up to 60HRc			RK 15F
RDHX 05 01 MOT	5x1,5				80 217
RDHX 07 01 MOT	7x1,99				80 237
RDHX 07 02 MOT	7x2,38				80 247
RDHX 08 T2 MOE	8x2,78				80 257
RDHX 10 03 MOT	10x3,18				80 267
RDHX 12 T3 MOT	12x3,97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



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

R-Cut
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



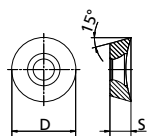
WSP rund mit polierter Hohlkehle,
für Alu, Kupfer, Kunststoff, unbeschichtet
hollow ground polished, uncoated

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-Fräswendeschneidplatten mit Hohlkehle RDHT

inserts RDHT



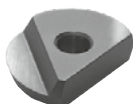
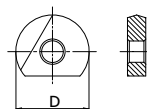
WSP rund mit Hohlkehle, Diamant beschichtet
Diamond coated



Wendeschneidplatte 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



Wendeschneidplatte 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

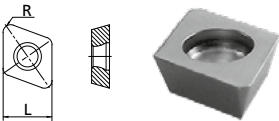
Kugelplatte, Diamant beschichtet
diamond-coated



Wendeschneidplatte 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

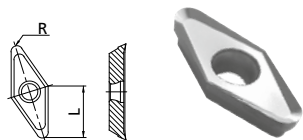
WSP rhombisch, Diamant beschichtet
inserts rhombic, diamond-coated



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/VCGT

insert VDGT/VCGT



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

R-Cut
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	-
VCGT 22 05	22	3	-	-	85 122	-

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

uncoated

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	-
VCGT 22 05	22	3	-	-	85 022	-

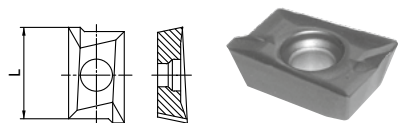
WSP für Alu, Kupfer und Kunststoff, Diamant beschichtet
for alu, copper, plastic, diamond coated



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

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

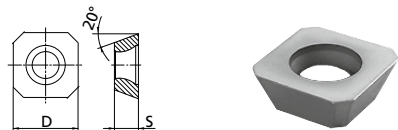
inserts APKT / ADKT / SEKX / SEET / PDHX / OFKT / OFEX



WSP beschichtet
inserts coated

TIALN
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

TIALN
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	



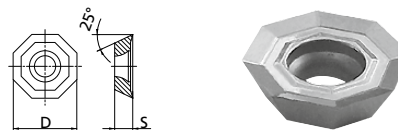
WSP 5 kant, TIALN-beschichtet
inserts 5 edge, TIALN-coated

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



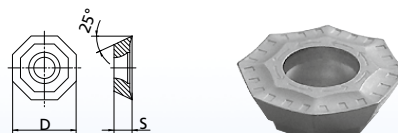
WSP, poliert unbeschichtet
inserts, uncoated polished

uncoated

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



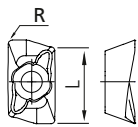
WSP beschichtet;
inserts coated

TIALN
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

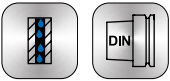
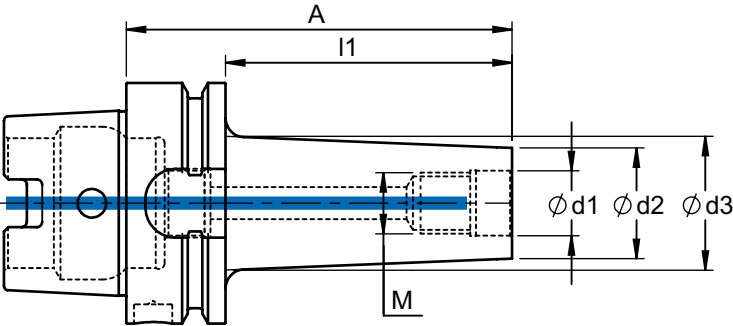
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Page

Fräsaufnahmen für Einschraubfräser Modular screw on holder	44 - 53
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



69893-1

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	

modular screw on holder HSK-A40

[illegible]

modular screw on holder HSK-A50



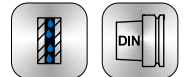
69893-1

rineck 47

modular screw on holder HSK-A63

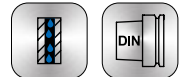
[illegible]

modular screw on holder HSK-A63



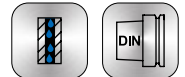
G2,5/15.000
oder/or
U<1gmm

modular screw on holder HSK-A80

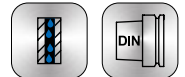


G2,5/15.000
oder/or
U<1gmm

modular screw on holder HSK-A100

[illegible]

modular screw on holder HSK-A100



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

arbor HSK-A50 for shell cutter

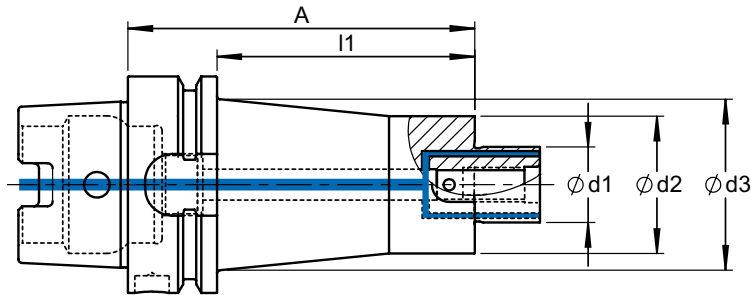
delivery: with drive keys and retaining screw



Fräsdorne HSK-A63

arbor HSK-A63 for shell cutter

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



69893-1

Bestell-Nr. order number	d1	d2	d3	l1	A					
901 - A6316	16	35	35	20	46	x	959-16	-	957-M8	-
901 - A631625	16	35	35	25	51	x	959-16	-	957-M8	-
901 - A631650	16	35	42	50	76	x	959-16	-	957-M8	-
901 - A631650ZY	16	35	35	50	76	x	959-16	-	957-M8	-
901 - A631675	16	35	45	75	101	x	959-16	-	957-M8	-
901 - A631675ZY	16	35	35	75	101	x	959-16	-	957-M8	-
901 - A6316100	16	35	50	100	126	x	959-16	-	957-M8	-
901 - A6316100ZY	16	35	35	100	126	x	959-16	-	957-M8	-
901 - A6316150	16	35	50	150	176	x	959-16	-	957-M8	-
901 - A6316200	16	35	53	200	226	x	959-16	-	957-M8	-
901 - A6316250	16	35	53	250	276	x	959-16	-	957-M8	-
901 - A6316300	16	35	53	300	326	x	959-16	-	957-M8	-
901 - A6322	22	40	40	20	46	x	959-22	-	957-M10	-
901 - A632225	22	40	40	25	51	x	959-22	-	957-M10	-
901 - A632250	22	40	45	50	76	x	959-22	-	957-M10	-
901 - A632250ZY	22	48	48	50	76	x	959-22	-	957-M10	-
901 - A632275	22	40	50	75	101	x	959-22	-	957-M10	-
901 - A632275ZY	22	48	48	75	101	x	959-22	-	957-M10	-
901 - A6322100	22	40	50	100	126	x	959-22	-	957-M10	-
901 - A6322100ZY	22	48	48	100	126	x	959-22	-	957-M10	-
901 - A6322150	22	40	50	150	176	x	959-22	-	957-M10	-
901 - A6322150ZY	22	48	48	150	176	x	959-22	-	957-M10	-
901 - A6322200	22	40	53	200	226	x	959-22	-	957-M10	-
901 - A6322200ZY	22	48	48	200	226	x	959-22	-	957-M10	-
901 - A6322250	22	40	53	250	276	x	959-22	-	957-M10	-
901 - A6322300	22	40	53	300	326	x	959-22	-	957-M10	-
901 - A632725	27	48	48	25	51	x	959-27	-	957-M12	-
901 - A632750	27	48	53	50	76	x	959-27	-	957-M12	-
901 - A6327100	27	48	53	100	126	x	959-27	-	957-M12	-
901 - A6327100ZY	27	48	48	100	126	x	959-27	-	957-M12	-
901 - A6327150	27	48	53	150	176	x	959-27	-	957-M12	-
901 - A6327200	27	48	53	200	226	x	959-27	-	957-M12	-
901 - A6327250	27	48	53	250	276	x	959-27	-	957-M12	-
901 - A6327300	27	48	53	300	326	x	959-27	-	957-M12	-
901 - A6332	32	60	60	32	58	x	959-32	957-32	-	958-32
901 - A6332100	32	60	60	100	126	x	959-32	957-32	-	958-32
901 - A6332150	32	60	60	150	176	x	959-32	957-32	-	958-32

G6, 3/8.000

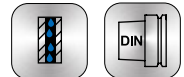
arbors HSK-A80 for shell cutter

delivery: with drive keys and retaining screw

[illegible]

arbors HSK-A63 for shell cutter

delivery: with drive keys and retaining screw

[illegible]

arbors HSK-A63 for shell cutter

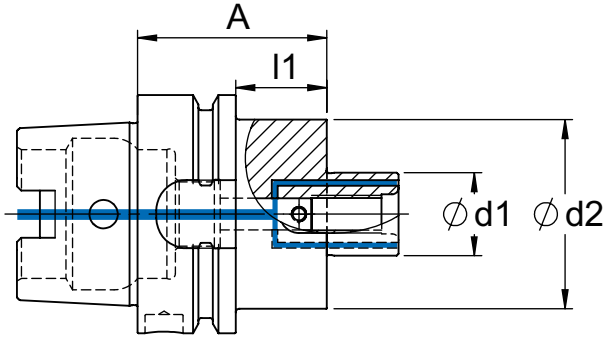
delivery: with drive keys and retaining screw

[illegible]

mit vergrössertem Anlagedurchmesser

arbors HSK-A63 - 100 with enlarged contact surface diameter

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



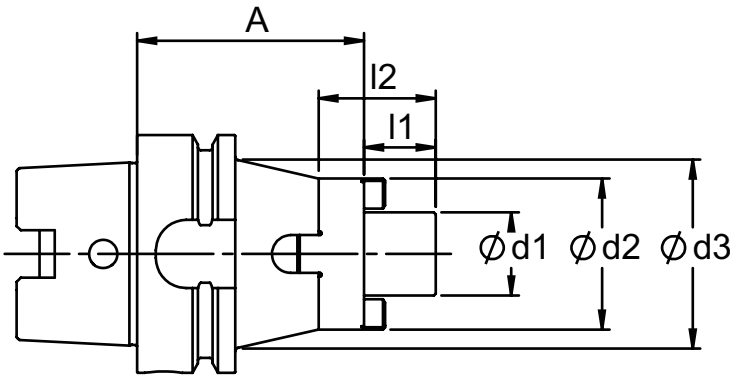
69 893-1

[illegible]

Kombi - Aufsteckfräsdorne HSK-A40 - 100

combi-arbors with tenon and parallel key drive, HSK-A40 - 100

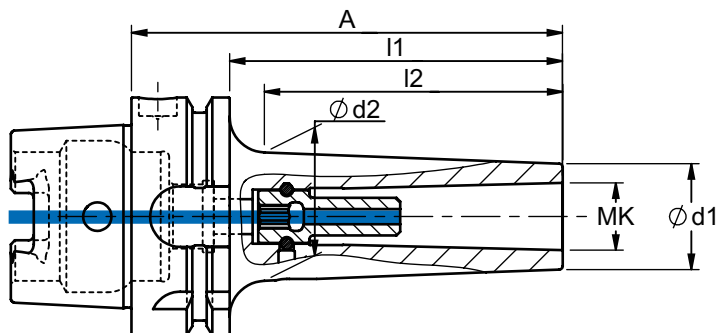
Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw



69893-1

Bestell-Nr. order number	HSK	d1	d2	d3	l1	l2	A					
902 - A4016	A40	16	32	32	17	27	50	955-16	956-16	957-16	958-16	G6,3/8.000
902 - A4022	A40	22	40	40	19	31	50	955-22	956-22	957-22	958-22	
902 - A4027	A40	27	48	48	21	33	65	955-27	956-27	957-27	958-27	
902 - A5016	A50	16	32	32	17	27	50	955-16	956-16	957-16	958-16	
902 - A5022	A50	22	40	40	19	31	50	955-22	956-22	957-22	958-22	
902 - A5027	A50	27	48	48	21	33	65	955-27	956-27	957-27	958-27	
902 - A5032	A50	32	58	58	24	38	65	955-32	956-32	957-32	958-32	
902 - A6316	A63	16	32	32	17	27	60	955-16	956-16	957-16	958-16	
902 - A6322	A63	22	40	40	19	31	60	955-22	956-22	957-22	958-22	
902 - A6327	A63	27	48	48	21	33	60	955-27	956-27	957-27	958-27	
902 - A6332	A63	32	58	58	24	38	60	955-32	956-32	957-32	958-32	
902 - A6340	A63	40	70	70	27	41	70	955-40	956-40	957-40	958-40	
902 - A8016	A80	16	32	32	17	27	60	955-16	956-16	957-16	958-16	
902 - A8022	A80	22	40	40	19	31	60	955-22	956-22	957-22	958-22	
902 - A8027	A80	27	48	48	21	33	60	955-27	956-27	957-27	958-27	
902 - A8032	A80	32	58	58	24	38	60	955-32	956-32	957-32	958-32	
902 - A8040	A80	40	70	70	27	41	70	955-40	956-40	957-40	958-40	
902 - A10016	A100	16	32	32	17	27	60	955-16	956-16	957-16	958-16	
902 - A10022	A100	22	40	40	19	31	60	955-22	956-22	957-22	958-22	
902 - A10027	A100	27	48	48	21	33	60	955-27	956-27	957-27	958-27	
902 - A10032	A100	32	58	58	24	38	60	955-32	956-32	957-32	958-32	
902 - A10040	A100	40	70	70	27	41	70	955-40	956-40	957-40	958-40	

morse taper adaptor HSK-A63 - 100



69 893-1

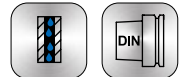
[illegible]

morse taper adaptor, HSK-A50 - 100

[illegible]

side lock adapter HSK-A50

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

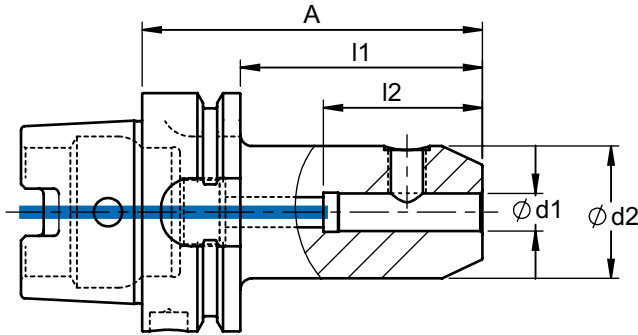


69 893-1

[illegible]

side lock adapter HSK-A63

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



69 893-1

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	

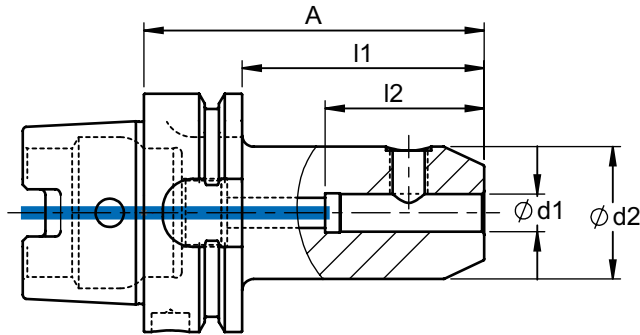
side lock adapter HSK-A80

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



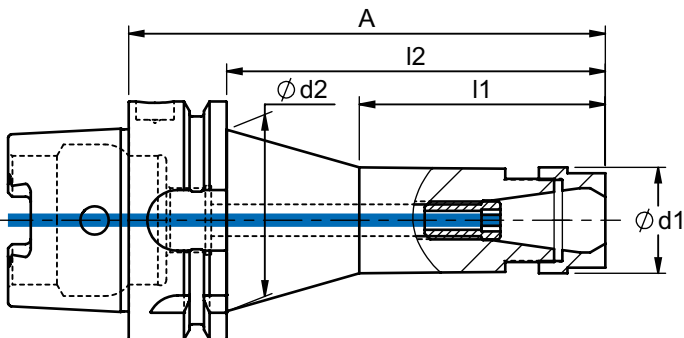
69 893-1

[illegible]

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



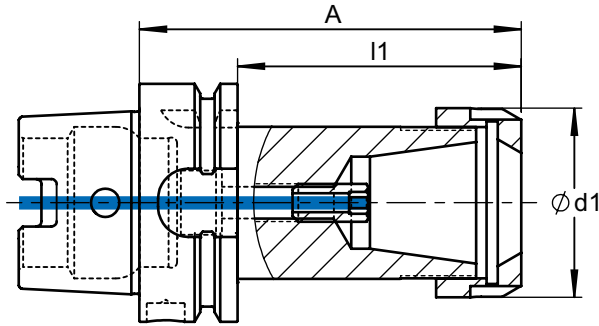
69 893-1

[illegible]

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



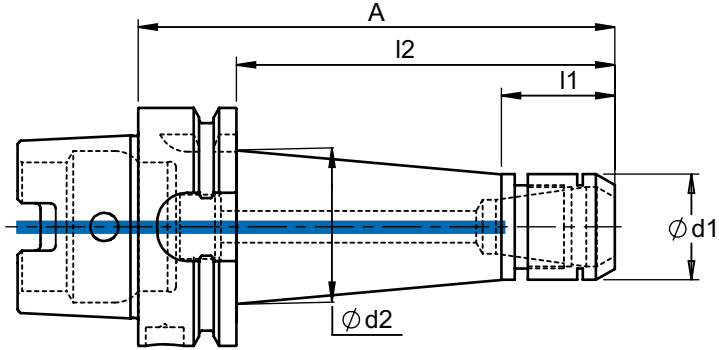
69 893-1

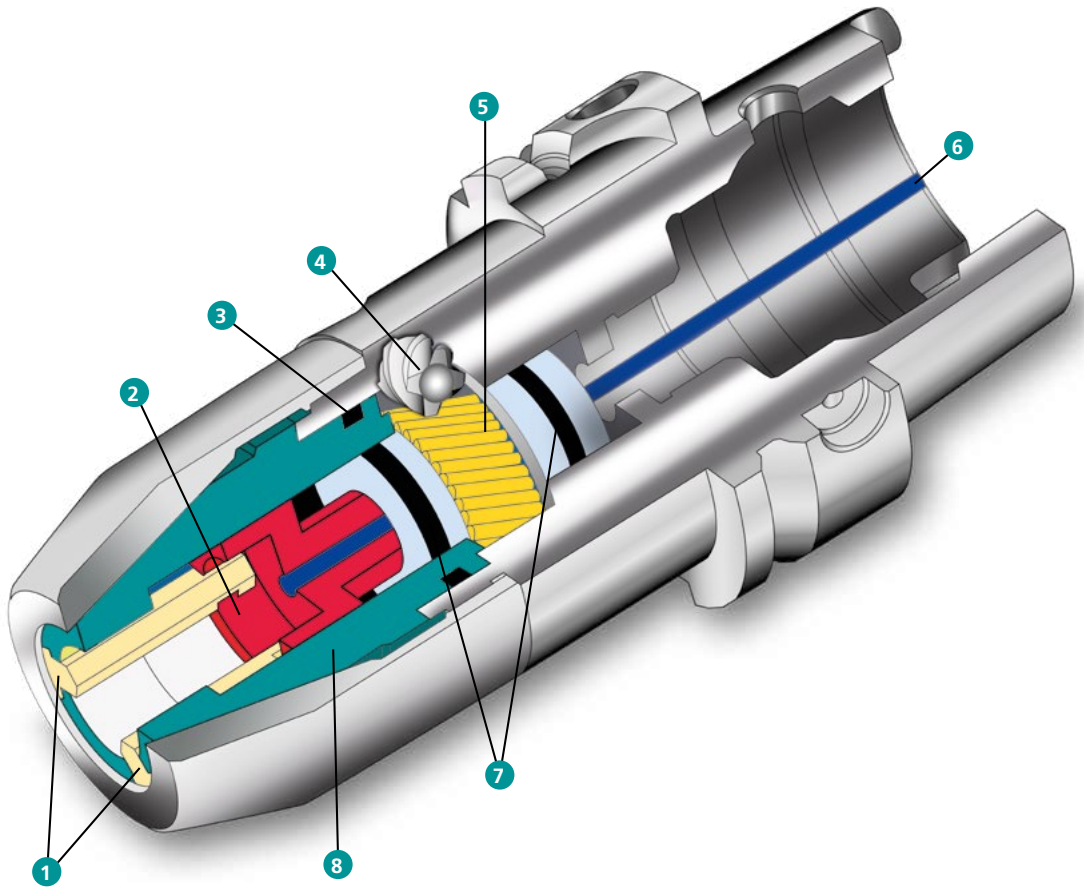
Bestell-Nr. order number	HSK	ER	d1	l1	A				
912 - A3245	A32	25	42	45	45	953-UM25	-	954-013ER25	G6,3/8.000
913 - A3260	A32	32	50	60	80	953-UM32	-	954-014ER32	
912 - A4060	A40	25	42	60	80	953-UM25	948-M12	954-013ER25	
913 - A4060	A40	32	50	60	80	953-UM32	948-M16	954-014ER32	
912 - A5050	A50	25	42	50	76	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	
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	
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	
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	

Spannzangenfutter HSK-A32 - 100
für Spannzangen ER 11/16/20 mit Spannmutter HS

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

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

[illegible]



- 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

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

[illegible]

blanks HSK-A32 - 100

Execution: taper and collar hardened and ground.

Application: For producing your own special tools.

[illegible]

Werkzeugaufnahmen HSK-E

Tool holders HSK-E

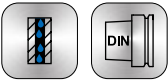
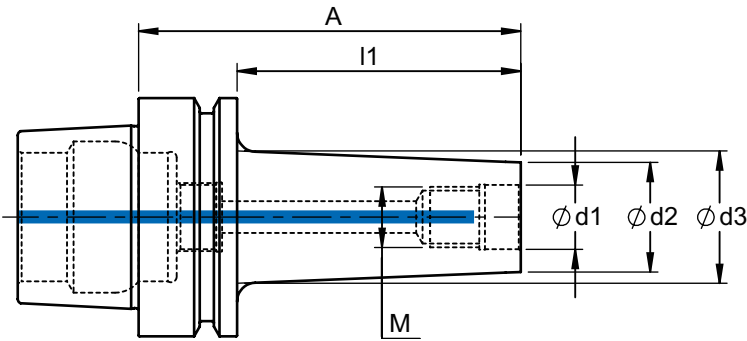
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Fräsdorne Arbors for shell cutters	82 - 83
Zwischenhülsen Morse taper adaptors	84
Weldonfutter Side lock adapter	85
Spannzangenfutter Collet chucks	86 - 88
CNC-Bohrfutter CNC-drill chucks	89
Rohlinge Blanks	90

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

Fräsaufnahme HSK-E32 für Einschraubfräser

modular screw on holder HSK-E32

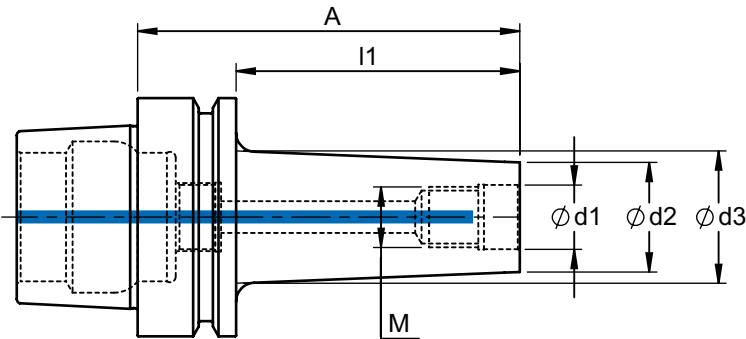


69893-5

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	

Fräsaufnahme HSK-E40 für Einschraubfräser

modular screw on holder HSK-E40



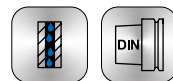
69893-5

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

[illegible]

modular screw on holder HSK-E63

[illegible]

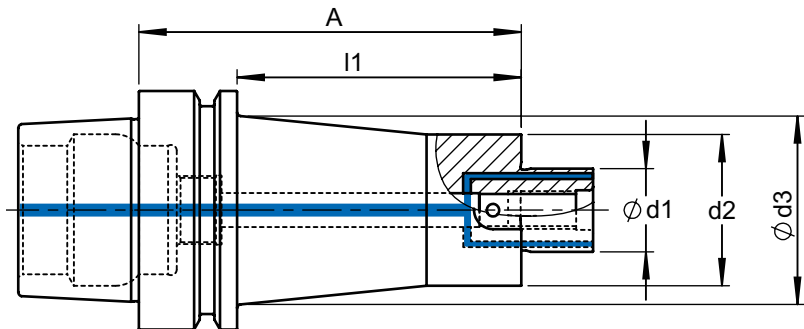
modular screw on holder HSK-E63

[illegible]

Fräsdorne HSK-E40 - 63

arbors HSK-E40 - 63 for shell cutter

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



69 893-5

[illegible]

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

delivery: with drive keys and retaining screw



Bestell-Nr. order number	d1	d2	d3	l1	l2	A					
902 - E5016	16	32	32	17	27	50	955-16	956-16	957-16	958-16	G6,3/8.000
902 - E5022	22	40	40	19	31	50	955-22	956-22	957-22	958-22	
902 - E5027	27	48	48	21	33	65	955-27	956-27	957-27	958-27	

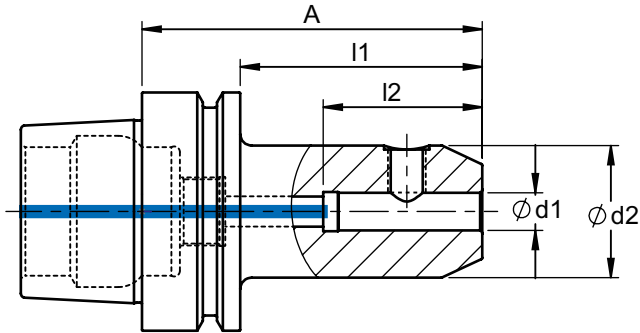
morse taper adaptor, HSK-E50

morse taper adaptor, HSK-E50

[illegible]

weldon chuck HSK-E40 - 63

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



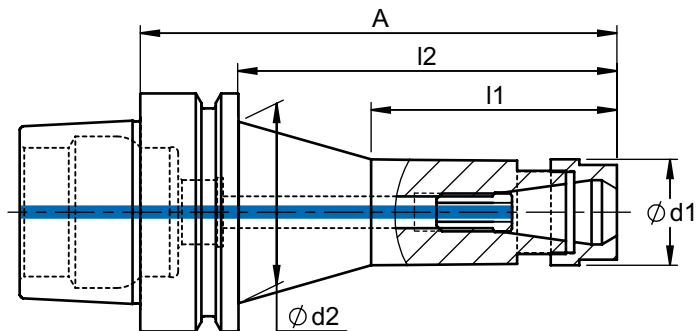
69893-5

[illegible]

für Spannzangen ER 16 mit Spannmutter UM

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



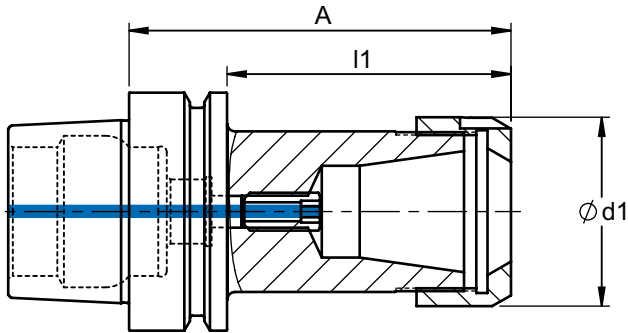
69 893-5

[illegible]

**Spannzangenfutter HSK-E40 - 63
für Spannzangen ER 25/32/40 mit Spannmutter UM**

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

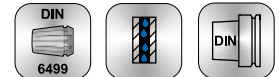


69893-5

[illegible]

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

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

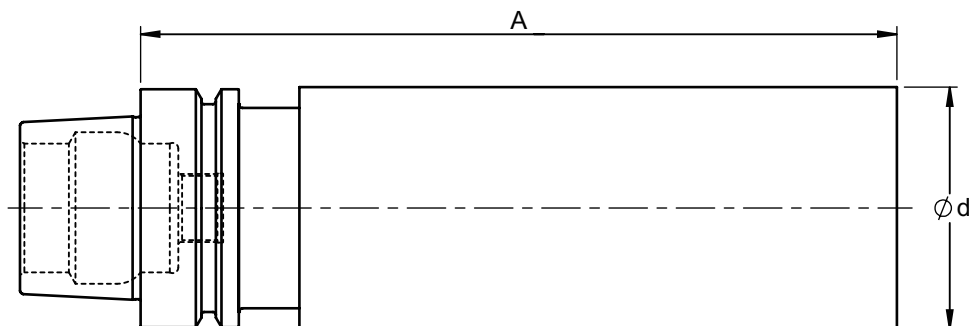
[illegible]

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

[illegible]

blanks HSK-E50 - 63

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.



69 893-5

[illegible]

Werkzeugaufnahmen HSK-F

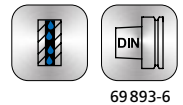
Tool holders HSK-F

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Spannzangenfutter Collet chucks	97 - 98
CNC-Bohrfutter CNC-drill chucks	99

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

modular screw on holder HSK-F63

92 rineck

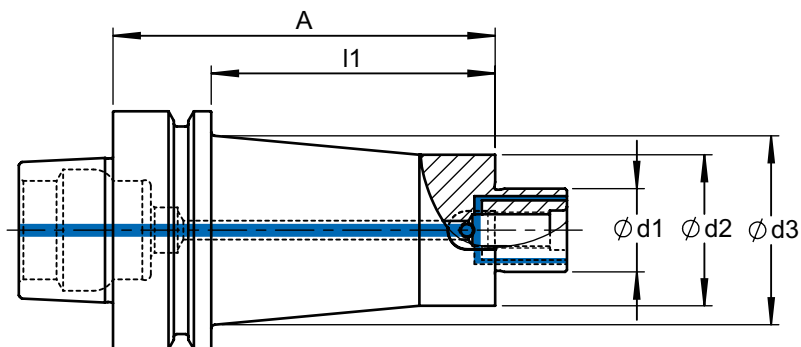
modular screw on holder HSK-F63 with thread for coolant tube



Fräsdorne HSK-F63

arbors HSK-F63 for shell cutter

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



69 893-6

morse taper adaptor, HSK-F63



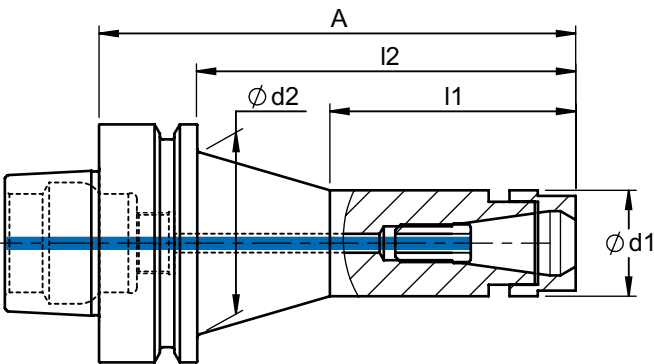
weldon chuck HSK-F63

delivery: weldon chuck with tightening screw

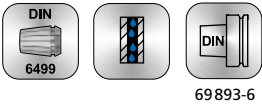
[illegible]

Spannzangenfutter HSK-F63 für Spannzangen ER 16/25/32/40 mit Spannmutter UM

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

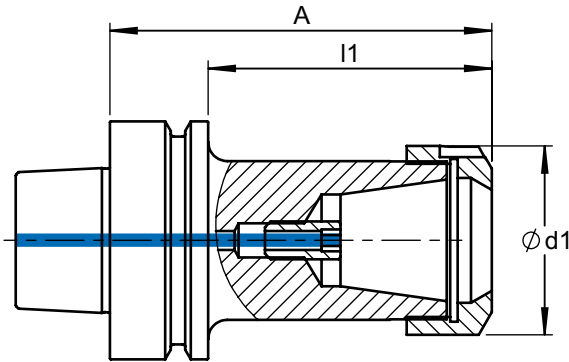


Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM

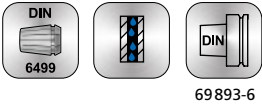


69893-6

Bestell-Nr. order number	ER	d1	d2	l1	l2	A				
910 - F6350	16	28	28	-	50	76	953-UM16	-	954-034	G6,3/15.000
910 - F6375	16	28	28	-	75	101	953-UM16	-	954-034	G6,3/15.000
910 - F63100	16	28	48	65	100	126	953-UM16	948-M10	954-034	G6,3/15.000



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



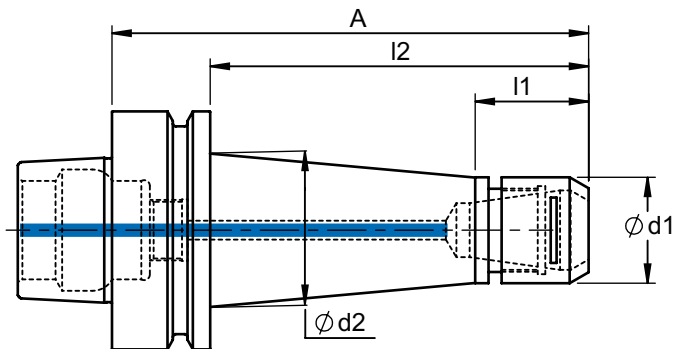
69893-6

Bestell-Nr. order number	ER	d1	l1	A				
912 - F6350	25	42	50	76	953-UM25	-	954-013ER25	G6,3/15.000
912 - F6375	25	42	75	101	953-UM25	948-M12	954-013ER25	
912 - F63100	25	42	100	126	953-UM25	948-M12	954-013ER25	
913 - F6350	32	50	50	76	953-UM32	-	954-013ER32	
913 - F6375	32	50	75	101	953-UM32	948-M16	954-013ER32	
913 - F63100	32	50	100	126	953-UM32	948-M16	954-013ER32	
914 - F6350	40	63	50	76	953-UM40	-	954-014ER40	

für Spannzangen ER 11/20 mit Spannmutter MS

collet chucks HSK-F63 for collets ER 11/20 with nut MS

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



69 893-6

Bestell-Nr. order number	ER	d1	d2	l1	l2	A			
918 - F63100	11	16	33	20	100	126	953-MS11	954-11	G2,5/15.000
918 - F63200	11	16	32	20	200	226	953-MS11	954-11	
911 - F6350	20	28	37	30	50	76	953-MS20	954-063E20	
911 - F63100	20	28	50	30	100	126	953-MS20	954-063E20	
911 - F63150	20	28	53	30	150	176	953-MS20	954-063E20	
911 - F63200	20	28	53	30	200	226	953-MS20	954-063E20	
911 - F63250	20	28	53	30	250	276	953-MS20	954-063E20	

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

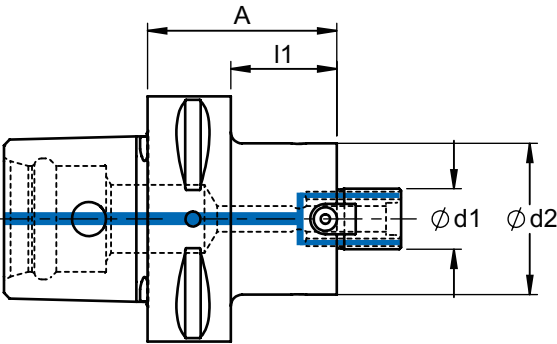
Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

shank PSC-63 for threaded type cutter

102 rineck

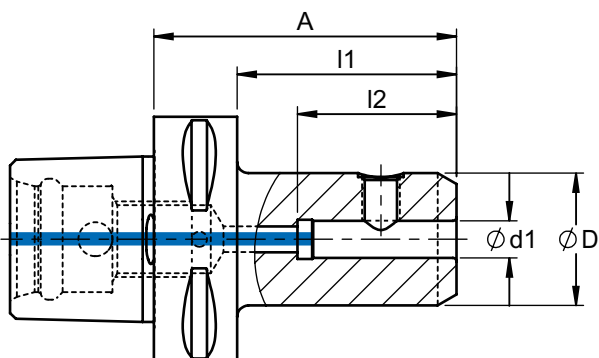
Fräsdorne PSC-63

arbors PSC-63 for shell cutter



Bestell-Nr. order number	d1	d2	l1	A					
922-PSC6316A50	16	40	28	50	959-16	-	957-M8	-	G6,3/8.000
922-PSC6316A100	16	40	78	100	959-16	-	957-M8	-	
922-PSC6322A50	22	50	28	50	959-22	-	957-M10	-	
922-PSC6322A100	22	50	78	100	959-22	-	957-M10	-	
922-PSC6327A50	27	60	28	50	959-27	-	957-M12	-	
922-PSC6327A100	27	60	78	100	959-27	-	957-M12	-	
922-PSC6332A60	32	63	38	60	959-32	957-32	-	958-32	

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

Werkzeugaufnahmen SK

Tool holders SK

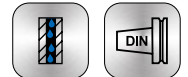
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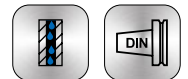
Fräsaufnahmen für Einschraubfräser Modular screw on holder	109 - 117
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Fräserhülsen / Zwischenhülsen Morse taper adaptors	122 - 123
Weldonfutter Side lock adapter	125
Spannzangenfutter Collet chucks	126 - 127
CNC-Bohrfutter CNC-drill chucks	129
Plananlagen für Einschraub- und Aufsteckfräser Arbors with face contact for modular screw in cutter and shell cutters	130 - 131
Rohlinge Blanks	132

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

modular screw on holder SK30

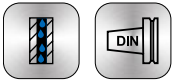
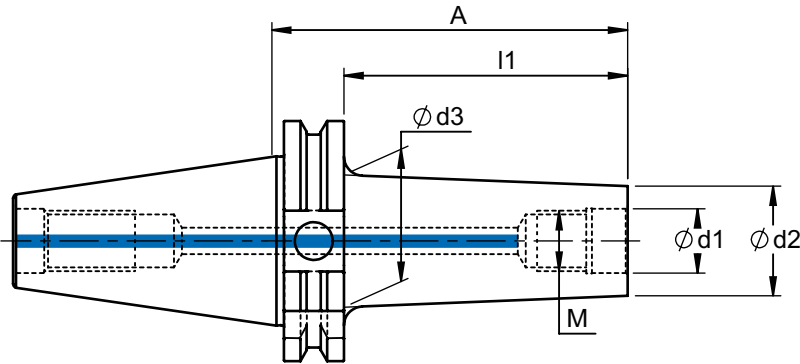
[illegible]

modular screw on holder SK40

[illegible]

Fräsaufnahmen SK40 für Einschraubfräser

modular screw on holder SK40



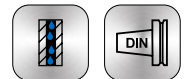
69871-AD

Bestell-Nr. order number	M	d1	d2	d3	A	l1	
962 - 1225	M12	12,5	21	24	44,1	25	 G6,3/10.000
962 - 1250	M12	12,5	21	30	69,1	50	
962 - 1250ZY	M12	12,5	22	22	69,1	50	
962 - 1275	M12	12,5	21	35	94,1	75	
962 - 1275ZY	M12	12,5	22	22	94,1	75	
962 - 12100	M12	12,5	21	38	119,1	100	
962 - 12100ZY	M12	12,5	22	22	119,1	100	
962 - 12125	M12	12,5	21	43	144,1	125	
962 - 12150	M12	12,5	21	45	169,1	150	
962 - 12175	M12	12,5	21	50	194,1	175	
962 - 12200	M12	12,5	21	50	219,1	200	
962 - 12250	M12	12,5	21	50	269,1	250	
962 - 1625	M16	17	29	29	44,1	25	
962 - 1650	M16	17	29	34	69,1	50	
962 - 1650-37	M16	17	37	43	69,1	50	
962 - 1650ZY	M16	17	29	29	69,1	50	
962 - 1675	M16	17	29	35	94,1	75	
962 - 1675-37	M16	17	37	46	94,1	75	
962 - 1675ZY	M16	17	29	29	94,1	75	
962 - 16100	M16	17	29	40	119,1	100	
962 - 16100-37	M16	17	37	49	119,1	100	
962 - 16100ZY	M16	17	29	29	119,1	100	
962 - 16125	M16	17	29	44	144,1	125	
962 - 16150	M16	17	29	45	169,1	150	
962 - 16150ZY	M16	17	29	29	169,1	150	
962 - 16175	M16	17	29	50	194,1	175	
962 - 16200	M16	17	29	50	219,1	200	
962 - 16200ZY	M16	17	29	29	219,1	200	
962 - 16225	M16	17	29	50	244,1	225	
962 - 16250	M16	17	29	50	269,1	250	

modular screw on holder SK40

rineck 113

modular screw on holder SK50

[illegible]

modular screw on holder SK50



Bestell-Nr. order number	M	d1	d2	d3	A	l1	
463 - SK501650	M16	17	29	35	69,1	50	G6,3/8.000
463 - SK501650-37	M16	17	37	43	69,1	50	
463 - SK501650ZY	M16	17	29	29	69,1	50	
463 - SK501675	M16	17	29	37	94,1	75	
463 - SK501675-37	M16	17	37	46	94,1	75	
463 - SK501675ZY	M16	17	29	29	94,1	75	
463 - SK501675ZY-37	M16	17	37	37	94,1	75	
463 - SK5016100	M16	17	29	41	119,1	100	
463 - SK5016100-37	M16	17	37	49	119,1	100	
463 - SK5016100ZY	M16	17	29	29	119,1	100	
463 - SK5016100ZY-37	M16	17	37	37	119,1	100	
463 - SK5016150	M16	17	29	50	169,1	150	
463 - SK5016150ZY	M16	17	29	29	169,1	150	
463 - SK5016200	M16	17	29	57	219,1	200	
463 - SK5016200ZY	M16	17	29	29	219,1	200	
463 - SK5016250	M16	17	29	62	269,1	250	
463 - SK5016250ZY-38	M16	17	38	38	269,1	250	
463 - SK5016300	M16	17	29	67	319,1	300	
463 - SK5016350	M16	17	29	70	369,1	350	
463 - SK5016400	M16	17	29	70	419,1	400	
463 - SK5016450	M16	17	29	70	469,1	450	

modular screw on holder SK50

[illegible]

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

delivery: with drive keys and retaining screw

[illegible]

morse taper adaptor SK50



69871-AD

122 rineck

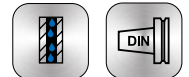
morse taper adaptor, SK40, 50



G6,3/8.000

weldon chuck SK40, 50

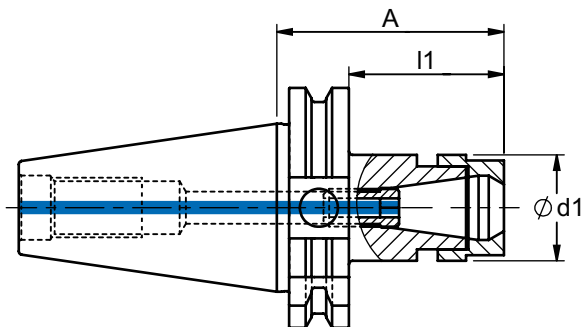
Lieferumfang: SK-Aufnahme mit Spannschraube
delivery: weldon chuck with tightening screw

[illegible]

für Spannzangen ER 16/25/32/40 mit Spannmutter UM

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



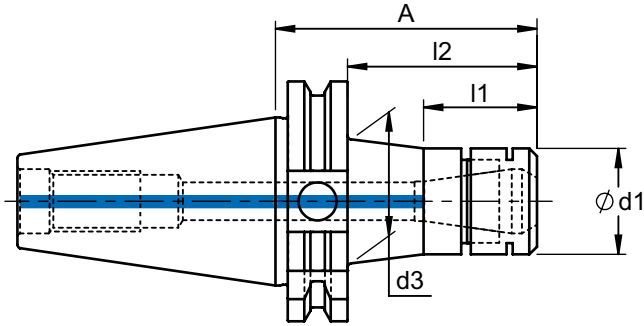
69871-AD

[illegible]

für Spannzangen ER 11/16/20 mit Spannmutter MS

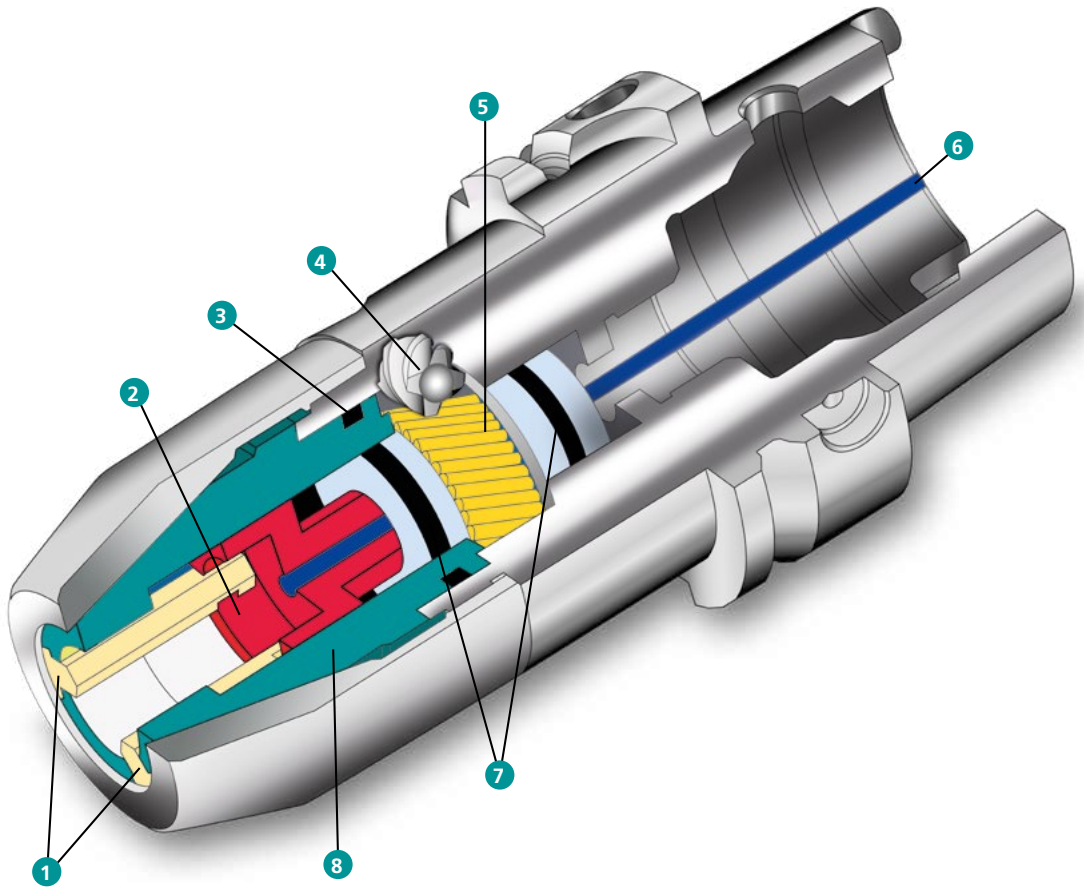
collet chucks SK30, 40 for collets ER 1 1/16/20 with nut type MS

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



69871-AD

Bestell-Nr. order number	SK	ER	d1	d2	l1	l2	A			
911 - SK3040	SK30	20	28	33	30	40	59,1	953-MS20	954-063E20	G2,5/15.000 oder/or U<1gmm
911 - SK3080	SK30	20	28	39	30	80	99,1	953-MS20	954-063E20	
918 - SK4050	SK40	11	16	20	21	50	69,1	953-MS11	954-11	
918 - SK40100	SK40	11	16	26	21	100	119,1	953-MS11	954-11	
918 - SK40150	SK40	11	16	33	21	150	169,1	953-MS11	954-11	
918 - SK40200	SK40	11	16	33	21	200	219,1	953-MS11	954-11	
919 - SK40100	SK40	16	22	35	30	100	119,1	953-MS16	954-16	
919 - SK40A175	SK40	16	22	34	30	155,9	175	953-MS16	954-16	
911 - SK4050	SK40	20	28	33	30	50	69,1	953-MS20	954-063E20	
911 - SK40100	SK40	20	28	35	30	100	119,1	953-MS20	954-063E20	
911 - SK40150	SK40	20	28	36	30	150	169,1	953-MS20	954-063E20	
911 - SK40200	SK40	20	28	36	30	200	219,1	953-MS20	954-063E20	



- 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

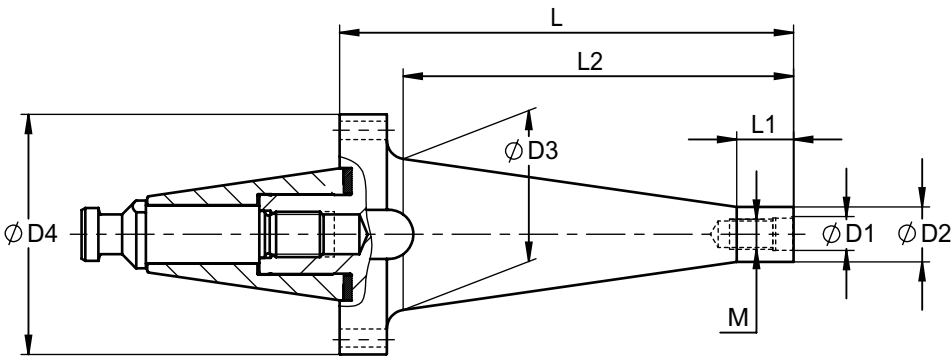
CNC- drill chucks SK30 - 50 for clockwise and anti clockwise rotation



rineck 129

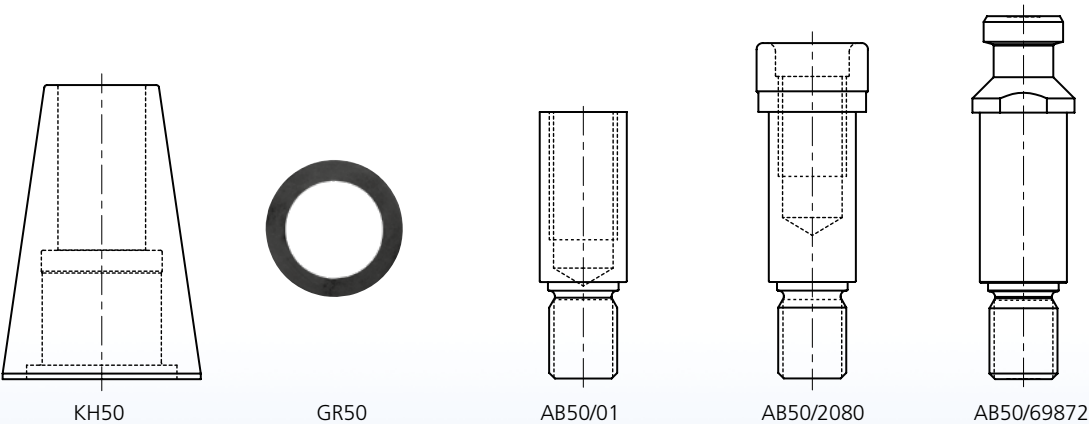
Steilkegel-Plananlagen SK50 für Einschraubfräser

modular screw on holder SK50 with face contact

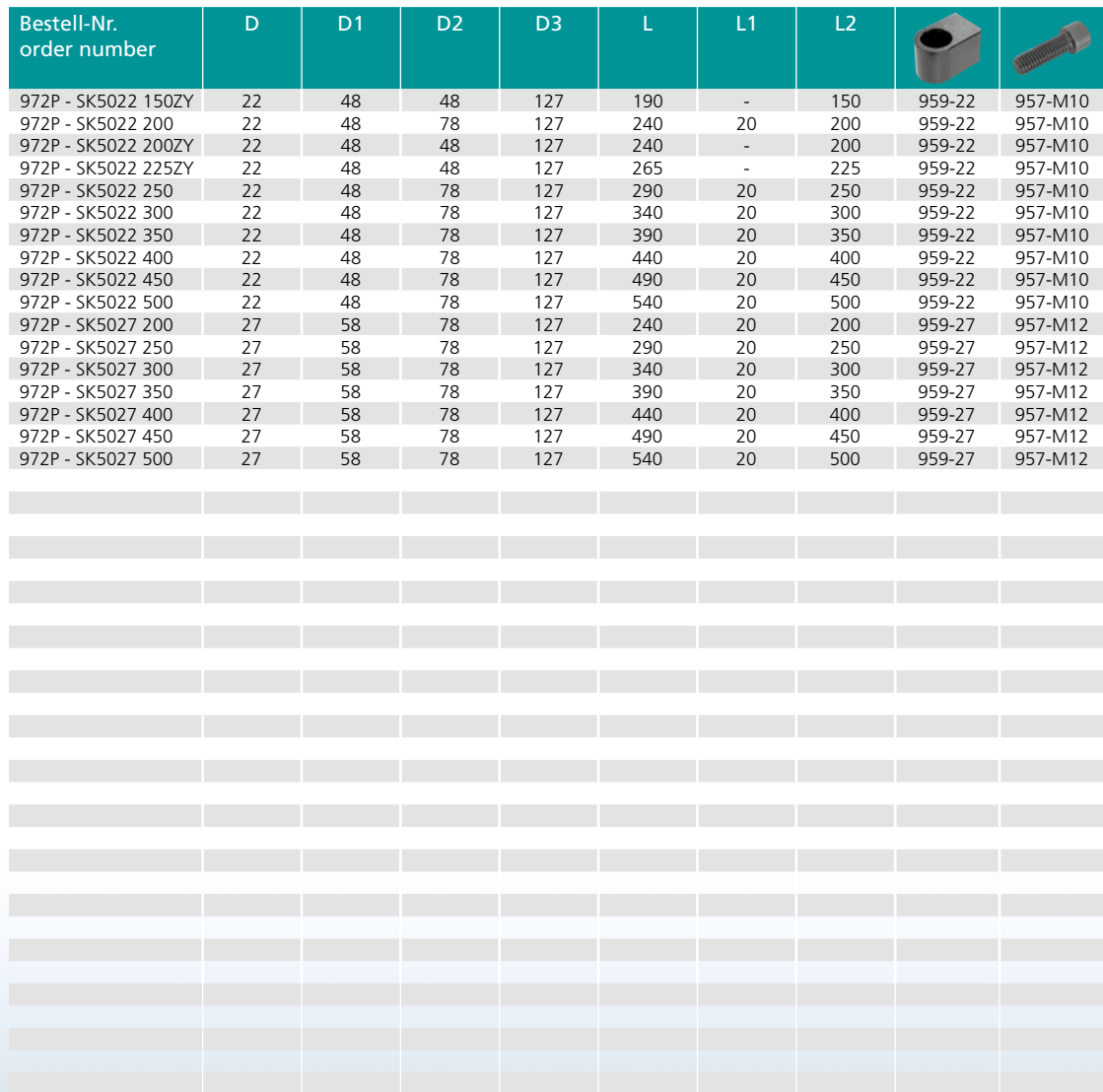


Bestell-Nr. order number	M	d1	d2	d3	d4	L	L1	L2	
963P - SK5016 250	16	17	29	78	127	290	30	250	
963P - SK5016 300	16	17	29	78	127	340	30	300	
963P - SK5016 350	16	17	29	78	127	390	30	350	
963P - SK5016 400	16	17	29	78	127	440	30	400	
963P - SK5016 450	16	17	29	78	127	490	30	450	
963P - SK5016 500	16	17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

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



arbors SK50 with face contact for shell cutters



blanks SK40, 50

Application: For producing your own special tools.



69871 A

132 rineck

Werkzeugaufnahmen SK50 DIN 2080

Tool holders SK50 DIN 2080

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Fräsaufnahmen für Einschraubfräser Modular screw on holder	134
Fräsdorne Arbors for shell cutters	135
Fräserhülsen / Zwischenhülsen Morse taper adaptors	136

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

modular screw on holder SK50 DIN 2080

134 rineck

arbors SK50 for shell cutter

delivery: with drive keys and retaining screw



nineck 135

[illegible]

morse taper adaptor SK50

136 rineck

Werkzeugaufnahmen BT

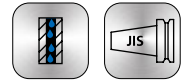
Tool holders BT

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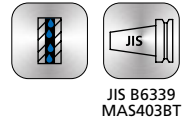
Fräsaufnahmen für Einschraubfräser Modular screw on holder	139 - 143
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CNC-Bohrfutter CNC-drill chucks	151
Rohlinge Blanks	152

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

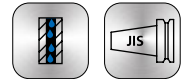
modular screw on holder BT30

[illegible]

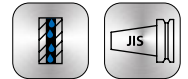
modular screw on holder BT40

140 rineck

modular screw on holder BT40

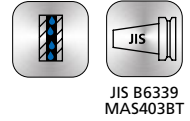
[illegible]

modular screw on holder BT50

[illegible]

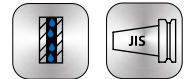
arbors BT40 for shell cutter

delivery: with drive keys and retaining screw

144 rineck

arbors BT50 for shell cutter

delivery: with drive keys and retaining screw



MAS403BT

G6,3/8.000

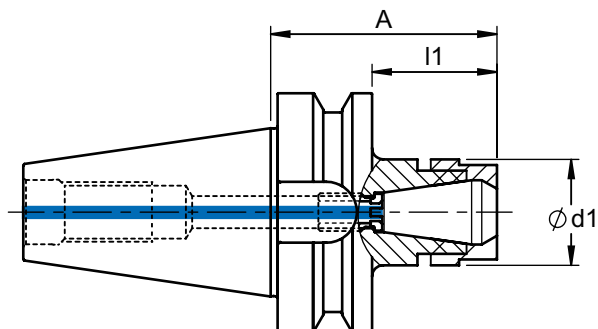
morse taper adaptor BT40, 50

rineck 147

**Spannzangenfutter BT30 - 50
für Spannzangen ER 16/25/32/40 mit Spannmutter UM**

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



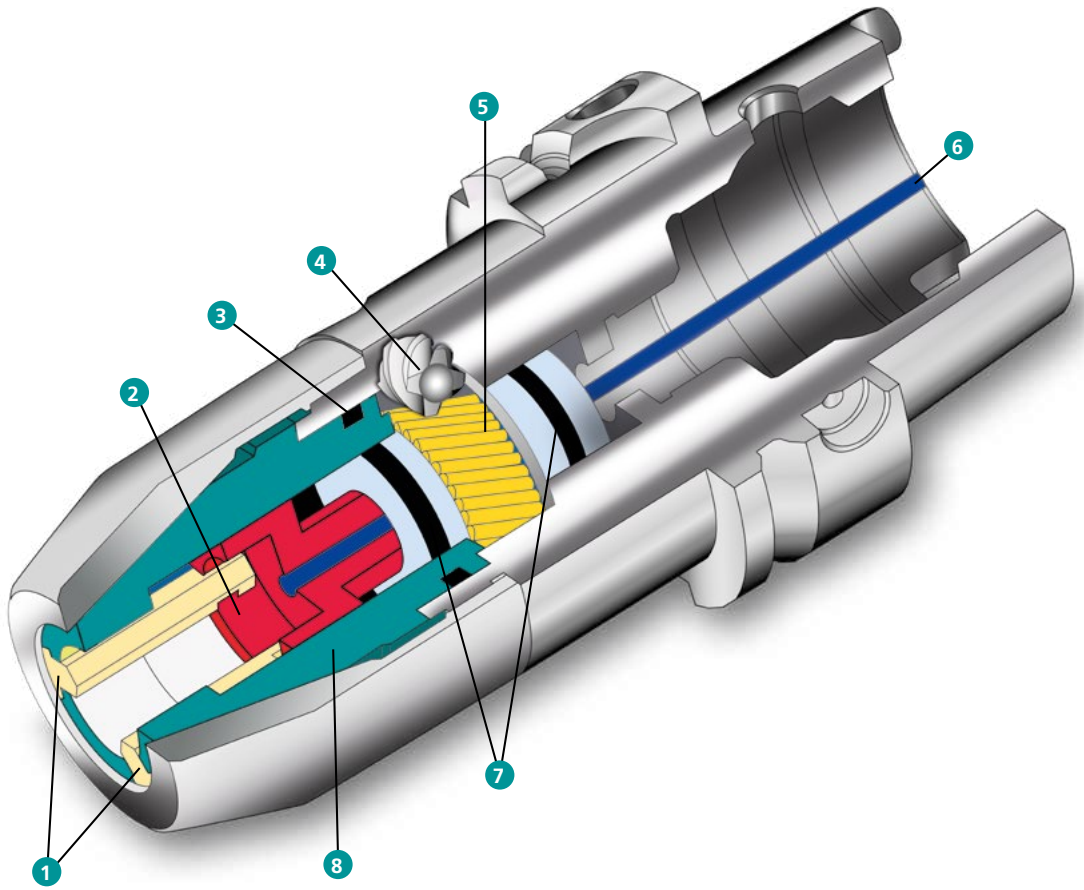
JIS B6339
MAS403BT

[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]



- 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

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

[illegible]

blanks BT40, 50

Application: For producing your own special tools.

[illegible]

Verlängerungen/Reduzierungen für Einschraubfräser

extensions/reducers for threaded type cutters

Seite

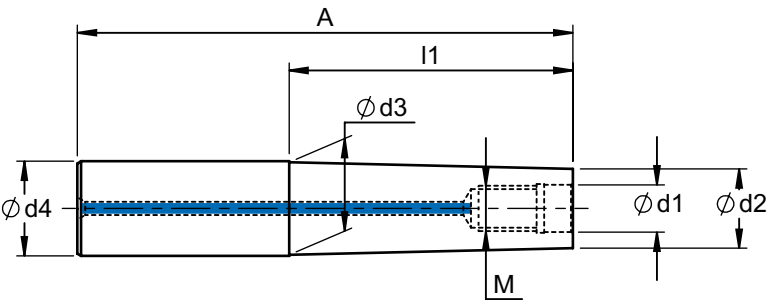
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Hartmetallverlängerungen für Einschraubfräser Carbide modular screw on extension	154 - 155
Frässtangen mit zyl. Schaft für Einschraubfräser Modular screw on extension	156 - 157
Verlängerungen / Reduzierungen für Einschraubfräser Extensions for modular 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



1835-A

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

modular screw on **carbide** extensions

[illegible]

modular screw on extensions



modular screw on extensions



modular screw on extensions

158 rineck

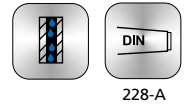
modular screw on reducers

rineck 159

modular screw on extension, morse taper

[illegible]

modular screw on extension, morse taper

rineck 161

modular screw on adapter for ER-collets

162 rineck

Zubehör

Acessories

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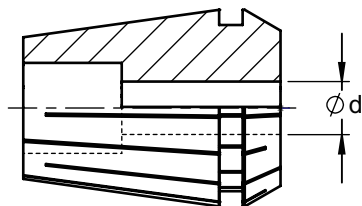
ER - Spannzangen / Standard nach DIN 6499 Form B Collets type ER DIN 6499 form B	164 - 165
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Andere Ausführungen und Längen auf Anfrage lieferbar.
Specials on request.

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:
Admissible 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 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 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

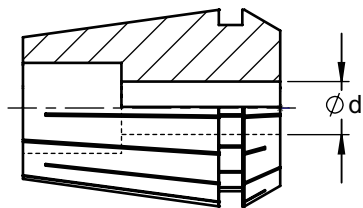
Spannzangen ER25 Spannbereich d max / min	Bestell-Nr. order number
1,0 - 0,5	950 - 2501
2,0 - 1,0	950 - 2502
3,0 - 2,0	950 - 2503
4,0 - 3,0	950 - 2504
5,0 - 4,0	950 - 2505
6,0 - 5,0	950 - 2506
7,0 - 6,0	950 - 2507
8,0 - 7,0	950 - 2508
9,0 - 8,0	950 - 2509
10,0 - 9,0	950 - 2510
11,0 - 10,0	950 - 2511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

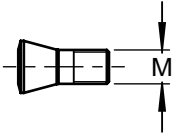
Alle unter Standard-Ausführung aufgeführten Spannzangen sind auch als Ultrapräzisions-Ausführung erhältlich.
Bei der Bestellung bitte vor die Bestell-Nr. ein „U“ setzen.
All above collets also available in high precision. Put a "U" in front of the order number.
Order example: U 950-3220

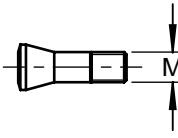
tightening fixtures and flange for tightening fixture



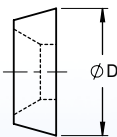
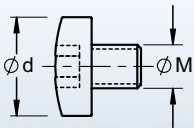
Zubehör

acesories

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

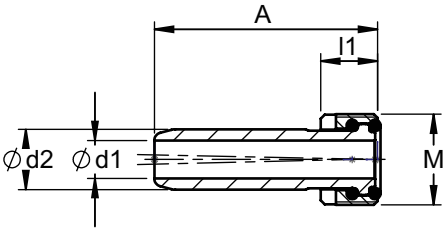
Passschrauben clamping screws	Bestell-Nr. order number	Größe (Gewinde) size
	993 22	M 2,5 x 0,35
	993 23	M 3 x 0,35
	993 24	M 3,5
	993 25	M 4
	993 27	M 5

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

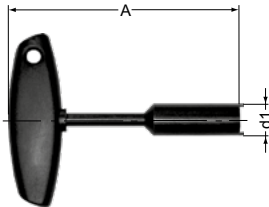
coolant tubes



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

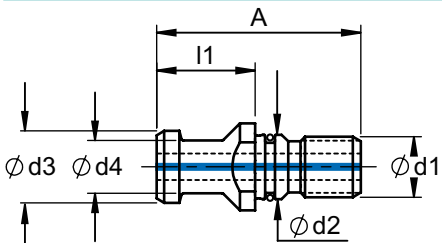
wrench for collant pipe

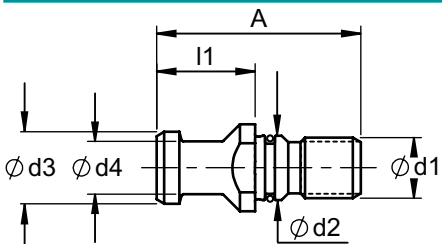


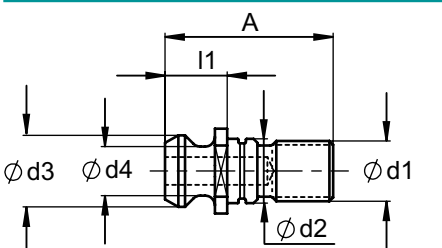
Bestell-Nr. order number	HSK	d1	L			
952 - A32	A - 32	8,8	110			
952 - A40	A - 40	10,8	110			
952 - A50	A - 50	14,5	120			
952 - A63	A - 63	16,5	130			
952 - A80	A - 80	18	140			
952 - A100	A - 100	22	140			

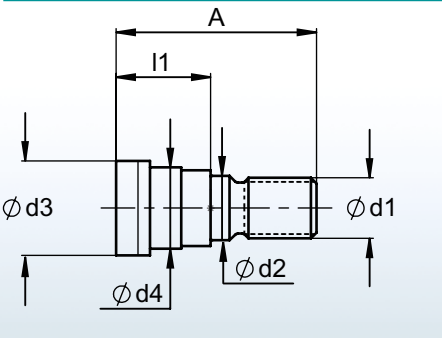
Anzugsbolzen

pull studs

DIN 69 872 A	Bestell-Nr. order number	SK	d1	d2	d3	d4	l1	A
	980 - A40	40	M16	17	19	14	26	54
	980 - A50	50	M24	25	28	21	34	74

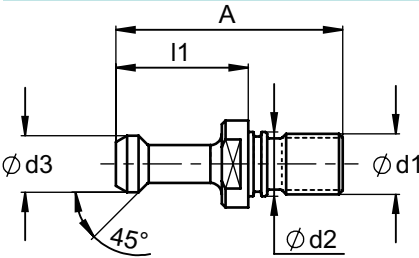
DIN 69 872 B	Bestell-Nr. order number	SK	d1	d2	d3	d4	l1	A
	980 - B40	M16	17	19	14	26	54	54
	980 - B50	M24	25	28	21	34	34	74

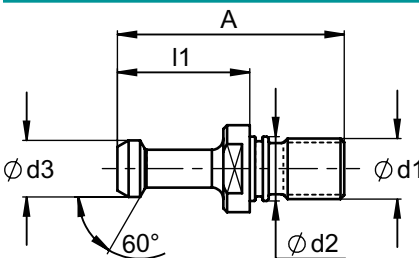
ISO 7388	Bestell-Nr. order number	SK	d1	d2	d3	d4	l1	A
	981 - 40	40	M16	17	18,95	12,95	16,4	44,5
	981 - 50	50	M24	25	29,1	19,6	25,55	65,5

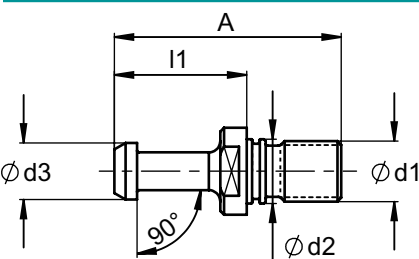
DIN 20 80	Bestell-Nr. order number	SK	d1	d2	d3	d4	l1	A
	982 - 40	40	M16	17	25	21,1	25	53
	982 - 50	50	M24	25	39,3	32	35,8	64,8

Anzugsbolzen

pull studs

MAS BT - Typ 1	Bestell-Nr. order number	BT	d1	d2	d3	45°	l1	A
	983 - 40	40	M16	17	15	45°	35	60
	983 - 50	50	M24	25	23	45°	45	85

MAS BT - Typ 2	Bestell-Nr. order number	BT	d1	d2	d3	60°	l1	A
	984 - 40	40	M16	17	15	60°	35	60
	984 - 50	50	M24	25	23	60°	45	85

MAS BT - Typ 3	Bestell-Nr. order number	BT	d1	d2	d3	90°	l1	A
	985 - 40	40	M16	17	15	90°	35	60
	985 - 50	50	M24	25	23	90°	45	85

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



6535-HA

Schaftausführung DIN 6535-HA
shank DIN 6535-HA



6535-HB

Schaftausführung DIN 6535-HB
shank DIN 6535-HB



228-A

Morsekegel DIN 228-A
morse taper DIN 228-A



2080

Steilkegel DIN 2080
shank DIN 2080



6499

Spannzange DIN 6499
collet DIN 6499



69871 A

Steilkegel DIN 69 871 A
shank DIN 69 871 A



69871-AD

Steilkegel DIN 69 871 AD
shank DIN 69 871 AD



69871 AD/B

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



69 893-1

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



69 893-5

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



69 893-6

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



JIS B6339
MAS403BT

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



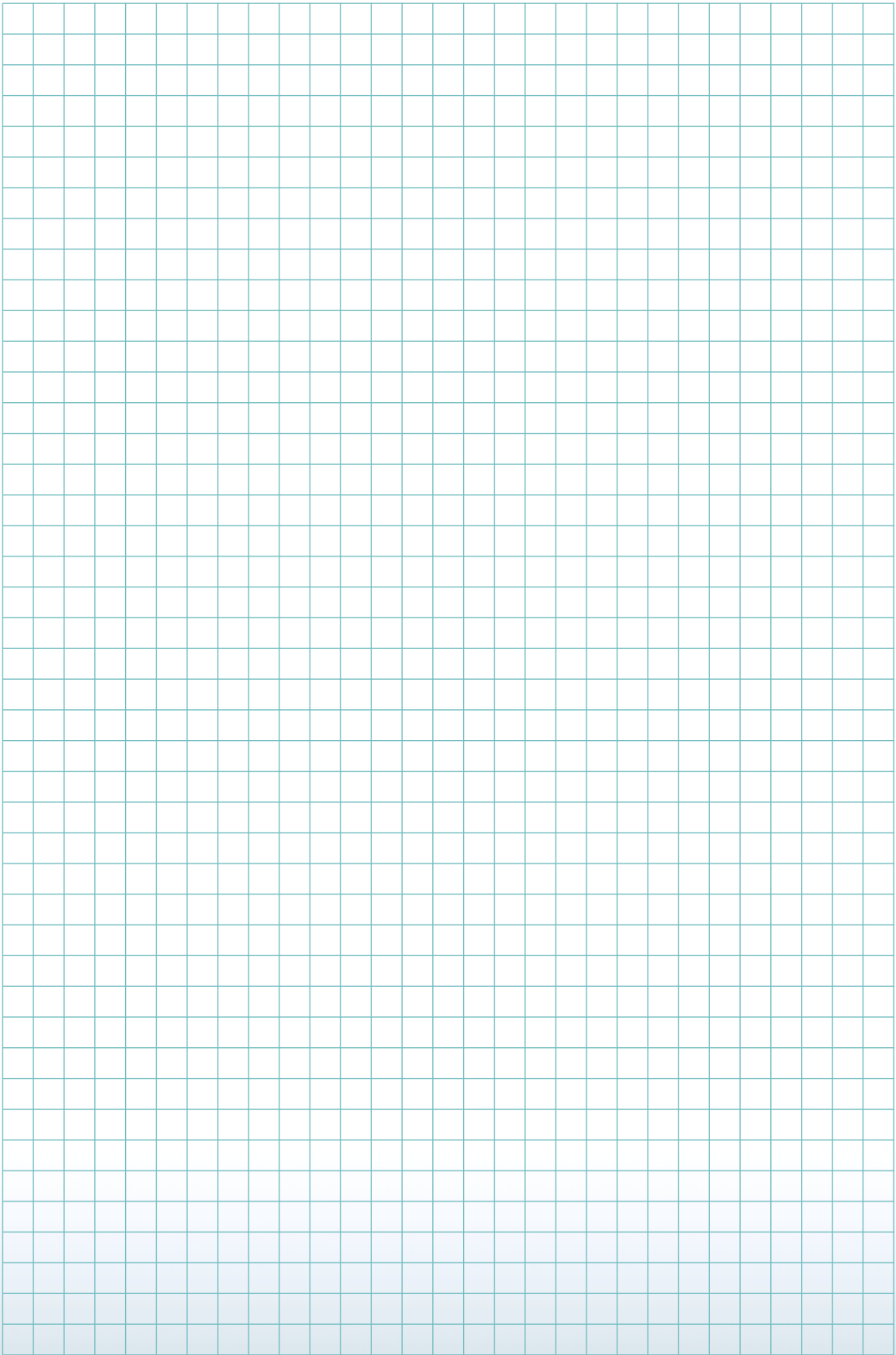
ISO
26623-1

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



PSC

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



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