

rineck

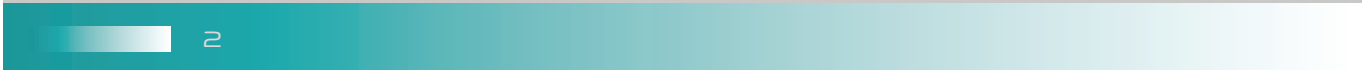
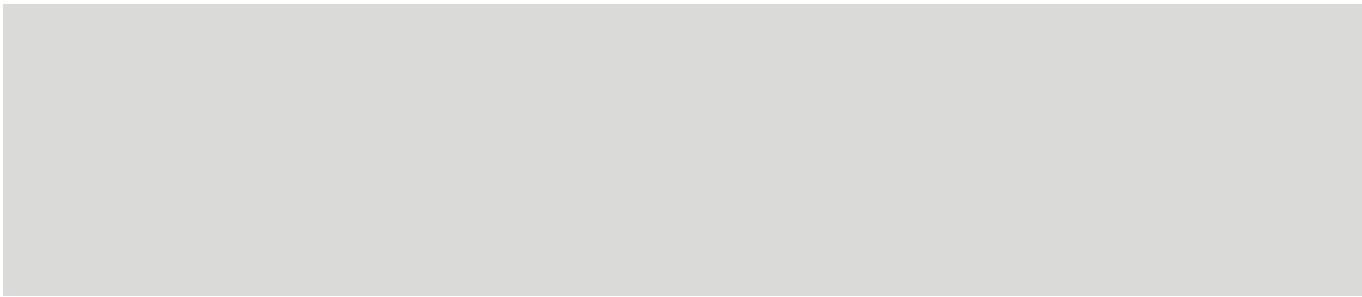
• Tool Holders

fräswerkzeuge / werkzeugaufnahmen

cutting tools / tool holders

fraises / mandrins



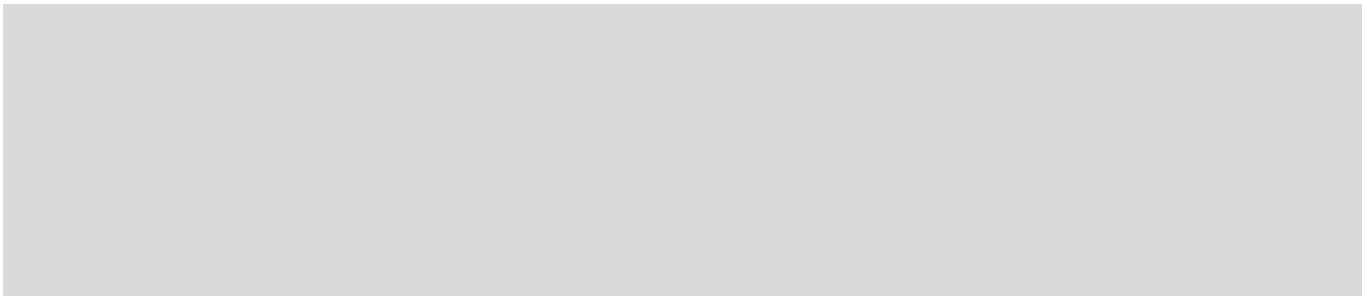


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Fräswerkzeuge / Wendeschneidplatten

Cutting tools / inserts
Fraises / Plaquettes

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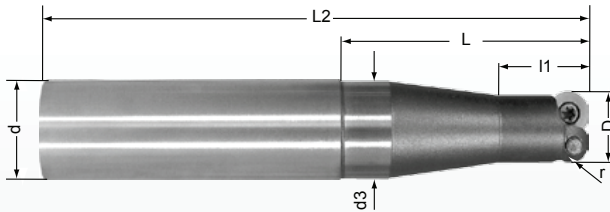
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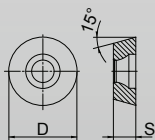
**Specials on request.
Execution special sur demand.**

Schafffräser, R2,5 RDHX

shank type cutter, R2,5 RDHX
fraises à queue, R2,5 RDHX



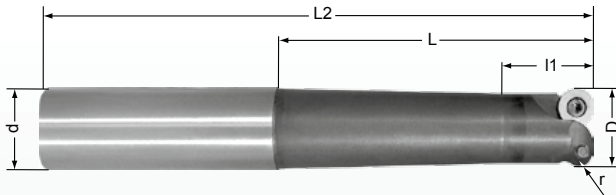
D	Bestell-Nr. order number No.	L	l1	L2	d	d3	z	WSP DxS	r			
10	2 10 951	30	30	75	10	9	2	5x1,5	2,5	x	993 01	994 06
12	3 12 950	30	30	75	12	11	3	5x1,5	2,5	x	993 01	994 06
15	4 15 949	30	30	80	16	15	4	5x1,5	2,5	x	993 01	994 06



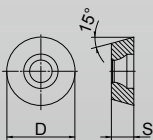
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Schafffräser, R3,5 RDHX

shank type cutter, R3,5 RDHX
fraises à queue, R3,5 RDHX



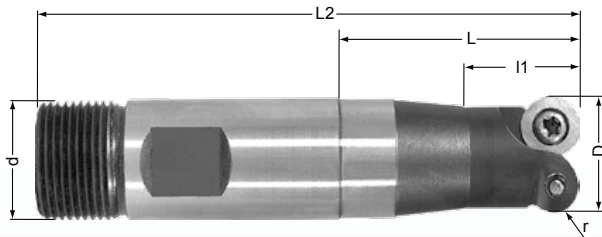
D	Bestell-Nr. order number No.	L	I1	L2	d	d3	z	WSP DxS	r			
12	2 12 948	30	-	75	10	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 947	30	-	75	12	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 942	40	16	88	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 941	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 940	80	16	128	16	-	2	7x1,99	3,5	x	993 02K	994 15
15	3 15 963	30	-	75	12	-	3	7x1,99	3,5	x	993 02	994 15
15	3 15 939	30	-	78	16	-	3	7x1,99	3,5	x	993 02	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



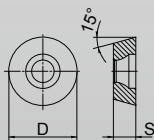
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plaquettes RD__ voir page 38-40

Schafffräser, R3,5 RDHX

shank type cutter, R3,5 RDHX
fraises à queue Weldon, R3,5 RDHX



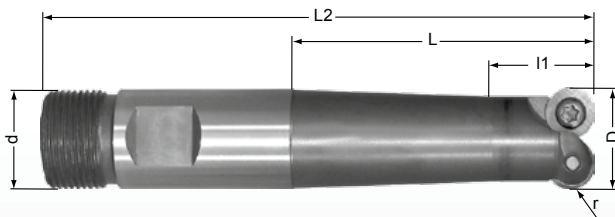
D	Bestell-Nr. order number No.	L	l1	L2	d	d3	z	WSP DxS	r			
12	2 12 946	40	16	88	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 945	60	16	108	16	-	2	7x1,99	3,5	x	993 02K	994 15
12	2 12 944	80	16	128	16	-	2	7x1,99	3,5	x	993 02K	994 15
15	3 15 962	30	-	78	16	-	3	7x1,99	3,5	x	993 02	994 15
15	2 15 961	40	20	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



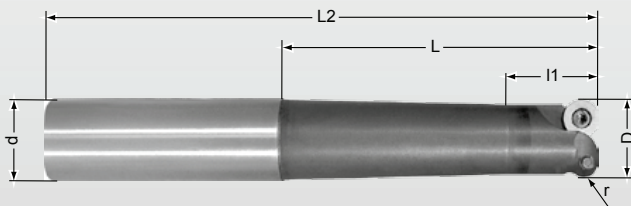
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Schafffräser, R5 RDHX

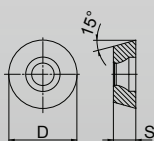
shank type cutter, R5 RDHX
fraises à queue Weldon, R5 RDHX



D	Bestell-Nr. order number No.	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



D	Bestell-Nr. order number No.	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

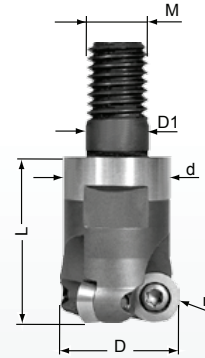


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Einschraubfräser R2,5-R3,5 RDHX

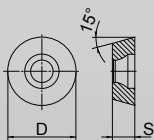
threaded type cutter R2,5-R3,5 RDHX

fraises à copier avec queue filetée R2,5-R3,5 RDHX



D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r			
8	1 08 819	20	5,5	9,8	1	5	5x1,5	2,5	x	993 01	994 06
8	1 08 818	20	6,5	9,8	1	6	5x1,5	2,5	x	993 01	994 06
10	2 10 974	20	5,5	9,8	2	5	5x1,5	2,5	x	993 01	994 06
10	2 10 975	20	6,5	9,8	2	6	5x1,5	2,5	x	993 01	994 06
12	3 12 817	20	6,5	10	3	6	5x1,5	2,5	x	993 01	994 06
12	3 12 973	20	8,5	13,5	3	8	5x1,5	2,5	x	993 01	994 06
15	4 15 972	20	8,5	13,5	4	8	5x1,5	2,5	x	993 01	994 06
20	5 20 971	25	10,5	18	5	10	5x1,5	2,5	x	993 01	994 06
25	6 25 825	28	12,5	21	6	12	5x1,5	2,5	x	993 01	994 06

D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r			
12	2 12 820	28	6,5	10	2	6	7x1,99	3,5	x	993 02K	994 07
12	2 12 RD07T1M7	23	7,5	11,5	2	7	7x1,99	3,5	x	993 02K	994 07
12	2 13 RD07T1M7	23	7,5	11,5	2	7	7x1,99	3,5	x	993 02K	994 07
12	2 13 RD07T1M8	23	8,5	13,5	2	8	7x1,99	3,5	x	993 02K	994 07
12	2 12 970	28	8,5	13,5	2	8	7x1,99	3,5	x	993 02K	994 07
15	3 15 968	28	8,5	13,5	3	8	7x1,99	3,5	x	993 02	994 07
20	4 20 967	28	10,5	18	4	10	7x1,99	3,5	x	993 02	994 07
25	5 25 966	28	12,5	21	5	12	7x1,99	3,5	x	993 02	994 07
30	6 30 965	28	17	29	6	16	7x1,99	3,5	x	993 02	994 07
35	7 35 964	28	17	29	7	16	7x1,99	3,5	x	993 02	994 07

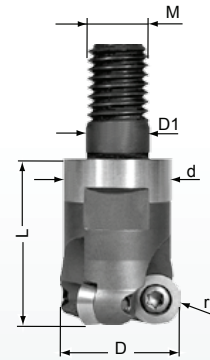


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 plaquettes RD__ voir page 38-40

Einschraubfräser R3,5-R4 RDHX

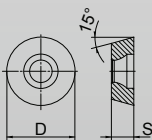
threaded type cutter R3,5-R4 RDHX

fraises à copier avec queue fileté R3,5-R4 RDHX



D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r			
15	2 15 969	28	8,5	13,5	2	8	7x2,38	3,5	x	993 02	994 07
15	2 15 969-23	23	8,5	13,5	2	8	7x2,38	3,5	x	993 02	994 07
15	3 15 943	28	8,5	13,5	3	8	7x2,38	3,5	x	993 02	994 07
15	3 15 943-23	23	8,5	13,5	3	8	7x2,38	3,5	x	993 02	994 07
16	2 16 850	28	8,5	13,5	2	8	7x2,38	3,5	x	993 02	994 07
16	3 16 RD0702M10	23	10,5	15,4	3	10	7x2,38	3,5	x	993 02	994 07
20	4 20 851	28	10,5	18	4	10	7x2,38	3,5	x	993 02	994 07
25	5 25 852	28	12,5	21	5	12	7x2,38	3,5	x	993 02	994 07
30	5 30 846	28	17	29	6	16	7x2,38	3,5	x	993 02	994 07
35	7 35 847	28	17	29	7	16	7x2,38	3,5	x	993 02	994 07

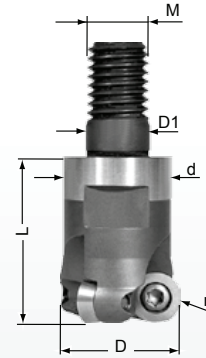
D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r			
16	2 16 RD08M8	23	8,5	13,5	2	8	8x2,78	4	x	993 12	994 08
16	2 16 RD08M10	23	10,5	15,4	2	10	8x2,78	4	x	993 12	994 08
20	3 20 RD08M10	25	10,5	18	3	10	8x2,78	4	x	993 12	994 08
25	4 25 RD08M12	29	12,5	21	3	12	8x2,78	4	x	993 12	994 08
32	5 32 RD08M16	33	17	29	4	16	8x2,78	4	x	993 12	994 08



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 plaquettes RD__ voir page 38-40

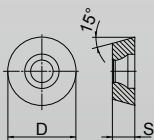
Einschraubfräser R5-R6 RDHX

threaded type cutter R5-R6 RDHX
fraises à copier avec queue filetée R5-R6 RDHX



D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r					
20	2 20 987	28	10,5	18	2	10	10x3,18	5	x	-	-	993 04	994 15
20	2 20 987-30	30	10,5	18	2	10	10x3,18	5	x	-	-	993 04	994 15
25	2 25 986	32	12,5	21	2	12	10x3,18	5	x	-	-	993 04	994 15
24	3 24 985	32	12,5	21	3	12	10x3,18	5	x	-	-	993 04	994 15
25	3 25 985	32	12,5	21	3	12	10x3,18	5	x	-	-	993 04	994 15
25	3 25 985-35	35	12,5	21	3	12	10x3,18	5	x	-	-	993 04	994 15
30	4 30 984	32	12,5	21	4	12	10x3,18	5	x	-	-	993 04	994 15
30	4 30 983	42	17	29	4	16	10x3,18	5	x	-	-	993 04	994 15
32	4 32 983	42	17	29	4	16	10x3,18	5	x	-	-	993 04	994 15
35	5 35 982	42	17	29	5	16	10x3,18	5	x	-	-	993 04	994 15
42	6 42 981	42	17	29	6	16	10x3,18	5	x	-	-	993 04	994 15
42	6 42 981-37	42	17	37	6	16	10x3,18	5	x	-	-	993 04	994 15

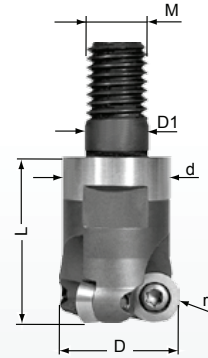
D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r					
24	2 24 980	32	12,5	21	2	12	12x3,97	6	x	-	-	995 05	993 04
24	2 24 980-35	35	12,5	21	2	12	12x3,97	6	x	-	-	995 05	993 04
30	3 30 816	42	17	29	3	16	12x3,97	6	x	-	-	995 05	993 04
32	3 32 816	42	17	29	3	16	12x3,97	6	x	-	-	995 05	993 04
35	3 35 979	42	17	29	3	16	12x3,97	6	x	-	-	995 05	993 04
35	4 35 978	42	17	29	4	16	12x3,97	6	x	-	-	995 05	993 04
42	4 42 977	42	17	29	4	16	12x3,97	6	x	-	-	995 05	993 04
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



Wendeschnidplatten RD__ siehe Seite 38-40
inserts RD__ see page 38-40
plaquettes RD__ voir page 38-40

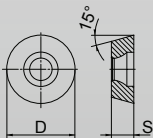
Einschraubfräser R8-R10 RDHX

threaded type cutter R8-R10 RDHX
 fraises à copier avec queue filetée R8-R10 RDHX

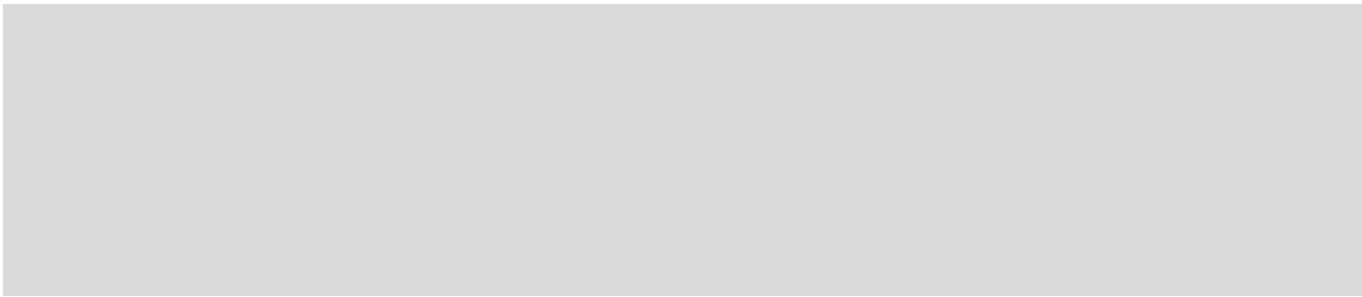


D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r				
32	2 32 975	42	17	29	2	16	16x4,76	8				
32	2 32 852	42	17	29	2	16	16x4,76	8	995 01	-	993 06	994 20
35	3 35 853	42	17	29	3	16	16x4,76	8	-	-	993 06	994 20

D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r				
40	2 40 848	52	17	29	2	16	20x6	10	995 01	-	993 06	994 20



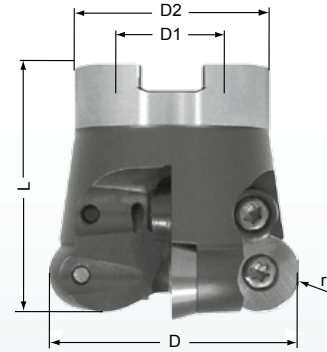
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Aufsteckfräser R5-R6-R8 RDHX

shell cutter R5-R6-R8 RDHX

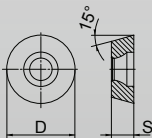
fraises à copier et surfacer R5-R6-R8 RDHX



D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
42	6 42 999	44	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

D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
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

D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
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

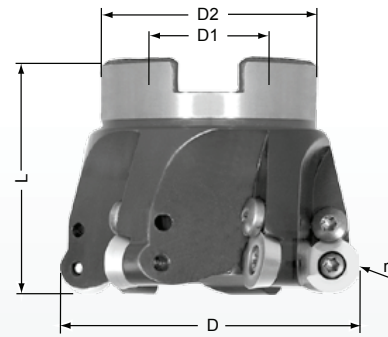


Wendeschneidplatten RD__ siehe Seite 38-40
 inserts RD__ see page 38-40
 plaquettes RD__ voir page 38-40

Aufsteckfräser R5-R6 RDHX 7° pos.

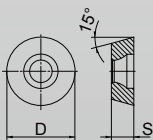
shell cutter R5-R6 RDHX

fraises à copier et surfacer R5-R6 RDHX



D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
52	850	50	22	40	7	10x3,18	5	x	-	-	993 04	994 15

D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
40	4 40 856	42	16	35	4	12x3,97	6	x	-	-	993 04	994 15
52	5 52 928	50	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

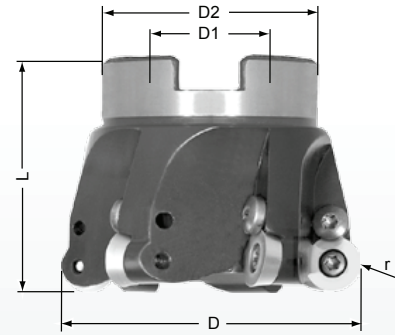


Wendeschneidplatten RD__ siehe Seite 38-40
 inserts RD__ see page 38-40
 plaquettes RD__ voir page 38-40

Aufsteckfräser R8-R10 RDHX 7° pos.

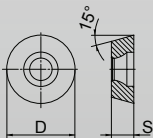
shell cutter R8-R10 RDHX

fraises à copier et surfacer R8-R10 RDHX



D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
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

D	Bestell-Nr. order number No.	L	D1	D2	Z	WSP DxS	r					
66	4 66 840	52	27	48	4	20x6	10	x	995 01	-	993 06	994 20
80	5 80 839	52	27	60	5	20x6	10	x	995 01	-	993 06	994 20
100	6 100 838	52	32	70	6	20x6	10	-	995 01	-	993 06	994 20
125	7 125 837	52	40	90	7	20x6	10	-	995 01	-	993 06	994 20
160	8 160 836	52	40	120	8	20x6	10	-	995 01	-	993 06	994 20

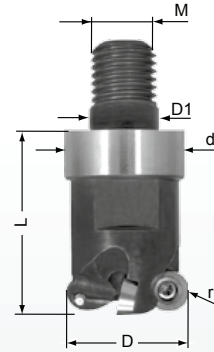


Wendeschneidplatten RD__ siehe Seite 38-40
 inserts RD__ see page 38-40
 plaquettes RD__ voir page 38-40

Einschraubfräser R3,5-R5-R6 REHX 12° pos.

threaded type cutter R3,5-R5-R6 REHX

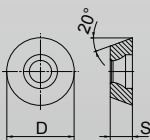
fraises à copier et surfacer R3,5-R5-R6 REHX



D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r				
15	3 15 900	28	8,5	13,5	3	8	7x1,99	3,5	x	-	993 02	994 07
20	4 20 899	28	10,5	18	4	10	7x1,99	3,5	x	-	993 02	994 07
25	5 25 898	28	12,5	21	5	12	7x1,99	3,5	x	-	993 02	994 07

D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r				
20	2 20 897	28	10,5	18	2	10	10x3,18	5	x	-	993 03	994 10
25	3 25 896	32	12,5	21	3	12	10x3,18	5	x	-	993 03	994 10
30	4 30 895	32	12,5	21	4	12	10x3,18	5	x	-	993 03	994 10
30	4 30 894	42	17	29	4	16	10x3,18	5	x	-	993 03	994 10
35	5 35 893	42	17	29	5	16	10x3,18	5	x	-	993 03	994 10

D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP DxS	r				
35	3 35 892	42	17	29	3	16	12x3,97	6	x	995 05	993 04	994 15

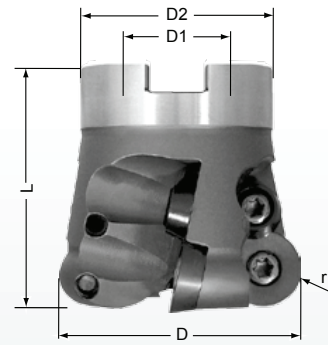


Wendeschneidplatten RE__ siehe Seite 42
 inserts RE__ see page 42
 plaquettes RD__ voir page 42

Aufsteckfräser R6-R8 REHX 12° pos.

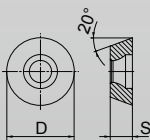
shell cutter R6-R8 REHX

fraises à copier et surfacer R6-R8 REHX



D	Bestell-Nr. order number No.	L	D1	D2	Z	M	WSP DxS	r					
42	4 42 891	44	16	35	4	-	12x3,97	6	x	-	-	993 04	994 15
52	5 52 890	50	22	40	5	-	12x3,97	6	x	-	995 05	993 04	994 15

D	Bestell-Nr. order number No.	L	D1	D2	Z	M	WSP DxS	r					
52	4 52 889	50	22	40	4	-	16x4,76	8	x	995 01	-	993 06	994 20
66	5 66 888	50	27	48	5	-	16x4,76	8	x	995 01	-	993 06	994 20
80	6 80 887	50	27	60	6	-	16x4,76	8	-	-	-	993 06	994 20

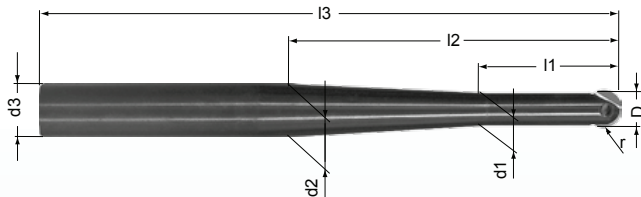




Wendeschneidplatten RE__ siehe Seite 42
 inserts RE__ see page 42
 plaquettes RD__ voir page 42

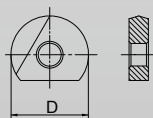
Kugelbahnschaftfräser ROHX

ball nose cutter ROHX

fraises à queue pour copiage ROHX



D	Bestell-Nr. order number No.	l1	l2	l3	d1	d2	d3	Z	r		
8	840RO8G12	30	40	85	7,3	12	12	2	4	993 22	994 07
8	860RO8G12	30	60	105	7,3	12	12	2	4	993 22	994 07
8	880RO8G12	30	80	125	7,3	12	12	2	4	993 22	994 07
10	1040RO10G12	40	40	85	9	12	12	2	5	993 23	994 08
10	1060RO10G16	40	60	108	9	16	16	2	5	993 23	994 08
10	1080RO10G16	40	80	128	9	16	16	2	5	993 23	994 08
12	1240RO12G12	40	40	85	10,5	12	12	2	6	993 24	994 10
12	1260RO12G16	50	60	108	10,5	16	16	2	6	993 24	994 10
12	1280RO12G16	60	80	128	10,5	16	16	2	6	993 24	994 10
12	12100RO12G16	70	100	148	10,5	16	16	2	6	993 24	994 10
16	1640RO16G16	40	40	88	14	16	16	2	8	993 25	994 15
16	1660RO16G16	60	60	108	14	16	16	2	8	993 25	994 15
16	1680RO16G20	60	80	130	14	20	20	2	8	993 25	994 15
16	16100RO16G20	80	100	150	14	20	20	2	8	993 25	994 15

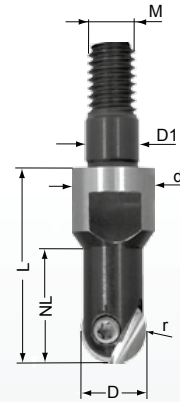




Wendeschneidplatten RO__ siehe Seite 42
 inserts RO__ see page 42
 plaquettes RO__ voir page 42

Kugelbahneinschraubfräser ROHX

ball nose cutter ROHX

fraises à queue filetée pour copiage ROHX



D	Bestell-Nr. order number No.	L	NL	d	D1	M	r		
8	823RO8M6	23	13	9,8	6,5	6	4	993 22	994 07
10	1023RO10M6	23	23	9,8	6,5	6	5	993 23	994 08
10	1033RO10M8	33	18	13	8,5	8	5	993 23	994 08
12	1223RO12M6	23	23	9,8	6,5	6	6	993 24	994 10
12	1233RO12M8	33	18	13	8,5	8	6	993 24	994 10
16	1628RO16M8	28	28	13,6	8,5	8	8	993 25	994 15
16	1628RO16M10	28	28	15,4	10,5	10	8	993 25	994 15
16	1638RO16M10	38	26	18	10,5	10	8	993 25	994 15
20	2028RO20M10	28	28	18	10,5	10	10	993 27	994 20



Wendeschneidplatten RO__ siehe Seite 42

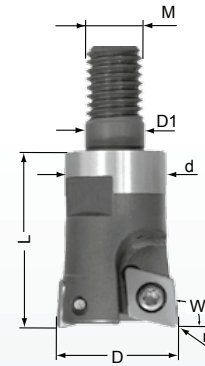
inserts RO__ see page 42

plaquettes RO__ voir page 42

Eck-Einschraubfräser für Rhombus WSP - XDHW - XDHT

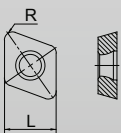
threaded type cutter for insert - XDHW - XDHT

fraises d'épaulement avec plaquette rhombe - XDHW - XDHT



D	Bestell-Nr. order number No.	L	D1	d	Z	M	W	WSP L	r				
10	2 10 900	20	6,5	10	2	6	90°	4	-	x	-	993 00	994 06
12	2 12 899	20	6,5	10	2	6	90°	4	-	x	-	993 00	994 06
12	2 12 898	20	8,5	13,6	2	8	90°	4	-	x	-	993 02	994 07
15	2 15 920	23	8,5	13,6	2	8	90°	6,5	-	x	-	993 02	994 07
16	2 16 901	23	8,5	13,6	2	8	90°	6,5	-	x	-	993 02	994 07
20	3 20 919	30	10,5	18	3	10	90°	6,5	-	x	-	993 02	994 07
25	3 25 918	35	12,5	21	3	12	90°	6,5	-	x	-	993 02	994 07
25	2 25 917	35	12,5	21	2	12	90°	10	-	x	995 05	993 04	994 15
35	3 35 916	43	17	29	3	16	90°	10	-	x	995 05	993 04	994 15
42	4 42 915	43	17	29	4	16	90°	10	-	x	995 05	993 04	994 15

D	Bestell-Nr. order number No.	L	D1	d	Z	M	W	WSP L	r				
10	210XD45M6-95	20	6,5	10	2	6	95°	4	0,5	x	-	993 00	994 06
12	212XD45M6-95	20	6,5	10	2	6	95°	4	0,5	x	-	993 00	994 06
12	212XD45M8-95	20	8,5	13,6	2	8	95°	4	0,5	x	-	993 00	994 06
15	215XD75M8-91	23	8,5	13,6	2	8	91°	6,5	0,5	x	-	993 02	994 07
16	216XD75M8-95	23	8,5	13,6	2	8	95°	6,5	0,5	x	-	993 02	994 07
20	320XD75M10-95	30	10,5	18	3	10	95°	6,5	0,5	x	-	993 02	994 07
25	325XD75M12-95	35	12,5	21	3	12	95°	6,5	0,5	x	-	993 02	994 07



Wendeschneidplatten XD__ siehe Seite 41

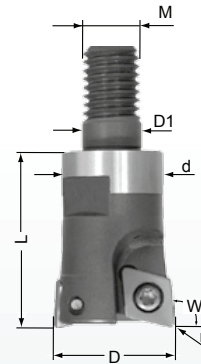
inserts XD__ see page 41

plaquettes XD__ voir page 41

Eck-Einschraubfräser für Rhombus WSP - XDHW - XDHT

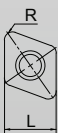
threaded type cutter for insert - XDHW - XDHT

fraises d'épaulement avec plaquette rhombe - XDHW - XDHT



D	Bestell-Nr. order number No.	L	D1	d	Z	M	W	WSP L	r				
10	2 10 897	20	6,5	10	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
12	2 12 895	20	8,5	13,6	2	8	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

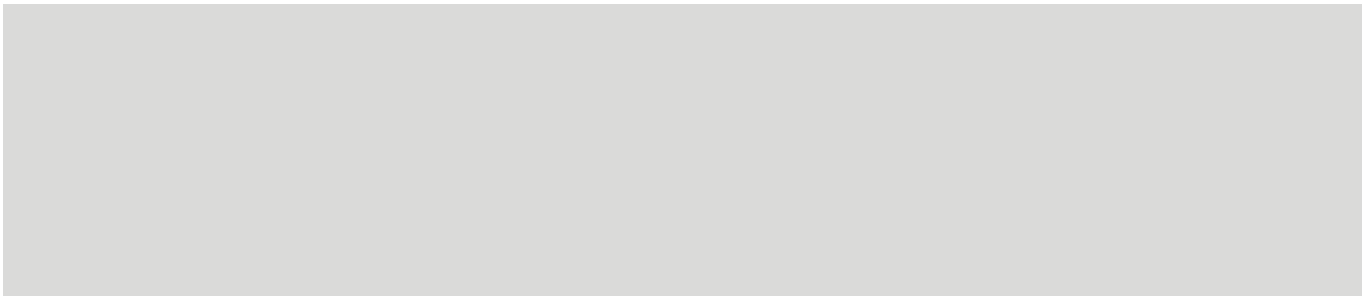
D	Bestell-Nr. order number No.	L	D1	d	Z	M	W	WSP L	r				
15	215XD72M8-91	23	8,5	13,6	2	8	91°	6,5	2	x	-	993 02	994 07
16	216XD72M8-95	23	8,5	13,6	2	8	95°	6,5	2	x	-	993 02	994 07
20	320XD72M10-95	30	10,5	18	3	10	95°	6,5	2	x	-	993 02	994 07
25	325XD72M12-95	35	12,5	21	3	12	95°	6,5	2	x	-	993 02	994 07
25	225XD1020M12-95	35	12,5	21	2	12	95°	10	2	x	995 05	993 04	994 15
35	335XD1020M16-95	43	17	29	3	16	95°	10	2	x	995 05	993 04	994 15
42	442XD1020M16-95	43	17	29	4	16	95°	10	2	x	995 05	993 04	994 15



Wendeschneidplatten XD__ siehe Seite 41

inserts XD__ see page 41

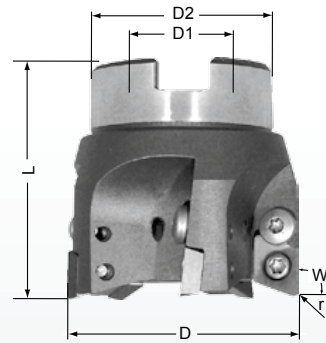
plaquettes XD__ voir page 41



Eck-Aufsteckfräser für Rhombus WSP - XDHW - XDHT

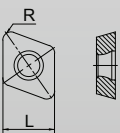
shell cutter for insert - XDHW - XDHT

fraises à surfer d'épaulement avec plaquette rhombe - XDHW - XDHT



D	Bestell-Nr. order number No.	L	D1	D2	Z	W	WSP L	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

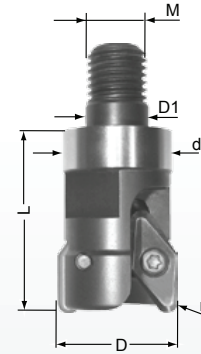
D	Bestell-Nr. order number No.	L	D1	D2	Z	W	WSP L	r				
52	5 52 904	50	22	40	5	95°	10	1	x	995 05	993 04	994 15
66	6 66 903	50	27	48	6	95°	10	1	x	995 05	993 04	994 15
80	7 80 902	50	27	60	7	95°	10	1	x	995 05	993 04	994 15
100	7 100 901	50	32	70	7	95°	10	1	x	995 05	993 04	994 15



Wendeschneidplatten XD__ siehe Seite 41
 inserts XD__ see page 41
 plaquettes XD__ voir page 41

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

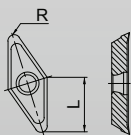
screw in type cutter for aluminium, copper, plastic, graphite VDGT/VCGT
fraises à queue fileté à plongée pour l'usinage de l'aluminium, cuivre, plastic, graphite
VDGT/VCGT



D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP L	r			
12	1 12VD11-05M6	33	6,5	10	1	6	11	0,5	x	993 02	994 07
12	1 12VD11-05M8	33	8,5	13,5	1	8	11	0,5	x	993 02	994 07
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

D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP L	r			
12	1 12 881	33	6,5	10	1	6	11	1	x	993 02	994 07
12	1 12 880	33	8,5	13,5	1	8	11	1	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

D	Bestell-Nr. order number No.	L	D1	d	Z	M	WSP L	r			
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

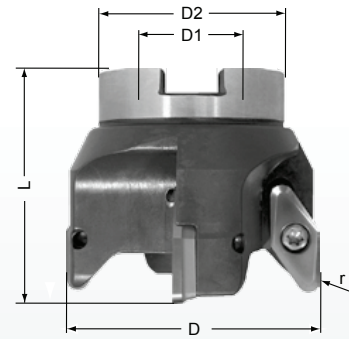


Wendeschneidplatten V__ siehe Seite 43
inserts V__ see page 43
plaquettes V__ voir page 43

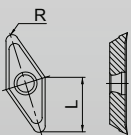
Aufsteck-Tauchfräser für Aluminium, Kupfer, Kunststoff, Graphit VCGT

shell cutter for aluminium, copper, plastic, graphite VCGT

fraises à surfer à plongée pour l'usinage de l'aluminium, cuivre, plastic, graphite VCGT



D	Bestell-Nr. order number No.	L	D1	d	Z	M	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



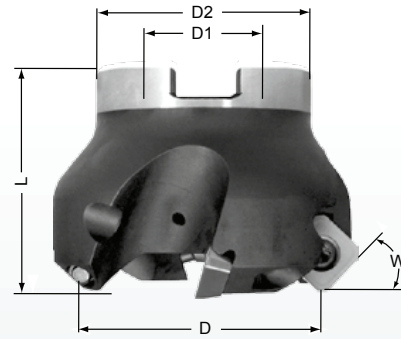
Wendeschneidplatten V__ siehe Seite 43

inserts V__ see page 43

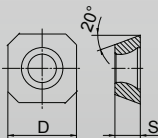
plaquettes V__ voir page 43

Planmesserkopf 45° SEKX

face milling cutter 45° SEKX
fraises à surfer 45° SEKX



D	Bestell-Nr. order number No.	L	W	D1	D2	Z		WSP L			
40	340SE12A16-45	40	45°	16	35	3		12,7	x	993 07	994 20
50	450SE12A22-45	45	45°	22	44	4		12,7	x	993 07	994 20
63	563SE12A22-45	45	45°	22	50	5		12,7	x	993 07	994 20
80	680SE12A27-45	50	45°	27	60	6		12,7	x	993 07	994 20
100	6100SE12A32-45	50	45°	32	80	6		12,7	-	993 07	994 20

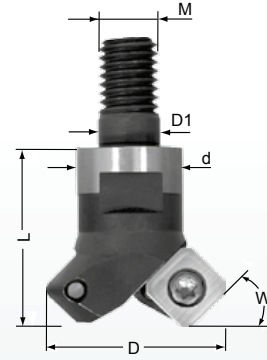





Wendeschneidplatten SE__ siehe Seite 44
inserts SE__ see page 44
plaquettes SE__ voir page 44

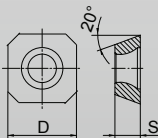
45° Fasen-Einschraubfräser SEKX

45° threaded type cutter for chamfering SEKX

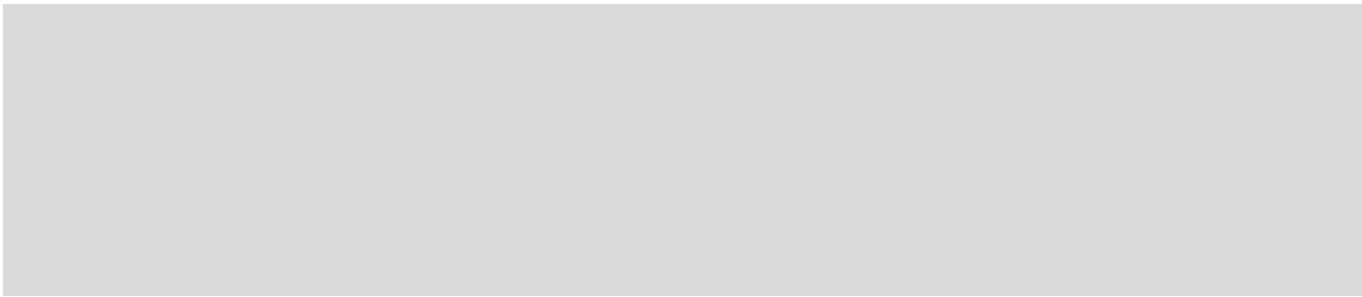
45° fraises à queue filetée pour chanfreiner SEKX



D	Bestell-Nr. order number No.	L	W	D1	d	M	Z	WSP L			
24	2 24 814	36	45°	12,5	21	12	2	12,7	x	993 06	994 20

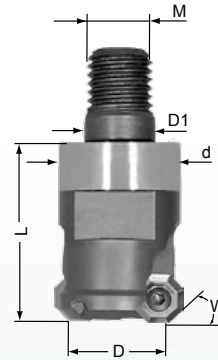


Wendeschneidplatten SE__ siehe Seite 44
 inserts SE__ see page 44
 plaquettes SE__ voir page 44



Einschraubfräser 43° OFMT

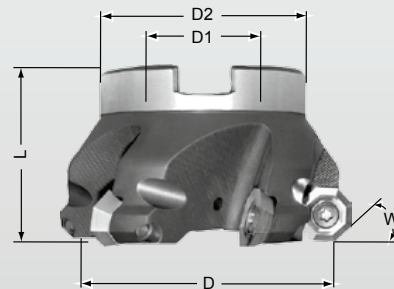
threaded type cutter 43° OFMT
fraises à queue filetée 43° OFMT



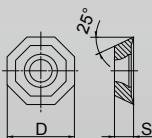
D	Bestell-Nr. order number No.	L	W	M	d	D1	Z	WSP			
25	2 25 OF05 M16	43	43°	16	29	17	2	05	x	993 15	994 15
35	3 35 OF05 M16	43	43°	16	29	17	3	05	x	993 15	994 15

Aufsteckfräser 43° OFMT

shell cutter 43° OFMT
fraises à alésage 43° OFMT



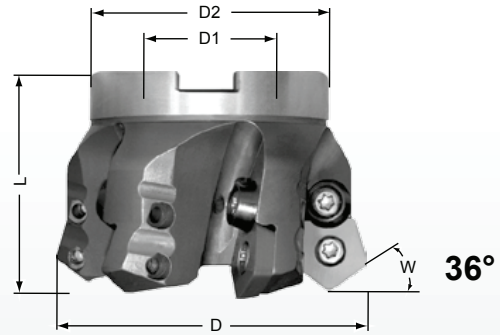
D	Bestell-Nr. order number No.	L	W	D1	D2	Z	WSP			
40	440 OF05 A16	40	43°	16	38	4	05	x	993 15	994 15
50	550 OF05 A22	40	43°	22	45	5	05	x	993 15	994 15
63	663 OF05 A22	50	43°	22	50	6	05	x	993 15	994 15
80	780 OF05 A27	50	43°	27	60	7	05	x	993 15	994 15
100	9100 OF05 A32	50	43°	32	80	9	05	x	993 15	994 15



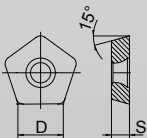
Wendeschneidplatten OF__ siehe Seite 45
inserts OF__ see page 45
plaquettes OF__ voir page 45

Aufsteckfräser - 5 kant PDHX

shell cutter for pentagon insert PDHX
fraises à surfer avec plaquette pentagonale PDHX



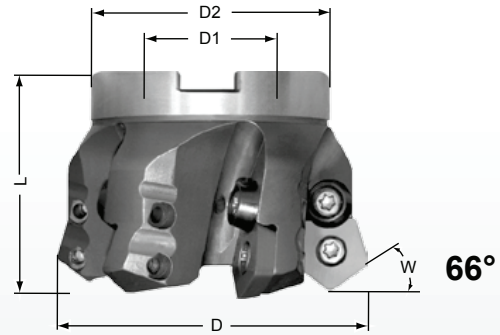
D	Bestell-Nr. order number No.	L	W	D1	D2	Z				
52	452PD12A16-36	55	36°	16	40	4	x	995 01	993 06	994 20
66	566PD12A27-36	55	36°	27	48	5	x	995 01	993 06	994 20
80	680PD12A27-36	55	36°	27	60	6	x	995 01	993 06	994 20
100	7100PD12A32-36	55	36°	32	70	7	-	995 01	993 06	994 20
125	8125PD12A40-36	55	36°	40	90	8	-	995 01	993 06	994 20
160	8160PD12A40-36	55	36°	40	120	8	-	995 01	993 06	994 20
160	9160PD12A40-36	55	36°	40	120	9	-	995 01	993 06	994 20
160	10160PD12A40-36	55	36°	40	120	10	-	995 01	993 06	994 20
180	11180PD12A40-36	55	36°	40	140	11	-	995 01	993 06	994 20
180	11180PD12A60-36	55	36°	60	140	11	-	995 01	993 06	994 20
200	9200PD12A60-36	55	36°	60	160	9	-	995 01	993 06	994 20
200	12200PD12A40-36	55	36°	40	160	12	-	995 01	993 06	994 20
200	12200PD12A60-36	55	36°	60	160	12	-	995 01	993 06	994 20
250	15250PD12A60-36	55	36°	60	160	15	-	995 01	993 06	994 20
315	15315PD12A60-36	55	36°	60	160	15	-	995 01	993 06	994 20
315	18315PD12A60-36	55	36°	60	160	18	-	995 01	993 06	994 20



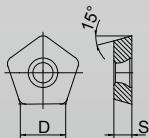
Wendeschneidplatten PD__ siehe Seite 44
inserts PD__ see page 44
plaquettes PD__ voir page 44

Aufsteckfräser - 5 kant PDHX

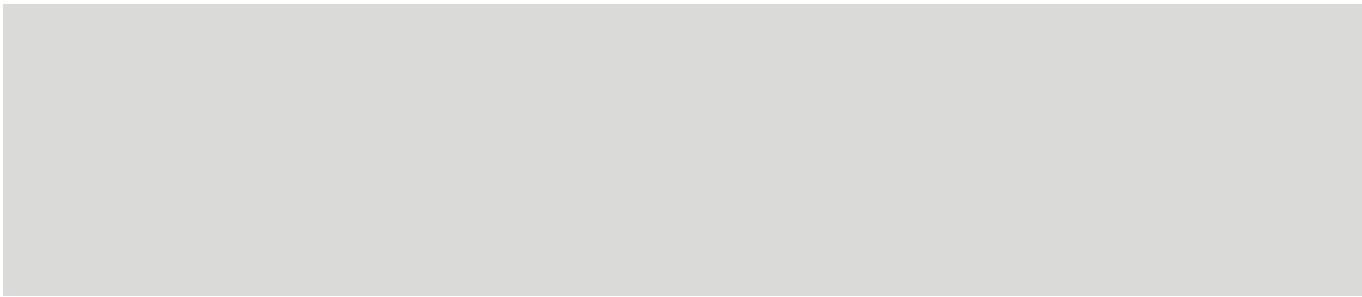
shell cutter for pentagon insert PDHX
 fraises à surfer avec plaquette pentagonale PDHX



D	Bestell-Nr. order number No.	L	W	D1	D2	Z				
52	452PD12A22-66	55	66°	22	40	4	x	995 01	993 06	994 20
66	566PD12A27-66	55	66°	27	48	5	x	995 01	993 06	994 20
80	680PD12A27-66	55	66°	27	60	6	x	995 01	993 06	994 20
100	7100PD12A32-66	55	66°	32	70	7	-	995 01	993 06	994 20

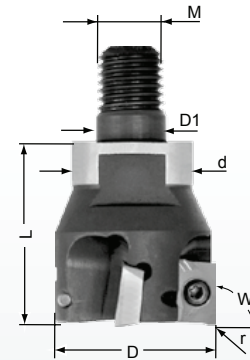


Wendeschneidplatten PD__ siehe Seite 44
 inserts PD__ see page 44
 plaquettes PD__ voir page 44



Einschraubfräser ADKT

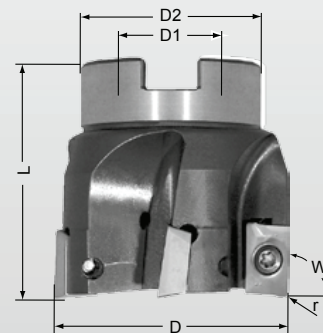
threaded type cutter, ADKT
fraises à queue filetée, ADKT



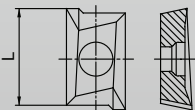
D	Bestell-Nr. order number No.	L	W	D1	d	M	Z		WSP L			
25	225AD15M12	35	90°	12,5	21	12	2		15	x	993 15	994 15
32	332AD15M16	43	90°	17	29	16	3		15	x	993 15	994 15
40	440AD15M16	43	90°	17	29	16	4		15	x	993 15	994 15

Aufsteckfräser, ADKT

shell cutter, ADKT
fraises à surfer, ADKT



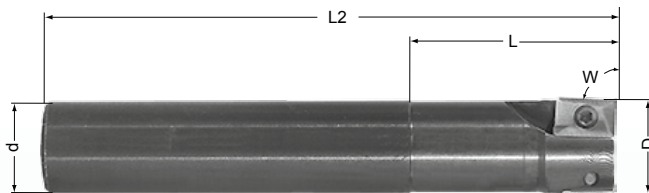
D	Bestell-Nr. order number No.	L	L2	W	D1	D2	M	Z	WSP L			
52	552AD15A22	50	-	90°	22	40	-	5	15	x	993 15	994 15
66	666AD15A27	50	-	90°	27	48	-	6	15	x	993 15	994 15



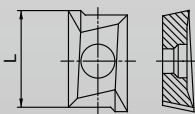
Wendeschneidplatten AD__ siehe Seite 44
inserts AD__ see page 44
plaquettes AD__ voir page 44

Schafffräser APKT 1003 PD...

shank type cutter APKT 1003 PD...
fraises à queue Weldon APKT 1003 PD...



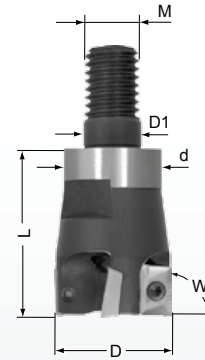
D	Bestell-Nr. order number No.	L	L2	d	d3	Z	WSP L	w			
10	110AP10G12A80	25	80	12	-	1	10	90°	x	993 12	994 08
10	110AP10G12A120	40	120	12	-	1	10	90°	x	993 12	994 08
12	112AP10G12A80	25	80	12	-	1	10	90°	x	993 12	994 08
12	112AP10G12A120	40	120	12	-	1	10	90°	x	993 12	994 08
13	113AP10G12A120	-	120	12	-	1	10	90°	x	993 12	994 08
16	216AP10G16A85	30	85	16	-	2	10	90°	x	993 12	994 08
16	216AP10G16A180	50	180	16	-	2	10	90°	-	993 12	994 08
17	217AP10G16A180	-	180	16	-	2	10	90°	-	993 12	994 08
20	320AP10G20A90	35	90	20	-	3	10	90°	x	993 12	994 08
20	320AP10G20A180	50	180	20	-	3	10	90°	-	993 12	994 08
21	321AP10G20A180	-	180	20	-	3	10	90°	-	993 12	994 08
25	425AP10G25A100	40	100	25	-	4	10	90°	x	993 12	994 08
25	425AP10G25A180	70	180	25	-	4	10	90°	-	993 12	994 08
26	426AP10G25A180	-	180	25	-	4	10	90°	-	993 12	994 08



Wendeschneidplatten AP__ siehe Seite 44
inserts AP__ see page 44
plaquettes AP__ voir page 44

Einschraubfräser APKT 1003 PD...

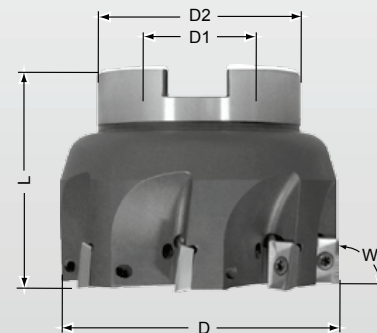
threaded type cutter APKT 1003 PD...
fraises à queue filetée, APKT 1003 PD...



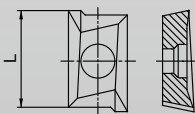
D	Bestell-Nr. order number No.	L	W	D1	d	M	Z	WSP L			
16	216AP10M8	25	90°	8,5	13,8	8	2	10	x	993 12	994 08
20	320AP10M10	30	90°	10,5	18	10	3	10	x	993 12	994 08
25	425AP10M12	35	90°	12,5	21	12	4	10	x	993 12	994 08

Aufsteckfräser APKT 1003 PD...

shell cutter, APKT 1003 PD...
fraises à surfacer, APKT 1003 PD...



D	Bestell-Nr. order number No.	L	L2	W	D1	D2	M	Z	WSP L			
40	640AP10A16	40	-	90°	16	35	-	6	10	x	993 12	994 08
50	750AP10A22	50	-	90°	22	40	-	7	10	x	993 12	994 08
52	752AP10A22	50	-	90°	22	40	-	7	10	x	993 12	994 08
63	863AP10A27	50	-	90°	27	48	-	8	10	x	993 12	994 08
66	866AP10A27	50	-	90°	27	48	-	8	10	x	993 12	994 08



Wendeschneidplatten AP__ siehe Seite 44
inserts AP__ see page 44
plaquettes AP__ voir page 44

Runde-Fräswendeschnidplatten RD..

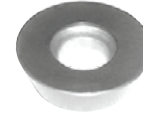
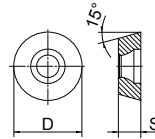
inserts RD..

plaquettes de fraissage RD..

VPE = 10 Stk. je Größe und Qualität

Runde-Fräswendeschnidplatten RDHX - präzisionsgeschliffen

inserts RDHX - precision ground insert
plaquettes de fraissage RDHX - rectifier

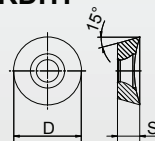


WSP rund, TIALN-beschichtet; inserts round, TIALN-coated					
Wendeschnidplatte insert plaquette	WSP DxS	P 40	P 25	K 10	K 03
RDHX 05 01 MOT	5x1,5	80 110	80 111	-	80 113
RDHX 07 01 MOT	7x1,99	80 130	80 131	80 132	80 133
RDHX 07 02 MOT	7x2,38	80 140	80 141	80 142	80 143
RDHX 08 T2 MOT	8x2,78	80 150	80 151	80 452	80 453
RDHX 10 03 MOT	10x3,18	80 160	80 265	80 162	80 163
RDHX 12 T3 MOT	12x3,97	80 170	80 275	80 172	80 173
RDHX 16 04 MOT	16x4,76	80 180	80 285	80 182	80 183
RDHX 20 06 MOT	20x6	80 190	80 191	80 192	-

TIALN
coated

Runde-Fräswendeschnidplatten mit Hohlkehle RDHT

insert RDHT
plaquettes de fraissage avec brise copeaux pour
l'usinage aluminium, cuivre et plastique



WSP rund mit Hohlkehle, für Alu, Kupfer, Kunststoff for alu, copper, plastic					
Wendeschnidplatte insert plaquette	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

Hardlube
coated

WSP rund mit polierter Hohlkehle, hollow ground polished, unbeschichtet, uncoated					
Wendeschnidplatte insert plaquette	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

uncoated

WSP rund mit Hohlkehle, Diamant beschichtet, Diamond coated					
Wendeschnidplatte insert plaquette	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	-



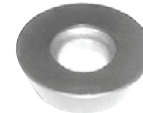
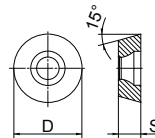
Runde-Fräswendeschnidplatten RD..

inserts RD..
plaquettes de fraisage RD..

VPE = 10 Stk. je Größe und Qualität

Runde-Fräswendeschnidplatten RDHX....CERMET, präzisionsgeschliffen

inserts RDHX....CERMET- precision ground insert
plaquettes de fraisage RDHX....CERMET - rectifier

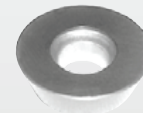
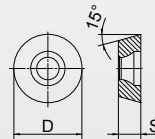


WSP rund, CERMET; inserts round, CERMET			
Wendeschnidplatte insert plaquette	WSP DxS	beschichtet coated revêter	unbeschichtet uncoated pas revêter
RDHX 07 01 MOT	7x1,99	-	80 034
RDHX 07 02 MOT	7x2,38	-	80 044
RDHX 10 03 MOT	10x3,18	-	80 064
RDHX 12 T3 MOT	12x3,97	-	80 074
RDHX 16 04 MOT	16x4,76	-	80 084

coated/
uncoated

Runde-Fräswendeschnidplatten RDHX....CBN, präzisionsgeschliffen

inserts RDHX....CBN - precision ground insert
plaquettes de fraisage RDHX....CBN - rectifier

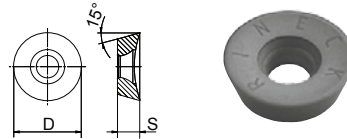


WSP rund, CBN Fullface; inserts round, CBN			
Wendeschnidplatte insert plaquette	WSP DxS	Guss casting fonte	Stahl steel acier
RDHX 07 01 MOT	7x1,99	80 035	80 036
RDHX 07 02 MOT	7x2,38	80 045	80 046
RDHX 10 03 MOT	10x3,18	80 065	80 066
RDHX 12 T3 MOT	12x3,97	80 075	80 076

Runde-Fräswendeschneidplatten RDLT - präzisionsgesintert

inserts RDLT - precision sintered insert
plaquettes de fraisage RDLT avec brise copeaux

VPE = 10 Stk. je Größe und Qualität



WSP MAGNUM rund, TIALN-beschichtet; inserts magnum, TIALN-coated				
Wendeschneidplatte insert plaquette	WSP DxS	P 40	P 25	K 10
RDLT 10 03 MOT	10x3,18	89 160	89 161	89 162
RDLT 12 T3 MOT	12x3,97	89 170	89 171	89 172
RDLT 16 04 MOT	16x4,76	89 180	89 181	89 182

TIALN
coated

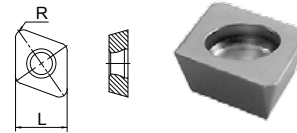
Rhombus-Wendeschneidplatten XD..

inserts XD.. - rhombic
plaquettes de fraisage XD.. - rhombique

VPE = 10 Stk. je Größe und Qualität

Rhombus-Wendeschneidplatten XDHW

inserts XDHW - rhombic
plaquettes de fraisage XDHW - rhombique



WSP rhombisch, TIALN-beschichtet; inserts rhombic, TIALN-coated						
Wendeschneidplatte insert plaquette	WSP L	R	P 40	P 25	K 10	K 03
XDHW 01 04-05	4	0,5	84 100.05	84 101.05	-	84 103.05
XDHW 01 04-10	4	1	84 100.10	84 101.10	-	84 103.10
XDHW 02 06-05	6,5	0,5	84 110.05	84 111.05	84 112.05	84 113.05
XDHW 02 06-10	6,5	1	84 110	84 111	84 112	84 113
XDHW 02 06-20	6,5	2	84 110.20	84 111.20	84 112.20	84 113.20
XDHW 03 10-10	10	1	84 120	84 121	84 122	84 123
XDHW 03 10-20	10	2	84 120.20	84 121.20	84 122.20	84 123.20

TIALN
coated

WSP rhombisch, Diamant beschichtet; inserts rhombic, diamond-coated						
Wendeschneidplatte insert plaquette	WSP L	R	P 40	P 25	K 10	K 05
XDHW 01 04-10	-	1	-	-	84 802.10	-
XDHW 02 06-10	-	1	-	-	84 812	-



Rhombus-Wendeschneidplatten XDHT, mit Spanformer

inserts XDHT - rhombic
plaquettes de fraisage XDHT - rhombique



Alucut

WSP rhombisch, Hardlube-beschichtet; inserts rhombic, hardlube-coated						
Wendeschneidplatte insert plaquette	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

Hardlube
coated

WSP rhombisch, unbeschichtet poliert; inserts rhombic, uncoated polished						
Wendeschneidplatte insert plaquette	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

uncoated

WSP rhombisch, Diamant beschichtet; inserts rhombic, diamond-coated						
Wendeschneidplatte insert plaquette	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	-



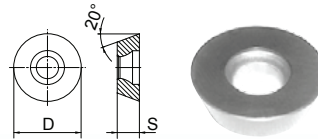
Runde-Fräswendeschnidplatten REHX, 20° Rostfreibearbeitung

inserts - precision ground insert REHX, 20° stainless steel machining
 plaquettes de fraisage - frittage de précision REHX, 20° pour l'usinage inox

VPE = 10 Stk. je Größe und Qualität

Runde-Fräswendeschnidplatten REHX, 20° Rostfreibearbeitung

inserts - precision ground insert REHX,
 20° stainless steel machining
 plaquettes de fraisage - frittage de précision REHX,
 20° pour l'usinage inox



TIALN
coated

WSP rund, TIALN-beschichtet; inserts round							
Wendeschnidplatte insert plaquette	WSP DxS			P 40	P 25		
REHX 07 01 MOT	7x1,99			81 330	81 131		
REHX 10 03 MOT	10x3,18			81 360	81 161		
REHX 12 T3 MOT	12x3,97			81 370	81 171		
REHX 16 04 MOT	16x4,76			81 380	81 181		

Kugelbahn-Wechselplatten ROHX

inserts ROHX
 plaquettes de fraisage ROHX



TIALN
coated

Kugelplatte, TIALN-beschichtet; TIALN-coated							
Wendeschnidplatte insert plaquette	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, unbeschichtet; uncoated							
Wendeschnidplatte insert plaquette	WSP D	R		P 40	P 25	K 10	K 05
ROHX 08	8	4		-	83 011	-	83 013
ROHX 10	10	5		-	83 021	-	83 023
ROHX 12	12	6		-	83 031	-	83 033
ROHX 16	16	8		-	83 051	-	83 053
ROHX 20	20	10		-	83 061	-	83 063

uncoated

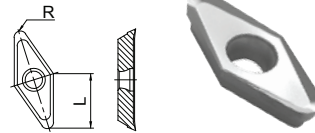
Kugelplatte, Diamant beschichtet; diamond-coated							
Wendeschnidplatte insert plaquette	WSP D	R		P 40	P 25	K 10	K 05
ROHX 08	8	4		-	-	83 812	-
ROHX 10	10	5		-	-	83 822	-
ROHX 12	12	6		-	-	83 832	-
ROHX 16	16	8		-	-	83 852	-



Fräs-Wendeschneidplatten für Alu-Tauchfräser VDGT/VCGT

insert VDGT/VCGT plaquettes de fraisage, por l'usinage aluminium
VDGT/VCGT, cuivre et plastique

VPE = 10 Stk. je Größe und Qualität



WSP für Alu, Kupfer und Kunststoff, poliert, Hardlube-beschichtet; for alu, copper, plastic, coated						
Wendeschneidplatte insert plaquette	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	-

Hardlube
coated

WSP für Alu, Kupfer und Kunststoff, unbeschichtet; for alu, copper, plastic, uncoated						
Wendeschneidplatte insert plaquette	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	-

uncoated

WSP für Alu, Kupfer und Kunststoff, Diamant beschichtet; for alu, copper, plastic, diamond coated						
Wendeschneidplatte insert plaquette	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	-

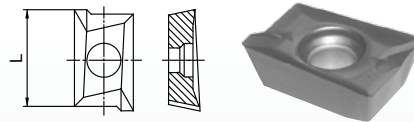


Wendeschneidplatten APKT / ADKT / SEKX / SEET / PDHX

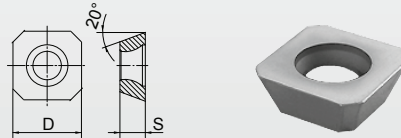
inserts APKT / ADKT / SEKX / SEET / PDHX

plaquettes de fraisage APKT / ADKT / SEKX / SEET / PDHX

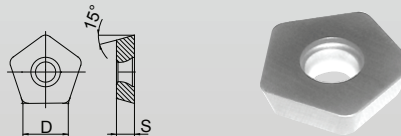
VPE = 10 Stk. je Größe und Qualität



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

TIALN
coated

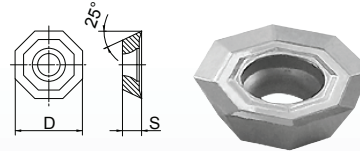
Fräs-Wendeschneidplatten Octa-Cut

insert Octa-Cut
plaquettes de fraisage octaèdre

VPE = 10 Stk. je Größe und Qualität

Fräs-Wendeschneidplatten Octa-Cut für Aluminiumbearbeitung OFKT

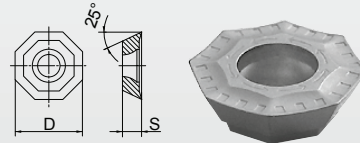
insert Octa-Cut for aluminium machining OFKT
plaquettes de fraisage octaèdre pour l'usinage aluminium OFKT



WSP Wendeschneidplatte insert plaquette	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
plaquettes de fraisage octaèdre pour l'usinage acier OFEX



WSP beschichtet; inserts coated Wendeschneidplatte insert plaquette	WSP L	R	P 40	P 25	K 10	
OFEX-05T35N	12,7	-	-	93 161	-	

TIALN
coated



Werkzeugaufnahmen HSK-A

Tool holders HSK-A
Mandrins HSK-A

Seite / Page / Page

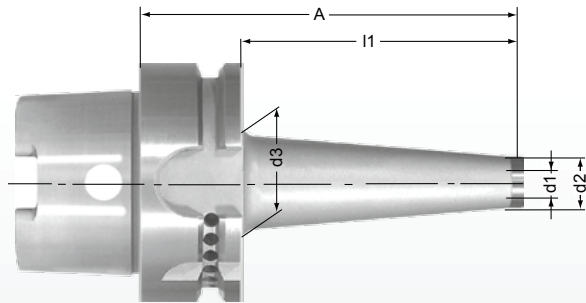
Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue fileté	48 - 55
Aufsteckfräsdorne Arbors for shell cutters Mandrins pour fraises à creuse	56 - 61
Fräserhülsen / Zwischenhülsen morse taper adaptors Mandrin cône morse	62 - 63
Weldonfutter Weldon chucks Mandrin pour queues cylindriques Weldon	64 - 67
Spannzangenfutter collet chucks Mandrin à pinces	68 - 71
CNC-Bohrfutter CNC-drill chucks Mandrin de percage CNC	72 - 73
Hydro-Dehnspannfutter expansion chucks Mandrins expansibles hydrauliques	74
Rohlinge Blanks Ébauche	75


Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Fräsaufnahme HSK-A32 für Einschraubfräser

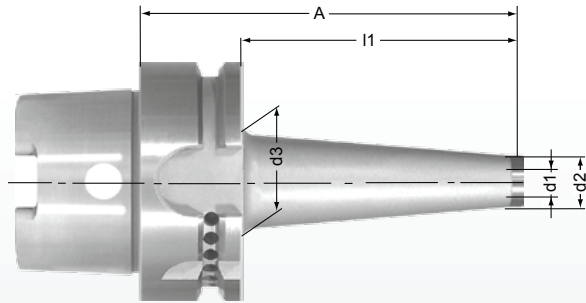
shank HSK-A32 for threaded type cutter
mandrin HSK-A32 pour fraises à queue fileté




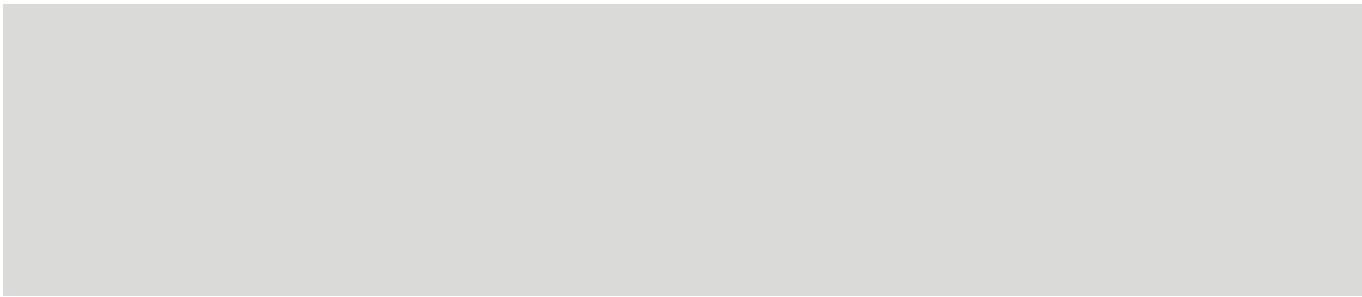
Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A320625	M6	10	15	45	25	G2,5/15.000 oder/or U<1gmm
920 - A320650	M6	10	22	70	50	
920 - A320825	M8	13,8	17	45	25	
920 - A320850	M8	13,8	24	70	50	
920 - A321025	M10	18	23	45	25	
920 - A321050	M10	18	25	70	50	
920 - A321225	M12	21	25	45	25	

Fräsaufnahme HSK-A40 für Einschraubfräser

shank HSK-A40 for threaded type cutter
mandrin HSK-A40 pour fraises à queue fileté

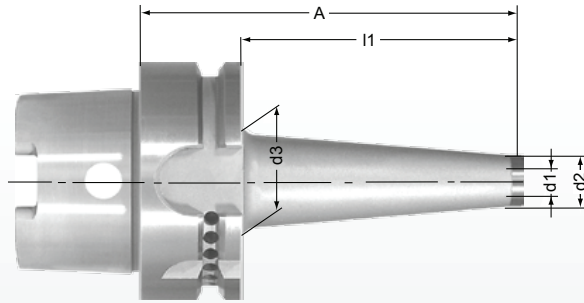



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A400650	M6	10	22	70	50	G2,5/15.000 oder/or U<1gmm
920 - A400675	M6	10	26	95	75	
920 - A400825	M8	13,8	18	45	25	
920 - A400850	M8	13,8	23	70	50	
920 - A400875	M8	13,8	25	95	75	
920 - A4008100	M8	13,8	30	120	100	
920 - A401025	M10	18	23	45	25	
920 - A401050	M10	18	25	70	50	
920 - A401075	M10	18	30	95	75	
920 - A4010100	M10	18	34	120	100	
920 - A401225	M12	21	24	45	25	
920 - A401250	M12	21	30	70	50	
920 - A401275	M12	21	34	95	75	
920 - A401625	M16	29	34	45	25	



Fräsaufnahme HSK-A50 für Einschraubfräser

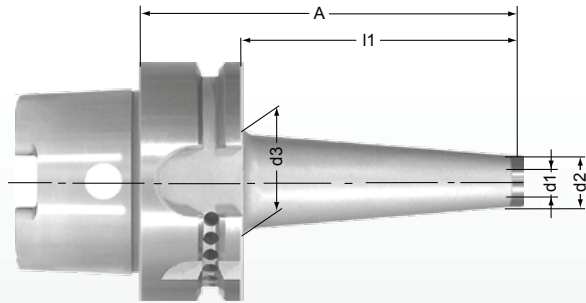
shank HSK-A50 for threaded type cutter
mandrin HSK-A50 pour fraises à queue fileté




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A500625	M 6	10	22	51	25	G2,5/15.000 oder/or U<1gmm
920 - A500650	M 6	10	22	76	50	
920 - A500675	M 6	10	26	101	75	
920 - A500825	M 8	13,8	18	51	25	
920 - A500825ZY	M 8	13,8	13,8	51	25	
920 - A500850	M 8	13,8	23	76	50	
920 - A500850ZY	M 8	13,8	13,8	76	50	
920 - A500875	M 8	13,8	25	101	75	
920 - A5008100	M 8	13,8	30	126	100	
920 - A5008125	M 8	13,8	36	151	125	
920 - A501025	M 10	18	23	51	25	
920 - A501025ZY	M 10	18	18	51	25	
920 - A501050	M 10	18	25	76	50	
920 - A501050ZY	M 10	18	18	76	50	
920 - A501075	M 10	18	30	101	75	
920 - A5010100	M 10	18	35	126	100	
920 - A5010125	M 10	18	41	151	125	
920 - A501225	M 12	21	24	51	25	
920 - A501250	M 12	21	30	76	50	
920 - A501250ZY	M 12	23	23	76	50	
920 - A501275	M 12	21	35	101	75	
920 - A501275ZY	M 12	23	23	101	75	
920 - A5012100	M 12	21	38	126	100	
920 - A5012125	M 12	21	42	151	125	
920 - A501625	M 16	29	29	51	25	
920 - A501650	M 16	29	34	76	50	
920 - A501650ZY	M 16	29	29	76	50	
920 - A501675	M 16	29	35	101	75	
920 - A501675ZY	M 16	29	29	101	75	
920 - A5016100	M 16	29	40	126	100	
920 - A5016125	M 16	29	42	151	125	

Fräsaufnahme HSK-A63 für Einschraubfräser

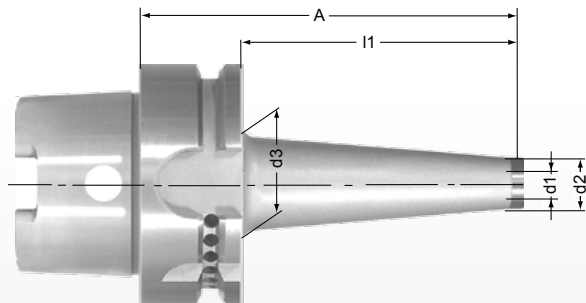
shank HSK-A63 for threaded type cutter
mandrin HSK-A63 pour fraises à queue fileté




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A630625	M 6	10	22	51	25	G2,5/15.000
920 - A630650	M 6	10	22	76	50	
920 - A630675	M 6	10	26	101	75	
920 - A630825	M 8	13,8	18	51	25	
920 - A630825ZY	M 8	13,8	13,8	51	25	
920 - A630850	M 8	13,8	23	76	50	
920 - A630850ZY	M 8	13,8	13,8	76	50	
920 - A630875	M 8	13,8	25	101	75	
920 - A630875ZY	M 8	13,8	13,8	101	75	
920 - A6308100	M 8	13,8	30	126	100	
920 - A6308125	M 8	13,8	32	151	125	
920 - A6308200	M 8	13,8	50	226	200	
920 - A631025	M 10	18	23	51	25	
920 - A631025ZY	M 10	18	18	51	25	
920 - A631050	M 10	18	25	76	50	
920 - A631050ZY	M 10	18	18	76	50	
920 - A631075	M 10	18	30	101	75	
920 - A631075ZY	M 10	18	18	101	75	
920 - A6310100	M 10	18	35	126	100	
920 - A6310100ZY	M 10	18	18	126	100	
920 - A6310125	M 10	18	40	151	125	
920 - A6310125ZY	M 10	18	18	151	125	
920 - A6310150	M 10	18	44	176	150	
920 - A6310200	M 10	18	50	226	200	
920 - A631225	M 12	21	24	51	25	
920 - A631250	M 12	21	30	76	50	
920 - A631250ZY	M 12	23	23	76	50	
920 - A631275	M 12	21	35	101	75	
920 - A631275ZY	M 12	23	23	101	75	
920 - A6312100	M 12	21	38	126	100	
920 - A6312100ZY	M 12	23	23	126	100	
920 - A6312125	M 12	21	43	151	125	
920 - A6312150	M 12	21	45	176	150	
920 - A6312175	M 12	21	46	201	175	
920 - A6312200	M 12	21	46	226	200	

Fräsaufnahme HSK-A63 für Einschraubfräser

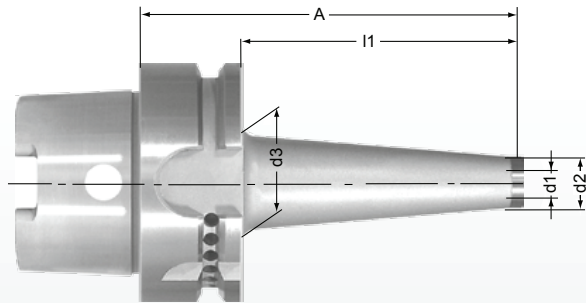
shank HSK-A63 for threaded type cutter
mandrin HSK-A63 pour fraises à queue fileté




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A631625	M 16	29	29	51	25	G2,5/15.000
920 - A631650	M 16	29	34	76	50	
920 - A631650-37	M 16	37	43	76	50	
920 - A631650ZY	M 16	29	29	76	50	
920 - A631650ZY-37	M 16	37	37	76	50	
920 - A631675	M 16	29	35	101	75	
920 - A631675-37	M 16	37	46	101	75	
920 - A631675ZY	M 16	29	29	101	75	
920 - A631675ZY-37	M 16	37	37	101	75	
920 - A6316100	M 16	29	40	126	100	
920 - A6316100-37	M 16	37	49	126	100	
920 - A6316100ZY	M 16	29	29	126	100	
920 - A6316125	M 16	29	44	151	125	
920 - A6316150	M 16	29	47	176	150	
920 - A6316150ZY	M 16	29	29	176	150	
920 - A6316175	M 16	29	52	201	175	
920 - A6316200	M 16	29	52	226	200	
920 - A6316200ZY	M 16	29	29	226	200	
920 - A6316250	M 16	29	52	276	250	

Fräsaufnahme HSK-A80 für Einschraubfräser

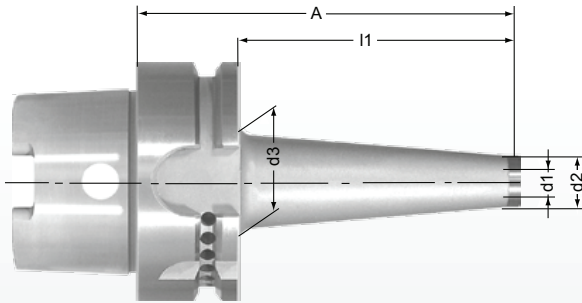
shank HSK-A80 for threaded type cutter
mandrin HSK-A80 pour fraises à queue fileté



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A800825	M 8	13,8	18	51	25	G2,5/15.000
920 - A800850	M 8	13,8	23	76	50	
920 - A8008100	M 8	13,8	30	126	100	
920 - A801025	M 10	18	23	51	25	
920 - A801050	M 10	18	25	76	50	
920 - A801075	M 10	18	30	101	75	
920 - A8010100	M 10	18	35	126	100	
920 - A801225	M 12	21	24	51	25	
920 - A801250	M 12	21	30	76	50	
920 - A801275	M 12	21	35	101	75	
920 - A8012100	M 12	21	40	126	100	
920 - A8012125	M 12	21	43	151	125	
920 - A801625	M 16	29	29	51	25	
920 - A801650	M 16	29	34	76	50	
920 - A801650ZY	M 16	29	29	76	50	
920 - A801650ZY-37	M 16	37	37	76	50	
920 - A801675	M 16	29	37	101	75	
920 - A8016100	M 16	29	40	126	100	
920 - A8016100-37	M 16	37	49	126	100	
920 - A8016125	M 16	29	44	126	100	
920 - A8016150	M 16	29	50	176	150	
920 - A8016200	M 16	29	60	226	200	

Fräsaufnahme HSK-A100 für Einschraubfräser

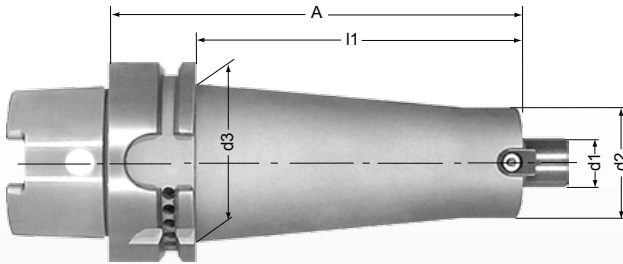
shank HSK-A100 for threaded type cutter
mandrin HSK-A100 pour fraises à queue filetée



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - A1000850	M 8	13,8	28	79	50	G2,5/15.000
920 - A1000875	M 8	13,8	30	104	75	
920 - A10008100	M 8	13,8	30	129	100	
920 - A10008150	M 8	13,8	33	179	150	
920 - A10008200	M 8	13,8	38	229	200	
920 - A1001050	M 10	18	30	79	50	
920 - A1001075	M 10	18	33	104	75	
920 - A10010100	M 10	18	35	129	100	
920 - A10010125	M 10	18	35	154	125	
920 - A10010150	M 10	18	38	179	150	
920 - A10010200	M 10	18	40	229	200	
920 - A1001230	M 12	21	30	59	30	
920 - A1001250	M 12	21	33	79	50	
920 - A1001275	M 12	21	35	104	75	
920 - A10012100	M 12	21	38	129	100	
920 - A10012125	M 12	21	43	154	125	
920 - A10012150	M 12	21	45	179	150	
920 - A10012200	M 12	21	50	229	200	
920 - A10012250	M 12	21	60	279	250	
920 - A10012300	M 12	21	70	329	300	
920 - A1001630	M 16	29	32	59	30	
920 - A1001650	M 16	29	34	79	50	
920 - A1001650ZY	M 16	29	29	79	50	
920 - A1001650ZY-37	M 16	37	37	79	50	
920 - A1001675	M 16	29	35	104	75	
920 - A1001675ZY	M 16	29	29	104	75	
920 - A1001675ZY-37	M 16	37	37	104	75	
920 - A10016100	M 16	29	40	129	100	
920 - A10016100ZY	M 16	29	29	129	100	
920 - A10016100ZY-37	M 16	37	37	129	100	
920 - A10016125	M 16	29	45	154	125	
920 - A10016150	M 16	29	50	179	150	
920 - A10016200	M 16	29	60	229	200	
920 - A10016250	M 16	29	70	279	250	
920 - A10016300	M 16	29	80	329	300	







Aufsteckfräsdorne HSK-A50

arbors HSK-A50 for shell cutter
mandrin HSK-A50 pour fraises à creuse



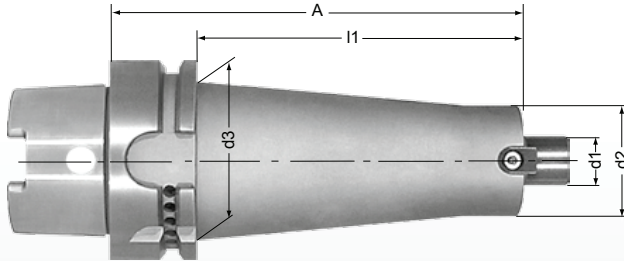
Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur



Bestell-Nr. order number No.	d1	d2	d3	l1	A						
901 - A5016	16	35	35	20	46	x	959-16	-	957-M8	-	G6,3/8.000
901 - A5022	22	40	40	22	48	x	959-22	-	957-M10	-	
901 - A5027	27	48	48	32	58	x	959-27	-	957-M12	-	






Aufsteckfräsdorne HSK-A63

arbors HSK-A63 for shell cutter
mandrin HSK-A63 pour fraises à creuse



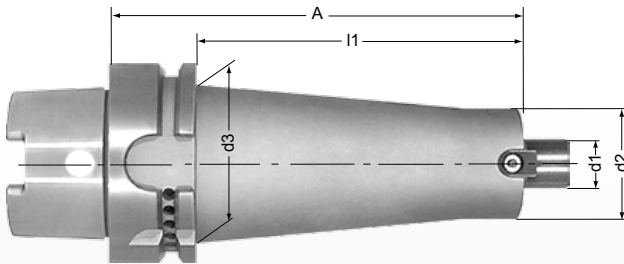
Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur



Bestell-Nr. order number No.	d1	d2	d3	l1	A						
901 - A6316	16	35	35	20	46	-	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 - A631675	16	35	45	75	101	x	959-16	-	957-M8	-	
901 - A6316100	16	35	50	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	-	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 - A632275	22	40	50	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	-	G6,3/8.000
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	-	959-32	957-32	-	958-32	
901 - A6332100	32	60	60	100	126	-	959-32	957-32	-	958-32	
901 - A6332150	32	60	60	150	176	-	959-32	957-32	-	958-32	







Aufsteckfräsdorne HSK-A80

arbors HSK-A80 for shell cutter
mandrin HSK-A80 pour fraises à creuse



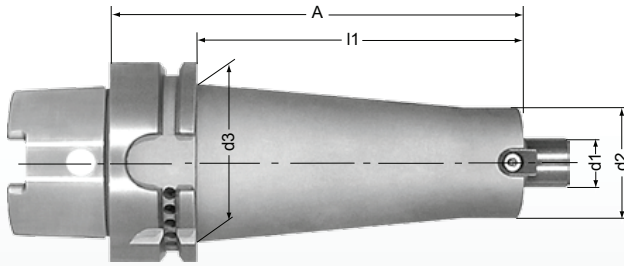
Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur



Bestell-Nr. order number No.	d1	d2	d3	l1	A						
901 - A801625	16	35	35	25	51	x	959-16	-	957-M8	-	G6,3/8.000
901 - A801650	16	35	45	50	76	x	959-16	-	957-M8	-	
901 - A8016100	16	35	50	100	126	x	959-16	-	957-M8	-	
901 - A8016200	16	35	60	200	226	x	959-16	-	957-M8	-	
901 - A802225	22	40	40	25	51	x	959-22	-	957-M10	-	
901 - A802250	22	40	45	50	76	x	959-22	-	957-M10	-	
901 - A8022100	22	40	50	100	126	x	959-22	-	957-M10	-	
901 - A8022100ZY	22	48	48	100	126	x	959-22	-	957-M10	-	
901 - A8022150ZY	22	48	48	150	176	x	959-22	-	957-M10	-	
901 - A8022200	22	40	68	200	226	x	959-22	-	957-M10	-	
901 - A802725	27	48	48	25	51	x	959-27	-	957-M12	-	
901 - A802750	27	48	55	50	76	x	959-27	-	957-M12	-	
901 - A8027100	27	48	60	100	126	x	959-27	-	957-M12	-	
901 - A8027100ZY	27	60	60	100	126	x	959-27	-	957-M12	-	
901 - A8027150ZY	27	60	60	150	176	x	959-27	-	957-M12	-	
901 - A8027200	27	48	65	200	226	x	959-27	-	957-M12	-	

Aufsteckfräsdorne HSK-A100

arbors HSK-A100 for shell cutter
mandrin HSK-A100 pour fraises à creuse



Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur



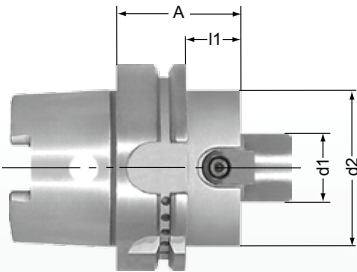
Bestell-Nr. order number No.	d1	d2	d3	l1	A						
901 - A1001625	16	35	35	25	54	x	959-16	-	957-M8	-	-
901 - A1001650	16	35	45	50	79	x	959-16	-	957-M8	-	-
901 - A10016100	16	35	50	100	129	x	959-16	-	957-M8	-	-
901 - A10016150	16	35	60	150	179	x	959-16	-	957-M8	-	-
901 - A10016200	16	35	60	200	229	x	959-16	-	957-M8	-	-
901 - A10016200ZY	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	-	-
901 - A10022100	22	40	50	100	129	x	959-22	-	957-M10	-	-
901 - A10022100ZY	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	22	48	48	150	179	x	959-22	-	957-M10	-	-
901 - A10022200	22	40	68	200	229	x	959-22	-	957-M10	-	-
901 - A10022200ZY	22	48	48	200	229	x	959-22	-	957-M10	-	-
901 - A1002725	27	60	60	25	54	x	959-27	-	957-M12	-	-
901 - A1002750	27	60	60	50	79	x	959-27	-	957-M12	-	-
901 - A10027100	27	60	70	100	129	x	959-27	-	957-M12	-	-
901 - A10027100ZY	27	60	60	100	129	x	959-27	-	957-M12	-	-
901 - A10027150	27	60	75	150	179	-	959-27	-	957-M12	-	-
901 - A10027150ZY	27	60	60	150	179	-	959-27	-	957-M12	-	-
901 - A10027200	27	60	80	200	229	-	959-27	-	957-M12	-	-
901 - A10027200ZY	27	60	60	200	229	-	959-27	-	957-M12	-	-
901 - A1003250	32	70	70	50	79	-	959-32	957-32	-	958-32	-
901 - A10032100	32	70	85	100	129	-	959-32	957-32	-	958-32	-

G6,3/8.000

Aufsteckfräsdorne HSK-A63 - 100 mit vergrößertem Anlagedurchmesser

arbors HSK-A63 - 100 with enlarged contact surface diameter

mandrin HSK-A63 - 100 pour fraise à creuse avec surface d'appui élargi







Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen

delivery: with drive keys and retaining screw

entendue de livraison: avec vis de blocage des fraises et entraineur



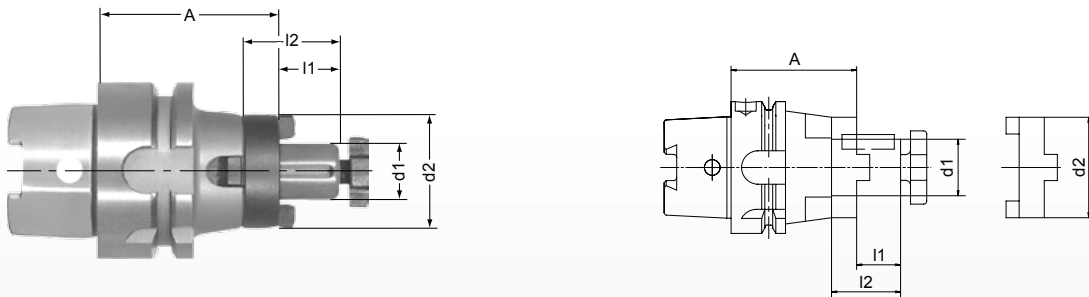
Bestell-Nr. order number No.	HSK	d1	d2	l1	A				
922 - A6322	A63	22	50	24	50	x	959-22	957-22	958-22
922 - A6327		27	60	34	60	x	959-27	957-27	958-27
922 - A6332		32	78	34	60	-	959-32	957-32	958-32
922 - A6340		40	89	34	60	-	959-40	957-40	958-40
922 - A8022	A80	22	50	24	50	x	959-22	957-22	958-22
922 - A8027		27	60	34	60	x	959-27	957-27	958-27
922 - A8032		32	78	34	60	-	959-32	957-32	958-32
922 - A8040		40	89	34	60	-	959-40	957-40	958-40
922 - A10022	A100	22	50	21	50	x	959-22	957-22	958-22
922 - A10027		27	60	21	50	x	959-27	957-27	958-27
922 - A10032		32	78	21	50	-	959-32	957-32	958-32
922 - A10040		40	89	31	60	-	959-40	957-40	958-40
922 - A10050		50	120	41	70	-	959-50	957-50	958-50

G6,3/8.000

Kombi - Aufsteckfräserdorne HSK-A50 - 100

combi-arbors with tenon and parallel key drive, HSK-A50 - 100

mandrin combi pour fraises à entraînement par clavette ou tenon, HSK-A50 - 100



Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen

delivery: with drive keys and retaining screw

entendue de livraison: avec vis de blocage des fraises et entraineur

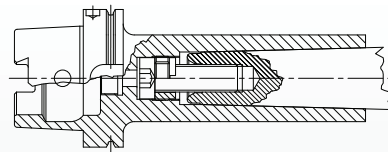
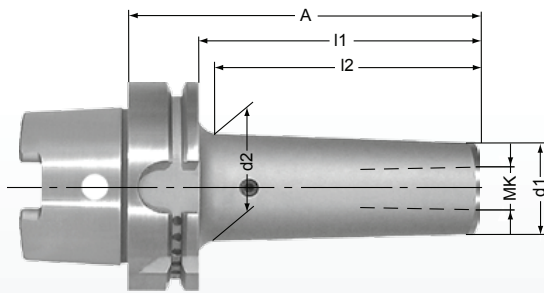






Bestell-Nr. order number No.	HSK	d1	d2	l1	l2	A					
902 - A5016	A50	16	32	17	27	50	955-16	956-16	957-16	958-16	G6,3/8.000
902 - A5022		22	40	19	31	50	955-22	956-22	957-22	958-22	
902 - A5027		27	48	21	33	65	955-27	956-27	957-27	958-27	
902 - A5032		32	58	24	38	65	955-32	956-32	957-32	958-32	
902 - A6316	A63	16	32	17	27	60	955-16	956-16	957-16	958-16	
902 - A6322		22	40	19	31	60	955-22	956-22	957-22	958-22	
902 - A6327		27	48	21	33	60	955-27	956-27	957-27	958-27	
902 - A6332		32	58	24	38	60	955-32	956-32	957-32	958-32	
902 - A6340		40	70	27	41	70	955-40	956-40	957-40	958-40	
902 - A8016	A80	16	32	17	27	60	955-16	956-16	957-16	958-16	
902 - A8022		22	40	19	31	60	955-22	956-22	957-22	958-22	
902 - A8027		27	48	21	33	60	955-27	956-27	957-27	958-27	
902 - A8032		32	58	24	38	60	955-32	956-32	957-32	958-32	
902 - A8040		40	70	27	41	70	955-40	956-40	957-40	958-40	
902 - A10016	A100	16	32	17	27	60	955-16	956-16	957-16	958-16	
902 - A10022		22	40	19	31	60	955-22	956-22	957-22	958-22	
902 - A10027		27	48	21	33	60	955-27	956-27	957-27	958-27	
902 - A10032		32	58	24	38	60	955-32	956-32	957-32	958-32	
902 - A10040		40	70	27	41	70	955-40	956-40	957-40	958-40	

Fräserhülsen HSK-A63 - 100 mit Anzugsgewinde für Morsekegel

morse taper adaptor HSK-A63 - 100

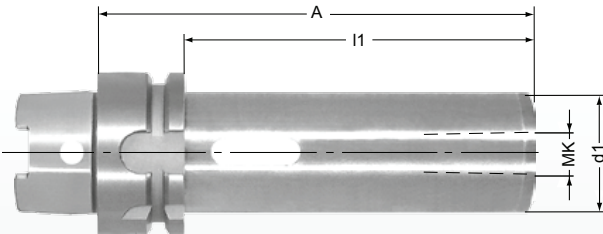
mandrin cône morse à trou fileté HSK-A63 - 100




Bestell-Nr. order number No.	HSK	MK	d1	d2	l1	l2	A				
905 - A63MK170	A63	1	18	26	78	70	104	959-MK1	957-MK1	952-MK1	G6,3/8.000
905 - A63MK280		2	28	34	88	80	114	959-MK2	957-MK2	952-MK2	
905 - A63MK2135		2	28	40	143	135	169	959-MK2	957-MK2	952-MK2	
905 - A63MK3100		3	36	41	108	100	134	959-MK3	957-MK3	952-MK3	
905 - A63MK3145		3	36	47	153	145	179	959-MK3	957-MK3	952-MK3	
905 - A63MK4130		4	44	52	138	130	164	959-MK4	957-MK4	952-MK4	
905 - A63MK4175	4	44	52	183	175	209	959-MK4	957-MK4	952-MK4		
905 - A80MK280	A80	2	28	34	88	80	114	959-MK2	957-MK2	952-MK2	
905 - A80MK2135		2	28	40	143	135	169	959-MK2	957-MK2	952-MK2	
905 - A80MK3100		3	36	41	108	100	134	959-MK3	957-MK3	952-MK3	
905 - A80MK3145		3	36	47	153	145	179	959-MK3	957-MK3	952-MK3	
905 - A80MK4135		4	44	53	143	135	169	959-MK4	957-MK4	952-MK4	
905 - A80MK4175		4	44	58	183	175	209	959-MK4	957-MK4	952-MK4	
905 - A80MK5165	5	56	62	173	165	199	959-MK5	957-MK5	952-MK5		
905 - A80MK5200	5	56	62	208	200	234	959-MK5	957-MK5	952-MK5		
905 - A100MK280	A100	2	28	34	88	80	117	959-MK2	957-MK2	952-MK2	
905 - A100MK2135		2	28	40	143	135	172	959-MK2	957-MK2	952-MK2	
905 - A100MK3100		3	36	41	108	100	137	959-MK3	957-MK3	952-MK3	
905 - A100MK3145		3	36	47	153	145	182	959-MK3	957-MK3	952-MK3	
905 - A100MK4135		4	44	55	143	135	172	959-MK4	957-MK4	952-MK4	
905 - A100MK4175		4	44	60	183	175	212	959-MK4	957-MK4	952-MK4	
905 - A100MK5165	5	58	70	173	165	202	959-MK5	957-MK5	952-MK5		
905 - A100MK5215	5	58	76	220	215	249	959-MK5	957-MK5	952-MK5		

Zwischenhülsen HSK-A50 - 100

morse taper adaptor, HSK-A50 - 100
mandrin cône morses, HSK-A50 - 100

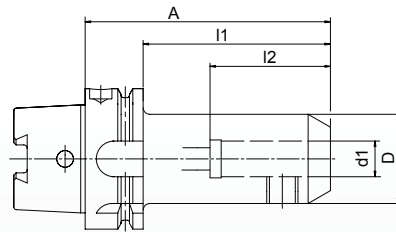
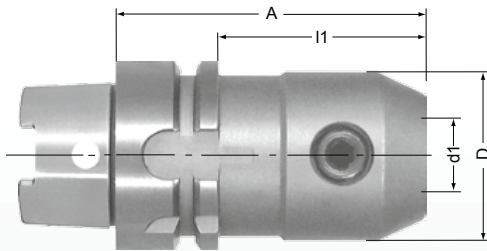


Bestell-Nr. order number No.	HSK	MK	d1	l1	A	
906 - A50MK1	A50	1	25	74	100	G6,3/8.000
906 - A50MK2		2	32	94	120	
906 - A50MK3		3	40	114	140	
906 - A63MK1	A63	1	25	74	100	
906 - A63MK2		2	32	94	120	
906 - A63MK3		3	40	114	140	
906 - A63MK4		4	48	134	160	
906 - A80MK1	A80	1	25	74	100	
906 - A80MK2		2	32	94	120	
906 - A80MK3		3	40	114	140	
906 - A80MK4		4	48	134	160	
906 - A80MK5		5	63	164	190	
906 - A100MK2	A100	2	32	91	120	
906 - A100MK3		3	40	121	150	
906 - A100MK4		4	48	141	170	
906 - A100MK5		5	63	171	200	

Weldonfutter HSK-A50

weldon chuck HSK-A50

mandrin pour queues cylindriques Weldon HSK-A50





Lieferumfang: HSK-Aufnahme mit Spannschraube

delivery: weldon chuck with tightening screw

entendue de livraison: mandrin avec vis de serrage

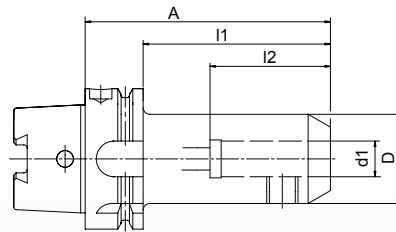
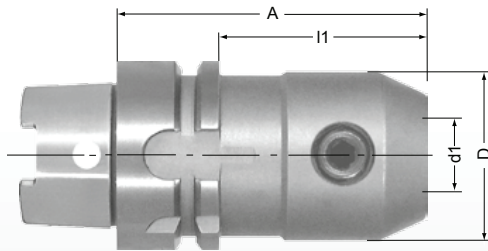


Bestell-Nr. order number No.	d1	D	l1	l2	A		
903 - A5006	6	25	39	38	65	949-M6	G6,3/8.000
903 - A5008	8	28	39	38	65	949-M8	
903 - A5010	10	35	39	42	65	949-M10	
903 - A5012	12	42	54	47	80	949-M12	
903 - A5014	14	44	54	47	80	949-M12	
903 - A5016	16	48	54	50	80	949-M14	
903 - A5018	18	50	54	50	80	949-M14	
903 - A5020	20	52	54	52	80	949-M16	

Weldonfutter HSK-A63

weldon chuck HSK-A63

mandrin pour queues cylindriques Weldon HSK-A63





Lieferumfang: HSK-Aufnahme mit Spannschraube

delivery: weldon chuck with tightening screw

entendue de livraison: mandrin avec vis de serrage

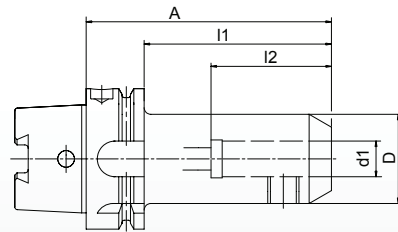
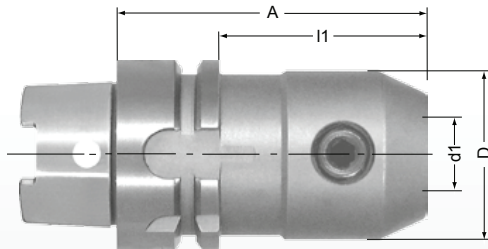


Bestell-Nr. order number No.	d1	D	I1	I2	A		
903 - A6306	6	25	39	38	65	949-M6	G6,3/8.000
903 - A6308	8	28	39	38	65	949-M8	
903 - A6310	10	35	39	42	65	949-M10	
903 - A6312	12	42	54	47	80	949-M12	
903 - A6314	14	44	54	47	80	949-M12	
903 - A6316	16	48	54	50	80	949-M14	
903 - A6318	18	50	54	50	80	949-M14	
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	

Weldonfutter HSK-A80

weldon chuck HSK-A80

mandrin pour queues cylindriques Weldon HSK-A80





Lieferumfang: HSK-Aufnahme mit Spannschraube

delivery: weldon chuck with tightening screw

entendue de livraison: mandrin avec vis de serrage

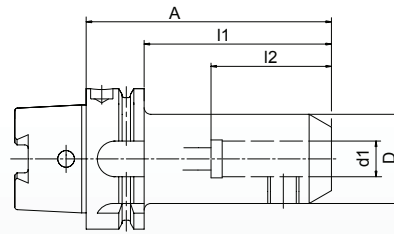
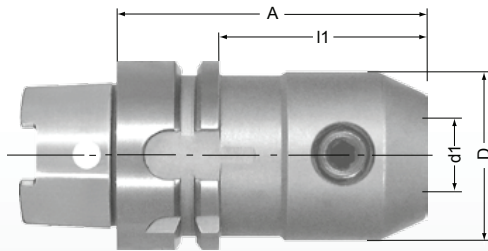


Bestell-Nr. order number No.	d1	D	l1	l2	A		
903 - A8006	6	25	54	38	80	949-M6	G6,3/8.000
903 - A8008	8	28	54	38	80	949-M8	
903 - A8010	10	35	54	42	80	949-M10	
903 - A8012	12	42	54	47	80	949-M12	
903 - A8014	14	44	54	47	80	949-M12	
903 - A8016	16	48	74	50	100	949-M14	
903 - A8018	18	50	74	50	100	949-M14	
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	

Weldonfutter HSK-A100

weldon chuck HSK-A100

mandrin pour queues cylindriques Weldon HSK-A100





Lieferumfang: HSK-Aufnahme mit Spannschraube

delivery: weldon chuck with tightening screw

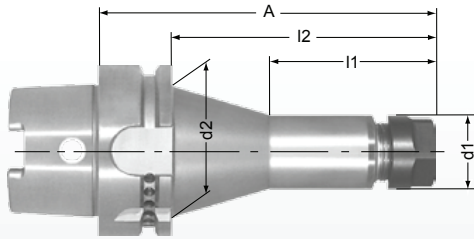
entendue de livraison: mandrin avec vis de serrage



Bestell-Nr. order number No.	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	
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	
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	





Spannzangenfutter HSK-A50 - 100 für Spannzangen ER 16 mit Spannmutter UM

collet chucks HSK type-A50 - 100 for collets ER 16 with nut UM
mandrin à pinces HSK type-A50 - 100 pour pinces type ER 16



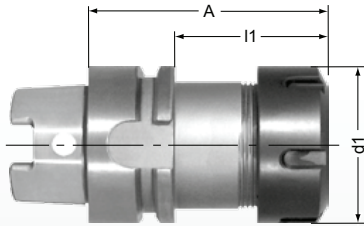
Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM
entendue de livraison: attachement avec ecrou UM



Bestell-Nr. order number No.	HSK	d1	d2	l1	l2	A				
910 - A5050	A50	28	42	43	50	76	953-UM16	-	954-034	G6,3/8.000
910 - A50100		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		28	48	65	100	126	953-UM16	948-M10	954-034	
910 - A63100ZY		28	28	100	100	126	953-UM16	948-M10	954-034	
910 - A63150		28	53	65	150	176	953-UM16	948-M10	954-034	
910 - A63150ZY		28	28	150	150	176	953-UM16	948-M10	954-034	
910 - A100100	A100	28	48	65	100	129	953-UM16	948-M10	954-034	





Spannzangenfutter HSK-A32 - 100 für Spannzangen ER 25/32/40 mit Spannmutter UM

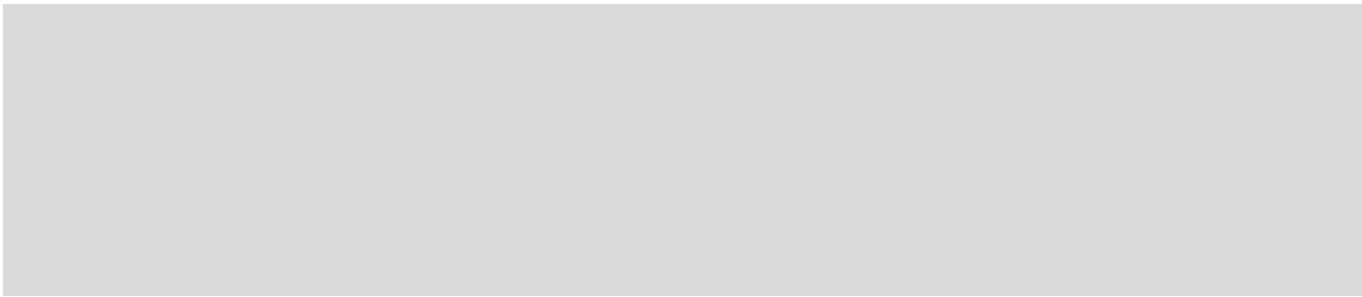
collet chucks HSK-A32 - 100 for collets ER 25/32/40 with nut UM
mandrin à pinces HSK-A32 - 100 pour pinces type ER 25/32/40



Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM
entendue de livraison: attachement avec ecrou UM

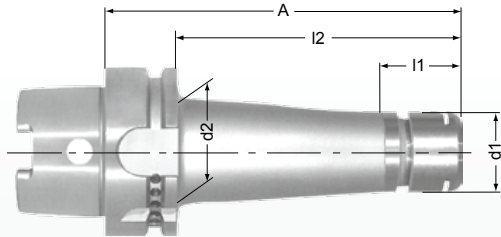


Bestell-Nr. order number No.	HSK	ER	d1	l1	A				
912 - A3240	A32	25	42	40	60	953-UM25	-	954-013ER25	G6,3/8.000
913 - A3260		32	50	60	80	953-UM32	-	954-014ER32	
912 - A4060	A40	25	42	60	80	953-UM25	948-M12	954-013ER25	
913 - A4060		32	50	60	80	953-UM32	948-M16	954-014ER32	
912 - A5050	A50	25	42	50	76	953-UM25	-	954-013ER25	
913 - A5050		32	50	50	76	953-UM32	-	954-014ER32	
912 - A6350	A63	25	42	50	76	953-UM25	-	954-013ER25	
912 - A63100		25	42	100	126	953-UM25	948-M12	954-013ER25	
913 - A6350		32	50	50	76	953-UM32	-	954-014ER32	
913 - A6375		32	50	75	101	953-UM32	948-M16	954-014ER32	
913 - A63100		32	50	100	126	953-UM32	948-M16	954-014ER32	
914 - A6350		40	63	50	76	953-UM40	-	954-015ER40	
914 - A6390		40	63	90	116	953-UM40	948-M16	954-015ER40	
914 - A63A120		40	63	94	120	953-UM40	948-M16	954-015ER40	
914 - A63A160		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		40	63	75	101	953-UM40	948-M16	954-015ER40	
914 - A80A120		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		25	42	100	129	953-UM25	948-M12	954-013ER25	
913 - A10050		32	50	50	79	953-UM32	-	954-014ER32	
913 - A10070		32	50	70	99	953-UM32	948-M16	954-014ER32	
913 - A100100		32	50	100	129	953-UM32	948-M16	954-014ER32	
913 - A100A100		32	50	71	100	953-UM32	948-M16	954-014ER32	
913 - A100A160		32	50	131	160	953-UM32	948-M16	954-014ER32	
913 - A100A200		32	50	171	200	953-UM32	948-M16	954-014ER32	
914 - A10075		40	63	75	104	953-UM40	948-M16	954-015ER40	
914 - A10090		40	63	90	119	953-UM40	948-M16	954-015ER40	
914 - A100A120		40	63	91	120	953-UM40	948-M16	954-015ER40	






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

collet chucks HSK-A32 - 100 for collets ER 11/16/20 with nut MS
mandrin à pinces HSK-A32 - 100 pour pinces type ER 11/16/20



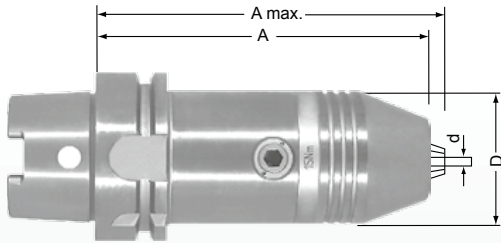
Lieferumfang: HSK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS
entendue de livraison: attachement avec ecrou MS




Bestell-Nr. order number No.	HSK	ER	d1	d2	l1	l2	A			
918 - A3230	A32	11	16	19	21	30	50	953-MS11	954-11	G2,5/15.000 oder/or U<1gmm
919 - A3230		16	22	22	-	30	50	953-MS16	954-16	
919 - A3270		16	22	26	28	70	90	953-MS16	954-16	
911 - A3235		20	28	24	-	35	55	953-MS20	954-063E20	
911 - A4050	A40	20	28	32	30	50	70	953-MS20	954-063E20	
911 - A5040	A50	20	28	34	30	40	66	953-MS20	954-063E20	
911 - A5080		20	28	37	30	80	106	953-MS20	954-063E20	
911 - A6350	A63	20	28	37	30	50	76	953-MS20	954-063E20	
911 - A63100		20	28	50	30	100	126	953-MS20	954-063E20	
911 - A63150		20	28	53	30	150	176	953-MS20	954-063E20	
911 - A63150ZY		20	28	28	-	150	176	953-MS20	954-063E20	
911 - A63200		20	28	53	30	200	226	953-MS20	954-063E20	
911 - A8050	A80	20	28	37	30	50	76	953-MS20	954-063E20	
911 - A80100		20	28	50	30	100	126	953-MS20	954-063E20	
911 - A10050	A100	20	28	37	30	50	79	953-MS20	954-063E20	
911 - A100100		20	28	50	30	100	129	953-MS20	954-063E20	

CNC- Bohrfutter HSK-A32 - 100 für Rechts- und Linkslauf

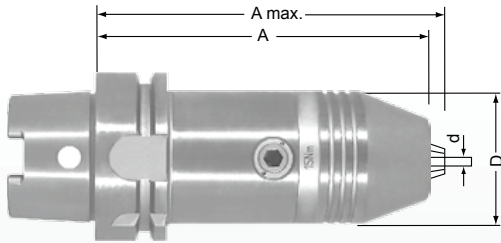
CNC- drill chucks HSK-A32 - 100 for clockwise and anti clockwise rotation
mandrin de perçage CNC HSK-A32 - 100 pour rotation gauche-droite




Bestell-Nr. order number No.	HSK	d	D	A	A max.	
907 - A3208IK	A32	0,5-8	36	90	93	G6,3/8.000
907 - A4008IK	A40	0,5-8	36	91	94	
907 - A5008IK	A50	0,5-8	36	95	98	
907 - A5013IK		1-13	50	116	122	
907 - A5016IK		3-16	57	116	127	
907 - A6308IK	A63	0,5-8	36	96	99	
907 - A6313IK		1-13	50	104	110	
907 - A6316IK		3-16	57	104	115	
907 - A8013IK	A80	1-13	50	109	115	
907 - A8016IK		3-16	57	109	120	
907 - A10013IK	A100	1-13	50	111	117	
907 - A10016IK		3-16	57	111	122	

CNC- Bohrfutter HSK-A32 - 100 für Rechts- und Linkslauf

CNC- drill chucks HSK-A32 for clockwise and anti clockwise rotation
mandrin de perçage CNC HSK-A32 pour rotation gauche-droite

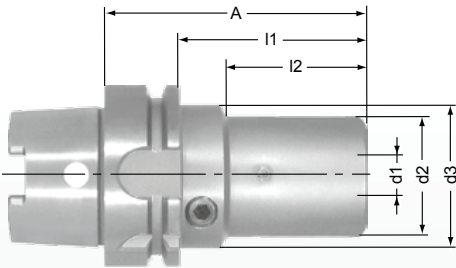



Bestell-Nr. order number No.	HSK	d	D	A	A max.	
907 - A3208	A32	0,5-8	36	90	93	G6,3/8.000
907 - A4008	A40	0,5-8	36	91	94	
907 - A5008	A50	0,5-8	36	95	98	
907 - A5013		1-13	50	116	122	
907 - A5016		3-16	57	116	127	
907 - A6308	A63	0,5-8	36	96	99	
907 - A6313		1-13	50	104	110	
907 - A6316		3-16	57	104	115	
907 - A8013	A80	1-13	50	109	115	
907 - A8016		3-16	57	109	120	
907 - A10013	A100	1-13	50	111	117	
907 - A10016		3-16	57	111	122	

Hydro - Dehnspannfutter HSK- A50, 63

expansion chuck HSK-A50, 63

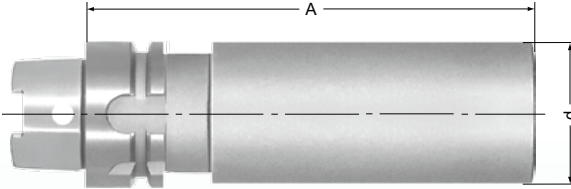
mandrins expansibles hydrauliques HSK- A50, 63



Bestell-Nr. order number No.	HSK	d1	d2	d3	l1	l2	A	
916 - A5006	A50	6	26	42	54	35	80	G6,3/15.000
916 - A5008		8	28	42	54	36	80	
916 - A5010		10	30	42	59	41	85	
916 - A5012		12	32	42	64	47	90	
916 - A5014		14	34	42	64	49	90	
916 - A5016		16	38	42	69	52	95	
916 - A5018		18	40	42	69	52	95	
916 - A5020		20	42	42	74	74	100	
916 - A6306	A63	6	26	50	54	33	80	
916 - A6308		8	28	50	54	33	80	
916 - A6310		10	30	50	59	39	85	
916 - A6312		12	32	50	64	44	90	
916 - A6314		14	34	50	64	46	90	
916 - A6316		16	38	50	69	52	95	
916 - A6318		18	40	50	69	52	95	
916 - A6320		20	42	50	74	58	100	
916 - A6325		25	50	50	94	94	120	
916 - A6332		32	60	50	99	83	125	

Rohlinge HSK-A32 - 100

blanks HSK-A32 - 100
ébauche HSK-A32 - 100



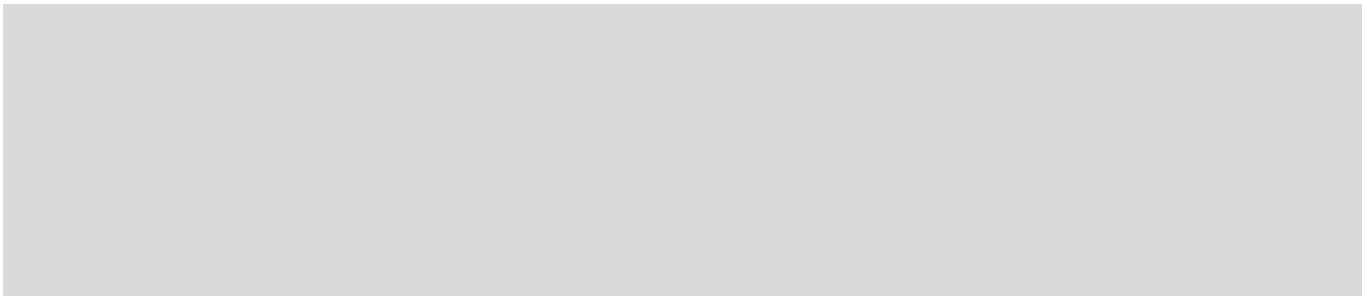
Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.

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

Execution: Cône d'outil et collerette trempés et rectifiés.
Application: Pour la fabrication d'outils spéciaux.



Bestell-Nr. order number No.	HSK	d	A			
917 - A32140	A32	32	140			
917 - A32120-40		40	120			
917 - A4070	A40	40	70			
917 - A40120		40	120			
917 - A50150	A50	51	150			
917 - A63160	A63	63	160			
917 - A63200		63	200			
917 - A63250-84		84	250			
917 - A80125-65	A80	65	125			
917 - A80250		82	250			
917 - A100250	A100	95	250			



Werkzeugaufnahmen HSK-E

Tool holders HSK-E
Mandrins HSK-E

Seite / Page / Page

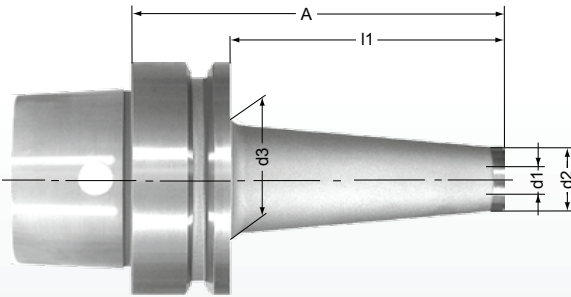
Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue filetée	78 - 83
Aufsteckfräsdorne Arbors for shell cutters Mandrins pour fraises à creuse	84 - 85
Zwischenhülsen morse taper adaptors Mandrin cône morse	86
Weldonfutter Weldon chucks Mandrin pour queues cylindriques Weldon	87
Spannzangenfutter collet chucks Mandrin à pinces	88 - 91
CNC-Bohrfutter CNC-drill chucks Mandrin de perçage CNC	92 - 93
Hydro-Dehnspannfutter expansion chucks Mandrins expansibles hydrauliques	94
Rohlinge Blanks Ébauche	95

Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Fräsaufnahme HSK-E32 für Einschraubfräser

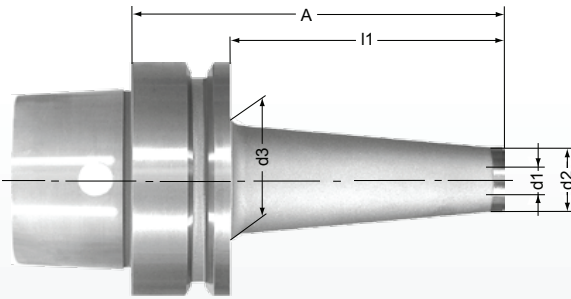
shank HSK-E32 for threaded type cutter
mandrin HSK-E32 pour fraises à queue fileté




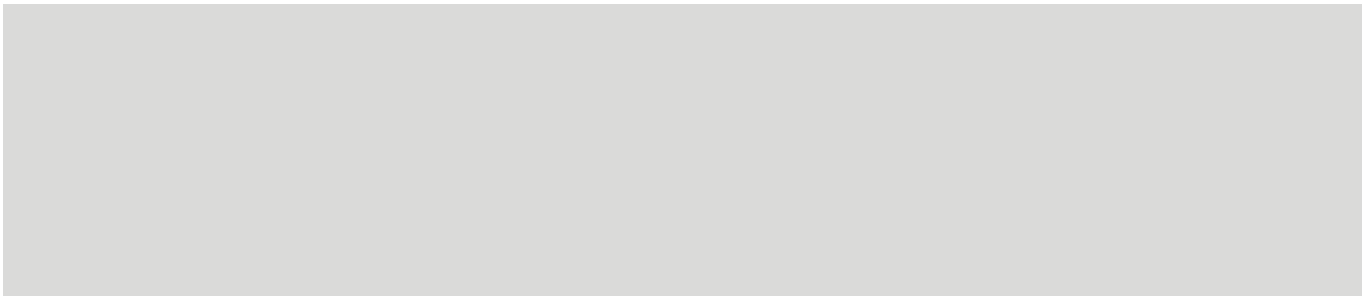
Bestell-Nr. order number No.	d1	d2	d3	A	l1	 G2,5/15.000 oder/or U<1gmm
920 - E320650	M6	10	22	70	50	
920 - E320825	M8	13,8	17	45	25	
920 - E320850	M8	13,8	24	70	50	
920 - E321025	M10	18	23	45	25	
920 - E321050	M10	18	25	70	50	
920 - E321225	M12	21	25	45	25	

Fräsaufnahme HSK-E40 für Einschraubfräser

shank HSK-E40 for threaded type cutter
mandrin HSK-E40 pour fraises à queue fileté

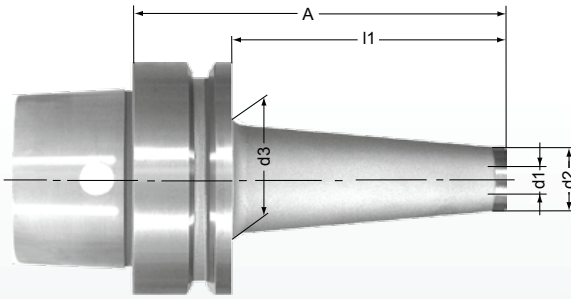



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - E400525	M5	10	18	45	25	G2,5/15.000 oder/or U<1gmm
920 - E400550	M5	10	22	70	50	
920 - E400575	M5	10	26	95	75	
920 - E400625	M6	10	18	45	25	
920 - E400650	M6	10	22	70	50	
920 - E400675	M6	10	26	95	75	
920 - E400825	M8	13,8	18	45	25	
920 - E400850	M8	13,8	23	70	50	
920 - E400875	M8	13,8	25	95	75	
920 - E4008100	M8	13,8	30	120	100	
920 - E401025	M10	18	23	45	25	
920 - E401050	M10	18	25	70	50	
920 - E401075	M10	18	30	95	75	
920 - E4010100	M10	18	34	120	100	
920 - E401225	M12	21	24	45	25	
920 - E401250	M12	21	30	70	50	
920 - E401275	M12	21	34	95	75	
920 - E401625	M16	29	34	45	25	



Fräsaufnahme HSK-E50 für Einschraubfräser

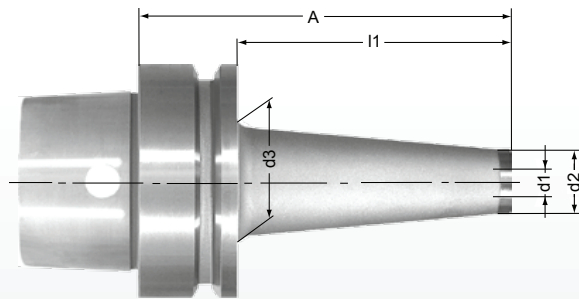
shank HSK-E50 for threaded type cutter
mandrin HSK-E50 pour fraises à queue fileté




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - E500625	M 6	10	22	51	25	G2,5/15.000 oder/or U<1gmm
920 - E500650	M 6	10	22	76	50	
920 - E500675	M 6	10	26	101	75	
920 - E500825	M 8	13,8	18	51	25	
920 - E500825ZY	M 8	13,8	13,8	51	25	
920 - E500850	M 8	13,8	23	76	50	
920 - E500850ZY	M 8	13,8	13,8	76	50	
920 - E500875	M 8	13,8	25	101	75	
920 - E5008100	M 8	13,8	30	126	100	
920 - E5008125	M 8	13,8	36	151	125	
920 - E501025	M 10	18	23	51	25	
920 - E501025ZY	M 10	18	18	51	25	
920 - E501050	M 10	18	25	76	50	
920 - E501050ZY	M 10	18	18	76	50	
920 - E501075	M 10	18	30	101	75	
920 - E5010100	M 10	18	35	126	100	
920 - E5010125	M 10	18	41	151	125	
920 - E501225	M 12	21	24	51	25	
920 - E501250	M 12	21	30	76	50	
920 - E501250ZY	M 12	23	23	76	50	
920 - E501275	M 12	21	35	101	75	
920 - E501275ZY	M 12	23	23	101	75	
920 - E5012100	M 12	21	38	126	100	
920 - E5012125	M 12	21	42	151	125	
920 - E501625	M 16	29	29	51	25	
920 - E501650	M 16	29	34	76	50	
920 - E501650ZY	M 16	29	29	76	50	
920 - E501675	M 16	29	35	101	75	
920 - E501675ZY	M 16	29	29	101	75	
920 - E5016100	M 16	29	40	126	100	
920 - E5016125	M 16	29	42	151	125	

Fräsaufnahme HSK-E63 für Einschraubfräser

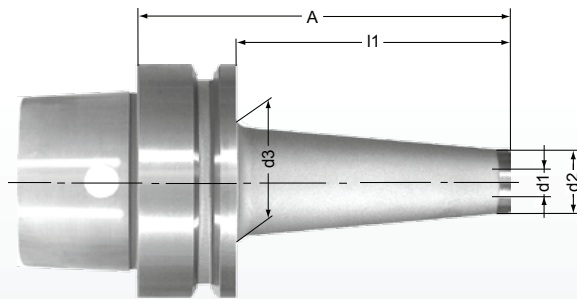
shank HSK-E63 for threaded type cutter
mandrin HSK-E63 pour fraises à queue fileté




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - E630625	M 6	10	22	51	25	G2,5/15.000
920 - E630650	M 6	10	22	76	50	
920 - E630825	M 8	13,8	18	51	25	
920 - E630825ZY	M 8	13,8	13,8	51	25	
920 - E630850	M 8	13,8	23	76	50	
920 - E630850ZY	M 8	13,8	13,8	76	50	
920 - E630875	M 8	13,8	25	101	75	
920 - E6308100	M 8	13,8	30	126	100	
920 - E6308125	M 8	13,8	32	151	125	
920 - E631025	M 10	18	23	51	25	
920 - E631025ZY	M 10	18	18	51	25	
920 - E631050	M 10	18	25	76	50	
920 - E631050ZY	M 10	25	25	76	50	
920 - E631075	M 10	18	30	101	75	
920 - E631075ZY	M 10	18	18	101	75	
920 - E6310100	M 10	18	35	126	100	
920 - E6310125	M 10	18	40	151	125	
920 - E6310150	M 10	18	44	176	150	
920 - E631225	M 12	21	24	51	25	
920 - E631250	M 12	21	30	76	50	
920 - E631250ZY	M 12	23	23	76	50	
920 - E631275	M 12	21	35	101	75	
920 - E631275ZY	M 12	23	23	101	75	
920 - E6312100	M 12	21	38	126	100	
920 - E6312100ZY	M 12	23	23	126	100	
920 - E6312125	M 12	21	43	151	125	
920 - E6312150	M 12	21	45	176	150	
920 - E6312175	M 12	21	46	201	175	
920 - E6312200	M 12	21	46	226	200	

Fräsaufnahme HSK-E63 für Einschraubfräser

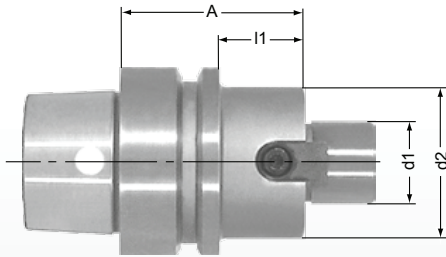
shank HSK-E63 for threaded type cutter
mandrin HSK-E63 pour fraises à queue fileté



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - E631625	M 16	29	29	51	25	G2,5/15.000
920 - E631650	M 16	29	34	76	50	
920 - E631650ZY	M 16	29	29	76	50	
920 - E631675	M 16	29	35	101	75	
920 - E631675ZY	M 16	29	29	101	75	
920 - E6316100	M 16	29	40	126	100	
920 - E6316100ZY	M 16	29	29	126	100	
920 - E6316125	M 16	29	44	151	125	
920 - E6316150	M 16	29	47	176	150	
920 - E6316175	M 16	29	52	201	175	
920 - E6316200	M 16	29	52	226	200	

Aufsteckfräsdorne HSK-E40 - 63

arbors HSK-E40 - 63 for shell cutter
mandrin HSK-E40 - 63 pour fraises à creuse







Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen

delivery: with drive keys and retaining screw

entendue de livraison: avec vis de blocage des fraises et entraineur

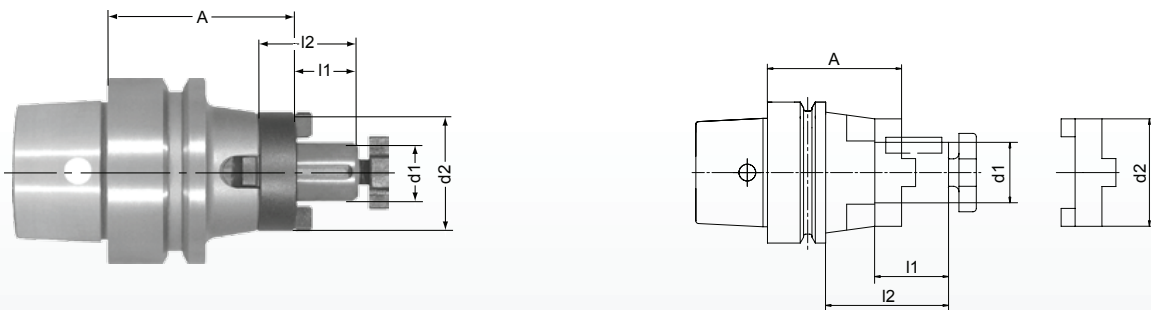


Bestell-Nr. order number No.	HSK	d1	d2	l1	A				
901 - E4016	E40	16	35	15	35	x	959-16	957-M8	
901 - E5016	E50	16	35	20	46	x	959-16	957-M8	G6,3/8.000
901 - E5022		22	40	22	48	x	959-22	957-M10	
901 - E502250		22	40	22	76	x	959-22	957-M10	
901 - E5022100		22	40	22	126	x	959-22	957-M10	
901 - E5022150		22	40	22	176	x	959-22	957-M10	
901 - E6316	E63	16	35	20	46	x	959-16	957-M8	
901 - E631625		16	35	25	51	x	959-16	957-M8	
901 - E632250		22	40	50	76	x	959-22	957-M10	
901 - E632275		22	40	75	101	x	959-22	957-M10	
901 - E6322100		22	40	100	126	x	959-22	957-M10	
901 - E632725		27	48	25	61	x	959-27	957-M12	

Kombi - Aufsteckfräserdorne HSK-E50

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

mandrin combi pour fraises à entraînement par clavette ou tenon, HSK-E50



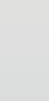




Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen

delivery: with drive keys and retaining screw

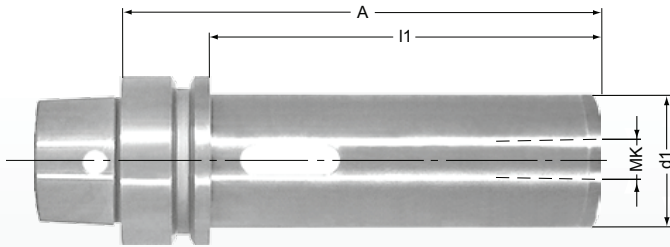
entendue de livraison: avec vis de blocage des fraises et entraineur




Bestell-Nr. order number No.	d1	d2	I1	I2	A					
902 - E5016	16	32	17	27	50	955-16	956-16	957-16	958-16	G6,3/8.000
902 - E5022	22	40	19	31	50	955-22	956-22	957-22	958-22	
902 - E5027	27	48	21	33	65	955-27	956-27	957-27	958-27	

Zwischenhülsen, HSK-E50

morse taper adaptor, HSK-E50
mandrin cône morses, HSK-E50

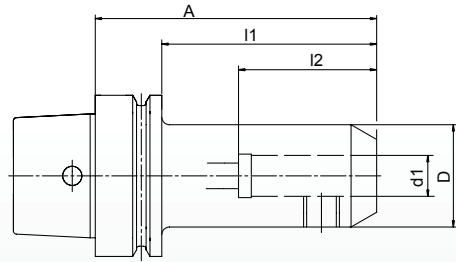
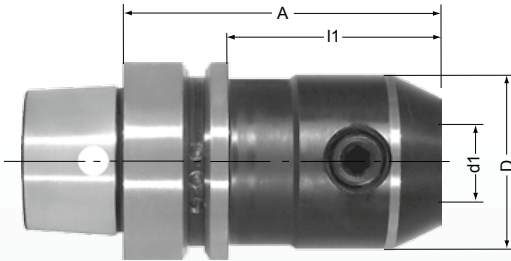


Bestell-Nr. order number No.	MK	d1	l1	A		
906 - E50MK2	2	32	94	120		G6,3/8.000
906 - E50MK3	3	40	114	140		

Weldonfutter HSK-E40 - 63

weldon chuck HSK-E40 - 63

mandrin pour queues cylindriques Weldon HSK-E40 - 63





Lieferumfang: HSK-Aufnahme mit Spannschraube

delivery: weldon chuck with tightening screw

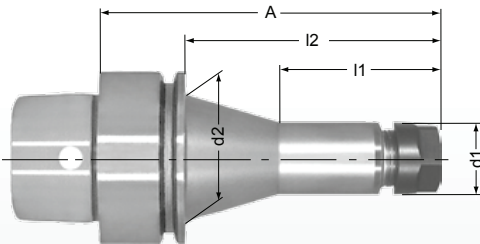
entendue de livraison: mandrin avec vis de serrage



Bestell-Nr. order number No.	HSK	d1	D	l1	l2	A		
903 - E4006	E40	6	25	40	38	60	949-M6	G6,3/15.000
903 - E4008		8	28	40	38	60	949-M8	
903 - E4010		10	35	40	42	60	949-M10	
903 - E4012		12	42	50	47	70	949-M12	
903 - E4014		14	44	55	47	75	949-M12	
903 - E4016		16	48	55	50	75	949-M14	
903 - E5006	E50	6	25	39	38	65	949-M6	
903 - E5008		8	28	39	38	65	949-M8	
903 - E5010		10	35	39	42	65	949-M10	
903 - E5012		12	42	54	47	80	949-M12	
903 - E5014		14	44	54	47	80	949-M12	
903 - E5016		16	48	54	50	80	949-M14	
903 - E5018		18	50	54	50	80	949-M14	
903 - E5020		20	52	54	52	80	949-M16	
903 - E5025		25	65	84	58	110	949-M18X2	
903 - E6306	E63	6	25	39	38	65	949-M6	
903 - E6308		8	28	39	38	65	949-M8	
903 - E6310		10	35	39	42	65	949-M10	
903 - E6312		12	42	54	47	80	949-M12	
903 - E6314		14	44	54	47	80	949-M12	
903 - E6316		16	48	54	50	80	949-M14	
903 - E6318		18	50	54	50	80	949-M14	
903 - E6320		20	52	54	52	80	949-M16	





Spannzangenfutter HSK-E40, 50 für Spannzangen ER 16 mit Spannmutter UM

collet chucks HSK-E40, 50 for collets ER 16 with nut UM
mandrin à pinces HSK-E40, 50 pour pinces type ER 16



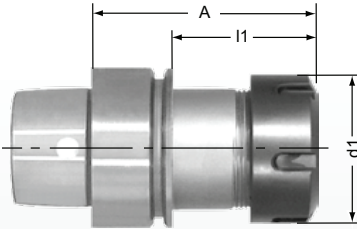
Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM
entendue de livraison: attachement avec ecrou UM



Bestell-Nr. order number No.	HSK	d1	d2	l1	l2	A				
910 - E4050	E40	28	32	45	50	70	953-UM16	-	954-034	G6,3/15.000
910 - E40100		28	32	65	100	120	953-UM16	948-M10	954-034	
910 - E5050	E50	28	42	43	50	76	953-UM16	948-M10	954-034	
910 - E50100		28	42	65	100	126	953-UM16	948-M10	954-034	
910 - E50160		28	42	65	160	186	953-UM16	948-M10	954-034	





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

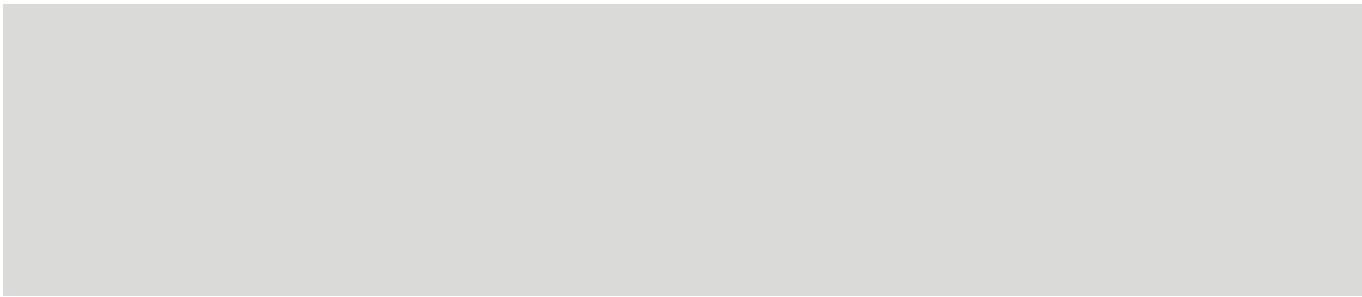
collet chucks HSK-E40 - 63 for collets ER 25/32/40 with nut UM
mandrin à pinces HSK-E40 - 63 pour pinces type ER 25/32/40



Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM
entendue de livraison: attachement avec ecrou UM

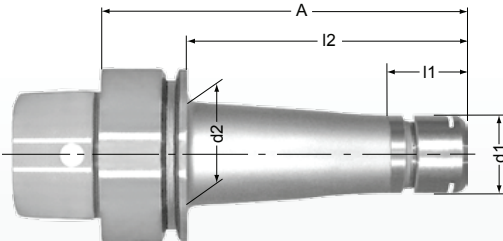


Bestell-Nr. order number No.	HSK	ER	d1	l1	A				
912 - E4050	E40	25	42	50	70	953-UM25	948-M12	954-013ER25	G6,3/15.000
912 - E5050	E50	25	42	50	76	953-UM25	948-M12	954-013ER25	
913 - E5050		32	50	50	76	953-UM32	-	954-014ER32	
913 - E6350	E63	32	50	50	76	953-UM32	-	954-014ER32	
913 - E6375		32	50	75	101	953-UM32	948-M16	954-014ER32	
914 - E6390		40	63	90	116	953-UM40	-	954-013ER40	






Spannzangenfutter HSK-E25 - 63 für Spannzangen ER 11/16/20 mit Spannmutter MS

collet chucks HSK-E25 - 63 for collets ER 11/16/20 with nut MS
mandrin à pinces HSK-E25 - 63 pour pinces type ER 11/16/20



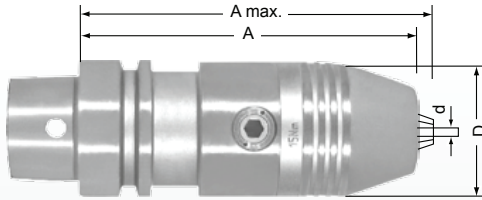
Lieferumfang: HSK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS
entendue de livraison: attachement avec ecrou MS




Bestell-Nr. order number No.	HSK	ER	d1	d2	l1	l2	A			
918 - E2525	E25	11	16	16	-	25	35	953-MS11	954-11	G2,5/15.000 oder/or U<1gmm
918 - E2560		11	16	20	21	60	70	953-MS11	954-11	
919 - E2525		16	22	22	-	25	35	953-MS16	954-16	
919 - E3230	E32	16	22	22	-	30	50	953-MS16	954-16	
919 - E3270		16	22	26	28	70	90	953-MS16	954-16	
989 - E4030	E40	8	13	13	-	30	50	953-MS8	954-8	
918 - E4030		11	16	20	20	30	50	953-MS11	954-11	
918 - E4080		11	16	20	20	80	100	953-MS11	954-11	
919 - E4030		16	22	22	-	30	50	953-MS16	954-16	
919 - E4050		16	22	29	28	50	70	953-MS16	954-16	
919 - E4080		16	22	29	28	80	100	953-MS16	954-16	
911 - E4030		20	28	28	-	30	50	953-MS20	954-063E20	
911 - E4040		20	28	30	30	40	60	953-MS20	954-063E20	
911 - E4050		20	28	32	30	50	70	953-MS20	954-063E20	
911 - E4070		20	28	34	30	70	90	953-MS20	954-063E20	
919 - E5080	E50	16	22	29	28	80	100	953-MS16	954-16	
911 - E5040		20	28	34	30	40	66	953-MS20	954-063E20	
911 - E5050		20	28	34	30	50	76	953-MS20	954-063E20	
911 - E5080		20	28	37	30	80	106	953-MS20	954-063E20	
911 - E6350	E63	20	28	37	30	50	76	953-MS20	954-063E20	
911 - E63100		20	28	50	30	100	126	953-MS20	954-063E20	
911 - E63150		20	28	53	30	150	176	953-MS20	954-063E20	

CNC- Bohrfutter HSK-E40 - 63 für Rechts- und Linkslauf

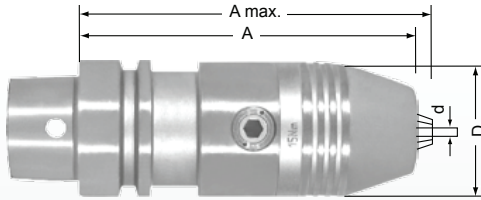
CNC- drill chucks HSK-E40 - 63 for clockwise and anti clockwise rotation
mandrin de perçage CNC HSK-E40 - 63 pour rotation gauche-droite




Bestell-Nr. order number No.	HSK	d	D	A	A max.	
907 - E4008IK	E40	0,5-8	36	91	94	G6,3/8.000
907 - E5008IK	E50	0,5-8	36	95	98	
907 - E5013IK		1-13	50	116	122	
907 - E5016IK		3-16	57	116	127	
907 - E6308IK		E63	0,5-8	36	96	
907 - E6313IK	1-13		50	104	110	
907 - E6316IK	3-16		57	104	115	

CNC- Bohrfutter HSK-E40 - 63 für Rechts- und Linkslauf

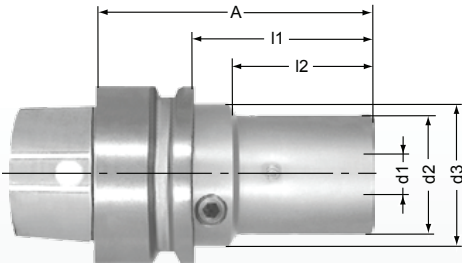
CNC- drill chucks HSK-E40 - 63 for clockwise and anti clockwise rotation
mandrin de perçage CNC HSK-E40 - 63 pour rotation gauche-droite




Bestell-Nr. order number No.	HSK	d	D	A	A max.	
907 - E4008	E40	0,5-8	36	91	94	G6,3/8.000
907 - E5008	E50	0,5-8	36	95	98	
907 - E5013		1-13	50	116	122	
907 - E5016		3-16	57	116	127	
907 - E6308	E63	0,5-8	36	96	99	
907 - E6313		1-13	50	104	110	
907 - E6316		3-16	57	104	115	

Hydro - Dehnspannfutter HSK-E40, 50

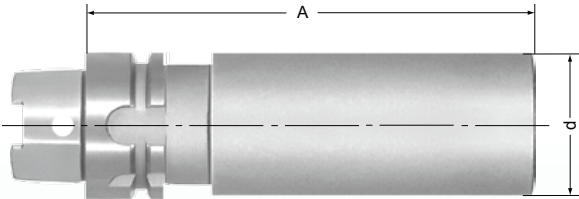
hydraulic expansion chuck HSK-E40, 50
mandrins expansibles hydrauliques HSK-E40, 50



Bestell-Nr. order number No.	HSK	d1	d2	d3	l1	l2	A	
916 - E4006	E40	6	26	34	60	60	80	G6,3/15.000 oder/or U<1gmm
916 - E4008		8	28	34	60	60	80	
916 - E4010		10	30	34	65	65	85	
916 - E4012		12	32	34	70	47	90	
916 - E4014		14	34	34	70	47	90	
916 - E4016		16	38	34	80	65	100	
916 - E5006	E50	6	26	40	54	35	80	
916 - E5008		8	28	40	54	36	80	
916 - E5010		10	30	40	59	41	85	
916 - E5012		12	32	40	64	47	90	
916 - E5014		14	34	40	64	46	90	
916 - E5016		16	38	40	69	52	95	
916 - E5018		18	40	40	69	58	95	
916 - E5020		20	42	40	74	74	100	

Rohlinge HSK-E50, 63

blanks HSK-E50, 63
ébauche HSK-E50, 63



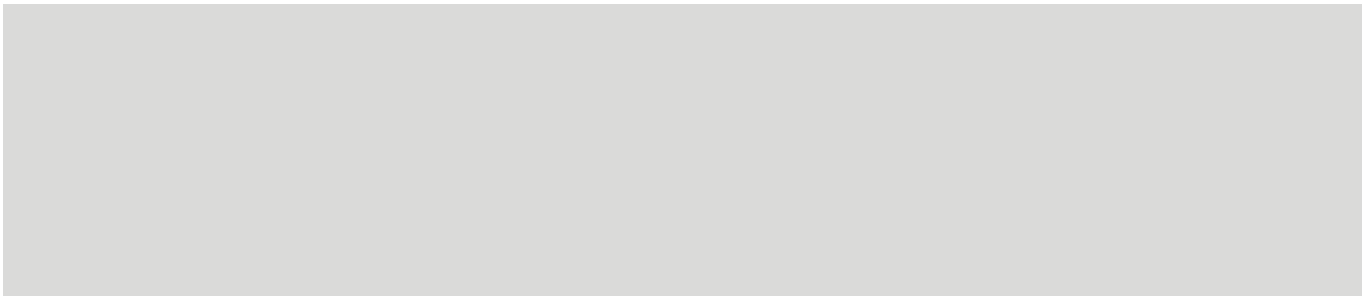
Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.

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

Execution: Cône d'outil et collerette trempés et rectifiés.
Application: Pour la fabrication d'outils spéciaux.



Bestell-Nr. order number No.	HSK	d	A			
917 - E50150	E50	50	150			
917 - E63200	E63	64	200			



Werkzeugaufnahmen HSK-F

Tool holders HSK-F
Mandrins HSK-F

Seite / Page / Page

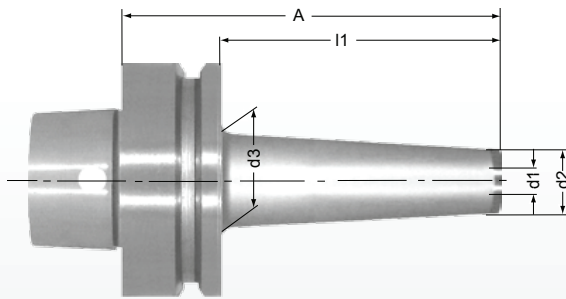
Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue fileté	98 - 99
Aufsteckfräsdorne Arbors for shell cutters Mandrins pour fraises à creuse	100
Zwischenhülsen morse taper adaptors Mandrin cône morse	101
Weldonfutter Weldon chucks Mandrin pour queues cylindriques Weldon	102
Spannzangenfutter collet chucks Mandrin à pinces	103 - 104
CNC-Bohrfutter CNC-drill chucks Mandrin de perçage CNC	105

Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Fräsaufnahme, HSK-F63 für Einschraubfräser

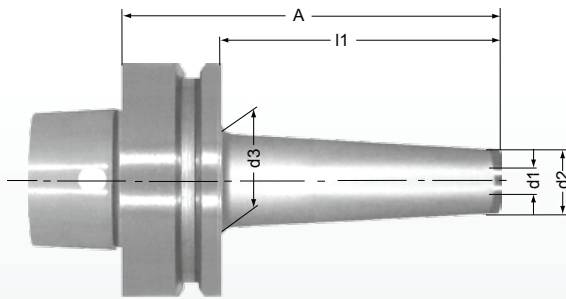
shank HSK-F63 for threaded type cutter
mandrin HSK-F63 pour fraises à queue filetée



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - F630825	M8	13,8	16	51	25	G2,5/15.000
920 - F630850	M8	13,8	19	76	50	
920 - F630875	M8	13,8	22	101	75	
920 - F6308100	M8	13,8	24	126	100	
920 - F631025	M10	18	20	51	25	
920 - F631050	M10	18	23	76	50	
920 - F631075	M10	18	26	101	75	
920 - F6310100	M10	18	28	126	100	
920 - F6310125	M10	18	31	151	125	
920 - F6310150	M10	18	34	176	150	
920 - F6310200	M10	18	50	226	200	
920 - F631225	M12	21	23	51	25	
920 - F631250	M12	21	26	76	50	
920 - F631275	M12	21	29	101	75	
920 - F6312100	M12	21	31	126	100	
920 - F6312125	M12	21	34	151	125	
920 - F6312150	M12	21	37	176	150	
920 - F6312200	M12	21	46	226	200	
920 - F6312200ZY	M12	23	23	226	200	
920 - F631625	M16	29	31	51	25	
920 - F631650	M16	29	34	76	50	
920 - F631675	M16	29	37	101	75	
920 - F631675ZY	M16	29	29	101	75	
920 - F6316100	M16	29	39	126	100	
920 - F6316100ZY	M16	29	29	126	100	
920 - F6316125	M16	29	42	151	125	
920 - F6316150	M16	29	45	176	150	
920 - F6316150ZY	M16	29	29	176	150	
920 - F6316175	M16	29	48	201	175	
920 - F6316200	M16	29	50	226	200	
920 - F6316200ZY	M16	29	29	226	200	

Fräsaufnahme, HSK-F63 für Einschraubfräser mit Gewinde für Kühlmittelübergaberohr

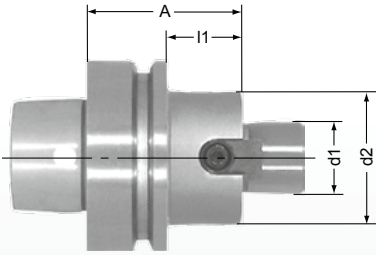
shank HSK-F63 for threaded type cutter with thread for coolant tube
mandrin HSK-F63 pour fraises à queue filetée avec filet pour raccord d'arrosage



Bestell-Nr. order number No.	d1	d2	d3	A	l1		
920 - F63K0850	M8	13,8	19	76	50		G2,5/15.000
920 - F63K1050	M10	18	23	76	50		
920 - F63K1075	M10	18	26	101	75		
920 - F63K10100	M10	18	28	126	100		
920 - F63K1250	M12	21	26	76	50		
920 - F63K1275	M12	21	29	101	75		
920 - F63K12100	M12	21	31	126	100		
920 - F63K1650	M16	29	34	76	50		
920 - F63K1675	M16	29	37	101	75		
920 - F63K16100	M16	29	39	126	100		





Aufsteckfräsdorne HSK-F63

arbors HSK-F63 for shell cutter
mandrin HSK-F63 pour fraises à creuse



Lieferumfang: HSK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur

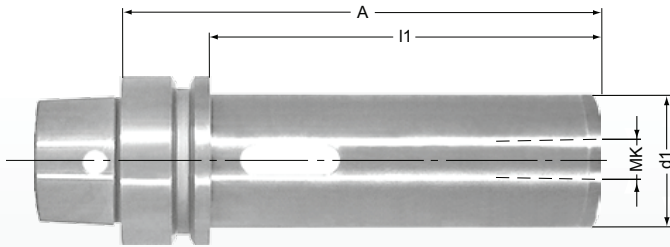



Bestell-Nr. order number No.	d1	d2	d3	l1	A				
901 - F6316	16	35	-	20	46	x	959-16	957-M8	
901 - F631650	16	35	42	50	76	x	959-16	957-M8	
901 - F6316100	16	35	48	100	126	x	959-16	957-M8	
901 - F632250	22	40	40	50	76	x	959-22	957-M10	
901 - F632275	22	40	40	75	101	x	959-22	957-M10	
901 - F6322100	22	40	50	100	126	x	959-22	957-M10	
901 - F6322150	22	40	53	150	176	x	959-22	957-M10	
901 - F6322200	22	40	53	200	226	x	959-22	957-M10	
901 - F632725	27	48	48	25	51	x	959-27	957-M12	
901 - F632750	27	48	53	50	76	x	959-27	957-M12	
901 - F632775	27	48	53	75	101	x	959-27	957-M12	
901 - F6327100	27	48	53	100	126	x	959-27	957-M12	
901 - F6327150	27	48	53	150	176	x	959-27	957-M12	

G6,3/8.000

Zwischenhülsen HSK-F63

morse taper adaptor HSK-F63
mandrin cône morses HSK-F63

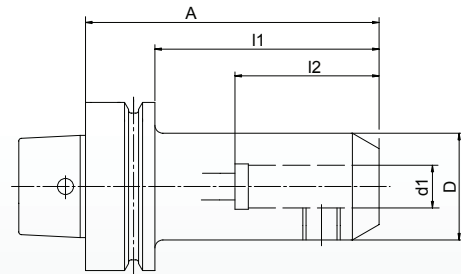
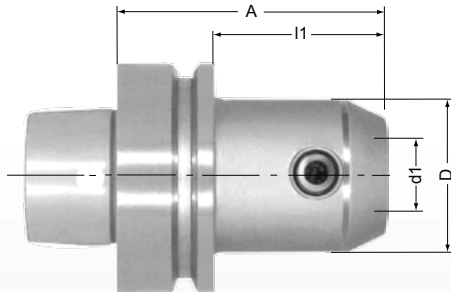


Bestell-Nr. order number No.	MK	d1	l1	A		
906 - F63MK1	1	25	74	100		
906 - F63MK2	2	32	94	120		G6,3/8.000
906 - F63MK3	3	40	114	140		

Weldonfutter HSK-F63

weldon chuck HSK-F63

mandrin pour queues cylindriques Weldon HSK-F63





Lieferumfang: HSK-Aufnahme mit Spannschraube

delivery: weldon chuck with tightening screw

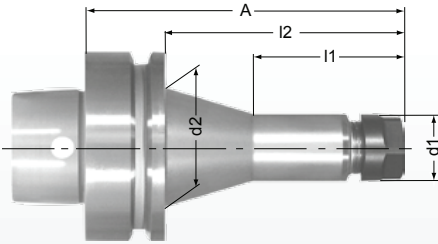
entendue de livraison: mandrin avec vis de serrage



Bestell-Nr. order number No.	d1	D	l1	l2	A		
903 - F6306	6	25	39	38	65	949-M6	G6,3/15.000
903 - F6308	8	28	39	38	65	949-M8	
903 - F6310	10	35	39	42	65	949-M10	
903 - F6312	12	42	54	47	80	949-M12	
903 - F6314	14	44	54	47	80	949-M12	
903 - F6316	16	48	54	50	80	949-M14	
903 - F6318	18	50	54	50	80	949-M14	
903 - F6320	20	52	54	52	80	949-M16	
903 - F6325	25	65	84	60	110	949-M18X2	
903 - F6332	32	72	84	64	110	949-M20X2	

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
mandrin à pinces HSK-F63 pour pinces type ER 16/25/32/40

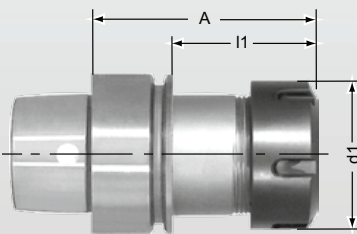


Lieferumfang: HSK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM

entendue de livraison: attachement avec ecrou UM







Bestell-Nr. order number No.	ER	d1	d2	l1	l2	A				
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

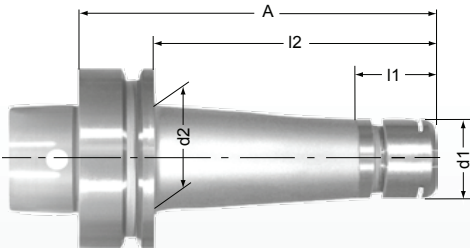
entendue de livraison: attachement avec ecrou UM



Bestell-Nr. order number No.	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	
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	




Spannzangenfutter HSK-F63 für Spannzangen ER 11/20 mit Spannmutter MS

collet chucks HSK-F63 for collets ER 11/20 with nut MS
mandrin à pinces HSK-F63 pour pinces type ER 11/20



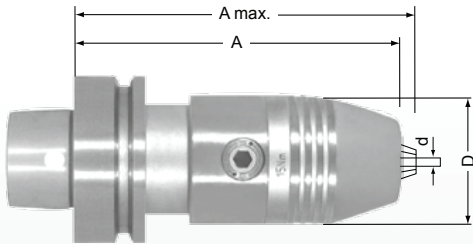
Lieferumfang: HSK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS
entendue de livraison: attachement avec ecrou MS



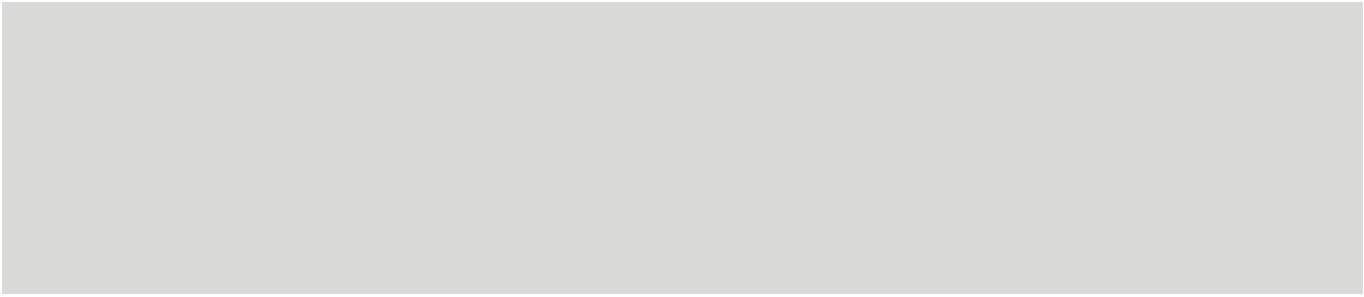
Bestell-Nr. order number No.	ER	d1	d2	l1	l2	A			
918 - F63100	11	16	33	20	100	126	953-MS11	954-11	G2,5/15.000
918 - F63200	11	16	32	20	200	226	953-MS11	954-11	
911 - F6350	20	28	37	30	50	76	953-MS20	954-063E20	
911 - F63100	20	28	50	30	100	126	953-MS20	954-063E20	
911 - F63150	20	28	53	30	150	176	953-MS20	954-063E20	
911 - F63200	20	28	53	30	200	226	953-MS20	954-063E20	

CNC- Bohrfutter HSK-F63 für Rechts- und Linkslauf

CNC- drill chucks HSK-F63 for clockwise and anti clockwise rotation
mandrin de perçage CNC HSK-F63 pour rotation gauche-droite



Bestell-Nr. order number No.	d	D	A	A max.		
907 - F6313	1-13	50	97	103		G6,3/8.000
907 - F6316	3-16	57	97	108		



Werkzeugaufnahmen PSC

Tool holders PSC
Mandrins PSC

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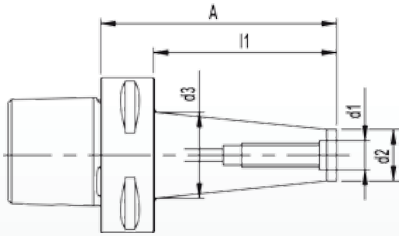
Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue fileté	108
Aufsteckfräsdorne Arbors for shell cutters Mandrins pour fraises à creuse	109
Weldonfutter Weldon chucks Mandrin pour queues cylindriques Weldon	110
Spannzangenfutter collet chucks Mandrin à pinces	111

Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Fräsaufnahme PSC-63 für Einschraubfräser

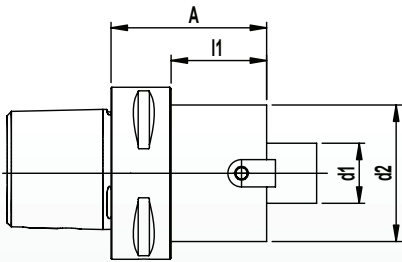
mandrini PSC-63 per frese con attacco filettato
shank PSC-63 for threadet type cutter



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920-PSC631050	M10	18	25	72	50	G2,5/15.000
920-PSC631050zy	M10	18	18	72	50	
920-PSC631075	M10	18	30	97	75	
920-PSC631075zy	M10	18	18	97	75	
920-PSC6310100	M10	18	35	122	100	
920-PSC631250	M12	21	30	72	50	
920-PSC631250zy	M12	23	23	72	50	
920-PSC631275	M12	21	35	97	75	
920-PSC631275zy	M12	23	23	97	75	
920-PSC6312100	M12	21	38	122	100	
920-PSC631650	M16	29	34	72	50	
920-PSC631650zy	M16	29	29	72	50	
920-PSC631675	M16	29	35	97	75	
920-PSC631675zy	M16	29	29	97	75	
920-PSC6316100	M16	29	40	122	100	

Aufsteckfräsdorne PSC-63

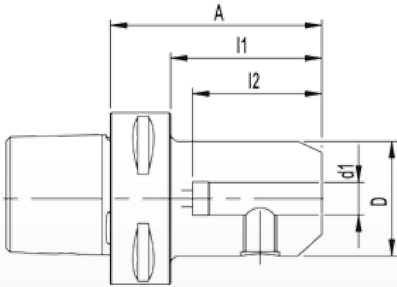
mandrini per frese con attacco a manicotto PSC-63
arbors for shell cutter PSC-63





Bestell-Nr. order number No.	d1	d2	l1	A						
922-PSC6316A50	16	40	28	50			-	957-M8	-	
922-PSC6322A50	22	50	28	50			-	957-M10	-	
922-PSC6322A100	22	50	78	100			-	957-M10	-	
922-PSC6327A50	27	60	28	50			-	957-M12	-	G6,3/8.000
922-PSC6327A100	27	60	78	100			-	957-M12	-	
922-PSC6332A60	32	63	38	60			957-32	-	958-32	

Weldonfutter PSC-63

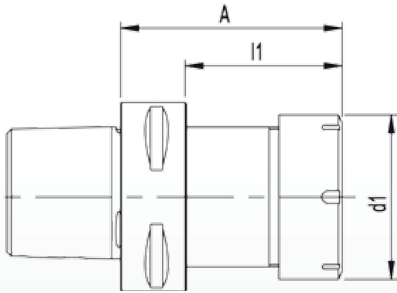
mandrini PSC-63 per frese con attacco Weldon
weldon chuck PSC-63



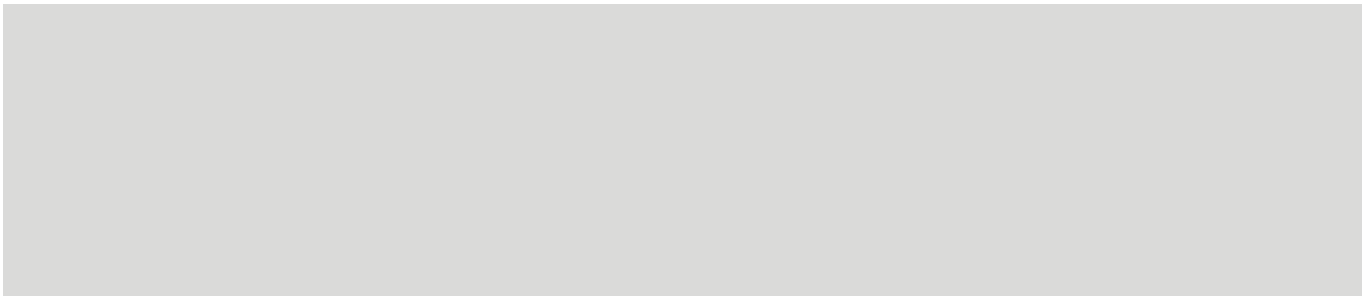
Bestell-Nr. Codice Order number	d1	D	A	l1			
903-PSC6306A75	6	25	75	53		949-M6	G6,3/8.000
903-PSC6306A120	6	25	120	98		949-M6	
903-PSC6308A80	8	28	80	58		949-M8	
903-PSC6308A120	8	28	120	98		949-M8	
903-PSC6310A80	10	35	80	58		949-M10	
903-PSC6310A120	10	35	120	98		949-M10	
903-PSC6312A80	12	42	80	58		949-M12	
903-PSC6312A120	12	42	120	98		949-M12	
903-PSC6314A80	14	44	80	58		949-M12	
903-PSC6316A80	16	48	80	58		949-M14	
903-PSC6316A120	16	48	120	98		949-M14	
903-PSC6318A80	18	50	80	58		949-M14	
903-PSC6320A85	20	52	85	63		949-M16	
903-PSC6320A120	20	52	120	98		949-M16	
903-PSC6325A90	25	65	90	68		949-M18x2	
903-PSC6332A90	32	72	90	68		949-M20x2	
903-PSC6340A100	40	80	100	78		949-M20x2	

ER-Spannzangenfutter PSC-63

mandrini PSC-63 per pinze tipo ER
collet chucks for collets ER PSC-63



Bestell-Nr. Codice Order number	d1	A	l1				
910-PSC63A70	28	70	48	953-UM16	-	954-013ER16	G6,3/8.000
910-PSC63A100	28	100	78	953-UM16	948-M10	954-013ER16	
912-PSC63A70	42	70	48	953-UM25	-	954-013ER25	
912-PSC63A110	42	110	88	953-UM25	948-M12	954-013ER25	
913-PSC63A70	50	70	48	953-UM32	-	954-013ER32	
913-PSC63A110	50	110	88	953-UM32	948-M16	954-013ER32	
914-PSC63A80	63	80	58	953-UM40	-	954-013ER40	



Werkzeugaufnahmen SK

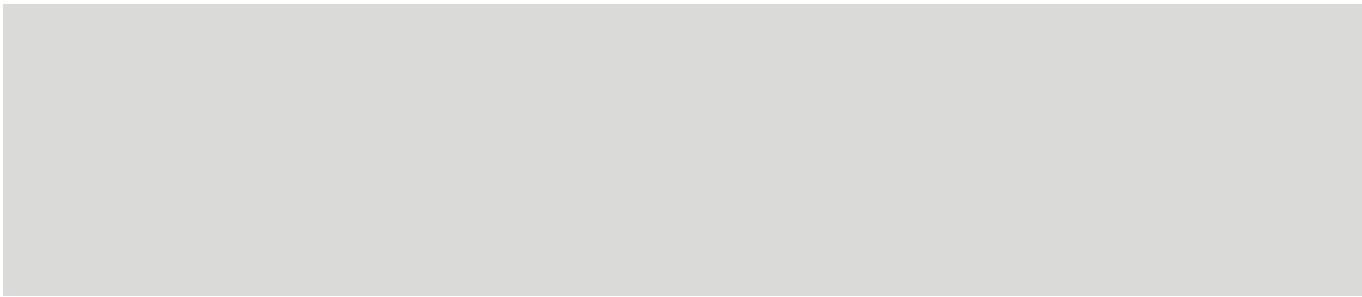
Tool holders SK
Mandrins conique SK

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Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue filetée	115 - 123
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Fräserhülsen / Zwischenhülsen morse taper adaptors Mandrin cône morse	128 - 129
Weldonfutter Weldon chucks Mandrin pour queues cylindriques Weldon	131
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CNC-Bohrfutter CNC-drill chucks Mandrin de perçage CNC	134 - 135
Plananlagen für Einschraub- und Aufsteckfräser Arbors with face contact for screw in type cutters and shell cutters Cône - avec surface d'appui pour fraises à creuse	136 - 137
Rohlinge Blanks Ébauche	139

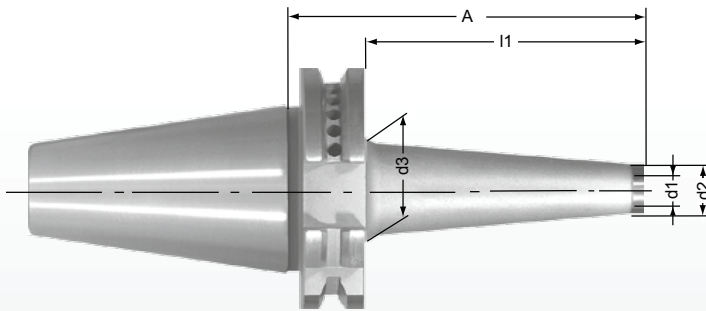
Andere Ausführungen und Längen auf Anfrage lieferbar.


**Specials on request.
Execution special sur demand.**



Fräsaufnahmen SK30 für Einschraubfräser

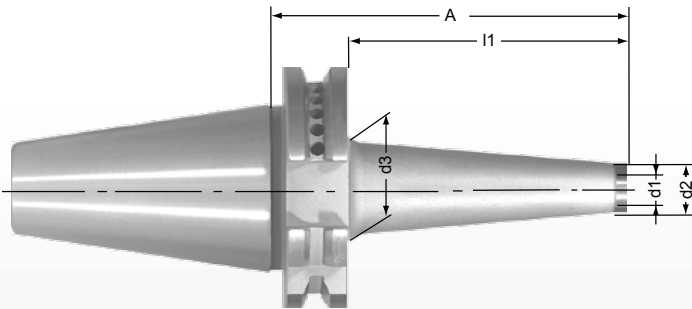
shank SK30 for threaded type cutter
mandrin SK30 pour fraises à queue filetée





Bestell-Nr. order number No.	d1	d2	d3	A	l1	
962 - SK300625	M6	10	17	44,1	25	G6,3/10.000
962 - SK300650	M6	10	20	69,1	50	
962 - SK300825	M8	14	18	44,1	25	
962 - SK300850	M8	14	23	69,1	50	
962 - SK301025	M10	18	23	44,1	25	
962 - SK301050	M10	18	27	69,1	50	
962 - SK301225	M12	21	25	44,1	25	
962 - SK301250	M12	21	31	69,1	50	
962 - SK301625	M16	29	29	44,1	25	
962 - SK301650	M16	29	34	69,1	50	

Fräsaufnahmen SK40 für Einschraubfräser

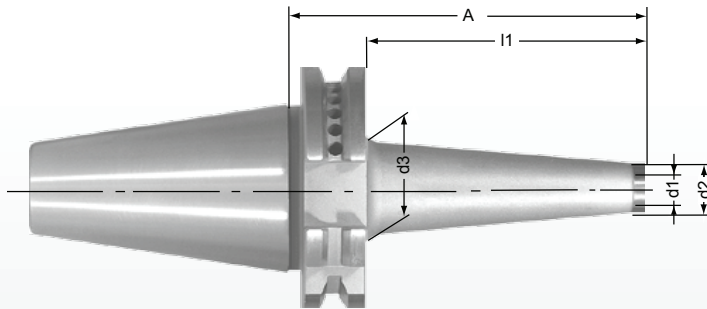
shank SK40 for threaded type cutter
mandrin SK40 pour fraises à queue fileté




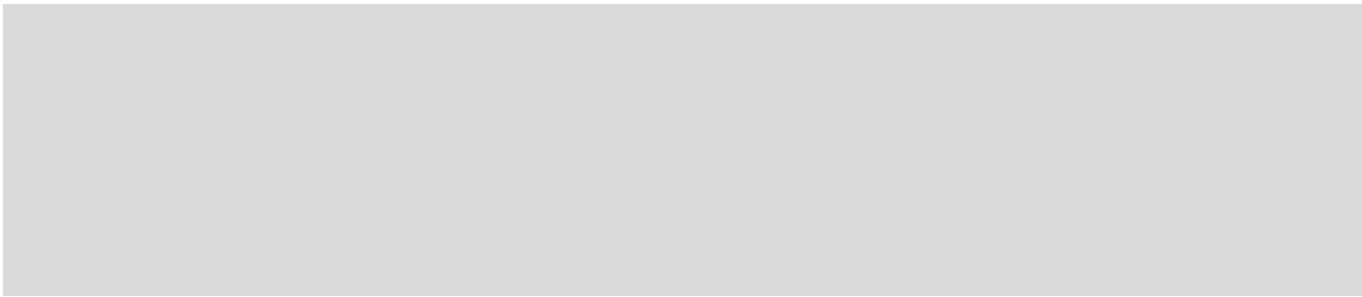
Bestell-Nr. order number No.	d1	d2	d3	A	l1		
962 - 0625	M6	10	17	44,1	25		
962 - 0625ZY	M6	10	10	44,1	25		
962 - 0650	M6	10	23	69,1	50		
962 - 0675	M6	10	25	94,1	75		
962 - 0825	M8	13,8	18	44,1	25		
962 - 0825ZY	M8	13,8	13,8	44,1	25		
962 - 0850	M8	13,8	23	69,1	50		
962 - 0850ZY	M8	13,8	13,8	69,1	50		
962 - 0875	M8	13,8	25	94,1	75		
962 - 0875ZY	M8	13,8	13,8	94,1	75		
962 - 08100	M8	13,8	30	119,1	100		
962 - 08125	M8	13,8	34	144,1	125		
962 - 1025K	M10	15,4	18	44,1	25		G6,3/10.000
962 - 1050K	M10	15,4	21	69,1	50		
962 - 1025	M10	18	23	44,1	25		
962 - 1025ZY	M10	18	18	44,1	25		
962 - 1050	M10	18	25	69,1	50		
962 - 1050ZY	M10	18	18	69,1	50		
962 - 1075	M10	18	30	94,1	75		
962 - 1075ZY	M10	18	18	94,1	75		
962 - 10100	M10	18	35	119,1	100		
962 - 10100ZY	M10	18	18	119,1	100		
962 - 10125	M10	18	40	144,1	125		
962 - 10150	M10	18	45	169,1	150		

Fräsaufnahmen SK40 für Einschraubfräser

shank SK40 for threaded type cutter
mandrin SK40 pour fraises à queue fileté



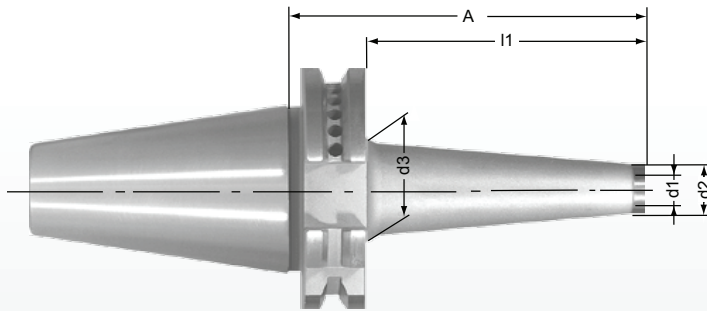
Bestell-Nr. order number No.	d1	d2	d3	A	l1	
962 - 1225	M12	21	24	44,1	25	G6,3/10.000
962 - 1250	M12	21	30	69,1	50	
962 - 1250ZY	M12	22	22	69,1	50	
962 - 1275	M12	21	35	94,1	75	
962 - 1275ZY	M12	22	22	94,1	75	
962 - 12100	M12	21	38	119,1	100	
962 - 12100ZY	M12	22	22	119,1	100	
962 - 12125	M12	21	43	144,1	125	
962 - 12150	M12	21	45	169,1	150	
962 - 12175	M12	21	50	194,1	175	
962 - 12200	M12	21	50	219,1	200	
962 - 1625	M16	29	29	44,1	25	
962 - 1650	M16	29	34	69,1	50	
962 - 1650-37	M16	37	43	69,1	50	
962 - 1650ZY	M16	29	29	69,1	50	
962 - 1675	M16	29	35	94,1	75	
962 - 1675-37	M16	37	46	94,1	75	
962 - 1675ZY	M16	29	29	94,1	75	
962 - 16100	M16	29	40	119,1	100	
962 - 16100-37	M16	37	49	119,1	100	
962 - 16100ZY	M16	29	29	119,1	100	
962 - 16125	M16	29	44	144,1	125	
962 - 16150	M16	29	45	169,1	150	
962 - 16150ZY	M16	29	29	169,1	150	
962 - 16175	M16	29	50	194,1	175	
962 - 16200	M16	29	50	219,1	200	
962 - 16200ZY	M16	29	29	219,1	200	
962 - 16225	M16	29	50	244,1	225	
962 - 16250	M16	29	50	269,1	250	




Fräsaufnahmen SK40 für Einschraubfräser

shank SK40 for threaded type cutter
mandrin SK40 pour fraises à queue filetée

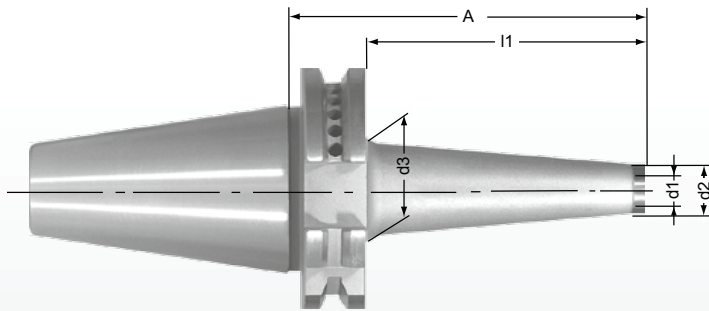
Form AD/B




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
920 - SK400825	M8	13,8	18	44,1	25	G6,3/10.000
920 - SK400825ZY	M8	13,8	13,8	44,1	25	
920 - SK400850	M8	13,8	23	69,1	50	
920 - SK400850ZY	M8	13,8	13,8	69,1	50	
920 - SK400875	M8	13,8	25	94,1	75	
920 - SK400875ZY	M8	13,8	13,8	94,1	75	
920 - SK4008100	M8	13,8	30	119,1	100	
920 - SK4008125	M8	13,8	34	144,1	125	
920 - SK401025	M10	18	23	44,1	25	
920 - SK401025ZY	M10	18	18	44,1	25	
920 - SK401050	M10	18	25	69,1	50	
920 - SK401050ZY	M10	18	18	69,1	50	
920 - SK401075	M10	18	30	94,1	75	
920 - SK401075ZY	M10	18	18	94,1	75	
920 - SK4010100	M10	18	35	119,1	100	
920 - SK4010100ZY	M10	18	18	119,1	100	
920 - SK4010150	M10	18	45	169,1	150	
920 - SK401225	M12	21	24	44,1	25	
920 - SK401250	M12	21	30	69,1	50	
920 - SK401250ZY	M12	22	22	69,1	50	
920 - SK401275	M12	21	35	94,1	75	
920 - SK401275ZY	M12	22	22	94,1	75	
920 - SK4012100	M12	21	38	119,1	100	
920 - SK4012100ZY	M12	22	22	119,1	100	
920 - SK401625	M16	29	29	44,1	25	
920 - SK401650	M16	29	34	69,1	50	
920 - SK401650ZY	M16	29	29	69,1	50	
920 - SK401675	M16	29	35	94,1	75	
920 - SK401675ZY	M16	29	29	94,1	75	
920 - SK4016100	M16	29	40	119,1	100	
920 - SK4016100ZY	M16	29	29	119,1	100	
920 - SK4016125	M16	29	44	144,1	125	
920 - SK4016150	M16	29	45	169,1	150	
920 - SK4016175	M16	29	50	194,1	175	
920 - SK4016200	M16	29	50	219,1	200	
920 - SK4016225	M16	29	50	244,1	225	

Fräsaufnahmen SK50 für Einschraubfräser

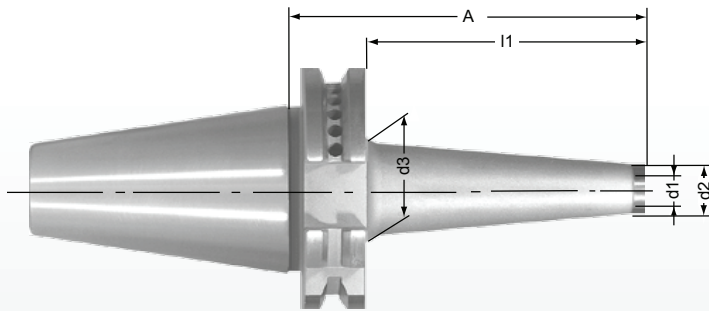
shank SK50 for threaded type cutter
mandrin SK50 pour fraises à queue fileté




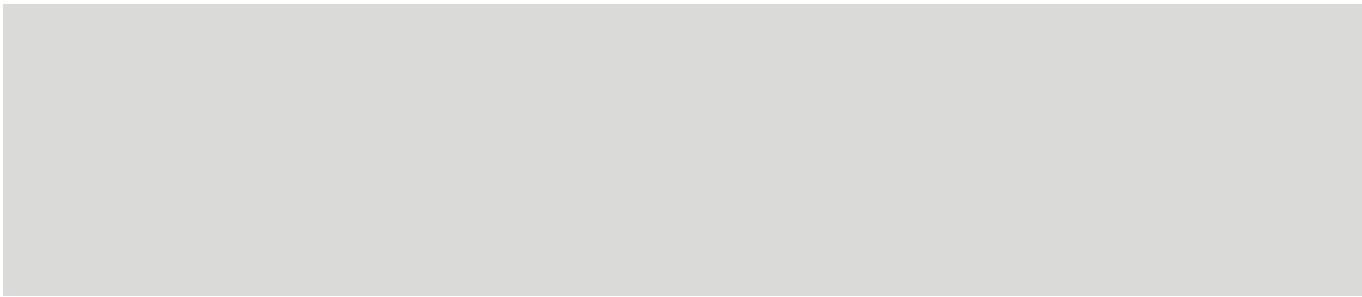
Bestell-Nr. order number No.	d1	d2	d3	A	l1	
963 - 0850	M8	13,8	23	69,1	50	G6,3/8.000
963 - 0875	M8	13,8	25	94,1	75	
963 - 08100	M8	13,8	30	119,1	100	
963 - 08150	M8	13,8	35	169,1	150	
963 - 1050	M10	18	25	69,1	50	
963 - 1050ZY	M10	18	18	69,1	50	
963 - 1075	M10	18	30	94,1	75	
963 - 10100	M10	18	35	119,1	100	
963 - 10150	M10	18	38	169,1	150	
963 - 1250	M12	21	34	69,1	50	
963 - 1250ZY	M12	22	22	69,1	50	
963 - 1275	M12	21	37	94,1	75	
963 - 1275ZY	M12	22	22	94,1	75	
963 - 12100	M12	21	41	119,1	100	
963 - 12100ZY	M12	22	22	119,1	100	
963 - 12150	M12	21	50	169,1	150	
963 - 12150ZY	M12	23	23	169,1	150	
963 - 12200	M12	21	57	219,1	200	
963 - 12250	M12	21	62	269,1	250	
963 - 12300	M12	21	67	319,1	300	
963 - 12350	M12	21	70	369,5	350	

Fräsaufnahmen SK50 für Einschraubfräser

shank SK50 for threaded type cutter
mandrin SK50 pour fraises à queue fileté



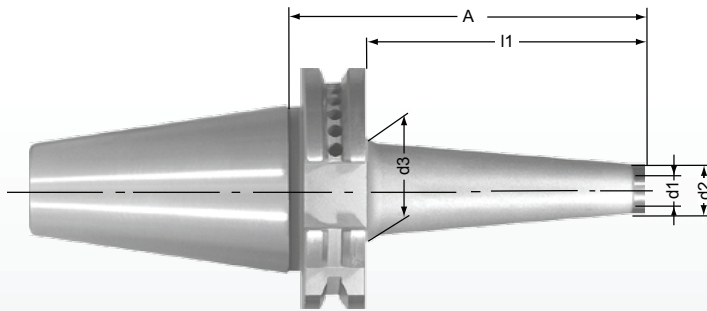
Bestell-Nr. order number No.	d1	d2	d3	A	l1	
963 - 1650	M16	29	35	69,1	50	G6,3/8.000
963 - 1650-37	M16	37	43	69,1	50	
963 - 1650ZY	M16	29	29	69,1	50	
963 - 1675	M16	29	37	94,1	75	
963 - 1675-37	M16	37	46	94,1	75	
963 - 1675ZY	M16	29	29	94,1	75	
963 - 1675ZY-37	M16	37	37	94,1	75	
963 - 16100	M16	29	41	119,1	100	
963 - 16100-37	M16	37	49	119,1	100	
963 - 16100ZY	M16	29	29	119,1	100	
963 - 16100ZY-37	M16	37	37	119,1	100	
963 - 16150	M16	29	50	169,1	150	
963 - 16150ZY	M16	29	29	169,1	150	
963 - 16200	M16	29	57	219,1	200	
963 - 16200ZY	M16	29	29	219,1	200	
963 - 16250	M16	29	62	269,1	250	
963 - 16250ZY-38	M16	38	38	269,1	250	
963 - 16300	M16	29	67	319,1	300	
963 - 16350	M16	29	70	369,1	350	
963 - 16400	M16	29	70	419,1	400	




Fräsaufnahmen SK50 für Einschraubfräser

shank SK50 for threaded type cutter
mandrin SK50 pour fraises à queue filetée

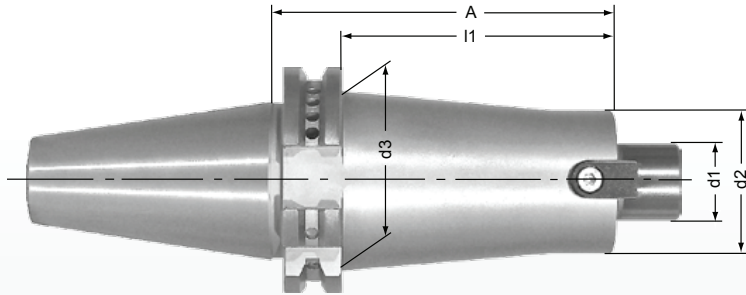
Form AD/B



Bestell-Nr. order number No.	d1	d2	d3	A	l1	 G6,3/8.000
920 - SK501275	M12	21	37	94,1	75	
920 - SK5012100	M12	21	41	119,1	100	
920 - SK5012150	M12	21	50	169,1	150	
920 - SK501675	M16	29	37	94,1	75	
920 - SK5016100	M16	29	41	119,1	100	
920 - SK5016150	M16	29	50	169,1	150	

Aufsteckfräsdorne SK40

arbors SK40 for shell cutter
mandrin SK40 pour fraises à creuse



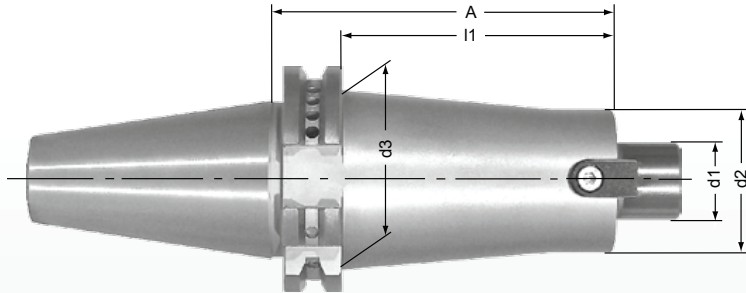
Lieferumfang: SK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur



Bestell-Nr. order number No.	d1	d2	d3	l1	A						
972-SK401625	16	35	35	25	44,1	x	959-16	-	957-M8	-	
972-SK401625ZY-30	16	30	30	25	44,1	x	959-16	-	957-M8	-	
972-SK401650	16	35	42	50	69,1	x	959-16	-	957-M8	-	
972-SK401650ZY-30	16	30	30	50	69,1	x	959-16	-	957-M8	-	
972-SK401675	16	35	45	75	94,1	x	959-16	-	957-M8	-	
972-SK4016100	16	35	50	100	119,1	x	959-16	-	957-M8	-	
972-SK4016150	16	35	50	150	169,1	x	959-16	-	957-M8	-	
972-SK4016200	16	35	50	200	219,1	x	959-16	-	957-M8	-	
972-SK402225	22	40	40	25	44,1	x	959-22	-	957-M10	-	G6,3/8.000
972-SK402250	22	40	45	50	69,1	x	959-22	-	957-M10	-	
972-SK402275	22	40	50	75	94,1	x	959-22	-	957-M10	-	
972-SK4022100	22	40	50	100	119,1	x	959-22	-	957-M10	-	
972-SK4022125	22	40	50	125	144,1	x	959-22	-	957-M10	-	
972-SK4022150	22	40	50	150	169,1	x	959-22	-	957-M10	-	
972-SK4022200	22	40	50	200	219,1	x	959-22	-	957-M10	-	
972-SK402725	27	45	45	25	44,1	x	959-27	-	957-M12	-	
972-SK402750	27	45	45	50	69,1	x	959-27	-	957-M12	-	
972-SK402775	27	45	45	75	94,1	x	959-27	-	957-M12	-	
972-SK4027100	27	45	45	100	119,1	x	959-27	-	957-M12	-	
972-SK4027150	27	48	50	150	169,1	x	959-27	-	957-M12	-	







Aufsteckfräsdorne SK50

arbors SK50 for shell cutter
mandrin SK50 pour fraises à creuse



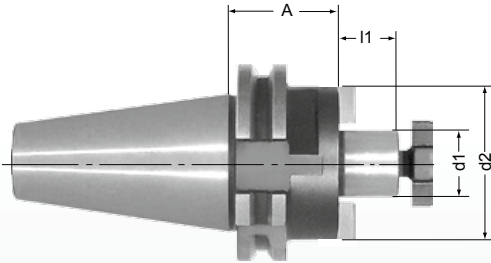
Lieferumfang: SK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur



Bestell-Nr. order number No.	d1	d2	d3	l1	A						
972-SK501650	16	35	40	50	69,1	x	959-16	-	957-M8	-	
972-SK5016100	16	35	50	100	119,1	x	959-16	-	957-M8	-	
972-SK5016150	16	35	53	150	169,1	x	959-16	-	957-M8	-	
972-SK5016200	16	35	60	200	219,1	x	959-16	-	957-M8	-	
972-SK502250	22	40	40	50	69,1	x	959-22	-	957-M10	-	
972-SK5022100	22	40	50	100	119,1	x	959-22	-	957-M10	-	
972-SK5022100ZY	22	48	48	100	119,1	x	959-22	-	957-M10	-	
972-SK5022150	22	40	62	150	169,1	x	959-22	-	957-M10	-	
972-SK5022150ZY	22	48	48	150	169,1	x	959-22	-	957-M10	-	
972-SK5022200	22	40	68	200	219,1	x	959-22	-	957-M10	-	
972-SK5022200ZY	22	48	48	200	219,1	x	959-22	-	957-M10	-	
972-SK5022250	22	48	68	250	269,1	-	959-22	-	957-M10	-	
972-SK5022250ZY	22	48	48	250	269,1	-	959-22	-	957-M10	-	
972-SK5022300	22	48	68	300	319,1	-	959-22	-	957-M10	-	
972-SK5022300ZY	22	48	48	300	319,1	-	959-22	-	957-M10	-	
972-SK5022350	22	48	68	350	369,1	-	959-22	-	957-M10	-	
972-SK502720	27	60	60	20	39,1	x	959-27	-	957-M12	-	G6,3/8.000
972-SK502750	27	60	60	50	69,1	x	959-27	-	957-M12	-	
972-SK5027100	27	60	70	100	119,1	x	959-27	-	957-M12	-	
972-SK5027100ZY	27	60	60	100	119,1	x	959-27	-	957-M12	-	
972-SK5027150	27	60	78	150	169,1	x	959-27	-	957-M12	-	
972-SK5027150ZY	27	60	60	150	169,1	x	959-27	-	957-M12	-	
972-SK5027200	27	60	78	200	219,1	x	959-27	-	957-M12	-	
972-SK5027200ZY	27	60	60	200	219,1	x	959-27	-	957-M12	-	
972-SK5027250	27	60	78	250	269,1	-	959-27	-	957-M12	-	
972-SK5027250ZY	27	60	60	250	269,1	-	959-27	-	957-M12	-	
972-SK5027300	27	60	78	300	319,1	-	959-27	-	957-M12	-	
972-SK5027300ZY	27	60	60	300	319,1	-	959-27	-	957-M12	-	
972-SK503250	32	70	70	50	69,1	-	959-32	957-32	-	958-32	
972-SK5032100	32	70	95	100	119,1	-	959-32	957-32	-	958-32	
972-SK5032150	32	70	95	150	169,1	-	959-32	957-32	-	958-32	
972-SK504050	40	95	95	50	69,1	-	959-40	957-40	-	958-40	
972-SK5040100	40	95	95	100	119,1	-	959-40	957-40	-	958-40	






Aufsteckfräsdorne SK40, 50 mit vergrößertem Anlagedurchmesser

arbors type SK40, 50 with enlarged contact surface diameter
mandrin avec diamètre de collerette élargi type SK40, 50



Lieferumfang: SK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur

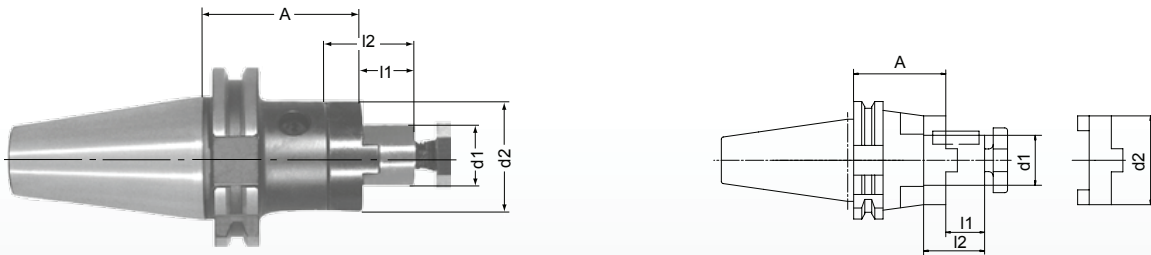


Bestell-Nr. order number No.	SK	d1	d2	l1	A					
968 - SK4016	SK40	16	40	17	35	-	959-16	957-16	958-16	G6,3/8.000
968 - SK4022		22	50	19	35	-	959-22	957-22	958-22	
968 - SK4027		27	50	21	35	-	959-27	957-27	958-27	
968 - SK4032		32	78	24	50	-	959-32	957-32	958-32	
968 - SK5022	SK50	22	50	19	35	-	959-22	957-22	958-22	
968 - SK5027		27	60	21	35	-	959-27	957-27	958-27	
968 - SK5032		32	78	24	35	-	959-32	957-32	958-32	
968 - SK5040		40	89	27	50	-	959-40	957-40	958-40	
968 - SK5050		50	120	30	70	-	959-50	957-50	958-50	

Kombi-Aufsteckfräsdorne SK40, 50

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

mandrin SK40, 50 combi pour fraises à entraînement par clavette ou tenon








Lieferumfang: SK-Aufnahme mit Anzugsschraube und Mitnehmersteinen

delivery: with drive keys and retaining screw

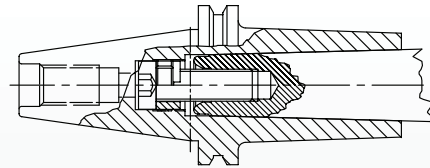
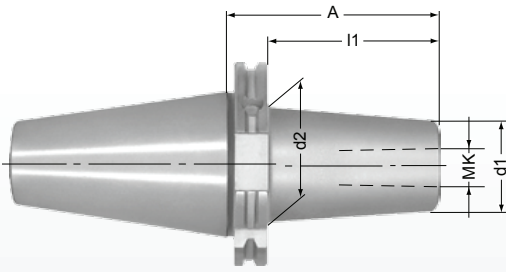
entendue de livraison: avec vis de blocage des fraises et entraineur




Bestell-Nr. order number No.	SK	d1	d2	l1	l2	A					
966 - SK4016	SK40	16	32	17	27	55	955-16	956-16	957-16	958-16	G6,3/8.000
966 - SK4022		22	40	19	31	55	955-22	956-22	957-22	958-22	
966 - SK4027		27	48	21	33	55	955-27	956-27	957-27	958-27	
966 - SK4032		32	58	24	38	60	955-32	956-32	957-32	958-32	
966 - SK5016	SK50	16	32	17	27	55	955-16	956-16	957-16	958-16	
966 - SK5022		22	40	19	31	55	955-22	956-22	957-22	958-22	
966 - SK5027		27	48	21	33	55	955-27	956-27	957-27	958-27	
966 - SK5032		32	58	24	38	55	955-32	956-32	957-32	958-32	
966 - SK5040		40	70	27	41	55	955-40	956-40	957-40	958-40	

Fräserhülsen SK40, 50 mit Anzugsgewinde für Morsekegel

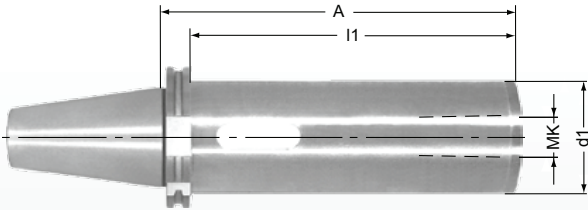
morse taper adaptor SK40, 50
mandrin cône morse à trou fileté SK40, 50




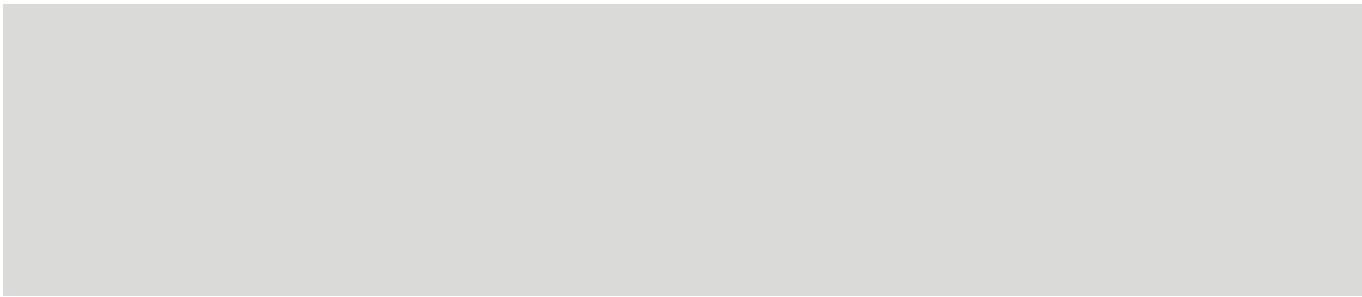
Bestell-Nr. order number No.	SK	MK	d1	d2	l1	A				
905 - 40 MK150	SK40	MK 1	25	25	30,9	50	959-MK1	957-MK1	952-MK1	G6,3/8.000
905 - 40 MK250		MK 2	32	32	30,9	50	959-MK2	957-MK2	952-MK2	
905 - 40 MK370		MK 3	40	40	50,9	70	959-MK3	957-MK3	952-MK3	
905 - 40 MK495		MK 4	48	48	75,9	95	959-MK4	957-MK4	952-MK4	
905 - 50 MK260	SK50	MK 2	30	35	40,9	60	959-MK2	957-MK2	952-MK2	
905 - 50 MK2110		MK 2	30	40	90,9	110	959-MK2	957-MK2	952-MK2	
905 - 50 MK2160		MK 2	30	45	140,9	160	959-MK2	957-MK2	952-MK2	
905 - 50 MK365		MK 3	36	43	45,9	65	959-MK3	957-MK3	952-MK3	
905 - 50 MK3120		MK 3	36	50	100,9	120	959-MK3	957-MK3	952-MK3	
905 - 50 MK3170		MK 3	36	60	150,9	170	959-MK3	957-MK3	952-MK3	
905 - 50 MK3220		MK 3	36	70	200,9	220	959-MK3	957-MK3	952-MK3	
905 - 50 MK3300		MK 3	36	70	280,9	300	959-MK3	957-MK3	952-MK3	
905 - 50 MK4100		MK 4	44	55	80,9	100	959-MK4	957-MK4	952-MK4	
905 - 50 MK4150		MK 4	44	60	130,9	150	959-MK4	957-MK4	952-MK4	
905 - 50 MK4200		MK 4	44	70	180,9	200	959-MK4	957-MK4	952-MK4	
905 - 50 MK4250		MK 4	44	70	230,9	250	959-MK4	957-MK4	952-MK4	
905 - 50 MK4300		MK 4	44	70	280,9	300	959-MK4	957-MK4	952-MK4	
905 - 50 MK5120		MK 5	56	70	100,9	120	959-MK5	957-MK5	952-MK5	
905 - 50 MK5170		MK 5	56	70	150,9	170	959-MK5	957-MK5	952-MK5	
905 - 50 MK5220		MK 5	56	75	200,9	220	959-MK5	957-MK5	952-MK5	

Zwischenhülsen, SK40, 50

morse taper adaptor, SK40, 50
mandrin cône morse SK40, 50



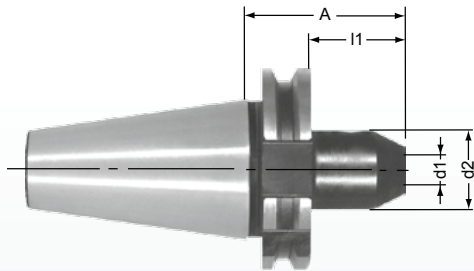
Bestell-Nr. order number No.	SK	MK	d1	l1	A	
906 - 40MK150	SK40	MK1	25	30,9	50	G6,3/8.000
906 - 40MK250		MK2	32	30,9	50	
906 - 40MK2113		MK2	32	93,9	113	
906 - 40MK370		MK3	40	50,9	70	
906 - 40MK3133		MK3	40	113,9	133	
906 - 40MK495		MK4	48	75,9	95	
906 - 40MK4156		MK4	48	136,9	156	
906 - 50MK145	SK50	MK1	25	25,9	45	
906 - 50MK260		MK2	32	40,9	60	
906 - 50MK2117		MK2	32	97,9	117	
906 - 50MK365		MK3	40	45,9	65	
906 - 50MK3137		MK3	40	117,9	137	
906 - 50MK495		MK4	48	75,9	95	
906 - 50MK4167		MK4	48	147,9	107	
906 - 50MK5105		MK5	63	85,9	105	
906 - 50MK5197	MK5	63	177,9	197		



Weldonfutter SK40, 50



weldon chucks SK40, 50

mandrin queues cylindriques Weldon SK40, 50



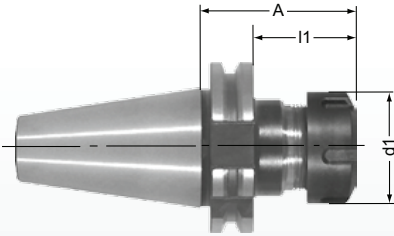
Lieferumfang: SK-Aufnahme mit Spannschraube
 delivery: weldon chuck with tightening screw
 entendue de livraison: mandrin avec vis de serrage



Bestell-Nr. order number No.	SK	d1	d2	l1	A		
965 - SK4006	SK40	6	25	30,9	50	949-M6	G6,3/8.000
965 - SK4008		8	28	30,9	50	949-M8	
965 - SK4010		10	35	30,9	50	949-M10	
965 - SK4012		12	42	30,9	50	949-M12	
965 - SK4014		14	44	30,9	50	949-M12	
965 - SK4016		16	48	40,9	63	949-M14	
965 - SK4018		18	50	40,9	63	949-M14	
965 - SK4020		20	52	40,9	63	949-M16	
965 - SK4025		25	65	80,9	100	949-M18X2	
965 - SK4032		32	72	80,9	100	949-M20X2	
965 - SK5006	SK50	6	25	43,9	63	949-M6	G6,3/8.000
965 - SK5008		8	28	43,9	63	949-M8	
965 - SK5010		10	32	43,9	63	949-M10	
965 - SK5012		12	42	43,9	63	949-M12	
965 - SK5014		14	44	43,9	63	949-M12	
965 - SK5016		16	48	43,9	63	949-M14	
965 - SK5018		18	50	43,9	63	949-M14	
965 - SK5020		20	52	43,9	63	949-M16	
965 - SK5025		25	65	60,9	80	949-M18X2	
965 - SK5032		32	72	80,9	100	949-M20X2	
965 - SK5040		40	90	80,9	100	949-M20X2	





Spannzangenfutter SK30 - 50 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
mandrin à pinces SK30 - 50 pour pinces ER 16/25/32/40



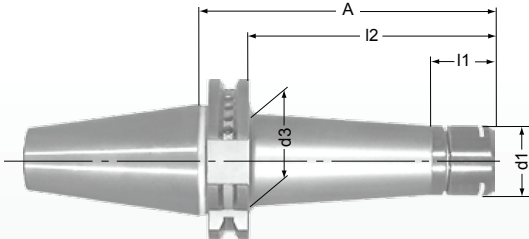
Lieferumfang: SK-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM
entendue de livraison: attachement avec écrou UM



Bestell-Nr. order number No.	SK	ER	d1	l1	A				
910 - SK3050	SK30	16	28	50	69,1	953-UM16	948-M10	954-034	G6,3/8.000
912 - SK3050		25	42	50	69,1	953-UM25	948-M12	954-013ER25	
910 - SK4060	SK40	16	28	40,9	60	953-UM16	948-M10	954-034	
912 - SK4060		25	42	40,9	60	953-UM25	948-M12	954-013ER25	
913 - SK4070		32	50	50,9	70	953-UM32	948-M16	954-013ER32	
914 - SK4080		40	63	60,9	80	953-UM40	948-M16	954-013ER40	
912 - SK5060	SK50	25	42	40,9	60	953-UM25	948-M12	954-013ER25	
913 - SK5070		32	50	50,9	70	953-UM32	948-M16	954-013ER32	
913 - SK50100		32	50	80,9	100	953-UM32	948-M16	954-013ER32	
914 - SK5080		40	63	60,9	80	953-UM40	948-M16	954-013ER40	




Spannzangenfutter SK30, 40 für Spannzangen ER 11/16/20 mit Spannmutter MS

collet chucks SK30, 40 for collets ER 11/16/20 with nut type MS
mandrin à pinces SK30, 40 pour pinces ER 11/16/20



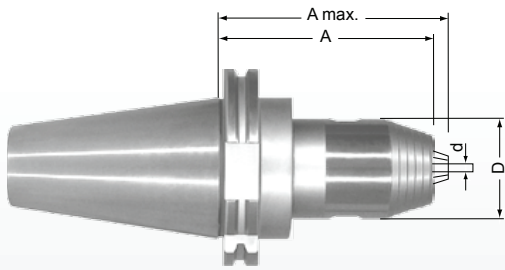
Lieferumfang: SK-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS
entendue de livraison: attachement avec ecrou MS




Bestell-Nr. order number No.	SK	ER	d1	d3	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		20	28	39	30	80	99,1	953-MS20	954-063E20	
918 - SK40150	SK40	11	16	33	21	150	169,1	953-MS11	954-11	
918 - SK40200		11	16	33	21	200	219,1	953-MS11	954-11	
919 - SK40100		16	22	35	30	100	119,1	953-MS16	954-16	
919 - SK40A175		16	22	34	30	155,9	175	953-MS16	954-16	
911 - SK4050		20	28	33	30	50	69,1	953-MS20	954-063E20	
911 - SK40100		20	28	35	30	100	119,1	953-MS20	954-063E20	
911 - SK40150		20	28	36	30	150	169,1	953-MS20	954-063E20	
911 - SK40200		20	28	36	30	200	219,1	953-MS20	954-063E20	

CNC- Bohrfutter SK40, 50 für Rechts-und Linkslauf

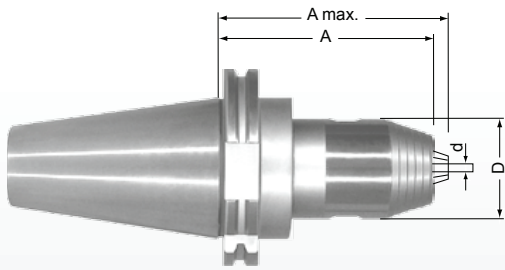
CNC- drill chucks SK40, 50 for clockwise and anti clockwise rotation
mandrin de perçage CNC SK40, 50 pour rotation gauche-droite




Bestell-Nr. order number No.	SK	d	D	A	A max.	
908 - 4008IK	SK40	0,5-8	36	73	76	G6,3/8.000
908 - 4013IK		1-13	50	90	96	
908 - 4016IK		3-16	57	90	101	
908 - 5013IK	SK50	1-13	50	106	112	
908 - 5016IK		3-16	57	106	117	

CNC- Bohrfutter SK30 - 50 für Rechts-und Linkslauf

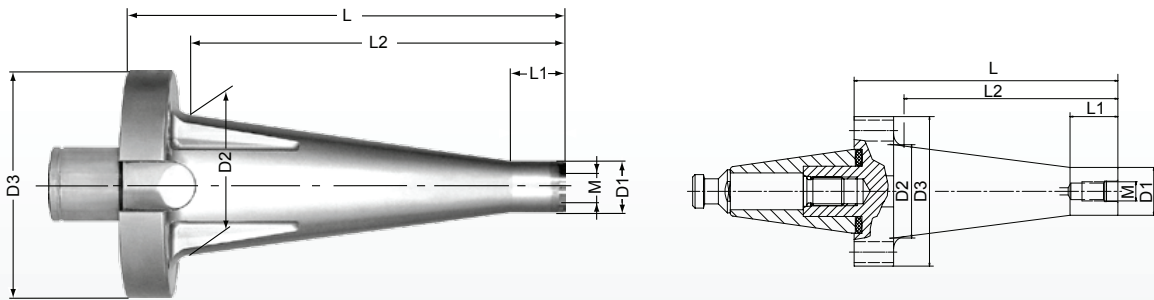
CNC- drill chucks SK30 - 50 for clockwise and anti clockwise rotation
mandrin de perçage CNC SK30 - 50 pour rotation gauche-droite



Bestell-Nr. order number No.	SK	d	D	A	A max.	
908 - 3008	SK30	0,5-8	36	70	73	G6,3/8.000
908 - 3013		1-13	50	111	117	
908 - 4008	SK40	0,5-8	36	70	73	
908 - 4013		1-13	50	90	96	
908 - 4016		3-16	57	90	101	
908 - 5013	SK50	1-13	50	106	112	
908 - 5016		3-16	57	106	117	

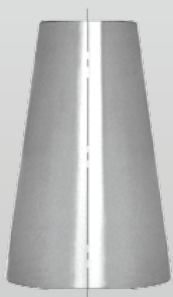
Steilkegel-Plananlagen SK50 für Einschraubfräser

arbors SK50 with face contact for screw in type cutters
 cône SK50 - avec surface d'appui pour fraises à creuse



Bestell-Nr. order number No.	M	D1	D2	D3	L	L1	L2		
963P - SK5016 250	16	29	78	127	290	30	250		
963P - SK5016 300	16	29	78	127	340	30	300		
963P - SK5016 350	16	29	78	127	390	30	350		
963P - SK5016 400	16	29	78	127	440	30	400		
963P - SK5016 450	16	29	78	127	490	30	450		
963P - SK5016 500	16	29	78	127	540	30	500		

Die Zubehörteile sind nicht im Lieferumfang enthalten und müssen separat bestellt werden.
 Accessories have to be ordered seperatly.
 Les accessoires sont pas incluse.



KH50



GR50



AB50/01



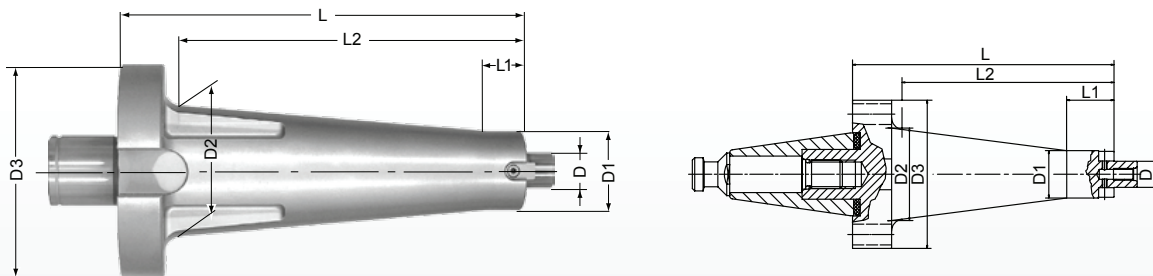
AB50/2080





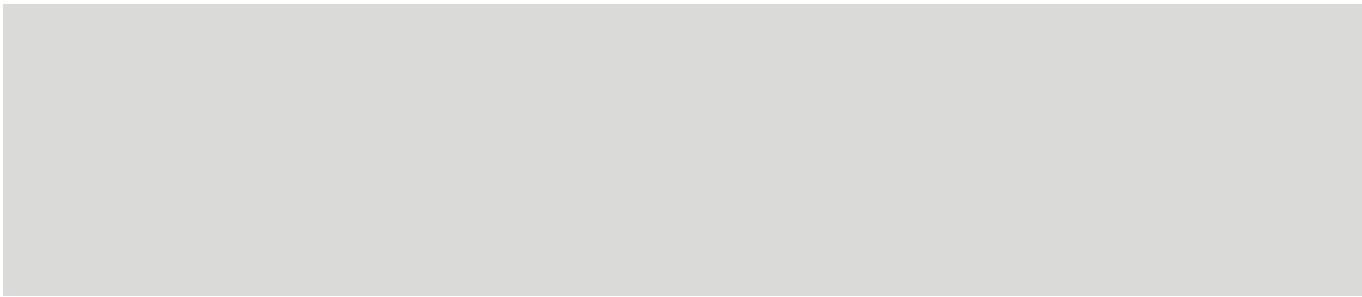
AB50/69872

Steilkegel-Plananlagen SK50 für Aufsteckfräser

arbors SK50 with face contact for shell cutters
cône SK50 - avec surface d'appui pour fraises à creuse

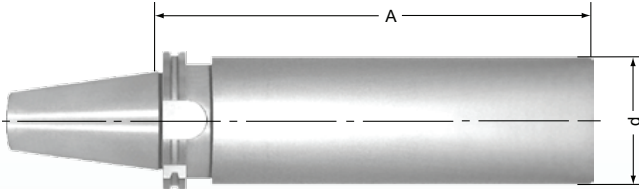


Bestell-Nr. order number No.	D	D1	D2	D3	L	L1	L2		
972P - SK5022 200	22	48	78	127	240	20	200	959-22	957-M10
972P - SK5022 250	22	48	78	127	290	20	250	959-22	957-M10
972P - SK5022 300	22	48	78	127	340	20	300	959-22	957-M10
972P - SK5022 350	22	48	78	127	390	20	350	959-22	957-M10
972P - SK5022 400	22	48	78	127	440	20	400	959-22	957-M10
972P - SK5022 450	22	48	78	127	490	20	450	959-22	957-M10
972P - SK5022 500	22	48	78	127	540	20	500	959-22	957-M10
972P - SK5027 200	27	58	78	127	240	20	200	959-27	957-M12
972P - SK5027 250	27	58	78	127	290	20	250	959-27	957-M12
972P - SK5027 300	27	58	78	127	340	20	300	959-27	957-M12
972P - SK5027 350	27	58	78	127	390	20	350	959-27	957-M12
972P - SK5027 400	27	58	78	127	440	20	400	959-27	957-M12
972P - SK5027 450	27	58	78	127	490	20	450	959-27	957-M12
972P - SK5027 500	27	58	78	127	540	20	500	959-27	957-M12



Rohlinge SK40, 50

blanks SK40, 50
ébauche SK40, 50



Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.

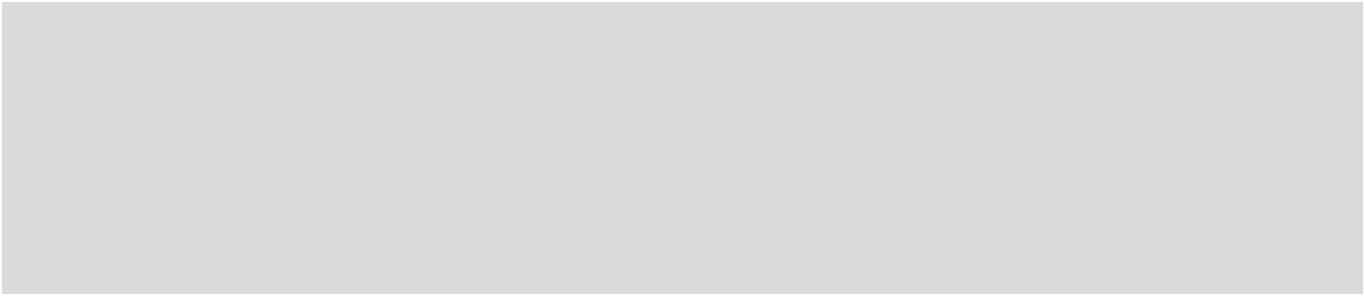
Verwendung: Zur Herstellung von Sonderwerkzeugen.
Execution: Cône d'outil et collerette trempés et rectifiés.
Application: Pour la fabrication d'outils spéciaux.

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

Application: For producing your own special tools.



Bestell-Nr. order number No.	SK	d	A			
970 - SK40250	SK40	63,5	250			
970 - SK40A110		71	110			
970 - SK50315	SK50	95,5	315			



Werkzeugaufnahmen SK50 DIN 2080

Tool holders SK50 DIN 2080
Mandrins conique SK50 DIN 2080

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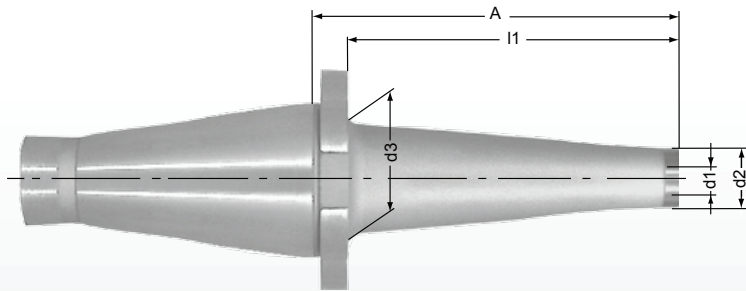
Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue fileté	142
Aufsteckfräsdorne Arbors for shell cutters Mandrins pour fraises à creuse	143
Fräserhülsen / Zwischenhülsen morse taper adaptors Mandrin cône morse	145

Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Fräsaufnahmen SK50 für Einschraubfräser, DIN2080

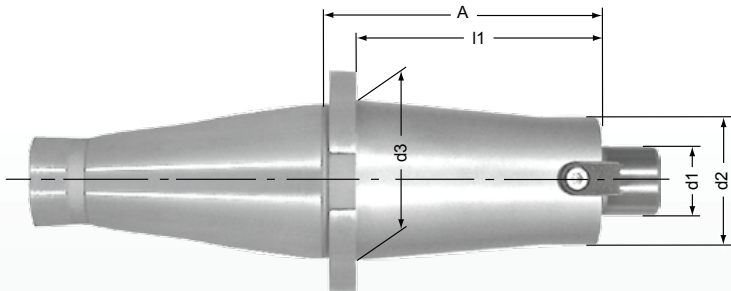
shank SK50 for threaded type cutter
mandrin SK50 pour fraises à queue filetée



Bestell-Nr. order number No.	d1	d2	d3	A	l1		
964 - SK501250	M12	21	37	65,2	50		
964 - SK5012100	M12	21	41	115,2	100		
964 - SK5012150	M12	21	50	165,2	150		
964 - SK501650	M16	29	37	65,2	50		
964 - SK5016100	M16	29	41	115,2	100		
964 - SK5016150	M16	29	50	165,2	150		





Aufsteckfräsdorne SK50, DIN 2080

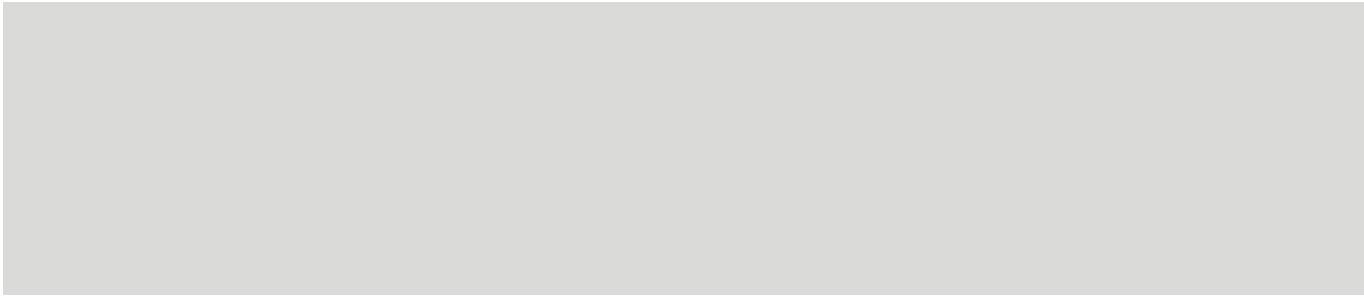
arbors SK50 for shell cutter
mandrin SK50 pour fraises à creuse



Lieferumfang: SK-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur

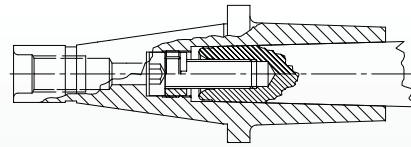
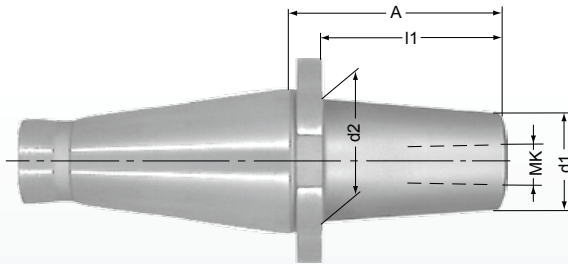





Bestell-Nr. order number No.	d1	d2	d3	l1	A					
973-SK502250	22	40	40	50	65,2	959-22	-	957-M10	-	
973-SK5022100	22	40	50	100	115,2	959-22	-	957-M10	-	
973-SK5022100ZY	22	48	48	100	115,2	959-22	-	957-M10	-	
973-SK5022150	22	40	62	150	165,2	959-22	-	957-M10	-	
973-SK5022150ZY	22	48	48	150	165,2	959-22	-	957-M10	-	
973-SK5022200	22	40	68	200	215,2	959-22	-	957-M10	-	
973-SK5022200ZY	22	48	48	200	215,2	959-22	-	957-M10	-	
973-SK502750	27	60	60	50	65,2	959-27	-	957-M12	-	
973-SK5027100	27	60	70	100	115,2	959-27	-	957-M12	-	
973-SK5027100ZY	27	60	60	100	115,2	959-27	-	957-M12	-	
973-SK5027150	27	60	78	150	165,2	959-27	-	957-M12	-	
973-SK5027150ZY	27	60	60	150	165,2	959-27	-	957-M12	-	
973-SK5027200	27	60	78	200	215,2	959-27	-	957-M12	-	
973-SK5027200ZY	27	60	60	200	215,2	959-27	-	957-M12	-	

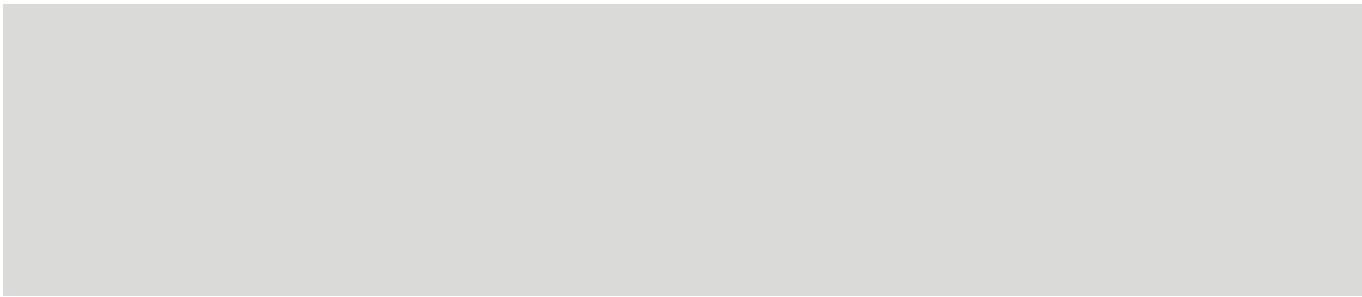


Fräserhülsen SK50 mit Anzugsgewinde für Morsekegel, DIN2080

morse taper adaptor SK50
mandrin cône morse à trou fileté SK50



Bestell-Nr. order number No.	MK	d1	d2	l1	A					
909 - 50 MK260	MK 2	30	35	44,8	60		959-MK2	957-MK2	952-MK2	
909 - 50 MK2110	MK 2	30	40	94,8	110		959-MK2	957-MK2	952-MK2	
909 - 50 MK2160	MK 2	30	45	144,8	160		959-MK2	957-MK2	952-MK2	
909 - 50 MK365	MK 3	36	43	49,8	65		959-MK3	957-MK3	952-MK3	
909 - 50 MK3120	MK 3	36	50	104,8	120		959-MK3	957-MK3	952-MK3	
909 - 50 MK3170	MK 3	36	60	154,8	170		959-MK3	957-MK3	952-MK3	
909 - 50 MK3220	MK 3	36	70	204,8	220		959-MK3	957-MK3	952-MK3	
909 - 50 MK4100	MK 4	44	55	84,8	100		959-MK4	957-MK4	952-MK4	
909 - 50 MK4150	MK 4	44	60	134,8	150		959-MK4	957-MK4	952-MK4	
909 - 50 MK4200	MK 4	44	70	184,8	200		959-MK4	957-MK4	952-MK4	
909 - 50 MK5120	MK 5	56	70	104,8	120		959-MK5	957-MK5	952-MK5	
909 - 50 MK5170	MK 5	56	70	154,8	170		959-MK5	957-MK5	952-MK5	
909 - 50 MK5220	MK 5	56	75	204,8	220		959-MK5	957-MK5	952-MK5	



Werkzeugaufnahmen MAS BT

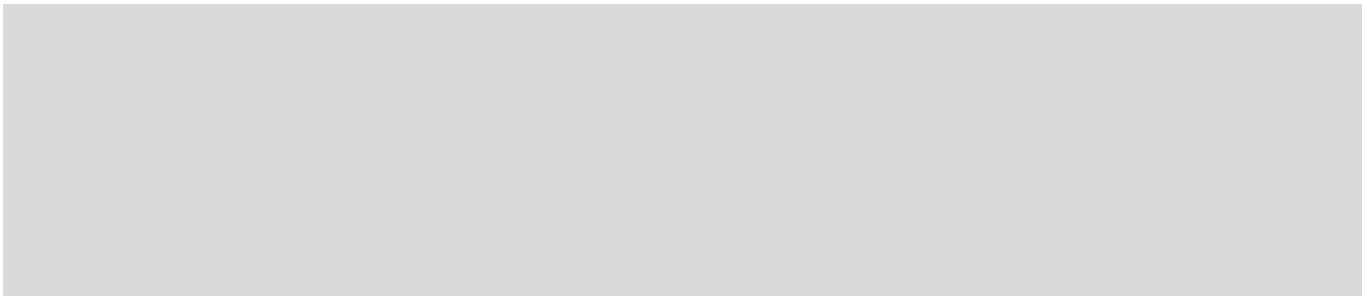
Tool holders MAS BT
Mandrins MAS BT

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Fräsaufnahmen für Einschraubfräser Chucks for threaded type cutters Mandrins pour fraises à queue fileté	149 - 153
Aufsteckfräsdorne Arbors for shell cutters Mandrins pour fraises à creuse	154 - 155
Fräserhülsen / Zwischenhülsen morse taper adaptors Mandrin cône morse	156 - 157
Spannzangenfutter collet chucks Mandrin à pinces	158 - 159
CNC-Bohrfutter CNC-drill chucks Mandrin de percage CNC	160 - 161
Rohlinge Blanks Ébauche	163

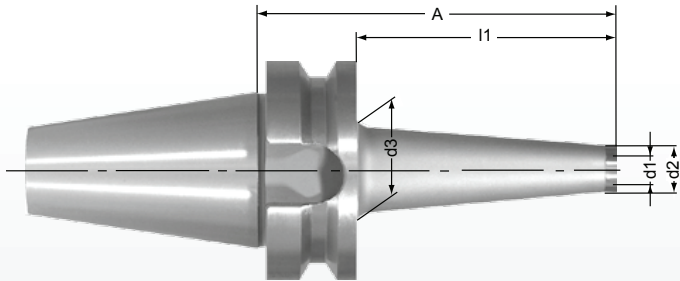
Andere Ausführungen und Längen auf Anfrage lieferbar.


**Specials on request.
Execution special sur demand.**



Fräsaufnahmen MAS-BT30 für Einschraubfräser

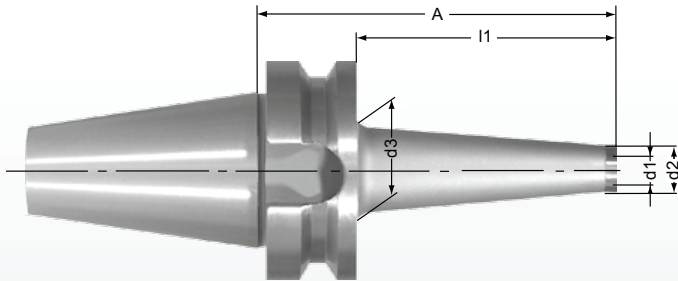
shank MAS-BT30 for threaded type cutter
mandrin MAS-BT30 pour fraises à queue fileté




Bestell-Nr. order number No.	d1	d2	d3	A	l1	
962 - BT300825	M8	14	18	47	25	G6,3/10.000
962 - BT300850	M8	14	23	72	50	
962 - BT301025	M10	18	23	47	25	
962 - BT301050	M10	18	27	72	50	
962 - BT301225	M12	21	25	47	25	
962 - BT301250	M12	21	31	72	50	
962 - BT301625	M16	29	29	47	25	
962 - BT301650	M16	29	34	47	50	

Fräsaufnahmen MAS-BT40 für Einschraubfräser

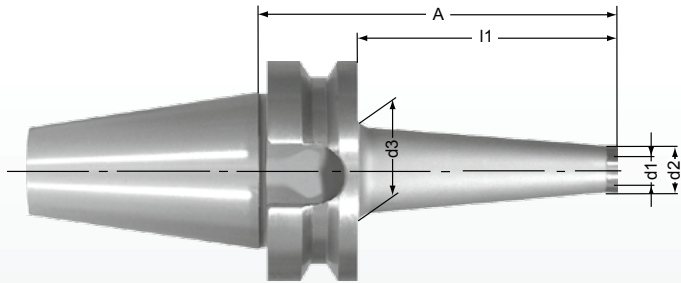
shank MAS-BT40 for threaded type cutter
mandrin MAS-BT40 pour fraises à queue fileté




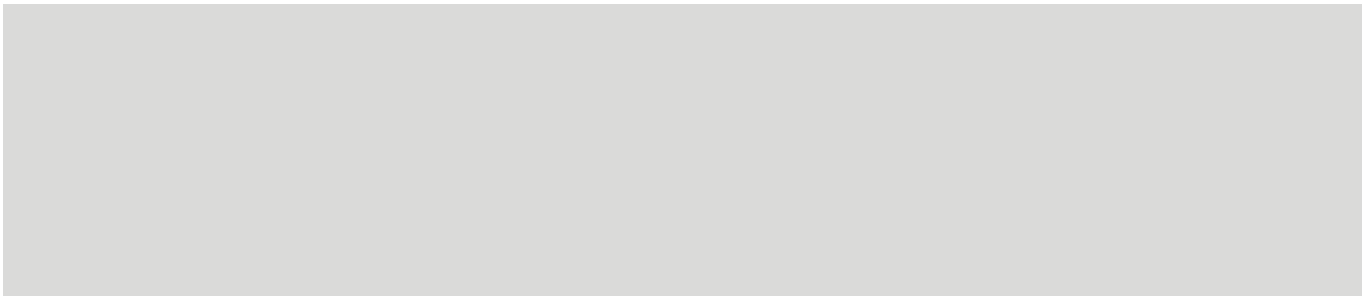
Bestell-Nr. order number No.	d1	d2	d3	A	l1	
962 - 0625BT	M6	10	17	52	25	G6,3/10.000
962 - 0625BTZY	M6	10	10	52	25	
962 - 0650BT	M6	10	23	77	50	
962 - 0675BT	M6	10	25	102	75	
962 - 0825BT	M8	13,8	18	52	25	
962 - 0825BTZY	M8	13,8	13,8	52	25	
962 - 0850BT	M8	13,8	23	77	50	
962 - 0850BTZY	M8	13,8	13,8	77	50	
962 - 0875BT	M8	13,8	25	102	75	
962 - 0875BTZY	M8	13,8	13,8	102	75	
962 - 08100BT	M8	13,8	30	127	100	
962 - 08125BT	M8	13,8	34	152	125	
962 - 1025BT	M10	18	23	52	25	
962 - 1025BTZY	M10	18	18	52	25	
962 - 1050BT	M10	18	25	77	50	
962 - 1050BTZY	M10	18	18	77	50	
962 - 1075BT	M10	18	30	102	75	
962 - 1075BTZY	M10	18	18	102	75	
962 - 10100BT	M10	18	35	127	100	
962 - 10100BTZY	M10	18	18	127	100	
962 - 10125BT	M10	18	40	152	125	
962 - 10150BT	M10	18	45	177	150	

Fräsaufnahmen MAS-BT40 für Einschraubfräser

shank MAS-BT40 for threaded type cutter
mandrin MAS-BT40 pour fraises à queue filetée

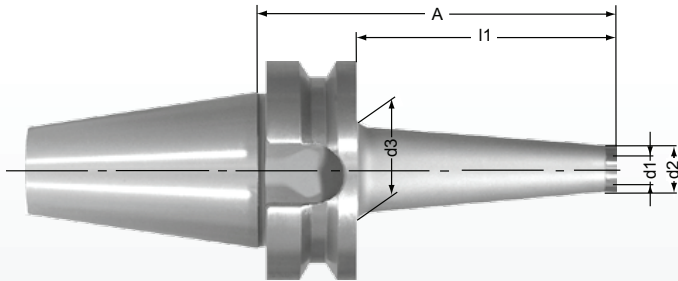



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
962 - 1225BT	M12	21	24	52	25	G6,3/10.000
962 - 1250BT	M12	21	30	77	50	
962 - 1250BTZY	M12	22	22	77	50	
962 - 1275BT	M12	21	35	102	75	
962 - 1275BTZY	M12	22	22	102	75	
962 - 12100BT	M12	21	38	127	100	
962 - 12100BTZY	M12	22	22	127	100	
962 - 12125BT	M12	21	43	152	125	
962 - 12150BT	M12	21	45	177	150	
962 - 1625BT	M16	29	29	52	25	
962 - 1650BT	M16	29	34	77	50	
962 - 1650BTZY	M16	29	29	77	50	
962 - 1675BT	M16	29	35	102	75	
962 - 1675BTZY	M16	29	29	102	75	
962 - 16100BT	M16	29	40	127	100	
962 - 16100BTZY	M16	29	29	127	100	
962 - 16125BT	M16	29	44	152	125	
962 - 16125BTZY	M16	29	29	152	125	
962 - 16150BT	M16	29	45	177	150	
962 - 16175BT	M16	29	50	202	175	
962 - 16200BT	M16	29	50	227	200	
962 - 16225BT	M16	29	50	252	225	
962 - 16250BT	M16	29	50	277	250	



Fräsaufnahmen MAS-BT50 für Einschraubfräser

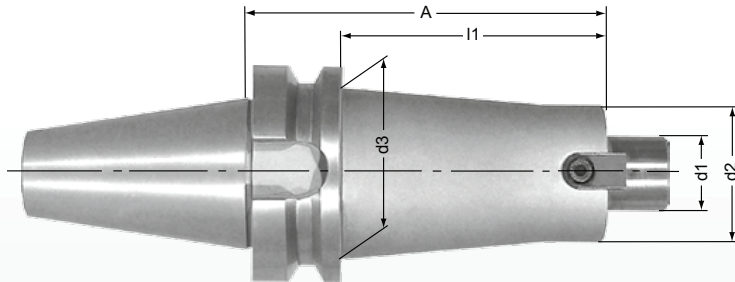
shank MAS-BT50 for threaded type cutter
mandrin MAS-BT50 pour fraises à queue fileté



Bestell-Nr. order number No.	d1	d2	d3	A	l1	
963 - 0850BT	M8	13,8	23	88	50	G6,3/8.000
963 - 08100BT	M8	13,8	30	138	100	
963 - 08150BT	M8	13,8	35	188	150	
963 - 1050BT	M10	18	25	88	50	
963 - 10100BT	M10	18	35	138	100	
963 - 10150BT	M10	18	38	188	150	
963 - 1250BT	M12	21	34	88	50	
963 - 1250BTZY	M12	22	22	88	50	
963 - 1275BT	M12	21	37	113	75	
963 - 1275BTZY	M12	22	22	113	75	
963 - 12100BT	M12	21	41	138	100	
963 - 12100BTZY	M12	22	22	138	100	
963 - 12150BT	M12	21	50	188	150	
963 - 12200BT	M12	21	57	238	200	
963 - 12250BT	M12	21	62	288	250	
963 - 12300BT	M12	21	67	338	300	
963 - 1650BT	M16	29	35	88	50	
963 - 1650BTZY	M16	29	29	88	50	
963 - 1675BT	M16	29	37	113	75	
963 - 1675BTZY	M16	29	29	113	75	
963 - 16100BT	M16	29	41	138	100	
963 - 16100BTZY	M16	29	29	138	100	
963 - 16150BT	M16	29	50	188	150	
963 - 16150BTZY	M16	29	29	188	150	
963 - 16200BT	M16	29	57	238	200	
963 - 16200BTZY	M16	29	29	238	200	
963 - 16250BT	M16	29	62	288	250	
963 - 16300BT	M16	29	67	338	300	

Aufsteckfräsdorne MAS-BT40

abors MAS-BT40 for shell cutter
mandrin MAS-BT40 pour fraises à creuse



Lieferumfang: BT-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur

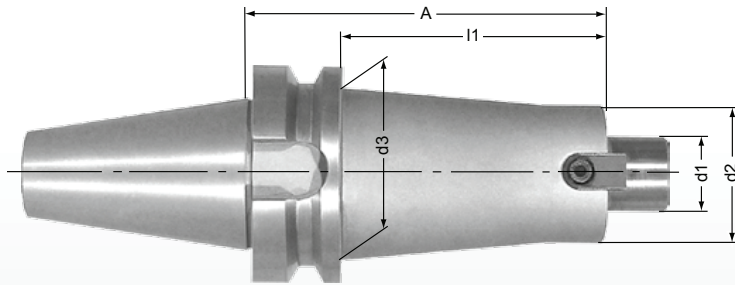


Bestell-Nr. order number No.	d1	d2	d3	l1	A					
972-BT401625	16	35	35	25	52	x	959-16	-	957-M8	-
972-BT401650	16	35	42	50	77	x	959-16	-	957-M8	-
972-BT401675	16	35	45	75	102	x	959-16	-	957-M8	-
972-BT4016100	16	35	50	100	127	x	959-16	-	957-M8	-
972-BT4016150	16	35	50	150	177	x	959-16	-	957-M8	-
972-BT4016200	16	35	50	200	227	x	959-16	-	957-M8	-
972-BT402225	22	40	40	25	52	x	959-22	-	957-M10	-
972-BT402250	22	40	45	50	77	x	959-22	-	957-M10	-
972-BT402275	22	40	50	75	102	x	959-22	-	957-M10	-
972-BT4022100	22	40	50	100	127	x	959-22	-	957-M10	-
972-BT4022150	22	40	50	150	177	x	959-22	-	957-M10	-
972-BT4022200	22	40	50	200	227	x	959-22	-	957-M10	-
972-BT402725	27	45	45	25	52	x	959-27	-	957-M12	-
972-BT402750	27	45	45	50	77	x	959-27	-	957-M12	-
972-BT402775	27	45	45	75	102	x	959-27	-	957-M12	-
972-BT4027100	27	45	45	100	127	x	959-27	-	957-M12	-

G6,3/8.000







Aufsteckfräsdorne MAS-BT50

abors MAS-BT50 for shell cutter
mandrin MAS-BT50 pour fraises à creuse



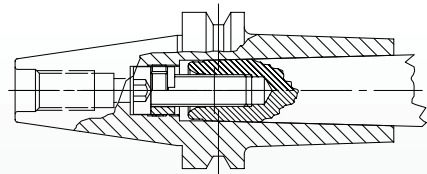
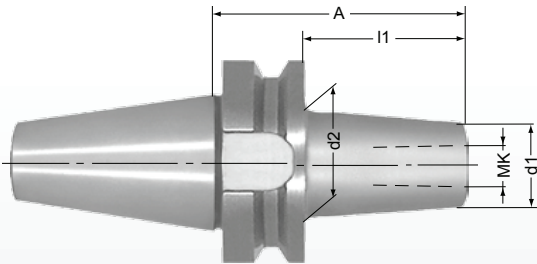
Lieferumfang: BT-Aufnahme mit Anzugsschraube und Mitnehmersteinen
delivery: with drive keys and retaining screw
entendue de livraison: avec vis de blocage des fraises et entraineur







Bestell-Nr. order number No.	d1	d2	d3	l1	A						
972-BT501650	16	35	40	50	88	x	959-16	-	957-M8	-	G6,3/8.000
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-BT502250	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	

Fräserhülsen MAS-BT40, 50 mit Anzugsgewinde für Morsekegel

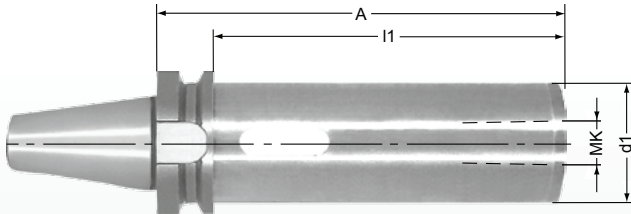
morse taper adaptor MAS-BT40, 50
mandrin cône morse à trou fileté MAS-BT40, 50




Bestell-Nr. order number No.	MAS	MK	d1	d2	l1	A				
905 - BT40 MK150	BT40	MK 1	25	25	23	50	959-MK1	957-MK1	952-MK1	G6,3/8.000
905 - BT40 MK250		MK 2	32	32	23	50	959-MK2	957-MK2	952-MK2	
905 - BT40 MK370		MK 3	40	40	43	70	959-MK3	957-MK3	952-MK3	
905 - BT40 MK495		MK 4	48	48	83	95	959-MK4	957-MK4	952-MK4	
905 - BT50 MK260	BT50	MK 2	30	35	22	60	959-MK2	957-MK2	952-MK2	
905 - BT50 MK2110		MK 2	30	40	72	110	959-MK2	957-MK2	952-MK2	
905 - BT50 MK2160		MK 2	30	45	122	160	959-MK2	957-MK2	952-MK2	
905 - BT50 MK365		MK 3	36	43	27	65	959-MK3	957-MK3	952-MK3	
905 - BT50 MK3120		MK 3	36	50	82	120	959-MK3	957-MK3	952-MK3	
905 - BT50 MK3170		MK 3	36	60	132	170	959-MK3	957-MK3	952-MK3	
905 - BT50 MK3220		MK 3	36	70	182	220	959-MK3	957-MK3	952-MK3	
905 - BT50 MK4100		MK 4	44	55	62	100	959-MK4	957-MK4	952-MK4	
905 - BT50 MK4150		MK 4	44	60	112	150	959-MK4	957-MK4	952-MK4	
905 - BT50 MK4200		MK 4	44	70	162	200	959-MK4	957-MK4	952-MK4	
905 - BT50 MK5120		MK 5	56	70	82	120	959-MK5	957-MK5	952-MK5	
905 - BT50 MK5170		MK 5	56	70	132	170	959-MK5	957-MK5	952-MK5	
905 - BT50 MK5220		MK 5	56	75	182	220	959-MK5	957-MK5	952-MK5	

Zwischenhülsen MAS BT40, 50

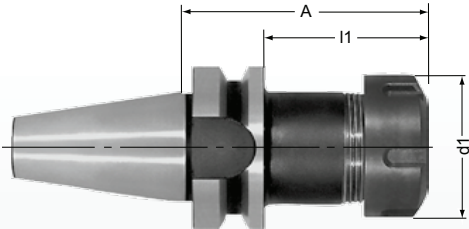
morse taper adaptor MAS BT40, 50
mandrin cône morse MAS BT40, 50



Bestell-Nr. order number No.	MAS	MK	d1	l1	A	
906 - BT40MK150	BT40	MK1	25	23	50	G6,3/8.000
906 - BT40MK250		MK2	32	23	50	
906 - BT40MK370		MK3	40	43	70	
906 - BT40MK495		MK4	48	68	95	
906 - BT50MK260	BT50	MK2	32	22	60	
906 - BT50MK365		MK3	40	27	65	
906 - BT50MK495		MK4	48	57	95	
906 - BT50MK5105		MK5	63	67	105	





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

collet chucks MAS-BT30 - 50 for collets ER 16/25/32/40 with nut type UM
mandrin à pinces MAS-BT30 - 50 pour pinces ER 16/25/32/40



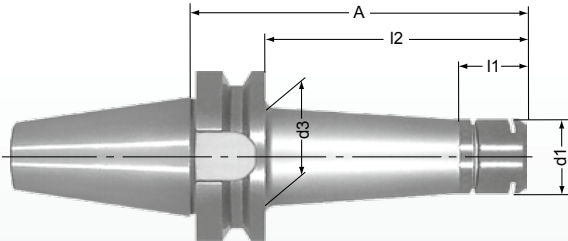
Lieferumfang: BT-Aufnahme mit Spannmutter UM
delivery: collet chuck with nut UM
entendue de livraison: attachement avec écrou UM



Bestell-Nr. order number No.	MAS	ER	d1	l1	A				
910 - BT3050	BT30	16	28	28	50	953-UM16	948-M10	954-034	G6,3/8.000
910 - BT3070		16	28	48	70	953-UM16	948-M10	954-034	
912 - BT3070		25	42	48	70	953-UM25	948-M12	954-013ER25	
912 - BT4060	BT40	25	42	33	60	953-UM25	948-M12	954-013ER25	
913 - BT4070		32	50	43	70	953-UM32	948-M16	954-014ER32	
914 - BT4080		40	63	53	80	953-UM40	948-M16	954-015ER40	
913 - BT5070	BT50	32	50	32	70	953-UM32	948-M16	954-014ER32	
914 - BT5080		40	63	42	80	953-UM40	948-M16	954-015ER40	




Spannzangenfutter MAS-BT30, 40 für Spannzangen ER 20 mit Spannmutter MS

collet chucks MAS-BT30, 40 for collets ER 20 with nut type MS
mandrin à pinces MAS-BT30, 40 pour pinces ER 20



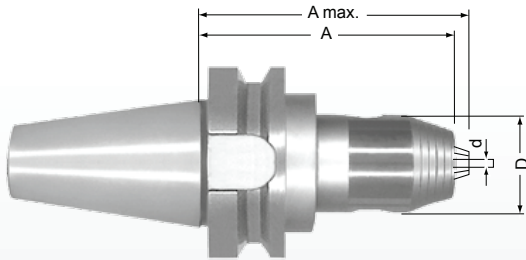
Lieferumfang: BT-Aufnahme mit Spannmutter MS
delivery: collet chuck with nut MS
entendue de livraison: attachement avec ecrou MS




Bestell-Nr. order number No.	MAS	d1	d3	l1	l2	A			
911 - BT3040	BT30	28	33	30	40	62	953-MS20	954-063E20	G2,5/15.000 oder/or U<1gmm
911 - BT3080		28	39	30	80	102	953-MS20	954-063E20	
911 - BT4050	BT40	28	33	30	50	77	953-MS20	954-063E20	
911 - BT40100		28	35	30	100	127	953-MS20	954-063E20	
911 - BT40150		28	36	30	150	177	953-MS20	954-063E20	
911 - BT40200		28	36	30	200	227	953-MS20	954-063E20	

CNC- Bohrfutter MAS-BT40, 50 für Rechts-und Linkslauf

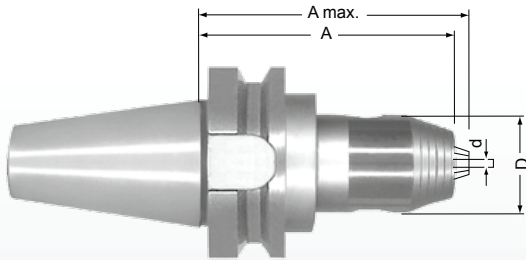
CNC- drill chucks MAS-BT40, 50 for clockwise and anti clockwise rotation
 mandrin de perçage CNC MAS-BT40, 50 pour rotation gauche-droite




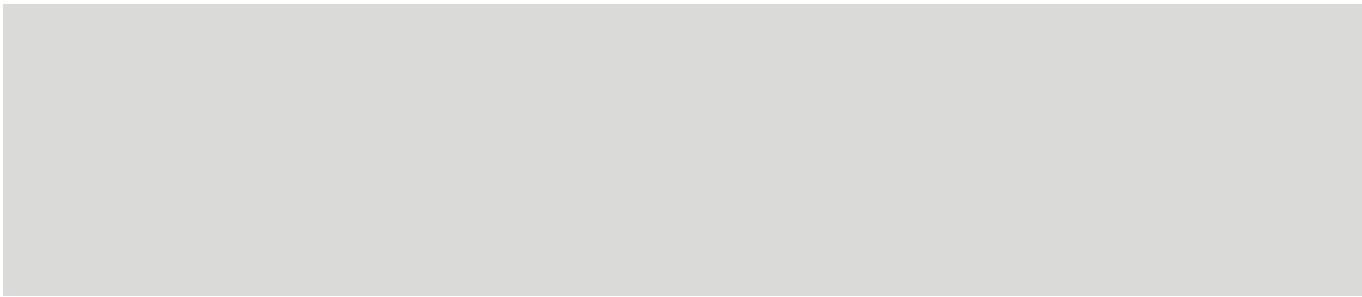
Bestell-Nr. order number No.	MAS	d	D	A	A max.	
908 - BT4008IK	BT40	0,5-8	36	81	84	G6,3/8.000
908 - BT4013IK		1-13	50	98	104	
908 - BT4016IK		3-16	57	103	109	
908 - BT5013IK	BT50	1-13	50	110	116	
908 - BT5016IK		3-16	57	115	121	

CNC- Bohrfutter MAS-BT40, 50 für Rechts-und Linkslauf

CNC- drill chucks MAS-BT40, 50 for clockwise and anti clockwise rotation
 mandrin de perçage CNC MAS-BT40, 50 pour rotation gauche-droite



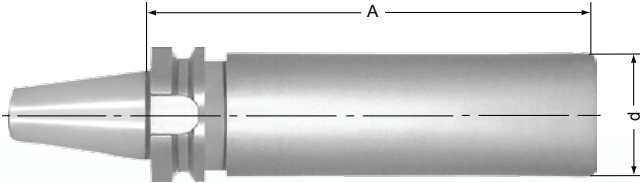
Bestell-Nr. order number No.	MAS	d	D	A	A max.	
908 - BT4008	BT40	0,5-8	36	78	81	G6,3/8.000
908 - BT4013		1-13	50	98	104	
908 - BT4016		3-16	57	103	109	
908 - BT5013	BT50	1-13	50	110	116	
908 - BT5016		3-16	57	115	121	



Rohlinge, MAS-BT40, 50

blanks, MAS-BT40, 50

ébauche, MAS-BT40, 50



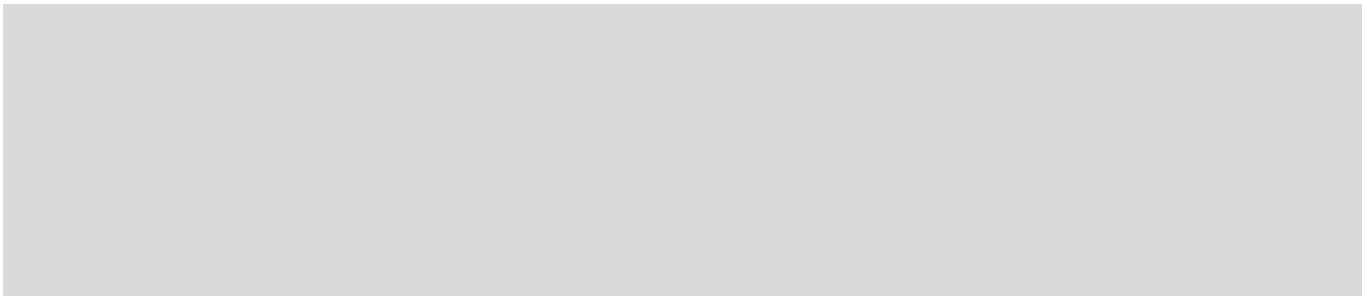
Ausführung: Kegel und Bund gehärtet und geschliffen.
Verwendung: Zur Herstellung von Sonderwerkzeugen.

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

Execution: Cône d'outil et collerette trempés et rectifiés.
Application: Pour la fabrication d'outils spéciaux.



Bestell-Nr. order number No.	MAS	d	A			
971 - BT40250	BT40	63,5	250			
971 - BT50315	BT50	95,5	315			



Verlängerungen/Reduzierungen für Einschraubfräser

extensions/reducers for threaded type cutters

ralonge/douilles pour fraises à queue filetée

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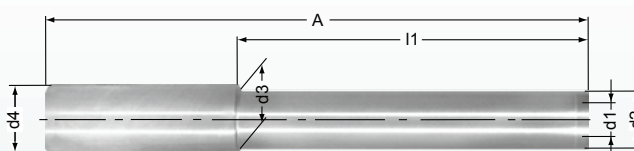
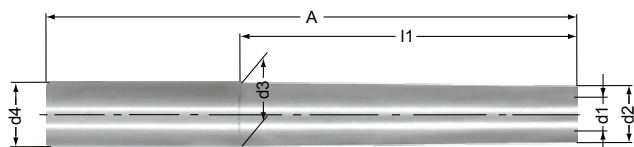
Hartmetallverlängerungen für Einschraubfräser adapters for threaded type cutters adapteur en métal dur pour fraises à queue filetée	166 - 167
Frässtangen mit zyl. Schaft für Einschraubfräser adapters for threaded type cutter adapteur cylindrique pour fraises à queue filetée	168
Schwermetallverlängerungen für Einschraubfräser densimet adapters for threaded type cutters adapteur en densimet pour fraises à queue filetée	169
Verlängerungen / Reduzierungen für Einschraubfräser extensions for threaded type cutter ralonge pour fraises à queue filetée	170
Frässtangen MK für Einschraubfräser adapters with morse taper for threaded type cutter adapteur avec cône morse pour fraises à queue filetée	171

Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Hartmetallverlängerungen für Einschraubfräser

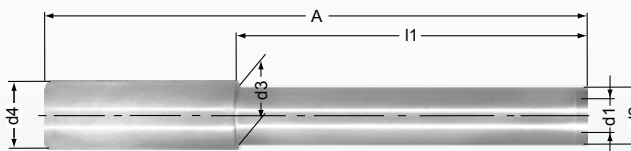
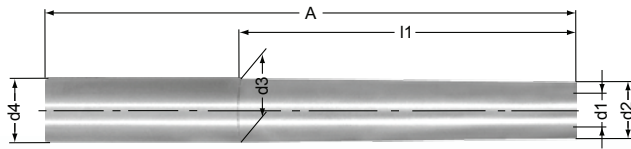
adapters for threaded type cutters
 adapteur en métal dur pour fraises à queue filetée



Bestell-Nr. order number No.	d1	d2	d3	d4	A	l1		
979HM - 120620ZY	M6	9,8	9,8	12	65	20		
979HM - 120640	M6	9,8	11,5	12	85	40		
979HM - 120640ZY	M6	9,8	9,8	12	85	40		
979HM - 120660	M6	9,8	11,5	12	105	60		
979HM - 120660ZY	M6	9,8	9,8	12	105	60		
979HM - 120680	M6	9,8	11,5	12	125	80		
979HM - 120680ZY	M6	9,8	9,8	12	125	80		
979HM - 1206100	M6	9,8	11,5	12	145	100		
979HM - 120720ZY	M7	11,5	11,5	12	65	20		
979HM - 120740ZY	M7	11,5	11,5	12	85	40		
979HM - 120760ZY	M7	11,5	11,5	12	105	60		
979HM - 120780ZY	M7	11,5	11,5	12	125	80		
979HM - 1607100	M7	11,5	15,5	16	148	100		
979HM - 160820ZY	M8	13,6	13,6	16	68	20		
979HM - 160840	M8	13,6	15,5	16	88	40		
979HM - 160840ZY	M8	13,6	13,6	16	88	40		
979HM - 160840ZY-12,5	M8	12,5	12,5	16	88	40		
979HM - 160860	M8	13,6	15,5	16	108	60		
979HM - 160860ZY	M8	13,6	13,6	16	108	60		
979HM - 160860ZY-12,5	M8	12,5	12,5	16	108	60		
979HM - 160880	M8	13,6	15,5	16	128	80		
979HM - 160880ZY	M8	13,6	13,6	16	128	80		
979HM - 1608100	M8	13,6	15,5	16	148	100		
979HM - 1608100ZY	M8	13,6	13,6	16	148	100		
979HM - 1608120	M8	13,6	15,5	16	168	120		
979HM - 161020ZY-15,4	M10	15,4	15,4	16	68	20		
979HM - 161040ZY-15,4	M10	15,4	15,4	16	88	40		
979HM - 161060ZY-15,4	M10	15,4	15,4	16	108	60		
979HM - 161080ZY-15,4	M10	15,4	15,4	16	128	80		
979HM - 1610100ZY-15,4	M10	15,4	15,4	16	148	100		
979HM - 1610120ZY-15,4	M10	15,4	15,4	16	168	120		
979HM - 1610205ZY-15,4	M10	15,4	15,4	16	250	205		

Hartmetallverlängerungen für Einschraubfräser

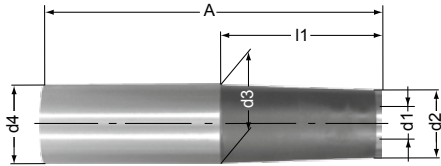
adapters for threaded type cutters
 adapteur en métal dur pour fraises à queue filetée



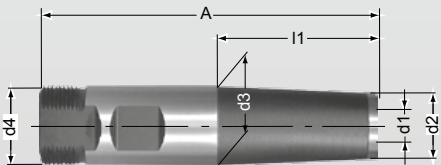
Bestell-Nr. order number No.	d1	d2	d3	d4	A	l1		
979HM - 201040	M10	18	19,5	20	90	40		
979HM - 201060	M10	18	19,5	20	110	60		
979HM - 201080	M10	18	19,5	20	130	80		
979HM - 201080-15,4	M10	15,4	19,5	20	130	80		
979HM - 2010100	M10	18	19,5	20	150	100		
979HM - 2010100-15,4	M10	15,4	19,5	20	150	100		
979HM - 2010120	M10	18	19,5	20	170	120		
979HM - 2010120-15,4	M10	15,4	19,5	20	170	120		
979HM - 2010150	M10	18	19,5	20	200	150		
979HM - 2010150-15,4	M10	15,4	19,5	20	200	150		
979HM - 2010200	M10	19	19	20	250	200		
979HM - 251240ZY	M12	23	23	25	96	40		
979HM - 251275	M12	21	24,5	25	131	75		
979HM - 251275ZY	M12	23	23	25	131	75		
979HM - 2512100	M12	21	24,5	25	156	100		
979HM - 2512100ZY	M12	23	23	25	156	100		
979HM - 2512125	M12	21	24,5	25	181	125		
979HM - 2512150	M12	21	24,5	25	206	150		
979HM - 2512175	M12	21	24,5	25	231	175		
979HM - 3216100	M16	29	31,5	32	160	100		
979HM - 3216150	M16	29	31,5	32	210	150		
979HM - 3216200	M16	29	31,5	32	260	200		

Frässtangen mit zyl. Schaft für Einschraubfräser

adapters for threaded type cutter
 adaptateur cylindrique pour fraises à queue fileté



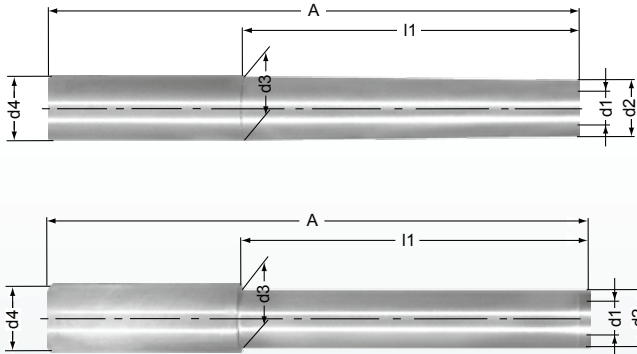
Bestell-Nr. order number No.	d1	d2	d3	d4	A	l1		
978 - 120510	M5	10	11,5	12	55	10		
978 - 120520	M5	10	11,5	12	65	20		
978 - 120620	M6	10	11,5	12	65	20		
978 - 160820	M8	13,8	15,5	16	68	20		
978 - 160825ZY	M8	13,8	13,8	16	73	25		
978 - 160840	M8	13,8	15,5	16	88	40		
978 - 201025	M10	18	19,5	20	75	25		
978 - 201045	M10	18	19,5	20	95	45		
978 - 251230	M12	21	24,5	25	86	30		
978 - 251250	M12	21	24,5	25	106	50		
978 - 321630	M16	29	31,5	32	90	30		
978 - 321650	M16	29	31,5	32	110	50		
978 - 3216100	M16	29	31,5	32	160	100		



Bestell-Nr. order number No.	d1	d2	d3	d4	A	l1		
975 - 120510	M5	10	11,5	12	55	10		
975 - 120520	M5	10	11,5	12	65	20		
975 - 120620	M6	10	11,5	12	65	20		
975 - 160820	M8	13,8	15,5	16	68	20		
975 - 160840	M8	13,8	15,5	16	88	40		
975 - 201025	M10	18	19,5	20	75	25		
975 - 201045	M10	18	19,5	20	95	45		
975 - 251230	M12	21	24,5	25	86	30		
975 - 251250	M12	21	24,5	25	106	50		
975 - 321630	M16	29	31,5	32	90	30		
975 - 321650	M16	29	31,5	32	110	50		

Schwermetallverlängerungen für Einschraubfräser

densimet adapters for threaded type cutters
 adapteur en densimet pour fraises à queue filetée



Nur auf Anfrage lieferbar

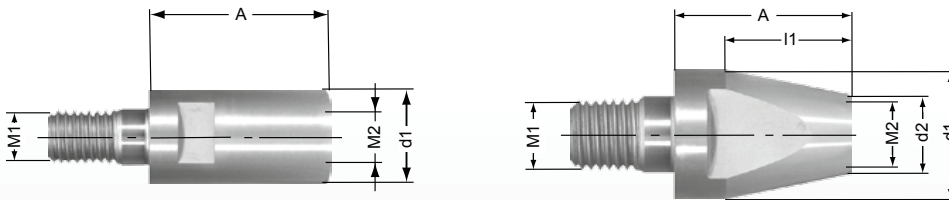
Only on request
 Seulement sur demande



Bestell-Nr. order number No.	d1	d2	d3	d4	A	l1		
979 - 120540	M5	10	11,5	12	85	40		
979 - 120560	M5	10	11,5	12	105	60		
979 - 120580	M5	10	11,5	12	125	80		
979 - 120640	M6	10	11,5	12	85	40		
979 - 120640ZY	M6	9,8	9,8	12	85	40		
979 - 120660	M6	10	11,5	12	104	60		
979 - 120660ZY	M6	9,8	9,8	12	105	60		
979 - 120680	M6	10	11,5	12	125	80		
979 - 120680ZY	M6	9,8	9,8	12	125	80		
979 - 1206100	M6	10	11,5	12	145	100		
979 - 160840	M8	13,6	15,5	16	88	40		
979 - 160840ZY	M8	13,6	13,6	16	88	40		
979 - 160860	M8	13,6	15,5	16	108	60		
979 - 160860ZY	M8	13,6	13,6	16	108	60		
979 - 160880	M8	13,6	15,5	16	128	80		
979 - 160880ZY	M8	13,6	13,6	16	128	80		
979 - 1608100	M8	13,6	15,5	16	148	100		
979 - 1608100ZY	M8	13,6	13,6	16	148	100		
979 - 1608120	M8	13,6	15,5	16	168	120		
979 - 201040	M10	18	19,5	20	90	40		
979 - 201060	M10	18	19,5	20	110	60		
979 - 201080	M10	18	19,5	20	130	80		
979 - 2010100	M10	18	19,5	20	150	100		
979 - 2010120	M10	18	19,5	20	170	120		
979 - 2510140	M10	18	24,5	25	196	140		
979 - 251275	M12	21	24,5	25	131	75		
979 - 2512100	M12	21	24,5	25	156	100		
979 - 2512125	M12	21	24,5	25	181	125		
979 - 2512150	M12	21	24,5	25	206	150		
979 - 2512175	M12	21	24,5	25	231	175		
979 - 3216100	M16	29	31,5	32	160	100		
979 - 3216150	M16	29	31,5	32	210	150		
979 - 3216200	M16	29	31,5	32	260	200		

Verlängerungen/Reduzierungen für Einschraubfräser

extensions/reducers for threaded type cutter
 rallonge/douilles pour fraises à queue filetée



Verlängerungen für Einschraubfräser

extensions for threaded type cutter
 rallonge pour fraises à queue filetée



Bestell-Nr. order number No.	M1	M2	d1	d2	A	l1		
976 - 0840	8	8	13,8	-	40	-		
976 - 0860	8	8	13,8	-	60	-		
976 - 1040	10	10	18	-	40	-		
976 - 1060	10	10	18	-	60	-		
976 - 1240	12	12	21	-	40	-		
976 - 1260	12	12	21	-	60	-		
976 - 1640	16	16	29	-	40	-		
976 - 1660	16	16	29	-	60	-		

Reduzierungen für Einschraubfräser

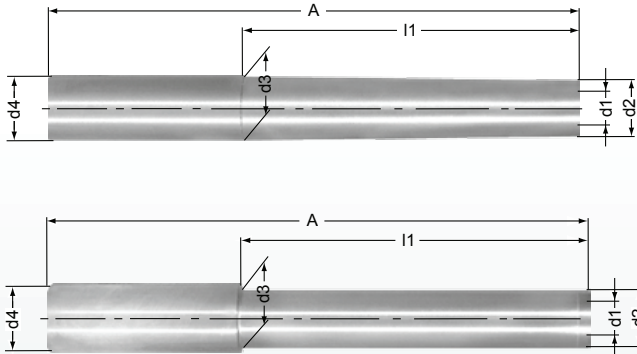
reducers for threaded type cutter
 douilles de réduction pour fraises à queue filetée



Bestell-Nr. order number No.	M1	M2	d1	d2	A	l1		
977 - 080640	8	6	13,8	10	40	25		
977 - 100640	10	6	18	10	40	32		
977 - 100840	10	8	18	13,8	40	25		
977 - 120840	12	8	21	13,8	40	32		
977 - 120860	12	8	21	13,8	60	52		
977 - 121040	12	10	21	18	40	15		
977 - 121060	12	10	21	18	60	40		
977 - 160840	16	8	29	13,8	40	35		
977 - 161040	16	10	29	18	40	28		
977 - 161060	16	10	29	18	60	48		
977 - 161240	16	12	29	21	40	19		
977 - 161260	16	12	29	21	60	39		

Schwermetallverlängerungen für Einschraubfräser

densimet adapters for threaded type cutters
 adapteur en densimet pour fraises à queue filetée

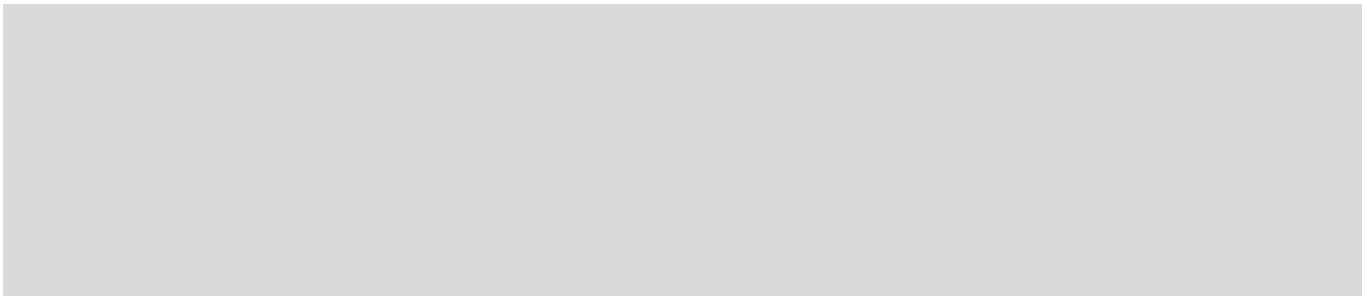


Nur auf Anfrage lieferbar

Only on request
 Seulement sur demande



Bestell-Nr. order number No.	d1	d2	d3	d4	A	l1		
979 - 120540	M5	10	11,5	12	85	40		
979 - 120560	M5	10	11,5	12	105	60		
979 - 120580	M5	10	11,5	12	125	80		
979 - 120640	M6	10	11,5	12	85	40		
979 - 120640ZY	M6	9,8	9,8	12	85	40		
979 - 120660	M6	10	11,5	12	104	60		
979 - 120660ZY	M6	9,8	9,8	12	105	60		
979 - 120680	M6	10	11,5	12	125	80		
979 - 120680ZY	M6	9,8	9,8	12	125	80		
979 - 1206100	M6	10	11,5	12	145	100		
979 - 160840	M8	13,6	15,5	16	88	40		
979 - 160840ZY	M8	13,6	13,6	16	88	40		
979 - 160860	M8	13,6	15,5	16	108	60		
979 - 160860ZY	M8	13,6	13,6	16	108	60		
979 - 160880	M8	13,6	15,5	16	128	80		
979 - 160880ZY	M8	13,6	13,6	16	128	80		
979 - 1608100	M8	13,6	15,5	16	148	100		
979 - 1608100ZY	M8	13,6	13,6	16	148	100		
979 - 1608120	M8	13,6	15,5	16	168	120		
979 - 201040	M10	18	19,5	20	90	40		
979 - 201060	M10	18	19,5	20	110	60		
979 - 201080	M10	18	19,5	20	130	80		
979 - 2010100	M10	18	19,5	20	150	100		
979 - 2010120	M10	18	19,5	20	170	120		
979 - 2510140	M10	18	24,5	25	196	140		
979 - 251275	M12	21	24,5	25	131	75		
979 - 2512100	M12	21	24,5	25	156	100		
979 - 2512125	M12	21	24,5	25	181	125		
979 - 2512150	M12	21	24,5	25	206	150		
979 - 2512175	M12	21	24,5	25	231	175		
979 - 3216100	M16	29	31,5	32	160	100		
979 - 3216150	M16	29	31,5	32	210	150		
979 - 3216200	M16	29	31,5	32	260	200		



Zubehör

Acessories
Accessoires

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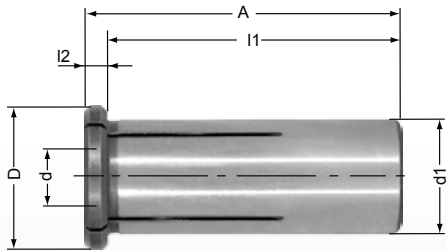
ER - Spannzangen / Standard nach DIN 6499 Form B collets type ER DIN 6499 form B Pinces de serrage système ER DIN 6499	174 - 175
Reduzierhülsen für Hydro - Dehnspannfutter reductions sleeves for hydraulic expansion chucks Douilles de réduction pour mandrins expansibles hydrauliques	176
Montageblock tightening fixtures bloc de montage	177
Torxschrauben / Torxschlüssel clamping screws / torx wrenches vis / clé	178
Kühlmittelübergaberohre / Schlüssel coolant tubes / wrenches raccord d'arrosage pour le refroidissement par le centre / clé	179
Anzugsbolzen pull studs tirettes	180 - 181
Pictogramme pictograms pictogrammes	182 - 183

Andere Ausführungen und Längen auf Anfrage lieferbar.

**Specials on request.
Execution special sur demand.**

Reduzierhülsen für Hydro-Dehnspannfutter

reductions sleeves for hydraulic expansion chucks
 douilles de réduction pour mandrins expansibles hydrauliques



d1 = 12							
Bestell-Nr. order number No.	D	d	d1	l1	l2	A	
946 - 1204	16	4	12	44	2	46	
946 - 1206	16	6	12	44	2	46	
946 - 1208	16	8	12	44	2	46	
946 - 1210	16	10	12	44	2	46	

d1 = 20							
Bestell-Nr. order number No.	D	d	d1	l1	l2	A	
946 - 2004	25	4	20	51	2	53	
946 - 2006	25	6	20	51	2	53	
946 - 2008	25	8	20	51	2	53	
946 - 2010	25	10	20	51	2	53	
946 - 2012	25	12	20	51	2	53	
946 - 2014	25	14	20	51	2	53	
946 - 2016	25	16	20	51	2	53	

d1 = 32							
Bestell-Nr. order number No.	D	d	d1	l1	l2	A	
946 - 3204	36	4	32	60	3	63	
946 - 3206	36	6	32	60	3	63	
946 - 3208	36	8	32	60	3	63	
946 - 3210	36	10	32	60	3	63	
946 - 3212	36	12	32	60	3	63	
946 - 3214	36	14	32	60	3	63	
946 - 3216	36	16	32	60	3	63	
946 - 3218	36	18	32	60	3	63	
946 - 3220	36	20	32	60	3	63	
946 - 3225	36	25	32	60	3	63	

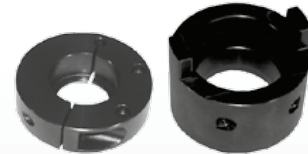
Montageblock

tightening fixtures
bloc de montage



Wechseleinsatz

flange for tightening fixture
Flasque de montage



Bestell-Nr. order number No.
991 - BT30
991 - BT40
991 - BT50
991 - SK30
991 - SK40
991 - SK50
991 - HSK32
991 - HSK40
991 - HSK50
991 - HSK63
991 - HSK80
991 - HSK100
991 - HSK32E
991 - HSK40E
991 - HSK50E
991 - HSK63E

Typ	B	L	H
BT - 30	130	260	160
BT - 40	130	260	160
BT - 50	130	260	160
SK - 30	130	260	160
SK - 40	130	260	160
SK - 50	130	260	160
HSK - A32	130	260	160
HSK - A40	130	260	160
HSK - A50	130	260	160
HSK - A63	130	260	160
HSK - A80	130	260	160
HSK - A100	130	260	160
HSK - E/F32	130	260	160
HSK - E/F40	130	260	160
HSK - E/F50	130	260	160
HSK - E/F63	130	260	160

Bestell-Nr. order number No.
991 - BT30 W
991 - BT40 W
991 - BT50 W
991 - SK30 W
991 - SK40 W
991 - SK50 W
991 - HSK32 W
991 - HSK40 W
991 - HSK50 W
991 - HSK63 W
991 - HSK80 W
991 - HSK100 W
991 - HSK32E W
991 - HSK40E W
991 - HSK50E W
991 - HSK63E W

Zubehör

accessories
accessoires



Torxschrauben / clamping screws / vis	
Bestell-Nr. order number No.	Größe (Gewinde) / size / Grandeur
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



Passschrauben / clamping screws / vis	
Bestell-Nr. order number No.	Größe (Gewinde) / size / Grandeur
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 / clé	
Bestell-Nr. order number No.	Größe (Gewinde) / size / Grandeur
994 06	T 6
994 07	T 7
994 08	T 8
994 10	T 10
994 15	T 15
994 20	T 20

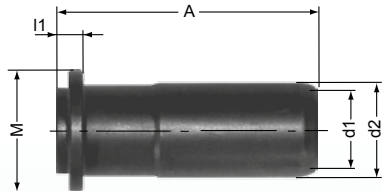


Klemmscheiben, Klemmschrauben / clamp washer / disque de serrage e vis				
Bestell-Nr. order number No.	Größe	M	Torxschlüssel	Bezeichnung
995 01	Ø12			Klemmscheibe
995 05	Ø 8	3,5	994 15	Klemmschraube für WSP Ø 12

Kühlmittelübergaberohre für HSK- Aufnahmen

coolant tubes

raccord d'arrosage pour le refroidissement par le centre

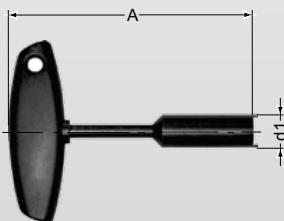


Bestell-Nr. order number No.	HSK	d1	d2	M	l1	A		
951 - A32	A - 32	3,5	6	M 10x 1,0	5,5	25,7		
951 - A40	A - 40	5	8	M 12x 1,0	7,5	29,2		
951 - A50	A - 50	6,4	10	M 16x 1,0	9,5	32,7		
951 - A63	A - 63	8	12	M 18x 1,0	11,5	36,2		
951 - A80	A - 80	10	14	M 20x 1,5	13,5	39,7		
951 - A100	A - 100	12	16	M 24x 1,5	15,5	43,6		

Schlüssel für Kühlmittelübergaberohre

wrench for coolant pipe

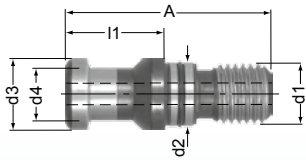
Clé pour raccord d'arrosage




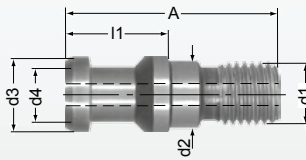
Bestell-Nr. order number No.	HSK	d1	L					
952 - A32	A - 32	8,8	110					
952 - A40	A - 40	10,8	110					
952 - A50	A - 50	14,5	120					
952 - A63	A - 63	16,5	130					
952 - A80	A - 80	18	140					
952 - A100	A - 100	22	140					

Anzugsbolzen

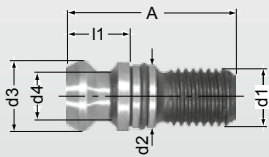
pull studs
tirettes



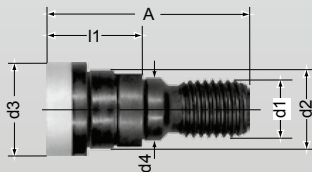
DIN 69 872 A								
Bestell-Nr. order number No.	SK	d1	d2	d3	d4	l1	A	
980 - A40	40	M16	17	19	14	26	54	x
980 - A50	50	M24	25	28	21	34	74	x



DIN 69 872 B								
Bestell-Nr. order number No.	SK	d1	d2	d3	d4	l1	A	
980 - B40	40	M16	17	19	14	26	54	
980 - B50	50	M24	25	28	21	34	34	



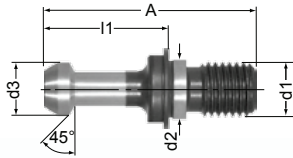
ISO 7388								
Bestell-Nr. order number No.	SK	d1	d2	d3	d4	l1	A	
981 - 40	40	M16	17	18,95	12,95	16,4	44,5	
981 - 50	50	M24	25	29,1	19,6	25,55	65,5	



DIN 20 80								
Bestell-Nr. order number No.	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	

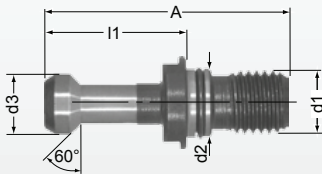
Anzugsbolzen

pull studs
tirettes



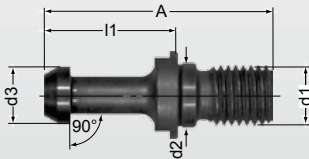
MAS BT - Typ 1

Bestell-Nr. order number No.	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 No.	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 No.	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
pictogrammes



Werkzeug mit Innenkühlung
through coolant
arrosage intérieur



Bearbeitungsrichtung
machining direction
direction d'usinage



Bearbeitungsrichtung
machining direction
direction d'usinage



Planfräsen
face milling
surfacer



Nutfräsen
slot milling
rainurage



Eckfräsen / Umfangfräsen
step milling / side milling
fraisage contournage



Fasfräsen
chamfering
ebavurage



Freiformflächenfräsen
contour milling
fraisage de formes



Eintauchwinkel
ramping
angle de plongée



Zirkularfräsen
helix milling
fraisage circulaire



Innenkühlung wahlweise, zentral oder über Bund
through coolant either central or radial
arrosage par le centre ou par la collerette



Guss
cast iron
fonte



Stahl
steel
acier



Mit Innenkühlung
through coolant
arrosage intérieur



Ohne Innenkühlung
without coolant
sans arrosage



Wendeplatteneinstellung 0°
rake angle of insert pocket 0°
Position de la plaquette 0°



Wendeplatteneinstellung 7° positiv
rake angle of insert pocket 7° positiv
Position de la plaquette 7° positive



Wendeplatteneinstellung 12° positiv
rake angle of insert pocket 12° positiv
Position de la plaquette 12° positive



Diamant beschichtet
diamond coated
revêtement diamant



Diamant beschichtet
diamond coated
revêtement diamant



beschichtet / unbeschichtet
coated / uncoated
revêtement / non revêtu



Unbeschichtet
uncoated
pas revêtu



Aluminium und Nichteisenwerkstoffe
aluminium and non ferrous material
aluminum et métal non-ferreux



Hardlube beschichtet
hardlube coated
revêtement hardlube



TIALN beschichtet
TIALN coated
revêtement TIALN

Piktogramme

pictograms
pictogrammes



Schaftausführung DIN 6535-HA
shank DIN 6535-HA
queue DIN 6535-HA



Schaftausführung DIN 6535-HB
shank DIN 6535-HB
queue DIN 6535-HB



Morsekegel DIN 228-A
morse taper DIN 228-A
attachement conique morse DIN 228-A



Steilkegel DIN 2080
shank DIN 2080
Attachement conique DIN 2080



Spannzange DIN 6499
collet DIN 6499
pince DIN 6499



Steilkegel DIN 69 871 A
shank DIN 69 871 A
attachement conique DIN 69 871 A



Steilkegel DIN 69 871 AD
shank DIN 69 871 AD
attachement conique DIN 69 871 AD



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



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



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



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



Schaftausführung DIN 1835-B
shank DIN 1835-B
queue DIN 1835-B



Schaftausführung DIN 1835-A
shank DIN 1835-A
queue DIN 1835-A



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



Polygonschaftkegel ISO 26623-1
Polygonal taper interface ISO 26623-1
Interfaces à cône polygonal ISO 26623-1



Polygonschaftkegel ISO 26623-1
Polygonal taper interface ISO 26623-1
Interfaces à cône polygonal ISO 26623-1

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