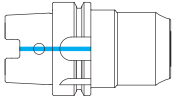




**HYF**

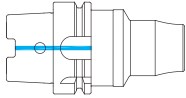


**Milling hydraulic chuck**  
Mandrino idraulico per fresatura

DIN 69893-1	Form A				G 2,5 25.000 rpm
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70

**HYF-S**

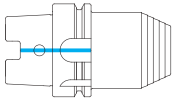


**Milling hydraulic chuck - reduced**  
Mandrino idraulico per fresatura - scaricato

DIN 69893-1	Form A				G 2,5 25.000 rpm
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71

**HY**

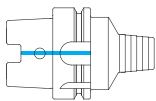


**Hydraulic chuck**  
Mandrino idraulico



DIN 69893-1	Form A				G 2,5 25.000 rpm
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72

**HYS**

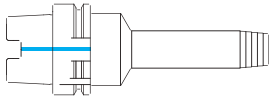


**Hydraulic chuck - reduced**  
Mandrino idraulico - scaricato


DIN 69893-1	Form A				G 2,5 25.000 rpm
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73

**HYLS**

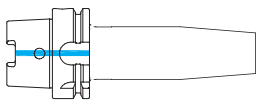


**Hydraulic chuck - reduced long**  
Mandrino idraulico - scaricato lungo

DIN 69893-1	Form A				G 2,5 25.000 rpm
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74

**SF 40/50**

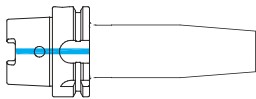


**Shrink fit chuck**  
Mandrino calettamento a caldo

DIN 69893-1	Form A				G 2,5 25.000 rpm
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75

**SF 63**

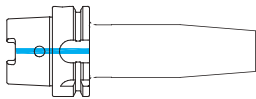


**Shrink fit chuck**  
Mandrino calettamento a caldo


DIN 69893-1	Form A				G 2,5 25.000 rpm
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76

**SF 80**



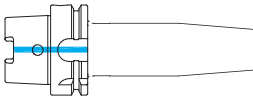
**Shrink fit chuck**  
Mandrino a calettamento a caldo

DIN 69893-1	Form A				G 2,5 25.000 rpm
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77



SF 100

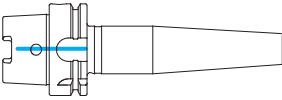


**Shrink fit chuck**  
**Mandrino a calettamento a caldo**

DIN 69893-1	Form A			G 2,5 25.000 rpm
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78

SF-S 63

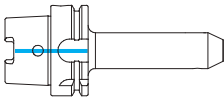


**Shrink fit chuck - slim**  
**Mandrino calettamento a caldo - snello**

DIN 69893-1	Form A			G 2,5 25.000 rpm
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79

W 40/50

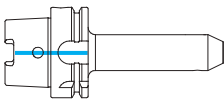


**Weldon chuck**  
**Mandrino Weldon**

DIN 69893-1	Form A			G 6,3 15.000 rpm
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80

W 63

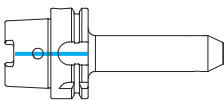


**Weldon chuck**  
**Mandrino Weldon**

DIN 69893-1	Form A			G 6,3 15.000 rpm
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81

W 80/100

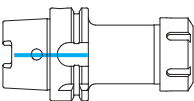


**Weldon chuck**  
**Mandrino Weldon**

DIN 69893-1	Form A			G 6,3 15.000 rpm
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82

ER-NT

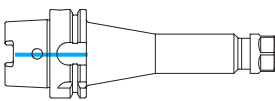


**ER chuck with and without thread**  
**Portapinze ER con e senza filetto**

DIN 69893-1	Form A			G 6,3 15.000 rpm
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83

ER-LT

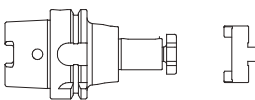


**ER chuck with thread - long**  
**Portapinze ER con filetto - lungo**

DIN 69893-1	Form A			G 6,3 15.000 rpm
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84

SM



**Shell end mill holder**  
**Portafrese a manicotto**

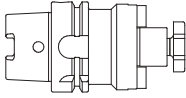
DIN 69893-1	Form A			G 6,3 15.000 rpm
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85

HSK-A



## SM-E 50/60

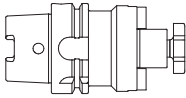


Shell end mill holder - enlarged  
Portafrese a manicotto - maggiorato

DIN 69893-1	Form A				G 6,3 15.000 rpm
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86

## SM-E 80/100

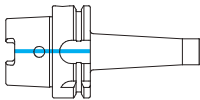


Shell end mill holder - enlarged  
Portafrese a manicotto - maggiorato

DIN 69893-1	Form A				G 6,3 15.000 rpm
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87

## SI 63

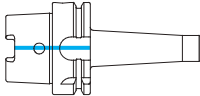


Screw-In milling cutters holder  
Portatestina con filetto interno

DIN 69893-1	Form A				G 2,5 20.000 rpm
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88

## SI 100

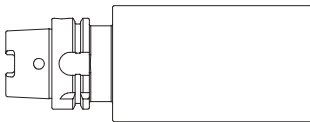


Screw-In milling cutters holder  
Portatestina con filetto interno

DIN 69893-1	Form A				G 2,5 20.000 rpm
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89

## TB

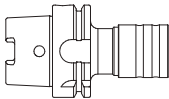


Tool blank  
Barra grezza

DIN 69893-1					
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90

## TH



Tapping chuck  
Mandrino maschiatore

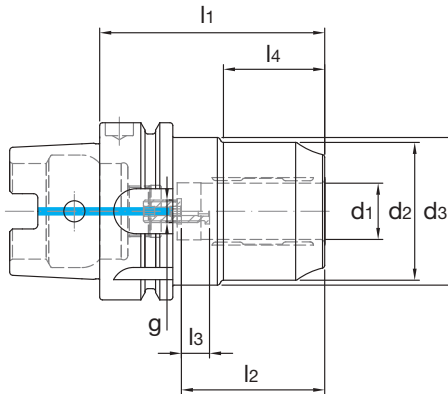
DIN 69893-1	Form A				
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91

TOOL HOLDERS

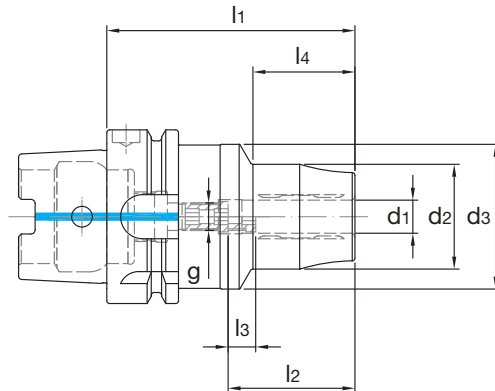
EXO





DIN 69893-1	Form A				G 2,5 25.000 rpm
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art.	HSK-A	d1	d2	d3	l1	l2	l3	l4	g	kg	€
HSK-A . 063 . HYF . 20 . 080	63	20	49	52,5	80	51	10	36	M8x1	1,3	354,00
HSK-A . 100 . HYF . 20 . 085	100	20	49	52,5	85	51	10	36	M8x1	2,6	389,00
HSK-A . 100 . HYF . 32 . 100	100	32	70	75	100	61	10	51	M8x1	3,8	389,00

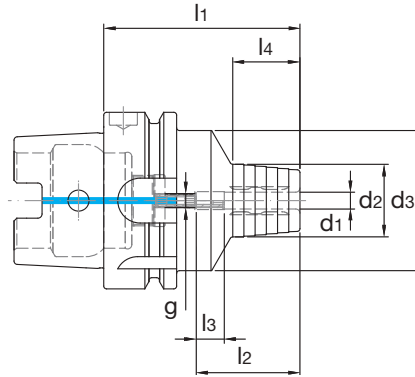
DIN 69893-1	Form A				G 2,5 25.000 rpm
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art.	HSK-A	d1	d2	d3	l1	l2	l3	l4	g	kg	€
HSK-A . 063 . HYF-S . 06 . 080	63	6	32	50	80	37	10	26	M5	1,1	573,00
HSK-A . 063 . HYF-S . 08 . 080	63	8	34	50	80	37	10	27	M6	1,1	573,00
HSK-A . 063 . HYF-S . 10 . 085	63	10	36	50	85	41	10	32	M8x1	1,2	573,00
HSK-A . 063 . HYF-S . 12 . 090	63	12	38	52,5	90	46	10	37	M10x1	1,3	573,00
HSK-A . 063 . HYF-S . 14 . 090	63	14	40	52,5	90	46	10	37	M10x1	1,3	573,00
HSK-A . 063 . HYF-S . 16 . 095	63	16	42	52,5	95	49	10	42	M12x1	1,5	573,00
HSK-A . 063 . HYF-S . 18 . 095	63	18	44	52,5	95	49	10	42	M12x1	1,5	573,00
HSK-A . 063 . HYF-S . 20 . 100	63	20	48	52,5	100	51	10	45	M16x1	1,5	573,00
HSK-A . 063 . HYF-S . 25 . 120	63	25	57	53	120	57	10	62	M16x1	2,1	573,00
HSK-A . 063 . HYF-S . 32 . 125	63	32	63	53	125	61	10	62	M16x1	2,3	573,00
HSK-A . 100 . HYF-S . 06 . 085	100	6	32	50	85	37	10	26	M5	2,8	768,00
HSK-A . 100 . HYF-S . 08 . 085	100	8	34	50	85	37	10	27	M6	2,8	768,00
HSK-A . 100 . HYF-S . 10 . 090	100	10	36	50	90	41	10	32	M8x1	2,9	768,00
HSK-A . 100 . HYF-S . 12 . 095	100	12	38	52,5	95	46	10	37	M10x1	2,9	768,00
HSK-A . 100 . HYF-S . 14 . 095	100	14	40	52,5	95	46	10	37	M10x1	2,9	768,00
HSK-A . 100 . HYF-S . 16 . 100	100	16	42	52,5	100	49	10	42	M12x1	3	768,00
HSK-A . 100 . HYF-S . 18 . 100	100	18	44	52,5	100	49	10	42	M12x1	3	768,00
HSK-A . 100 . HYF-S . 20 . 105	100	20	48	52,5	105	51	10	45	M16x1	3	768,00
HSK-A . 100 . HYF-S . 25 . 115	100	25	57	63	115	57	10	60	M16x1	3,8	768,00
HSK-A . 100 . HYF-S . 32 . 120	100	32	63	75	120	61	10	60	M16x1	4	768,00


Accessories for Hydraulic chuck pag.158-161 - Coolant tube pag. 174  
Accessori per Mandrini idraulici per fresatura pag.158-161 - Adduttore refrigerante pag. 174

HSK-A





DIN  
69893-1

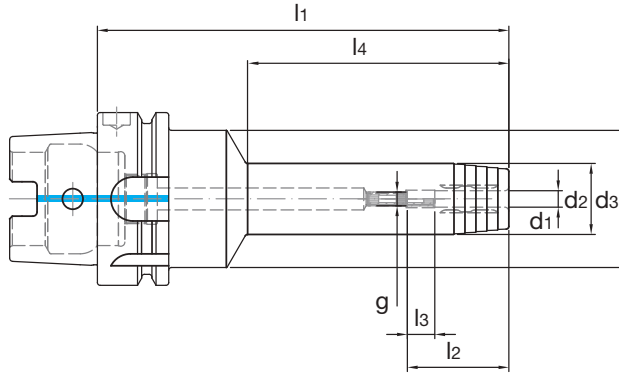
Form  
A



G 2,5  
25.000 rpm

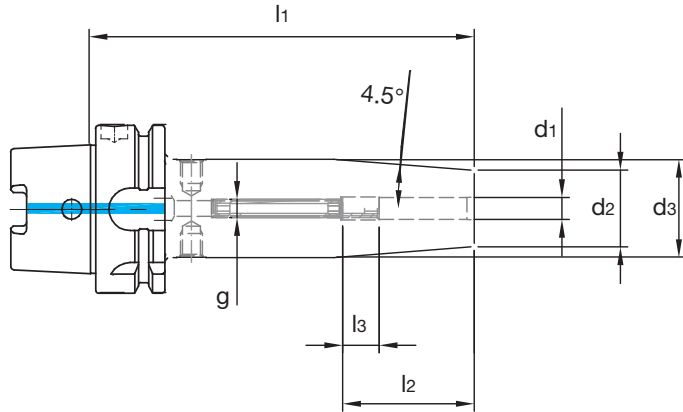
art.	HSK-A	d1	d2	d3	l1	l2	l3	l4	g	kg		€
HSK-A .063 .HY-S .06 .070	63	6	26	50	70	37	10	24	M5	0,9		513,00
HSK-A .063 .HY-S .08 .070	63	8	28	50	70	37	10	25	M6	0,9		513,00
HSK-A .063 .HY-S .10 .080	63	10	30	50	80	41	10	35	M8x1	1		513,00
HSK-A .063 .HY-S .12 .085	63	12	32	50	85	46	10	40	M10x1	1		513,00
HSK-A .063 .HY-S .14 .085	63	14	34	50	85	46	10	40	M10x1	1,1		513,00
HSK-A .063 .HY-S .16 .090	63	16	38	50	90	49	10	46	M12x1	1,2		513,00
HSK-A .063 .HY-S .18 .090	63	18	40	50	90	49	10	47	M12x1	1,2		513,00
HSK-A .063 .HY-S .20 .090	63	20	42	50	90	51	10	48	M16x1	1,2		513,00
HSK-A .063 .HY-S .25 .120	63	25	57	53	120	57	10	63	M16x1	2,1		513,00
HSK-A .063 .HY-S .32 .125	63	32	63	59	125	61	10	61	M16x1	2,3		513,00
HSK-A .100 .HY-S .20 .105	100	20	42	50	105	51	10	59	M16x1	2,7		708,00
HSK-A .100 .HY-S .32 .110	100	32	63	67	110	61	10	60	M16x1	3,5		708,00





DIN 69893-1	Form A				G 2,5 25.000 rpm
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art.	HSK-A	d1	d2	d3	l1	l2	l3	l4	g	kg			€
HSK-A . 063 . HY-LS . 06 . 150	63	6	26	50	150	37	10	103	M5	1,7			917,00
HSK-A . 063 . HY-LS . 06 . 200	63	6	26	50	200	37	10	153	M5	1,9			960,00
HSK-A . 063 . HY-LS . 08 . 150	63	8	28	50	150	37	10	104	M6	1,7			917,00
HSK-A . 063 . HY-LS . 08 . 200	63	8	28	50	200	37	10	154	M6	1,9			960,00
HSK-A . 063 . HY-LS . 10 . 150	63	10	30	50	150	41	10	104	M8x1	1,7			917,00
HSK-A . 063 . HY-LS . 10 . 200	63	10	30	50	200	41	10	154	M8x1	1,9			960,00
HSK-A . 063 . HY-LS . 12 . 150	63	12	32	50	150	46	10	105	M10x1	1,7			917,00
HSK-A . 063 . HY-LS . 12 . 200	63	12	32	50	200	46	10	155	M10x1	1,9			960,00
HSK-A . 063 . HY-LS . 14 . 150	63	14	34	50	150	46	10	105	M10x1	1,9			917,00
HSK-A . 063 . HY-LS . 14 . 200	63	14	34	50	200	46	10	155	M10x1	2,1			960,00
HSK-A . 063 . HY-LS . 16 . 150	63	16	38	50	150	49	10	106	M12x1	2,0			917,00
HSK-A . 063 . HY-LS . 16 . 200	63	16	38	50	200	49	10	156	M12x1	2,3			960,00
HSK-A . 063 . HY-LS . 18 . 150	63	18	40	50	150	49	10	107	M12x1	2,1			917,00
HSK-A . 063 . HY-LS . 18 . 200	63	18	40	50	200	49	10	157	M12x1	2,4			960,00
HSK-A . 063 . HY-LS . 20 . 150	63	20	42	50	150	51	10	108	M16x1	2,1			917,00
HSK-A . 063 . HY-LS . 20 . 200	63	20	42	50	200	51	10	158	M16x1	2,4			960,00

DIN  
69893-1

Form  
A



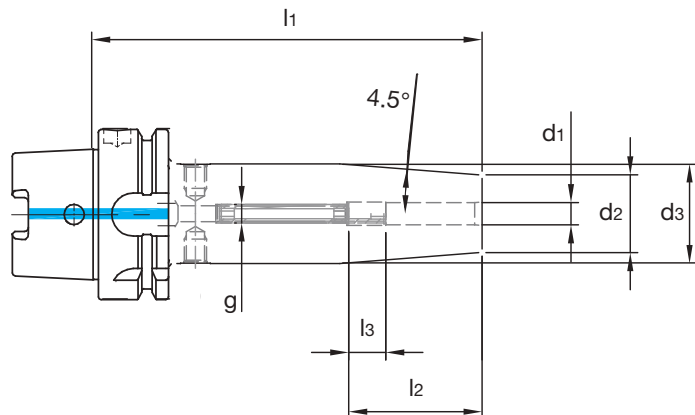
$\sqrt{3} \mu\text{m}$

G 2,5  
25.000 rpm

HSK-A

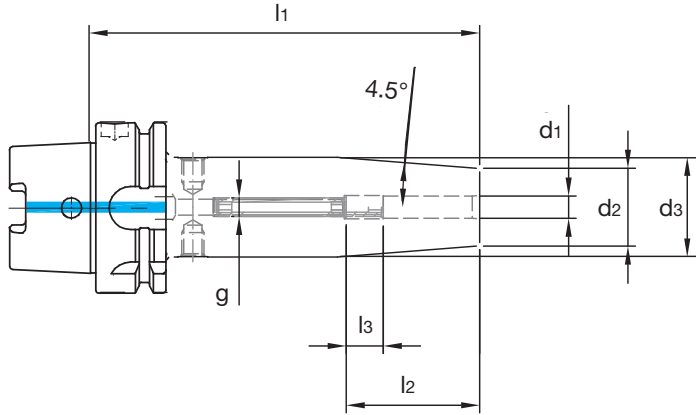
art.	HSK-A	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-A .040 . SF .03 .065	40	3	12	17	65	-	-	-	0,3	B	279,00
HSK-A .040 . SF .04 .065	40	4	12	17	65	-	-	-	0,3	B	258,00
HSK-A .040 . SF .05 .065	40	5	12	17	65	-	-	-	0,3	B	248,00
HSK-A .040 . SF .06 .080	40	6	21	31	80	36	10	M 5	0,5	B	235,00
HSK-A .040 . SF .08 .080	40	8	21	31	80	36	10	M 6	0,5	B	235,00
HSK-A .040 . SF .10 .080	40	10	24	34	80	41	10	M 8 x 1	0,5	B	235,00
HSK-A .040 . SF .12 .090	40	12	24	34	90	47	10	M10 x 1	0,5	B	235,00
HSK-A .040 . SF .14 .090	40	14	27	34	90	47	10	M10 x 1	0,6	B	235,00
HSK-A .040 . SF .16 .090	40	16	27	34	90	50	10	M12 x 1	0,6	B	235,00

HSK-A .050 . SF .03 .065	50	3	12	17	65	-	-	-	0,4	B	321,00
HSK-A .050 . SF .04 .065	50	4	12	17	65	-	-	-	0,4	B	313,00
HSK-A .050 . SF .05 .065	50	5	12	17	65	-	-	-	0,4	B	300,00
HSK-A .050 . SF .06 .080	50	6	21	30	80	36	10	M 5	0,6	B	271,00
HSK-A .050 . SF .08 .080	50	8	21	30	80	36	10	M 6	0,6	B	271,00
HSK-A .050 . SF .10 .085	50	10	24	33	85	41	10	M 8 x 1	0,7	B	271,00
HSK-A .050 . SF .12 .090	50	12	24	34	90	47	10	M10 x 1	0,7	B	271,00
HSK-A .050 . SF .14 .090	50	14	27	37	90	47	10	M10 x 1	0,8	B	271,00
HSK-A .050 . SF .16 .095	50	16	27	38	95	50	10	M12 x 1	0,8	B	271,00
HSK-A .050 . SF .18 .095	50	18	33	42	95	50	10	M12 x 1	0,9	B	271,00
HSK-A .050 . SF .20 .100	50	20	33	42	100	52	10	M16 x 1	0,9	B	271,00



DIN 69893-1	Form A			G 2,5 25.000 rpm
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art.	HSK-A	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-A .063 .SF .03 .080	63	3	10	15	80	28	16	M6	0,7	A	184,00
HSK-A .063 .SF .03 .120	63	3	10	20	120	-	-	-	0,9	A	238,00
HSK-A .063 .SF .03 .160	63	3	10	20	160	-	-	-	1,0	A	263,00
HSK-A .063 .SF .04 .080	63	4	15	22	80	28	12	M6	0,7	A	184,00
HSK-A .063 .SF .04 .120	63	4	15	22	120	-	-	-	0,9	A	238,00
HSK-A .063 .SF .04 .160	63	4	15	22	160	-	-	-	1,0	A	263,00
HSK-A .063 .SF .05 .080	63	5	15	22	80	30	10	M6	0,7	A	184,00
HSK-A .063 .SF .05 .120	63	5	15	22	120	-	-	-	0,9	A	238,00
HSK-A .063 .SF .05 .160	63	5	15	22	160	-	-	-	1,0	A	263,00
HSK-A .063 .SF .06 .080	63	6	21	27	80	36	10	M5	0,8	A	158,00
HSK-A .063 .SF .06 .120	63	6	21	27	120	36	10	M5	1,1	A	215,00
HSK-A .063 .SF .06 .160	63	6	21	27	160	36	10	M5	1,3	A	251,00
HSK-A .063 .SF .06 .200	63	6	21	27	200	36	10	M5	1,4	A	298,00
HSK-A .063 .SF .08 .080	63	8	21	27	80	36	10	M6	0,8	A	159,00
HSK-A .063 .SF .08 .120	63	8	21	27	120	36	10	M6	1,1	A	215,00
HSK-A .063 .SF .08 .160	63	8	21	27	160	36	10	M6	1,3	A	251,00
HSK-A .063 .SF .08 .200	63	8	21	27	200	36	10	M6	1,4	A	298,00
HSK-A .063 .SF .10 .085	63	10	24	32	85	41	10	M10 x 1	0,9	A	159,00
HSK-A .063 .SF .10 .120	63	10	24	32	120	41	10	M8 x 1	1,2	A	215,00
HSK-A .063 .SF .10 .160	63	10	24	32	160	41	10	M8 x 1	1,5	A	251,00
HSK-A .063 .SF .10 .200	63	10	24	32	200	41	10	M8 x 1	1,7	A	298,00
HSK-A .063 .SF .12 .090	63	12	21	32	90	47	10	M10 x 1	0,9	A	159,00
HSK-A .063 .SF .12 .120	63	12	24	32	120	47	10	M10 x 1	1,2	A	215,00
HSK-A .063 .SF .12 .160	63	12	24	32	160	47	10	M10 x 1	1,5	A	251,00
HSK-A .063 .SF .12 .200	63	12	24	32	200	47	10	M10 x 1	1,7	A	298,00
HSK-A .063 .SF .14 .090	63	14	27	34	90	47	10	M10 x 1	0,9	A	159,00
HSK-A .063 .SF .14 .120	63	14	27	34	120	47	10	M10 x 1	1,2	A	215,00
HSK-A .063 .SF .14 .160	63	14	27	34	160	47	10	M10 x 1	1,6	A	251,00
HSK-A .063 .SF .14 .200	63	14	27	34	200	47	10	M10 x 1	1,9	A	298,00
HSK-A .063 .SF .16 .095	63	16	27	34	95	50	10	M12 x 1	1,1	A	159,00
HSK-A .063 .SF .16 .120	63	16	27	34	120	50	10	M12 x 1	1,1	A	215,00
HSK-A .063 .SF .16 .160	63	16	27	34	160	50	10	M12 x 1	1,4	A	251,00
HSK-A .063 .SF .16 .200	63	16	27	34	200	50	10	M12 x 1	1,7	A	298,00
HSK-A .063 .SF .18 .095	63	18	33	42	95	50	10	M12 x 1	1,1	A	159,00
HSK-A .063 .SF .18 .120	63	18	33	42	120	50	10	M12 x 1	1,3	A	215,00
HSK-A .063 .SF .18 .160	63	18	33	42	160	50	10	M12 x 1	1,6	A	251,00
HSK-A .063 .SF .18 .200	63	18	33	42	200	50	10	M12 x 1	2,3	A	298,00
HSK-A .063 .SF .20 .100	63	20	33	42	100	52	10	M16 x 1	1,1	A	159,00
HSK-A .063 .SF .20 .120	63	20	33	42	120	52	10	M16 x 1	1,3	A	215,00
HSK-A .063 .SF .20 .160	63	20	33	42	160	52	10	M16 x 1	1,6	A	251,00
HSK-A .063 .SF .20 .200	63	20	33	42	200	52	10	M16 x 1	2,3	A	298,00
HSK-A .063 .SF .25 .115	63	25	44	53	115	58	10	M16 x 1	1,6	A	159,00
HSK-A .063 .SF .25 .120	63	25	44	53	120	58	10	M16 x 1	1,7	A	215,00
HSK-A .063 .SF .25 .160	63	25	44	53	160	62	10	M16 x 1	2,0	A	251,00
HSK-A .063 .SF .25 .200	63	25	44	53	200	61	10	M16 x 1	3,2	A	298,00
HSK-A .063 .SF .32 .120	63	32	44	53	120	62	10	M16 x 1	1,6	A	159,00
HSK-A .063 .SF .32 .160	63	32	44	53	160	62	10	M16 x 1	1,9	A	251,00
HSK-A .063 .SF .32 .200	63	32	44	53	200	62	10	M16 x 1	3,0	A	298,00

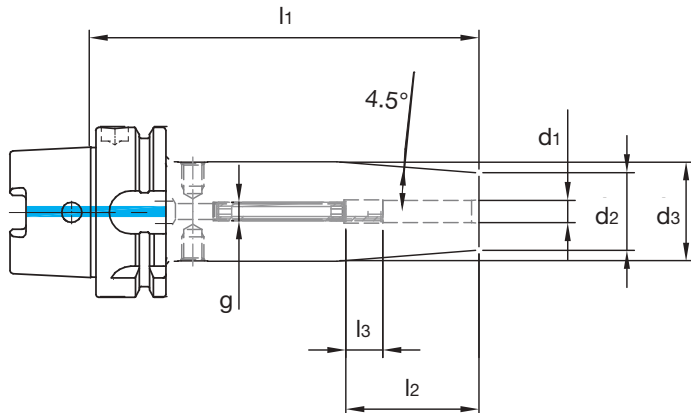


DIN 69893-1	Form A			G 2,5 25.000 rpm
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HSK-A

art.	HSK-A	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-A .080 . SF .06 .085	80	6	21	30	85	36	10	M 5	1.3	B	365,00
HSK-A .080 . SF .08 .085	80	8	21	30	85	36	10	M 6	1.3	B	365,00
HSK-A .080 . SF .10 .090	80	10	24	34	90	41	10	M 8 x 1	1.4	B	365,00
HSK-A .080 . SF .12 .095	80	12	24	35	95	47	10	M10 x 1	1.4	B	365,00
HSK-A .080 . SF .14 .095	80	14	27	38	95	47	10	M10 x 1	1.5	B	365,00
HSK-A .080 . SF .16 .100	80	16	27	39	100	50	10	M12 x 1	1.5	B	365,00
HSK-A .080 . SF .18 .100	80	18	33	45	100	50	10	M12 x 1	1.6	B	365,00
HSK-A .080 . SF .20 .105	80	20	33	45	105	52	10	M16 x 1	1.7	B	365,00
HSK-A .080 . SF .25 .115	80	25	44	53	115	58	10	M16 x 1	2.1	B	365,00
HSK-A .080 . SF .32 .120	80	32	44	56	120	61	10	M16 x 1	2.1	B	365,00

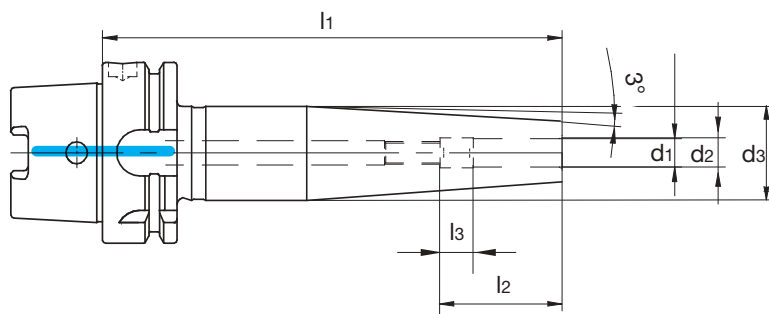

Accessories for shrink fit pag. 156 - Coolant tube pag. 174  
Accessori per Mandrini a calettamento a caldo pag. 156 - Adduttore refrigerante pag. 174



DIN 69893-1	Form A			G 2,5 25.000 rpm
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art.	HSK-A	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-A . 100 . SF .06 . 085	100	6	21	27	85	36	10	M 5	2,2	A	257,00
HSK-A . 100 . SF .06 . 120	100	6	21	27	120	36	10	M 5	2,4	A	330,00
HSK-A . 100 . SF .06 . 160	100	6	21	27	160	36	10	M 5	2,6	A	371,00
HSK-A . 100 . SF .06 . 200	100	6	21	27	200	36	10	M 5	2,7	A	434,00
HSK-A . 100 . SF .08 . 085	100	8	21	27	85	36	10	M 6	2,2	A	257,00
HSK-A . 100 . SF .08 . 120	100	8	21	27	120	36	10	M 6	2,4	A	330,00
HSK-A . 100 . SF .08 . 160	100	8	21	27	160	36	10	M 6	2,6	A	371,00
HSK-A . 100 . SF .08 . 200	100	8	21	27	200	36	10	M 6	2,7	A	434,00
HSK-A . 100 . SF .10 . 090	100	10	24	32	90	41	10	M 8 x 1	2,3	A	257,00
HSK-A . 100 . SF .10 . 120	100	10	24	32	120	41	10	M 8 x 1	2,5	A	330,00
HSK-A . 100 . SF .10 . 160	100	10	24	32	160	41	10	M 8 x 1	2,7	A	371,00
HSK-A . 100 . SF .10 . 200	100	10	24	32	200	41	10	M 8 x 1	2,9	A	434,00
HSK-A . 100 . SF .12 . 095	100	12	24	32	95	47	10	M10 x 1	2,3	A	257,00
HSK-A . 100 . SF .12 . 120	100	12	24	32	120	47	10	M10 x 1	2,5	A	330,00
HSK-A . 100 . SF .12 . 160	100	12	24	32	160	47	10	M10 x 1	2,7	A	371,00
HSK-A . 100 . SF .12 . 200	100	12	24	32	200	47	10	M10 x 1	2,7	A	434,00
HSK-A . 100 . SF .14 . 095	100	14	27	34	95	47	10	M10 x 1	2,3	A	257,00
HSK-A . 100 . SF .14 . 120	100	14	27	34	120	47	10	M10 x 1	2,5	A	330,00
HSK-A . 100 . SF .14 . 160	100	14	27	34	160	47	10	M10 x 1	2,7	A	371,00
HSK-A . 100 . SF .14 . 200	100	14	27	34	200	47	10	M10 x 1	3,0	A	434,00
HSK-A . 100 . SF .16 . 100	100	16	27	34	100	50	10	M12 x 1	2,4	A	257,00
HSK-A . 100 . SF .16 . 120	100	16	27	34	120	50	10	M12 x 1	2,6	A	330,00
HSK-A . 100 . SF .16 . 160	100	16	27	34	160	50	10	M12 x 1	2,9	A	371,00
HSK-A . 100 . SF .16 . 200	100	16	27	34	200	50	10	M12 x 1	3,0	A	434,00
HSK-A . 100 . SF .18 . 100	100	18	33	42	100	50	10	M12 x 1	2,5	A	257,00
HSK-A . 100 . SF .18 . 120	100	18	33	42	120	50	10	M12 x 1	2,7	A	330,00
HSK-A . 100 . SF .18 . 160	100	18	33	42	160	50	10	M12 x 1	3,0	A	371,00
HSK-A . 100 . SF .18 . 200	100	18	33	42	200	50	10	M12 x 1	3,6	A	434,00
HSK-A . 100 . SF .20 . 105	100	20	33	42	105	52	10	M16 x 1	2,5	A	257,00
HSK-A . 100 . SF .20 . 120	100	20	33	42	120	52	10	M16 x 1	3,0	A	330,00
HSK-A . 100 . SF .20 . 160	100	20	33	42	160	52	10	M16 x 1	3,4	A	371,00
HSK-A . 100 . SF .20 . 200	100	20	33	42	200	52	10	M16 x 1	3,6	A	434,00
HSK-A . 100 . SF .25 . 115	100	25	44	53	115	58	10	M16 x 1	3,0	A	257,00
HSK-A . 100 . SF .25 . 120	100	25	44	53	120	58	10	M16x1	3,2	A	330,00
HSK-A . 100 . SF .25 . 160	100	25	44	53	160	58	10	M16 x 1	3,6	A	371,00
HSK-A . 100 . SF .25 . 200	100	25	44	53	200	58	10	M16 x 1	4,5	A	434,00
HSK-A . 100 . SF .32 . 120	100	32	44	53	120	62	10	M16 x 1	3,0	A	257,00
HSK-A . 100 . SF .32 . 160	100	32	44	53	160	62	10	M16 x 1	3,3	A	371,00
HSK-A . 100 . SF .32 . 200	100	32	44	53	200	62	10	M16 x 1	4,4	A	434,00

Accessories for shrink fit pag. 156 - Coolant tube pag. 174  
Accessori per Mandrini a calettamento a caldo pag. 156 - Adduttore refrigerante pag. 174



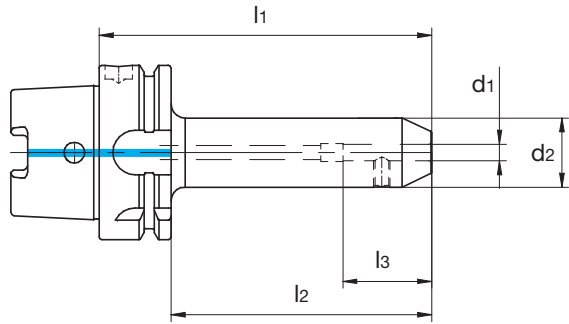
DIN 69893-1
Form A


G 2,5  
25.000 rpm

art.	HSK-A	d1	d2	d3	l1	l2	l3		g	kg	Form screw		€
HSK-A .063 .SF-S .06 .120	63	6	15	30	120	36	10		M5	1	B		266,00
HSK-A .063 .SF-S .06 .160	63	6	15	30	160	36	10		M5	1,2	B		293,00
HSK-A .063 .SF-S .06 .200	63	6	15	30	200	36	10		M5	1,4	B		323,00
HSK-A .063 .SF-S .08 .120	63	8	15	30	120	36	10		M6	1	B		266,00
HSK-A .063 .SF-S .08 .160	63	8	15	30	160	36	10		M6	1,2	B		293,00
HSK-A .063 .SF-S .08 .200	63	8	15	30	200	36	10		M6	1,4	B		323,00
HSK-A .063 .SF-S .10 .120	63	10	18	33	120	41	10		M8x1	1	B		266,00
HSK-A .063 .SF-S .10 .160	63	10	18	32	160	41	10		M8x1	1,3	B		293,00
HSK-A .063 .SF-S .10 .200	63	10	18	32	200	41	10		M8x1	1,5	B		323,00
HSK-A .063 .SF-S .12 .120	63	12	18	33	120	47	10		M10x1	1	B		266,00
HSK-A .063 .SF-S .12 .160	63	12	18	32	160	47	10		M10x1	1,3	B		293,00
HSK-A .063 .SF-S .12 .200	63	12	18	32	200	47	10		M10x1	1,5	B		323,00
HSK-A .100 .SF-S .06 .120	100	6	15	30	120	36	10		M5	2,3	B		384,00
HSK-A .100 .SF-S .06 .160	100	6	15	30	160	36	10		M5	2,5	B		416,00
HSK-A .100 .SF-S .06 .200	100	6	15	30	200	36	10		M5	2,7	B		462,00
HSK-A .100 .SF-S .08 .120	100	8	15	30	120	36	10		M6	2,3	B		384,00
HSK-A .100 .SF-S .08 .160	100	8	15	30	160	36	10		M6	2,5	B		416,00
HSK-A .100 .SF-S .08 .200	100	8	15	30	200	36	10		M6	2,7	B		462,00
HSK-A .100 .SF-S .10 .120	100	10	18	33	120	41	10		M8x1	2,4	B		384,00
HSK-A .100 .SF-S .10 .160	100	10	18	32	160	41	10		M8x1	2,6	B		416,00
HSK-A .100 .SF-S .10 .200	100	10	18	32	200	41	10		M8x1	2,8	B		462,00
HSK-A .100 .SF-S .12 .120	100	12	18	33	120	47	10		M10x1	2,4	B		384,00
HSK-A .100 .SF-S .12 .160	100	12	18	32	160	47	10		M10x1	2,6	B		416,00
HSK-A .100 .SF-S .12 .200	100	12	18	32	200	47	10		M10x1	2,8	B		462,00


Accessories for shrink fit pag. 156 - Coolant tube pag. 174  
Accessori per Mandrini a calettamento a caldo pag. 156 - Adduttore refrigerante pag. 174

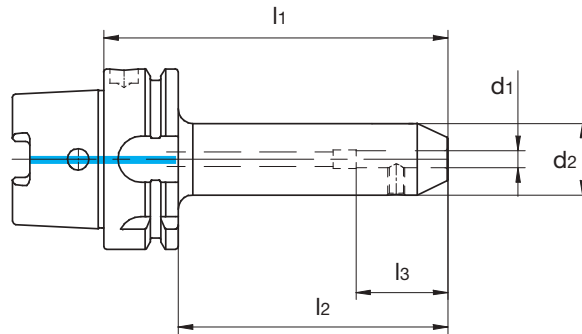
HSK-A



DIN 69893-1	Form A			G 6,3 15.000 rpm
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art.		HSK-A	d1	d2	l1	l2	l3	Tol./d1	kg	€
HSK-A . 040 . W . 06 . 060	40	6	25	60	40	35	+ 0.005	0,6	193,00	
HSK-A . 040 . W . 08 . 060	40	8	28	60	40	35	+ 0.005	0,7	193,00	
HSK-A . 040 . W . 10 . 060	40	10	35	60	40	39	+ 0.005	0,7	193,00	
HSK-A . 040 . W . 12 . 070	40	12	42	70	50	44	+ 0.005	1,0	193,00	
HSK-A . 040 . W . 14 . 075	40	14	44	75	55	44	+ 0.005	1,1	193,00	
HSK-A . 040 . W . 16 . 075	40	16	48	75	55	47	+ 0.005	1,1	193,00	
HSK-A . 050 . W . 06 . 065	50	6	25	65	39	35	+ 0.005	0,7	193,00	
HSK-A . 050 . W . 08 . 065	50	8	28	65	39	35	+ 0.005	0,8	193,00	
HSK-A . 050 . W . 10 . 065	50	10	35	65	39	39	+ 0.005	0,8	193,00	
HSK-A . 050 . W . 12 . 080	50	12	42	80	54	44	+ 0.005	0,9	193,00	
HSK-A . 050 . W . 14 . 080	50	14	44	80	54	44	+ 0.005	1,0	193,00	
HSK-A . 050 . W . 16 . 080	50	16	48	80	54	47	+ 0.005	1,0	193,00	
HSK-A . 050 . W . 18 . 080	50	18	50	80	54	47	+ 0.005	1,0	193,00	
HSK-A . 050 . W . 20 . 080	50	20	52	80	54	49	+ 0.007	1,0	193,00	

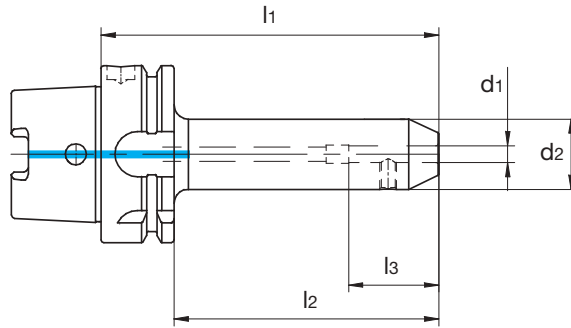

Coolant tube pag. 174  
Adduttore refrigerante pag. 174



art.	HSK-A	d1	d2	l1	l2	l3			Tol./d1	kg		€
HSK-A .063 . W .06 .065	63	6	25	65	39	35			+ 0.005	0,8		138,00
HSK-A .063 . W .06 .100	63	6	18	100	-	-			-	-		231,00
HSK-A .063 . W .06 .120	63	6	25	120	94	35			+ 0.005	1,0		168,00
HSK-A .063 . W .08 .065	63	8	28	65	39	35			+ 0.005	0,8		138,00
HSK-A .063 . W .08 .100	63	8	22	100	-	-			-	-		222,00
HSK-A .063 . W .08 .120	63	8	28	120	94	35			+ 0.005	1,1		168,00
HSK-A .063 . W .08 .160	63	8	22	160	-	-			-	-		266,00
HSK-A .063 . W .10 .065	63	10	35	65	39	39			+ 0.005	0,9		138,00
HSK-A .063 . W .10 .100	63	10	30	100	-	-			-	-		222,00
HSK-A .063 . W .10 .120	63	10	35	120	94	39			+ 0.005	1,3		168,00
HSK-A .063 . W .10 .160	63	10	30	160	-	-			-	-		266,00
HSK-A .063 . W .12 .080	63	12	42	80	54	44			+ 0.005	1,2		138,00
HSK-A .063 . W .12 .100	63	12	34	100	-	-			-	-		222,00
HSK-A .063 . W .12 .120	63	12	42	120	94	44			+ 0.005	1,6		168,00
HSK-A .063 . W .12 .160	63	12	34	160	-	-			-	-		266,00
HSK-A .063 . W .14 .080	63	14	44	80	54	44			+ 0.005	1,2		138,00
HSK-A .063 . W .14 .100	63	14	36	100	-	-			-	-		222,00
HSK-A .063 . W .14 .120	63	14	44	120	94	44			+ 0.005	1,7		168,00
HSK-A .063 . W .14 .160	63	14	36	160	-	-			-	-		266,00
HSK-A .063 . W .16 .080	63	16	48	80	54	47			+ 0.005	1,3		138,00
HSK-A .063 . W .16 .100	63	16	42	100	-	-			-	-		222,00
HSK-A .063 . W .16 .120	63	16	48	120	94	47			+ 0.005	1,8		168,00
HSK-A .063 . W .16 .160	63	16	42	160	-	-			-	-		266,00
HSK-A .063 . W .18 .080	63	18	50	80	54	47			+ 0.005	1,3		138,00
HSK-A .063 . W .18 .120	63	18	50	120	94	47			+ 0.005	1,9		168,00
HSK-A .063 . W .20 .080	63	20	52	80	54	49			+ 0.007	1,4		138,00
HSK-A .063 . W .20 .100	63	20	45	100	-	-			-	-		222,00
HSK-A .063 . W .20 .120	63	20	52	120	94	49			+ 0.007	2,0		168,00
HSK-A .063 . W .20 .160	63	20	45	160	-	-			-	-		266,00
HSK-A .063 . W .25 .110	63	25	65	110	84	54			+ 0.007	2,3		168,00
HSK-A .063 . W .25 .160	63	25	65	160	-	-			-	-		266,00
HSK-A .063 . W .32 .110	63	32	72	110	84	58			+ 0.007	2,5		168,00
HSK-A .063 . W .32 .160	63	32	72	160	-	-			-	-		278,00

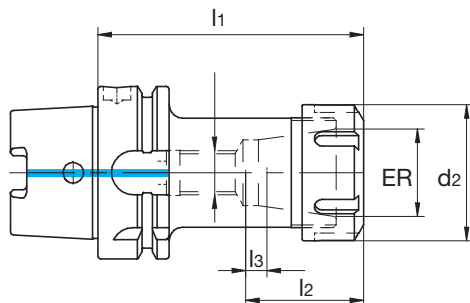

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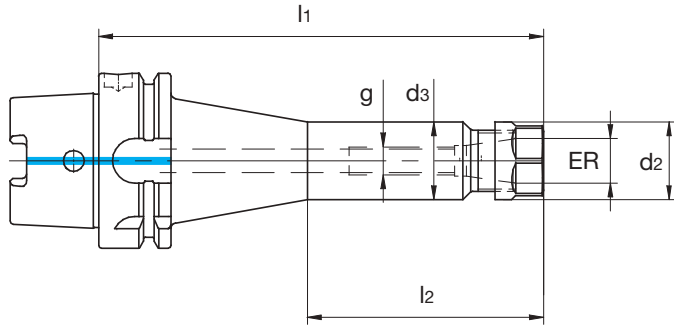
DIN 69893-1	Form A			G 6,3 15.000 rpm
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art.	HSK-A	d1	d2	l1	l2	l3	Tol./d1	kg	€
HSK-A .080 . W .06.080	80	6	25	80	54	35	+ 0.005	1,5	258,00
HSK-A .080 . W .08.080	80	8	28	80	54	35	+ 0.005	1,5	258,00
HSK-A .080 . W .10.080	80	10	35	80	54	39	+ 0.005	1,7	258,00
HSK-A .080 . W .12.080	80	12	42	80	54	44	+ 0.005	1,8	258,00
HSK-A .080 . W .14.080	80	14	44	80	54	44	+ 0.005	1,9	258,00
HSK-A .080 . W .16.100	80	16	48	100	74	47	+ 0.005	2,1	258,00
HSK-A .080 . W .18.100	80	18	50	100	74	47	+ 0.005	2,3	258,00
HSK-A .080 . W .20.100	80	20	52	100	74	49	+ 0.007	2,4	258,00
HSK-A .080 . W .25.100	80	25	65	100	74	54	+ 0.007	2,9	300,00
HSK-A .080 . W .32.110	80	32	72	110	84	58	+ 0.007	3,4	321,00
HSK-A .100 . W .06.080	100	6	25	80	51	35	+ 0.005	2,0	200,00
HSK-A .100 . W .06.090	100	6	25	90	-	-	-	-	245,00
HSK-A .100 . W .06.160	100	6	25	160	131	35	+ 0.005	2,5	308,00
HSK-A .100 . W .08.080	100	8	28	80	51	35	+ 0.005	2,2	200,00
HSK-A .100 . W .08.090	100	8	28	90	-	-	-	-	239,00
HSK-A .100 . W .08.160	100	8	28	160	131	35	+ 0.005	2,6	308,00
HSK-A .100 . W .10.080	100	10	35	80	51	39	+ 0.005	2,4	200,00
HSK-A .100 . W .10.090	100	10	35	90	-	-	-	-	239,00
HSK-A .100 . W .10.160	100	10	35	160	131	39	+ 0.005	3,0	308,00
HSK-A .100 . W .12.080	100	12	42	80	51	44	+ 0.005	2,5	200,00
HSK-A .100 . W .12.100	100	12	42	100	-	-	-	-	239,00
HSK-A .100 . W .12.160	100	12	42	160	131	44	+ 0.005	3,4	308,00
HSK-A .100 . W .14.080	100	14	44	80	51	44	+ 0.005	2,5	200,00
HSK-A .100 . W .14.100	100	14	44	100	-	-	-	-	239,00
HSK-A .100 . W .14.160	100	14	44	160	131	44	+ 0.005	3,5	308,00
HSK-A .100 . W .16.100	100	16	48	100	71	47	+ 0.005	2,9	200,00
HSK-A .100 . W .16.160	100	16	48	160	131	47	+ 0.005	3,8	308,00
HSK-A .100 . W .18.100	100	18	50	100	71	47	+ 0.005	2,9	200,00
HSK-A .100 . W .18.160	100	18	50	160	131	47	+ 0.005	4,0	308,00
HSK-A .100 . W .20.100	100	20	52	100	71	49	+ 0.007	3,0	200,00
HSK-A .100 . W .20.110	100	20	52	110	-	-	-	-	239,00
HSK-A .100 . W .20.160	100	20	52	160	131	49	+ 0.007	4,1	308,00
HSK-A .100 . W .25.100	100	25	65	100	71	54	+ 0.007	3,5	230,00
HSK-A .100 . W .25.120	100	25	65	120	-	-	-	-	256,00
HSK-A .100 . W .25.160	100	25	65	160	131	54	+ 0.007	5,0	354,00
HSK-A .100 . W .32.100	100	32	72	100	71	58	+ 0.007	3,7	246,00
HSK-A .100 . W .32.120	100	32	72	120	-	-	-	-	263,00
HSK-A .100 . W .32.160	100	32	72	160	131	58	+ 0.007	5,6	369,00
HSK-A .100 . W .40.120	100	40	80	120	191	75	+ 0.007	5,9	293,00
HSK-A .100 . W .50.130	100	50	100	130	-	-	-	-	329,00



DIN 69893-1	Form A			G 6,3 15.000 rpm
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art.	HSK-A	ER	d2	l1	l2	l3	kg	€
HSK-A .040 .ER-NT .25 .080	40	ER 25 (1 - 16)	42	80	36	10	0,5	200,00
HSK-A .050 .ER-NT .25 .100	50	ER 25 (1 - 16)	42	100	36	10	1,2	200,00
HSK-A .063 .ER-NT .16 .100	63	ER 16 (1 - 10)	32	100	-	-	-	138,00
HSK-A .063 .ER-NT .25 .075	63	ER 25 (1 - 16)	42	75	36	10	0,9	158,00
HSK-A .063 .ER-NT .25 .100	63	ER 25 (1 - 16)	42	100	36	10	1,2	164,00
HSK-A .063 .ER-NT .25 .160	63	ER 25 (1 - 16)	42	160	36	10	1,8	186,00
HSK-A .063 .ER-NT .32 .075	63	ER 32 (2 - 20)	50	75	40	10	1,0	158,00
HSK-A .063 .ER-NT .32 .100	63	ER 32 (2 - 20)	50	100	40	10	1,2	164,00
HSK-A .063 .ER-NT .32 .160	63	ER 32 (2 - 20)	50	160	40	10	1,7	192,00
HSK-A .063 .ER-NT .40 .090	63	ER 40 (3 - 26)	63	90	58	10	1,4	173,00
HSK-A .063 .ER-NT .40 .120	63	ER 40 (3 - 26)	63	120	58	10	1,7	179,00
HSK-A .080 .ER-NT .25 .100	80	ER 25 (1 - 16)	42	100	36	10	3,0	260,00
HSK-A .080 .ER-NT .32 .100	80	ER 32 (2 - 20)	50	100	40	10	2,7	260,00
HSK-A .080 .ER-NT .40 .120	80	ER 40 (3 - 26)	63	120	58	10	3,2	271,00
HSK-A .100 .ER-NT .25 .100	100	ER 25 (1 - 16)	42	100	36	10	2,6	200,00
HSK-A .100 .ER-NT .25 .160	100	ER 25 (1 - 16)	42	160	36	10	3,2	245,00
HSK-A .100 .ER-NT .32 .100	100	ER 32 (2 - 20)	50	100	40	10	2,7	200,00
HSK-A .100 .ER-NT .32 .160	100	ER 32 (2 - 20)	50	160	40	10	3,6	245,00
HSK-A .100 .ER-NT .40 .120	100	ER 40 (3 - 26)	63	120	58	10	3,4	207,00
HSK-A .100 .ER-NT .40 .160	100	ER 40 (3 - 26)	63	160	58	10	4,2	245,00



DIN  
69893-1

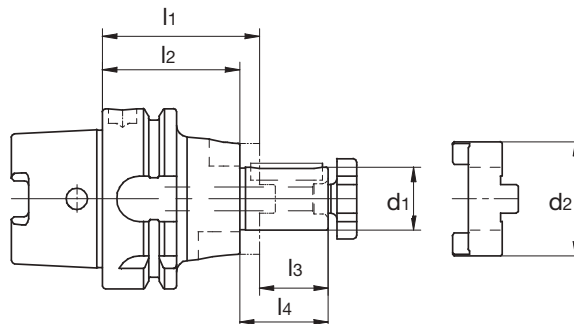
Form  
A



G 6,3  
15.000 rpm

art.	HSK-A	ER	d2	d3	l1	l2	g	kg	€
HSK-A . 040 . ER-LT . 16 . 080	40	ER 16 (0.5 - 10)	32	28	80	27	M10	0,4	200,00
HSK-A . 050 . ER-LT . 16 . 100	50	ER 16 (0.5 - 10)	32	28	100	27	M10	0,6	200,00
HSK-A . 063 . ER-LT . 16 . 075	63	ER 16 (0.5 - 10)	32	28	75	27	M10	0,8	158,00
HSK-A . 063 . ER-LT . 16 . 100	63	ER 16 (0.5 - 10)	32	28	100	27	M10	1,0	162,00
HSK-A . 063 . ER-LT . 16 . 160	63	ER 16 (0.5 - 10)	32	28	160	27	M10	1,7	183,00
HSK-A . 100 . ER-LT . 16 . 100	100	ER 16 (0.5 - 10)	32	28	100	27	M12	2,9	212,00
HSK-A . 100 . ER-LT . 16 . 160	100	ER 16 (0.5 - 10)	32	28	160	27	M12	3,4	252,00

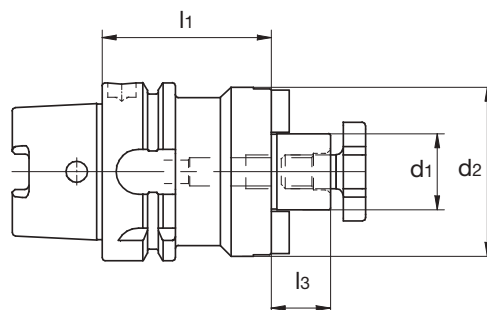

Coolant tube pag. 174 - ER Collets pag. 162 - Clamping keys for ER Clamping nuts pag. 180  
 Adduttore refrigerante pag. 174 - Pinze ER pag. 162 - Chiave per ghiera pag. 180  
 Clamping nuts pag. 173  
 Ghiere pag. 173



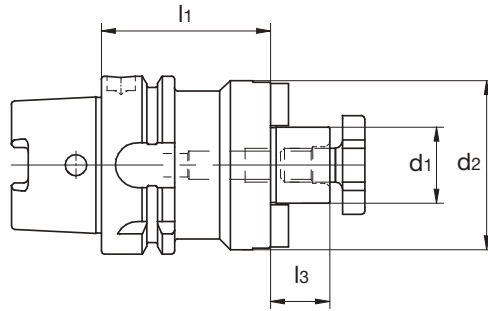
DIN 69893-1	Form A	$\sqrt{6 \mu\text{m}}$	G 6,3 15.000 rpm
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art.	HSK-A	d1	d2		l1	l2	l3	l4		kg		€
HSK-A .050 . SM .16 .050	50	16	32		50	40	17	27		0,7		229,00
HSK-A .050 . SM .22 .050	50	22	40		50	38	19	31		0,8		229,00
HSK-A .050 . SM .27 .065	50	27	48		65	53	21	33		1,0		237,00
HSK-A .050 . SM .32 .065	50	32	58		65	51	24	38		1,2		248,00
HSK-A .063 . SM .16 .080	63	16	32		60	50	17	27		0,9		164,00
HSK-A .063 . SM .16 .100	63	16	32		100	90	17	27		1,2		179,00
HSK-A .063 . SM .16 .160	63	16	32		160	150	17	27		2,0		195,00
HSK-A .063 . SM .22 .060	63	22	40		60	48	19	31		1,0		164,00
HSK-A .063 . SM .22 .100	63	22	40		100	88	19	31		1,5		179,00
HSK-A .063 . SM .22 .160	63	22	40		160	148	19	31		2,2		195,00
HSK-A .063 . SM .27 .060	63	27	48		60	48	21	33		1,1		164,00
HSK-A .063 . SM .27 .100	63	27	48		100	88	21	33		1,6		179,00
HSK-A .063 . SM .27 .160	63	27	48		160	148	21	33		2,4		195,00
HSK-A .063 . SM .32 .060	63	32	58		60	46	24	38		1,2		177,00
HSK-A .063 . SM .32 .100	63	32	58		100	86	24	38		2,0		195,00
HSK-A .063 . SM .32 .160	63	32	58		160	146	24	38		3,2		213,00
HSK-A .063 . SM .40 .070	63	40	70		70	56	27	41		1,5		209,00
HSK-A .063 . SM .40 .100	63	40	70		100	86	27	41		2,4		209,00
HSK-A .063 . SM .40 .160	63	40	70		160	146	27	41		4,2		233,00
HSK-A .080 . SM .16 .060	80	16	32		60	50	17	27		1,5		298,00
HSK-A .080 . SM .22 .060	80	22	40		60	48	19	31		1,8		298,00
HSK-A .080 . SM .27 .060	80	27	48		60	48	21	33		2,0		307,00
HSK-A .080 . SM .32 .060	80	32	58		60	46	24	38		2,4		326,00
HSK-A .080 . SM .40 .070	80	40	70		70	56	27	41		2,9		347,00
HSK-A .080 . SM .50 .080	80	50	90		80	64	30	46		3,3		378,00
HSK-A .100 . SM .16 .060	100	16	32		60	50	17	27		2,0		228,00
HSK-A .100 . SM .16 .100	100	16	32		100	90	17	27		2,6		246,00
HSK-A .100 . SM .16 .160	100	16	32		160	150	17	27		3,4		269,00
HSK-A .100 . SM .22 .060	100	22	40		60	48	19	31		2,3		228,00
HSK-A .100 . SM .22 .100	100	22	40		100	88	19	31		2,8		246,00
HSK-A .100 . SM .22 .160	100	22	40		160	148	19	31		3,9		269,00
HSK-A .100 . SM .27 .060	100	27	48		60	48	21	33		2,4		323,00
HSK-A .100 . SM .27 .100	100	27	48		100	88	21	33		3,1		249,00
HSK-A .100 . SM .27 .160	100	27	48		160	148	21	33		3,8		272,00
HSK-A .100 . SM .32 .060	100	32	58		60	46	24	38		2,5		248,00
HSK-A .100 . SM .32 .100	100	32	58		100	86	24	38		3,5		264,00
HSK-A .100 . SM .32 .160	100	32	58		160	146	24	38		4,5		288,00
HSK-A .100 . SM .40 .070	100	40	70		70	56	27	41		3,2		269,00
HSK-A .100 . SM .40 .100	100	40	70		100	86	27	41		3,9		287,00
HSK-A .100 . SM .40 .160	100	40	70		160	146	27	41		5,8		309,00
HSK-A .100 . SM .50 .080	100	50	90		80	64	30	46		3,8		332,00

ER Collets pag. 162 - Clamping keys for ER Clamping nuts pag. 180  
Clamping nuts pag. 173  
Pinze ER pag. 162 - Chiave per ghiera pag. 180  
Ghiera pag. 173

DIN  
69893-1Form  
AG 6,3  
15.000 rpm

art.	HSK-A	d1	d2	l1	l3	kg	€
HSK-A . 050 . SM-E . 16 . 045	50	16	38	45	17	-	158,00
HSK-A . 050 . SM-E . 16 . 050	50	16	40	50	17	0,8	237,00
HSK-A . 050 . SM-E . 22 . 055	50	22	48	55	19	-	161,00
HSK-A . 050 . SM-E . 22 . 060	50	22	50	60	19	0,9	237,00
HSK-A . 050 . SM-E . 27 . 055	50	27	58	55	21	-	169,00
HSK-A . 050 . SM-E . 27 . 060	50	27	60	60	21	1,1	246,00
HSK-A . 050 . SM-E . 32 . 060	50	32	78	60	24	-	175,00
HSK-A . 063 . SM-E . 16 . 045	63	16	38	45	17	-	160,00
HSK-A . 063 . SM-E . 16 . 050	63	16	40	50	17	0,9	183,00
HSK-A . 063 . SM-E . 16 . 100	63	16	40	100	17	1,4	228,00
HSK-A . 063 . SM-E . 16 . 160	63	16	40	160	17	2,0	275,00
HSK-A . 063 . SM-E . 22 . 050	63	22	50	50	19	1,1	183,00
HSK-A . 063 . SM-E . 22 . 100	63	22	50	100	19	1,8	228,00
HSK-A . 063 . SM-E . 22 . 160	63	22	50	160	19	2,7	175,00
HSK-A . 063 . SM-E . 27 . 055	63	27	58	55	21	-	172,00
HSK-A . 063 . SM-E . 27 . 060	63	27	60	60	21	1,4	183,00
HSK-A . 063 . SM-E . 27 . 100	63	27	60	100	21	2,2	228,00
HSK-A . 063 . SM-E . 27 . 160	63	27	60	160	21	3,5	275,00
HSK-A . 063 . SM-E . 32 . 060	63	32	78	60	24	1,6	186,00
HSK-A . 063 . SM-E . 32 . 100	63	32	78	100	24	3,0	236,00
HSK-A . 063 . SM-E . 32 . 160	63	32	78	160	24	5,2	281,00
HSK-A . 063 . SM-E . 40 . 060	63	40	89	60	27	1,8	239,00
HSK-A . 063 . SM-E . 40 . 065	63	40	88	65	27	-	199,00
HSK-A . 063 . SM-E . 40 . 100	63	40	89	100	27	3,9	285,00
HSK-A . 063 . SM-E . 40 . 160	63	40	70	160	27	-	246,00

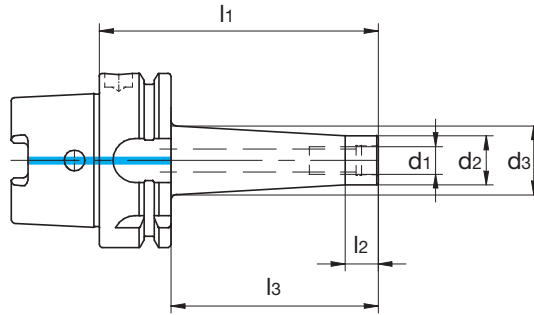


DIN 69893-1	Form A		G 6,3 15.000 rpm
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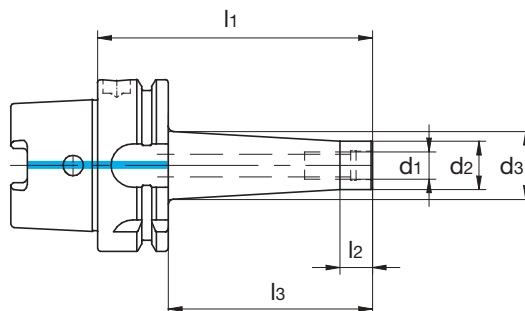
art.	HSK-A	d1	d2	l1	l3	kg	€
HSK-A .080 .SM-E .22 .050	80	22	50	50	19	2,1	315,00
HSK-A .080 .SM-E .27 .050	80	27	60	50	21	2,3	315,00
HSK-A .080 .SM-E .32 .060	80	32	78	60	24	2,5	330,00
HSK-A .080 .SM-E .40 .060	80	40	89	60	27	3,3	385,00

HSK-A .100 .SM-E .16 .050	100	16	40	50	17	2,2	242,00
HSK-A .100 .SM-E .16 .100	100	16	40	100	17	2,7	288,00
HSK-A .100 .SM-E .16 .160	100	16	40	160	17	3,3	333,00
HSK-A .100 .SM-E .22 .050	100	22	50	50	19	2,4	242,00
HSK-A .100 .SM-E .22 .100	100	22	50	100	19	3,1	288,00
HSK-A .100 .SM-E .22 .160	100	22	50	160	19	4,0	333,00
HSK-A .100 .SM-E .27 .050	100	27	60	50	21	2,5	242,00
HSK-A .100 .SM-E .27 .100	100	27	60	100	21	3,6	288,00
HSK-A .100 .SM-E .27 .160	100	27	60	160	21	4,7	333,00
HSK-A .100 .SM-E .32 .050	100	32	78	50	24	2,9	248,00
HSK-A .100 .SM-E .32 .100	100	32	78	100	24	4,7	294,00
HSK-A .100 .SM-E .32 .160	100	32	78	160	24	6,9	324,00
HSK-A .100 .SM-E .40 .060	100	40	89	60	27	3,5	285,00
HSK-A .100 .SM-E .40 .100	100	40	89	100	27	5,4	330,00
HSK-A .100 .SM-E .40 .160	100	40	89	160	27	8,3	377,00
HSK-A .100 .SM-E .50 .070	100	50	120	70	30	5,4	333,00
HSK-A .100 .SM-E .50 .100	100	50	120	100	30	7,1	380,00
HSK-A .100 .SM-E .50 .160	100	50	120	160	30	9,3	426,00
HSK-A .100 .SM-E .60 .070	100	60	140	70	40	6,3	333,00
HSK-A .100 .SM-E .60 .100	100	60	140	100	40	8,2	380,00


Key for cutter retaining screw pag. 180 - Coolant tube pag. 174  
Chiave di serraggio per portafresse pag. 180 - Adduttore refrigerante pag. 174

DIN  
69893-1Form  
AG 2,5  
20.000 rpm

art.	HSK-A	d1	d2	d3	l1	l2	l3			kg		€
HSK-A .063 .SI .08 .051	63	M8	12,8	15	51	12	25			0,7		275,00
HSK-A .063 .SI .08 .076	63	M8	12,8	23	76	12	50			0,8		303,00
HSK-A .063 .SI .08 .101	63	M8	12,8	23	101	12	75			0,8		327,00
HSK-A .063 .SI .10 .051	63	M10	17,8	20	51	12	25			0,7		288,00
HSK-A .063 .SI .10 .076	63	M10	17,8	25	76	12	50			0,8		315,00
HSK-A .063 .SI .10 .101	63	M10	17,8	25	101	12	75			0,9		341,00
HSK-A .063 .SI .10 .126	63	M10	17,8	32	126	12	100			1,0		377,00
HSK-A .063 .SI .10 .176	63	M10	17,8	35	176	12	150			1,3		449,00
HSK-A .063 .SI .12 .051	63	M12	20,8	24	51	12	25			0,7		288,00
HSK-A .063 .SI .12 .076	63	M12	20,8	28	76	12	50			0,8		315,00
HSK-A .063 .SI .12 .101	63	M12	20,8	31	101	12	75			0,9		341,00
HSK-A .063 .SI .12 .126	63	M12	20,8	33	126	12	100			1,1		377,00
HSK-A .063 .SI .12 .176	63	M12	20,8	40	176	12	150			1,4		449,00
HSK-A .063 .SI .16 .051	63	M16	28,8	-	51	-	25			0,8		293,00
HSK-A .063 .SI .16 .076	63	M16	28,8	34	76	12	50			0,9		315,00
HSK-A .063 .SI .16 .101	63	M16	28,8	34	101	12	75			1,0		341,00
HSK-A .063 .SI .16 .126	63	M16	28,8	36	126	12	100			1,2		377,00
HSK-A .063 .SI .16 .176	63	M16	28,8	42	176	12	150			1,7		449,00

DIN  
69893-1

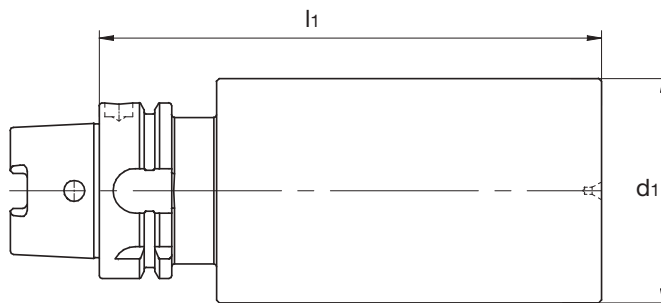
Form  
A



G 2,5  
20.000 rpm

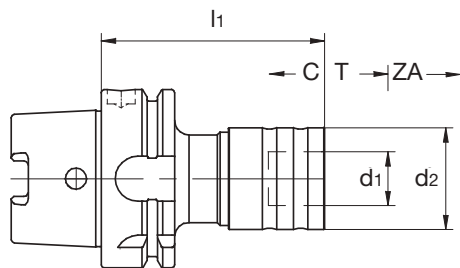
art.	HSK-A	d1	d2	d3	l1	l2	l3					kg	€
HSK-A . 100 . SI . 08 . 079	100	M8	12,8	23	79	12	50					2,2	371,00
HSK-A . 100 . SI . 10 . 079	100	M10	17,8	25	79	12	50					2,2	371,00
HSK-A . 100 . SI . 10 . 104	100	M10	17,8	25	104	12	75					2,3	410,00
HSK-A . 100 . SI . 10 . 129	100	M10	17,8	32	129	12	100					2,4	455,00
HSK-A . 100 . SI . 10 . 179	100	M10	17,8	35	179	12	150					2,6	524,00
HSK-A . 100 . SI . 12 . 079	100	M12	20,8	28	79	12	50					2,2	371,00
HSK-A . 100 . SI . 12 . 104	100	M12	20,8	31	104	12	75					2,3	410,00
HSK-A . 100 . SI . 12 . 129	100	M12	20,8	33	129	12	100					2,4	455,00
HSK-A . 100 . SI . 12 . 179	100	M12	20,8	40	179	12	150					2,8	524,00
HSK-A . 100 . SI . 16 . 079	100	M16	28,8	34	79	12	50					2,3	371,00
HSK-A . 100 . SI . 16 . 104	100	M16	28,8	34	104	12	75					2,4	410,00
HSK-A . 100 . SI . 16 . 129	100	M16	28,8	36	129	12	100					2,6	455,00
HSK-A . 100 . SI . 16 . 179	100	M16	28,8	42	179	12	150					3,0	524,00





DIN  
69893-1

art.	HSK-A	d1				l1					kg		€
HSK-A . 040 . TB . 40 . 200	40	40				200					7,6		357,00
HSK-A . 050 . TB . 63 . 200	50	63				200					8,1		365,00
HSK-A . 063 . TB . 63 . 250	63	63				250					-		176,00
HSK-A . 063 . TB . 80 . 250	63	80				250					11,0		281,00
HSK-A . 080 . TB . 80 . 250	80	80				250					16,4		477,00
HSK-A . 100 . TB . 80 . 250	100	80				250					-		249,00
HSK-A . 100 . TB . 95 . 250	100	95				250					18,0		294,00

art.	HSK-A	M	d1	d2	l1	C	T	ZA	kg	€
HSK-A .040 . TH .01 . 073	40	M 3 - M14	19	36	73	5	8	2,1	0,6	475,00
HSK-A .050 . TH .01 . 077	50	M 3 - M14	19	36	77	5	8	2,1	0,9	496,00
HSK-A .063 . TH .01 . 079	63	M 3 - M14	19	36	79	5	8	2,1	1,2	496,00
HSK-A .063 . TH .03 . 113	63	M 4,5 - M24	31	53	113	8,5	15	2,8	2,1	538,00
HSK-A .080 . TH .01 . 084	80	M 3 - M14	19	36	83,5	5	8	2,1	2	538,00
HSK-A .080 . TH .03 . 118	80	M 4,5 - M24	31	53	117,5	8,5	15	2,8	2,9	603,00
HSK-A .100 . TH .03 . 120	100	M 4,5 - M24	31	53	119,5	8,5	15	2,8	4	754,00

Lenght compensation on Compression and Tension

Compensazione assiale in Compressione ed in Trazione

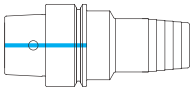
TOOL HOLDERS

EVO





HY-S

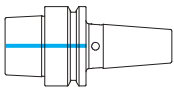


Hydraulic chuck - reduced  
Mandrino idraulico - scaricato

DIN 69893-5	Form E				G 2,5 25.000 rpm
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94

SF

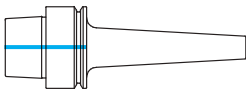


Shrink fit chuck  
Mandrino calettamento a caldo

DIN 69893-5	Form E				G 2,5 25.000 rpm
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95

SF-S

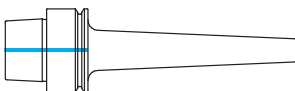


Shrink fit chuck - slim  
Mandrino calettamento a caldo - snello

DIN 69893-5	Form E				G 2,5 30.000 rpm
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96

SF-ES

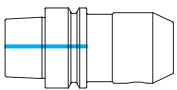


Shrink fit chuck - extra slim  
Mandrino calettamento a caldo - extra snello

DIN 69893-5	Form E				G 2,5 25.000 rpm
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97

W

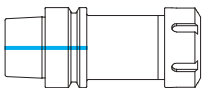


Weldon chuck  
Mandrino Weldon

DIN 69893-5	Form E				G 2,5 25.000 rpm
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98

ER-N

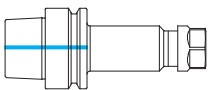


ER chuck  
Portapinze ER

DIN 69893-5	Form E				G 2,5 25.000 rpm
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99

ER-S

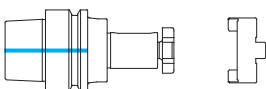


ER chuck - slim  
Portapinze ER - snello

DIN 69893-5	Form E				G 2,5 25.000 rpm
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100

SM

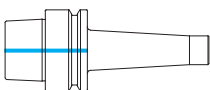


Shell end mill holder  
Portafrese a manicotto

DIN 69893-5	Form E				G 2,5 25.000 rpm
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101

SI

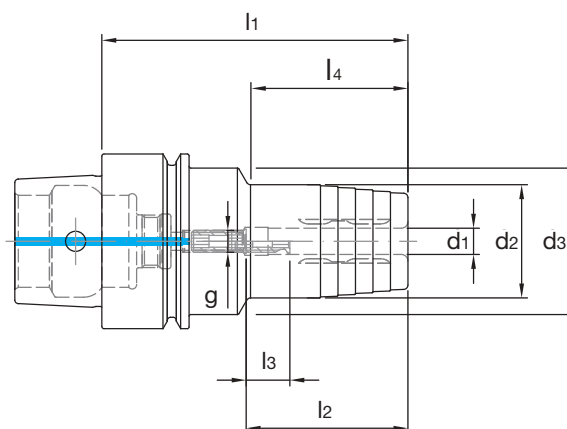


Screw-In milling cutters holder  
Portatestine con filetto interno

DIN 69893-5	Form E				G 2,5 25.000 rpm
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102

HSK-E



DIN  
69893-5

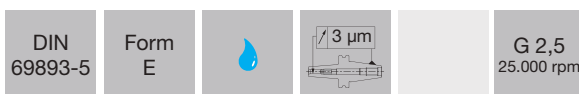
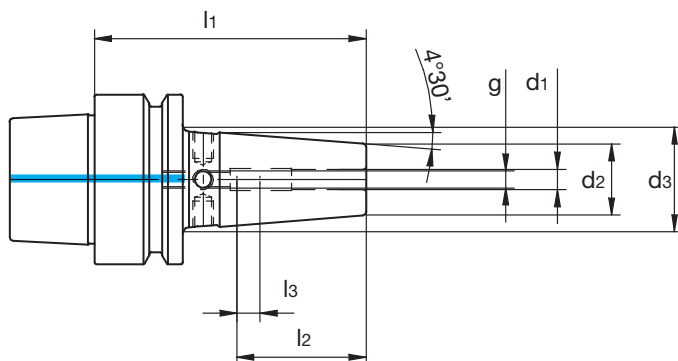
Form  
E



G 2,5  
25.000 rpm

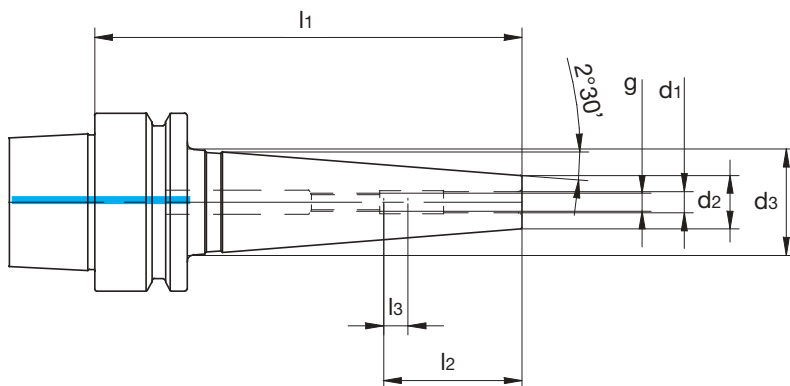
art.	HSK-E	d1	d2	d3	l1	l2	l3	l4	g	kg		€
HSK-E .040 . HY-S .06 .070	40	6	26	33,5	70	37	10	36	M5	0,5		509,00
HSK-E .040 . HY-S .08 .070	40	8	28	33,5	70	37	10	36	M6	0,5		509,00
HSK-E .040 . HY-S .10 .075	40	10	30	33,5	75	41	10	42	M6	0,6		509,00
HSK-E .040 . HY-S .12 .080	40	12	32	33,5	80	46	10	48	M6	0,6		509,00

HSK-E .050 . HY-S .06 .070	50	6	26	40	70	37	10	28	M5	0,9		516,00
HSK-E .050 . HY-S .08 .070	50	8	28	40	70	37	10	28	M6	0,9		516,00
HSK-E .050 . HY-S .10 .075	50	10	30	40	75	41	10	34	M8x1	1		516,00
HSK-E .050 . HY-S .12 .080	50	12	32	40	85	46	10	44	M10x1	1		516,00
HSK-E .050 . HY-S .14 .080	50	14	34	40	85	46	10	44	M10x1	1		516,00
HSK-E .050 . HY-S .16 .090	50	16	38	42	90	49	10	30	M12x1	1		516,00
HSK-E .050 . HY-S .18 .090	50	18	40	42	90	49	10	29	M12x1	1,2		516,00
HSK-E .050 . HY-S .20 .090	50	20	42	42	90	51	10	29	M16x1	1,2		516,00

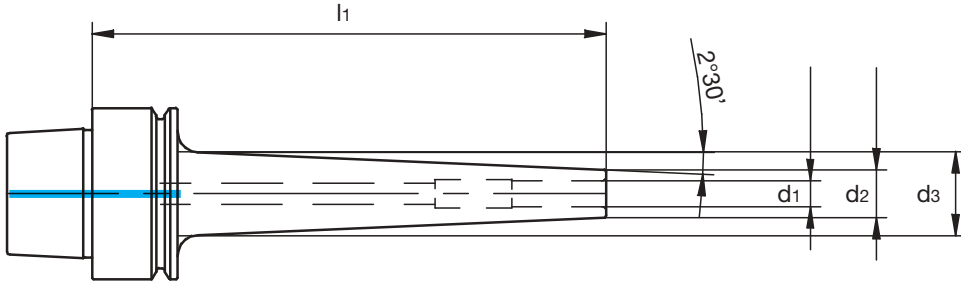



art.	HSK-E	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-E .032 . SF .03 .065	32	3	12	17	65	-	-		0.2	B	258,00
HSK-E .032 . SF .04 .065	32	4	12	17	65	-	-		0.2	B	258,00
HSK-E .032 . SF .05 .065	32	5	12	17	65	-	-		0.2	B	258,00
HSK-E .032 . SF .06 .070	32	6	21	26	70	36	10	M 5	0.4	B	214,00
HSK-E .032 . SF .08 .070	32	8	21	26	70	36	10	M 6	0.4	B	214,00
HSK-E .032 . SF .10 .070	32	10	24	30	70	41	10	M 8 x 1	0.4	B	214,00
HSK-E .040 . SF .03 .065	40	3	12	17	65	-	-		0.3	B	300,00
HSK-E .040 . SF .04 .065	40	4	12	17	65	-	-		0.3	B	300,00
HSK-E .040 . SF .05 .065	40	5	12	17	65	-	-		0.3	B	300,00
HSK-E .040 . SF .06 .080	40	6	21	31	80	36	10	M 5	0.4	B	235,00
HSK-E .040 . SF .08 .080	40	8	21	31	80	36	10	M 6	0.4	B	235,00
HSK-E .040 . SF .10 .080	40	10	24	34	80	41	10	M 8 x 1	0.6	B	235,00
HSK-E .040 . SF .12 .090	40	12	24	35	90	47	10	M 10 x 1	0.6	B	235,00
HSK-E .050 . SF .03 .065	50	3	12	17	65	-	-		0.5	B	300,00
HSK-E .050 . SF .04 .065	50	4	12	17	65	-	-		0.5	B	300,00
HSK-E .050 . SF .05 .065	50	5	12	17	65	-	-		0.5	B	300,00
HSK-E .050 . SF .06 .080	50	6	21	30	80	36	10	M 5	0.6	B	235,00
HSK-E .050 . SF .08 .080	50	8	21	30	80	36	10	M 6	0.6	B	235,00
HSK-E .050 . SF .10 .085	50	10	24	33	85	41	10	M 8 x 1	0.7	B	235,00
HSK-E .050 . SF .12 .090	50	12	24	34	90	47	10	M 10 x 1	0.7	B	235,00
HSK-E .050 . SF .14 .090	50	14	27	37	90	47	10	M 10 x 1	0.8	B	235,00
HSK-E .050 . SF .16 .095	50	16	27	38	95	50	10	M 12 x 1	0.8	B	235,00
HSK-E .063 . SF .03 .080	63	3	12	17	80	-	-		0.6	B	321,00
HSK-E .063 . SF .04 .080	63	4	12	17	80	-	-		0.6	B	321,00
HSK-E .063 . SF .05 .080	63	5	12	17	80	-	-		0.6	B	321,00
HSK-E .063 . SF .06 .080	63	6	21	30	80	36	10	M 5	0.7	B	279,00
HSK-E .063 . SF .08 .080	63	8	21	30	80	36	10	M 6	0.7	B	279,00
HSK-E .063 . SF .10 .085	63	10	24	33	85	41	10	M 8 x 1	0.8	B	279,00
HSK-E .063 . SF .12 .090	63	12	24	34	90	47	10	M 10 x 1	0.8	B	279,00
HSK-E .063 . SF .14 .090	63	14	27	37	90	47	10	M 10 x 1	0.9	B	279,00
HSK-E .063 . SF .16 .095	63	16	27	38	95	50	10	M 12 x 1	0.9	B	279,00


Accessories for shrink fit pag. 156 - Coolant tube pag. 174  
Accessori per Mandrini a calettamento a caldo pag. 156 - Adduttore refrigerante pag. 174

DIN  
69893-5Form  
EG 2,5  
30.000 rpm

art.	HSK-E	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-E .040 .SF-S .06 .120	40	6	15	30	120	36	10	M5	0,5	B	431,00
HSK-E .040 .SF-S .08 .120	40	8	15	30	120	36	10	M6	0,5	B	431,00
HSK-E .040 .SF-S .10 .120	40	10	18	33	120	41	10	M8X1	0,6	B	431,00
HSK-E .040 .SF-S .12 .120	40	12	18	33	120	47	10	M10X1	0,6	B	431,00
HSK-E .050 .SF-S .06 .120	50	6	15	30	120	36	10	M5	0,7	B	452,00
HSK-E .050 .SF-S .08 .120	50	8	15	30	120	36	10	M6	0,7	B	452,00
HSK-E .050 .SF-S .10 .120	50	10	18	33	120	41	10	M8X1	0,8	B	452,00
HSK-E .050 .SF-S .12 .120	50	12	18	33	120	47	10	M10X1	0,8	B	452,00
HSK-E .063 .SF-S .06 .120	63	6	15	30	120	36	10	M5	1	B	475,00
HSK-E .063 .SF-S .08 .120	63	8	15	30	120	36	10	M6	1	B	475,00
HSK-E .063 .SF-S .10 .120	63	10	18	33	120	41	10	M8X1	1,1	B	475,00
HSK-E .063 .SF-S .12 .120	63	12	18	33	120	47	10	M10X1	1,1	B	475,00



DIN  
69893-5

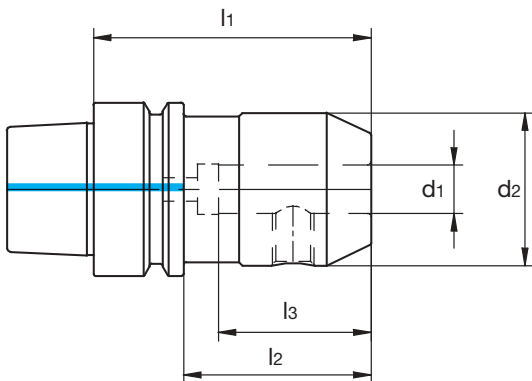
Form  
E



G 2,5  
25.000 rpm

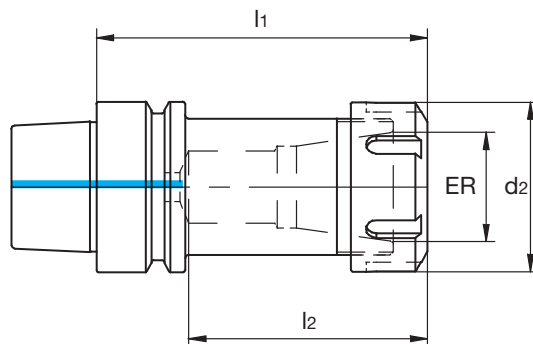
art.	HSK-E	d1	d2	d3	l1				kg		€
HSK-E .040 .SF-ES .03 .070	40	3	8	12,4	70				0,3		365,00
HSK-E .040 .SF-ES .03 .120	40	3	8	16,8	120				0,3		431,00
HSK-E .040 .SF-ES .04 .070	40	4	9	13,4	70				0,3		365,00
HSK-E .040 .SF-ES .04 .120	40	4	9	17,8	120				0,3		431,00
HSK-E .040 .SF-ES .05 .070	40	5	10	14,4	70				0,3		365,00
HSK-E .040 .SF-ES .05 .120	40	5	10	18,4	120				0,3		431,00
HSK-E .040 .SF-ES .06 .070	40	6	11	15,4	70				0,3		365,00
HSK-E .040 .SF-ES .06 .120	40	6	11	19,4	120				0,4		431,00
HSK-E .040 .SF-ES .08 .070	40	8	13	17,4	70				0,3		365,00
HSK-E .040 .SF-ES .08 .120	40	8	13	21,4	120				0,4		431,00
HSK-E .040 .SF-ES .10 .070	40	10	15	19,4	70				0,3		365,00
HSK-E .040 .SF-ES .10 .120	40	10	15	23,4	120				0,4		431,00
HSK-E .040 .SF-ES .12 .070	40	12	17	21,4	70				0,3		365,00
HSK-E .040 .SF-ES .12 .120	40	12	17	25,4	120				0,5		431,00





DIN 69893-5	Form E			G 2,5 25.000 rpm
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art.	HSK-E	d1	d2		l1	l2	l3		Tol./d1	kg		€
HSK-E .050 . W .06 . 065	50	6	25		65	39	35		+ 0.005	0.7		258,00
HSK-E .050 . W .08 . 065	50	8	28		65	39	35		+ 0.005	0.8		235,00
HSK-E .050 . W .10 . 065	50	10	35		65	39	39		+ 0.005	0.8		235,00
HSK-E .050 . W .12 . 080	50	12	42		80	54	44		+ 0.005	0.9		235,00
HSK-E .050 . W .16 . 080	50	16	48		80	54	47		+ 0.005	1.0		235,00
HSK-E .050 . W .18 . 080	50	18	50		80	54	47		+ 0.005	1.0		235,00
HSK-E .050 . W .20 . 080	50	20	52		80	54	49		+ 0.007	1.0		235,00
HSK-E .063 . W .06 . 065	63	6	25		65	39	35		+ 0.005	0.8		258,00
HSK-E .063 . W .08 . 065	63	8	28		65	39	35		+ 0.005	0.8		258,00
HSK-E .063 . W .10 . 065	63	10	35		65	39	39		+ 0.005	0.9		258,00
HSK-E .063 . W .12 . 080	63	12	42		80	54	44		+ 0.005	1.2		258,00
HSK-E .063 . W .16 . 080	63	14	44		80	54	44		+ 0.005	1.2		258,00
HSK-E .063 . W .18 . 080	63	16	48		80	54	47		+ 0.005	1.3		258,00
HSK-E .063 . W .20 . 080	63	20	52		80	54	49		+ 0.007	1.4		258,00

DIN  
69893-5

Form  
E



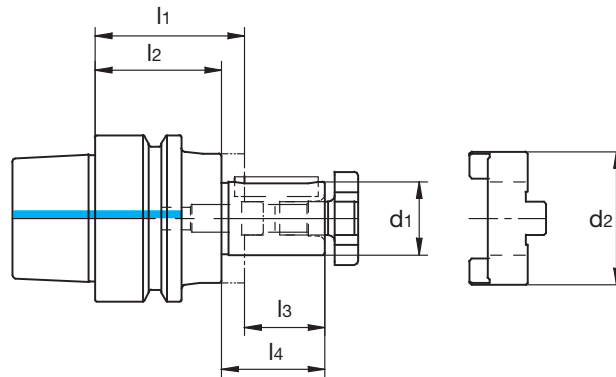
G 2,5  
25.000 rpm

HSK-E

art.	HSK-E	ER	d2	l1	l2	kg	€
HSK-E .040 . ER-N .25 . 080	40	ER 25 (1-16)	42	80	36	0,5	212,00
HSK-E .050 . ER-N .25 . 100	50	ER 25 (1-16)	42	100	36	1,2	250,00
HSK-E .050 . ER-N .32 . 100	50	ER 32 (2-20)	50	100	40	1,2	256,00


Coolant tube pag. 174 - ER collets pag. 162 - Wrench for clamping nuts pag. 180  
 Adduttore refrigerante pag. 174 - Pinze ER pag. 162 - Chiave per ghiera pag. 180

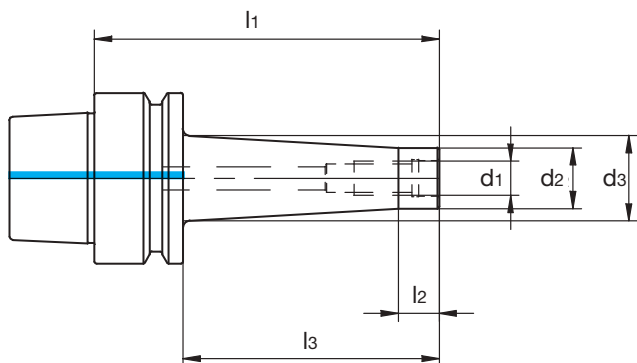




DIN 69893-5	Form E			G 2,5 25.000 rpm
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art.	HSK-E	d1	d2		l1	l2	l3	l4		kg		€
HSK-E .050 . SM .16 .050	50	16	32		50	40	17	27		0,7		279,00
HSK-E .050 . SM .22 .050	50	22	40		50	38	19	31		0,8		265,00
HSK-E .050 . SM .27 .065	50	27	48		65	53	21	33		1,0		271,00
HSK-E .050 . SM .32 .065	50	32	58		65	51	24	38		1,2		286,00

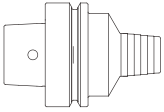

Coolant tube pag. 174 - Key for cutter retaining screw pag. 180  
 Adduttore refrigerante pag. 174 - Chiave di serraggio portafresse a manicotto pag. 180

DIN  
69893-5Form  
EG 2,5  
25.000 rpm

art.	HSK-E	d1	d2	d3	l1	l2	l3	kg	€
HSK-E .040 .SI .08 .045	40	M 8	12.8	15	45	12	25	0,3	197,00
HSK-E .040 .SI .08 .070	40	M 8	12.8	23	70	12	50	0,3	204,00
HSK-E .040 .SI .08 .095	40	M 8	12.8	23	95	12	75	0,4	206,00
HSK-E .040 .SI .10 .045	40	M10	17.8	20	45	12	25	0,3	197,00
HSK-E .040 .SI .10 .070	40	M10	17.8	25	70	12	50	0,4	204,00
HSK-E .040 .SI .10 .095	40	M10	17.8	25	95	12	75	0,4	206,00
HSK-E .050 .SI .08 .051	50	M 8	12.8	15	51	12	25	0,5	206,00
HSK-E .050 .SI .08 .076	50	M 8	12.8	23	76	12	50	0,5	210,00
HSK-E .050 .SI .08 .101	50	M 8	12.8	23	101	12	75	0,6	214,00
HSK-E .050 .SI .08 .126	50	M 8	12.8	23	126	12	100	0,6	225,00
HSK-E .050 .SI .10 .051	50	M10	17.8	20	51	12	25	0,5	206,00
HSK-E .050 .SI .10 .076	50	M10	17.8	25	76	12	50	0,6	210,00
HSK-E .050 .SI .10 .101	50	M10	17.8	25	101	12	75	0,6	214,00
HSK-E .050 .SI .10 .126	50	M10	17.8	32	126	12	100	0,8	225,00
HSK-E .050 .SI .12 .051	50	M12	20.8	24	51	12	25	0,5	206,00
HSK-E .050 .SI .12 .076	50	M12	20.8	28	76	12	50	0,6	210,00
HSK-E .050 .SI .12 .101	50	M12	20.8	31	101	12	75	0,7	214,00
HSK-E .050 .SI .12 .126	50	M12	20.8	33	126	12	100	0,8	225,00



HYS

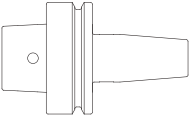


Hydraulic chuck - reduced  
Mandrino idraulico - scaricato

DIN 69893-6	Form F				G 2,5 25.000 rpm
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104

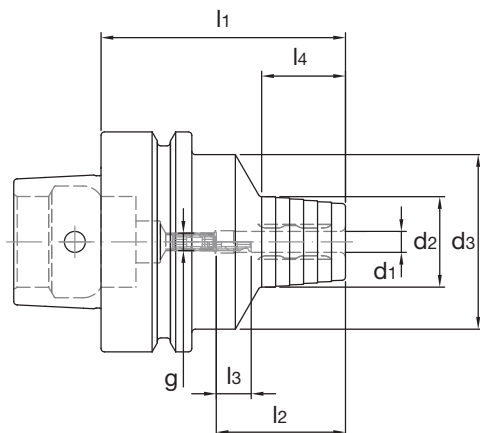
SF



Shrink fit chuck  
Mandrino calettamento a caldo

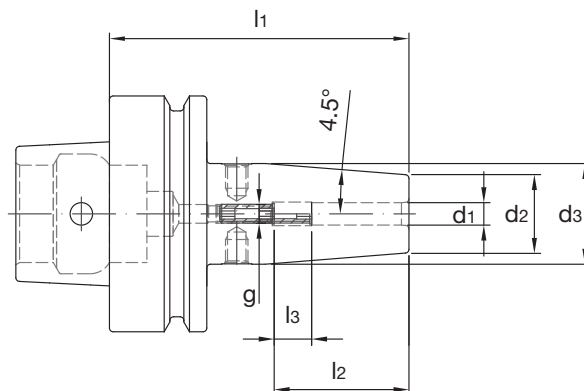
DIN 69893-6	Form F				G 2,5 25.000 rpm
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105



DIN 69893-6	Form F				G 2,5 25.000 rpm
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art.	HSK-F	d1	d2	d3	l1	l2	l3	l4	g	kg		€
HSK-F . 063 . HY-S . 06 . 070	63	6	26	50	70	37	10	24	M5	0,6		556,00
HSK-F . 063 . HY-S . 08 . 070	63	8	28	50	70	37	10	25	M6	0,7		556,00
HSK-F . 063 . HY-S . 10 . 080	63	10	30	50	80	41	10	35	M8x1	0,8		556,00
HSK-F . 063 . HY-S . 12 . 085	63	12	32	50	85	46	10	40	M10x1	0,7		513,00
HSK-F . 063 . HY-S . 14 . 085	63	14	34	50	85	46	10	40	M10x1	0,8		556,00
HSK-F . 063 . HY-S . 16 . 090	63	16	38	50	90	49	10	46	M12x1	0,8		556,00
HSK-F . 063 . HY-S . 18 . 090	63	18	40	50	90	49	10	47	M12x1	0,7		556,00
HSK-F . 063 . HY-S . 20 . 090	63	20	42	50	90	51	10	48	M16x1	0,8		513,00
HSK-F . 063 . HY-S . 25 . 120	63	25	57	53	120	57	10	63	M16x1	0,8		556,00

DIN 69893-6	Form F			G 2,5 25.000 rpm
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art.	HSK-F	d1	d2	d3	l1	l2	l3	g	kg	Form screw	€
HSK-F .063 .SF .03 .080	63	3	10	15	80	28	16	M6	0,6	A	240,00
HSK-F .063 .SF .03 .120	63	3	10	20	120	-	-	-	0,7	A	295,00
HSK-F .063 .SF .03 .160	63	3	10	20	160	-	-	-	0,8	A	319,00
HSK-F .063 .SF .04 .080	63	4	15	22	80	28	12	M6	0,7	A	240,00
HSK-F .063 .SF .04 .120	63	4	15	22	120	-	-	-	0,8	A	295,00
HSK-F .063 .SF .04 .160	63	4	15	22	160	-	-	-	0,8	A	319,00
HSK-F .063 .SF .05 .080	63	5	15	22	80	30	10	M6	0,7	A	240,00
HSK-F .063 .SF .05 .120	63	5	15	22	120	-	-	-	0,8	A	295,00
HSK-F .063 .SF .05 .160	63	5	15	22	160	-	-	-	0,8	A	319,00
HSK-F .063 .SF .06 .080	63	6	21	27	80	36	10	M5	0,8	A	215,00
HSK-F .063 .SF .06 .120	63	6	21	27	120	36	10	M5	1	A	270,00
HSK-F .063 .SF .06 .160	63	6	21	27	160	36	10	M5	1,1	A	307,00
HSK-F .063 .SF .08 .080	63	8	21	27	80	36	10	M6	0,8	A	215,00
HSK-F .063 .SF .08 .120	63	8	21	27	120	36	10	M6	1	A	270,00
HSK-F .063 .SF .08 .160	63	8	21	27	160	36	10	M6	1,1	A	307,00
HSK-F .063 .SF .10 .085	63	10	24	32	85	41	10	M8X1	0,9	A	215,00
HSK-F .063 .SF .10 .120	63	10	24	32	120	41	10	M8X1	1,1	A	270,00
HSK-F .063 .SF .10 .160	63	10	24	32	160	41	10	M8X1	1,3	A	307,00
HSK-F .063 .SF .12 .090	63	12	24	32	90	47	10	M10X1	0,9	A	215,00
HSK-F .063 .SF .12 .120	63	12	24	32	120	47	10	M10X1	1,1	A	270,00
HSK-F .063 .SF .12 .160	63	12	24	32	160	47	10	M10X1	1,3	A	307,00
HSK-F .063 .SF .14 .090	63	14	27	34	90	47	10	M10X1	0,9	A	215,00
HSK-F .063 .SF .14 .120	63	14	27	34	120	47	10	M10X1	1,1	A	270,00
HSK-F .063 .SF .14 .160	63	14	27	34	160	47	10	M10X1	1,3	A	307,00
HSK-F .063 .SF .16 .095	63	16	27	34	95	50	10	M12X1	1	A	215,00
HSK-F .063 .SF .16 .120	63	16	27	34	120	50	10	M12X1	1,1	A	270,00
HSK-F .063 .SF .16 .160	63	16	27	34	160	50	10	M12X1	1,4	A	307,00
HSK-F .063 .SF .18 .095	63	18	33	42	95	50	10	M12X1	1,1	A	215,00
HSK-F .063 .SF .18 .120	63	18	33	42	120	50	10	M12X1	1,3	A	270,00
HSK-F .063 .SF .18 .160	63	18	33	42	160	50	10	M12X1	1,6	A	307,00
HSK-F .063 .SF .20 .100	63	20	33	42	100	52	10	M16X1	1,1	A	215,00
HSK-F .063 .SF .20 .120	63	20	33	42	120	52	10	M16X1	1,3	A	270,00
HSK-F .063 .SF .20 .160	63	20	33	42	160	52	10	M16X1	1,6	A	307,00
HSK-F .063 .SF .25 .115	63	25	44	53	115	58	10	M16X1	1,6	A	215,00
HSK-F .063 .SF .25 .120	63	25	44	53	120	58	10	M16X1	1,7	A	270,00
HSK-F .063 .SF .25 .160	63	25	44	53	160	58	10	M16X1	2	A	307,00
HSK-F .063 .SF .32 .120	63	32	44	53	120	62	10	M16X1	1,6	A	215,00