

PENCIL DESIGN

Benefits and features

- For drilling to finishing
- Pencil design enabling machining in deep cavities and complex components
- Special designs possibility
- High clamping force



6 Nm



ETP HYDRO-GRIP® PENCIL

Hydraulic high precision toolholder – Pencil version

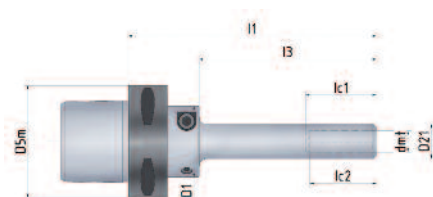
ETP HYDRO-GRIP® PENCIL is with its extreme slim design one of the most versatile holder on the market. An extensive range of

standard dimensions and lengths optimizes your productivity when machining deep cavities and complex components.

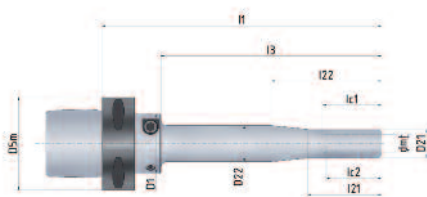
ETP HYDRO-GRIP® PENCIL can also be made to your specific gauge line requirement, using our Customized Designs possibility.

- Runout accuracy < 0.004 mm at 2.5 x dm_t (max. 50 mm)
< 0.007 mm at 2.5 x dm_t at length $l_1 > 125$ mm
- Balancing grade: G 2.5 at 25 000 rpm for PSK C4 – C6, HSK 50 - 63 and ISO 30 - 40
G 2.5 at 14 000 rpm for PSK C8, HSK 100 and ISO50
- Tool shank h6 or h7 can be used
- Can be used with reducing sleeve
- Coolant through on all holders
- Bore for data carrier – available on request

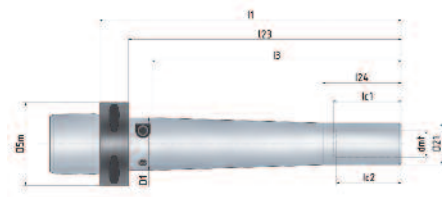
METRIC RANGE



PSK form design 1



PSK form design 2



PSK form design 3

ETP HYDRO-GRIP® PENCIL

Hydraulic high precision toolholder – Pencil version



Technical Specification PSK form

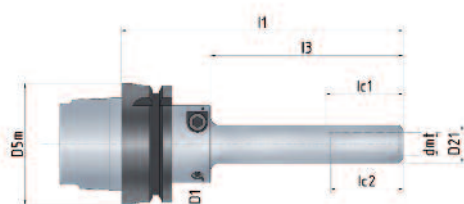
Dimensions, mm

Design	Coupling size	Part no.	Item description	D_{5m}	dm_t	D_1	D_{21}	D_{22}	l_{c1}	l_{c2}	l_1	l_3	l_{21}	l_{22}	l_{23}	l_{24}
● 1	C4	683210	HG PENCIL-6x50/C4	40	6	40	12		40	30	88	50				
○ 1		683180	HG PENCIL-8x50/C4	40	8	40	14,5		40	30	88	50				
○ 1		683200	HG PENCIL-10x50/C4	40	10	40	17		40	37	88	50				
○ 1		683190	HG PENCIL-10x100/C4	40	10	40	17		40	37	138	100				
● 1		683220	HG PENCIL-12x50/C4	40	12	40	19,5		40	37	88	50				
● 1		683230	HG PENCIL-12x100/C4	40	12	40	19,5		40	37	138	100				
● 2		683240	HG PENCIL-12x150/C4	40	12	40	19,5	24,5	40	37	188	150	50	75		
● 1	C5	683310	HG PENCIL-6x50/C5	50	6	40	12		40	30	88	50				68
○ 1		683250	HG PENCIL-8x50/C5	50	8	40	14,5		40	30	88	50				68
○ 1		683270	HG PENCIL-10x50/C5	50	10	40	17		40	37	88	50				68
○ 1		683260	HG PENCIL-10x100/C5	50	10	40	19,5		40	37	138	100				118
● 1		683320	HG PENCIL-12x50/C5	50	12	40	19,5		40	37	88	50				68
● 1		683330	HG PENCIL-12x100/C5	50	12	40	19,5		40	37	138	100				118
● 2		683300	HG PENCIL-12x150/C5	50	12	40	19,5	24,5	40	37	188	150	50	75	168	
○ 1		683290	HG PENCIL-16x75/C5	50	16	40	26		50	47	113	75				93
○ 1		683280	HG PENCIL-16x125/C5	50	16	40	26		50	47	163	125				143
● 3		683340	HG PENCIL-20x110/C5	50	20	40	32		52	49	148	110				128 60
● 3		683350	HG PENCIL-20x190/C5	50	20	40	32		52	49	228	190				208 60
● 1	C6	683430	HG PENCIL-6x50/C6	63	6	40	12		40	30	90	50				68
○ 1		683360	HG PENCIL-8x50/C6	63	8	40	14,5		40	30	90	50				68
○ 1		683380	HG PENCIL-10x50/C6	63	10	40	17		40	37	90	50				68
○ 1		683370	HG PENCIL-10x100/C6	63	10	40	17		40	37	140	100				118
● 1		683440	HG PENCIL-12x50/C6	63	12	40	19,5		40	37	90	50				68
● 1		683450	HG PENCIL-12x100/C6	63	12	40	19,5		40	37	140	100				118
● 2		683410	HG PENCIL-12x150/C6	63	12	40	19,5	24,5	40	37	190	150	50	75	168	
○ 1		683400	HG PENCIL-16x75/C6	63	16	40	26		50	47	115	75				93
○ 1		683390	HG PENCIL-16x125/C6	63	16	40	26		50	47	165	125				143
● 3		683460	HG PENCIL-20x110/C6	63	20	40	32		52	49	150	110				128 60
● 3		683420	HG PENCIL-20x190/C6	63	20	40	32		52	49	230	190				208 60
○ 1	C8	683480	HG PENCIL-10x50/C8	80	10	40	17		40	37	102	50				72
○ 1		683470	HG PENCIL-10x100/C8	80	10	40	17		40	37	152	100				122
● 1		683510	HG PENCIL-12x50/C8	80	12	40	19,5		40	37	102	50				72
● 1		683520	HG PENCIL-12x100/C8	80	12	40	19,5		40	37	152	100				122
● 2		683540	HG PENCIL-12x150/C8	80	12	40	19,5	24,5	40	37	202	150	50	75	172	
○ 1		683500	HG PENCIL-16x75/C8	80	16	40	26		50	47	127	75				97
○ 1		683490	HG PENCIL-16x125/C8	80	16	40	26		50	47	177	125				147
● 3		683530	HG PENCIL-20x110/C8	80	20	40	32		52	49	162	110				132 60
● 3		683550	HG PENCIL-20x190/C8	80	20	40	32		52	49	242	190				212 60

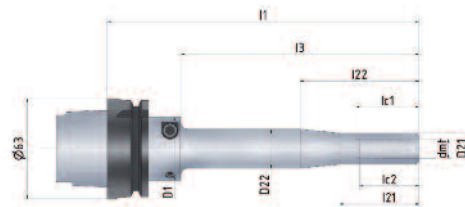
● From stock

○ On request - PSK Inch equivalents add "-T" to metric part no.

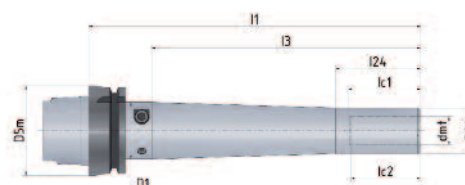
l_1 = programming length



HSK form design 1



HSK form design 2



HSK form design 3

ETP HYDRO-GRIP® PENCIL

Hydraulic high precision toolholder – Pencil version

Technical Specification HSK form A/C

Design	HSK size	Part no.	Item description	Dimensions, mm												
				D_{5m}	dm_t	D_1	D_{21}	D_{22}	l_1	l_3	l_{21}	l_{22}	l_{24}	l_{c1}	l_{c2}	
● 1	63	683810	HG PENCIL-6x50/HSK63	63	6	40	12		96,5	50					40	30
○ 1		683740	HG PENCIL-8x50/HSK63	63	8	40	14,5		96,5	50					40	30
○ 1		683760	HG PENCIL-10x50/HSK63	63	10	40	17		96,5	50					40	37
○ 1		683750	HG PENCIL-10x100/HSK63	63	10	40	17		146,5	100					40	37
● 1		683830	HG PENCIL-12x50/HSK63	63	12	40	19,5		96,5	50					40	37
● 1		683840	HG PENCIL-12x100/HSK63	63	12	40	19,5		146,5	100					40	37
● 2		683820	HG PENCIL-12x150/HSK63	63	12	40	19,5	24,5	196,5	150	50	75			40	37
○ 1		683780	HG PENCIL-16x75/HSK63	63	16	40	26		121,5	75					50	47
○ 1		683770	HG PENCIL-16x125/HSK63	63	16	40	26		171,5	125					50	47
● 3		683790	HG PENCIL-20x110/HSK63	63	20	40	32		156,5	110			60		52	49
● 3		683800	HG PENCIL-20x190/HSK63	63	20	40	32		236,5	190			60		52	49
○ 1	100	683860	HG PENCIL-10x50/HSK100	100	10	40	17		117	50					40	37
○ 1		683850	HG PENCIL-10x100/HSK100	100	10	40	17		167	100					40	37
● 1		683890	HG PENCIL-12x50/HSK100	100	12	40	19,5		117	50					40	37
● 1		683920	HG PENCIL-12x100/HSK100	100	12	40	19,5		167	100					40	37
● 2		683930	HG PENCIL-12x150/HSK100	100	12	40	19,5	24,5	217	150	50	75			40	37
○ 1		683880	HG PENCIL-16x75/HSK100	100	16	40	26		142	75					50	47
○ 1		683870	HG PENCIL-16x125/HSK100	100	16	40	26		192	125					50	47
● 3		683900	HG PENCIL-20x110/HSK100	100	20	40	32		177	110			60		52	49
● 3		683910	HG PENCIL-20x190/HSK100	100	20	40	32		257	190			60		52	49

Technical Specification HSK form E

Design	HSK size	Part no.	Item description	Dimensions, mm												
				D_{5m}	dm_t	D_1	D_{21}	D_{22}	l_1	l_3	l_{21}	l_{22}	l_{c1}	l_{c2}		
○ 1	50	683670	HG PENCIL-6x50/HSK50	50	6	40	12		94	50					40	30
○ 1		683680	HG PENCIL-8x50/HSK50	50	8	40	14,5		94	50					40	30
○ 1		683700	HG PENCIL-10x50/HSK50	50	10	40	17		94	50					40	37
○ 1		683690	HG PENCIL-10x100/HSK50	50	10	40	17		144	100					40	37
○ 1		683730	HG PENCIL-12x50/HSK50	50	12	40	19,5		94	50					40	37
○ 1		683710	HG PENCIL-12x100/HSK50	50	12	40	19,5		144	100					40	37
○ 2		683720	HG PENCIL-12x150/HSK50	50	12	40	19,5	24,5	194	150	50	75			40	37

ETP HYDRO-GRIP® PENCIL

Cylindrical shank

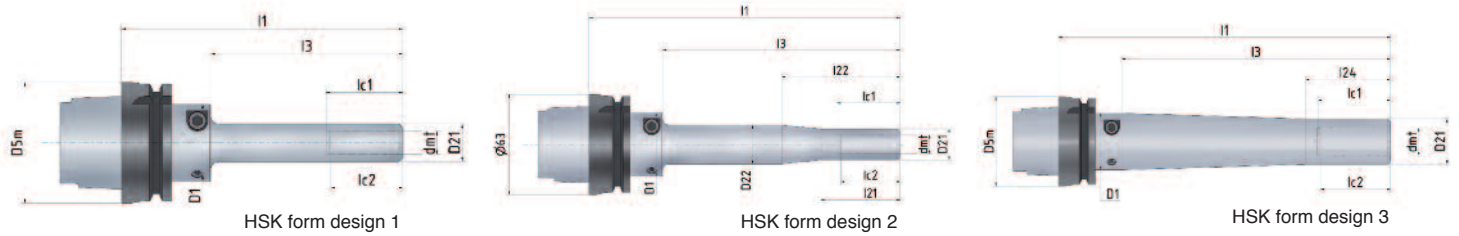


Technical Specification

Part no.	Item description	Dimensions, mm/inch			
		dm_m	dm_t	l_c	l_1
● 336891	HG PENCIL-12/Rd20-150	20	12	40	150

l_1 = programming length

INCH RANGE



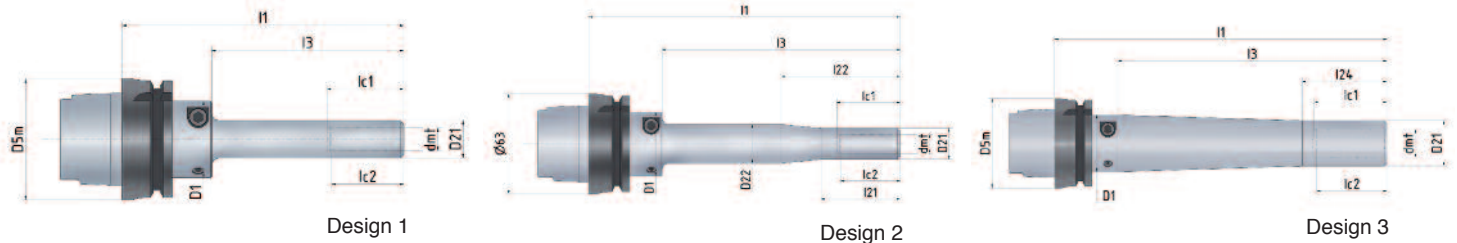
ETP HYDRO-GRIP® PENCIL Hydraulic high precision toolholder – Pencil version

Technical Specification HSK form A/C

Design	HSK size	Part no.	Item description	Dimensions, mm												
				D_{5m}	dm_t	D_1	D_{21}	D_{22}	l_1	l_3	l_{21}	l_{22}	l_{24}	l_{c1}	l_{c2}	
● 1	63	683830-T	HG PENCIL-1/2"x50/HSK63	63	0.500"	40	19,5		96,5	50				40	37	
● 1		683840-T	HG PENCIL-1/2"x100/HSK63	63	0.500"	40	19,5		146,5	100			40	37		
● 2		683820-T	HG PENCIL-1/2"x150/HSK63	63	0.500"	40	19,5	24,5	196,5	150	50	75	40	37		
● 3		683790-T	HG PENCIL-3/4"x110/HSK63	63	0.750"	40	32		156,5	110			60	52	49	
● 3		683800-T	HG PENCIL-3/4"x190/HSK63	63	0.750"	40	32		236,5	190			60	52	49	
● 1	100	683890-T	HG PENCIL-1/2"x50/HSK100	100	0.500"	40	19,5		117	50			40	37		
● 1		683920-T	HG PENCIL-1/2"x100/HSK100	100	0.500"	40	19,5		167	100			40	37		
● 2		683930-T	HG PENCIL-1/2"x150/HSK100	100	0.500"	40	19,5	24,5	217	150	50	75	40	37		
● 3		683900-T	HG PENCIL-3/4"x110/HSK100	100	0.750"	40	32		177	110			60	52	49	
● 3		683910-T	HG PENCIL-3/4"x190/HSK100	100	0.750"	40	32		257	190			60	52	49	

- Runout accuracy < 0.004 mm at 2.5 x dm_t (max. 50 mm)
< 0.007 mm at 2.5 x dm_t at length $l_1 > 125$ mm
- Balancing grade: G 2.5 at 25 000 rpm
- Tool shank h6 or h7 can be used
- Can be used with reducing sleeve

METRIC RANGE INCH RANGE



ETP HYDRO-GRIP® PENCIL HSK 63F Hydraulic high precision toolholder – Pencil version

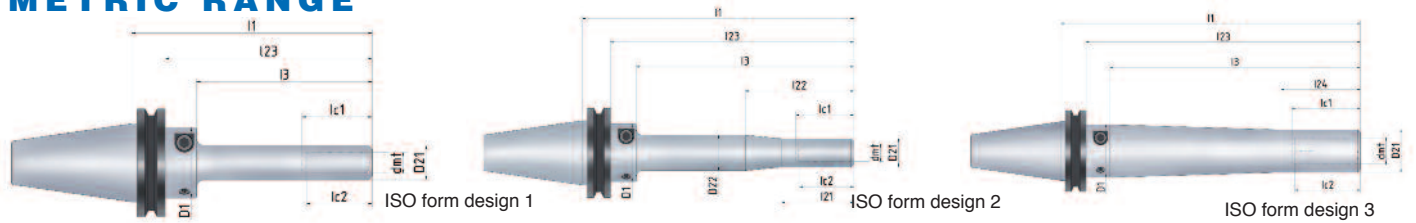
Technical Specification HSK 63F

Design	Part no.	Item description	Dimensions, mm												
			D_{5m}	dm_t	D_1	D_{21}	D_{22}	l_1	l_3	l_{21}	l_{22}	l_{24}	l_{c1}	l_{c2}	
● 1	684400	HG PENCIL-6x50/HSK63F	63	6	40	12		94	50				40	30	
● 1	684440	HG PENCIL-12x50/HSK63F	63	12	40	19,5		94	50				40	37	
● 1	684450	HG PENCIL-12x100/HSK63F	63	12	40	19,5		144	100				40	37	
● 2	684460	HG PENCIL-12x150/HSK63F	63	12	40	19,5	24,5	194	150	50	75		40	37	
● 3	684490	HG PENCIL-20x110/HSK63F	63	20	40	32		154	110			60	52	49	
● 3	684500	HG PENCIL-20x190/HSK63F	63	20	40	32		234	190			60	52	49	
● 1	684540	HG PENCIL-1/2"x50/HSK63F	63	0.500"	40	19,5		94	50				40	37	
● 1	684550	HG PENCIL-1/2"x100/HSK63F	63	0.500"	40	19,5		144	100				40	37	
● 2	684560	HG PENCIL-1/2"x150/HSK63F	63	0.500"	40	19,5	24,5	194	150	50	75		40	37	
● 3	684590	HG PENCIL-3/4"x110/HSK63F	63	0.750"	40	32		154	110			60	52	49	
● 3	684600	HG PENCIL-3/4"x190/HSK63F	63	0.750"	40	32		234	190			60	52	49	

- From stock
- On request

l_1 = programming length

METRIC RANGE

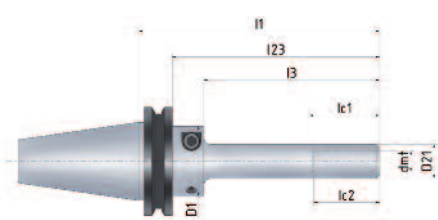


ETP HYDRO-GRIP® PENCIL Hydraulic high precision toolholder – Pencil version

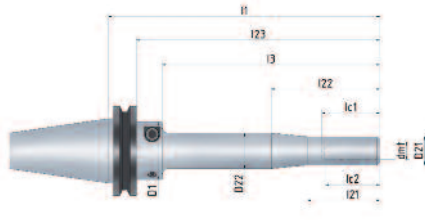
Technical Specification ISO form AD (A/B coolant on all CAT40 and CAT50 holders)

Design	Spindle design	Taper	Part no.	Item description	Dimensions											
					dm_t	D_1	D_{21}	D_{22}	l_1	l_3	l_{21}	l_{22}	l_{23}	l_{24}	l_{c1}	l_{c2}
● 1	ISO7388/1	ISO40	683940	HG PENCIL-6x50/ISO40	6	40	12		87	50			67,9		40	30
○ 1			683950	HG PENCIL-8x50/ISO40	8	40	14,5		87	50			67,9		40	30
○ 1			683970	HG PENCIL-10x50/ISO40	10	40	17		87	50			67,9		40	37
○ 1			683960	HG PENCIL-10x100/ISO40	10	40	17		137	100			117,9		40	37
● 1			684000	HG PENCIL-12x50/ISO40	12	40	19,5		87	50			67,9		40	37
● 1			684010	HG PENCIL-12x100/ISO40	12	40	19,5		137	100			117,9		40	37
● 2			684030	HG PENCIL-12x150/ISO40	12	40	19,5	24,5	187	150	50	75	167,9		40	37
○ 1			683990	HG PENCIL-16x75/ISO40	16	40	26		112	75			92,9		50	47
○ 1			683980	HG PENCIL-16x125/ISO40	16	40	26		162	125			142,9		50	47
● 3			684020	HG PENCIL-20x110/ISO40	20	40	32		147	110			127,9	60	52	49
● 3			684040	HG PENCIL-20x190/ISO40	20	40	32		227	190			207,9	60	52	49
● 1	ISO7388/1	ISO50	684190	HG PENCIL 12x50/ISO50	12	40	19,5		87	50			67,9		40	37
● 1			684200	HG PENCIL 12x100/ISO50	12	40	19,5		137	100			117,9		40	37
● 2			684210	HG PENCIL 12x150/ISO50	12	40	19,5	24,5	187	150	50	75	167,9		40	37
● 3			684240	HG PENCIL 20x110/ISO50	20	40	32		147	110			127,9	60	52	49
● 3			684250	HG PENCIL 20x190/ISO50	20	40	32		227	190			207,9	60	52	49
● 1	MAS-BT403	ISO30	683000	HG PENCIL-6x50/BT30	6	40	12		90	50			68		40	30
○ 1			683010	HG PENCIL-8x50/BT30	8	40	14,5		90	50			68		40	30
○ 1			683030	HG PENCIL-10x50/BT30	10	40	17		90	50			68		40	37
○ 1			683020	HG PENCIL-10x100/BT30	10	40	17		140	100			118		40	37
● 1			683060	HG PENCIL-12x50/BT30	12	40	19,5		90	50			68		40	37
● 1			683040	HG PENCIL-12x100/BT30	12	40	19,5		140	100			118		40	37
● 2			683050	HG PENCIL-12x150/BT30	12	40	19,5	24,5	190	150	50	75	168		40	37
○ 3			684360	HG PENCIL-20x110/BT30	20	40	32		150	110			128	60	52	49
○ 3			684370	HG PENCIL-20x190/BT30	20	40	32		230	190			208	60	52	49
● 1	MAS-BT403	ISO40	683070	HG PENCIL-6x50/BT40	6	40	12		95	50			68		40	30
○ 1			683080	HG PENCIL-8x50/BT40	8	40	14,5		95	50			68		40	30
○ 3			683100	HG PENCIL-10x50/BT40	10	40	17		95	50			68		40	37
○ 3			683090	HG PENCIL-10x100/BT40	10	40	17		145	100			118		40	37
● 1			683160	HG PENCIL-12x50/BT40	12	40	19,5		95	50			68		40	37
● 1			683170	HG PENCIL-12x100/BT40	12	40	19,5		145	100			118		40	37
● 2			683110	HG PENCIL-12x150/BT40	12	40	19,5	24,5	195	150	50	75	168		40	37
○ 1			683130	HG PENCIL-16x75/BT40	16	40	26		120	75			93		50	47
○ 2			683120	HG PENCIL-16x125/BT40	16	40	26		170	125			143		50	47
● 3			683150	HG PENCIL-20x110/BT40	20	40	32		155	110			128	60	52	49
● 3			683140	HG PENCIL-20x190/BT40	20	40	32		235	190			208	60	52	49
● 1	MAS-BT403	ISO50	684090	HG PENCIL 12x50/BT50	12	40	19,5		106	50			68		40	37
● 1			684100	HG PENCIL 12x100/BT50	12	40	19,5		156	100			118		40	37
● 2			684110	HG PENCIL 12x150/BT50	12	40	19,5	24,5	206	150	50	75	168		40	37
● 3			684140	HG PENCIL 20x110/BT50	20	40	32		166	110			128	60	52	49
● 3			684150	HG PENCIL 20x190/BT50	20	40	32		246	190			206,5	60	52	49
○ 1	CAT V	ISO40	683560	HG PENCIL-6x50/CAT40	6	40	12		88	50			68,95		40	30
○ 1			683570	HG PENCIL-8x50/CAT40	8	40	14,5		88	50			68,95		40	30
○ 1			683590	HG PENCIL-10x50/CAT40	10	40	17		88	50			68,95		40	37
○ 1			683580	HG PENCIL-10x100/CAT40	10	40	17		138	100			118,95		40	37
● 1			683650	HG PENCIL-12x50/CAT40	12	40	19,5		88	50			68,95		40	37
● 1			683600	HG PENCIL-12x100/CAT40	12	40	19,5		138	100			118,95		40	37
● 2			683610	HG PENCIL-12x150/CAT40	12	40	19,5	24,5	188	150	50	75	168,95		40	37
○ 1			683630	HG PENCIL-16x75/CAT40	16	40	26		113	75			93,95		50	47
○ 1			683620	HG PENCIL-16x125/CAT40	16	40	26		163	125			143,95		50	47
● 3			683660	HG PENCIL-20x110/CAT40	20	40	32		148	110			128,95	60	52	49
● 3			683640	HG PENCIL-20x190/CAT40	20	40	32		228	190			208,95	60	52	49
● 1	CAT V	ISO50	684290	HG PENCIL 12x50/CAT50	12	40	19,5		88	50			68,95		40	37
● 1			684300	HG PENCIL 12x100/CAT50	12	40	19,5		138	100			118,95		40	37
● 2			684310	HG PENCIL 12x150/CAT50	12	40	19,5	24,5	188	150	50	75	168,95		40	37
● 3			684340	HG PENCIL 20x110/CAT50	20	40	32		148	110			128,95	60	52	49
● 3			684350	HG PENCIL 20x190/CAT50	20	40	32		228	190			208,95	60	52	49

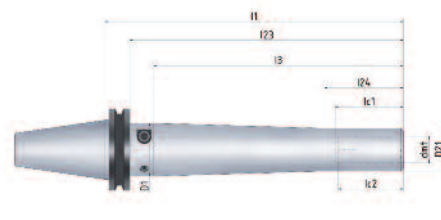
l_1 = programming length



ISO form design 1



ISO form design 2



ISO form design 3

ETP HYDRO-GRIP® PENCIL Hydraulic high precision toolholder – Pencil version

Technical Specification ISO form AD (A/B coolant on all CAT40 and CAT50 holders)

Design	Spindle design	Taper	Part no.	Item description	Dimensions												
					dm_1	D_1	D_{21}	D_{22}	l_1	l_3	l_{21}	l_{22}	l_{23}	l_{24}	l_{c1}	l_{c2}	
○ 1	ISO7388/1	ISO40	683940-T	HG PENCIL-1/4"x50/ISO40	0.250"	40	12		87	50				67,9	40	30	
○ 1			684000-T	HG PENCIL-1/2"x50/ISO40	0.500"	40	19,5		87	50				67,9	40	37	
○ 1			684010-T	HG PENCIL-1/2"x100/ISO40	0.500"	40	19,5		137	100				117,9	40	37	
○ 2			684030-T	HG PENCIL-1/2"x150/ISO40	0.500"	40	19,5	24,5	187	150	50	75	167,9		40	37	
○ 3			684020-T	HG PENCIL-3/4"x110/ISO40	0.750"	40	32		147	110				127,9	60	52	49
○ 3			684040-T	HG PENCIL-3/4"x190/ISO40	0.750"	40	32		227	190				207,9	60	52	49
○ 1	ISO7388/1	ISO50	684190-T	HG PENCIL 1/2"x50/ISO50	0.500"	40	19,5		87	50				67,9	40	37	
○ 1			684200-T	HG PENCIL 1/2"x100/ISO50	0.500"	40	19,5		137	100				117,9	40	37	
○ 2			684210-T	HG PENCIL 1/2"x150/ISO50	0.500"	40	19,5	24,5	187	150	50	75	167,9		40	37	
○ 3			684240-T	HG PENCIL 3/4"x110/ISO50	0.750"	40	32		147	110				127,9	60	52	49
○ 3			684250-T	HG PENCIL 3/4"x190/ISO50	0.750"	40	32		227	190				207,9	60	52	49
○ 1	MAS-BT403	ISO30	683000-T	HG PENCIL-1/4"x50/BT30	0.250"	40	12		90	50				68	40	30	
● 1			683060-T	HG PENCIL-1/2"x50/BT30	0.500"	40	19,5		90	50				68	40	37	
● 1			683040-T	HG PENCIL-1/2"x100/BT30	0.500"	40	19,5		140	100				118	40	37	
○ 2			683050-T	HG PENCIL-1/2"x150/BT30	0.500"	40	19,5	24,5	190	150	50	75	168		40	37	
○ 1	MAS-BT403	ISO40	683070-T	HG PENCIL-1/4"x50/BT40	0.250"	40	12		95	50				68	40	30	
○ 1			683160-T	HG PENCIL-1/2"x50/BT40	0.500"	40	19,5		95	50				68	40	37	
○ 1			683170-T	HG PENCIL-1/2"x100/BT40	0.500"	40	19,5		145	100				118	40	37	
○ 2			683110-T	HG PENCIL-1/2"x150/BT40	0.500"	40	19,5	24,5	195	150	50	75	168		40	37	
○ 3			683150-T	HG PENCIL-3/4"x110/BT40	0.750"	40	32		155	110				128	60	52	49
○ 3			683140-T	HG PENCIL-3/4"x190/BT40	0.750"	40	32		235	190				208	60	52	49
○ 1	MAS-BT403	ISO50	684090-T	HG PENCIL 1/2"x50/BT50	0.500"	40	19,5		106	50				68	40	37	
○ 1			684100-T	HG PENCIL 1/2"x100/BT50	0.500"	40	19,5		156	100				118	40	37	
○ 2			684110-T	HG PENCIL 1/2"x150/BT50	0.500"	40	19,5	24,5	206	150	50	75	168		40	37	
○ 3			684140-T	HG PENCIL 3/4"x110/BT50	0.750"	40	32		166	110				128	60	52	49
○ 3			684150-T	HG PENCIL 3/4"x190/BT50	0.750"	40	32		246	190				206,5	60	52	49
● 1	CAT V	ISO40	683650-T	HG PENCIL-1/2"x50/CAT40	0.500"	40	19,5		88	50				68,95	40	37	
● 1			683600-T	HG PENCIL-1/2"x100/CAT40	0.500"	40	19,5		138	100				118,95	40	37	
● 2			683610-T	HG PENCIL-1/2"x150/CAT40	0.500"	40	19,5	24,5	188	150	50	75	168,95		40	37	
● 3			683660-T	HG PENCIL-3/4"x110/CAT40	0.750"	40	32		148	110				128,95	60	52	49
● 3			683640-T	HG PENCIL-3/4"x190/CAT40	0.750"	40	32		228	190				208,95	60	52	49
● 1	CAT V	ISO50	684290-T	HG PENCIL 1/2"x50/CAT50	0.500"	40	19,5		88	50				68,95	40	37	
● 1			684300-T	HG PENCIL 1/2"x100/CAT50	0.500"	40	19,5		138	100				118,95	40	37	
● 2			684310-T	HG PENCIL 1/2"x150/CAT50	0.500"	40	19,5	24,5	188	150	50	75	168,95		40	37	
● 3			684340-T	HG PENCIL 3/4"x110/CAT50	0.750"	40	32		148	110				128,95	60	52	49
● 3			684350-T	HG PENCIL 3/4"x190/CAT50	0.750"	40	32		228	190				208,95	60	52	49

l_1 = programming length

- From stock
- On request