



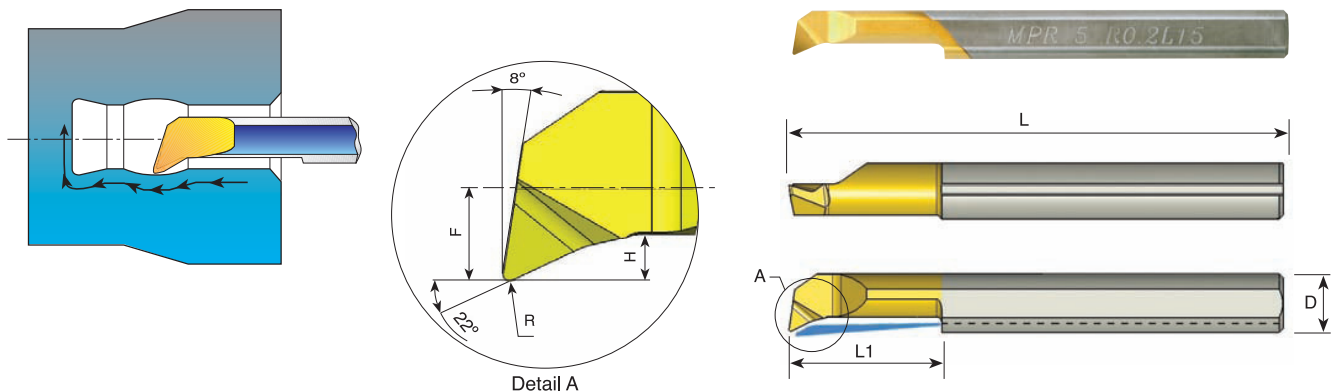
Carmex
Precision Tools Ltd.
x-treme thread cutting™



Tiny Tools New Products

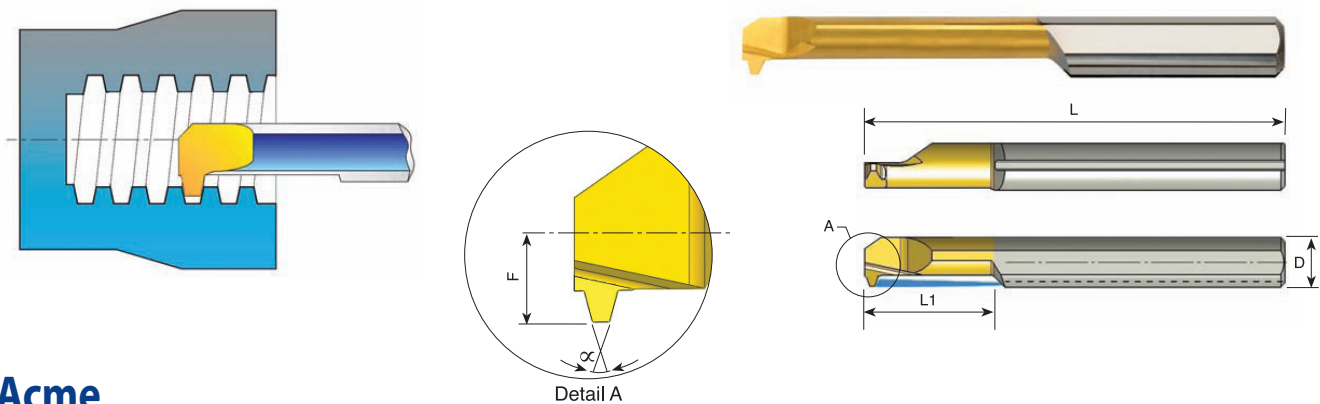


MPR Bars Profiling and Boring - with through Coolant



D	Ordering Code	L	L1	R	H	F	Min. Bore Dia.	Holder
3.0	MPR 1.5 R0.1 L10	39	10	0.10	0.3	0.7	1.5	SIM ... H3
3.0	MPR 2 R0.15 L15	39	15	0.15	0.5	0.8	2.1	SIM ... H3
7.0	MPR 7 R0.2 L35	62	35	0.20	1.5	3.3	7.1	SIM ... H7

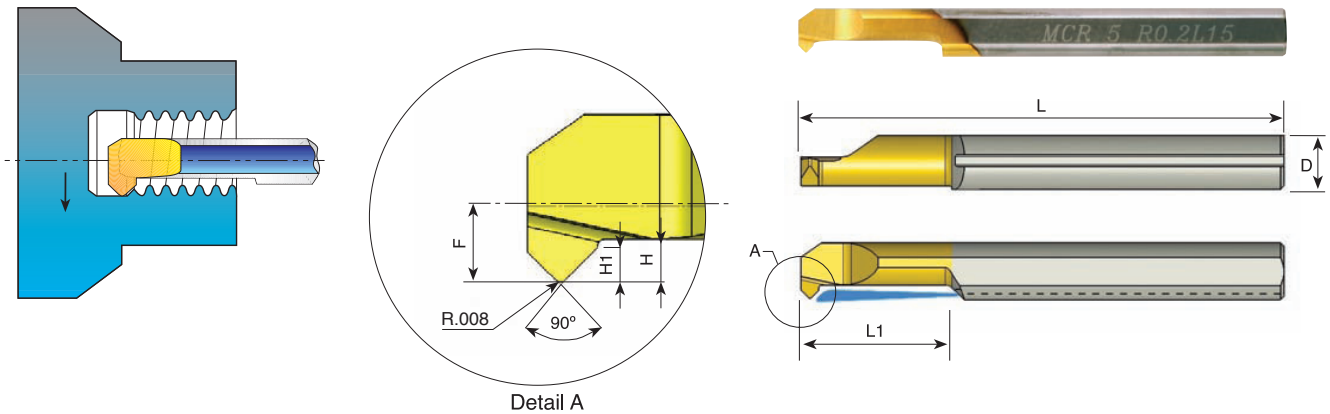
MIR Bars Threading - with through Coolant



Acme

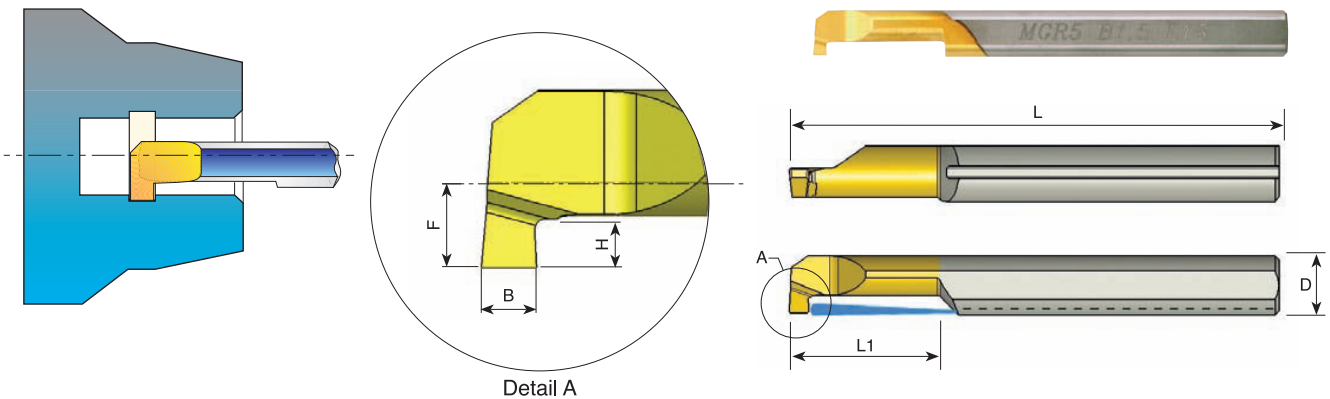
D	Ordering Code	Pitch TPI	Thread Size	L	L1	F	α	Min. Bore Dia.	Holder
8.0	MIR 8 L30 10 ACME	10	1/2 x 10	76	30	3.8	29	10.0	SIM ... H8
10.0	MIR 10 L35 8 ACME	8	5/8 x 8	73	35	4.8	29	12.5	SIM ... H10
10.0	MIR 10 L45 6 ACME	6	3/4 x 6 7/8 x 6	105	45	4.8	29	14.6	SIM ... H10

MCR Bars Chamfering and Boring - with through Coolant



D	Ordering Code	L	L1	R	H	H1	F	Min. Bore Dia.	Holder
7.0	MCR 7 R0.2 L20	62	20	0.2	1.5	0.8	3.3	7.1	SIM ... H7

MGR Bars Grooving - with through Coolant



D	Ordering Code	L	L1	B	H	F	Min. Bore Dia.	Holder
4.0	MGR 4 B1.0 L15	51	15	1.0	1.0	1.7	4.1	SIM ... H4
	MGR 5 B1.0 L22		22	1.0				
5.0	MGR 5 B1.5 L22	51	22	1.5	1.2	2.3	5.1	SIM ... H5
	MGR 5 B2.0 L22		22	2.0				
6.0	MGR 6 B1.0 L22	51	22	1.0	1.4	2.8	6.1	SIM ... H6
	MGR 6 B1.5 L22		22	1.5				
	MGR 6 B2.0 L22		22	2.0				
7.0	MGR 7 B1.0 L15	62	15	1.0	2.5	3.3	7.1	SIM ... H7
	MGR 7 B1.0 L22		22	1.0				
	MGR 7 B1.0 L30		30	1.0				
	MGR 7 B1.5 L15		15	1.5				
	MGR 7 B1.5 L22		22	1.5				
	MGR 7 B1.5 L30		30	1.5				
	MGR 7 B2.0 L15		15	2.0				
	MGR 7 B2.0 L22		22	2.0				
MGR 7 B2.0 L30	30	2.0						

Technical Section

Carbide Grades:

BXC (P30 - P50, K25 - K40)

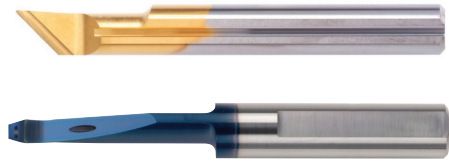
PVD TiN coated grade for low cutting speed.
Works well with a wide range of stainless steels.

BMK (K10 - K20)

Sub-micron grade with advanced PVD triple blue coating. Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

K20 (K10 - K30)

Uncoated Carbide grade for non ferrous metals, aluminum and cast iron.

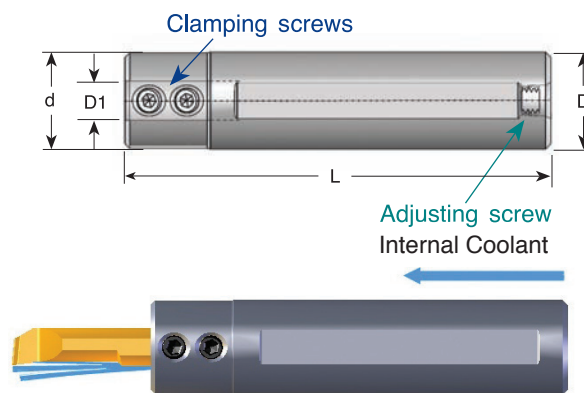


Cutting speed for Tiny Tools

ISO Standard	Material		Condition	Cutting Speed m/min		
				BXC	BMK	
P	Non-Alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	25-50	30-60	
		≥0.25%C	Annealed			
		< 0.55%C	Quenched and tempered			
		≥0.55%C	Annealed			
	Low alloy steel and cast steel (less than 5% alloying elements)		Annealed	20-25	24-30	
			Quenched and tempered			
High alloy steel, cast steel, and tool steel		Annealed	18-20	22-24		
		Quenched and tempered				
M	Stainless steel and cast steel		Ferritic/martensitic	25-30	30-42	
			Martensitic			
			Austenitic			
K	Cast iron nodular (GGG)		Ferritic/pearlitic	17-23	20-28	
			Pearlitic			
	Grey cast iron (GG)		Ferritic	17-23	20-28	
			Pearlitic			
	Malleable cast iron		Ferritic	17-23	20-28	
			Pearlitic			
N	Aluminum-wrought alloy		Not cureable	50-70	60-84	
			Cured			
	Aluminum-cast, alloyed	<=12% Si	Not cureable	30-40	36-48	
			Cured			
	Copper alloys	>12% Si	High temperature	22-25	24-30	
		>1% Pb	Free cutting			
		Brass				
Non metallic			Electrolytic copper	35-45		
			Duroplastics, fiber plastics			
S	High temp. alloys, Super alloys		Fe based	15-20	18-24	
						Annealed
						Cured
						Cast
	Titanium alloys		Ni or Co based	12-18	15-20	
						Alpha+beta alloys cured
H	Hardened steel		Hardened 45-50 HRc	15-20	18-24	
			Hardened 51-55 HRc			
			Hardened 56-62 HRc			
	Chilled cast iron		Cast	10-14	12-16	
Cast iron		Hardened	8-12	10-14		

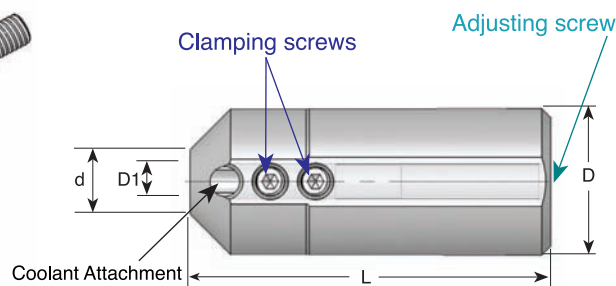
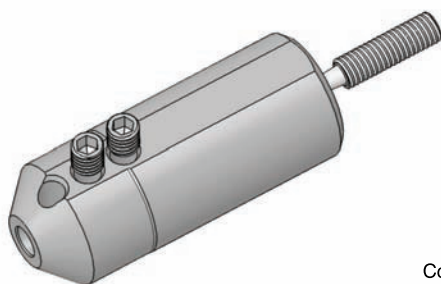
Recommended Feed Rate: 0.01 - 0.03 mm/rev

Tiny Tools Bar Holders



D1	Ordering Code	L	D	d	Key	Clamping Screw	Adjusting Screw
3.0	SIM 0012 H3	88	12	12	K25	S24	S35
	* SIM 0016 H3S	75	16	20			
	SIM 0016 H3	88	16	20		S35	
	SIM 0020 H3	88	20	20			
	* SIM 0022 H3	88	22	22			
4.0	SIM 0012 H4	88	12	12	K25	S24	S35
	* SIM 0016 H4S	75	16	20			
	SIM 0016 H4	88	16	20		S35	
	SIM 0020 H4	88	20	20z			
	* SIM 0022 H4	88	22	22			
5.0	SIM 0012 H5	88	12	12	K25	S24	S35
	* SIM 0016 H5S	75	16	20			
	SIM 0016 H5	88	16	20		S35	
	SIM 0020 H5	88	20	20			
	* SIM 0022 H5	88	22	22			
6.0	* SIM 0016 H6S	75	16	20	K25	S25	S35S
	SIM 0016 H6	88	16	20			S35
	SIM 0020 H6	88	20	20			
	* SIM 0022 H6	88	22	22			
7.0	SIM 0016 H7	88	16	20	K25	S25	S35
	SIM 0020 H7	88	20	20			
8.0	SIM 0016 H8	88	16	20	K25	S25	S35
	SIM 0020 H8	88	20	20			
10.0	SIM 0020 H10	88	20	20	K25	S25	S35

* Can also be used with Swiss type lathe machines



D1	Ordering Code	L	D	d	Key	Clamping Screw	Adjusting Screw
3.0	SIM 0025 H3	62	25	10.8	K25	S25	S35M
4.0	SIM 0025 H4						
5.0	SIM 0025 H5						
6.0	SIM 0025 H6						

Square shank Tiny Tools holders for internal machining with sliding head clamping method for Swiss type lathe machines

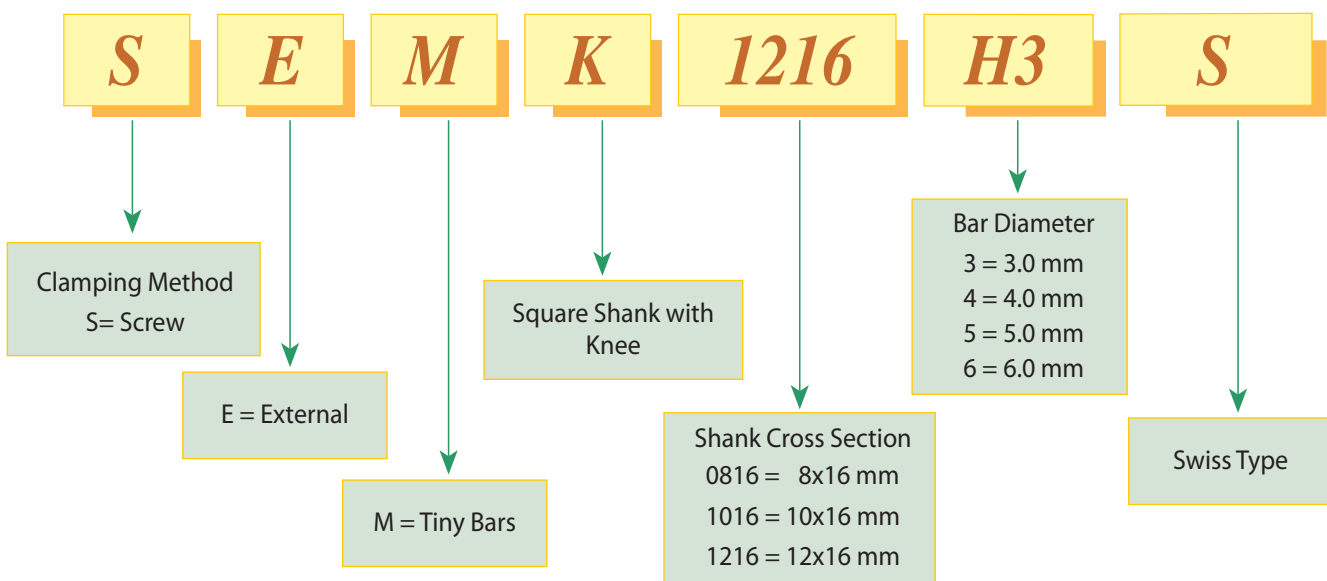
To be used with the standard Tiny Tools diameters 3, 4, 5 and 6 mm.

- Boring
- Back turning
- Profiling
- Threading
- Chamfering
- Grooving
- Face grooving

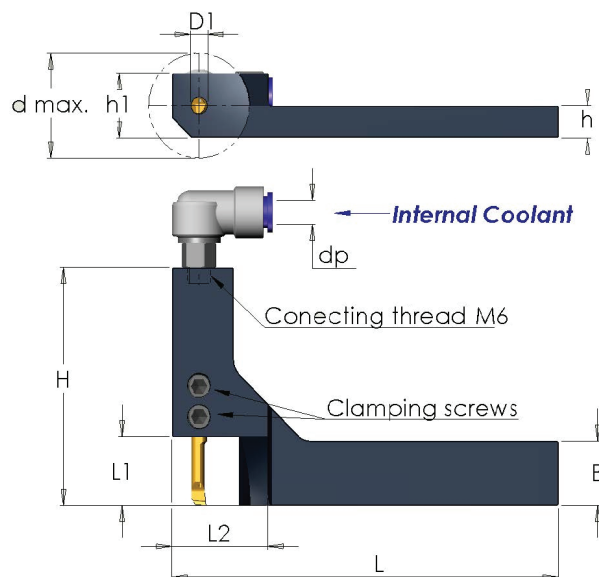
Advantages

- Accurate tool location
- Internal coolant through the holder
- Adaptor for fast coolant connection

Product Identification Tiny Bar Holders Ordering Codes



Square Shanks Holders



D1	Ordering Code	B	L	L1	L2	H	h	h1	d max.	*dp	Key	Clamping Screw
3.0	SEMK 0816 H3S	16	100	17	25	46	8	16	26	4/6	K25	S25
	SEMK 1016 H3S						10	18				
	SEMK 1216 H3S						12	20				
4.0	SEMK 0816 H4S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H4S						10	18				
	SEMK 1216 H4S						12	20				
5.0	SEMK 0816 H5S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H5S						10	18				
	SEMK 1216 H5S						12	20				
6.0	SEMK 0816 H6S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H6S						10	18				
	SEMK 1216 H6S						12	20				

* Optional

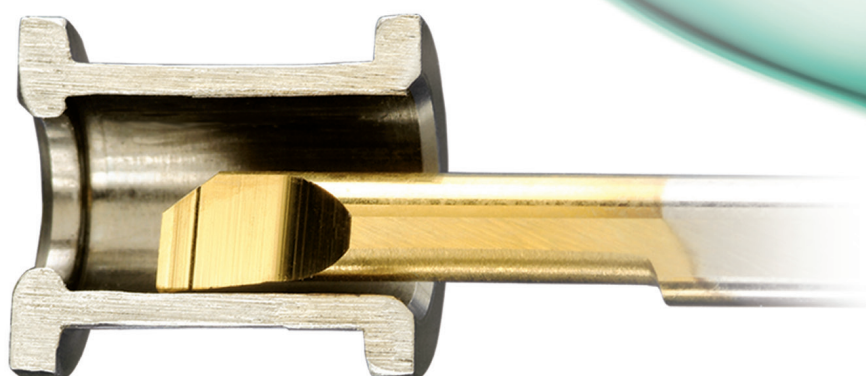


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