

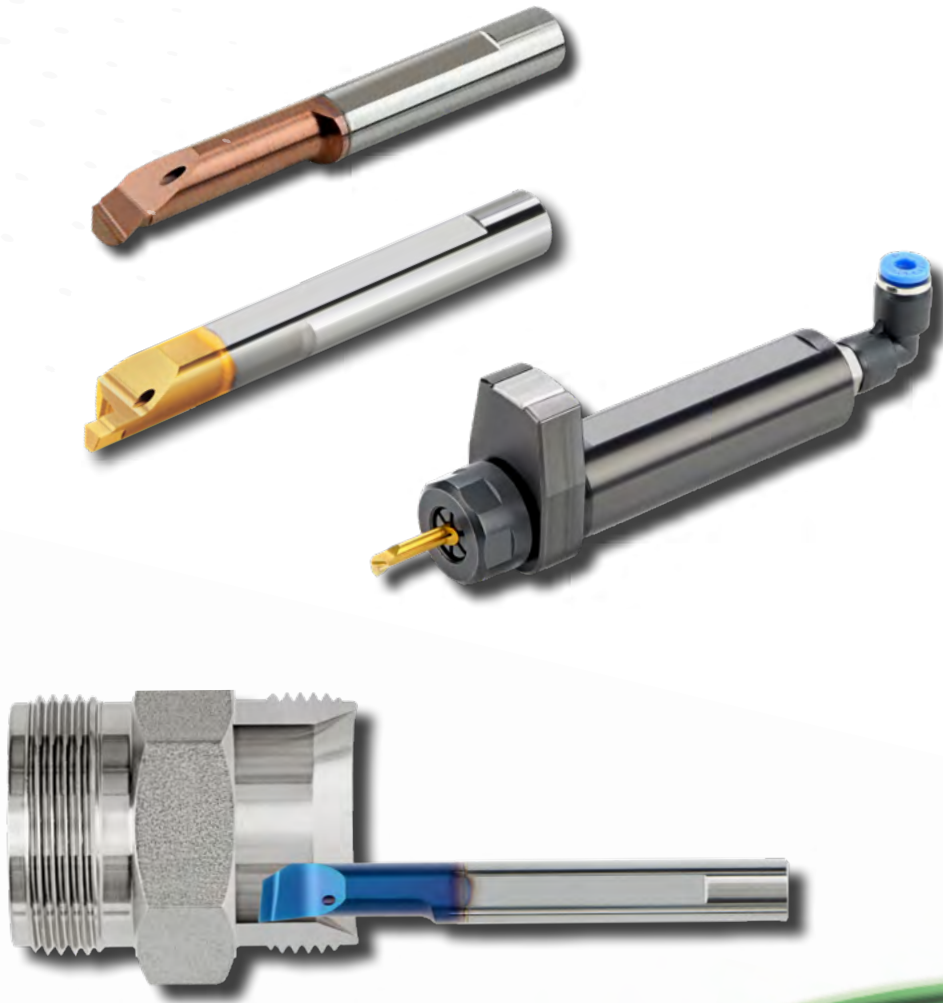


Carmex
Precision Tools Ltd.

The optimal tools for your industry™

Tiny Tools

微型小镗刀



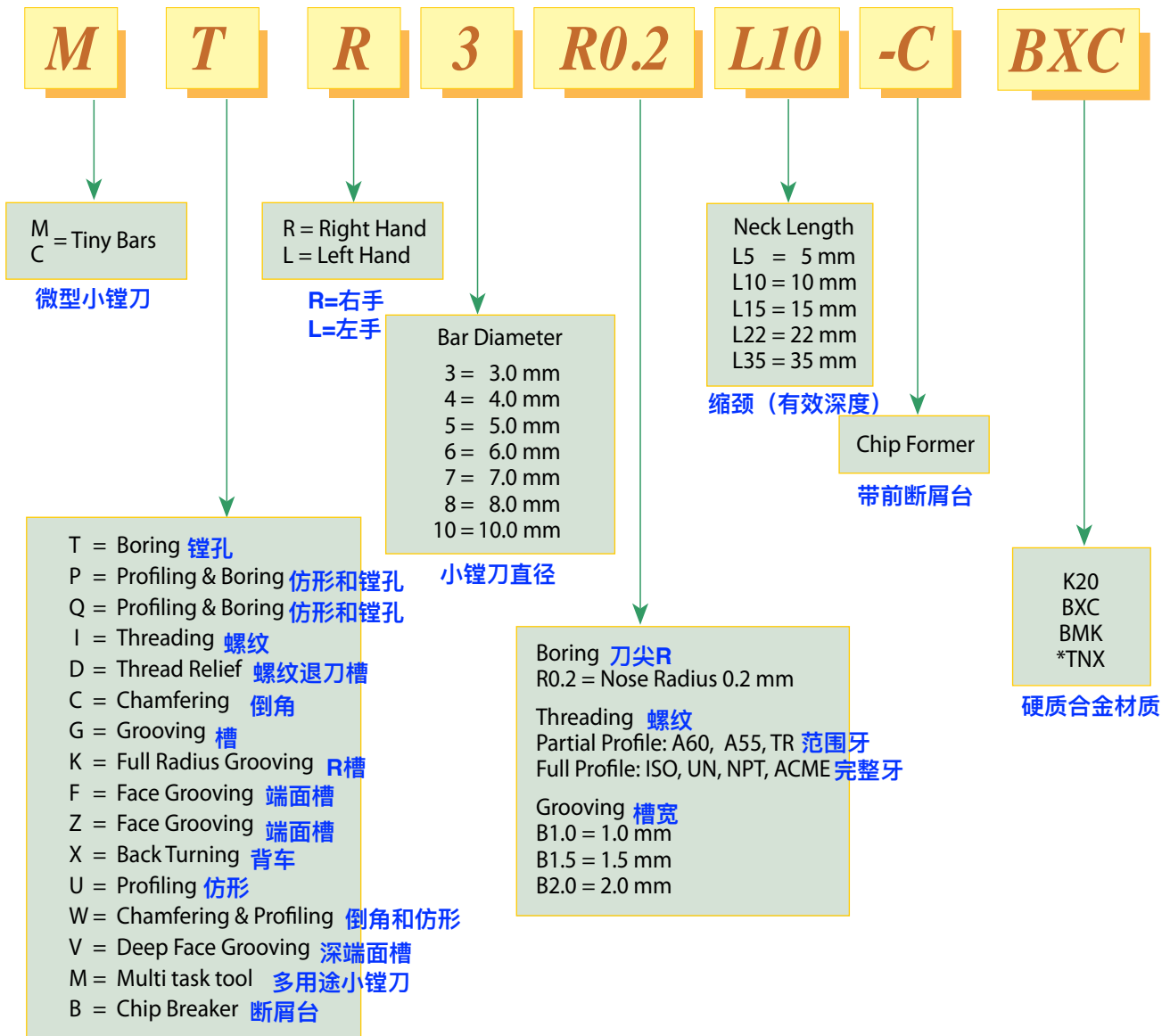
Metric 2020

公制 2020

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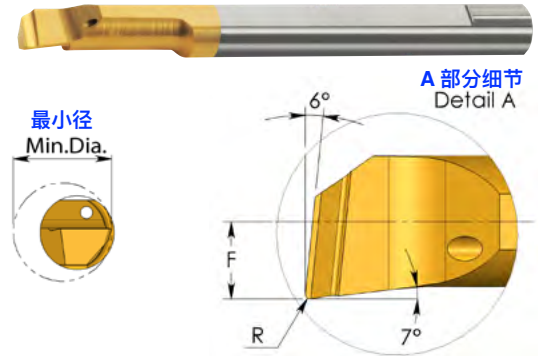
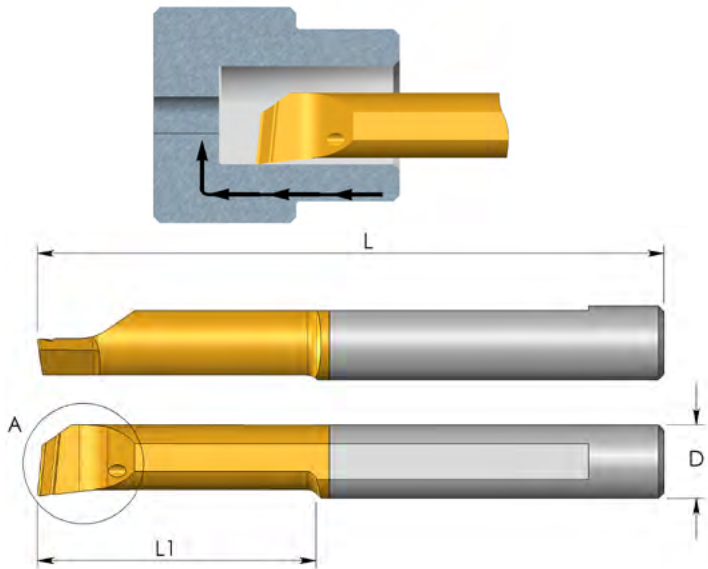
Product Identification 产品标识-微型小镗刀订货号

Tiny Bars Ordering Codes



* Available only for CBR bars 带星号的TNK材质只用于CBR小镗刀

MTR Bars Boring MTR小镗刀



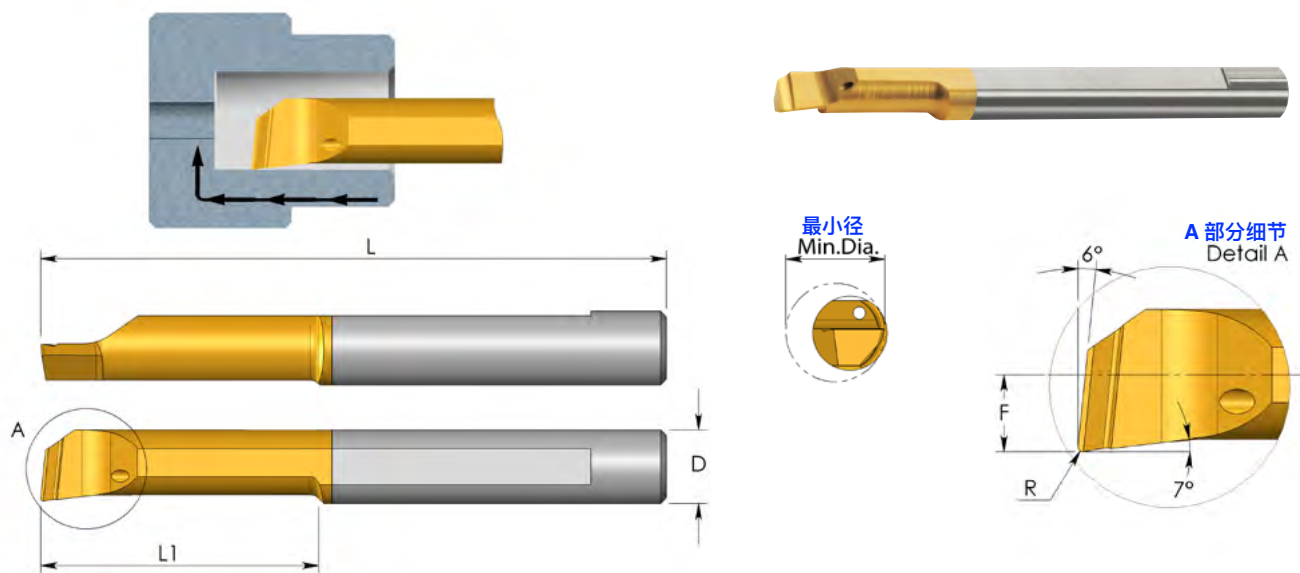
Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

柄径 D	订货号 Ordering Code	总长 L	有效长度 L1	刀尖R	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
3.0	MTR 1 R0 L6	39	6	0	0.5	1.0	SIM ... H3
	MTR 1 R0.05 L4	39	4	0.05	0.5	1.0	
	MTR 1 R0.05 L6	39	6	0.05	0.5	1.0	
3.0	MTR 1.2 R0 L7	39	7	0	0.6	1.2	SIM ... H3
	MTR 1.2 R0 L9	39	9	0	0.6	1.2	
3.0	MTR 1.5 R0 L6	39	6	0	0.7	1.5	SIM ... H3
	MTR 1.5 R0.1 L6	39	6	0.10	0.7	1.5	
3.0	MTR 2 R0 L10	39	10	0	0.8	2.1	SIM ... H3
	MTR 2 R0.05 L5	39	5	0.05	0.8	2.1	
	MTR 2 R0.05 L10	39	10	0.05	0.8	2.1	
	MTR 2 R0.1 L10	39	10	0.10	0.8	2.1	
	MTR 2 R0.1 L15	39	15	0.10	0.8	2.1	
	MTR 2 R0.15 L5	39	5	0.15	0.8	2.1	
4.0	MTR 2 R0.15 L10	39	10	0.15	0.8	2.1	SIM ... H3
	MTR 2.5 R0 L10	51	10	0	1.0	2.5	
	MTR 2.5 R0.1 L10	51	10	0.10	1.0	2.5	
3.0	MTR 2.5 R0.1 L15	51	15	0.10	1.0	2.5	SIM ... H4
	MTR 3 R0.05 L10	39	10	0.05	1.3	3.1	
	MTR 3 R0.05 L15	39	15	0.05	1.3	3.1	
	MTR 3 R0.1 L10	39	10	0.10	1.3	3.1	
	MTR 3 R0.1 L15	39	15	0.10	1.3	3.1	
	MTR 3 R0.2 L10	39	10	0.20	1.3	3.1	
4.0	MTR 3 R0.2 L15	39	15	0.20	1.3	3.1	SIM ... H3
	MTR 4 R0.05 L15	51	15	0.05	1.7	4.1	
	MTR 4 R0.05 L22	51	22	0.05	1.7	4.1	
	MTR 4 R0.1 L10	51	10	0.10	1.7	4.1	
	MTR 4 R0.1 L15	51	15	0.10	1.7	4.1	
	MTR 4 R0.1 L22	51	22	0.10	1.7	4.1	
	MTR 4 R0.2 L10	51	10	0.20	1.7	4.1	
	MTR 4 R0.2 L15	51	15	0.20	1.7	4.1	
4.0	MTR 4 R0.2 L22	51	22	0.20	1.7	4.1	SIM ... H4
	MTR 4 R0.2 L30	62	30	0.20	1.7	4.1	

For additional holders see page 33-42 更多的变径套刀杆请见第33-42页

MTR Bars Boring MTR镗孔小镗刀



柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	含刀尖半径 F	最小径 Min Dia.	变径套 Holder
5.0	MTR 5 R0.05 L15	51	15	0.05	2.1	5.1	SIM ... H5
	MTR 5 R0.1 L15	51	15	0.10	2.1	5.1	
	MTR 5 R0.1 L22	51	22	0.10	2.1	5.1	
	MTR 5 R0.1 L30	76	30	0.10	2.1	5.1	
	MTR 5 R0.2 L10	51	10	0.20	2.1	5.1	
	MTR 5 R0.2 L15	51	15	0.20	2.1	5.1	
	MTR 5 R0.2 L22	51	22	0.20	2.1	5.1	
	MTR 5 R0.2 L30	76	30	0.20	2.1	5.1	
6.0	MTR 5 R0.2 L40	76	40	0.20	2.1	5.1	
	MTR 6 R0.05 L15	51	15	0.05	2.8	6.1	SIM ... H6
	MTR 6 R0.05 L22	51	22	0.05	2.8	6.1	
	MTR 6 R0.1 L15	51	15	0.10	2.8	6.1	
	MTR 6 R0.1 L22	51	22	0.10	2.8	6.1	
	MTR 6 R0.2 L15	51	15	0.20	2.8	6.1	
	MTR 6 R0.2 L22	51	22	0.20	2.8	6.1	
	MTR 6 R0.2 L30	58	30	0.20	2.8	6.1	
MTR 6 R0.2 L35	76	35	0.20	2.8	6.1		
7.0	MTR 6 R0.2 L40	76	40	0.20	2.8	6.1	
	MTR 7 R0.2 L22	62	22	0.20	3.3	7.1	SIM ... H7
8.0	MTR 7 R0.2 L30	62	30	0.20	3.3	7.1	
	MTR 8 R0.2 L15	64	15	0.20	3.8	8.1	SIM ... H8
	MTR 8 R0.2 L22	64	22	0.20	3.8	8.1	
MTR 8 R0.2 L35	76	35	0.20	3.8	8.1		
10.0	MTR 10 R0.2 L35	73	35	0.20	4.8	10.1	SIM ... H10

Order example: MTR 4 R0.2 L15 BXC 订货式样: MTR 4 R0.2 L15 BXC

For L.H. bars specify MTL instead of MTR 左手L.H.小镗刀以MTL表示, 而不能以MTR代之。

For additional holders see page 33-42 更多的变径套刀杆请见第33-42页

CBR Bars Profiling and Boring CBR小镗刀-仿形和镗孔

With advanced Chip Breaker 带断屑台

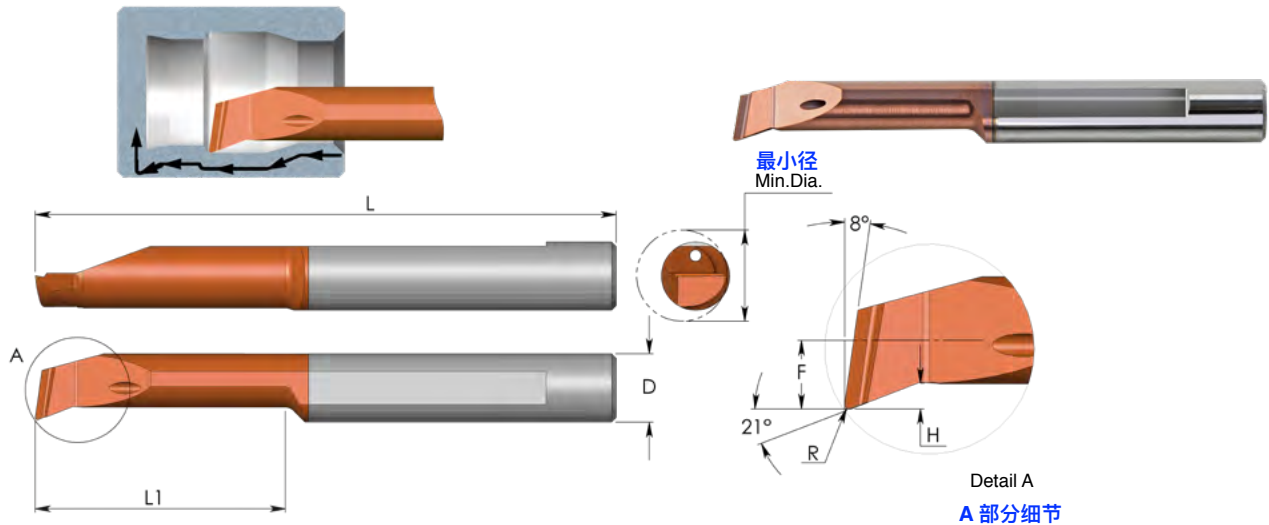
Chip evacuation is obtained thanks to advanced Chip Breaker and the internal coolant through the tool, pushing the chips out of the hole.

前置的断屑台和内冷，将切屑冲出孔外。

Excellent solution for machining stainless steels, super alloys and other “difficult” materials that create curly chips around the tool and the application.

Can be used also as general purpose for a wide range of materials.

杰出的不锈钢加工小镗刀，用于超级合金和其它“困难”的材料。断屑槽产生漩涡状卷曲的切屑，能用于通用的、宽范围的材料。



Grade	P	M	K	N	S	H
材质 TNX	●	●	●	●	●	●

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	切削刃高 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	CBR 4 R0.2 L10	51	10	0.2	0.4	1.8	4.1	SIM ... H4
	CBR 4 R0.2 L15	51	15	0.2	0.4	1.8	4.1	
5.0	CBR 5 R0.2 L15	51	15	0.2	0.8	2.3	5.1	SIM ... H5
	CBR 5 R0.2 L22	51	22	0.2	0.8	2.3	5.1	
6.0	CBR 6 R0.2 L15	51	15	0.2	1.0	2.8	6.1	SIM ... H6
	CBR 6 R0.2 L22	51	22	0.2	1.0	2.8	6.1	

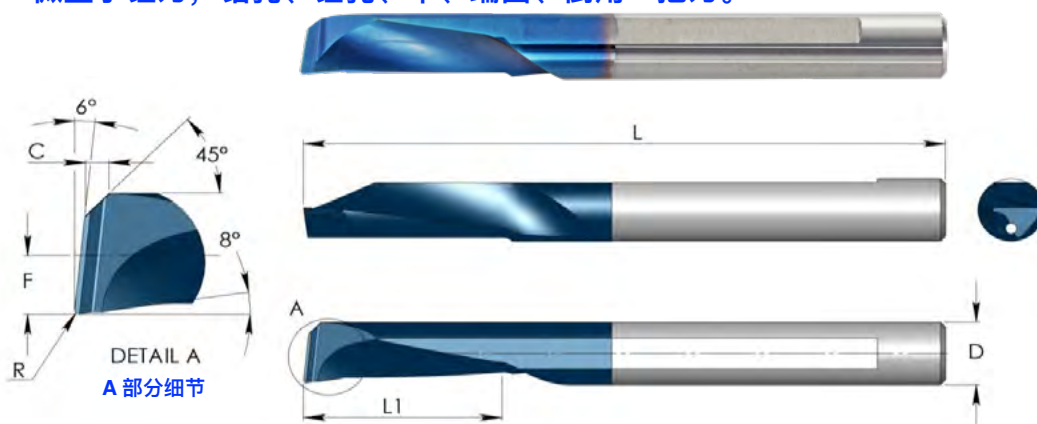
Order example: CBR 5 R0.2 L15 TNX 订货式样: CBR 5 R0.2 L 15 TNX

For L.H. bars specify CBL instead of CBR 左手L.H.小镗刀以CBL表示，而不能以CBR代之。

For additional holders see page 33-42 更多的变径套见第33-42页

CMR Multi-Task Tiny Bars CMR-多用途微型小镗刀

Multi-Task Tiny Tool CMR for Boring, Turning, Facing and Chamfering with a single tool
 多用途CMR-微型小镗刀，钻孔、镗孔、车、端面、倒角一把刀。



Grade	P	M	K	N	S	H
材质 BMK	●	●	●	○	●	●

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	含刀尖半径 F	槽宽 C	最小径 Hole Dia.*	变径套 Holder
4.0	CMR 4 R0.1 L10	51	10	0.1	1.8	1.3	4.0	SIM...H4
	CMR 4 R0.1 L15	51	15	0.1	1.8	1.3	4.0	
5.0	CMR 5 R0.2 L10	51	10	0.2	2.1	1.3	5.0	SIM...H5
	CMR 5 R0.2 L15	51	15	0.2	2.1	1.3	5.0	
6.0	CMR 6 R0.2 L12	58	12	0.2	2.8	1.5	6.0	SIM...H6
	CMR 6 R0.2 L18	58	18	0.2	2.8	1.5	6.0	

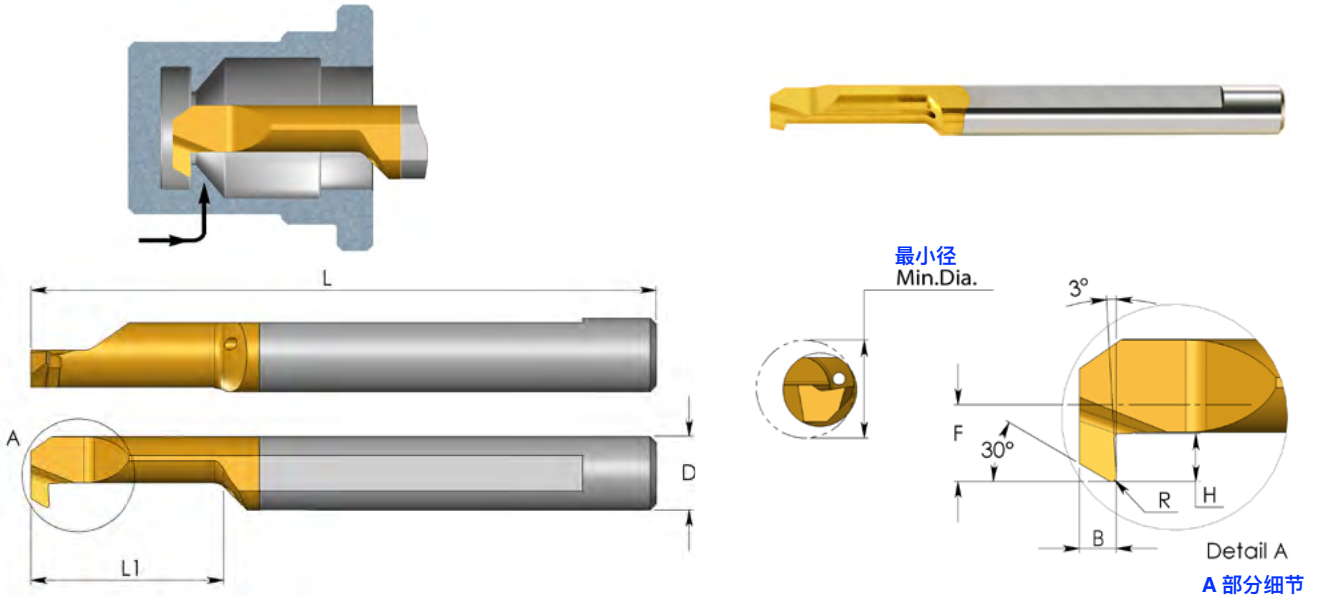
Order example: CMR 6 R0.2 L12 BMK 订货式样: **CMR 6 R0.2 L 12 BMK**

For L.H. bars specify CML instead of CMR 左手L.H.小镗刀以CML表示，而不能以CMR代之。

* The minimum diameter the tool can produce from full material 最小直径小镗刀可用于所有材料

For additional holders see page 33-42 更多变径套请见33-42页

MXR Bars Back Turning MXR-背车小镗刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

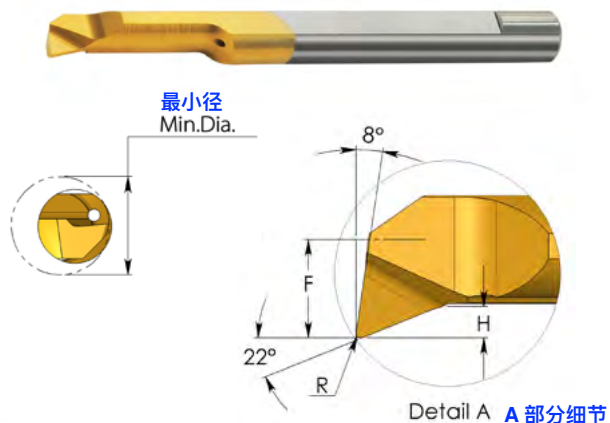
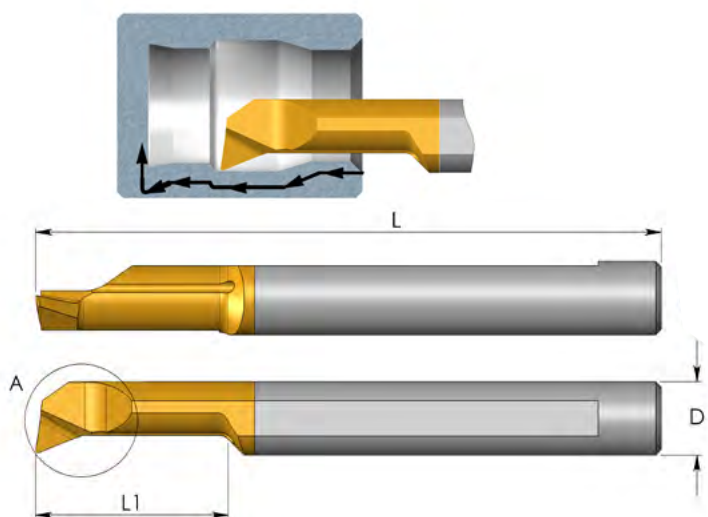
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刃宽 B	刀尖R R	刃长 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MXR 4 R0.1 L10	51	10	1.3	0.10	0.5	1.3	3.1	SIM ... H4
4.0	MXR 4 R0.15 L10	51	10	1.3	0.15	0.8	1.7	4.1	SIM ... H4
	MXR 4 R0.15 L15	51	15	1.3	0.15	0.8	1.7	4.1	
5.0	MXR 5 R0.2 L15	51	15	1.5	0.20	1.0	2.3	5.1	SIM ... H5
	MXR 5 R0.2 L22	51	22	1.5	0.20	1.0	2.3	5.1	
6.0	MXR 6 R0.2 L15	51	15	1.5	0.20	1.8	2.8	6.1	SIM ... H6
	MXR 6 R0.2 L22	51	22	1.5	0.20	1.8	2.8	6.1	

Order example: MXR 4 R0.15 L15 BXC 订货式样: **MXR 4 R0.15 L15 BXC**

For L.H. bars specify MXL instead of MXR 左手L.H.小镗刀以MXL表示, 而不能以MXR代之。

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MPR Bars Profiling and Boring MPR-仿形和镗孔



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

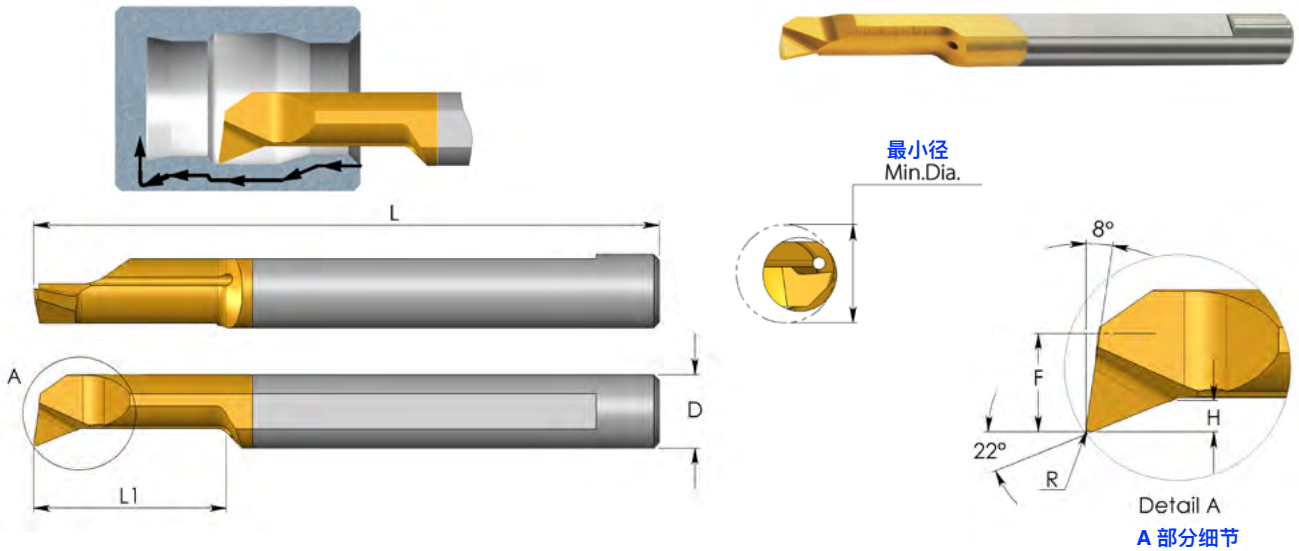
材质

Detail A A部分细节

柄径 D	订货式样 Ordering Code	总长 L	有效长 L1	刀尖R R	刀尖高 H	含刀尖半径 F	Min. 最小径 Dia.	变径套 Holder
3.0	MPR 1 R0.05 L4	39	4	0.05	0.2	0.5	1.0	SIM ... H3
	MPR 1 R0.05 L8	39	8	0.05	0.2	0.5	1.0	
3.0	MPR 1.2 R0.1 L5	39	5	0.10	0.3	0.6	1.2	SIM ... H3
	MPR 1.2 R0.1 L9	39	9	0.10	0.3	0.6	1.2	
3.0	MPR 1.5 R0.05 L10	39	10	0.05	0.3	0.7	1.5	SIM ... H3
	MPR 1.5 R0.1 L6	39	6	0.10	0.3	0.7	1.5	
	MPR 1.5 R0.1 L10	39	10	0.10	0.3	0.7	1.5	
3.0	MPR 2 R0.05 L10	39	10	0.05	0.5	0.8	2.1	SIM ... H3
	MPR 2 R0.1 L10	39	10	0.10	0.5	0.8	2.1	
	MPR 2 R0.15 L5	39	5	0.15	0.5	0.8	2.1	
	MPR 2 R0.15 L10	39	10	0.15	0.5	0.8	2.1	
4.0	MPR 2.5 R0.1 L10	51	10	0.10	0.6	1.0	2.5	SIM ... H4
	MPR 2.5 R0.1 L15	51	15	0.10	0.6	1.0	2.5	
3.0	MPR 3 R0.05 L10	39	10	0.05	0.7	1.3	3.1	SIM ... H3
	MPR 3 R0.05 L15	39	15	0.05	0.7	1.3	3.1	
	MPR 3 R0.1 L10	39	10	0.10	0.7	1.3	3.1	
	MPR 3 R0.1 L15	39	15	0.10	0.7	1.3	3.1	
	MPR 3 R0.1 L22	47	22	0.10	0.7	1.3	3.1	
	MPR 3 R0.2 L10	39	10	0.20	0.7	1.3	3.1	
	MPR 3 R0.2 L15	39	15	0.20	0.7	1.3	3.1	
4.0	MPR 4 R0.1 L10	51	10	0.10	0.8	1.7	4.1	SIM ... H4
	MPR 4 R0.1 L15	51	15	0.10	0.8	1.7	4.1	
	MPR 4 R0.1 L22	51	22	0.10	0.8	1.7	4.1	
	MPR 4 R0.2 L10	51	10	0.20	0.8	1.7	4.1	
	MPR 4 R0.2 L15	51	15	0.20	0.8	1.7	4.1	
	MPR 4 R0.2 L22	51	22	0.20	0.8	1.7	4.1	
	MPR 4 R0.2 L30	62	30	0.20	0.8	1.7	4.1	

For additional holders see page 33-42 更多变径套刀杆见第33-42页

MPR Bars Profiling and Boring MPR-仿形和镗孔



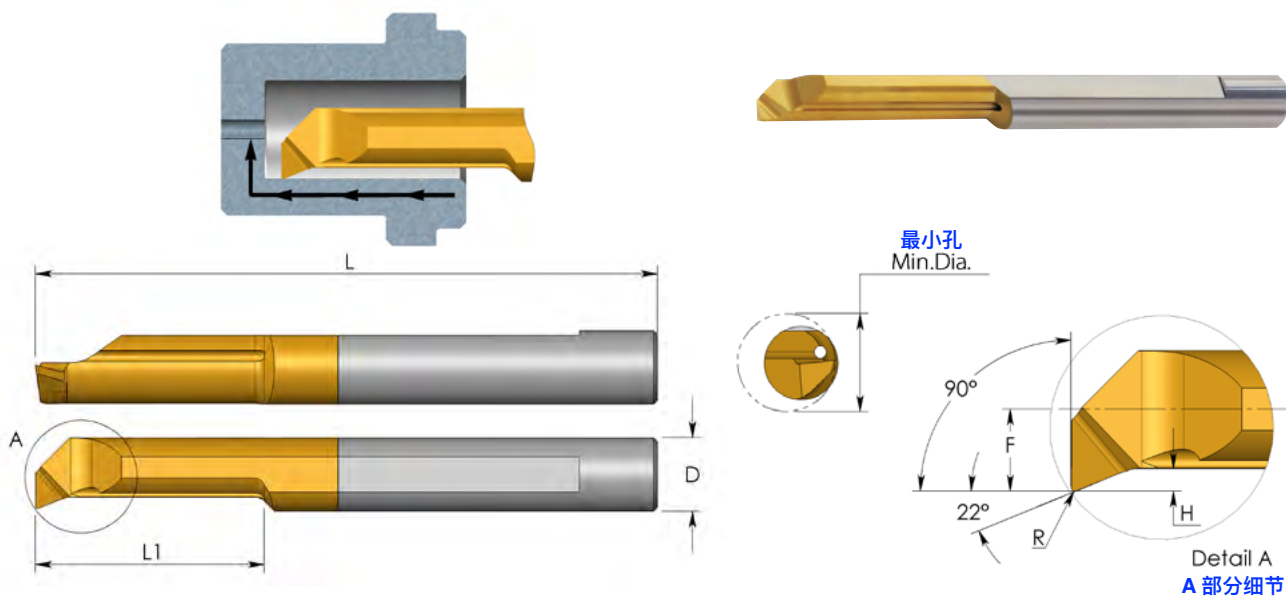
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	刀尖高 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
5.0	MPR 5 R0.1 L22	51	22	0.10	1.2	2.1	5.1	SIM ... H5
	MPR 5 R0.1 L30	76	30	0.10	1.2	2.1	5.1	
	MPR 5 R0.2 L10	51	10	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L15	51	15	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L22	51	22	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L30	76	30	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L40	76	40	0.20	0.9	2.1	5.1	
6.0	MPR 6 R0.2 L10	51	10	0.20	1.4	2.8	6.1	SIM ... H6
	MPR 6 R0.2 L15	51	15	0.20	1.4	2.8	6.1	
	MPR 6 R0.2 L22	51	22	0.20	1.4	2.8	6.1	
	MPR 6 R0.2 L30	76	30	0.20	1.4	2.8	6.1	
	MPR 6 R0.2 L40	76	40	0.20	1.0	2.8	6.1	
7.0	MPR 7 R0.2 L22	62	22	0.20	1.5	3.3	7.1	SIM ... H7
	MPR 7 R0.2 L30	62	30	0.20	1.5	3.3	7.1	
	MPR 7 R0.2 L35	62	35	0.20	1.5	3.3	7.1	
8.0	MPR 8 R0.2 L15	64	15	0.20	1.6	3.8	8.1	SIM ... H8
	MPR 8 R0.2 L22	64	22	0.20	1.6	3.8	8.1	
	MPR 8 R0.2 L35	76	35	0.20	1.6	3.8	8.1	
10.0	MPR 10 R0.2 L35	73	35	0.20	2.0	4.8	10.1	SIM ... H10

Order example: MPR 4 R0.2 L15 BXC 订货式样: MPR 4 R0.2 L 15 BXC

For L.H. Bars specify MPL instead of MPR 左手L.H.小镗刀以MPL表示, 而不能以MPR代之。

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MUR Bars Profiling, 90° Face Cutting MUR-仿形, 90°端面切削



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

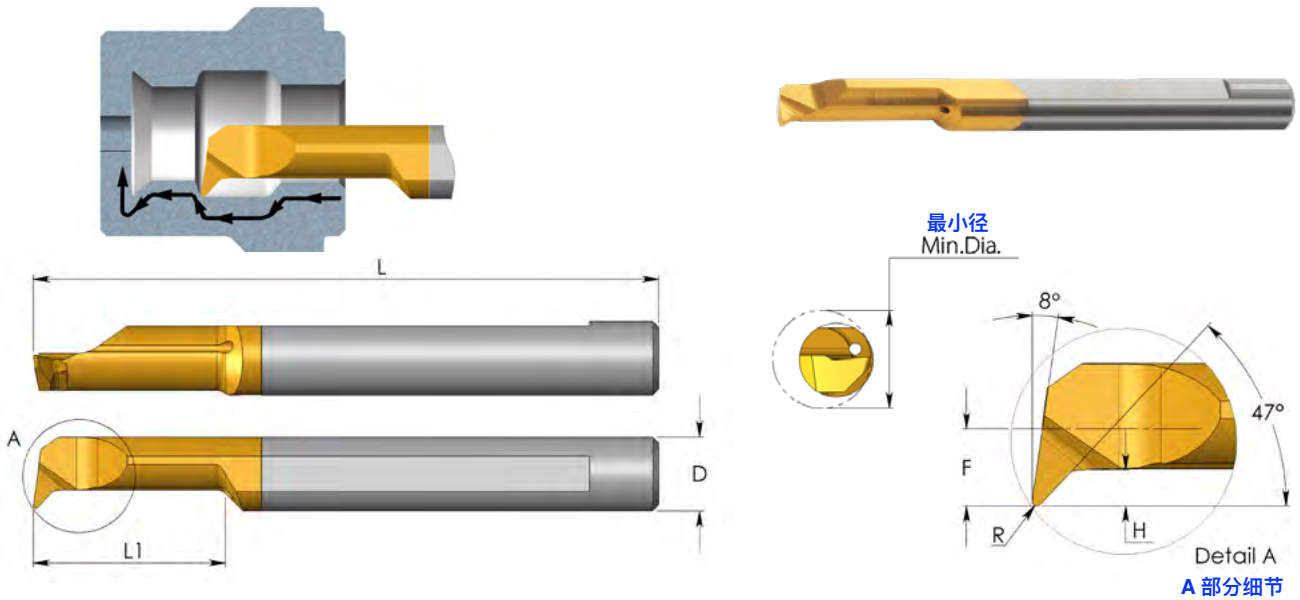
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	切削刃高 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
3.0	MUR 3 R0.05 L10	39	10	0.05	0.4	1.3	3.1	SIM ... H3
	MUR 3 R0.05 L15	39	15	0.05	0.4	1.3	3.1	
4.0	MUR 4 R0.1 L10	51	10	0.10	0.5	1.7	4.1	SIM ... H4
	MUR 4 R0.1 L15	51	15	0.10	0.5	1.7	4.1	
5.0	MUR 5 R0.15 L15	51	15	0.15	0.7	2.1	5.1	SIM ... H5
	MUR 5 R0.15 L22	51	22	0.15	0.7	2.1	5.1	
6.0	MUR 6 R0.15 L15	51	15	0.15	0.9	2.8	6.1	SIM ... H6
	MUR 6 R0.15 L22	51	22	0.15	0.9	2.8	6.1	
8.0	MUR 8 R0.2 L22	64	22	0.20	1.1	3.8	8.1	SIM ... H8

Order example: MUR 5 R0.15 L15 BXC 订货式样: MUR 5 R0.15 L 15 BXC

For L.H. bars specify MUL instead of MUR 左手L.H.小镗刀以MUL表示, 而不能以MUR代之。

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MQR Bars Profiling and Boring MQR-仿形和镗孔



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

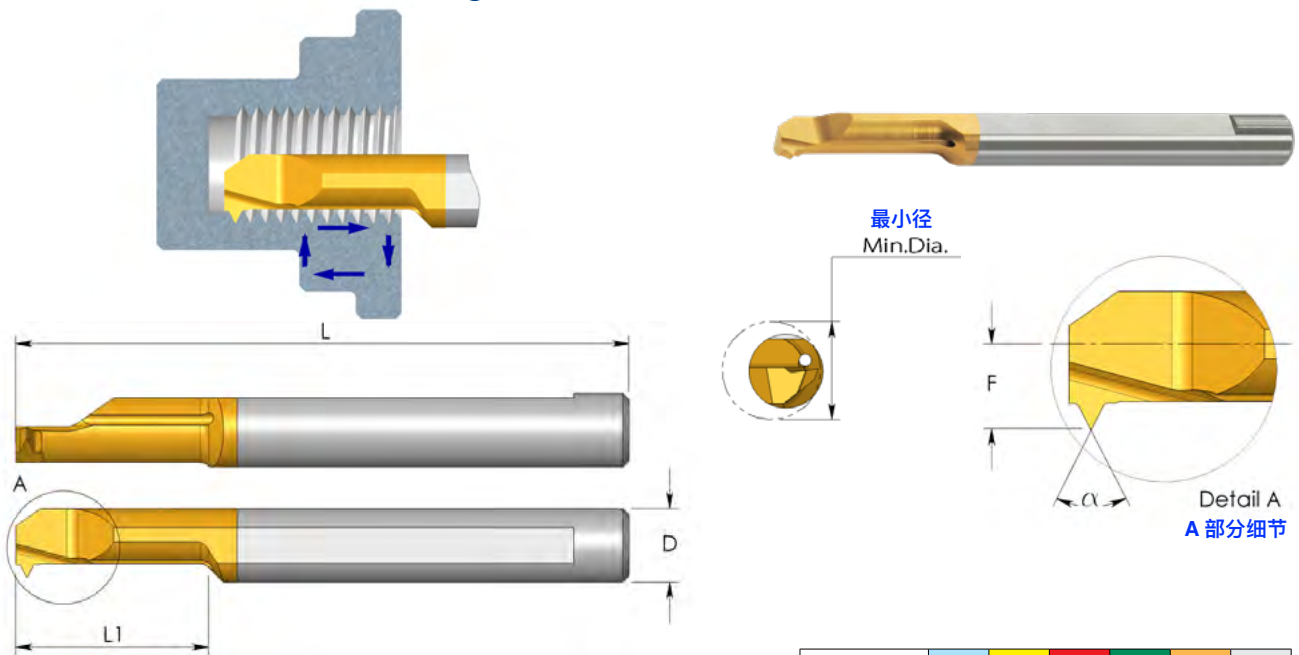
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	切削刃高 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
3.0	MQR 3 R0.1 L10	39	10	0.10	0.6	1.3	3.1	SIM ... H3
	MQR 3 R0.1 L15	39	15	0.10	0.6	1.3	3.1	
4.0	MQR 4 R0.1 L22	51	22	0.10	0.8	1.8	4.1	SIM ... H4
	MQR 4 R0.2 L10	51	10	0.20	0.8	1.8	4.1	
	MQR 4 R0.2 L15	51	15	0.20	0.8	1.8	4.1	
	MQR 4 R0.2 L22	51	22	0.20	0.8	1.8	4.1	
5.0	MQR 5 R0.2 L15	51	15	0.20	1.0	2.3	5.1	SIM ... H5
	MQR 5 R0.2 L22	51	22	0.20	1.0	2.3	5.1	
6.0	MQR 6 R0.2 L15	51	15	0.20	1.4	2.8	6.1	SIM ... H6
	MQR 6 R0.2 L22	51	22	0.20	1.4	2.8	6.1	
	MQR 6 R0.2 L30	58	30	0.20	1.4	2.8	6.1	
8.0	MQR 8 R0.2 L22	64	22	0.20	1.6	3.8	8.1	SIM ... H8
	MQR 8 R0.2 L27	64	27	0.20	2.0	3.8	8.1	

Order example: MQR 5 R0.2 L15 BXC 订货式样: MQR 5 R0.2 L 15 BXC

For L.H. bars specify MQR instead of MQL 左手L.H.小镗刀以MQL表示, 而不能以MQR代之。

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading MIR-螺纹车刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

Partial Profile 55° 55°-范围牙

柄径 D	订货号 Ordering Code	螺距 Pitch Range mm 毫米	范围 TPI 牙数	总长 L	有效长 L1	牙型角度 α	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
3.0	MIR 3 L15 A55	0.5 - 1.0	48 - 24	39	15	55	1.4	3.2	SIM ... H3
4.0	MIR 4 L15 A55	0.5 - 1.0	48 - 24	51	15	55	1.8	4.1	SIM ... H4
5.0	MIR 5 L15 A55	0.5 - 1.25	48 - 20	51	15	55	2.3	5.1	SIM ... H5
	MIR 5 L22 A55	0.5 - 1.25	48 - 20	51	22	55	2.3	5.1	
6.0	MIR 6 L15 A55	0.5 - 1.5	48 - 16	51	15	55	2.6	6.0	SIM ... H6
	MIR 6 L22 A55	0.5 - 1.5	48 - 16	51	22	55	2.6	6.0	

Order example: MIR 5 L15 A55 BXC 订货式样: MIR 5 A 55 BXC

Partial Profile 60° 60°-范围牙

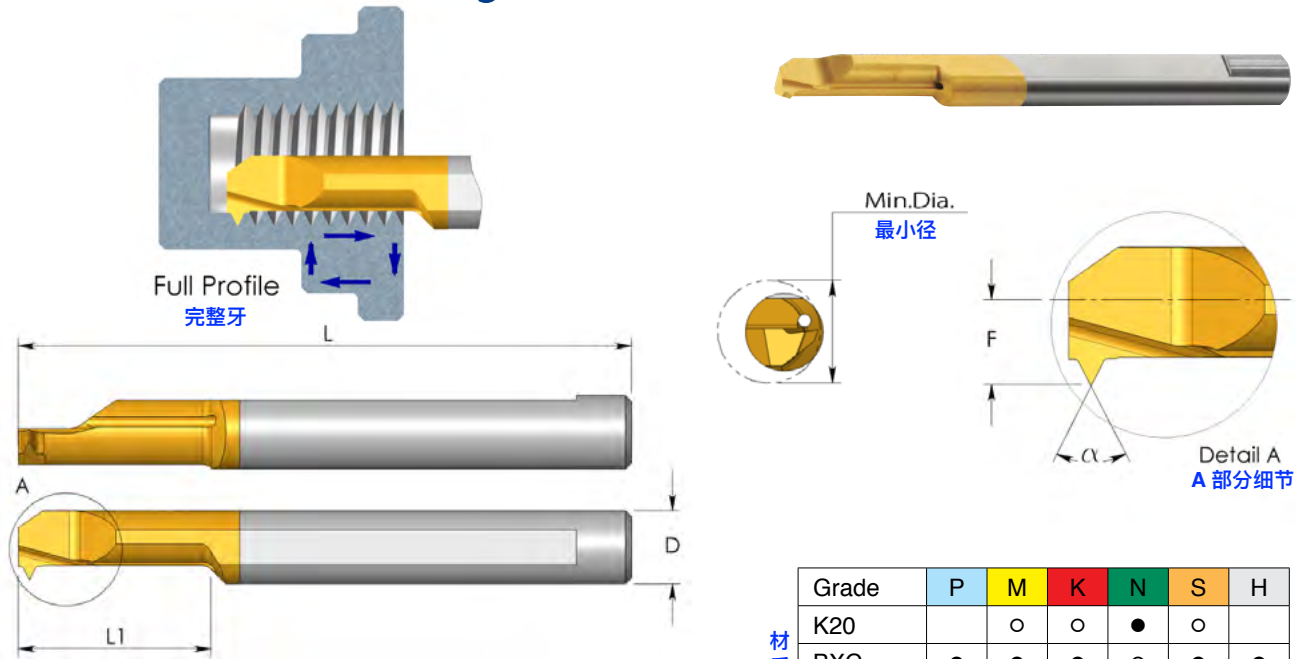
柄径 D	订货号 Ordering Code	螺距 Pitch Range mm 毫米	范围 TPI 牙数	总长 L	有效长 L1	牙型角度 α	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
3.0	MIR 1 L5 A60	0.25 - 0.35	100 - 72	39	4.8	60	0.55	1.2	SIM ... H3
	MIR 1.5 L6 A60	0.35 - 0.45	72 - 56	39	6.3	60	0.65	1.4	
3.0	MIR 2 L8 A60	0.45 - 0.7	56 - 32	39	8	60	1.0	2.1	SIM ... H3
3.0	MIR 3 L15 A60	0.7 - 1.0	32 - 24	39	15	60	1.4	3.2	SIM ... H3
4.0	MIR 4 L17 A60	0.35 - 0.45	72 - 56	51	17	60	1.8	4.1	SIM ... H4
	MIR 4 L15 A60	0.8 - 1.0	32 - 24	51	15	60	1.8	4.1	
5.0	MIR 5 L15 A60	1.0 - 1.25	24 - 20	51	15	60	2.3	5.1	SIM ... H5
	MIR 5 L22 A60	1.0 - 1.25	24 - 20	51	22	60	2.3	5.1	
6.0	MIR 6 L15 A60	1.0 - 1.5	24 - 16	51	15	60	2.6	6.0	SIM ... H6
	MIR 6 L22 A60	1.0 - 1.5	24 - 16	51	22	60	2.6	6.0	
8.0	MIR 8 L22 A60	1.0 - 2.0	24 - 13	64	22	60	3.6	8.0	SIM ... H8

Order example: MIR 5 L15 A60 BXC 订货式样: MIR 5 L15 A 60 BXC

For L.H. bars specify MIL instead of MIR 左手L.H.小镗刀以MIL表示, 而不能以MIR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading MIR-螺纹车刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - ISO 60° 60°-ISO完整牙

柄径 D	订货号 Ordering Code	Pitch 螺距 mm	公制 M 粗牙 Coarse	公制 M 细牙 Fine	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
3.0	MIR 3 L10 0.5 ISO	0.5	M3	M3.5	39	10	60	1.0	2.4	SIM ... H3
	MIR 3 L15 0.5 ISO	0.5		M4	39	15	60	1.4	3.2	SIM ... H3
3.0	MIR 3 L15 0.7 ISO	0.7	M4		39	15	60	1.4	3.2	
	MIR 3 L15 0.75 ISO	0.75	M4.5		39	15	60	1.4	3.2	
4.0	MIR 4 L15 0.5 ISO	0.5		M5	51	15	60	1.8	4.1	SIM ... H4
	MIR 4 L15 0.75 ISO	0.75		M5	51	15	60	1.8	4.1	
	MIR 4 L15 0.8 ISO	0.8	M5		51	15	60	1.8	4.1	
5.0	MIR 5 L15 1.0 ISO	1.0	M6, M7	M8	51	15	60	2.2	4.9	SIM ... H5
6.0	MIR 6 L22 1.25 ISO	1.25	M8, M9	M10	51	22	60	2.8	6.1	SIM ... H6
	MIR 6 L22 1.5 ISO	1.5	M10, M11		51	22	60	2.8	6.1	

Order example: MIR 5 L15 1.0 ISO BXC 订货式样: MIR 5 L15 ISO 1.0 BXC

Full Profile - UN 60° 60°-UN完整牙

柄径 D	订货号 Ordering Code	牙数 Pitch TPI	粗牙 UNC	细牙 UNF	特细牙 UNEF	特殊牙 UNS	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
3.0	MIR 3 L10 32 UN	32	6				39	10	60	1.0	2.7	SIM...H3
3.0	MIR 3 L15 32 UN	32	8	10			39	15	60	1.4	3.2	SIM...H3
	MIR 3 L15 36 UN	36		8		10	39	15	60	1.4	3.2	
4.0	MIR 4 L15 36 UN	36				12	51	15	60	1.8	4.1	SIM...H4
	MIR 4 L15 32 UN	32			12		51	15	60	1.8	4.1	
5.0	MIR 5 L15 28 UN	28		1/4			51	15	60	2.2	4.9	SIM...H5
	MIR 5 L18 20 UN	20	1/4				51	18	60	2.3	5.0	
6.0	MIR 6 L18 24 UN	24		5/16			51	18	60	2.8	6.5	SIM...H6
	MIR 6 L18 18 UN	18	5/6			3/8	51	18	60	2.8	6.2	

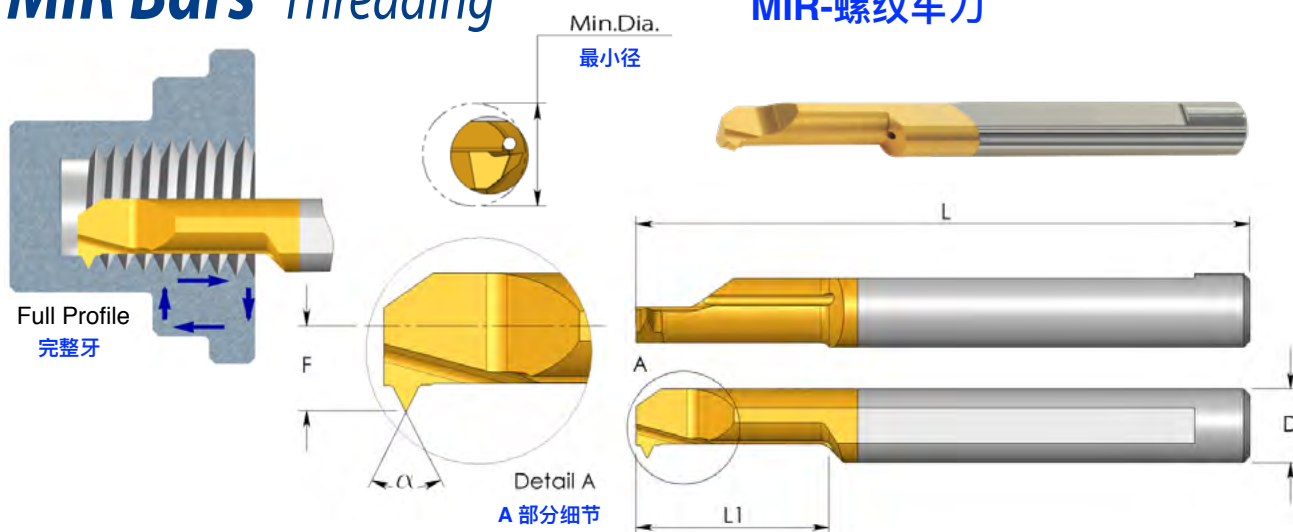
Order example: MIR 4 L15 36 UN BXC 订货式样: MIR 4 L 15 36 UN BXC

For L.H. bars specify MIL instead of MIR 左手L.H.小镗刀以MIL表示, 而不能以MIR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading

MIR-螺纹车刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - MJ 60° 60°-MJ-公制航空航天螺纹

柄径 D	订货号 Ordering Code	Thread Size 螺纹规格	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小孔径 Min. Dia.	变径套 Holder
3.0	MIR 3 L15 0.7 MJ	MJ4x0.7	39	15	60	1.4	3.2	SIM ... H3
4.0	MIR 4 L15 0.8 MJ	MJ5x0.8	51	15	60	1.8	4.1	SIM ... H4
5.0	MIR 5 L15 1.0 MJ	MJ6x1.0	51	15	60	2.2	4.9	SIM ... H5

Full Profile - UNJ 60° 60°-美国UNJ航空航天螺纹

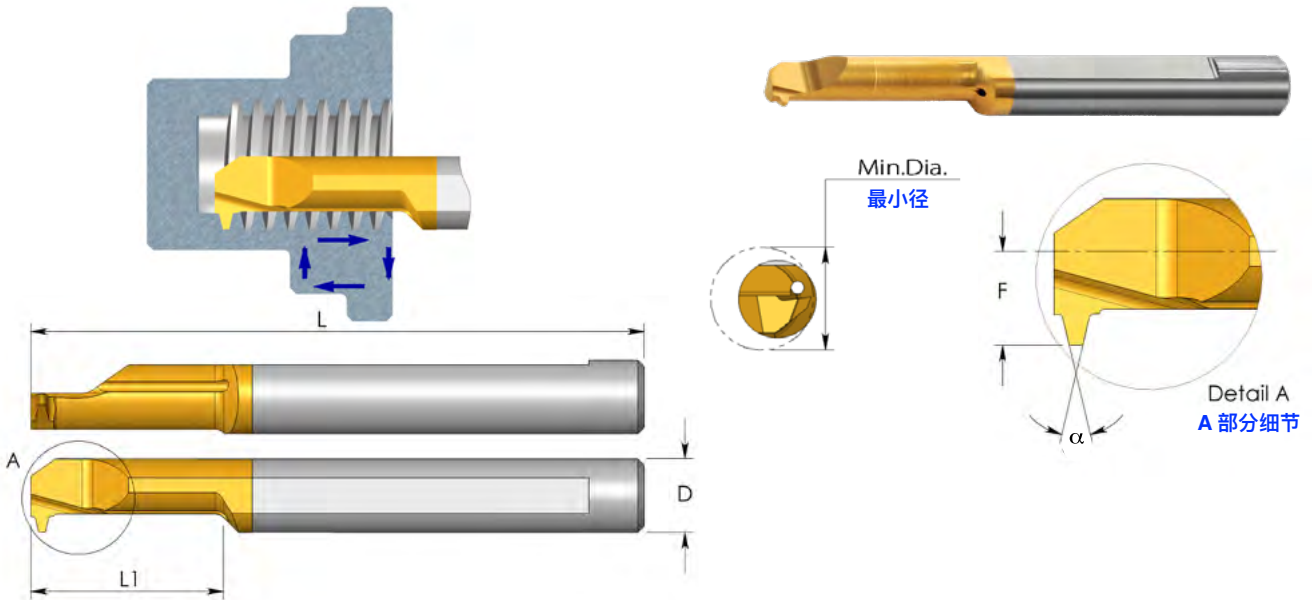
柄径 D mm	订货号 Ordering Code	Thread Size 螺纹规格	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
3.0	MIR 3 L15 32 UNJ	8-32 UNJC	39	15	60	1.4	3.2	SIM...H3
5.0	MIR 5 L15 28 UNJ	1/4-28 UNJF	51	15	60	2.2	4.9	SIM...H5
	MIR 5 L18 20 UNJ	1/4-20 UNJC	51	18	60	2.3	5.0	SIM...H5

Order example: MIR 3 L15 32 UNJ BXC 订货式样: MIR 3 L 15 UNJ BXC

For L.H. bars specify MIL instead of MIR 左手L.H.小镗刀以MIL表示, 而不能以MIR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading **MIR-螺纹车刀**



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - G 55° BSP **55°-完整牙-BSP**

柄径 D	订货号 Ordering Code	Thread Size 螺纹规格	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
6.0	MIR 6 L17 28 W	1/16-28 BSP	51	17	55	2.8	6.5	SIM ... H6
	MIR 6 L17 19 W	1/4-19 BSP	51	17	55	2.8	7.0	

Full Profile - Whitworth 55° BSW **55°-完整牙英国惠氏螺纹-BSW**

柄径 D	订货号 Ordering Code	Thread Size 螺纹规格	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
5.0	MIR 5 L17 20 W	1/4-20 BSW	51	17	55	2.0	4.7	SIM ... H5

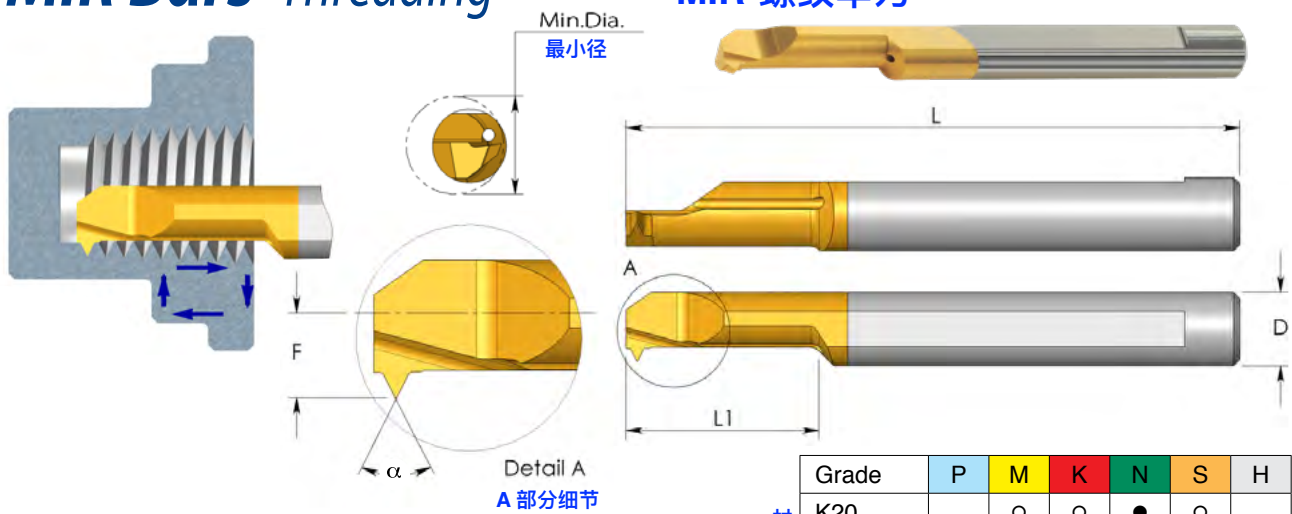
Order example: MIR 6 L17 28 W BMK 订货式样: **MIR 6 L 17 28 W BMK**

For L.H. bars specify MIL instead of MIR 左手L.H.小镗刀以MIL表示, 而不能以MIR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading

MIR-螺纹车刀

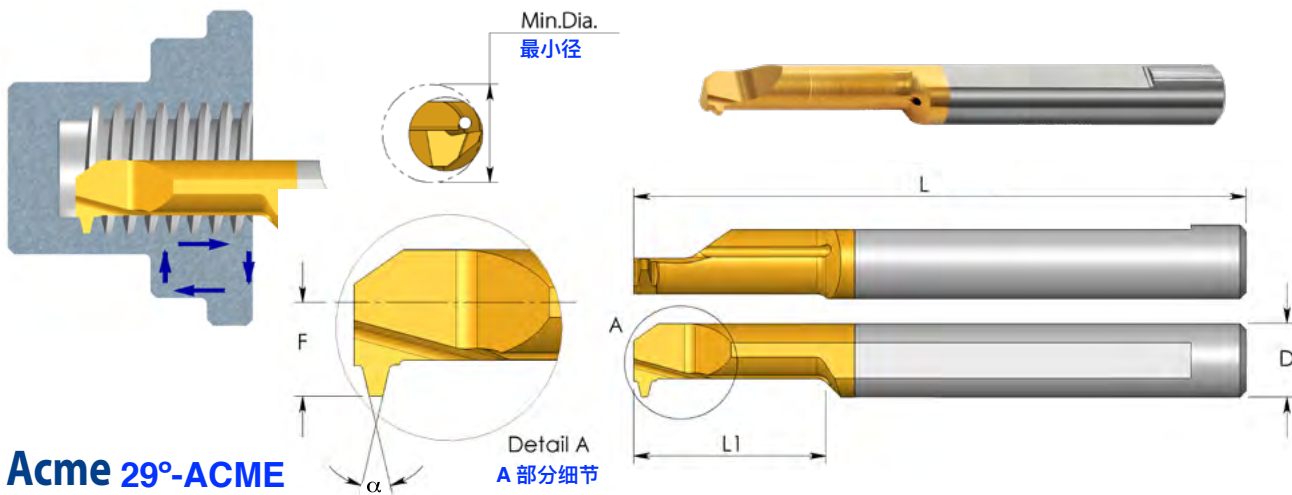


Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - NPT 60° 60°-完整牙NPT锥管螺纹

柄径 D	订货号 Ordering Code	Pitch 牙 TPI 数	Thread 螺纹 Size 规格	总长 L	有效长度 L1	含刀尖半径 α 牙型角度	F	最小径 Min. Dia.	变径套 Holder
6.0	MIR 6 L15 27 NPT	27	1/16 x 27 NPT 1/8 x 27 NPT	51	15	60	2.8	5.9	SIM ... H6

Order example: MIR 6 L15 27 NPT BXC 订货式样: MIR 6 L 15 27 NPT BXC



Acme 29°-ACME

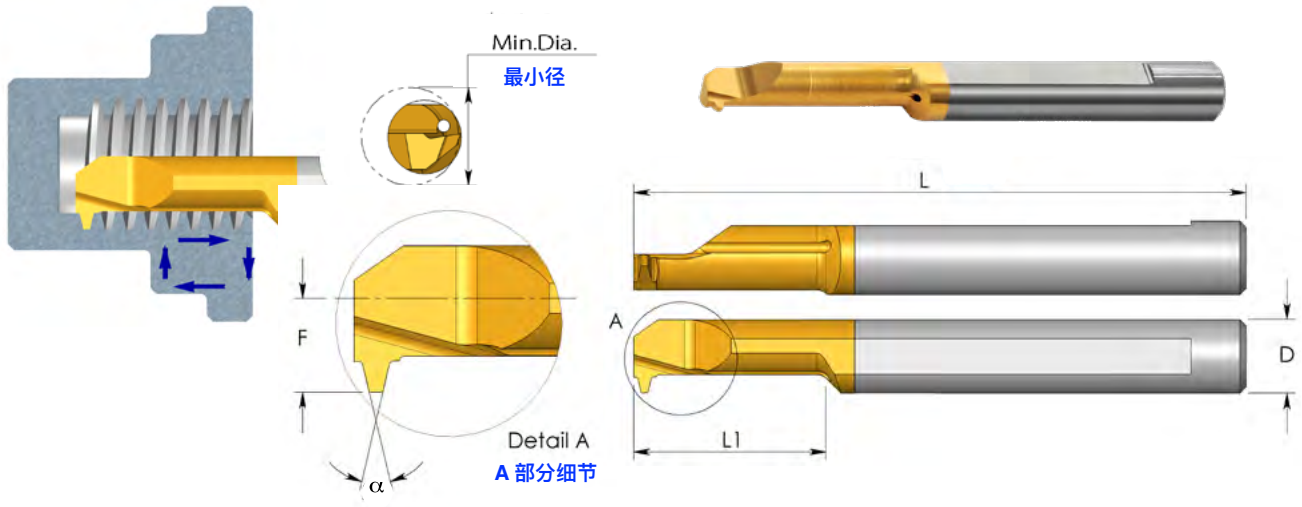
柄径 D	订货号 Ordering Code	Pitch 牙 TPI 数	Thread 螺纹 Size 规格	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
4.0	MIR 4 L15 16 ACME	16	1/4 x 16	51	15	29	1.8	4.6	SIM ... H4
6.0	MIR 6 L20 14 ACME	14	5/16 x 14	51	20	29	2.8	6.0	SIM ... H6
7.0	MIR 7 L22 12 ACME	12	3/8 x 12 7/16 x 12	62	22	29	3.3	7.2	SIM ... H7
8.0	MIR 8 L30 10 ACME	10	1/2 x 10	76	30	29	3.8	10.0	SIM ... H8
10.0	MIR 10 L35 8 ACME	8	5/8 x 8	73	35	29	4.8	12.5	SIM ... H10
10.0	MIR 10 L45 6 ACME	6	3/4 x 6 7/8 x 6	105	45	29	4.8	14.6	SIM ... H10
10.0	MIR 10 L52 5 ACME	5	1x5	105	52	29	4.8	20.0	SIM ... H10

Order example: MIR 6 L 20 14 ACME BXC 订货式样: MIR 6 L 20 14 ACME BXC

For L.H. bars specify MIL instead of MIR 左手L.H.小镗刀以MIL表示, 而不能以MIR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading **MIR-螺纹车刀**



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

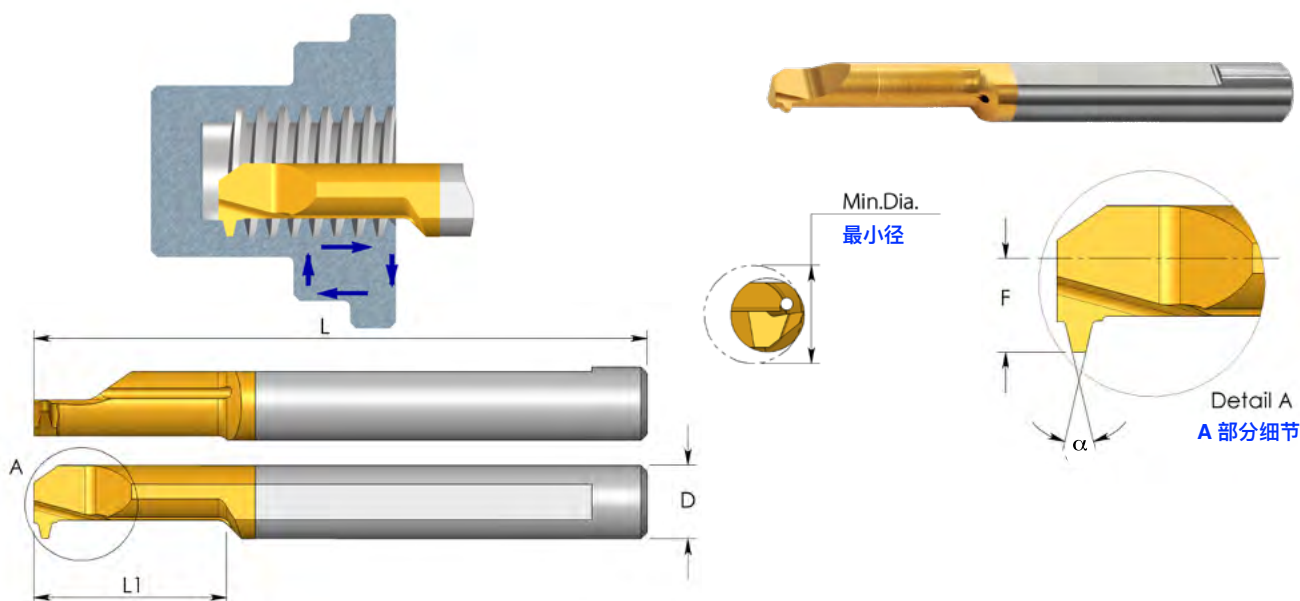
材质

Stub Acme 29°-短齿STACME螺纹

柄径 D	订货号 Ordering Code	Pitch 牙 TPI 数	Thread 螺纹Size 规格	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	刀杆 Holder
4.0	MIR 4 L15 16 STACME	16	1/4 x 16	51	15	29	1.8	5.2	SIM ... H4
6.0	MIR 6 L20 14 STACME	14	5/16 x 14	51	20	29	2.8	6.6	SIM ... H6
7.0	MIR 7 L22 12 STACME	12	3/8 x 12 7/16 x 12	62	22	29	3.3	8.1	SIM ... H7
8.0	MIR 8 L30 10 STACME	10	1/2 x 10	76	30	29	3.8	11.0	SIM ... H8
10.0	MIR 10 L35 8 STACME	8	5/8 x 8	73	35	29	4.8	13.8	SIM ... H10
10.0	MIR 10 L45 6 STACME	6	3/4 x 6 7/8 x 6	105	45	29	4.8	16.3	SIM ... H10

Order example: MIR 7 L22 12 STACME K20 订货式样: **MIR 7 L 22 12 STACME K20**
 For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MIR Bars Threading MIR-螺纹车刀



30°-DIN 103范围牙梯形螺纹 Partial Profile Trapez - DIN 103

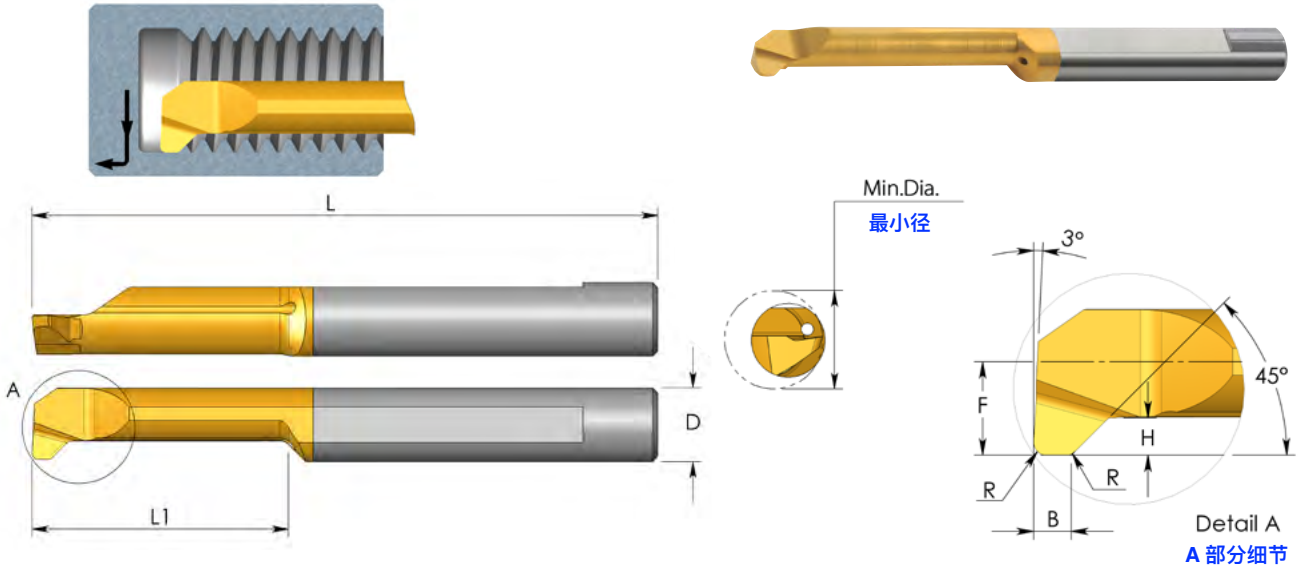
Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

柄径 D	订货号 Ordering Code	螺距 Pitch mm	螺纹规格 Thread Size	总长 L	有效长 L1	牙型角度 α	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
6.0	MIR 6 L22 1.5 TR	1.5	TR 8 x 1.5 TR 9 x 1.5 TR10 x 1.5	51	22	30	2.8	6.4	SIM ... H6
7.0	MIR 7 L25 2 TR	2	TR 9 x 2 TR10 x 2 TR11 x 2 TR12 x 2	62	25	30	3.2	6.9	SIM ... H7
10.0	MIR 10 L35 2 TR	2	TR14 x 2 TR16 x 2 TR18 x 2 TR20 x 2	73	35	30	4.8	11.0	SIM ... H10
7.0	MIR 7 L35 3 TR	3	TR11 x 3 TR12 x 3	62	35	30	3.3	7.5	SIM ... H7
10.0	MIR 10 L35 3 TR	3	TR14 x 3 TR22 x 3 TR24 x 3 TR26 x 3 TR28 x 3	73	35	30	4.8	10.5	SIM ... H10
10.0	MIR 10 L45 4 TR	4	TR16 x 4 TR18 x 4 TR20 x 4	105	45	30	4.8	11.5	SIM ... H10
10.0	MIR 10 L55 5 TR	5	TR22 x 5 TR24 x 5 TR28 x 5	105	55	30	4.8	11.0	SIM ... H10

Order example: MIR 10 L35 3 TR BXC 订货式样: MIR 10 L 35 3 TR BXC
 For L.H. bars specify MIL instead of MIR 左手L.H.小镗刀以MIL表示, 而不能以MIR代之
 For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MDR Bars Thread Relief, Chamfering and Grooving

MDR-螺纹退刀槽，倒角和切槽车刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

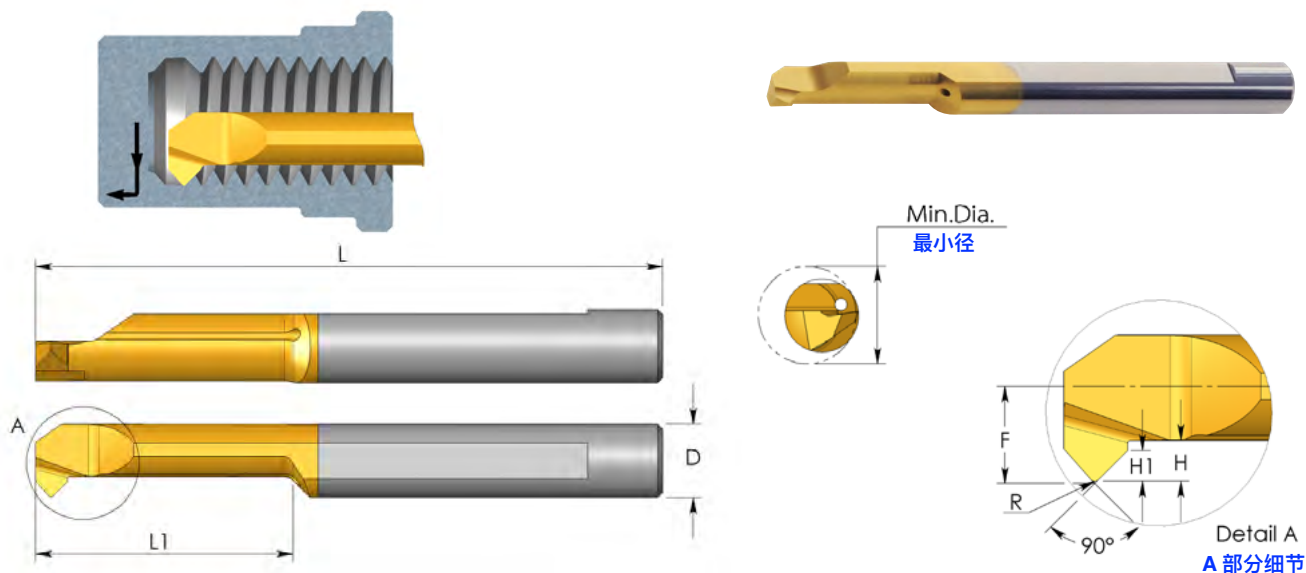
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刃宽 B	刀尖R	切削刃高 H	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
4.0	MDR 4 R0.5 L18	51	18	1.5	0.5	0.8	1.8	4.1	SIM ... H4
5.0	MDR 5 R0.5 L24	51	24	1.5	0.5	1.2	2.3	5.1	SIM ... H5
6.0	MDR 6 R0.5 L27	58	27	1.5	0.5	1.4	2.8	6.1	SIM ... H6

Order example: MDR 5 R0.5 L24 BXC 订货式样: **MDR 5 R0.5 L24 BXC**

For L.H. bars specify MDL instead of MDR 左手L.H.小镗刀以MDL表示, 而不能以MDR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MCR Bars Chamfering and Boring MCR-倒角和镗孔



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

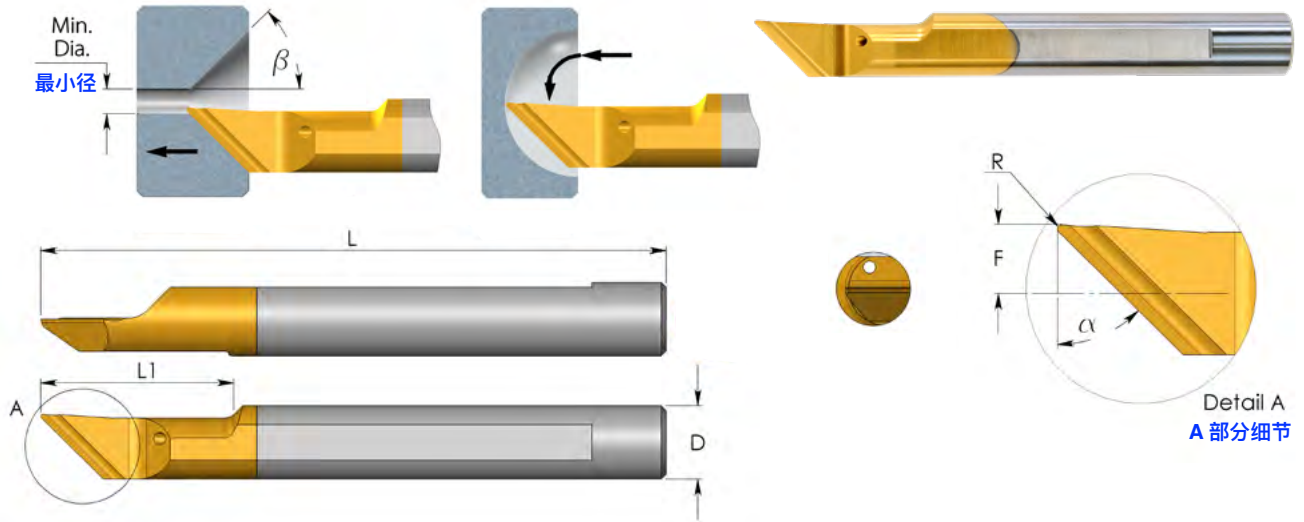
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	切削刃高 H	刃有效高 H1	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
3.0	MCR 3 R0.2 L10	39	10	0.2	0.7	0.3	1.3	3.1	SIM ... H3
4.0	MCR 4 R0.2 L15	51	15	0.2	0.8	0.4	1.7	4.1	SIM ... H4
5.0	MCR 5 R0.2 L15	51	15	0.2	1.2	0.7	2.1	5.1	SIM ... H5
6.0	MCR 6 R0.2 L15	51	15	0.2	1.4	0.7	2.8	6.1	SIM ... H6
7.0	MCR 7 R0.2 L20	62	20	0.2	1.5	0.8	3.3	7.1	SIM ... H7

Order example: MCR 4 R0.2 L15 BXC 订货式样: **MCR 4 R0.2 L15 BXC**

For L.H. bars specify MCL instead of MCR 左手L.H.小镗刀以MCL表示, 而不能以MCR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MWR Bars Chamfering and Profiling MWR-倒角和仿形



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	切削刃角度 α	β 角度 β	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
6.0	MWR 6 R0.2 A90	51	15	0.2	45°	45°	2.3	1.0	SIM ... H6
	MWR 6 R0.2 A60	51	15	0.2	60°	30°	2.3	1.0	
	* MWR 6 R0.4 A90	51	22	0.4	45°	45°	2.3	6.0	
	* MWR 6 R0.4 A60	51	22	0.4	60°	30°	2.3	6.0	

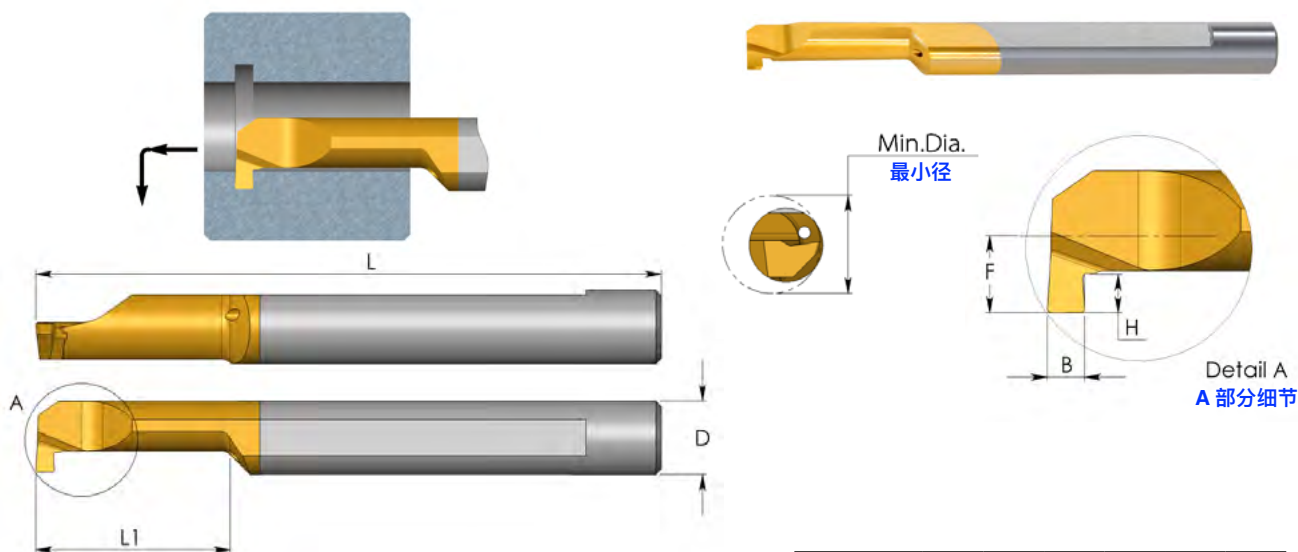
Order example: MWR 6 R0.2 A90 BXC 订货式样: MWR 6 R0.2 A90 BXC

For L.H. bars specify MWL instead of MWR 左手L.H.小镗刀以MWL表示, 而不能以MWR代之

*Can be used also for boring 带星号的也可以用于镗孔

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MGR Bars Grooving MGR-切内径槽刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	槽宽 mm mm	B	槽宽 英寸 in	槽深 H	F 含刀尖半径	最小径 Min. Dia.	变径套 Holder
4.0	MGR 2 B0.5 L10	51	10	0.5		.020	0.5	0.9	2.1	SIM ... H4
3.0	MGR 3 B0.5 L10	39	10	0.5		.020	0.5	1.3	3.1	SIM ... H3
	MGR 3 B0.7 L10	39	10	0.7		.028	0.6	1.3	3.1	
4.0	MGR 4 B0.5 L10	51	10	0.5		.020	0.5	1.7	4.1	SIM ... H4
	MGR 4 B0.5 L15	51	15	0.5		.028	0.5	1.7	4.1	
	MGR 4 B0.7 L10	51	10	0.7		.028	0.6	1.7	4.1	
	MGR 4 B0.79 L15	51	15	0.79		.031	0.9	1.7	4.1	
	MGR 4 B0.79 L22	51	22	0.79		.031	0.9	1.7	4.1	
	MGR 4 B1.0 L10	51	10	1.0		.039	1.0	1.7	4.1	
	MGR 4 B1.0 L15	51	15	1.0		.039	1.0	1.7	4.1	
	MGR 4 B1.0 L22	51	22	1.0		.039	1.0	1.7	4.1	
	MGR 4 B1.5 L10	51	10	1.5		.059	1.0	1.7	4.1	
	MGR 4 B1.5 L15	51	15	1.5		.059	1.0	1.7	4.1	
5.0	MGR 5 B0.79 L15	51	15	0.79		.031	1.0	2.3	5.1	SIM ... H5
	MGR 5 B0.79 L22	51	22	0.79		.031	1.0	2.3	5.1	
	MGR 5 B1.0 L15	51	15	1.0		.039	1.2	2.3	5.1	
	MGR 5 B1.0 L22	51	22	1.0		.039	1.2	2.3	5.1	
	MGR 5 B1.19 L15	51	15	1.19		.047	1.2	2.3	5.1	
	MGR 5 B1.19 L22	51	22	1.19		.047	1.2	2.3	5.1	
	MGR 5 B1.5 L15	51	15	1.5		.059	1.2	2.3	5.1	
	MGR 5 B1.5 L22	51	22	1.5		.059	1.2	2.3	5.1	
	MGR 5 B1.59 L15	51	15	1.59		.063	1.2	2.3	5.1	
	MGR 5 B1.59 L22	51	22	1.59		.063	1.2	2.3	5.1	
	MGR 5 B2.0 L15	51	15	2.0		.079	1.2	2.3	5.1	
	MGR 5 B2.0 L22	51	22	2.0		.079	1.2	2.3	5.1	

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MGR Bars Grooving MGR-内径槽刀

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	槽宽 mm B	槽宽 英寸 in	槽深 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
6.0	MGR 6 B1.0 L15	51	15	1.0	.039	1.4	2.8	6.1	SIM ... H6
	MGR 6 B1.0 L22	51	22	1.0	.039	1.4	2.8	6.1	
	MGR 6 B1.5 L15	51	15	1.5	.059	1.4	2.8	6.1	
	MGR 6 B1.5 L22	51	22	1.5	.059	1.4	2.8	6.1	
	MGR 6 B2.0 L15	51	15	2.0	.079	1.4	2.8	6.1	
	MGR 6 B2.0 L22	51	22	2.0	.079	1.4	2.8	6.1	
6.0	MGR 6 B0.79 L17	51	17	0.79	.031	1.8	2.8	6.1	SIM ... H6
	MGR 6 B0.79 L23	51	23	0.79	.031	1.8	2.8	6.1	
	MGR 6 B1.0 L17	51	17	1.0	.039	1.8	2.8	6.1	
	MGR 6 B1.19 L17	51	17	1.19	.047	1.8	2.8	6.1	
	MGR 6 B1.19 L23	51	23	1.19	.047	1.8	2.8	6.1	
	MGR 6 B1.5 L17	51	17	1.5	.059	1.8	2.8	6.1	
	MGR 6 B1.5 L23	51	23	1.5	.059	1.8	2.8	6.1	
	MGR 6 B1.59 L17	51	17	1.59	.063	1.8	2.8	6.1	
	MGR 6 B1.59 L23	51	23	1.59	.063	1.8	2.8	6.1	
	MGR 6 B2.0 L17	51	17	2.0	.079	1.8	2.8	6.1	
MGR 6 B2.0 L23	51	23	2.0	.079	1.8	2.8	6.1		
7.0	MGR 7 B1.0 L15	62	15	1.0	.039	2.5	3.3	7.1	SIM ... H7
	MGR 7 B1.0 L22	62	22	1.0	.039	2.5	3.3	7.1	
	MGR 7 B1.0 L30	62	30	1.0	.039	2.5	3.3	7.1	
	MGR 7 B1.19 L22	62	22	1.19	.047	2.5	3.3	7.1	
	MGR 7 B1.19 L30	62	30	1.19	.047	2.5	3.3	7.1	
	MGR 7 B1.5 L15	62	15	1.5	.059	2.5	3.3	7.1	
	MGR 7 B1.5 L22	62	22	1.5	.059	2.5	3.3	7.1	
	MGR 7 B1.5 L30	62	30	1.5	.059	2.5	3.3	7.1	
	MGR 7 B1.59 L22	62	22	1.59	.063	2.5	3.3	7.1	
	MGR 7 B1.59 L30	62	30	1.59	.063	2.5	3.3	7.1	
	MGR 7 B2.0 L15	62	15	2.0	.079	2.5	3.3	7.1	
	MGR 7 B2.0 L22	62	22	2.0	.079	2.5	3.3	7.1	
MGR 7 B2.0 L30	62	30	2.0	.079	2.5	3.3	7.1		
8.0	MGR 8 B1.0 L22	64	22	1.0	.039	1.7	3.8	8.1	SIM ... H8
	MGR 8 B1.5 L22	64	22	1.5	.059	1.7	3.8	8.1	
	MGR 8 B2.0 L15	64	15	2.0	.079	2.6	3.8	8.1	
	MGR 8 B2.0 L22	64	22	2.0	.079	2.6	3.8	8.1	
	MGR 8 B2.38 L15	64	15	2.38	.094	2.6	3.8	8.1	
	MGR 8 B2.38 L22	64	22	2.38	.094	2.6	3.8	8.1	

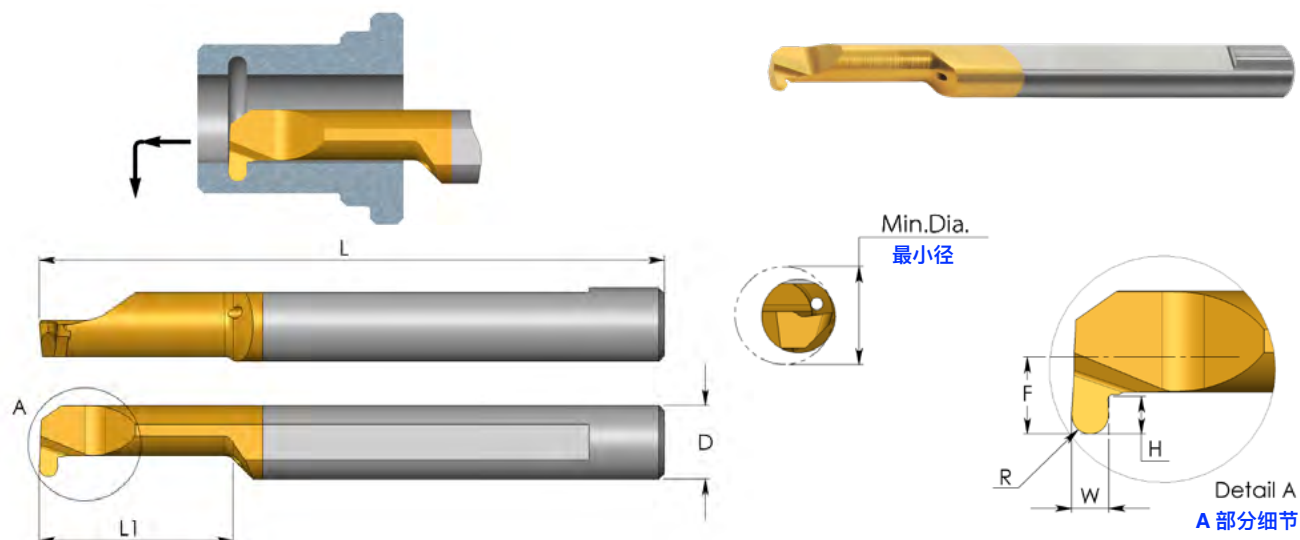
Tolerance: B±0.025 mm/.001" 公差: B ± 0.025mm/0.001英寸

Order example: MGR 5 B1.5 L15 BXC 订货式样: MGR 5 B 1.5 L15 BXC

For L.H. bars specify MGL instead of MGR 左手L.H.小镗刀以MGL表示, 而不能以MGR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MKR Bars Full Radius Grooving MKR-内径R槽



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	半径R R	槽宽 W	槽深 H	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MKR 4 R0.5 L10	51	10	0.50	1.0	1.0	1.7	4.1	SIM ... H4
	MKR 4 R0.5 L15	51	15	0.50	1.0	1.0	1.7	4.1	
	MKR 4 R0.75 L10	51	10	0.75	1.5	1.0	1.7	4.1	
5.0	MKR 5 R0.5 L15	51	15	0.50	1.0	1.2	2.3	5.1	SIM ... H5
	MKR 5 R0.75 L15	51	15	0.75	1.5	1.2	2.3	5.1	
	MKR 5 R1.0 L15	51	15	1.00	2.0	1.2	2.3	5.1	
	MKR 5 R1.0 L22	51	22	1.00	2.0	1.2	2.3	5.1	
6.0	MKR 6 R0.5 L15	51	15	0.50	1.0	1.6	2.8	6.1	SIM ... H6
	MKR 6 R0.75 L15	51	15	0.75	1.5	1.6	2.8	6.1	
	MKR 6 R1.0 L15	51	15	1.00	2.0	1.6	2.8	6.1	
	MKR 6 R1.0 L23	51	23	1.00	2.0	1.8	2.8	6.1	
7.0	MKR 7 R0.5 L22	62	22	0.50	1.0	2.5	3.3	7.1	SIM ... H7
	MKR 7 R0.75 L22	62	22	0.75	1.5	2.5	3.3	7.1	
	MKR 7 R1.0 L22	62	22	1.00	2.0	2.5	3.3	7.1	

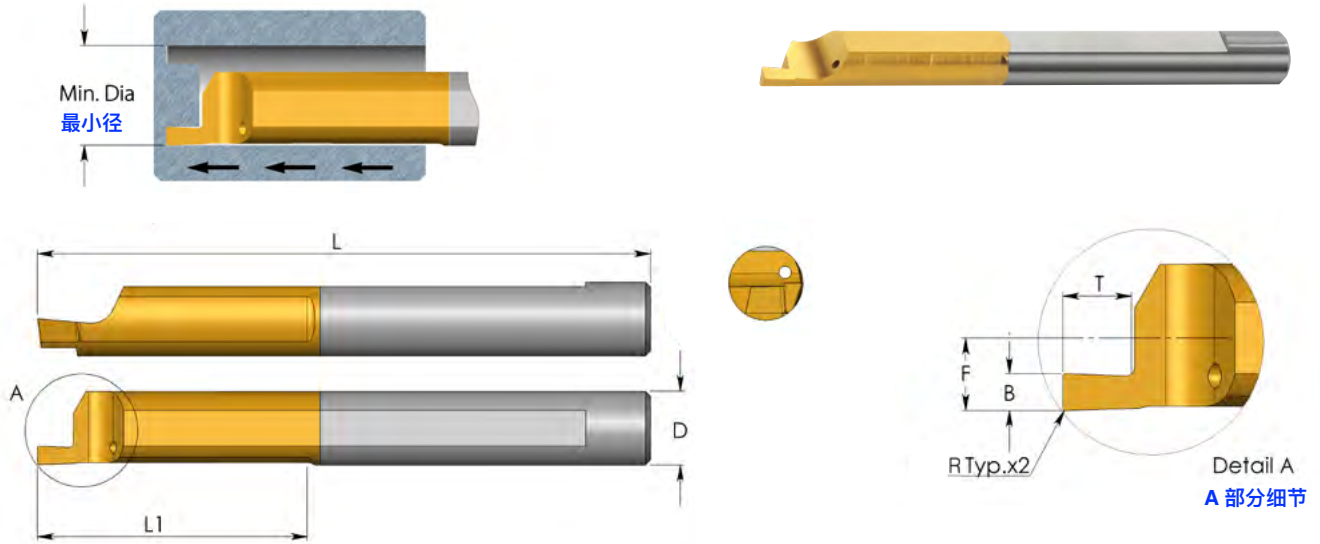
Tolerance: R±0.025 mm 公差: B ± 0.025mm

Order example: MKR 5 R1.0 L15 BXC 订货式样: MKR 5 R1.0 L15 BXC

For L.H. bars specify MKL instead of MKR 左手L.H.小镗刀以MKL表示, 而不能以MKR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MFR Bars Face Grooving MFR-端面槽刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

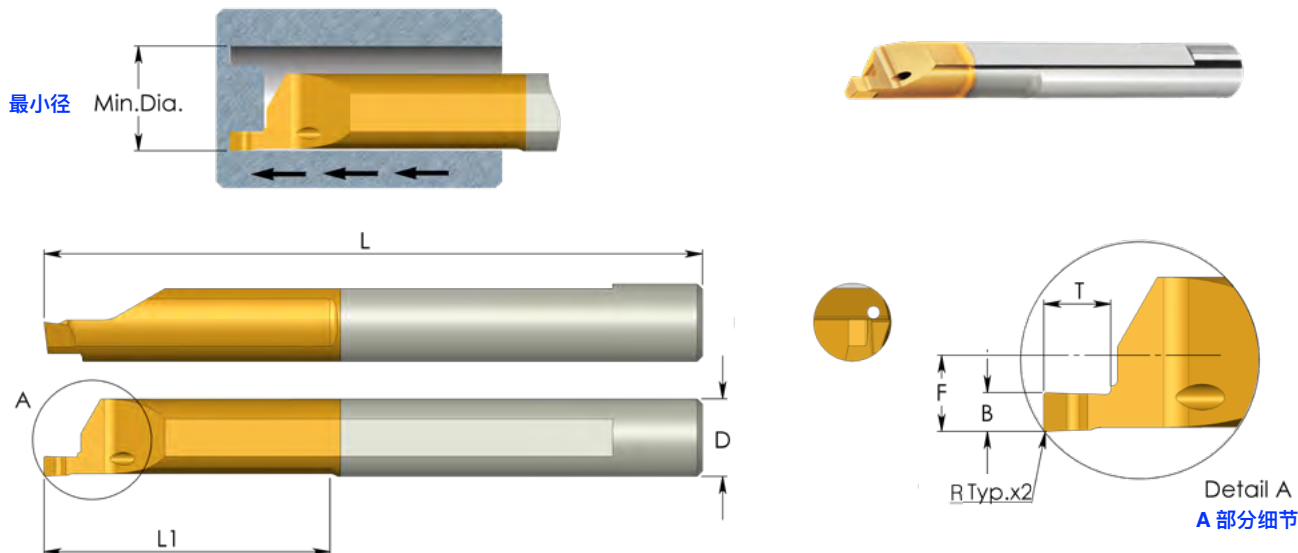
材质

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	槽宽 B	槽深 T	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MFR 4 B0.5 L15	51	15	0.05	0.5	1.2	1.95	5.0	SIM ... H4
	MFR 4 B0.75 L15	51	15	0.1	0.75	1.2	1.95	5.0	
	MFR 4 B1.0 L15	51	15	0.1	1.0	1.5	1.95	5.0	
	MFR 4 B1.5 L15	51	15	0.1	1.5	2.8	1.95	5.0	
	MFR 4 B1.5 L17	51	17	0.1	1.5	3.5	1.95	5.0	
	MFR 4 B2.0 L17	51	17	0.1	2.0	5.0	1.95	5.0	
5.0	MFR 5 B0.5 L22	51	22	0.05	0.5	1.2	2.45	6.0	SIM ... H5
	MFR 5 B0.75 L22	51	22	0.1	0.75	1.2	2.45	6.0	
	MFR 5 B1.0 L22	51	22	0.1	1.0	1.5	2.45	6.0	
	MFR 5 B1.0 L23	51	23	0.1	1.0	2.5	2.45	6.0	
	MFR 5 B1.5 L22	51	22	0.1	1.5	2.5	2.45	6.0	
	MFR 5 B1.5 L23	51	23	0.1	1.5	3.5	2.45	6.0	
	MFR 5 B2.0 L22	51	22	0.1	2.0	3.8	2.45	6.0	
	MFR 5 B2.0 L23	51	23	0.1	2.0	5.0	2.45	6.0	
6.0	MFR 6 B1.0 L22	51	22	0.1	1.0	1.5	2.95	8.0	SIM ... H6
	MFR 6 B1.5 L22	51	22	0.1	1.5	2.5	2.95	8.0	
	MFR 6 B2.0 L22	51	22	0.1	2.0	3.0	2.95	8.0	
	MFR 6 B2.5 L22	51	22	0.1	2.5	4.8	2.95	8.0	
	MFR 6 B3.0 L30	58	30	0.1	3.0	6.0	2.95	8.0	
8.0	MFR 8 B2.5 L22	64	22	0.1	2.5	3.5	3.95	10.0	SIM ... H8

Order example: MFR 5 B1.0 L22 BXC 订货式样: MFR 5 B1.0 L22 BXC
 For additional holders see page 33-42 更多变径套刀杆请见第33-45页

MFR Bars Face Grooving with Chip Former

MFR-端面槽刀，带前断屑槽



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

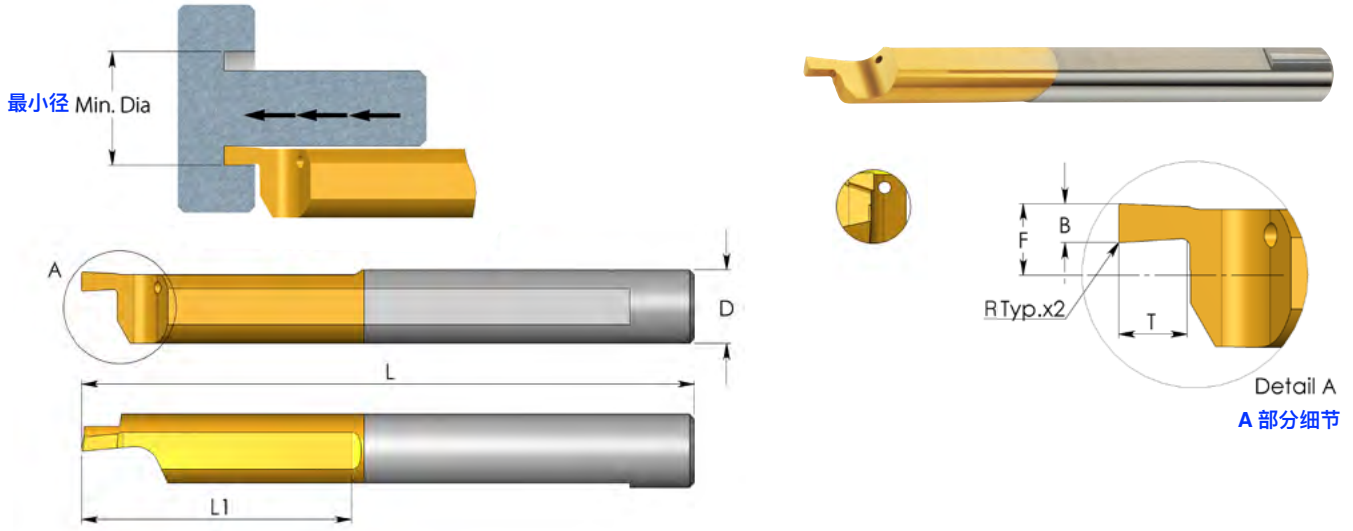
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	槽宽 B	槽深 T	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MFR 4 B1.5 L15-C	51	15	0.1	1.5	2.8	1.95	5.0	SIM ... H4
5.0	MFR 5 B1.5 L22-C	51	22	0.1	1.5	2.5	2.45	6.0	SIM ... H5
	MFR 5 B2.0 L22-C	51	22	0.1	2.0	3.8	2.45	6.0	
6.0	MFR 6 B1.5 L22-C	51	22	0.1	1.5	2.5	2.95	8.0	SIM ... H6
	MFR 6 B2.0 L22-C	51	22	0.1	2.0	3.0	2.95	8.0	
	MFR 6 B3.0 L22-C	51	22	0.1	3.0	6.0	2.95	8.0	

Order example: MFR 5 B2.0 L22-C BXC 订货式样: **MFR 5 B2.0 L22-C BXC**

For L.H. bars specify MFL instead of MFR 左手L.H.小镗刀以MFL表示, 而不能以MFR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MFL Bars Face Grooving MFL-端面槽刀



材质

Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

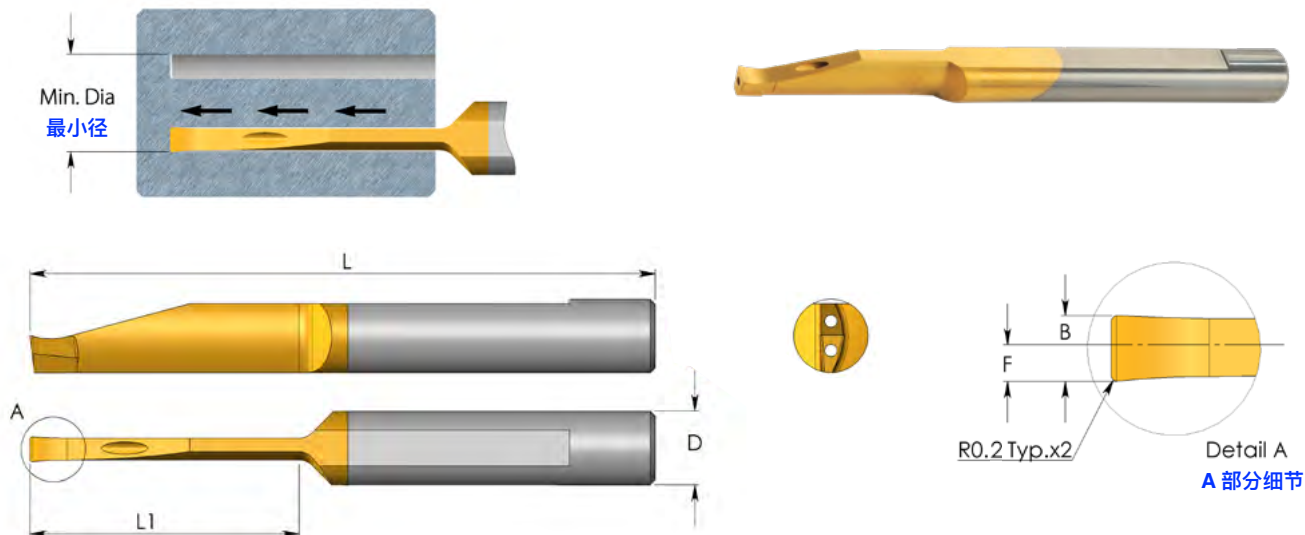
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	槽宽 B	槽深 T	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MFL 4 B0.5 L15	51	15	0.05	0.5	1.2	1.75	5.0	SIM ... H4
	MFL 4 B0.75 L15	51	15	0.10	0.75	1.2	1.75	5.0	
	MFL 4 B1.0 L15	51	15	0.10	1.0	1.5	1.75	5.0	
	MFL 4 B1.5 L15	51	15	0.10	1.5	2.8	1.75	5.0	
	MFL 4 B1.5 L17	51	17	0.10	1.5	3.5	1.75	5.0	
	MFL 4 B2.0 L17	51	17	0.10	2.0	5.0	1.75	5.0	
5.0	MFL 5 B0.5 L22	51	22	0.05	0.5	1.2	2.25	6.0	SIM ... H5
	MFL 5 B0.75 L22	51	22	0.10	0.75	1.2	2.25	6.0	
	MFL 5 B1.0 L22	51	22	0.10	1.0	1.5	2.25	6.0	
	MFL 5 B1.0 L23	51	23	0.10	1.0	2.5	2.25	6.0	
	MFL 5 B1.5 L22	51	22	0.10	1.5	2.5	2.25	6.0	
	MFL 5 B1.5 L23	51	23	0.10	1.5	3.5	2.25	6.0	
	MFL 5 B2.0 L22	51	22	0.10	2.0	3.8	2.25	6.0	
MFL 5 B2.0 L23	51	23	0.10	2.0	5.0	2.25	6.0		
6.0	MFL 6 B1.0 L22	51	22	0.10	1.0	1.5	2.75	8.0	SIM ... H6
	MFL 6 B1.5 L22	51	22	0.10	1.5	2.5	2.75	8.0	
	MFL 6 B2.0 L22	51	22	0.10	2.0	3.0	2.75	8.0	
	MFL 6 B2.5 L22	51	22	0.10	2.5	4.8	2.75	8.0	
	MFL 6 B3.0 L30	58	30	0.10	3.0	6.0	2.75	8.0	
8.0	MFL 8 B2.5 L22	64	22	0.10	2.5	3.5	3.75	10.0	SIM ... H8

Order example: MFL 4 B2.0 L17 BMK 订货式样: MFL 4 B2.0 L17 BMK

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MVR Bars Deep Face Grooving - with 2 Coolant Bores

MVR-深端面槽，带两个冷却孔



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

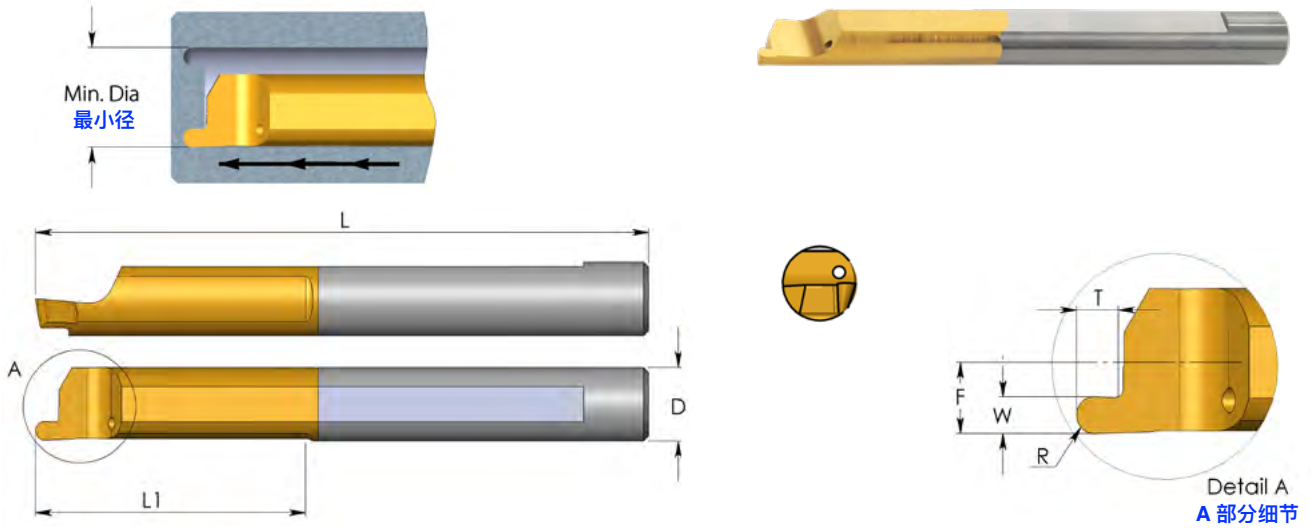
柄径 D	订货号 Ordering Code	总长 L	有效长 L1	槽宽 B	含刀尖半径 F	Min. Dia.	Holder
6.0	MVR 6 B2.0 L10	64	10	2.0	1.1	10.0	SIM ... H6
	MVR 6 B2.0 L15	64	15	2.0	1.1	12.0	
	MVR 6 B2.0 L22	64	22	2.0	1.1	12.0	
	MVR 6 B2.5 L15	64	15	2.5	1.4	10.0	
	MVR 6 B2.5 L22	64	22	2.5	1.4	12.0	
	MVR 6 B3.0 L22	64	22	3.0	1.6	10.0	
8.0	MVR 8 B3.0 L27	64	27	3.0	1.6	15.0	SIM ... H8
	MVR 8 B3.0 L43	80	43	3.0	1.6	15.0	
8.0	MVR 8 B4.0 L43	80	43	4.0	2.1	20.0	SIM ... H8

Order example: MVR 6 B2.0 L22 BXC 订货式样: MVR 6 2.0 L22 BXC

For L.H. bars specify MVL instead of MVR 左手L.H.小镗刀以MVL表示，而不能以MVR代之

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MZR Bars Face Grooving MZR-端面R槽



材质

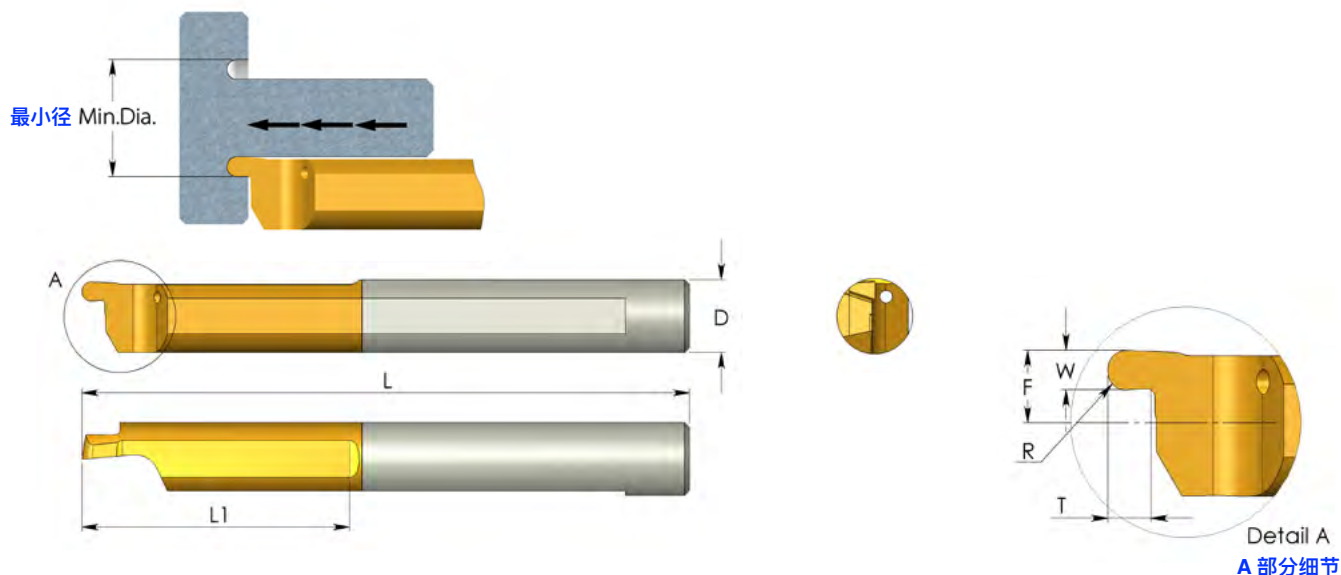
Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	半径R R	槽宽 W	槽深 T	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MZR 4 R0.5 L15	51	15	0.50	1.0	1.2	1.95	5.0	SIM ... H4
	MZR 4 R0.75 L15	51	15	0.75	1.5	1.5	1.95	5.0	
5.0	MZR 5 R0.5 L22	51	22	0.50	1.0	1.2	2.45	6.0	SIM ... H5
	MZR 5 R0.75 L22	51	22	0.75	1.5	1.5	2.45	6.0	
	MZR 5 R1.0 L22	51	22	1.00	2.0	2.5	2.45	6.0	
6.0	MZR 6 R0.5 L22	51	22	0.50	1.0	1.2	2.95	8.0	SIM ... H6
	MZR 6 R0.75 L22	51	22	0.75	1.5	1.5	2.95	8.0	
	MZR 6 R1.0 L22	51	22	1.00	2.0	2.5	2.95	8.0	

Order example: MZR 5 R0.5 L22 BXC 订货式样: MZR 5 R0.5 L22 BXC

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

MZL Bars Face Grooving MZL-端面槽刀



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

材质

柄径 D	订货号 Ordering Code	总长 L	有效长 L1	半径R R	槽宽 W	槽深 T	含刀尖半径 F	最小径 Min. Dia.	变径套 Holder
4.0	MZL 4 R0.5 L15	51	15	0.50	1.0	1.2	1.75	5.0	SIM ... H4
	MZL 4 R0.75 L15	51	15	0.75	1.5	1.5	1.75	5.0	
5.0	MZL 5 R0.5 L22	51	22	0.50	1.0	1.2	2.25	6.0	SIM ... H5
	MZL 5 R0.75 L22	51	22	0.75	1.5	1.5	2.25	6.0	
	MZL 5 R1.0 L22	51	22	1.00	2.0	2.5	2.25	6.0	
6.0	MZL 6 R0.5 L22	51	22	0.50	1.0	1.2	2.75	8.0	SIM ... H6
	MZL 6 R0.75 L22	51	22	0.75	1.5	1.5	2.75	8.0	
	MZL 6 R1.0 L22	51	22	1.00	2.0	2.5	2.75	8.0	

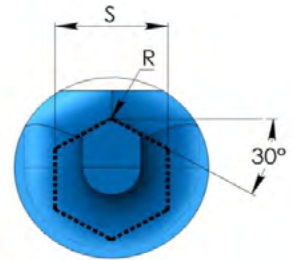
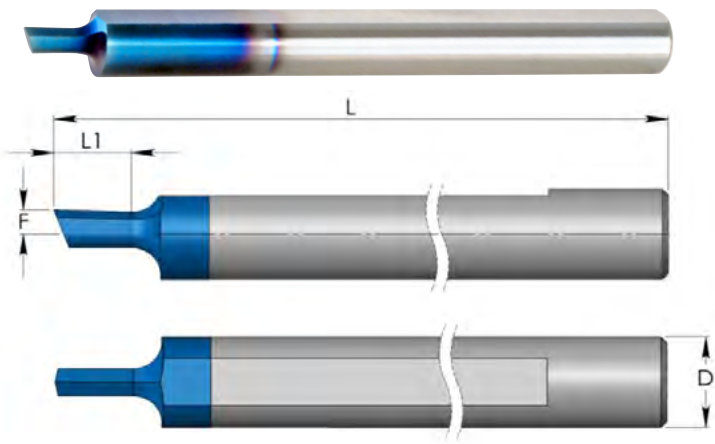
Order example: MZL 5 R0.5 L22 BXC 订货式样: MZL5 R0.5 L22 BXC

For additional holders see page 33-42 更多变径套刀杆请见第33-42页

HK Broaching Tools for Hexagon Keys HK-内六角键槽平面插刀 (拉刀)

Product Identification - Ordering Codes 产品标识-订货标识

HK	3	S30	L5	BMK
Hexagon Keys 内六角键槽	Min. Bore Dia. 1 = 1.2 - 1.6 mm 2 = 2.2 mm 3 = 2.9 mm 4 = 3.9 mm 5 = 4.9 mm 最小孔径	Socket Size S12 = 1.2 - 1.6 mm S16 = 1.6 - 2.3 mm S23 = 2.3 - 2.9 mm S30 = 3.0 - 4.0 mm S40 = 4.0 - 5.0 mm S50 = 5.0 - 8.0 mm 插键槽孔规格	Maximum Cutting depth L2 = 2.3 - 2.5 mm L4 = 4.0 mm L5 = 5.5 mm L6 = 6.5 mm L9 = 9.5 mm 最小切深	Grade 材质



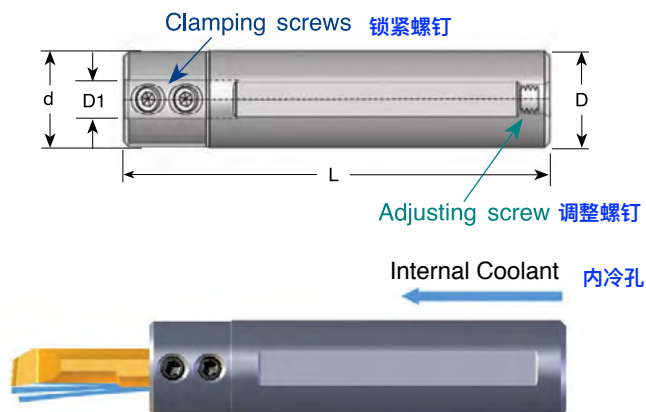
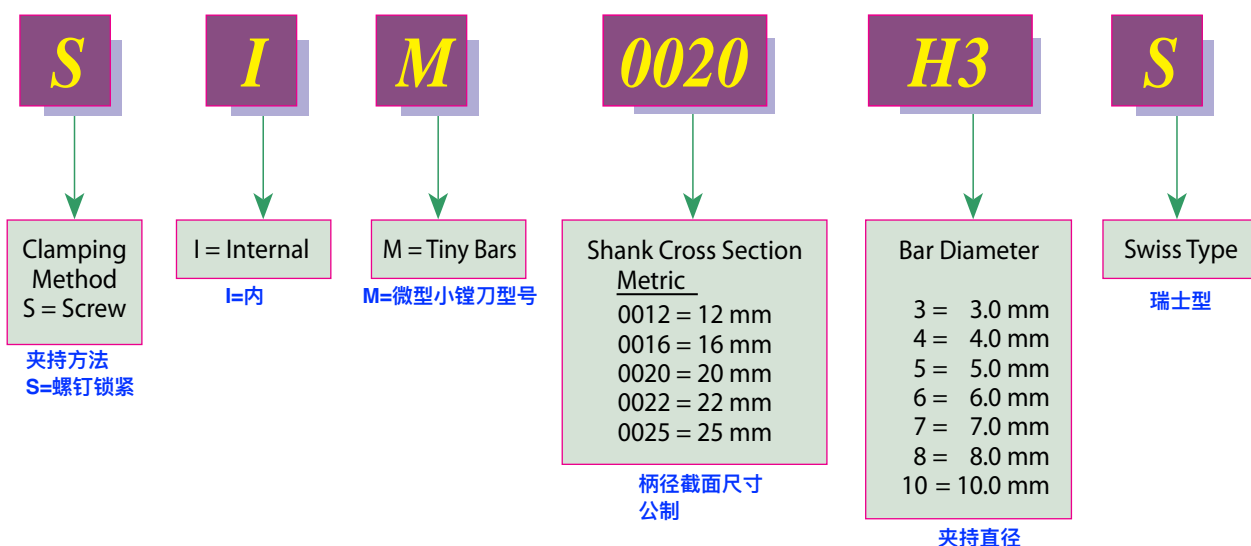
Grade	P	M	K	N	S	H
BMK	●	●	●	●	●	

柄径 D	槽宽 S	订货号 Ordering Code	总长 L	有效长 L1	刀尖R R	含刀尖半径 F	Min.最小径 Dia.	变径套 Holder
4.0	1.2-1.6	HK 1 S12 L2	51	2.3	0.05	0.10	1.2	SIM...H4
	1.6-2.3	HK 1 S16 L2	51	2.5	0.05	0.10	1.6	
5.0	2.3-2.9	HK 2 S23 L4	51	4.0	0.05	1.35	2.2	SIM...H5
	3.0-4.0	HK 3 S30 L5	51	5.5	0.05	1.35	2.9	
	4.0-5.0	HK 4 S40 L6	51	6.5	0.10	1.35	3.9	
7.0	5.0-8.0	HK 5 S50 L9	62	9.5	0.10	1.35	4.9	SIM...H7

S = Socket Size S=插键槽孔规格
 Order example: HK 1 S12 L2 BMK 订货式样: HK 1 S 12 L2 BMK
 For additional holders see page 33-42 更多变径套刀杆请见第33-42页

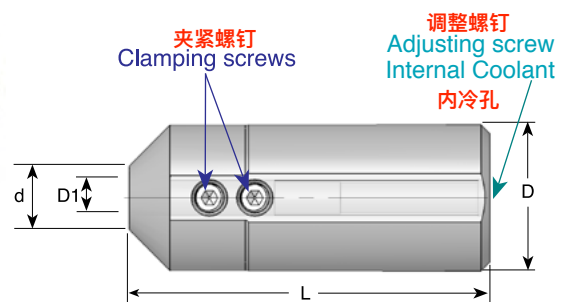
Tiny Tools Toolholders 微型小镗刀变径套刀杆

Product Identification - Ordering Codes 产品标识-订货标识



夹持直径 D1	订货号 Ordering Code	柄径 D	夹紧端直径 d	总长 L	扳手 Key	夹紧螺钉 Clamping Screw	调整螺钉 Adjusting Screw
3.0	SIM 0012 H3	12	12	88	K16	S24	S35
	SIM 0016 H3S	16	20	75	K25	S25	S35S
	SIM 0016 H3	16	20	88	K25	S25	S35
	SIM 0020 H3	20	20	88	K25	S25	S35
	SIM 0022 H3	22	22	88	K25	S25	S35
	SIM 0022 H3K	22	22	120	K25	S25	S55
	SIM 0025 H3M	25	25	150	K25	S25	-

夹持直径 D1	订货号 Ordering Code	柄径 D	夹紧端直径 d	总长 L	扳手 Key	夹紧螺钉 Clamping Screw	调整螺钉 Adjusting Screw
4.0	SIM 0012 H4	12	12	88	K16	S24	S35
	SIM 0016 H4S	16	20	75	K25	S25	S35S
	SIM 0016 H4	16	20	88	K25	S25	S35
	SIM 0020 H4	20	20	88	K25	S25	S35
	SIM 0022 H4	22	22	88	K25	S25	S35
	SIM 0025 H4M	25	25	150	K25	S25	-
5.0	SIM 0012 H5	12	12	88	K16	S24	S35
	SIM 0016 H5S	16	20	75	K25	S25	S35S
	SIM 0016 H5	16	20	88	K25	S25	S35
	SIM 0020 H5	20	20	88	K25	S25	S35
	SIM 0022 H5	22	22	88	K25	S25	S35
	SIM 0022 H5K	22	22	120	K25	S25	S55
SIM 0025 H5M	25	25	150	K25	S25	-	
6.0	SIM 0012 H6	12	14	88	K16	S24	S35
	SIM 0016 H6S	16	20	75	K25	S25	S35S
	SIM 0016 H6	16	20	88	K25	S25	S35
	SIM 0020 H6	20	20	88	K25	S25	S35
	SIM 0022 H6	22	22	88	K25	S25	S35
	SIM 0022 H6K	22	22	120	K25	S25	S55
SIM 0025 H6M	25	25	150	K25	S25	-	
7.0	SIM 0016 H7	16	20	88	K25	S25	S35
	SIM 0020 H7	20	20	88	K25	S25	S35
	SIM 0022 H7	22	22	88	K25	S25	S35
8.0	SIM 0016 H8	16	20	88	K25	S25	S35
	SIM 0020 H8	20	20	88	K25	S25	S35
	SIM 0022 H8	22	22	88	K25	S25	S35
10.0	SIM 0016 H10	16	20	88	K25	S25S	S35
	SIM 0020 H10	20	20	88	K25	S25S	S35
	SIM 0022 H10	22	22	88	K25	S25	S35

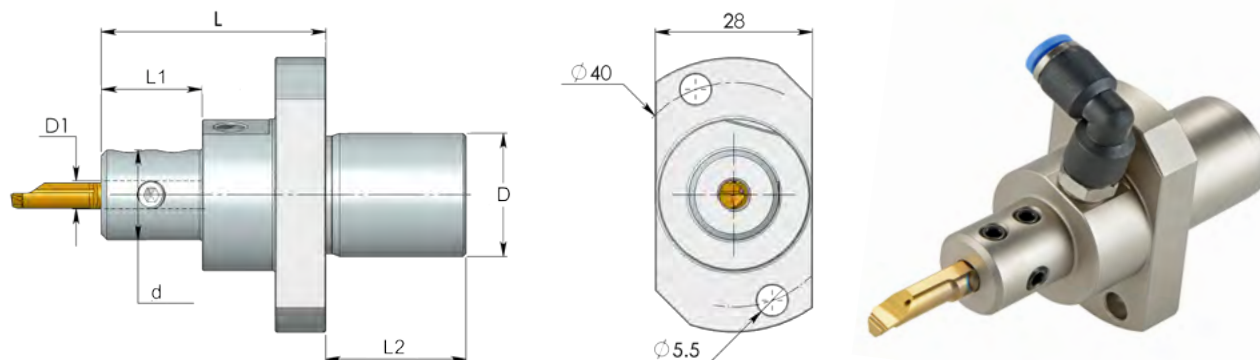


夹持直径 D1	订货号 Ordering Code	柄径 D	前端直径 d	总长 L	扳手 Key	夹紧螺钉 Clamping Screw	调整螺钉 Adjusting Screw
3.0	SIM 0025 H3	25	10.8	62	K25	S25	S35M
4.0	SIM 0025 H4	25	10.8	62	K25	S25	S35M
5.0	SIM 0025 H5	25	10.8	62	K25	S25	S35M
6.0	SIM 0025 H6	25	10.8	62	K25	S25	S35M
7.0	SIM 0025 H7	25	10.8	62	K25	S25	S35M
8.0	SIM 0025 H8	25	10.8	62	K25	S25	S35M

Tiny Tools Toolholders for Swiss machines

瑞士机床微型变径套刀杆

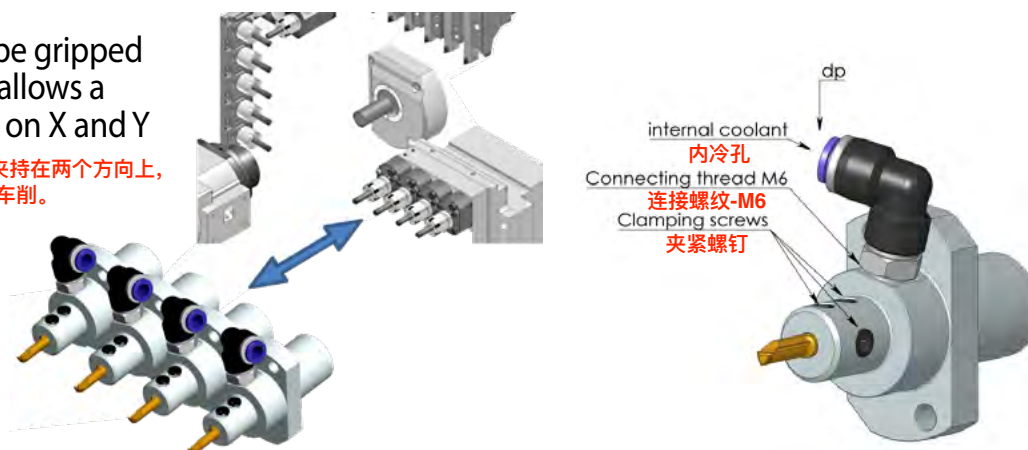
Carmex has developed a unique external turning holder for the sub-spindle on CNC Swiss type lathes. Carmex开发了一种独一无二的瑞士机床副主轴用变径套刀杆。



夹持直径 D1	订货号 Ordering Code	柄径 D	前端直径 d	总长 L	有效长 L1	柄部长 L2	水管孔 dp	扳手 key	锁紧螺钉 Clamping Screw
3.0	SIM 22S H3	22	16	40	18	25	4/6	K16	S24P
3.0	SIM 22S H3-L	22	16	50	28	25	4/6	K16	S24P
4.0	SIM 22S H4	22	16	40	18	25	4/6	K16	S24P
4.0	SIM 22S H4-L	22	16	50	28	25	4/6	K16	S24P
5.0	SIM 22S H5	22	16	40	18	25	4/6	K16	S24M
5.0	SIM 22S H5-L	22	16	50	28	25	4/6	K16	S24M
6.0	SIM 22S H6	22	16	40	18	25	4/6	K16	S24M
6.0	SIM 22S H6-L	22	16	50	28	25	4/6	K16	S24M
7.0	SIM 22S H7	22	20	40	18	25	4/6	K25	S25
8.0	SIM 22S H8	22	20	40	18	25	4/6	K25	S25
8.0	SIM 22S H8-L	22	20	50	28	25	4/6	K25	S25
10.0	SIM 22S H10	22	20	40	18	25	4/6	K25	S25S
10.0	SIM 22S H10-L	22	20	50	28	25	4/6	K25	S25S

For use on Star machines 用于Star机床

The Tiny tool can be gripped in two directions, allows a turning operation on X and Y axis. 变径套刀杆可以被夹持在两个方向上, 能在X和Y轴上进行车削。



CIM-Fast Clamping System

CIM-快速夹紧系统



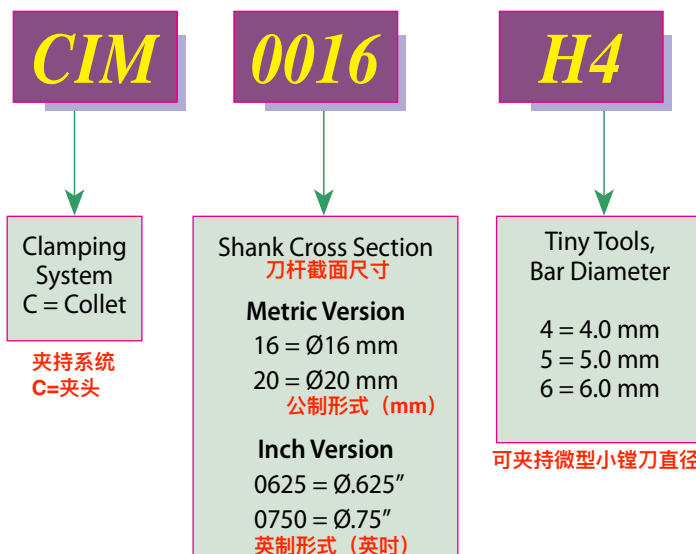
新的创新的**CIM**夹紧系统提高了微型小镗刀切削刃的精度和可重复性，以及不需要拆卸刀杆即可快速、简单的更换刀具。**CIM**系统包括一个刀杆内部转位机构，指示刀具在该机构的正确位置。以及高稳定、高刚性夹头。

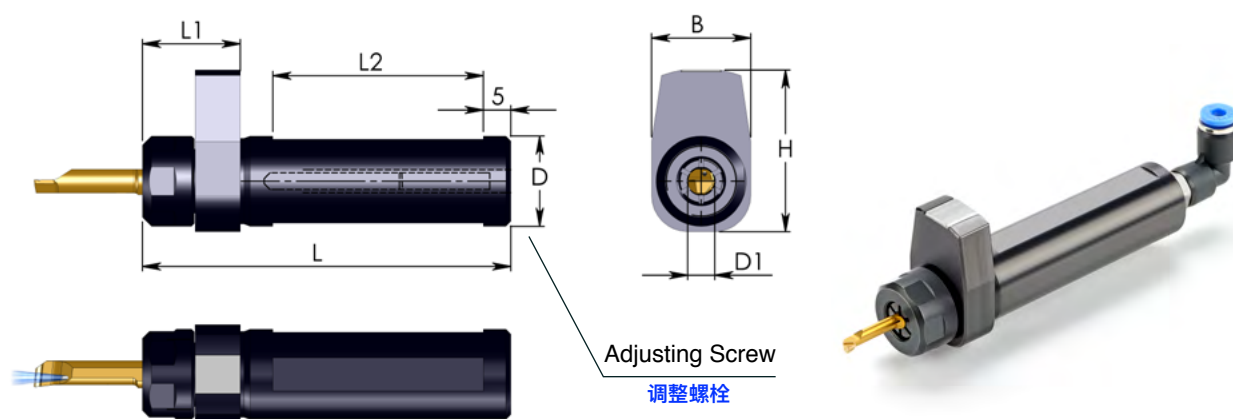
The new innovative **CIM** clamping system provides high precision and repeatability of the Tiny Tools cutting edge, as well as fast and easy tool exchange without removing the holder. The **CIM** system includes an internal tool indexing mechanism which index the tool in the correct orientation, as well as strong and rigid collet clamping for high stability.

- No screws required 不需要螺钉
- Enable fast and accurate exchange of the Tiny Tool inside the machine without removing the **CIM** holder from the machine, or additional tool setup.
机床上的**CIM**刀杆或其它刀具设置，不需要拆卸刀杆即可快速准确地更换机床上的微型小镗刀。
- Holders with three clamping flats on the shank for maximum flexibility.
柄上有三个夹紧平面，最大的柔性应用。
- Fits standard and special Carmex Tiny Tools
适合**Carmexs**标准和特殊的微型小镗刀
- Internal coolant through the **CIM** holder and the Tiny Tool pointing to the cutting edge.
CIM变径套刀杆内冷通过刀杆直达切削刃

Product Identification - Ordering Codes 产品标识-订货标识

CIM – Toolholder **CIM**-变径套刀杆





Metric Version 公制形式 (mm)

夹持直径 D1	订货号 Ordering Code	柄径 D	总长 L	有效长 L1	夹持长度 L2	刀杆宽度 B	刀杆高度 H
4.0	CIM 0016 H4	16	88	22	58	22	36
	CIM 0020 H4	20	88	22	58	22	36
5.0	CIM 0016 H5	16	88	22	58	22	36
	CIM 0020 H5	20	88	22	58	22	36
6.0	CIM 0016 H6	16	88	22	58	22	36
	CIM 0020 H6	20	88	22	58	22	36

Inch Version 英制形式 (英吋)

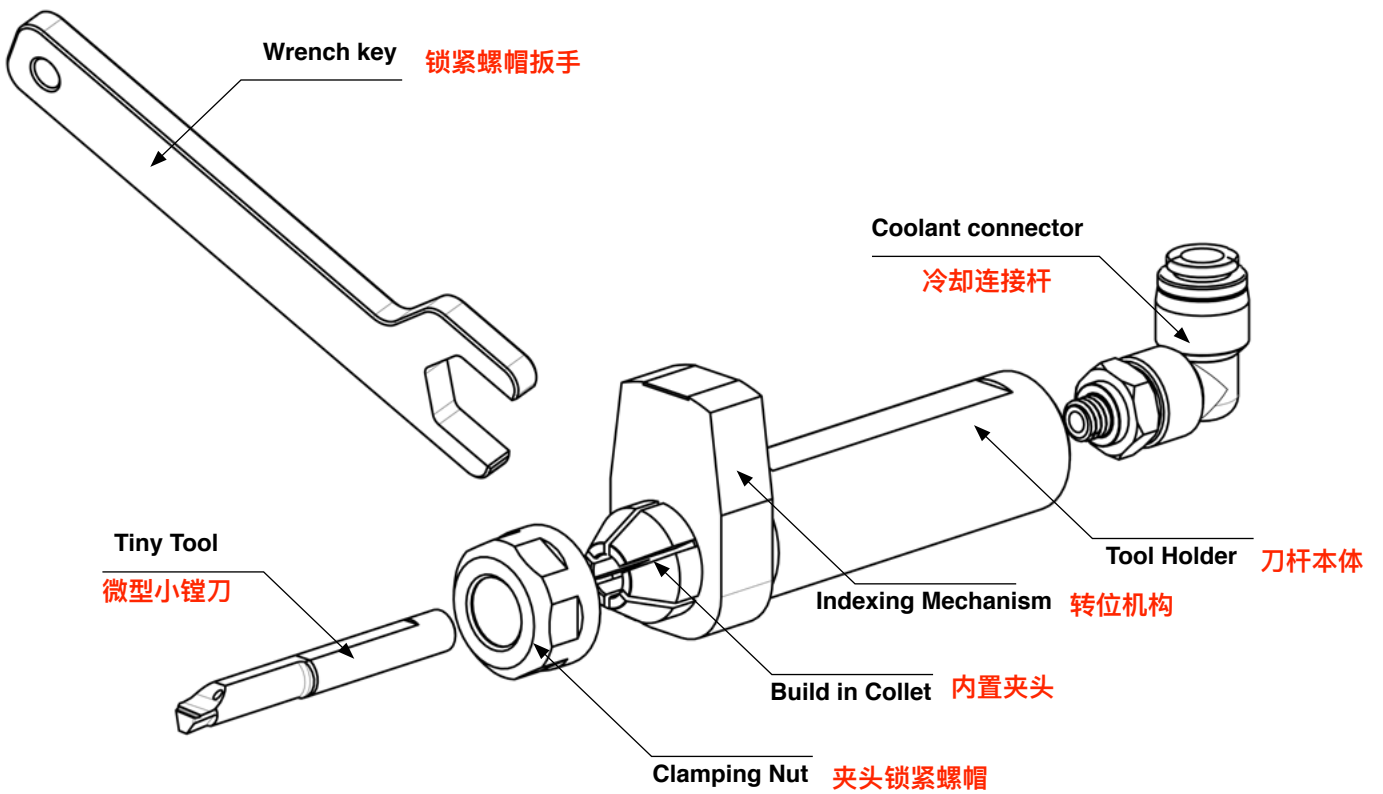
夹持直径 D1 mm	订货号 Ordering Code	柄径 D"	总长 L"	有效长 L1"	夹持长度 L2"	刀杆宽度 B"	刀杆高度 H"
4.0	CIM 0625 H4	5/8	3.5	.87	2.3	.87	1.4
	CIM 0750 H4	3/4	3.5	.87	2.3	.87	1.4
5.0	CIM 0625 H5	5/8	3.5	.87	2.3	.87	1.4
	CIM 0750 H5	3/4	3.5	.87	2.3	.87	1.4
6.0	CIM 0625 H6	5/8	3.5	.87	2.3	.87	1.4
	CIM 0750 H6	3/4	3.5	.87	2.3	.87	1.4

Spare parts 刀杆配件

锁紧螺帽 Clamping nut	锁紧螺帽扳手 Wrench key	调整螺栓 Adjusting screw	调整螺栓扳手 Adjusting screw key	内冷连接 Coolant supply connector
CN19	WK19	S35	K25	P-M6-4

* P-M6-6 also available 带星号表示刀杆附带P-M6-6螺丝

CIM – clamping system details CIM-夹持系统零件图



General instructions for use 使用说明

The CIM tool holder system is design for a fast and simple way of achieving correct indexing of Tiny Tools inside the machine. CIM刀杆系统是为微型小镗刀在机床上的准确转位而设计的一种快速简易的机构。

Following is a recommended procedure for the first use: 第一次使用推荐

1. Adjust the rear stopper screw according the tool required over-hang. 根据刀具悬伸调整后止动螺钉。
Insert the Tiny Tool into the collet and push it gently until it passes the internal indexing mechanism. Adjust the rear stopper screw according the required overhang (do not set the final tool orientation). That procedure should be done only once and outside the machine. 将小镗刀插入夹头，缓慢的推动，直到它通过内部转位机构。根据刀具所需的悬伸调整后止动螺钉（不要设置刀具最终起点）。这个步骤只能在机床外部进行一次。
2. Remove the Tiny Tool from the CIM tool holder and mount the holder on the machine. Clamp it well and it is ready to use. At that point the clamping nut should be screwed on the tool holder collet by hand and remain open. 从CIM刀杆上取出微型小镗刀，将刀杆安装在机床上。夹紧即可。此时，应该用手将夹紧螺母拧到刀杆夹头上并处于打开状态。
3. Insert the Tiny Tool into the CIM collet and push it inside gently until you will hear a click. Rotate the tool by hand clock wise and counter clock wise until you hear a click and the indexing mechanism set the tool to center. 将小镗刀插入CIM夹头并缓慢的将其推入，直到听到咔嚓声。反复顺时针旋转和逆时针旋转小镗刀，直到听到咔嚓声，转位机构将刀具设置为中心。
4. Close the nut by the wrench key. 用扳手锁紧螺帽

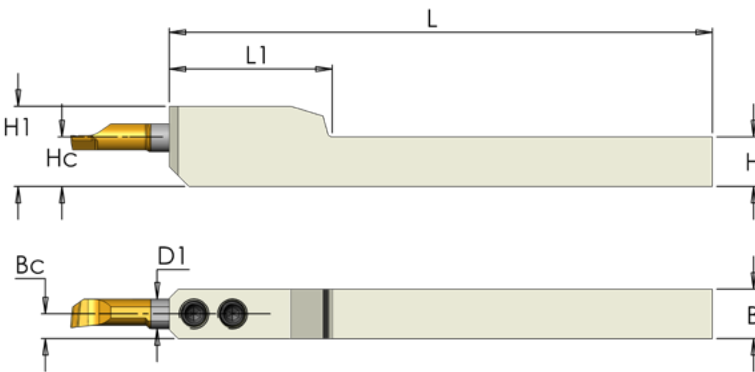
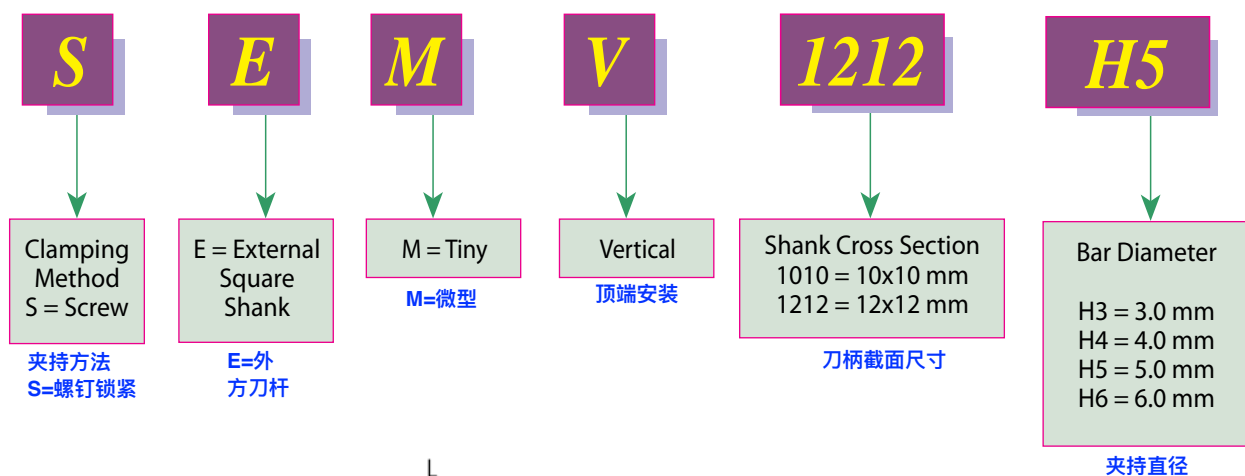
In that point the tool is ready to use. 在这个点上，可以立即使用小镗刀了。

For a tool replacement, open the collet with the wrench key, replace the tool, close the collet and continue working. 如果要更换小镗刀，请用扳手松开夹头更换，锁紧夹头继续加工。

Tiny Tools Toolholders - Square Shank 方刀杆

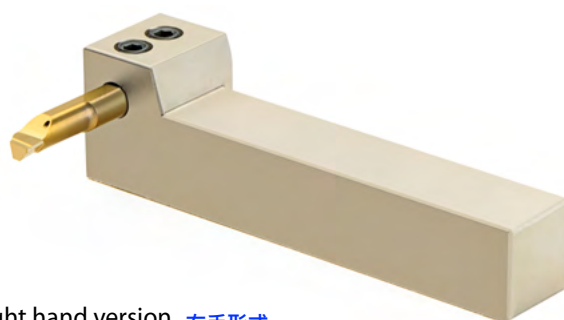
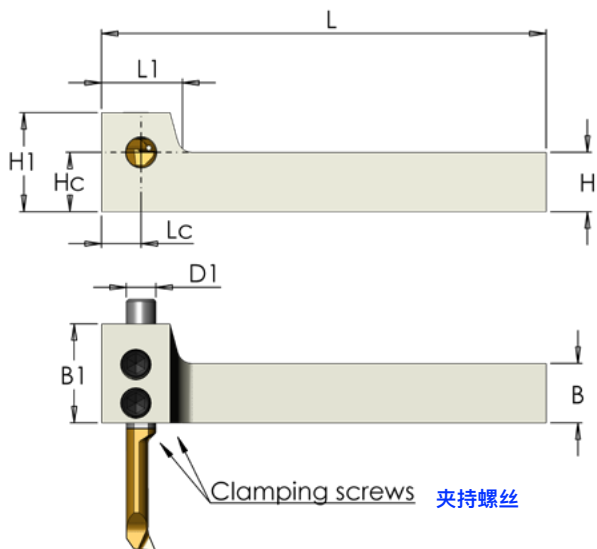
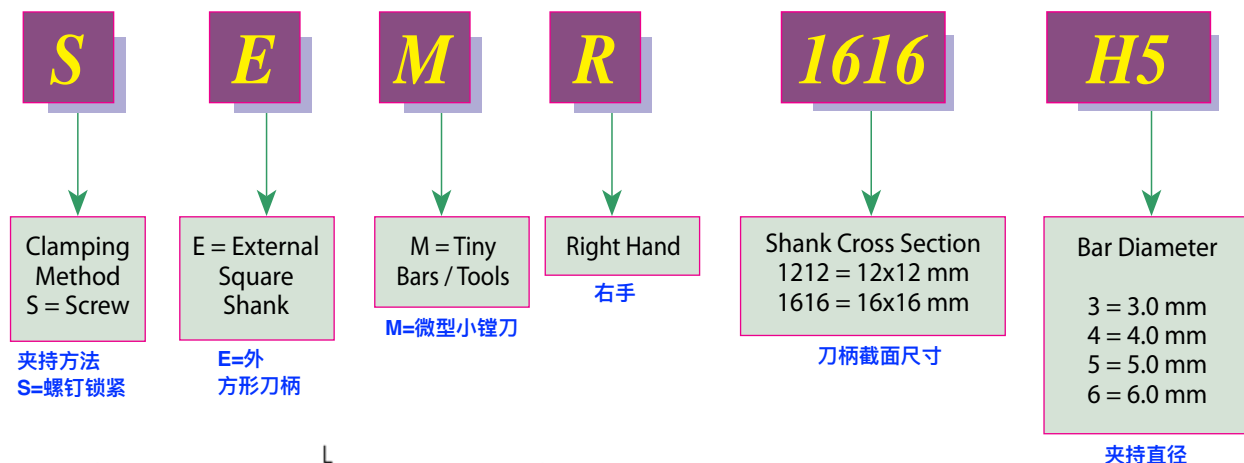
for internal machining 用于内孔加工

Product Identification - Ordering Codes 产品标识-订货标识



夹持直径 D1	订货号 Ordering Code	刀杆高度 H	刀杆宽度 B	有效长 L1	总长 L	中心高 Hc	中心宽度 Bc	前端高度 H1	扳手 key	锁紧螺钉 Clamping Screw
3.0	SEM V 1010 H3	10	10	24	110	10	5	14.7	K16	S24
	SEM V 1212 H3	12	12	24	110	12	6	16.7	K16	S24
4.0	SEM V 1010 H4	10	10	36	110	10	5	15.2	K16	S24
	SEM V 1212 H4	12	12	36	110	12	6	17.2	K16	S24
5.0	SEM V 1010 H5	10	10	36	110	10	5	15.7	K16	S24
	SEM V 1212 H5	12	12	36	110	12	6	17.7	K16	S24
6.0	SEM V 1010 H6	10	10	33	110	10	5	16.2	K16	S24
	SEM V 1212 H6	12	12	33	110	12	6	18.2	K16	S24

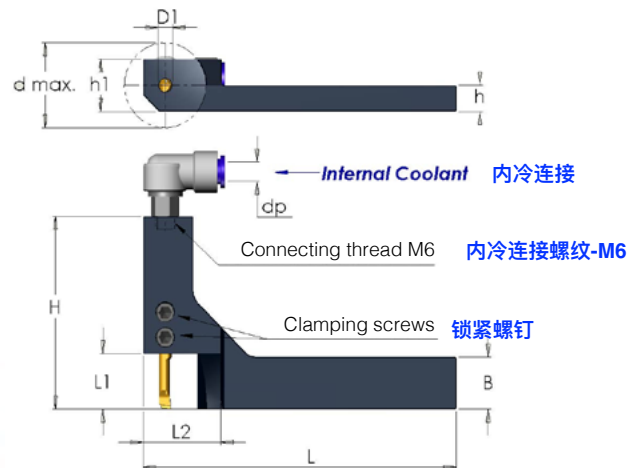
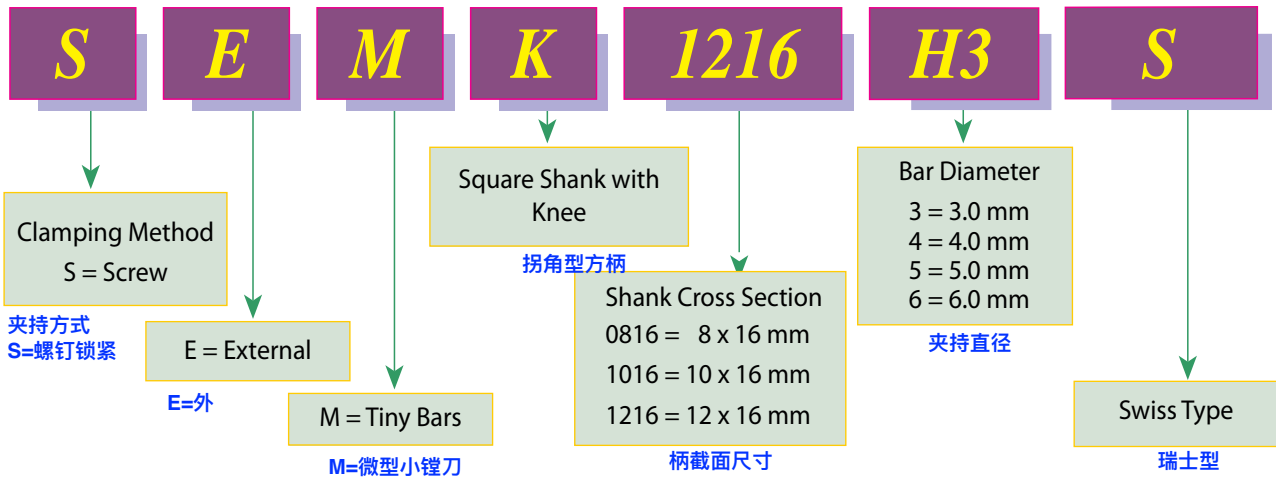
Product Identification - Ordering Codes 产品标识-订货标识



夹持直径 D1	订货号 Ordering Code	刀杆高 H	刀杆宽 B	前端 B1	总长 L	头端 L1	中心高 Hc	中心宽 Lc	前端高 H1	扳手 key	锁紧螺钉 Clamping Screw
3.0	SEM R 1212 H3	12	12	20	88	16	12	7	20	K25	S25
	SEM R 1616 H3	16	16	24	120	16	16	7	24	K25	S25
4.0	SEM R 1212 H4	12	12	20	88	16	12	7	20	K25	S25
	SEM R 1616 H4	16	16	24	120	16	16	7	24	K25	S25
5.0	SEM R 1212 H5	12	12	20	88	16	12	7	20	K25	S25
	SEM R 1616 H5	16	16	24	120	16	16	7	24	K25	S25
6.0	SEM R 1212 H6	12	12	20	88	16	12	7	20	K25	S25S
	SEM R 1616 H6	16	16	24	120	16	16	7	24	K25	S25S

Product Identification - Ordering Codes

产品标识=订货标识

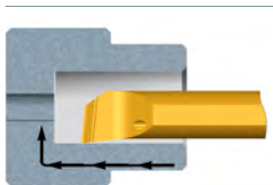


夹持直径 D1	订货号 Ordering Code	刀杆宽 B	总长 L	有效长 L1	L2	拐角长 H	刀杆高 h	前端高 h1	最大直径 d max.	水管孔 *dp	扳手 Key	锁紧螺钉 Clamping Screw
3.0	SEMK 0816 H3S	16	100	17	25	46	8	16	26	4/6	K25	S25
	SEMK 1016 H3S	16	100	17	25	46	10	18	26	4/6	K25	
	SEMK 1216 H3S	16	100	17	25	46	12	20	26	4/6	K25	
4.0	SEMK 0816 H4S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H4S	16	100	17	25	58	10	18	26	4/6	K25	
	SEMK 1216 H4S	16	100	17	25	58	12	20	26	4/6	K25	
5.0	SEMK 0816 H5S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H5S	16	100	17	25	58	10	18	26	4/6	K25	
	SEMK 1216 H5S	16	100	17	25	58	12	20	26	4/6	K25	
6.0	SEMK 0816 H6S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H6S	16	100	17	25	58	10	18	26	4/6	K25	
	SEMK 1216 H6S	16	100	17	25	58	12	20	26	4/6	K25	

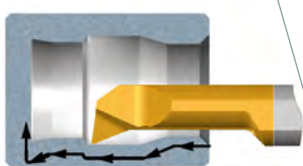
* Optional 星号表示可选择

Tiny Tools Kits 微型小镗刀套盒

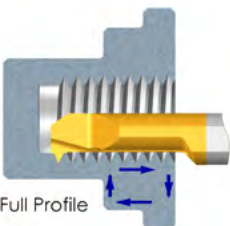
Boring 镗孔



Profiling & Boring 仿形和镗孔

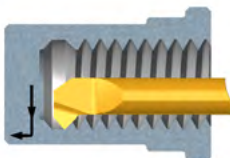


Threading 螺纹

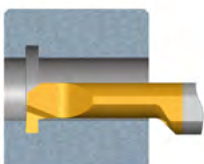


Full Profile

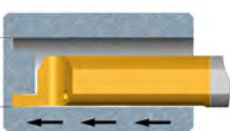
Chamfering & Boring 倒角和镗孔



Grooving 内径切槽



Face Grooving 端面槽



最小径 Min. Dia



KT4-20	KT5-20	所含内容
MTR 4 R0.2 L10	MTR 5 R0.2 L15	Boring 镗孔小镗刀
MPR 4 R0.2 L10	MPR 5 R0.2 L15	Profiling 仿形小镗刀
MIR 4 L15 A60	MIR 5 L15 A60	Threading 螺纹车刀
MCR4 R0.2 L15	MCR 5 R0.2 L15	Chamfering 倒角小镗刀
MGR4 B1.5 L10	MGR 5 B1.5 L15	Grooving 内径切槽
MFR 4 B1.0 L15	MFR 5 B1.0 L22	Face Grooving 端面槽刀
SIM 0020 H4	SIM 0020 H5	Holder 变径套刀杆
K25	K25	Key 扳手

Order example: KT4-20 订货式样: [KT4-20](#)

Also available are kits with a 16mm or 22mm shank diameter bar holder. 套盒带一个16mm或22mm变径套刀杆
Order example: KT4-16 订货式样: [KT4-16](#)

Technical Section 技术部分

Carbide Grades: 硬质合金材质

BXC (P30 - P50, K25 - K40)

PVD TiN coated grade for low cutting speed. Works well with a wide range of stainless steels. BXC-PVD TiN涂层, 用于低切削速度。宽范围的不锈钢加工。

BMK (K10 - K20)

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

General purpose for all materials. BMK-亚微粒级和先进的PVD三层涂层。特别的耐高温和光滑切削加工, 用于高效能和通用加工条件。适用于全部材料

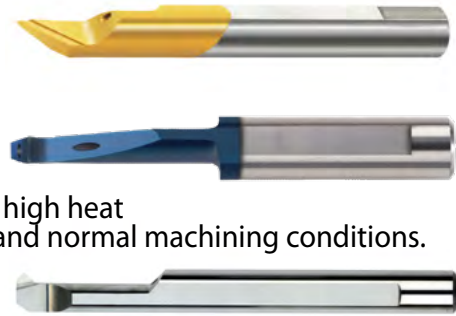
K20 (K10 - K30)

Uncoated Carbide grade for non ferrous metals, aluminum and cast iron. K20-非涂层硬质合金用于非铁金属材料, 铝合金和铸铁。

TNX

New advanced carbide grade TNX for higher feeds and high performance, at medium to high cutting speed. Extra fine grain size with high hardness and toughness combined with triple layer reddish coating, provides high edge stability and better chip flow. Available only for CBR bars.

TNX-新的先进的硬质合金材质, 用于高进给和高效率加工, 在中到高的切削速度。特别细的颗粒高硬度和高韧性组合, 三层微红涂层, 高稳定切削刃最好的切屑流向。只有CBR才有的材质。



Cutting speed for Tiny Tools

ISO Standard	Material 材料		Condition 状态	Cutting Speed m/min 切削速度/m/min			
				BXC	BMK	K20	TNX
P 钢	Non-Alloy steel and cast steel, free cutting steel 非合金钢/铸钢/易切钢	<=0.25C	Annealed 退火	25 - 70	30 - 80		36 - 80
		≥0.25C	Annealed 退火				
		< 0.55C	Quenched and tempered 淬火或回火				
		≥0.55C	Annealed 退火				
	Low alloy steel and cast steel (less than %5 alloying elements)		Annealed 退火	20 - 40	25 - 50		30 - 50
			Quenched and tempered 淬火或回火	20 - 40	25 - 50		30 - 50
High alloy steel, cast steel, and high alloy steel/tool steel 工具钢		Annealed 退火	20 - 40	25 - 50		30 - 50	
		Quenched and tempered 淬火或回火	20 - 40	25 - 50		30 - 50	
M 不锈钢	Stainless steel and cast steel 不锈钢和铸造不锈钢		Ferritic/martensitic 铁素体/马氏体	25 - 40	30 - 60		36 - 60
			Martensitic 马氏体				
			Austenitic 奥氏体				
K 铸铁	Cast iron nodular (GGG) 球墨铸铁		Ferritic/pearlitic 铁素体/珠光体	25 - 60	30 - 80		36 - 80
			Pearlitic 珠光体				
	Grey cast iron (GG) 灰铸铁		Ferritic 铁素体	30 - 70	30 - 80		36 - 80
			Pearlitic 珠光体				
Malleable cast iron 锻造铸铁		Ferritic 铁素体	20 - 40	20 - 50		24 - 50	
		Pearlitic 珠光体					
N 非铁金属	Aluminum-wrought alloy 铝镁合金		Not cureable 非硬化	50 - 100	60 - 120	30 - 50	72 - 120
			Cured 硬化				
	Aluminum-cast, alloyed 铸铝合金	≤%12 Si	Not cureable 非硬化	40 - 80	50 - 90	20 - 40	60 - 90
		>%12 Si	High temperature 高温处理				
	Copper alloys 铜合金	>%1 Pb	Free cutting 易切削	30 - 60	30 - 70	20 - 40	36 - 70
			Brass 黄铜				
		Electrolytic copper 电解铜	40 - 80		20 - 40		
	Non metallic 非金属	Duroplastics, fiber plastics 硬塑料					
S 耐热合金	High temp. alloys, Super alloys 高温合金/超合金	Fe based 铁基	Annealed 退火	15 - 30	15 - 40		18 - 40
			Cured 固熔				
		Ni or Co based 镍或钴基	Annealed 退火				
			Cured 固熔				
	Cast 铸造						
	Titanium, Titanium alloys 钛合金	Alpha+beta alloys cured 固熔	10 - 30	10 - 30		12 - 30	
H 硬钢和铸铁	Hardened steel 硬钢		硬度 Hardened 45-50 HRC	10 - 30	14 - 40		18 - 40
			硬度 Hardened 51-55 HRC				
			硬度 Hardened 56-62 HRC				
	Chilled cast iron 冷硬铸铁		铸造 Cast	10 - 30	10 - 30		12 - 30
Cast iron 硬铸铁		硬度 Hardened	10 - 20	10 - 20		12 - 20	

Recommended Feed Rate: 0.01 - 0.03 mm/rev 推荐进给范围: 0.01-0.03mm/rev

For CMR Tiny Tools see page 7 CMR微型小镗刀见第7页

Threading Passes 螺纹切削进给次数

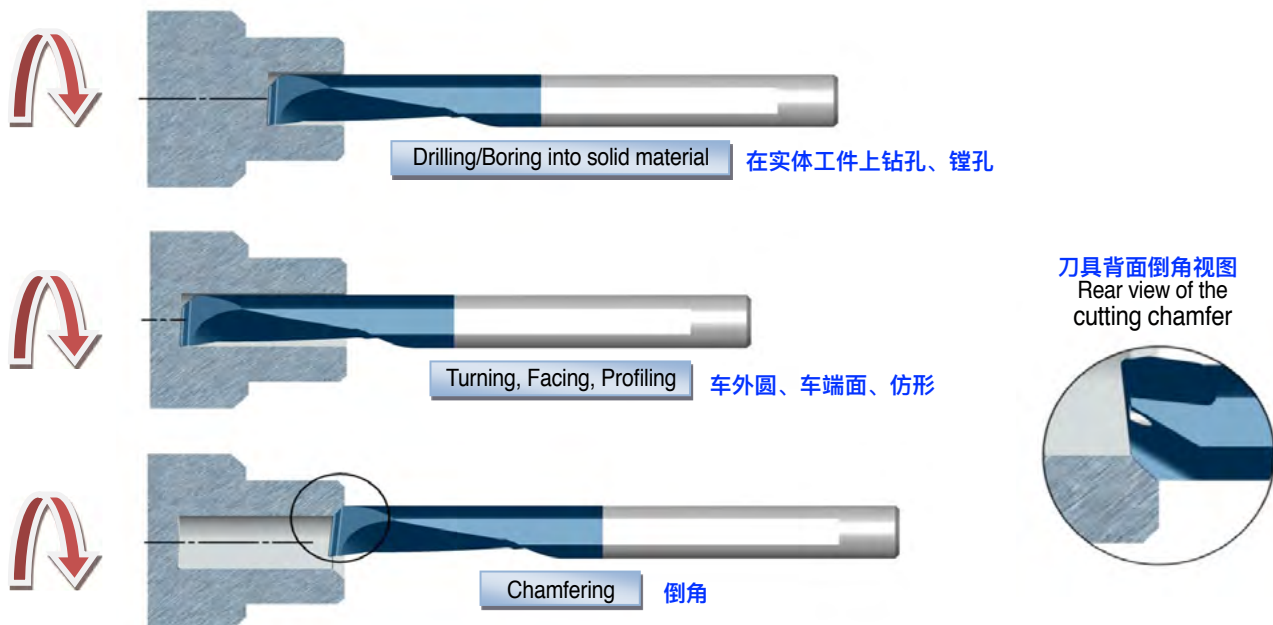
Pitch:	螺距 牙数	mm TPI	0.5 48	0.7 36	0.8 32	1.0 24	1.25 20	1.5 16	2-5 14-5
Number of Passes	进给次数		6 - 12	7 - 14	7 - 16	8 - 18	8 - 20	10 - 22	20 - 38

CMR Carmex Multi-Task Tiny Tools CMR-Carmex多用途微型小镗刀

- Carmex is introducing a new and innovative Multi-Task Tiny Tool **CMR** for Boring, Turning, Facing and Chamfering with a single tool. Carmex推出一种创新的多用途微型小镗刀CMR，一把刀完成钻孔、镗孔、车削、车端面 and 倒角。
- The unique design enables machining of the material without the need for a pilot hole. 独特的设计，不需要预钻孔便能进行孔加工
- The new tool shortens the machining cycle time and the number of tools required - providing **High Productivity**. 减少加工时间，节省费用。 高效率
- Effective through coolant hole with a spiral flute, evacuates the chips out of the hole uninterrupted. 通过螺旋槽的冷却孔，不间断地将切屑排出孔外。
- Unique chip breaker and flute design. 独特的断屑台和断屑槽设计/
- To use with standard SIM toolholders on Swiss Type or CNC lathe machines. 通过标准SIM变径套在瑞士机床和车床上使用，
- Available in **BMK** Grade only. 只有BMK材质提供

Working Method 加工方式

- The tool penetrates the work piece and produces the hole compliant with the minimum diameter the tool allows. 刀具能贯穿实体工件并钻出孔，孔径符合刀具最小直径。
- The tool can penetrate the material in one pass or several passes depending on the work piece material, coolant pressure, machine power etc. 刀具能多次在实体工件上钻孔，这取决于工件材料、冷却压力、机床功率。
- The hole can be enlarged by multi radial passes. 可以进行多次径向扩孔。



The tool is equipped with an additional cutting edge, which is located across the main front edge. This allows production of an additional 45° chamfer on the work piece without the need to stop the spindle or processing operation.

刀具有一个附加的切削刃，它位于前端主切削刃的对面。可以在工件上进行45°倒角，而不需要停机或更换刀具。

CMR General Recommendations CMR-常规推荐

Coolant fluid 冷却液

Dry machining should not be performed under any circumstances.

It is necessary to use an internal coolant in all applications.

Oil or Emulsion lubricants are recommended for best performance.

In the event of low coolant pressure, adding an external coolant can improve the tool

operation. 无论如何不要进行干式切削。在所有的切削中都必须使用内冷。推荐机油或乳化液冷却以获得最佳性能。如果内冷压力低，增加外冷可以使切削获得改善。

The cooling stream is designed to provide three benefits: 冷却液喷射的设计有三个好处：

1. Cooling the cutting edge of the tool, and the contact area. 冷却液直达切削刃和接触区域。
2. Pushing the chip away from the tool quickly, thereby reducing wear of the edge. 使切屑快速从切削刃上冲离，减少切削刃磨损。
3. Helping to break the chip into smaller pieces and evacuating them from the cutting area. 有利于碎屑，有助于切屑排出。

Cutting Data 切削参数

ISO Standard	Material 材料	Cutting Speed m/min 切削速度 m/min
P 钢	Low and Medium Carbon Steels <0.55%C 低到中碳钢	20 - 75
	High Carbon Steels ≥0.55%C 高碳钢	20 - 75
	Alloy Steels, Treated Steels 合金钢/热处理钢	20 - 60
M 不锈钢	Stainless Steels - Free Cutting 易切不锈钢	20 - 60
	Stainless Steels - Austenitic 奥氏体不锈钢	20 - 50
	Cast Steels 铸钢	20 - 70
K 铸铁	Cast Iron 铸铁	20 - 90
N 非铁金属	Aluminum ≤12%Si, Copper 铝合金（硅含量低于12%）、铜	40 - 150
	Aluminum >12% Si 高硅铝（硅含量高于12%）	20 - 100
	Synthetics, Duroplastics, Thermoplastics 合成纤维/硬塑料/耐热塑料	40 - 150
S 合金 H 硬钢	Nickel Alloys, Titanium Alloys 镍基合金/钛合金	15 - 60
	Hardened Steels 硬钢	60 - 70

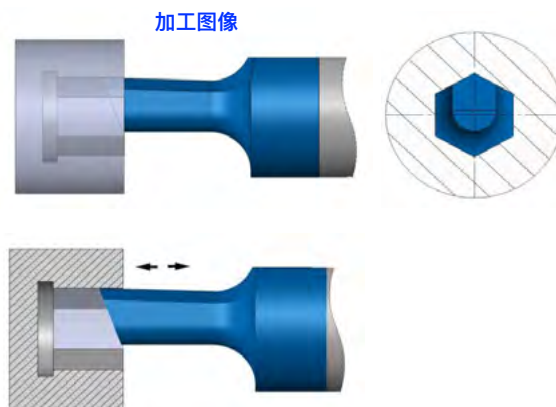
Recommended Feed Rate: 0.01 - 0.03 mm/rev 推荐进给范围：0.01-0.03mm/rev

HK Broaching Tools for Hexagon Keys HK-内六方键槽平面插刀 (拉刀)

The HK broaching system have been developed to machine internal keyways inside blind or through holes, using CNC machines. HK-已开发出在数控机床使用的拉削系统，用于加工盲孔内或通孔的内六方键槽。

Working Demo

- To use with Carmex standard SIM Bar Holders
使用Carmex标准SIM变径套刀杆
- The holder can be located directly in the turret or the machine spindle
变径套可以直接安装刀塔或机床主轴上
- Holder with rear clamping screw for full support during operation 刀杆尾部带后锁紧螺钉用于操作中全部支撑
- Available in **BMK** Grade only. 现货只有BMK材质



Cutting Data 切削参数

Material	材料抗拉强度 Tensile Strength (N/mm ²)	进给范围 mm/min Feed rate (mm/min)	每次进给 (mm) In-feed per stroke (mm)
	400-650	7000-9000	0.06-0.09
	700-850	5000-6500	0.04-0.07
	900-1000	4000-5500	0.03-0.05
	1100-1200	3000-4500	0.02-0.04

The cutting data above is an initial recommendation and depends on the machine condition, workpiece profile and the application clamping 切削参数仅是初始的推荐，结果取决于机床工况、零件形状和操作夹紧。

- A relief groove is highly recommended, if not possible a gradual volume decrease should be made at the end of the broaching groove 强烈建议使用退刀槽，如果做不到，应在拉削键槽根部逐渐减小空隙。
- The HK tool must be position outside of the hole/groove before each stroke 每次行程之前，刀具必须置于孔/槽外。
- After setup and first stroke, we recommend to observe the tool and the application to make sure no collision occurred 在编程后，我们建议模拟空运行检查，以确保刀具和操作程序没有干涉。

