

Price
advantage
up to 40 %

TINY TOOLS PROMO

TINY TOOLS SETS FOR SUPER-SPECIAL-PRICE

SET Ø 4



includes:

- 1 x MPR4 R0.2 L15 BXC
- 1 x MPR4 R0.2 L22 BXC
- 1 x MTR4 R0.2 L15 BXC
- 1 x MTR4 R0.2 L22 BXC
- 1 x matching Holder

Please choose:

SIM 0012 H4
SIM 0016 H4
SIM 0020 H4
SIM 0022 H4

135 €

SET Ø 5



includes:

- 1 x MPR5 R0.2 L15 BXC
- 1 x MPR5 R0.2 L22 BXC
- 1 x MTR5 R0.2 L15 BXC
- 1 x MTR5 R0.2 L22 BXC
- 1 x matching Holder

Please choose:

SIM 0012 H5
SIM 0016 H5
SIM 0020 H5
SIM 0022 H5

135 €

SET Ø 6



includes:

- 1 x MPR6 R0.2 L15 BXC
- 1 x MPR6 R0.2 L22 BXC
- 1 x MTR6 R0.2 L15 BXC
- 1 x MTR6 R0.2 L22 BXC
- 1 x matching Holder

Please choose:

SIM 0012 H6
SIM 0016 H6
SIM 0020 H6
SIM 0022 H6

135 €

Sets consist of 4 Tiny Tools and a matching holder for the set.

Supervised by:

When ordering
3 Sets

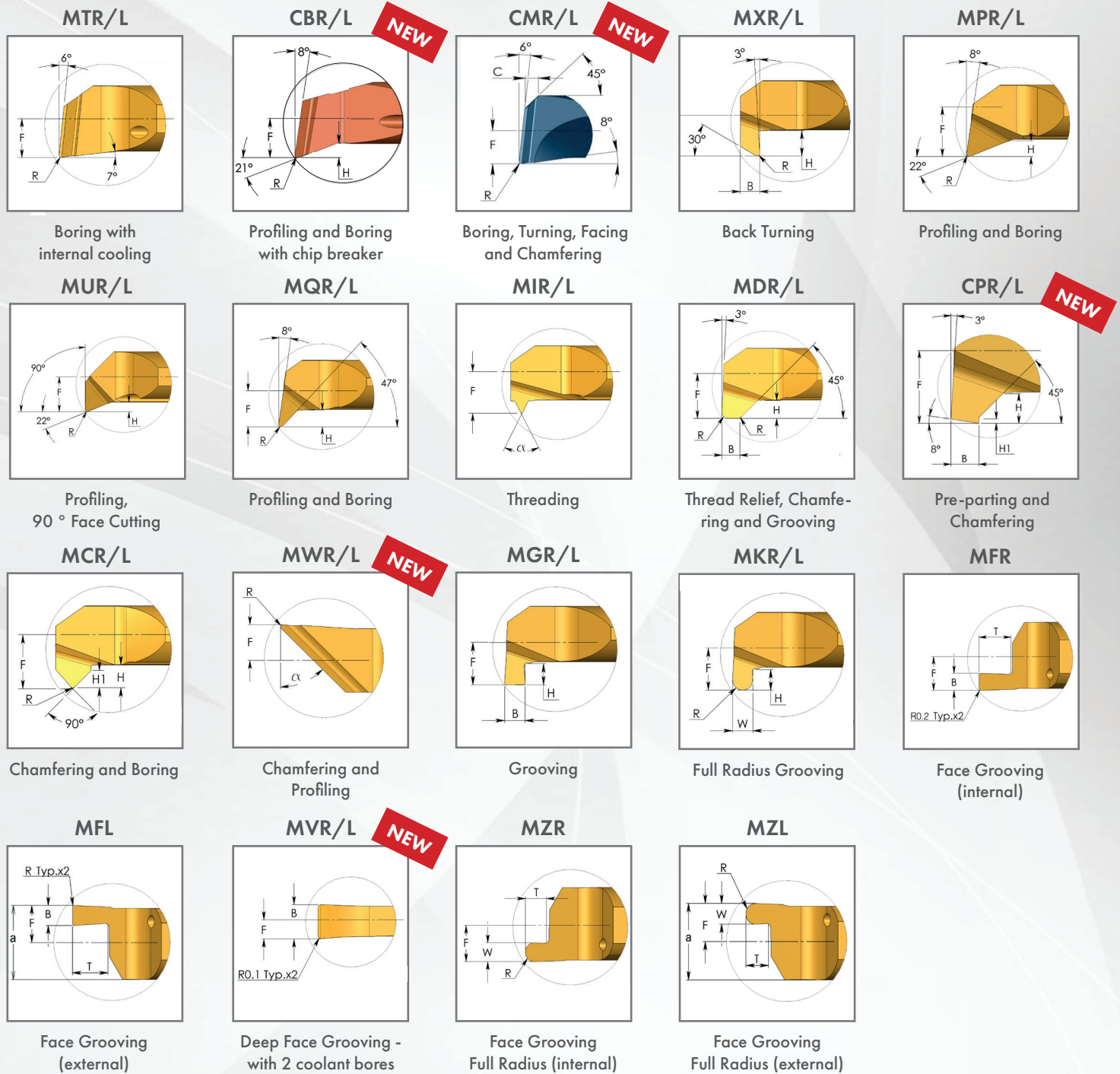
125 €

(free choice)
per set including one
Stainless steel
drinking cup.



Please specify in your order
the promotion code:
TINY-25 and the choosen sets.

Further Tiny Tools applications from our extensive standard range



Carbide Grades:

BXC (P30 - P50, K25 - K40)

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

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.

K20 (K10 - K30)

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

TNX

New advanced carbide grade TNX for higher feed rates and high performance at medium to high cutting speeds. Extra fine grain with high hardness and toughness combined with a three-layer reddish coating. Ensures high edge stability and improved chip flow.





Demonstration

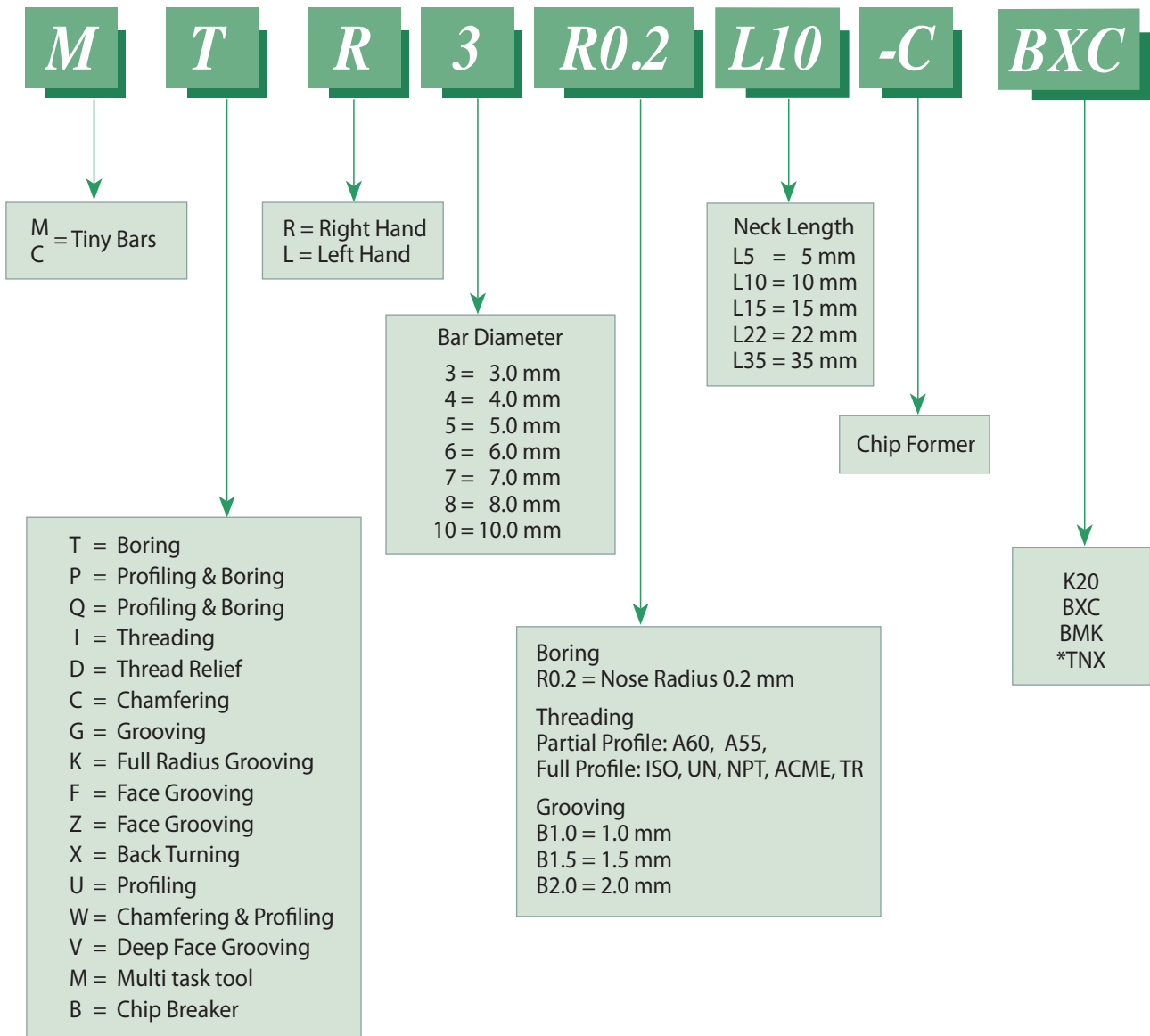
Solid Carbide tools for working in small bores

These tools are made for the high-tech, medical and small component industry. All tools include through coolant enabling the cooling fluid to reach the cutting edge efficiently, for easy chip removal and smooth cutting operations.

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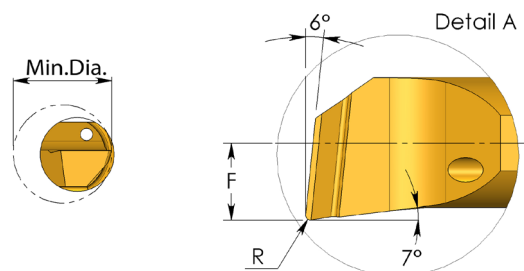
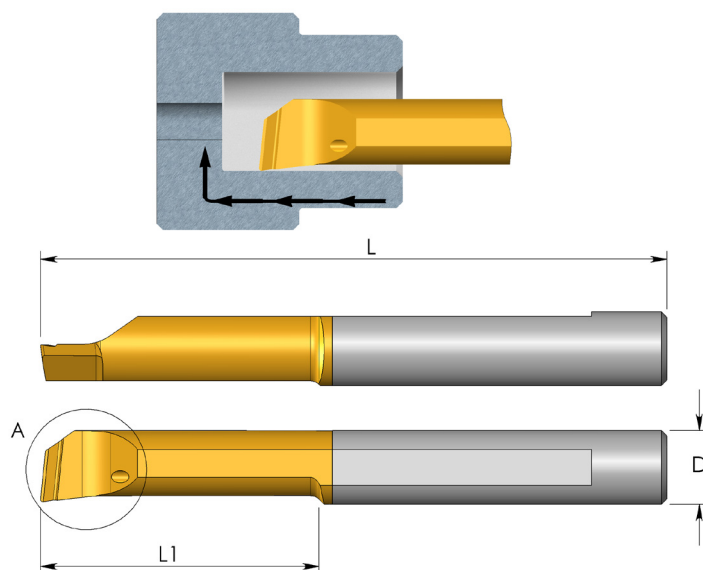
Product Identification

Tiny Bars Ordering Codes



* Available only for CBR bars

MTR Bars Boring



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

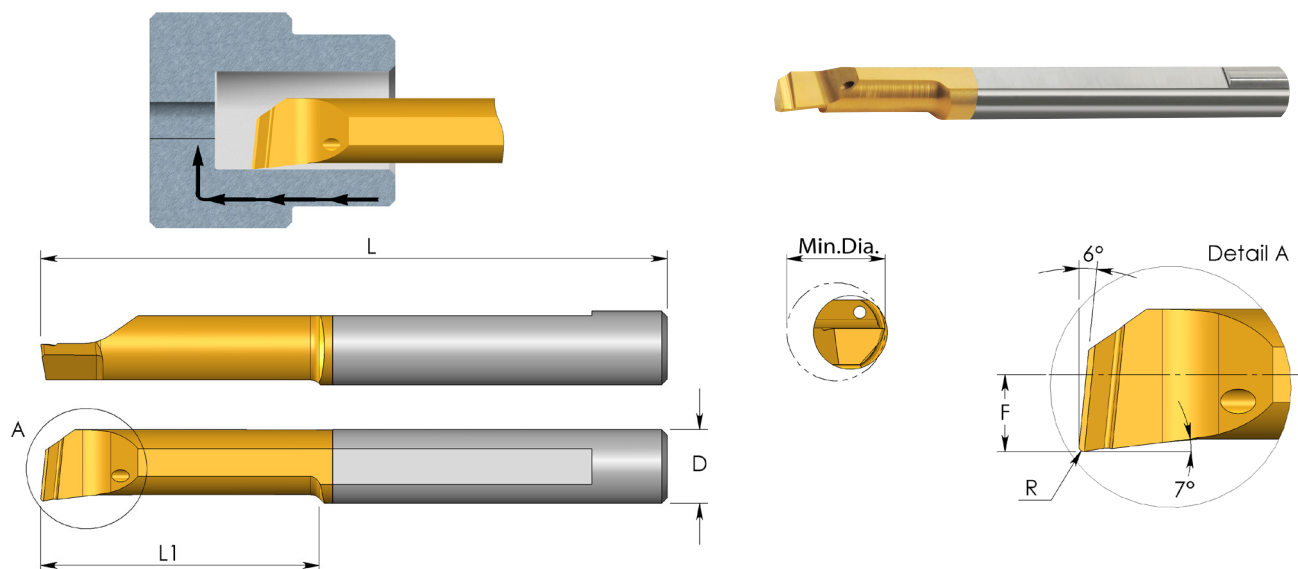
D	Ordering Code	L	L1	R	F	Min. Dia.	Holder
3.0	MTR 1 R0 L6	39	6	0	0.5	1.0	SIM ... H3
	MTR 1 R0.05 L4	39	4	0.05	0.5	1.0	
	MTR 1 R0.05 L6	39	6	0.05	0.5	1.0	
3.0	MTR 1.2 R0 L7	39	7	0	0.6	1.2	SIM ... H3
	MTR 1.2 R0 L9	39	9	0	0.6	1.2	
3.0	MTR 1.5 R0 L6	39	6	0	0.7	1.5	SIM ... H3
	MTR 1.5 R0.1 L6	39	6	0.10	0.7	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	
	MTR 2 R0.15 L10	39	10	0.15	0.8	2.1	
4.0	MTR 2.5 R0 L10	51	10	0	1.0	2.5	SIM ... H4
	MTR 2.5 R0.1 L10	51	10	0.10	1.0	2.5	
	MTR 2.5 R0.1 L15	51	15	0.10	1.0	2.5	
3.0	MTR 3 R0.05 L10	39	10	0.05	1.3	3.1	SIM ... H3
	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	
	MTR 3 R0.2 L15	39	15	0.20	1.3	3.1	
4.0	MTR 4 R0.05 L15	51	15	0.05	1.7	4.1	SIM ... H4
	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	
	MTR 4 R0.2 L22	51	22	0.20	1.7	4.1	
	MTR 4 R0.2 L30	62	30	0.20	1.7	4.1	

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MTR Bars Boring



D	Ordering Code	L	L1	R	F	Min Dia.	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 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 7 R0.2 L22	62	22	0.20	3.3	7.1	SIM ... H7
	MTR 7 R0.2 L30	62	30	0.20	3.3	7.1	
8.0	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

For L.H. bars specify **MTL** instead of **MTR**

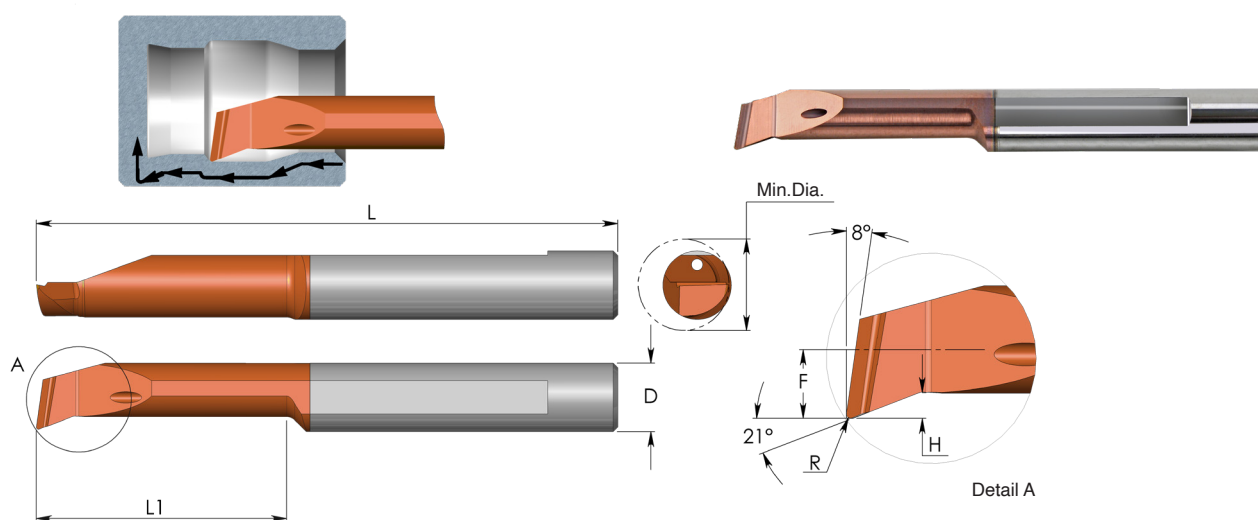
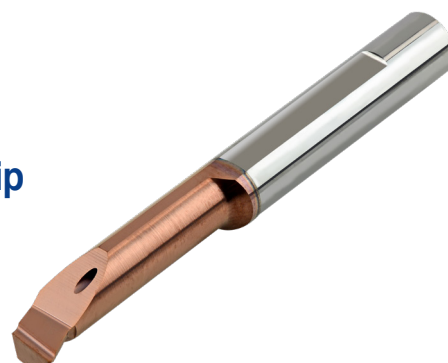
For additional holders see page A06-32 to 41

CBR Bars Profiling and Boring

With advanced Chip Breaker

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

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.



Grade	P	M	K	N	S	H
TNX	●	●	●	●	●	●

D	Ordering Code	L	L1	R	H	F	Min. Dia.	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

For L.H. bars specify CBL instead of CBR

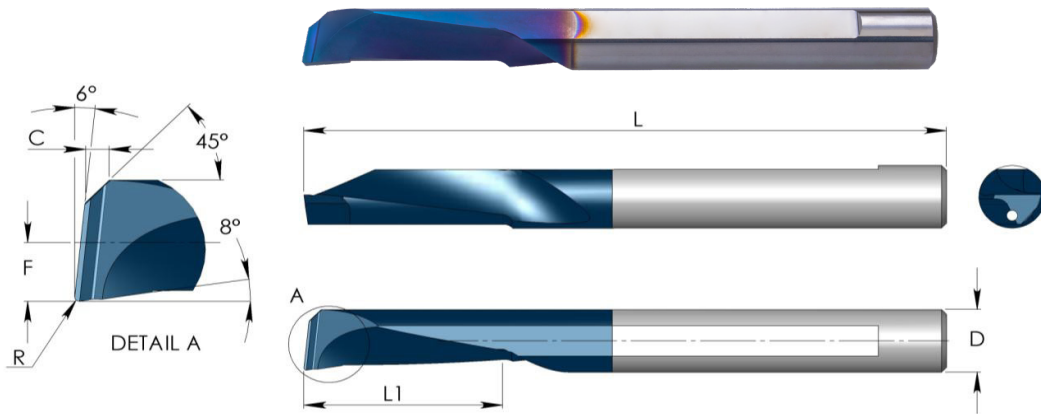
For additional holders see page A06-32 to 41

● First choice

○ Alternative

CMR Multi-Task Tiny Bars

Multi-Task Tiny Tool CMR for Boring, Turning, Facing and Chamfering with a single tool



Grade	P	M	K	N	S	H
BMK	●	●	●	○	●	●

D	Ordering Code	L	L1	R	F	C	Hole Dia.*	Holder
4.0	CMR 4 R0.1 L10	51	10	0.1	1.8	1.1	4.0	SIM...H4
	CMR 4 R0.1 L15	51	15	0.1	1.8	1.1	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

● First choice ○ Alternative

For L.H. bars specify CML instead of CMR

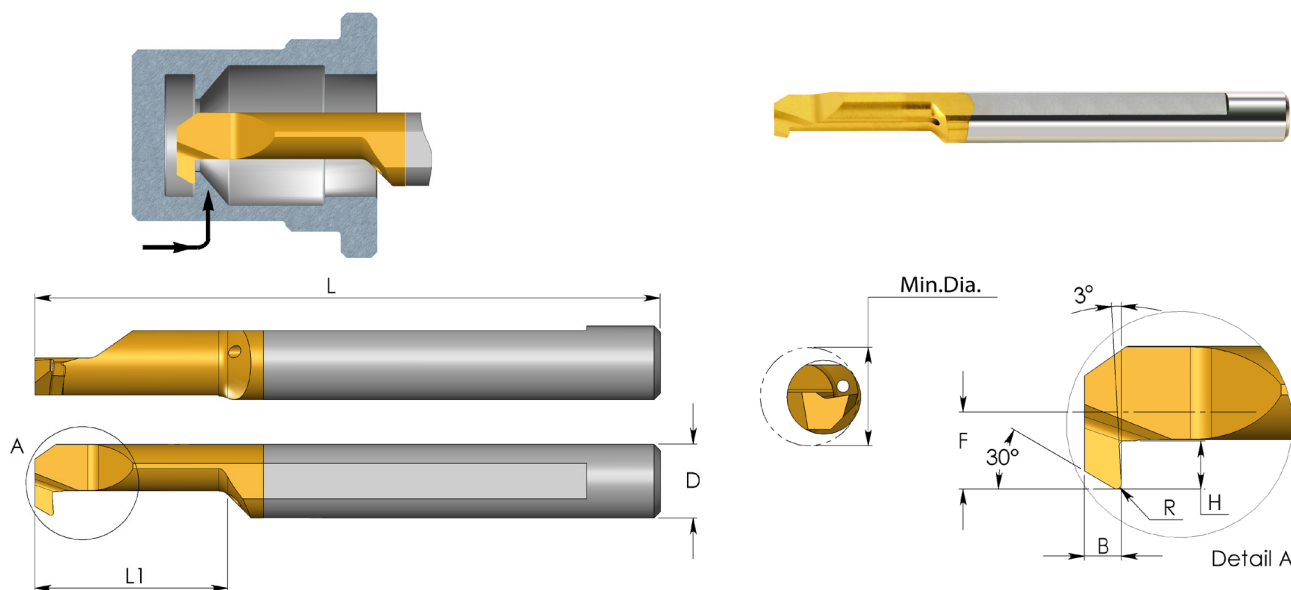
* The minimum diameter the tool can produce from full material

For additional holders see page A06-32 to 41



Demonstration

MXR Bars Back Turning



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

D	Ordering Code	L	L1	B	R	H	F	Min. Dia.	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
4.0	MXR 4 R0.15 L15	51	15	1.3	0.15	0.8	1.7	4.1	SIM ... H4
5.0	MXR 5 R0.2 L15	51	15	1.5	0.20	1.0	2.3	5.1	SIM ... H5
5.0	MXR 5 R0.2 L22	51	22	1.5	0.20	1.0	2.3	5.1	SIM ... H5
6.0	MXR 6 R0.2 L15	51	15	1.5	0.20	1.8	2.8	6.1	SIM ... H6
6.0	MXR 6 R0.2 L22	51	22	1.5	0.20	1.8	2.8	6.1	SIM ... H6

Order example: MXR 4 R0.15 L15 BXC

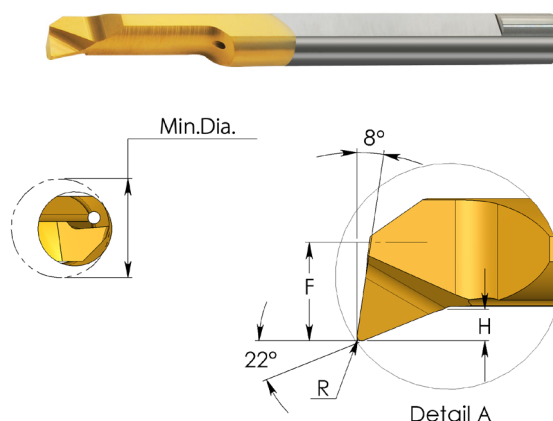
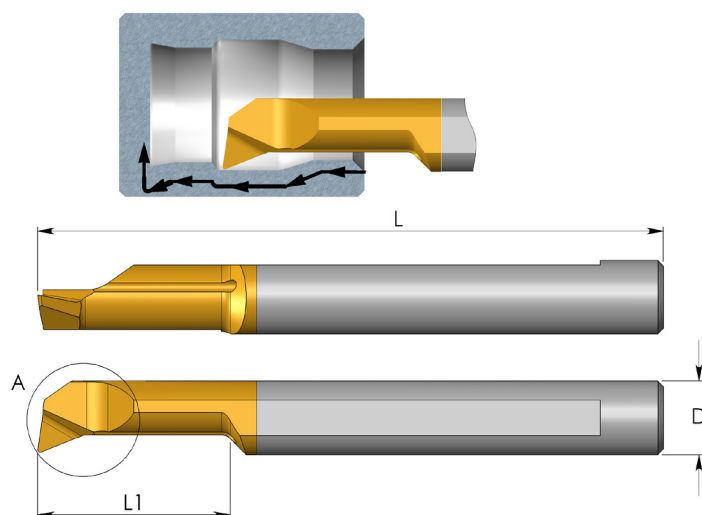
For L.H. bars specify **MXL** instead of **MXR**

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MPR Bars Profiling and Boring



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

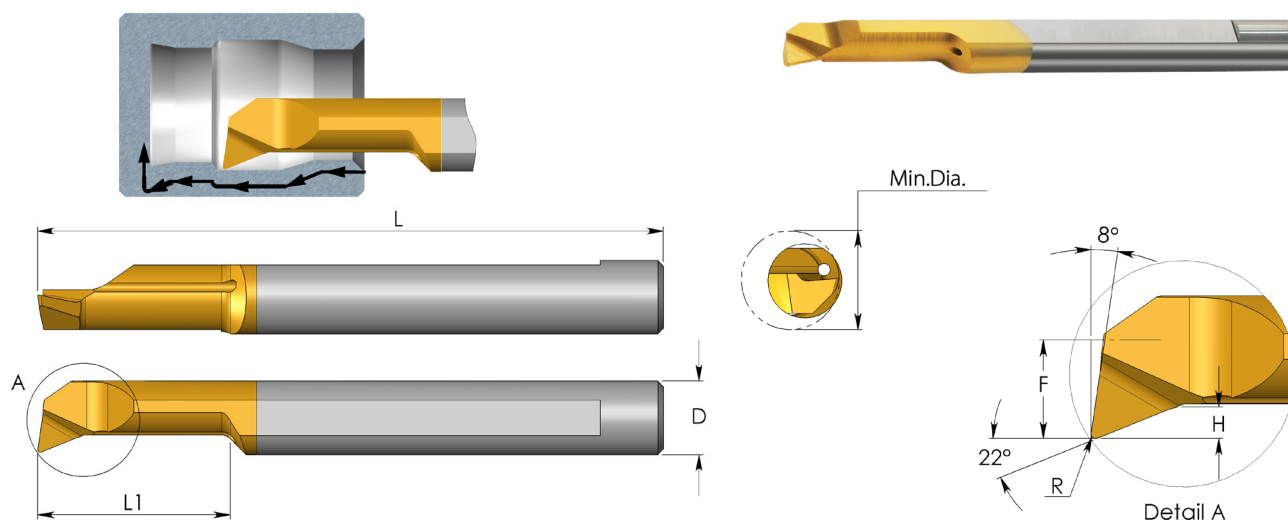
D	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
3.0	MPR 1 R0.05 L4	39	4	0.05	0.2	0.5	1.0	SIM ... H3
	MPR 1 R0.05 L8	39	8	0.05	0.2	0.5	1.0	
3.0	MPR 1.2 R0.1 L5	39	5	0.10	0.3	0.6	1.2	SIM ... H3
	MPR 1.2 R0.1 L9	39	9	0.10	0.3	0.6	1.2	
3.0	MPR 1.5 R0.05 L10	39	10	0.05	0.3	0.7	1.5	SIM ... H3
	MPR 1.5 R0.1 L6	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	
	MPR 2 R0.15 L15	39	15	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	
	MPR 3 R0.2 L22	47	22	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 A06-32 to 41

● First choice

○ Alternative

MPR Bars Profiling and Boring



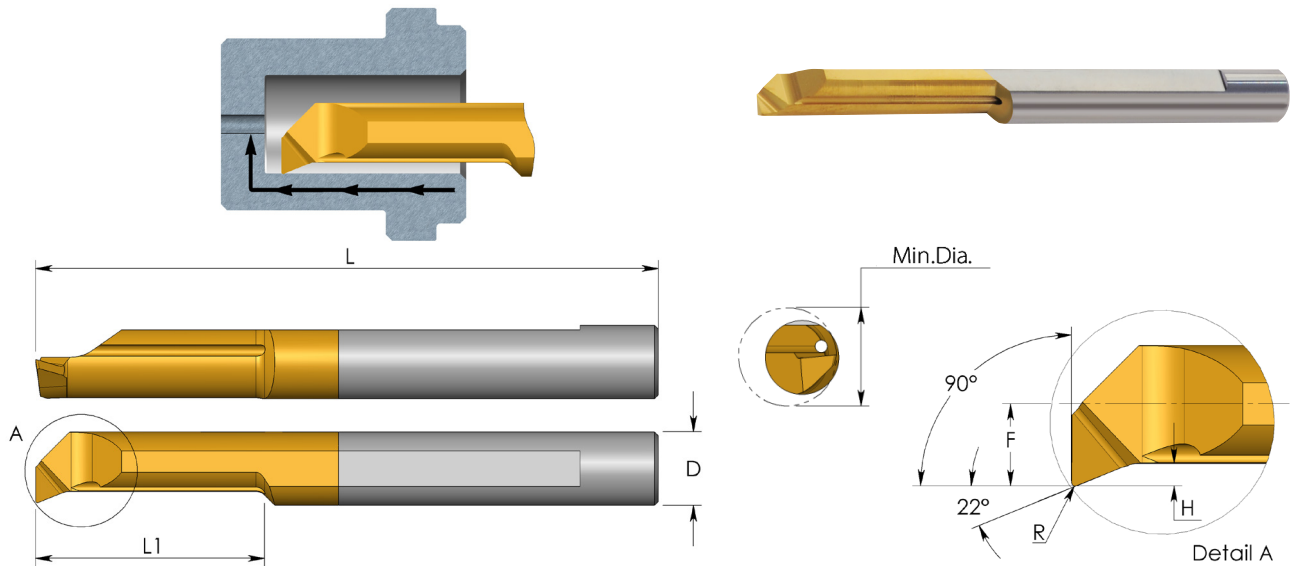
D	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
5.0	MPR 5 R0.1 L22	51	22	0.10	1.2	2.1	5.1	SIM ... H5
	MPR 5 R0.1 L30	76	30	0.10	1.2	2.1	5.1	
	MPR 5 R0.2 L10	51	10	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L15	51	15	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L22	51	22	0.20	1.2	2.1	5.1	
	MPR 5 R0.2 L30	76	30	0.20	1.2	2.1	5.1	
	MPR 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

For L.H. Bars specify MPL instead of MPR

For additional holders see page A06-32 to 41

MUR Bars Profiling, 90° Face Cutting



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

D	Ordering Code	L	L1	R	H	F	Min. Dia.	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

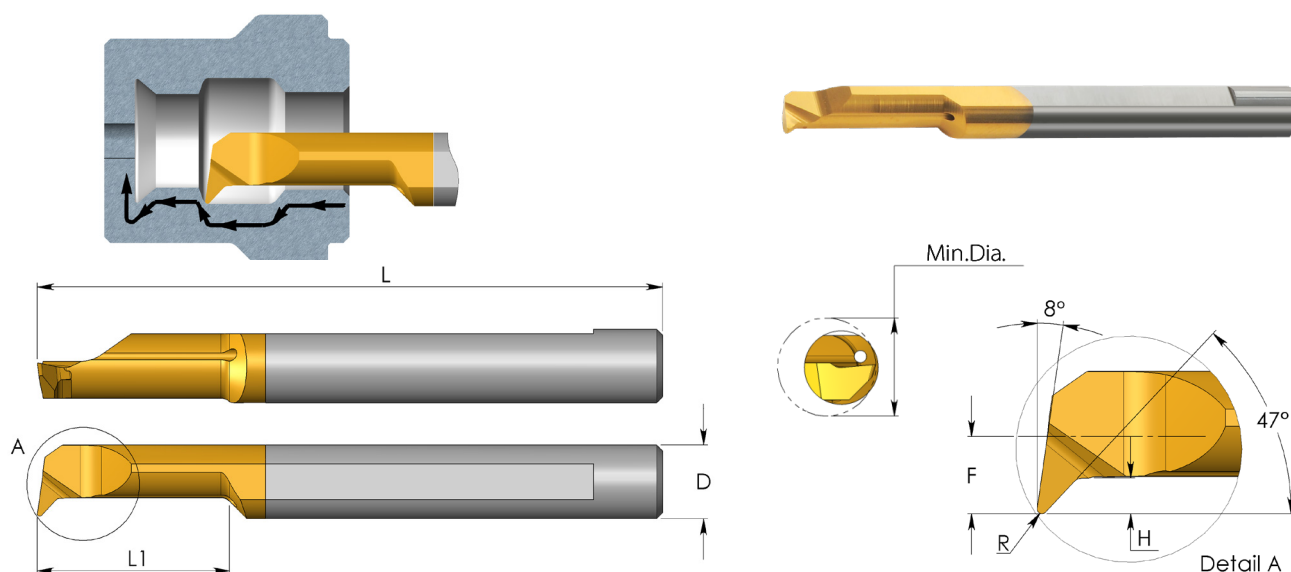
● First choice

○ Alternative

For L.H. bars specify MUL instead of MUR

For additional holders see page A06-32 to 41

MQR Bars Profiling and Boring



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

D	Ordering Code	L	L1	R	H	F	Min. Dia.	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

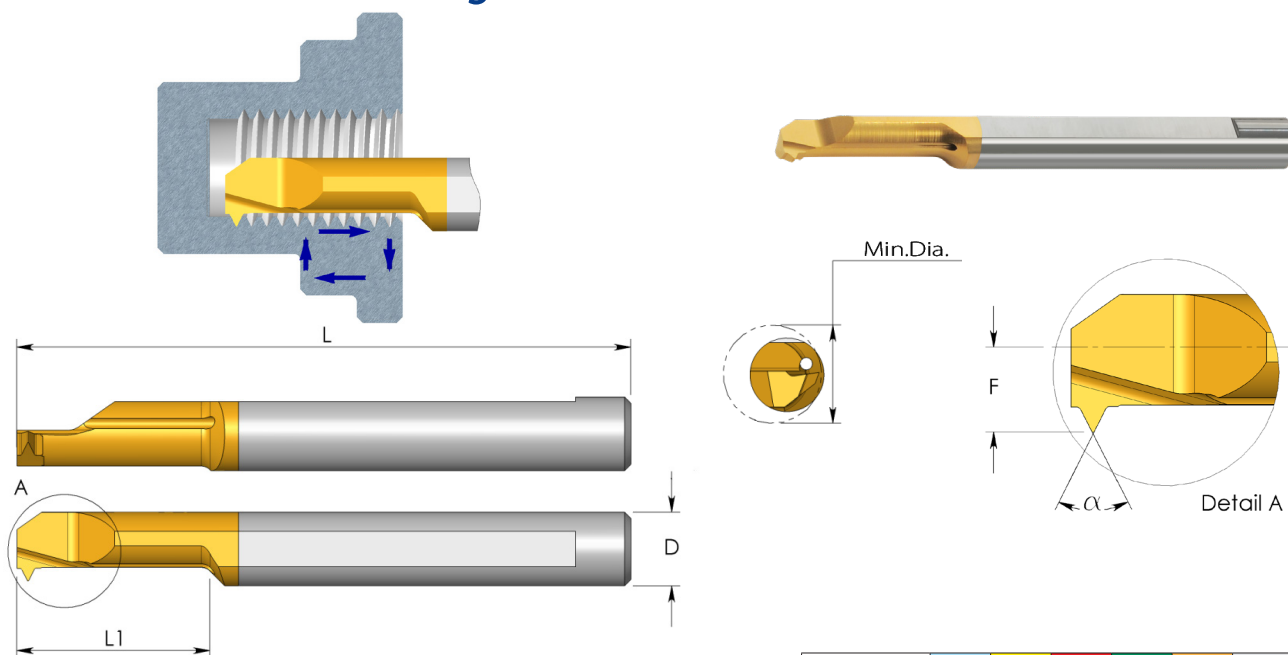
For L.H. bars specify **MQL** instead of **MQR**

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MIR Bars Threading



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

Partial Profile 55°

D	Ordering Code	Pitch Range mm	TPI	L	L1	α	F	Min. Dia.	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

Partial Profile 60°

D	Ordering Code	Pitch Range mm	TPI	L	L1	α	F	Min. Dia.	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

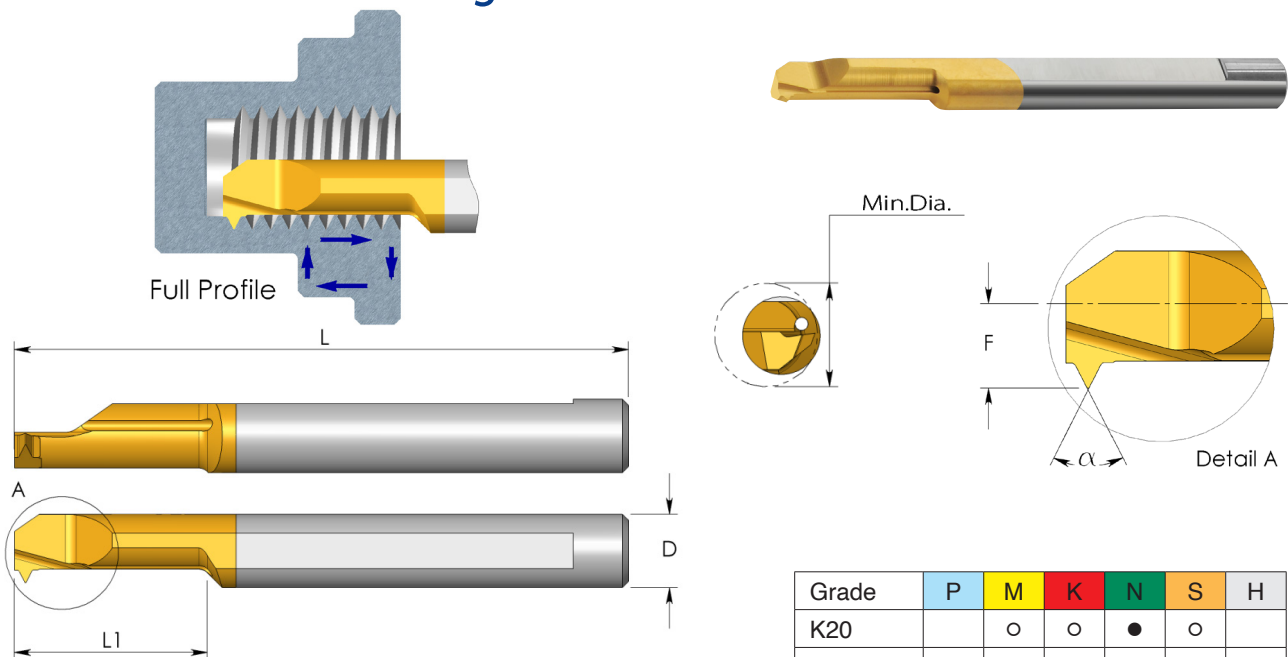
For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MIR Bars Threading



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

Full Profile - ISO 60°

D	Ordering Code	Pitch mm	M Coarse	M Fine	L	L1	α	F	Min. Dia.	Holder
3.0	MIR 3 L10 0.5 ISO	0.5	M3	M3.5	39	10	60	1.0	2.4	SIM ... H3
3.0	MIR 3 L15 0.5 ISO	0.5		M4	39	15	60	1.4	3.2	SIM ... H3
	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

Full Profile - UN 60°

D	Ordering Code	Pitch TPI	UNC	UNF	UNEF	UNS	L	L1	α	F	Min. Dia.	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

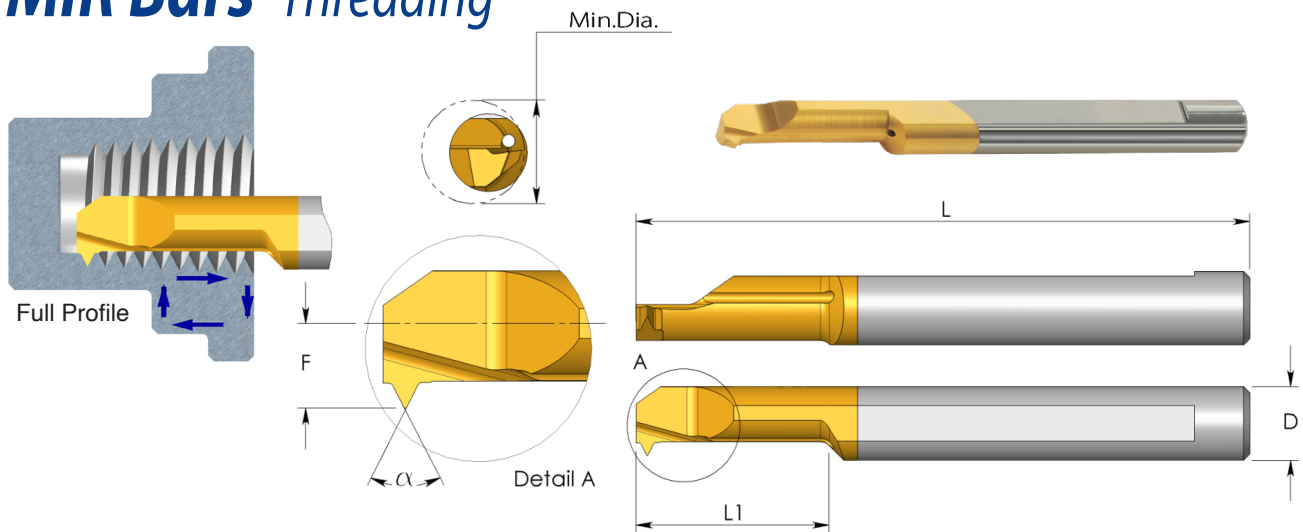
For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MIR Bars Threading



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

Full Profile - MJ 60°

D	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	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

Order example: MIR 4 L15 0.8 MJ BXC

Full Profile - UNJ 60°

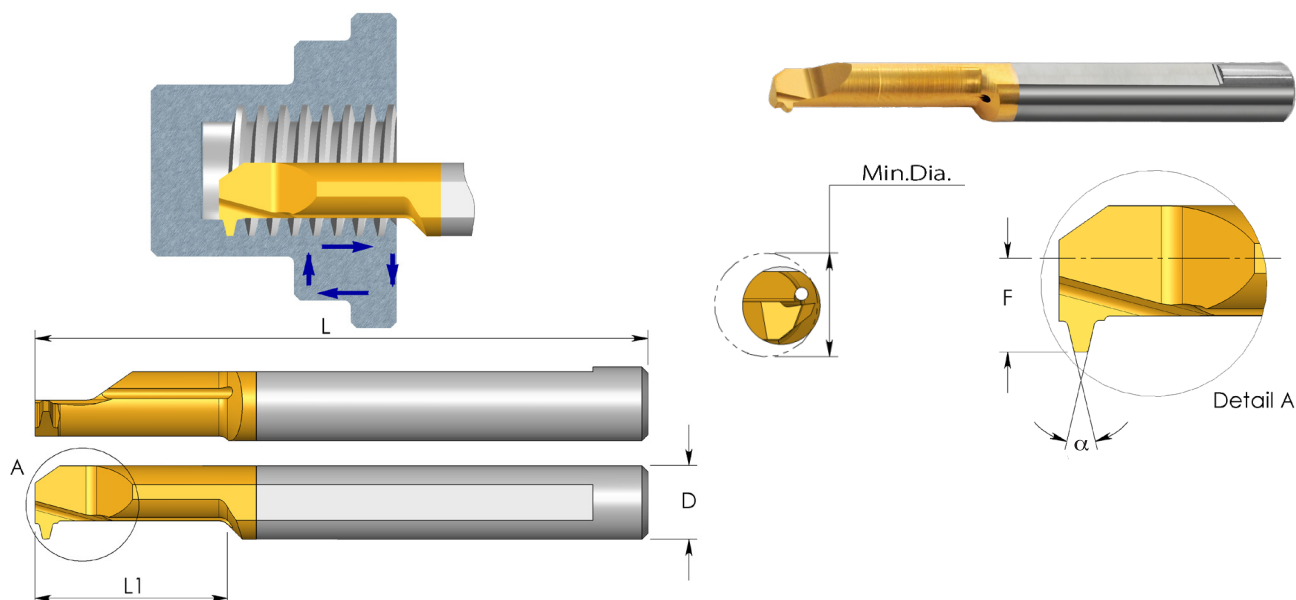
D mm	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	Holder
3.0	MIR 3 L15 32 UNJ	8-32 UNJC	39	15	60	1.4	3.2	SIM...H3
5.0	MIR 5 L15 28 UNJ	1/4-28 UNJF	51	15	60	2.2	4.9	SIM...H5
	MIR 5 L18 20 UNJ	1/4-20 UNJC	51	18	60	2.3	5.0	SIM...H5

Order example: MIR 3 L15 32 UNJ BXC

For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

MIR Bars Threading



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

Full Profile - G 55° BSP

D	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	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

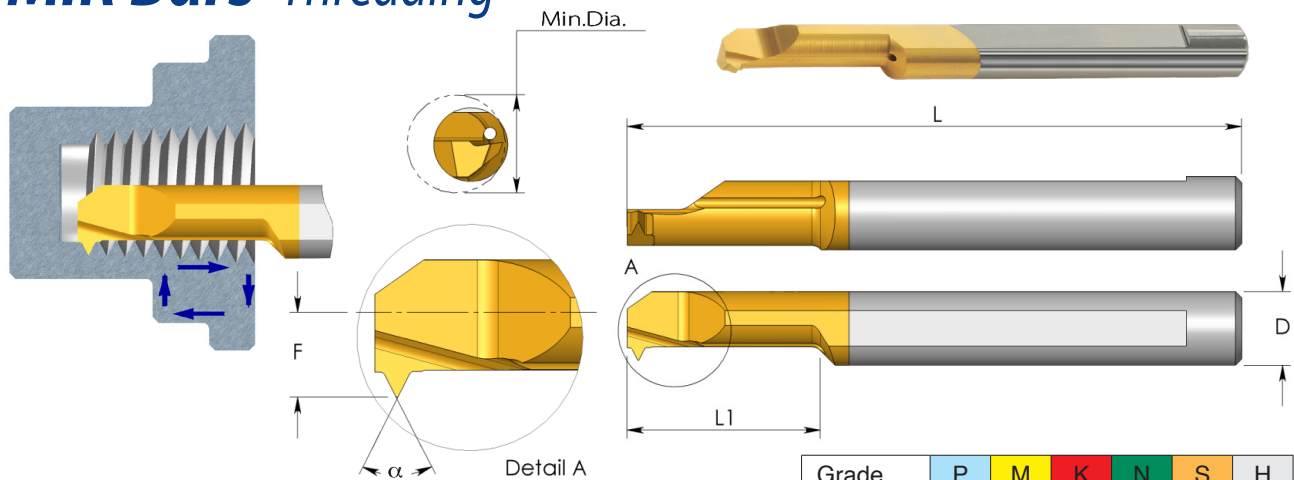
D	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	Holder
5.0	MIR 5 L17 20 W	1/4-20 BSW	51	17	55	2.0	4.7	SIM ... H5

Order example: MIR 6 L17 28 W BMK

For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

MIR Bars Threading

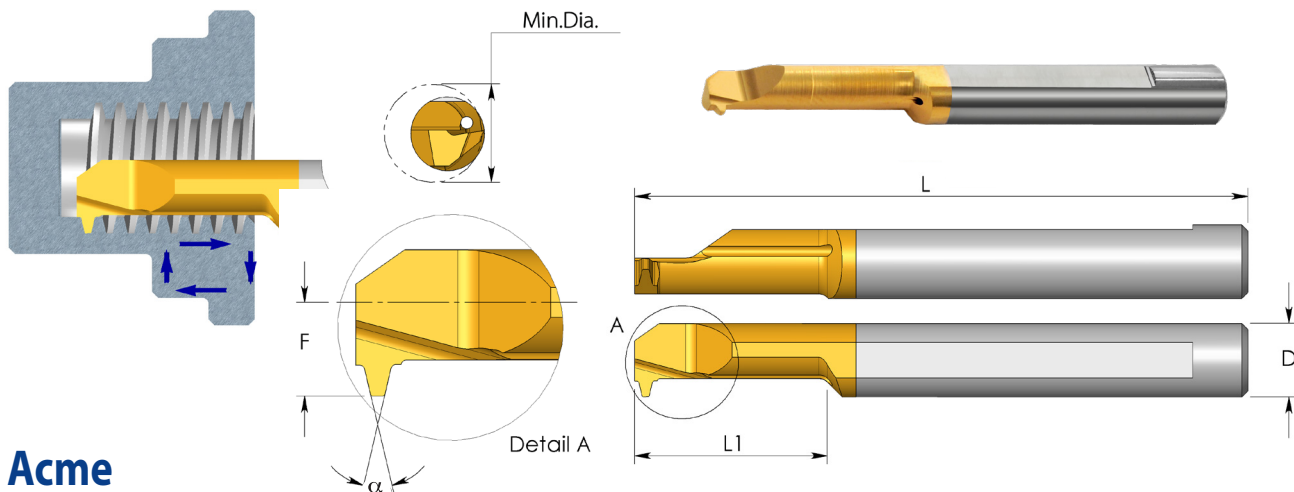


Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - NPT 60°

D	Ordering Code	Pitch TPI	Thread Size	L	L1	α	F	Min. Dia.	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



Acme

D	Ordering Code	Pitch TPI	Thread Size	L	L1	α	F	Min. Dia.	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

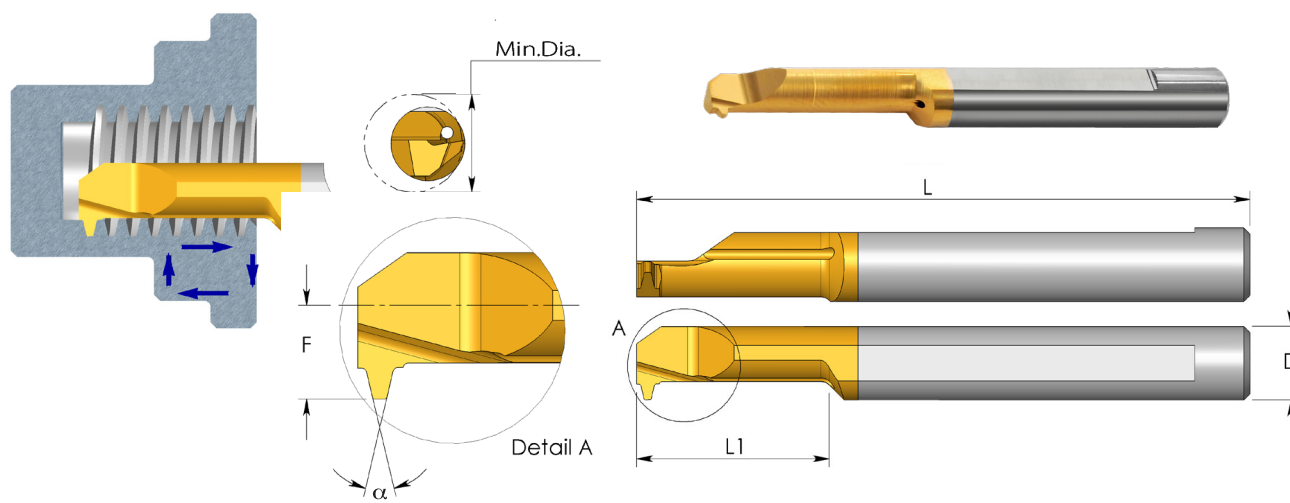
For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MIR Bars Threading



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

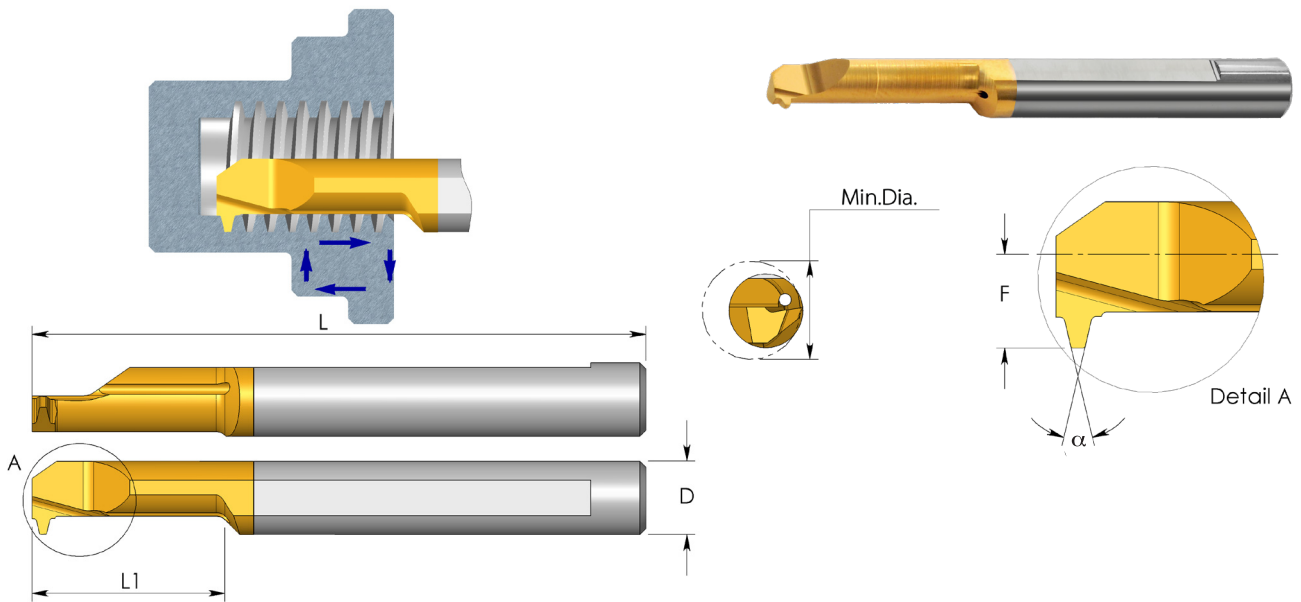
Stub Acme

D	Ordering Code	Pitch TPI	Thread Size	L	L1	α	F	Min. Dia.	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
For additional holders see page A06-32 to 41

● First choice ○ Alternative

MIR Bars Threading



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

Trapez - DIN 103

D	Ordering Code	Pitch mm	Thread Size	L	L1	α	F	Min. Dia.	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

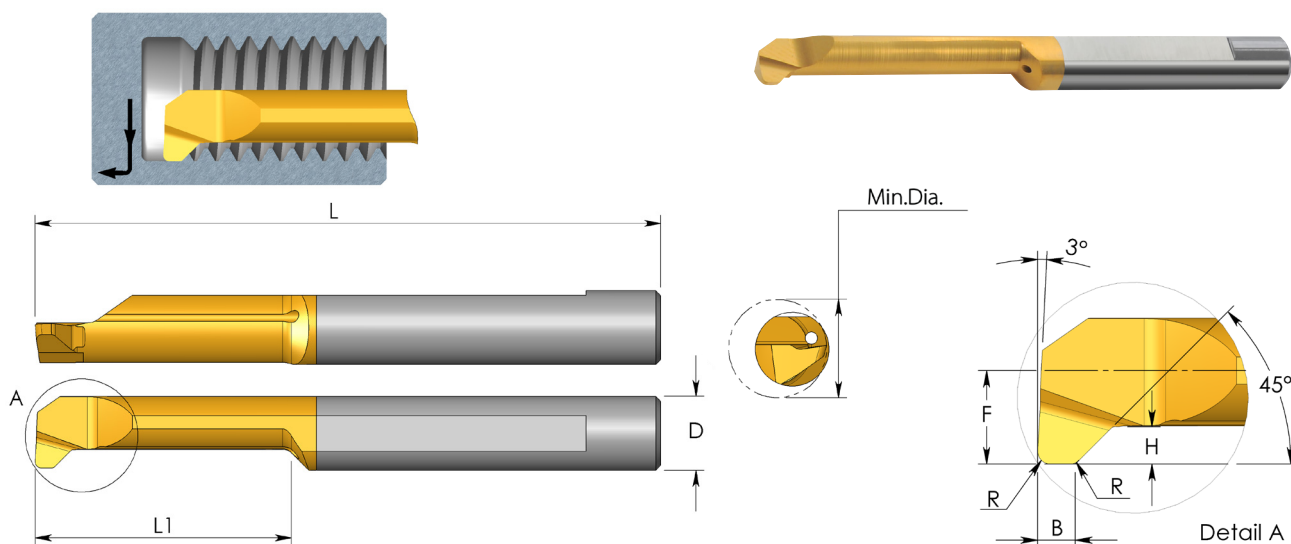
For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MDR Bars Thread Relief, Chamfering and Grooving



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

D	Ordering Code	L	L1	B	R	H	F	Min. Dia.	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

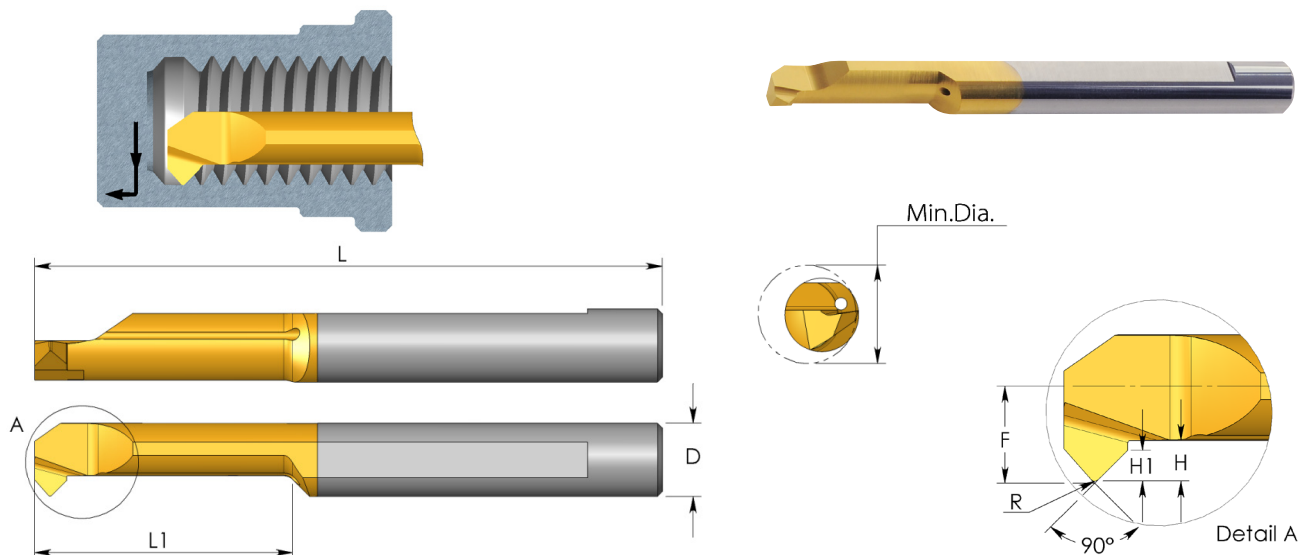
Order example: MDR 5 R0.5 L24 BXC

● First choice

○ Alternative

For L.H. bars specify MDL instead of MDR

For additional holders see page A06-32 to 41



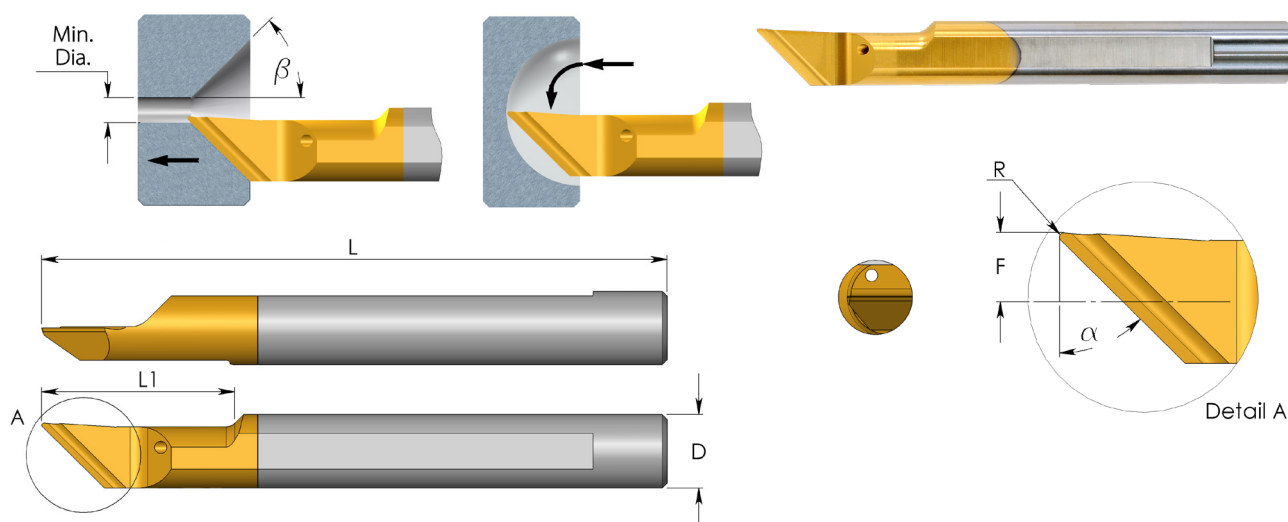
Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

D	Ordering Code	L	L1	R	H	H1	F	Min. Dia.	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

● First choice ○ Alternative

For additional holders see page A06-32 to 41

MWR Bars Chamfering and Profiling



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

D	Ordering Code	L	L1	R	α	β	F	Min. Dia.	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

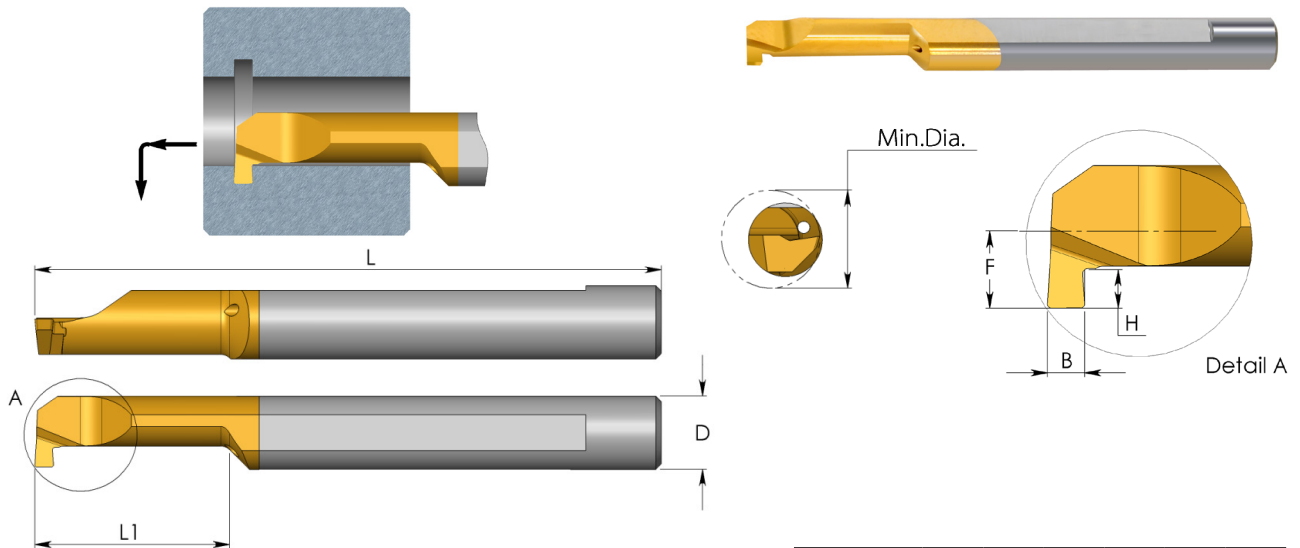
● First choice ○ Alternative

For L.H. bars specify MWL instead of MWR

*Can be used also for boring

For additional holders see page A06-32 to 41

MGR Bars Grooving



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

D	Ordering Code	L	L1	B		H	F	Min. Dia.	Holder
				mm	in				
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 A06-32 to 41

● First choice

○ Alternative

MGR Bars Grooving

D	Ordering Code	L	L1	B		H	F	Min. Dia.	Holder
				mm	in				
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	

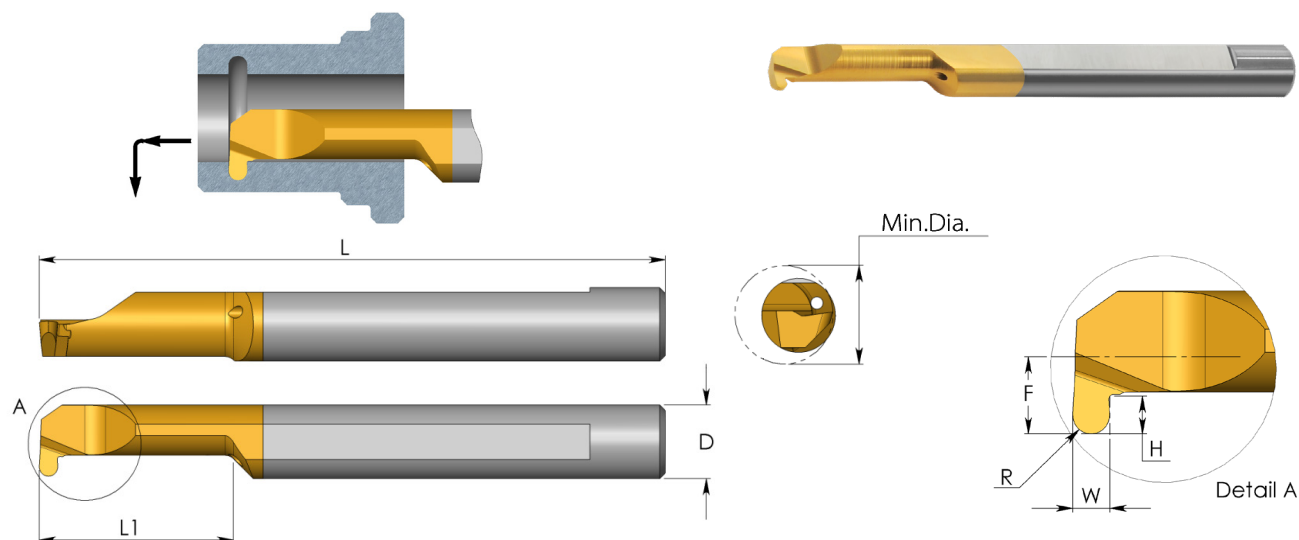
Tolerance: B±0.025 mm/.001"

Order example: MGR 5 B1.5 L15 BXC

For L.H. bars specify MGL instead of MGR

For additional holders see page A06-32 to 41

MKR Bars Full Radius Grooving



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

D	Ordering Code	L	L1	R	W	H	F	Min. Dia.	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: $R \pm 0.025$ mm

Order example: MKR 5 R1.0 L15 BXC

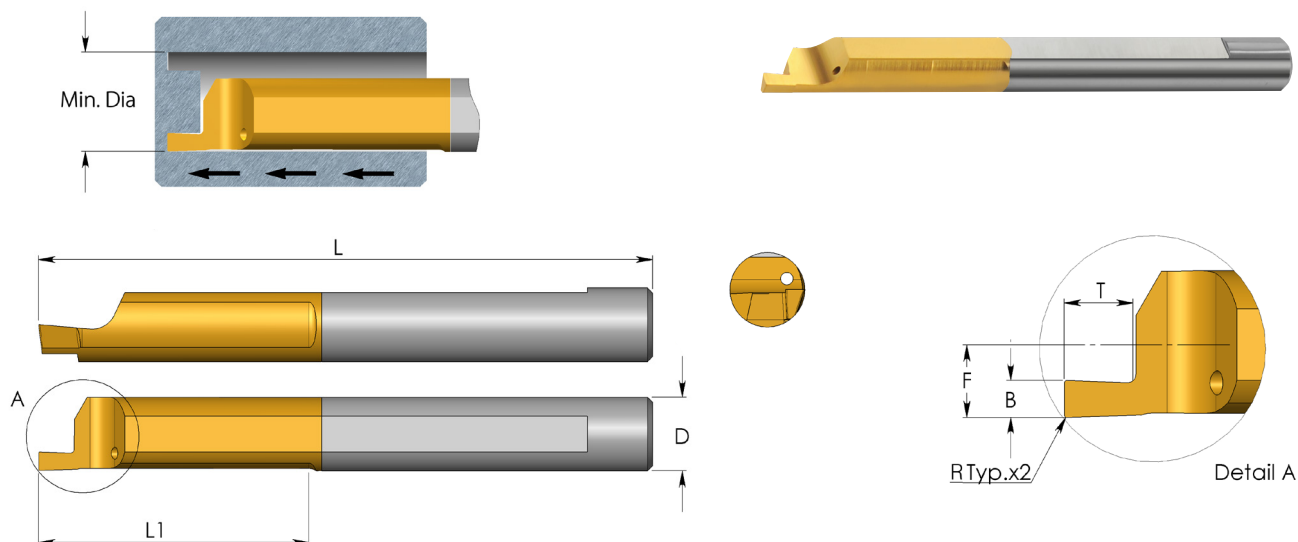
For L.H. bars specify MKL instead of MKR

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MFR Bars Face Grooving



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

D	Ordering Code	L	L1	R	B	T	F	Min. Dia.	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

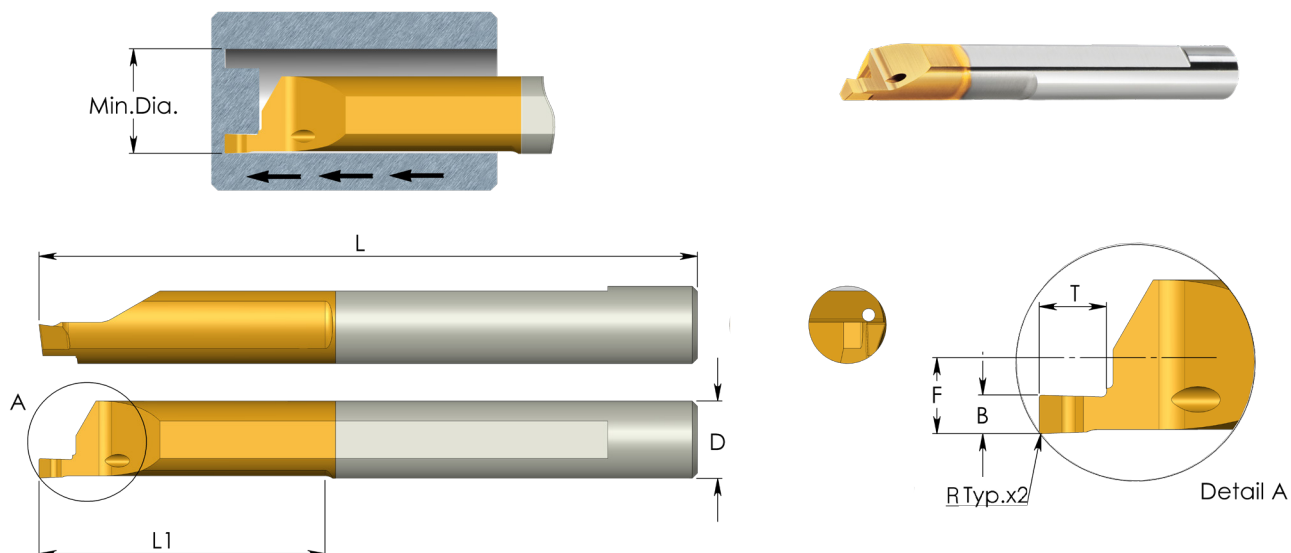
Order example: MFR 5 B1.0 L22 BXC

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MFR Bars Face Grooving with Chip Former



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

D	Ordering Code	L	L1	R	B	T	F	Min. Dia.	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	

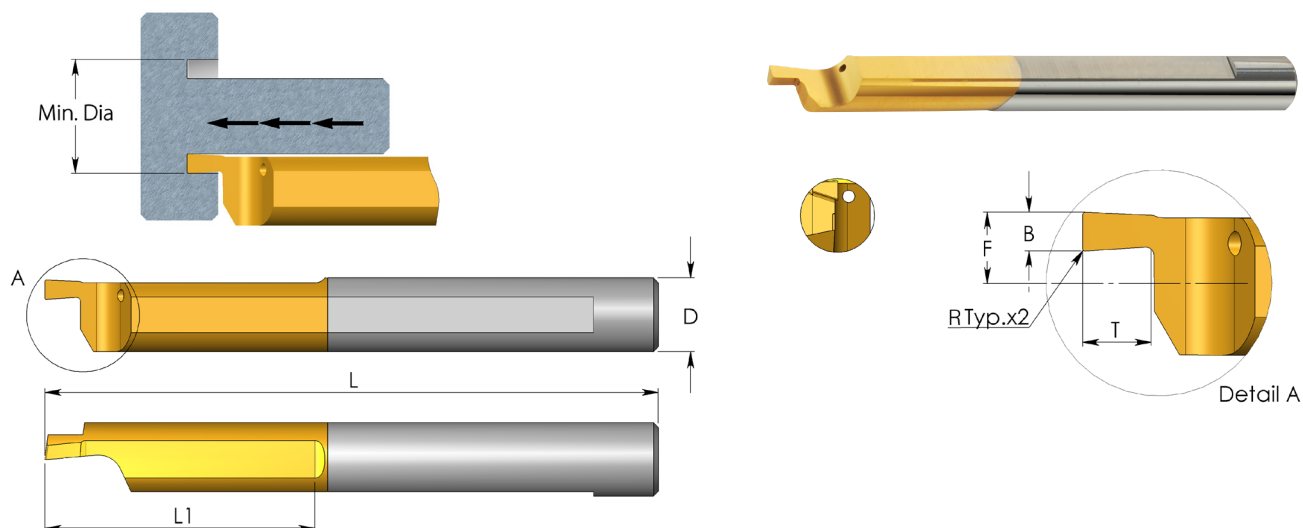
Order example: MFR 5 B2.0 L22-C BXC

For L.H. bars specify MFL instead of MFR

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MFL Bars Face Grooving



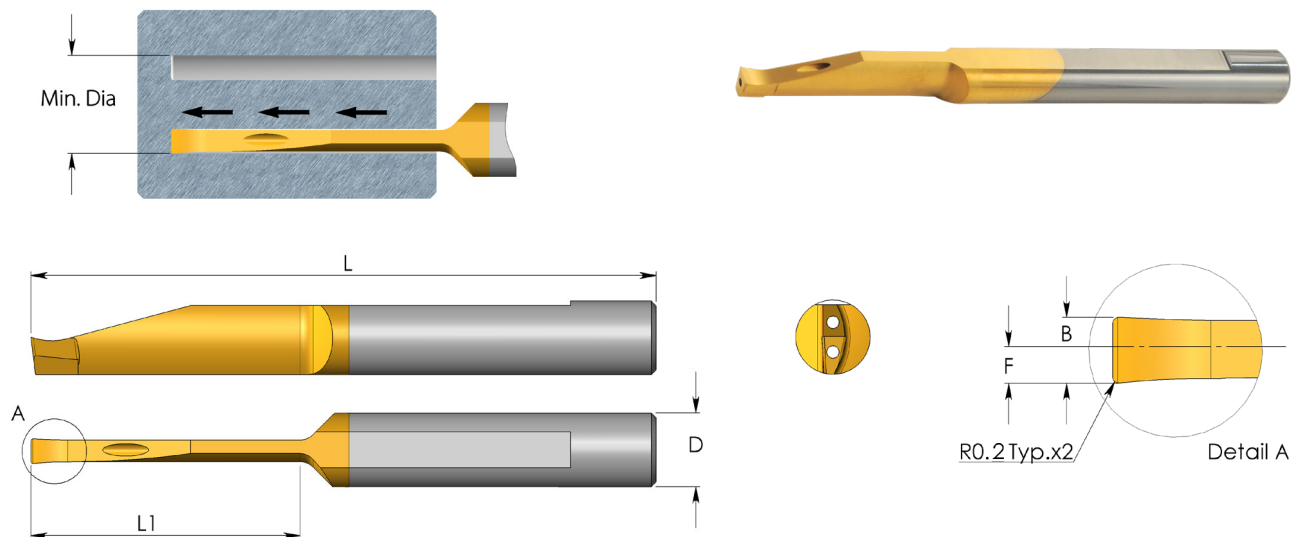
Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

D	Ordering Code	L	L1	R	B	T	F	Min. Dia.	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
For additional holders see page A06-32 to 41

● First choice ○ Alternative

MVR Bars Deep Face Grooving - with 2 coolant bores



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

D	Ordering Code	L	L1	B	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

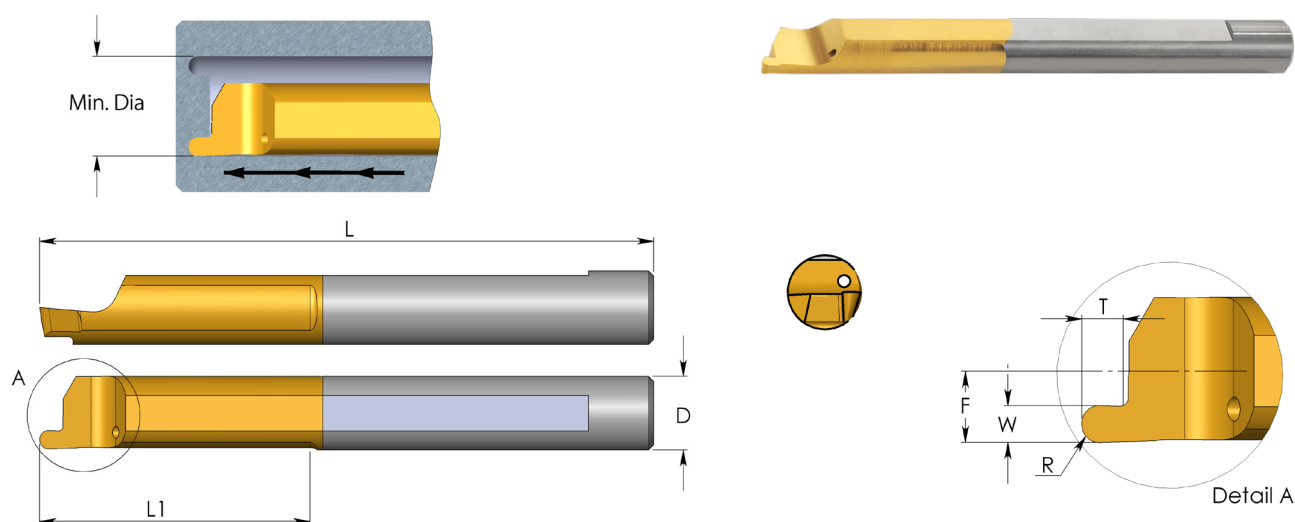
● First choice

○ Alternative

For L.H. bars specify MV_L instead of MV_R

For additional holders see page A06-32 to 41

MZR Bars Face Grooving



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

D	Ordering Code	L	L1	R	W	T	F	Min. Dia.	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	

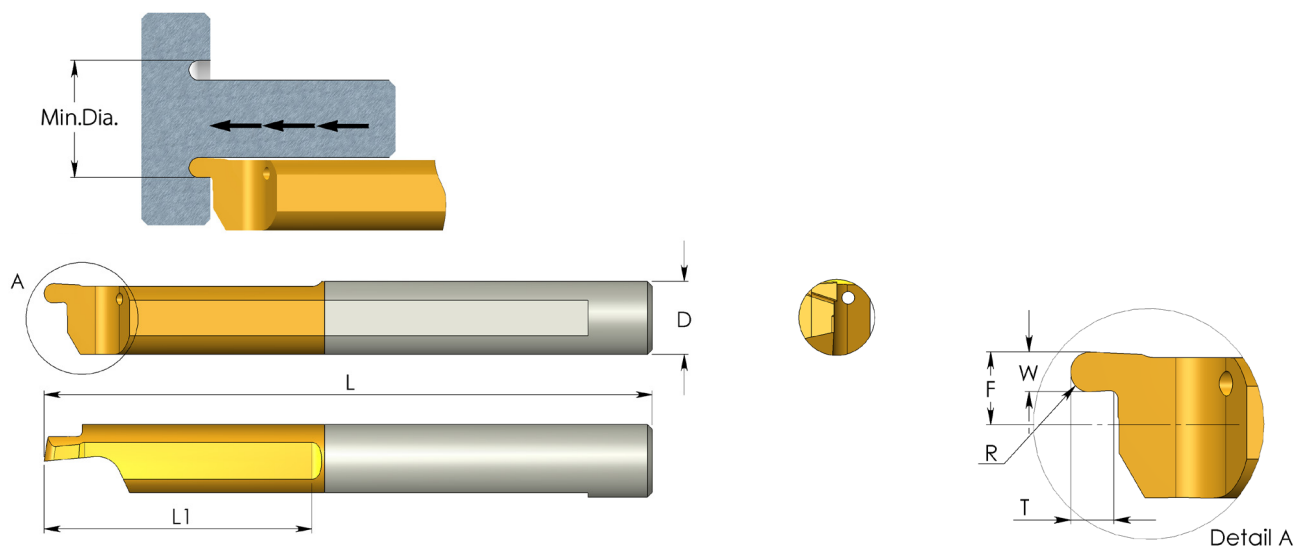
Order example: MZR 5 R0.5 L22 BXC

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MZL Bars Face Grooving



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

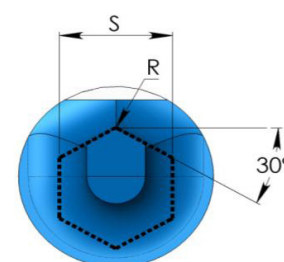
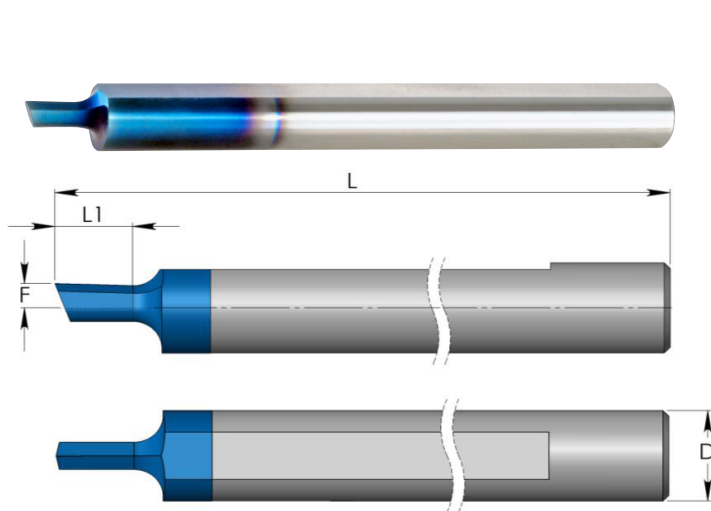
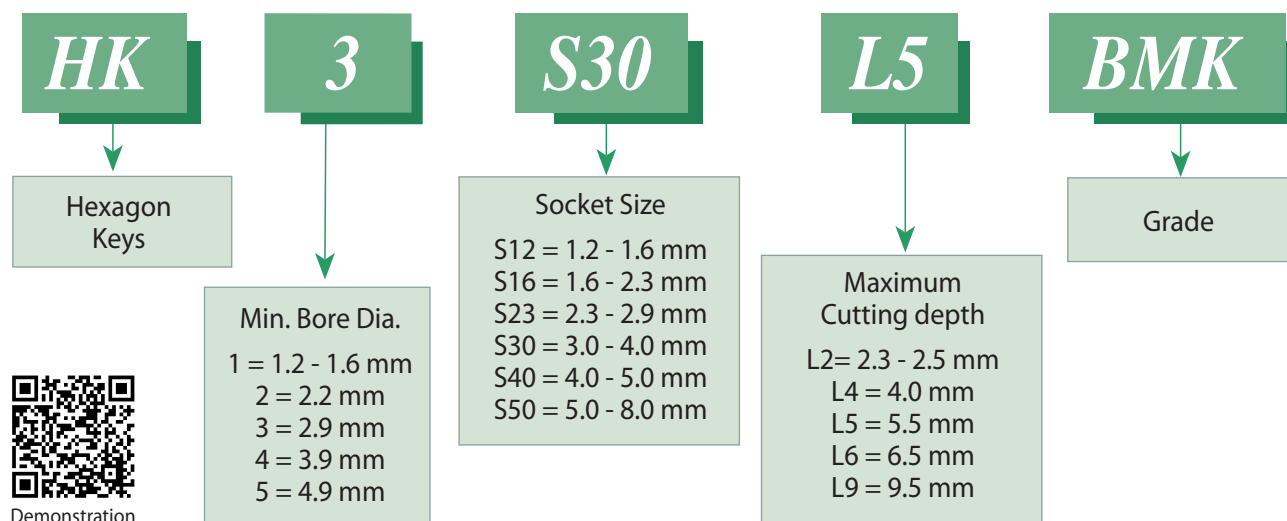
D	Ordering Code	L	L1	R	W	T	F	Min. Dia.	Holder
4.0	MZL 4 R0.5 L15	51	15	0.50	1.0	1.2	1.75	5.0	SIM ... H4
	MZL 4 R0.75 L15	51	15	0.75	1.5	1.5	1.75	5.0	
5.0	MZL 5 R0.5 L22	51	22	0.50	1.0	1.2	2.25	6.0	SIM ... H5
	MZL 5 R0.75 L22	51	22	0.75	1.5	1.5	2.25	6.0	
	MZL 5 R1.0 L22	51	22	1.00	2.0	2.5	2.25	6.0	
6.0	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
For additional holders see page A06-32 to 41

● First choice ○ Alternative

HK Broaching Tools for Hexagon Keys

Product Identification - Ordering Codes



Grade	P	M	K	N	S	H
BMK	●	●	●	●	●	

D	S	Ordering Code	L	L1	R	F	Min. Dia.	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

Order example: HK 1 S12 L2 BMK

For additional holders see page A06-32 to 41

● First choice

○ Alternative

Tiny Tools Toolholders

Product Identification - Ordering Codes

S

Clamping
Method
S = Screw

I

I = Internal

M

M = Tiny Bars

0020

Shank Cross Section
Metric

0012 = 12 mm
0016 = 16 mm
0020 = 20 mm
0022 = 22 mm
0025 = 25 mm

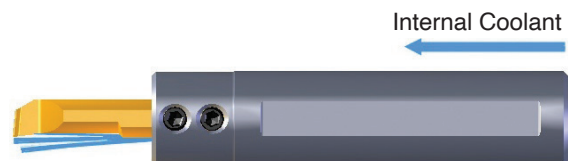
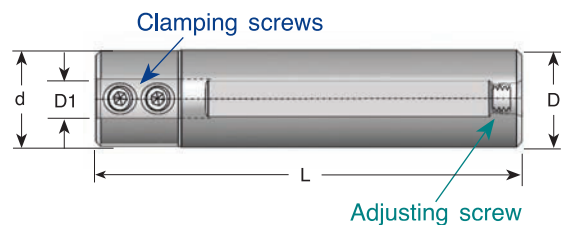
H3

Bar Diameter

3 = 3.0 mm
4 = 4.0 mm
5 = 5.0 mm
6 = 6.0 mm
7 = 7.0 mm
8 = 8.0 mm
10 = 10.0 mm

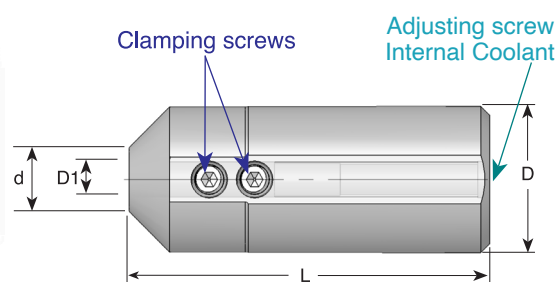
S

Swiss Type



D1	Ordering Code	D	d	L	Key	Clamping Screw	Adjusting Screw
3.0	SIM 0012 H3	12	12	88	K16, K25	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	-

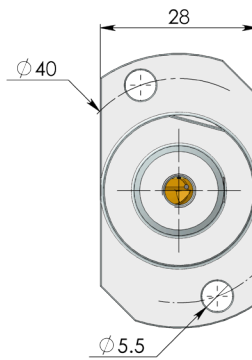
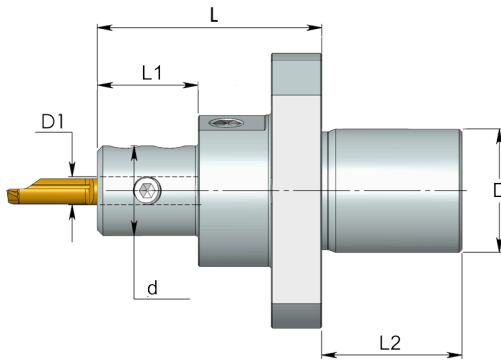
D1	Ordering Code	D	d	L	Key	Clamping Screw	Adjusting Screw
4.0	SIM 0012 H4	12	12	88	K16, K25	S24	S35
	SIM 0016 H4S	16	20	75	K25	S25	S35S
	SIM 0016 H4	16	20	88	K25	S25	S35
	SIM 0020 H4	20	20	88	K25	S25	S35
	SIM 0022 H4	22	22	88	K25	S25	S35
	SIM 0022 H4K	22	22	120	K25	S25	S55
	SIM 0025 H4M	25	25	150	K25	S25	-
5.0	SIM 0012 H5	12	12	88	K16, K25	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, K25	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



D1	Ordering Code	D	d	L	Key	Clamping Screw	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

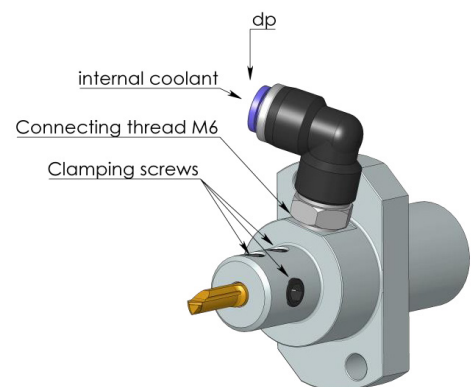
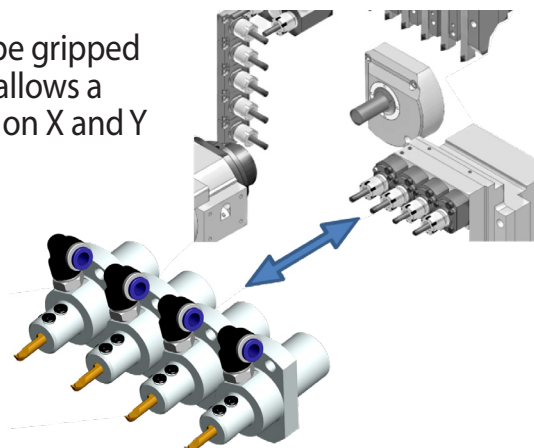
Tiny Tools Toolholders for Star Swiss machines

CPT has developed a unique external turning holder for the sub-spindle on CNC Swiss type lathes.

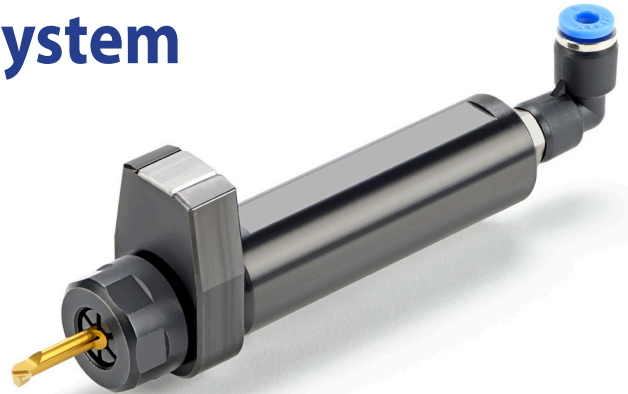


D1	Ordering Code	D	d	L	L1	L2	dp	key	Clamping Screw
3.0	SIM 22S H3	22	16	40	18	25	4/6	K16, K25	S24P
3.0	SIM 22S H3-L	22	16	50	28	25	4/6	K16, K25	S24P
4.0	SIM 22S H4	22	16	40	18	25	4/6	K16, K25	S24P
4.0	SIM 22S H4-L	22	16	50	28	25	4/6	K16, K25	S24P
5.0	SIM 22S H5	22	16	40	18	25	4/6	K16, K25	S24M
5.0	SIM 22S H5-L	22	16	50	28	25	4/6	K16, K25	S24M
6.0	SIM 22S H6	22	16	40	18	25	4/6	K16, K25	S24M
6.0	SIM 22S H6-L	22	16	50	28	25	4/6	K16, K25	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

The Tiny tool can be gripped in two directions, allows a turning operation on X and Y axis.



CIM-Fast Clamping System

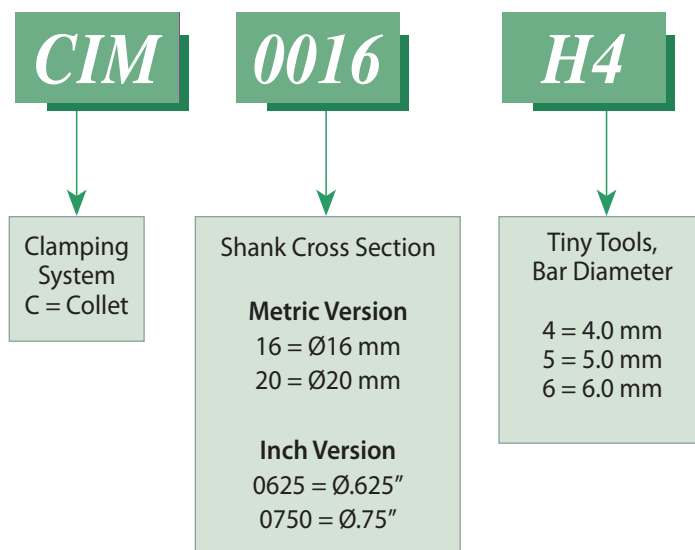


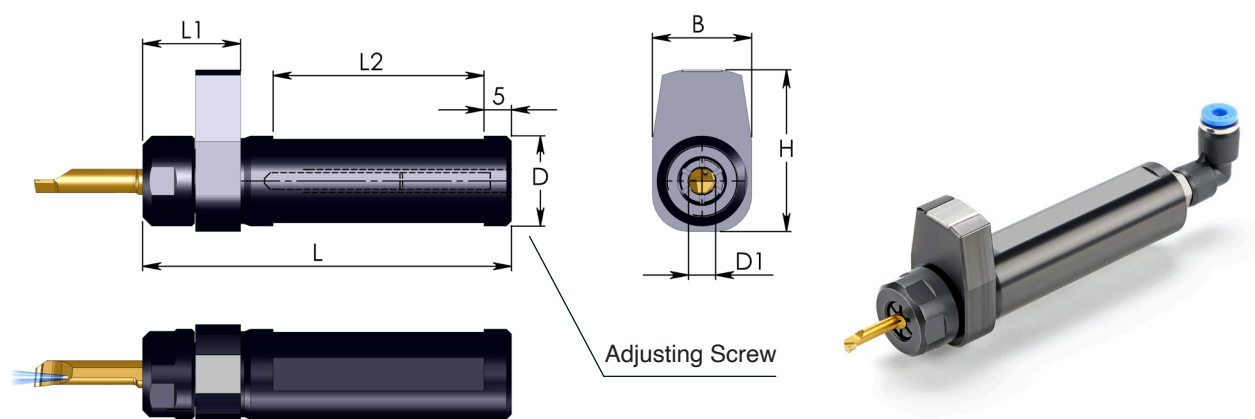
The new innovative **CIM** clamping system provides high precision and repeatability of the Tiny Tools cutting edge, as well as fast and easy tool exchange without removing the holder. The **CIM** system includes an internal tool indexing mechanism which index the tool in the correct orientation, as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

- No screws required
- Enable fast and accurate exchange of the Tiny Tool inside the machine without removing the **CIM** holder from the machine, or additional tool setup.
- Holders with three clamping flats on the shank for maximum flexibility.
- Fits standard and special CPT Tiny Tools
- Internal coolant through the **CIM** holder and the Tiny Tool pointing to the cutting edge.

Product Identification - Ordering Codes

CIM – Toolholder





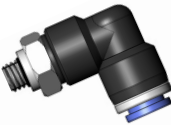
Metric Version

D1	Ordering Code	D	L	L1	L2	B	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

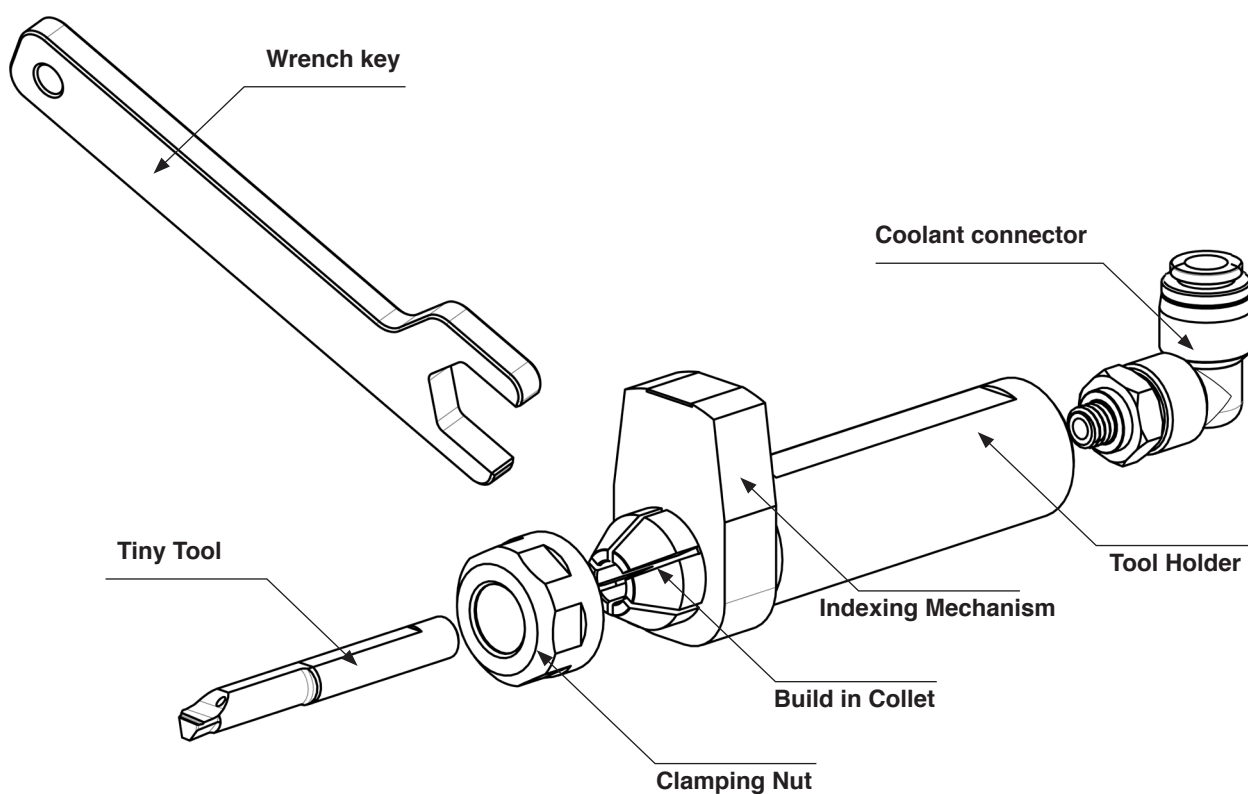
D1 mm	Ordering Code	D"	L"	L1"	L2"	B"	H"
4.0	CIM 0625 H4	5/8	3.5	.87	2.3	.87	1.4
	CIM 0750 H4	3/4	3.5	.87	2.3	.87	1.4
5.0	CIM 0625 H5	5/8	3.5	.87	2.3	.87	1.4
	CIM 0750 H5	3/4	3.5	.87	2.3	.87	1.4
6.0	CIM 0625 H6	5/8	3.5	.87	2.3	.87	1.4
	CIM 0750 H6	3/4	3.5	.87	2.3	.87	1.4

Spare parts

Clamping nut	Wrench key	Adjusting screw	Adjusting screw key	Coolant supply connector
				
CN19	WK19	S35	K25	P-M6-4

* P-M6-6 also available

CIM – clamping system details



General instructions for use

The CIM toolholder system is designed for a fast and simple way of achieving correct indexing of Tiny Tools inside the machine.

Following is a recommended procedure for the first use:

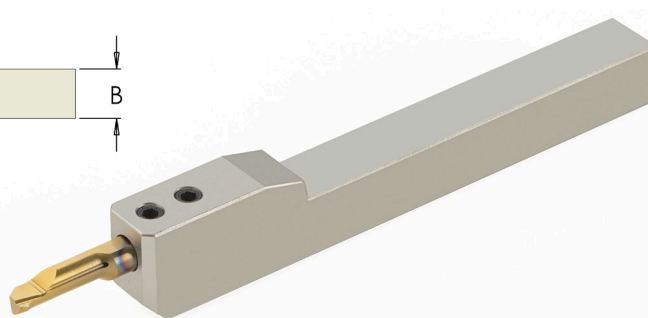
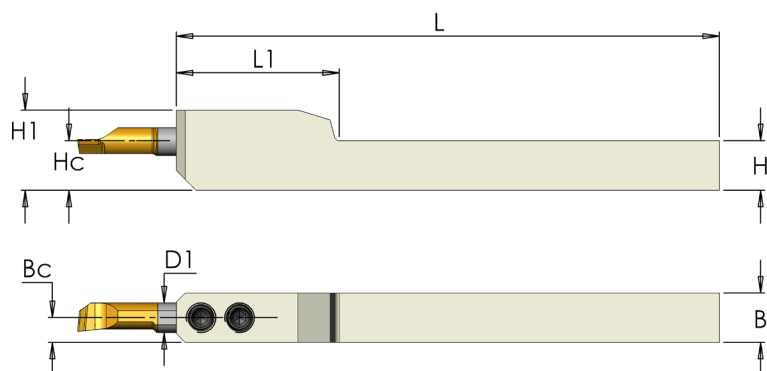
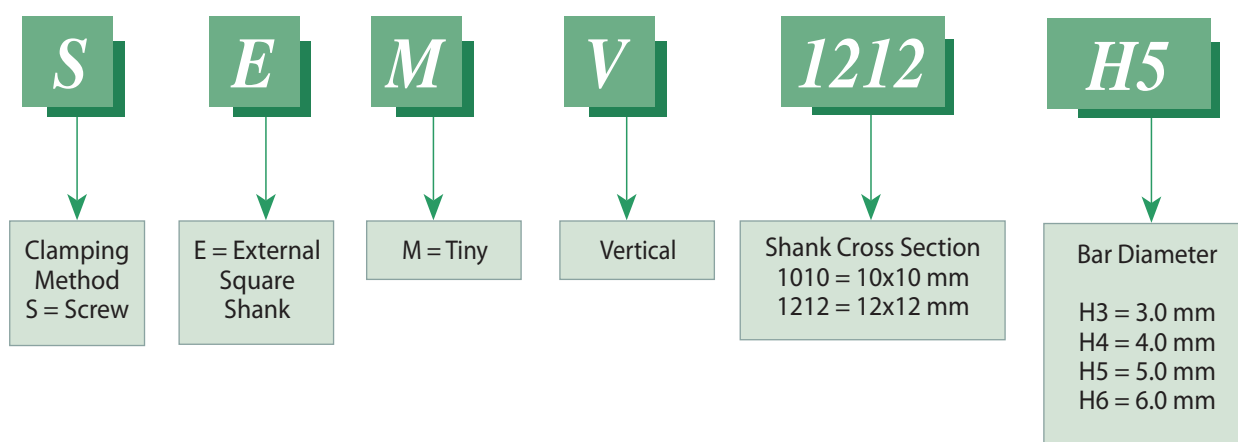
1. Adjust the rear stopper screw according the tool required over-hang.
Insert the Tiny Tool into the collet and push it gently until it passes the internal indexing mechanism.
Adjust the rear stopper screw according the required overhang (do not set the final tool orientation).
That procedure should be done only once and outside the machine.
2. Remove the Tiny Tool from the CIM toolholder 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 toolholder collet by hand and remain open.
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.
4. Close the nut by the wrench key.

In that point the tool is ready to use.

For a tool replacement, open the collet with the wrench key, replace the tool, close the collet and continue working.

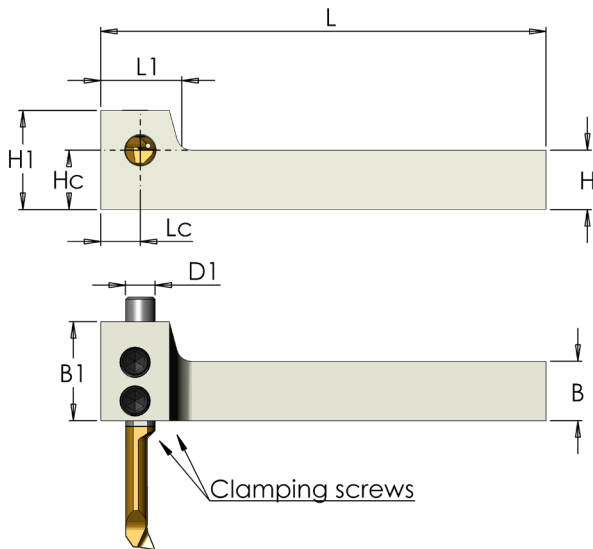
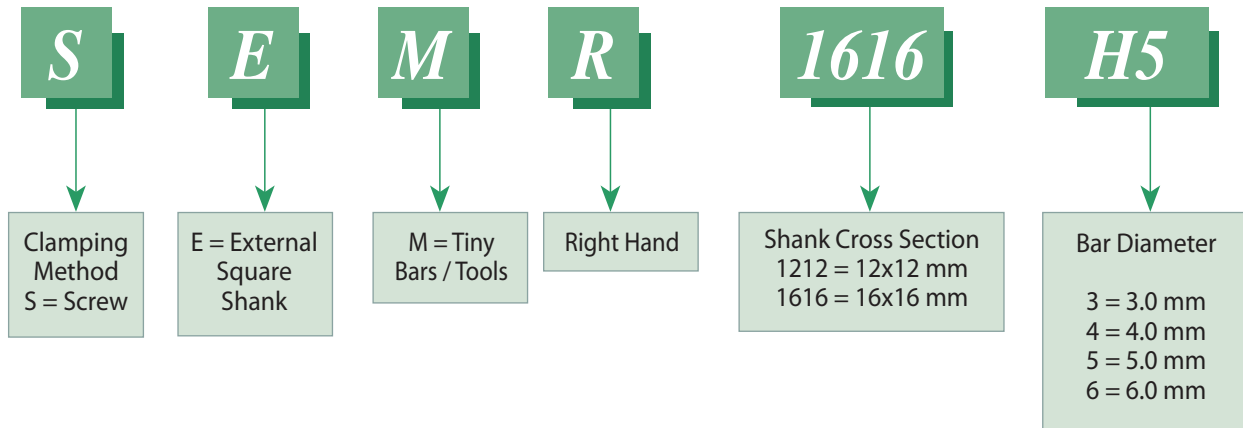
Tiny Tools Toolholders - Square Shank for internal machining

Product Identification - Ordering Codes



D1	Ordering Code	H	B	L1	L	Hc	Bc	H1	Key	Clamping Screw
3.0	SEMV 1010 H3	10	10	24	110	10	5	14.7	K16	S24
	SEMV 1212 H3	12	12	24	110	12	6	16.7	K16	S24
4.0	SEMV 1010 H4	10	10	36	110	10	5	15.2	K16	S24
	SEMV 1212 H4	12	12	36	110	12	6	17.2	K16	S24
5.0	SEMV 1010 H5	10	10	36	110	10	5	15.7	K16	S24
	SEMV 1212 H5	12	12	36	110	12	6	17.7	K16	S24
6.0	SEMV 1010 H6	10	10	33	110	10	5	16.2	K16	S24
	SEMV 1212 H6	12	12	33	110	12	6	18.2	K16	S24

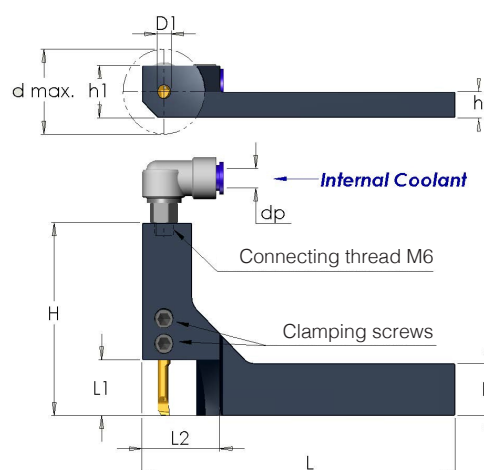
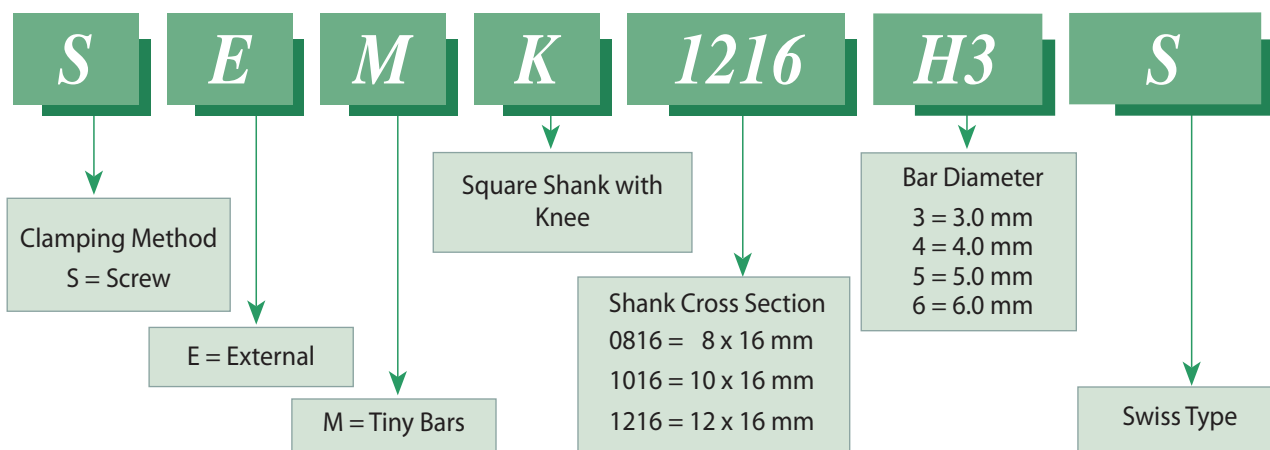
Product Identification - Ordering Codes



Right hand version

D1	Ordering Code	H	B	B1	L	L1	Hc	Lc	H1	Key	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

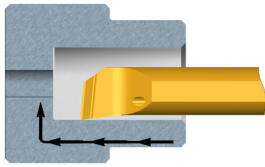


D1	Ordering Code	B	L	L1	L2	H	h	h1	d max.	*dp	Key	Clamping Screw
3.0	SEMK 0816 H3S	16	100	17	25	46	8	16	26	4/6	K25	S25
	SEMK 1016 H3S	16	100	17	25	46	10	18	26	4/6	K25	
	SEMK 1216 H3S	16	100	17	25	46	12	20	26	4/6	K25	
4.0	SEMK 0816 H4S	16	100	17	25	58	8	16	26	4/6	K25	S25
	SEMK 1016 H4S	16	100	17	25	58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

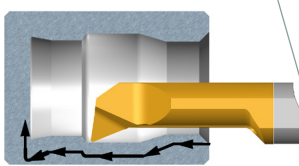
* Optional

Tiny Tools Kits

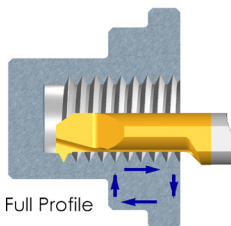
Boring



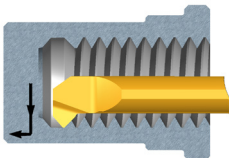
Profiling & Boring



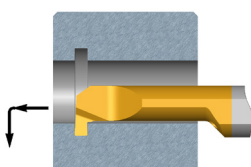
Threading



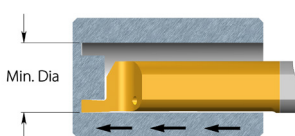
Chamfering & Boring



Grooving



Face Grooving



KT4-20	KT5-20	
MTR 4 R0.2 L10	MTR 5 R0.2 L15	Boring
MPR 4 R0.2 L10	MPR 5 R0.2 L15	Profiling
MIR 4 L15 A60	MIR 5 L15 A60	Threading
MCR 4 R0.2 L15	MCR 5 R0.2 L15	Chamfering
MGR 4 B1.5 L10	MGR 5 B1.5 L15	Grooving
MFR 4 B1.0 L15	MFR 5 B1.0 L22	Face Grooving
SIM 0020 H4	SIM 0020 H5	Holder
K25	K25	Key

Order example: KT4-20

Also available are kits with a
16 mm or 22 mm shank diameter bar holder.
Order example: KT4-16

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 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.

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.



Cutting speed for Tiny Tools

ISO Stan- dard	Material		Condition	Cutting Speed m/min			
				BXC	BMK	K20	TNX
P	Non-Alloy steel and cast steel, free cutting steel	<%0.25C	Annealed	25 - 70	30 - 80		36 - 80
		≥%0.25C	Annealed				
		< %0.55C	Quenched and tempered				
		≥%0.55C	Annealed				
		≥%0.55C	Quenched and tempered				
	Low alloy steel and cast steel (less than %5 alloying elements)		Annealed	20 - 40	25 - 50		30 - 50
			Quenched and tempered				
	High alloy steel, cast steel, and tool steel		Annealed	20 - 40	25 - 50		30 - 50
		Quenched and tempered					
M	Stainless steel and cast steel		Ferritic/martensitic	25 - 40	30 - 60		36 - 60
			Martensitic				
			Austenitic				
K	Cast iron nodular (GGG)		Ferritic/pearlitic	25 - 60	30 - 80		36 - 80
			Pearlitic				
	Grey cast iron (GG)		Ferritic	30 - 70	30 - 80		36 - 80
			Pearlitic				
	Malleable cast iron		Ferritic	20 - 40	20 - 50		24 - 50
Pearlitic							
N	Aluminum-wrought alloy		Not cureable	50 - 100	60 - 120	30 - 50	72 - 120
			Cured				
	Aluminum- cast, alloyed	≤%12 Si	Not cureable	40 - 80	50 - 90	20 - 40	60 - 90
			Cured				
		>%12 Si	High temperature				
	Copper alloys	>%1 Pb	Free cutting	30 - 60	30 - 70	20 - 40	36 - 70
			Brass				
			Electrolytic copper				
Non metallic		Duroplastics, fiber plastics	40 - 80		20 - 40		
		Hard rubber					
S	High temp. alloys, Super alloys	Fe based	Annealed	15 - 30	15 - 40		18 - 40
			Cured				
		Ni or Co based	Annealed				
			Cured				
	Titanium, Titanium alloys		Cast	10 - 30	10 - 30		12 - 30
		Alpha+beta alloys cured					
H	Hardened steel		Hardened 45-50 HRc	10 - 30	14 - 40		18 - 40
			Hardened 51-55 HRc				
			Hardened 56-62 HRc				
	Chilled cast iron		Cast	10 - 30	10 - 30		12 - 30
	Cast iron		Hardened	10 - 20	10 - 20		12 - 20

Recommended Feed Rate: 0.01 - 0.03 mm/rev

For CMR Tiny Tools see page A06-45

Threading Passes

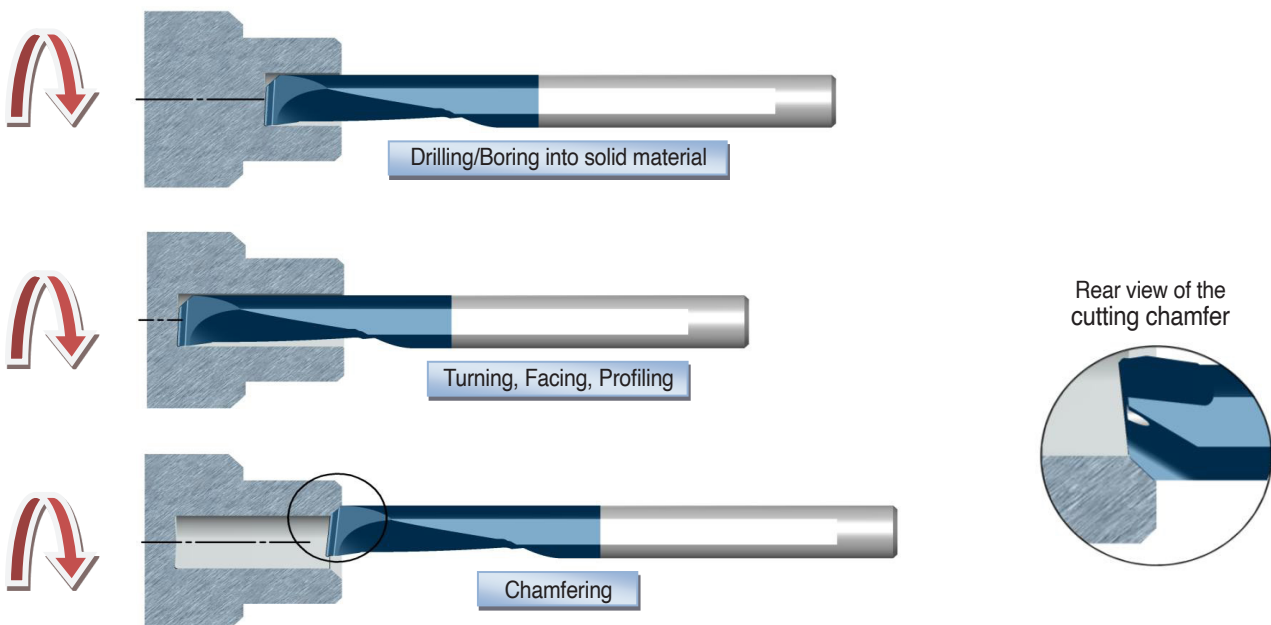
Pitch:	mm TPI	0.5 48	0.7 36	0.8 32	1.0 24	1.25 20	1.5 16	2-5 14-5
Number of Passes		6 - 12	7 - 14	7 - 16	8 - 18	8 - 20	10 - 22	20 - 38

CMR CPT Multi-Task Tiny Tools

- CPT is introducing a new and innovative Multi-Task Tiny Tool **CMR** for Boring, Turning, Facing and Chamfering with a single tool.
- The unique design enables machining of the material without the need for a pilot hole.
- The new tool shortens the machining cycle time and the number of tools required - providing **High Productivity**.
- Effective through coolant hole with a spiral flute, evacuates the chips out of the hole uninterruptedly.
- Unique chip breaker and flute design.
- To use with standard SIM toolholders on Swiss Type or CNC lathe machines.
- Available in **BMK** Grade only.

Working Method

- The tool penetrates the work piece and produces the hole compliant with the minimum diameter the tool allows.
- The tool can penetrate the material in one pass or several passes depending on the work piece material, coolant pressure, machine power etc.
- The hole can be enlarged by multi radial passes.



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.

CMR General Recommendations

Coolant fluid

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.

The cooling stream is designed to provide three benefits:

1. Cooling the cutting edge of the tool, and the contact area.
2. Pushing the chip away from the tool quickly, thereby reducing wear of the edge.
3. Helping to break the chip into smaller pieces and evacuating them from the cutting area.

Cutting Data

ISO Standard	Material	Cutting Speed m/min
P	Low and Medium Carbon Steels <0.55%C	20 - 75
	High Carbon Steels ≥0.55%C	20 - 75
	Alloy Steels, Treated Steels	20 - 60
M	Stainless Steels - Free Cutting	20 - 60
	Stainless Steels - Austenitic	20 - 50
	Cast Steels	20 - 70
K	Cast Iron	20 - 90
N	Aluminum ≤12%Si, Copper	40 - 150
	Aluminum >12% Si	20 - 100
	Synthetics, Duroplastics, Thermoplastics	40 - 150
S	Nickel Alloys, Titanium Alloys	15 - 60
H	Hardened Steels	60 - 70

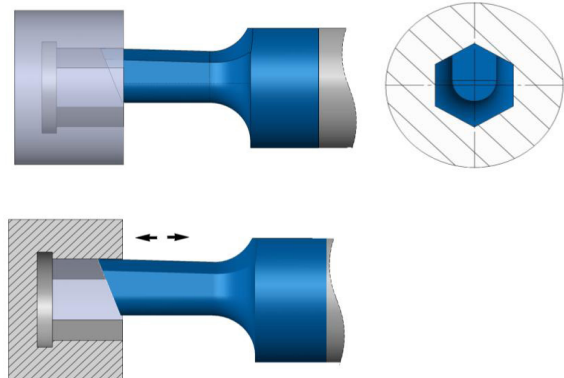
Recommended Feed Rate: 0.01 - 0.03 mm/rev

HK Broaching Tools for Hexagon Keys

The HK broaching system have been developed to machine internal keyways inside blind or through holes, using CNC machines.

Working Demo

- To use with CPT standard SIM Bar Holders
- The holder can be located directly in the turret or the machine spindle
- Holder with rear clamping screw for full support during operation
- Available in **BMK** Grade only.

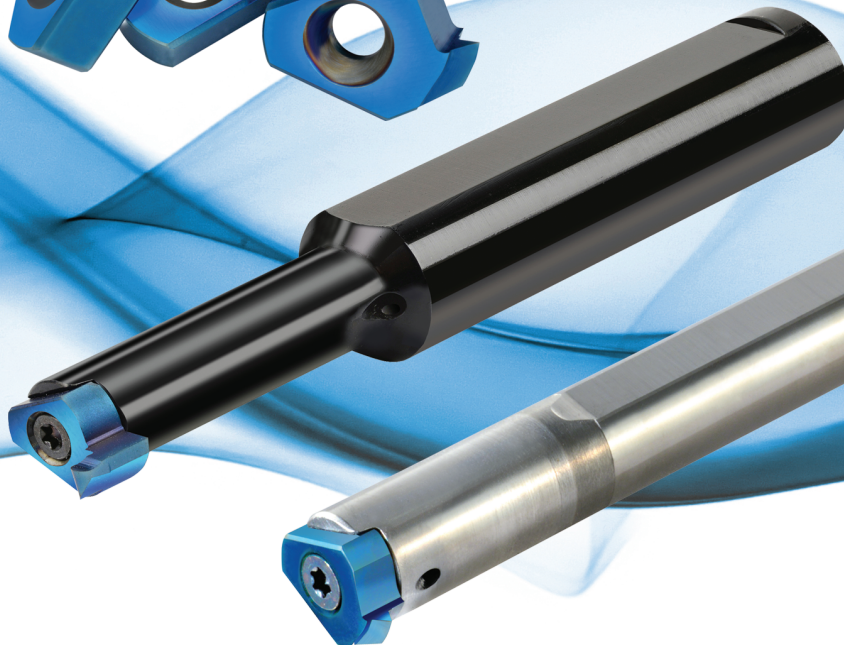


Cutting Data

Material Tensile Strength (N/mm ²)	Feed rate (mm/min)	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

- A relief groove is highly recommended, if not possible a gradual volume decrease should be made at the end of the broaching groove
- The HK tool must be positioned outside of the hole/groove before each stroke
- After setup and first stroke, we recommend to observe the tool and the application to make sure no collision occurred



Demonstration

Vertical Inserts and Toolholders for threading, chamfering, grooving and turning

Advantages

Carbide grade:

BLU-Sub-Micron grade with advanced PVD triple layer coating delivering high heat resistance and smooth cutting operation.

- Carbide shank toolholder provides excellent vibration resistance.
- Long reach.
- Through coolant.
- For threading, grooving, boring and chamfering.
- Quick indexing.

Typical Applications:

- Long threads or applications requiring over-hang.
- Enables production of threads with large pitch/profile.
- Threading, grooving, boring, profiling and chamfering - It's possible to offer most of the Tiny Tools profiles on the insert.

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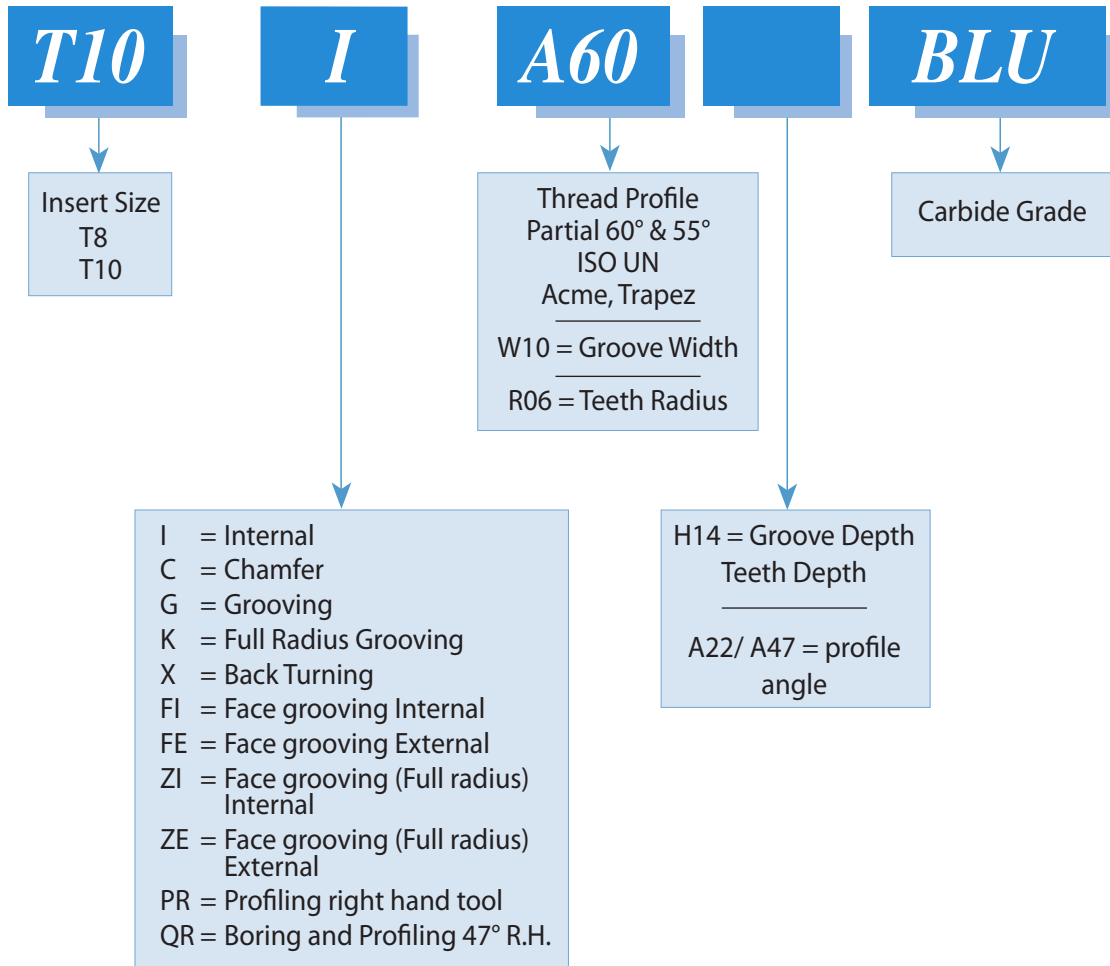
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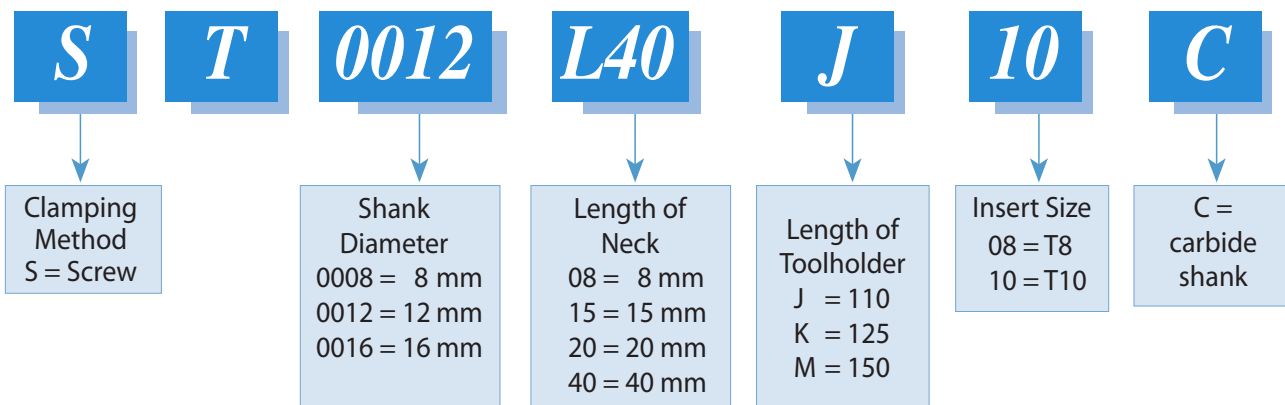
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Product Identification - Ordering Codes

Inserts

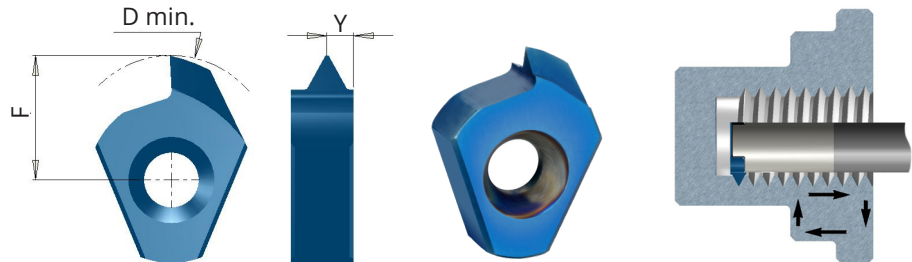


Toolholders



Partial Profile 60°

Same insert for internal and external thread



Insert Type	Ordering Code	Pitch Range mm	Pitch Range TPI	D min	F	Y
T8	T8 A60	Int 0.5-0.75 Ex 0.4- 0.75	56-32 64-32	8.0	3.7	0.6
	T8 G60	Int 1.0-1.25 Ex 0.8- 1.0	28-20 32-28	8.4	4.1	0.8
T10	T10 A60	Int 0.5-0.8 Ex 0.4-0.8	56-28 64-32	11.6	6.4	0.6
	T10 G60	Int 1.0-2.0 Ex 0.8-1.75	28-13 32-15	12.3	7.1	1.3
	T10 D60	Int 2.0-3.0 Ex 1.75-2.5	13-8 15-10	13.1	7.9	1.5

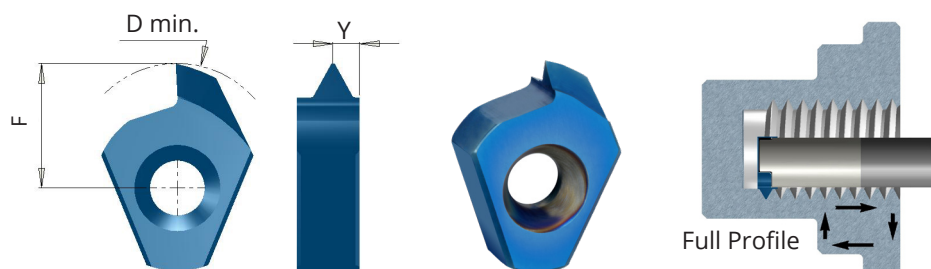
Order example: T8 G60 BLU

Partial Profile 55°

Same insert for internal and external thread

Insert Type	Ordering Code	Pitch Range mm	Pitch Range TPI	D min	F	Y
T8	T8 G55	1.25-1.5	19-18	9.1	4.8	1.0
	T8 U55	1.75-2.0	16-14	8.7	4.4	1.2
T10	T10 G55	1.25-2.0	19-14	12.4	7.2	1.2

Full Profile



ISO

Inserts for internal thread

Insert Type	Ordering Code	Pitch mm	M coarse	M fine	D min	F	Y
T8	T8 I 0.5 ISO	0.5		M8.5	8.0	3.6	0.5
	T8 I 0.75 ISO	0.75		M9	8.1	3.8	0.6
	T8 I 1.0 ISO	1.0		M9	8.0	3.7	0.7
	T8 I 1.25 ISO	1.25		M10	8.2	3.9	0.8
	T8 I 1.5 ISO	1.5	M10	M12	8.4	4.1	1.0
	T8 I 1.75 ISO	1.75	M12	-	8.6	4.3	1.1
	T8 I 2.0 ISO	2.0	M14	M17	8.8	4.5	1.3
T10	T10 I 0.5 ISO	0.5		M12	11.3	6.1	0.5
	T10 I 0.75 ISO	0.75		M12	11.3	6.1	0.6
	T10 I 1.0 ISO	1.0		M13	11.7	6.5	0.7
	T10 I 1.5 ISO	1.5		M14	11.7	6.5	1.0
	T10 I 2.0 ISO	2.0	M16	M17	12.0	6.8	1.3
	T10 I 2.5 ISO	2.5	M18, M20	-	12.6	7.4	1.4
	T10 I 3.0 ISO	3.0	M24	M28	12.6	7.4	1.6

Order example: T10 I 0.5 ISO BLU

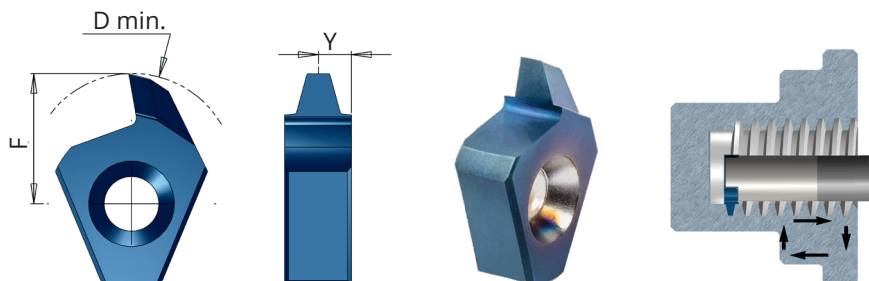
UN

Inserts for internal thread

Insert Type	Ordering Code	Pitch TPI	Nominal size	UNC	UNF	UNEF	D min	F	Y
T8	T8 I 32UN	32	7/16, 1/2			3/8	8.3	4.0	0.6
	T8 I 28UN	28	3/8			7/16, 1/2	8.3	4.0	0.7
	T8 I 24UN	24			3/8		8.3	4.0	0.7
	T8 I 20UN	20	3/8		7/16, 1/2		8.2	3.9	0.9
	T8 I 16UN	16	7/16, 1/2				8.7	4.4	1.0
	T8 I 14UN	14		7/16			8.8	4.5	1.2
	T8 I 13UN	13		1/2			8.8	4.5	1.3
T10	T10 I 20UN	20	9/16, 5/8, 11/16			3/4	12.0	6.8	0.9
	T10 I 18UN	18			9/16, 5/8		12.0	6.8	1.0
	T10 I 16UN	16	9/16, 5/8, 11/16		3/4		12.0	6.8	1.1
	T10 I 14UN	14			7/8		12.1	6.9	1.2
	T10 I 12UN	12	5/8, 11/16, 3/4	9/16			12.1	6.9	1.4
	T10 I 11UN	11		5/8			12.5	7.3	1.5
	T10 I 10UN	10		3/4			12.6	7.4	1.5

Acme

Inserts for internal thread

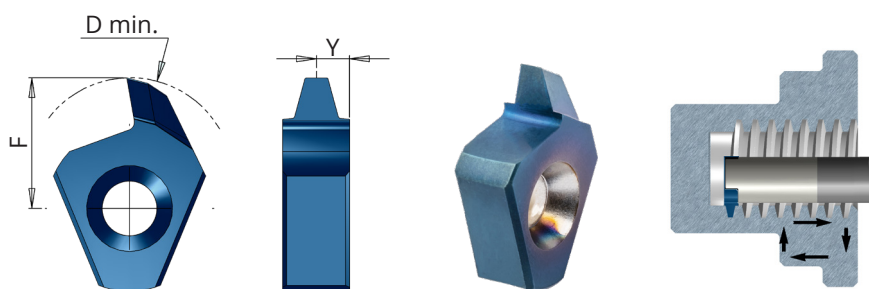


Insert Type	Ordering Code	Pitch TPI	Thread size	D min	F	Y
T8	T8 I 10 ACME	10	1/2-10	10.1	5.5	1.3
T10	T10 I 8 ACME	8	5/8-8	12.7	7.3	1.6
	T10 I 6 ACME	6	3/4-6	14.8	7.9	2.0

Order example: T10 I 6 ACME BLU

Trapez - DIN103

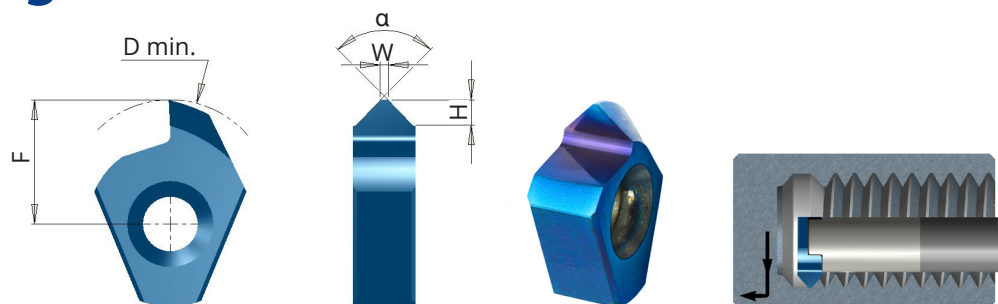
Inserts for internal thread



Insert Type	Ordering Code	Pitch mm	Thread size	D min	F	Y
T8	T8 I 2 TR	2	Tr12x2, Tr14x2	10.0	4.8	1.0
	T8 I 3 TR	3	Tr14x3	11.0	5.8	1.5
T10	T10 I 2 TR	2	Tr16x2, Tr18x2, Tr20x2	14.0	7.0	1.0
	T10 I 3 TR	3	Tr22x3	19.0	7.9	1.5
	*T10 I 4 TR	4	Tr16x4, Tr18x4	12.0	6.7	2.0

*To use with T10 toolholders version B

Chamfering

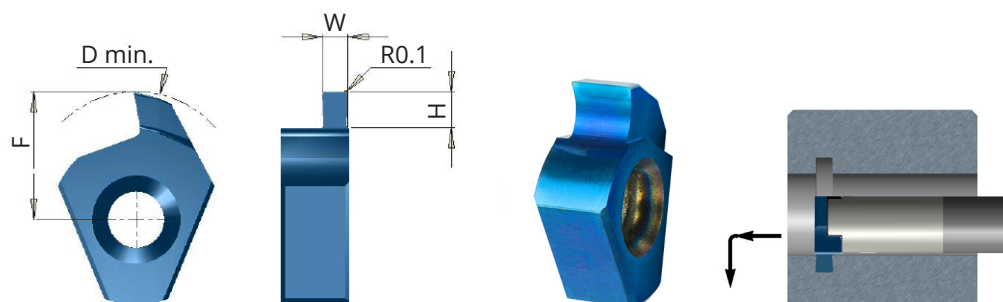


Insert Type	Ordering Code	W	H max	α	D min	F
T8	T8 C90	0.2	1.4	90°	8.8	4.5
T10	T10 C90	0.2	1.8	90°	12.7	7.5

Same insert for right and left hand chamfers

Order example: T8 C90 BLU

Grooving



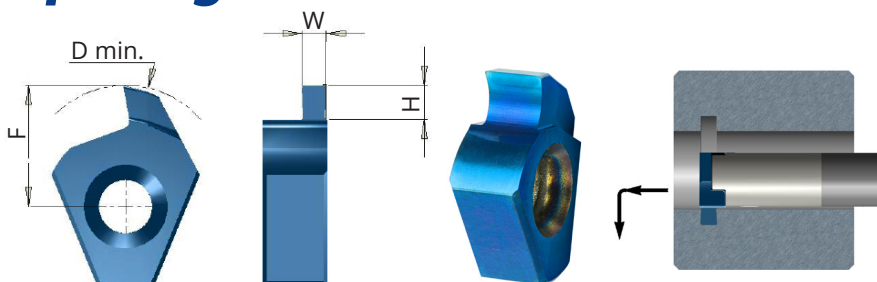
Insert Type	Ordering Code	W		R	H max	D min	F
		mm	inch				
T8	T8 G W08 H20	0.79	.031	0.1	2.0	9.4	5.1
	T8 G W10 H20	1.0	.039	0.1	2.0	9.4	5.1
	T8 G W12 H20	1.19	.047	0.1	2.0	9.4	5.1
	T8 G W15 H20	1.5	.059	0.1	2.0	9.4	5.1
	T8 G W16 H20	1.59	.063	0.1	2.0	9.4	5.1
	T8 G W20 H20	2.0	.079	0.1	2.0	9.4	5.1
	T8 G W24 H20	2.38	.094	0.1	2.0	9.4	5.1
	T8 G W25 H20	2.5	.098	0.1	2.0	9.4	5.1
	T8 G W30 H20	3.0	.118	0.1	2.0	9.4	5.1
T10	T10 G W08 H28	0.79	.031	0.1	2.8	13.4	7.9
	T10 G W10 H14	1.0	.039	0.1	1.4	12.3	7.1
	T10 G W10 H23	1.0	.039	0.1	2.3	13.1	7.9
	T10 G W12 H28	1.19	.047	0.1	2.8	13.4	7.9
	T10 G W15 H14	1.5	.059	0.1	1.4	12.3	7.1
	T10 G W15 H23	1.5	.059	0.1	2.3	13.1	7.9
	*T10 G W15 H40	1.5	.059	0.1	4.0	13.5	7.9
	T10 G W16 H28	1.59	.063	0.1	2.8	13.4	7.9
	T10 G W20 H14	2.0	.079	0.1	1.4	12.3	7.1
	T10 G W20 H23	2.0	.079	0.1	2.3	13.1	7.9
	*T10 G W20 H40	2.0	.079	0.1	4.0	13.5	7.9
	T10 G W24 H28	2.38	.094	0.1	2.8	13.4	7.9
	T10 G W25 H23	2.5	.098	0.1	2.3	13.1	7.9
	*T10 G W25 H40	2.5	.098	0.1	4.0	13.5	7.9
	T10 G W30 H23	3.0	.118	0.1	2.3	13.1	7.9
	*T10 G W30 H40	3.0	.118	0.1	4.0	13.5	7.9

*To use with T10 toolholders version B

Tolerance: $W \pm 0.02 \text{ mm} / .001''$

Order example: T10 G W08 H28 BLU

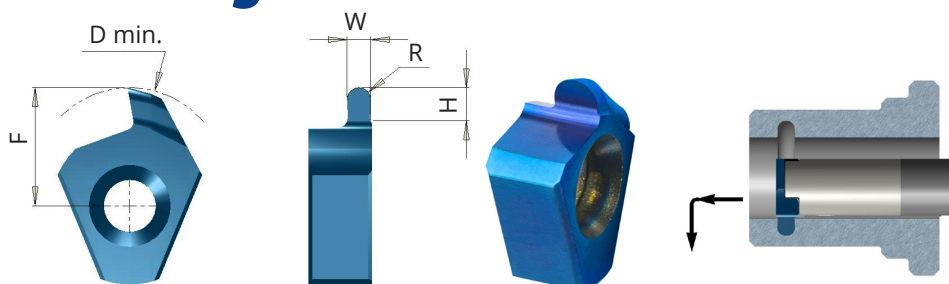
Grooving, Circlip Ring Grooves DIN 471/472



Insert Type	Ordering Code	Nom` groove width	W +0.03	R	H max	D min	F
T8	TD8 G W07 H12	0.7	0.73	0	1.2	8.8	4.3
	TD8 G W08 H13	0.8	0.83	0	1.3	8.9	4.4
	TD8 G W09 H18	0.9	0.93	0	1.8	9.4	4.9
	TD8 G W12 H18	1.1	1.20	0	1.8	9.4	4.9
	TD8 G W14 H18	1.3	1.40	0	1.8	9.4	4.9
	TD8 G W17 H18	1.6	1.70	0	1.8	9.4	4.9
T10	TD10 G W07 H12	0.7	0.73	0	1.2	11.9	6.4
	TD10 G W08 H13	0.8	0.83	0	1.3	12.0	6.5
	TD10 G W09 H15	0.9	0.93	0	1.5	12.2	6.7
	TD10 G W12 H28	1.1	1.20	0	2.8	13.4	7.9
	TD10 G W14 H28	1.3	1.40	0	2.8	13.4	7.9
	TD10 G W17 H28	1.6	1.70	0	2.8	13.4	7.9

Order example: TD10 G W17 H28 BLU

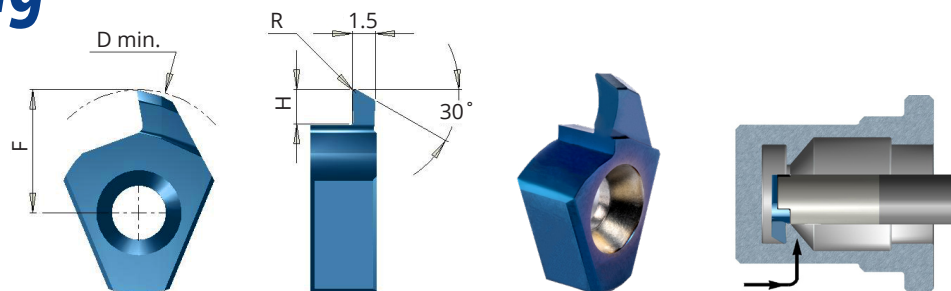
Full Radius Grooving



Insert Type	Ordering Code	W ±0.02	R	H max	D min	F
T8	T8 K R04 H10	0.8	0.4	1.0	8.4	4.1
	T8 K R06 H10	1.2	0.6	1.0	8.4	4.1
	T8 K R09 H10	1.8	0.9	1.0	8.4	4.1
T10	T10 K R04 H22	0.8	0.4	2.2	13.1	7.9
	*T10 K R04 H40	0.8	0.4	4.0	13.5	7.9
	T10 K R06 H22	1.2	0.6	2.2	13.1	7.9
	*T10 K R06 H40	1.2	0.6	4.0	13.5	7.9
	T10 K R09 H22	1.8	0.9	2.2	13.1	7.9
	*T10 K R09 H40	1.8	0.9	4.0	13.5	7.9
	T10 K R10 H22	2.0	1.0	2.2	13.1	7.9
	*T10 K R10 H40	2.0	1.0	4.0	13.5	7.9

*To use with T10 toolholders version B

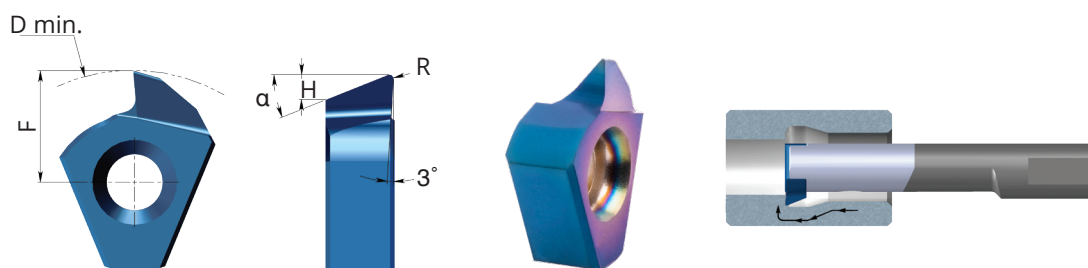
Back Turning



Insert Type	Ordering Code	R	H max	D min	F
T8	T8 X R02 H20	0.2	2.0	9.4	5.1
T10	T10 X R02 H23	0.2	2.3	13.1	7.9
	*T10 X R02 H35	0.2	3.5	13.5	7.9
	T10 X R04 H23	0.4	2.3	13.1	7.9

*To use with T10 toolholders version B

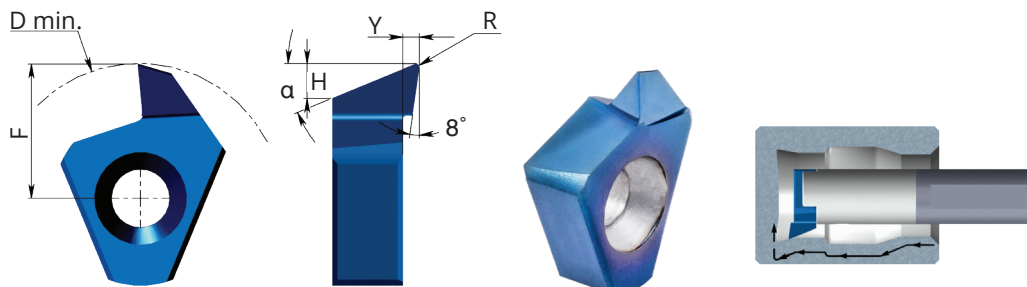
Boring and Profiling



Insert Type	Ordering Code	α	R	H	D min	F
T8	T8 PR R01 A22	22°	0.1	1.0	9.2	5.0
	T8 PR R02 A22	22°	0.2	1.0	9.2	5.0
	T8 QR R01 A47	47°	0.1	1.9	9.2	5.0
	T8 QR R02 A47	47°	0.2	1.9	9.2	5.0

Order example: T8 PR R01 A22 BLU

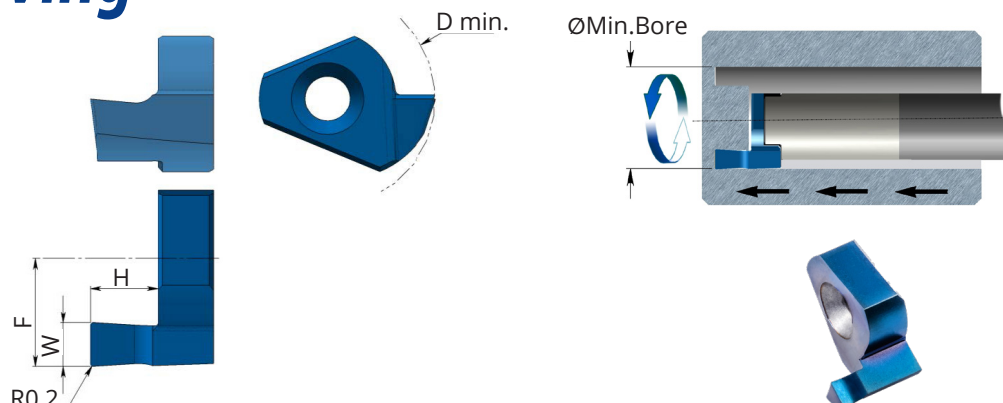
Boring, Profiling and Facing



Insert Type	Ordering Code	α	β	R	H	Y	D min	F
T10	T10 PR R01 A22	22°	8°	0.1	1.9	0.9	12.9	7.7
	T10 PR R02 A22	22°	8°	0.2	1.9	0.9	12.9	7.7
	T10 QR R01 A47	47°	3°	0.1	2.6	0.4	12.9	7.7
	T10 QR R02 A47	47°	3°	0.2	2.6	0.4	12.9	7.7

Order example: T10 PR R01 A22 BLU

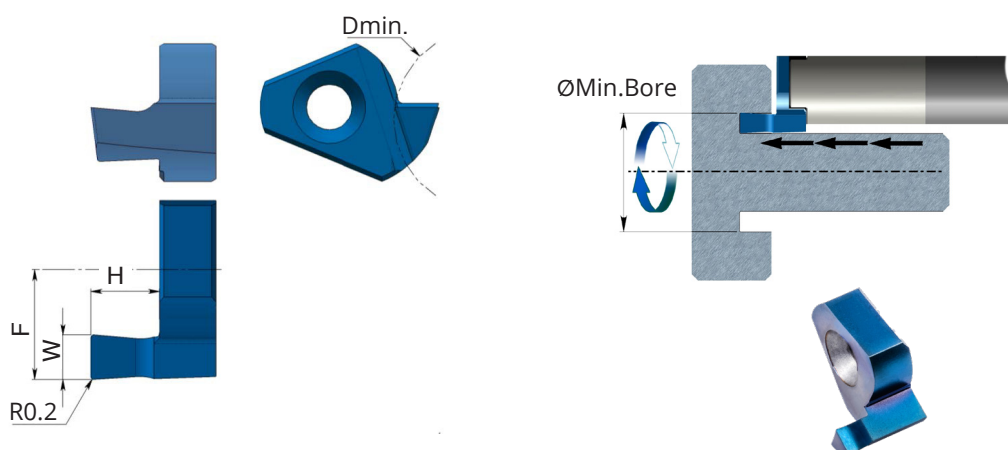
Face grooving Internal



Insert Type	Ordering Code	W ±0.02	H max	D min	F
T10	T10 FI W10 H15	1.0	1.5	14.0	8.0
	T10 FI W15 H25	1.5	2.5		
	T10 FI W20 H30	2.0	3.0		
	T10 FI W20 H50	2.0	5.0		
	T10 FI W25 H30	2.5	3.0		
	T10 FI W25 H50	2.5	5.0		
	T10 FI W30 H30	3.0	3.0		
	T10 FI W30 H50	3.0	5.0		

Order example: T10 FI W30 H50 BLU

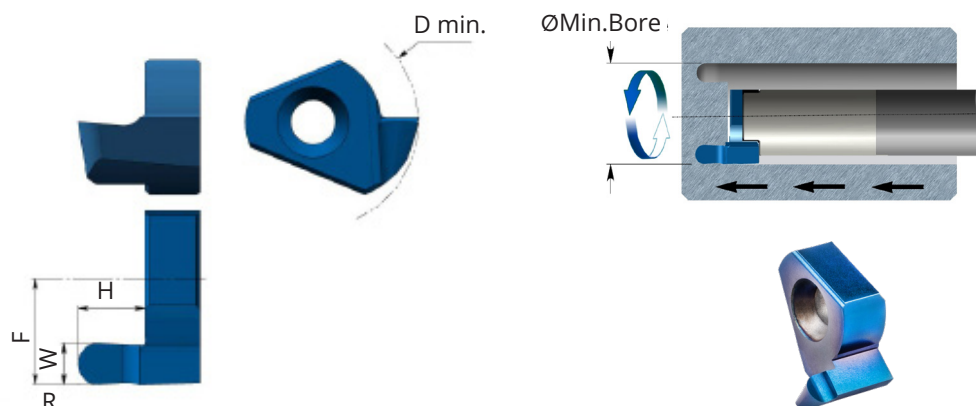
External



Insert Type	Ordering Code	W ±0.02	H max	D min	F
T10	T10 FE W10 H15	1.0	1.5	12.0	8.0
	T10 FE W15 H25	1.5	2.5		
	T10 FE W20 H30	2.0	3.0		
	T10 FE W20 H50	2.0	5.0		
	T10 FE W25 H30	2.5	3.0		
	T10 FE W25 H50	2.5	5.0		
	T10 FE W30 H30	3.0	3.0		
	T10 FE W30 H50	3.0	5.0		

Face grooving, Full radius

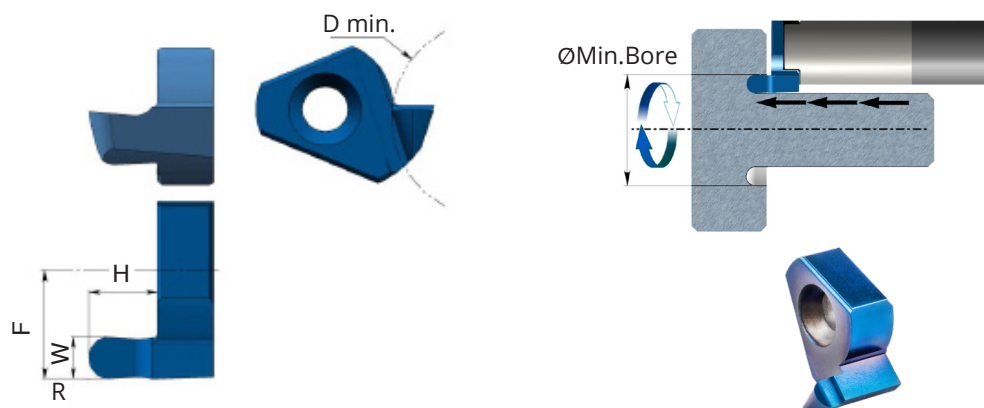
Internal



Insert Type	Ordering Code	W ±0.02	R	H max	D min	F
T10	T10 ZI R05 H15	1.0	0.5	1.5	14.0	8.0
	T10 ZI R08 H25	1.6	0.8	2.5		
	T10 ZI R10 H30	2.0	1.0	3.0		
	T10 ZI R125 H30	2.5	1.25	3.0		
	T10 ZI R15 H30	3.0	1.5	3.0		

Order example: T10 ZI R05 H15 BLU

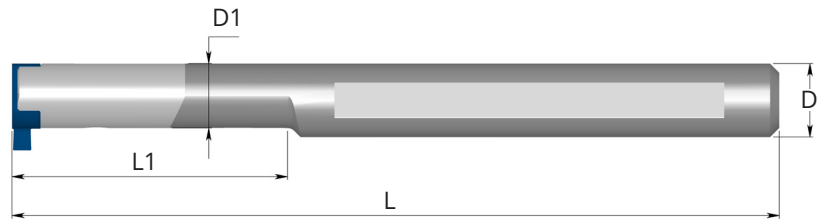
External



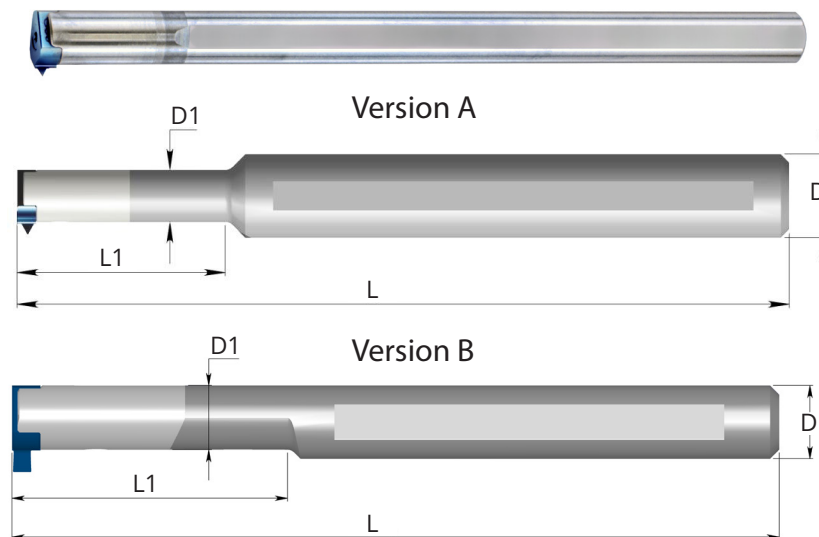
Insert Type	Ordering Code	W ±0.02	R	H max	D min	F
T10	T10 ZE R05 H15	1.0	0.5	1.5	12.0	8.0
	T10 ZE R08 H25	1.6	0.8	2.5		
	T10 ZE R10 H30	2.0	1.0	3.0		
	T10 ZE R125 H30	2.5	1.25	3.0		
	T10 ZE R15 H30	3.0	1.5	3.0		

Carbide Shank Toolholders

With through coolant



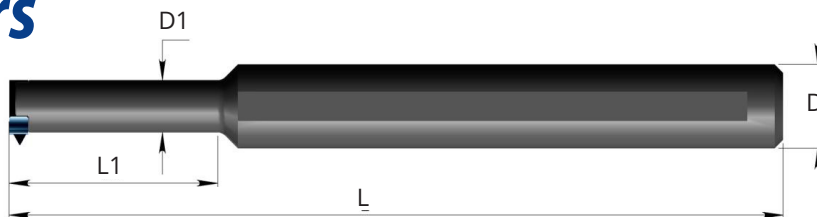
Insert Type	Ordering Code	D	D1	L1	L	Insert Screw	Torx Key
T8	ST 0008 L20 F08C	8	7	20	80	S5	K5
	ST 0008 L30 G08C	8	7	30	95	S5	K5
	ST 0008 L40 H08C	8	7	40	105	S5	K5



Insert Type	Ordering Code	D	D1	L1	L	Insert Screw	Torx Key	Toolholder Version
T10	ST 0010 L29 H10C	10	8.8	29	100	S11	K11	B
	ST 0010 L40 J10C	10	8.8	40	110	S11	K11	B
	ST 0010 M10C	10	10.0	-	150	S11	K11	A
	ST 0012 L37 J10C	12	8.8	37	110	S11	K11	B
	ST 0012 L40 J10C	12	10.0	40	110	S11	K11	A
	ST 0012 L50 K10C	12	8.8	50	125	S11	K11	B
	ST 0012 L55 K10C	12	10.0	55	125	S11	K11	A

Order example: ST 0012 L37 J10C

Steel Toolholders



Insert Type	Ordering Code	D	D1	L1	L	Insert Screw	Torx Key
T10	ST 0012 L25 E10	12	10	25	70	S11	K11
	ST 0016 L25 G10	16	10	25	90	S11	K11
	ST 0016 L35 H10	16	10	35	100	S11	K11

Technical Section

Carbide Grades

BLU PVD triple layer coated Sub-Micron grade for Steel, Stainless Steels, Titanium and hard materials.

Cutting Data

ISO	Materials	Cutting Speed m/min	Recommended feed rate mm/rev
P	Low and Medium Carbon Steels <0.55%C	25 - 70	Grooving: 0.01-0.03 Back turning: 0.03-0.10 Face grooving: 0.01-0.08 Chamfering: 0.02-0.08
	High Carbon Steels ≥0.55%C	20 - 50	
	Alloy Steels, Treated Steels	15 - 30	
M	Stainless Steels - Free Cutting	25 - 70	
	Stainless Steels - Austenitic	20 - 40	
	Cast Steels	30 - 70	
K	Cast Iron	15 - 30	
N	Aluminum ≤12%Si, Copper	30 - 90	
	Aluminum >12% Si	20 - 70	
	Synthetics, Duroplastics, Thermoplastics	20 - 70	
S	Nickel Alloys, Titanium Alloys	20 - 50	
H	Hardened Steel 45 - 50HRc	10 - 40	

Threading Passes

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