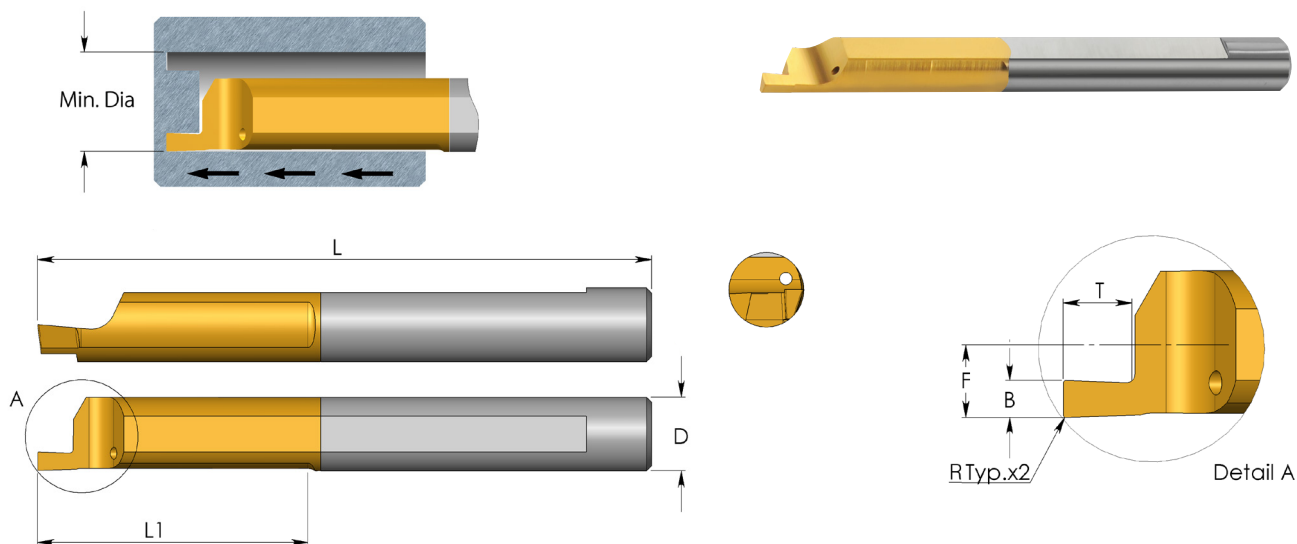


MFR Bars Face Grooving



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

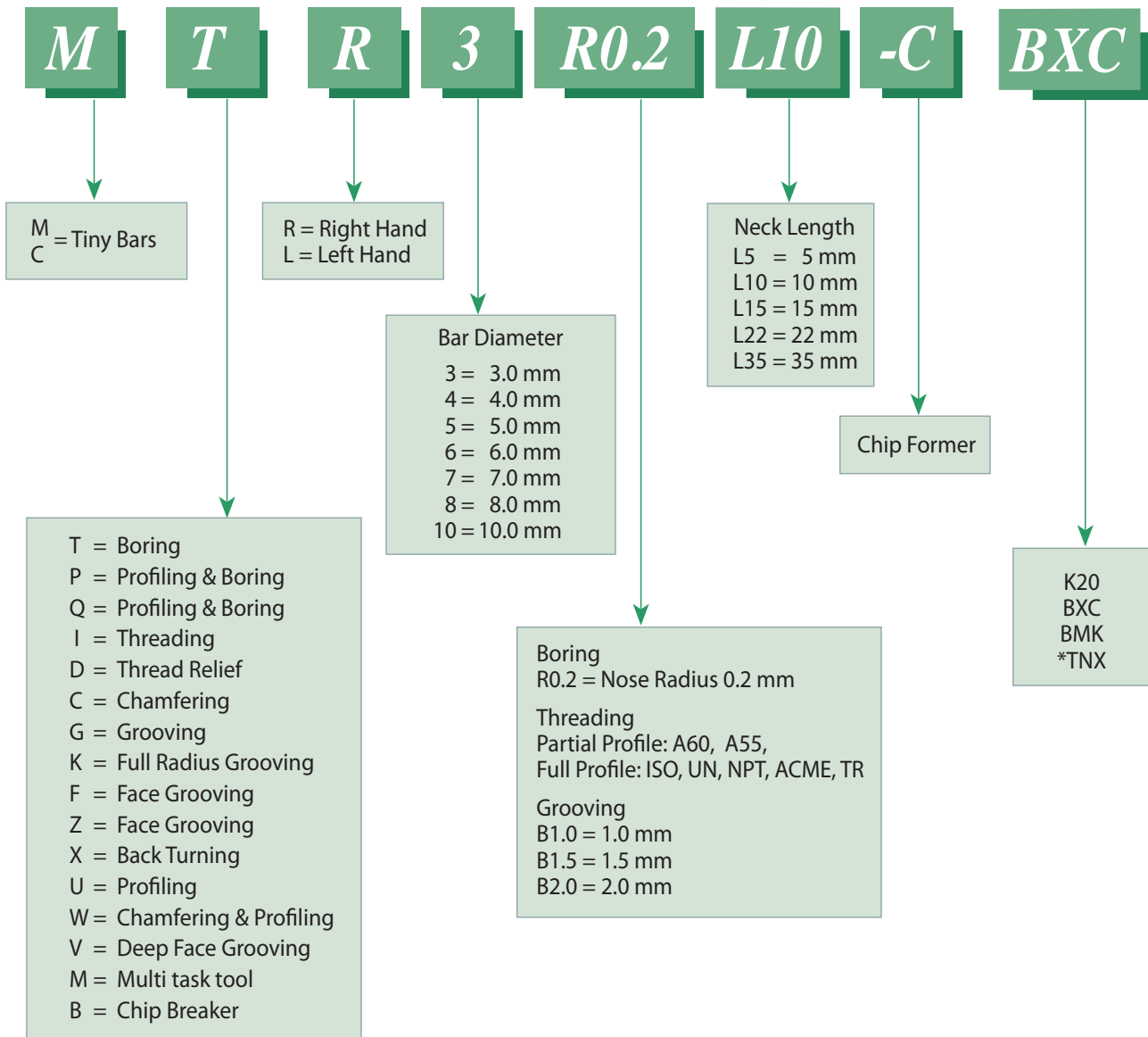
● First choice

○ Alternative

For additional holders see page A06-32 to 41

Product Identification

Tiny Bars Ordering Codes



* Available only for CBR bars

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 Standard	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				
	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				
	Cast						
	Titanium, Titanium alloys	Alpha+beta alloys cured	10 - 30	10 - 30		12 - 30	
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