

Work Material	Hardness	Grade	vc (m/min)	Finish-Light		Light-Medium		Medium-Rough	
				fz (mm)	ap(mm)	fz (mm)	ap(mm)	fz (mm)	ap(mm)
P Mild Steel	≤180HB	MP6120 VP15TF	250 (200–300)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
		MP6130 VP20RT	240 (190–290)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
Carbon Steel Alloy Steel	180–350HB	MP6120 VP15TF	220 (170–270)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
		MP6130 VP20RT	200 (150–250)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
Alloy Steel Pre-Hardened Steel	35–45HRC	MP6120 VP15TF	140 (100–180)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
		MP6130 VP20RT	120 (90–150)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
M	—	MP7130 VP15TF VP20RT	200 (150–250)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	—	—
		MP7130 VP15TF VP20RT	170 (120–220)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	—	—
		MP7130 VP15TF VP20RT	160 (110–210)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	—	—
		MP7130 VP15TF VP20RT	150 (100–200)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	—	—
K	Tensile Strength ≤350MPa	MC5020	220 (200–270)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
		VP15TF VP20RT	180 (130–250)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
	Tensile Strength ≤800MPa	MC5020	200 (180–250)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
		VP15TF VP20RT	160 (110–240)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
H	40–55HRC	VP15TF	50 (30–70)	0.05 (0.05–0.1)	≤1.5	0.1 (0.05–0.15)	≤2.0	—	—

* Please set the cutting condition according to the system requirements referring to the above table.

* Wet cutting is recommended for better surface finishes. (Tool life is shorter when compared to dry cutting.)

Wet cutting condition

Work Material	Hardness	Grade	vc (m/min)	Finish-Light		Light-Medium		Medium-Rough		
				fz (mm)	ap(mm)	fz (mm)	ap(mm)	fz (mm)	ap(mm)	
P	Mild Steel	MP6120 VP15TF	150 (100–200)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0	
		MP6130 VP20RT								
	Carbon Steel Alloy Steel	MP6120 VP15TF	120 (80–160)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0	
		MP6130 VP20RT								
	Alloy Steel Pre-Hardened Steel	35–45HRC	MP6120 VP15TF	100 (80–120)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0
			MP6130 VP20RT							
M	Austenitic Stainless Steel Ferritic and Martensitic Stainless Steel	MP7130 VP15TF VP20RT	130 (80–180)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤2.0	–	–	
	Austenitic Stainless Steel	MP7130 VP15TF VP20RT	100 (80–150)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	–	–	
	Two-phase Stainless Steel	MP7130 VP15TF VP20RT	100 (80–150)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	–	–	
	Hardened Stainless Steel	MP7130 VP15TF VP20RT	90 (50–140)	0.15 (0.1–0.2)	≤2.0	0.2 (0.15–0.25)	≤3.0	–	–	
K	Gray Cast Iron	MC5020	180 (160–200)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0	
		VP15TF VP20RT	130 (100–160)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0	
	Ductile Cast Iron	MC5020	180 (160–200)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0	
		VP15TF VP20RT	110 (80–140)	0.15 (0.1–0.2)	≤3.0	0.2 (0.15–0.25)	≤4.0	0.25 (0.2–0.3)	≤5.0	
N	Aluminium Alloy	TF15	300–	0.2 (0.1–0.3)	≤5.0	–	–	–	–	
S	Titanium Alloy	MP9120 VP15TF VP20RT	50 (40–60)	0.05 (0.05–0.1)	≤1.5	0.1 (0.05–0.15)	≤2.0	–	–	
	Heat Resistant Alloy	MP9120 VP15TF VP20RT	40 (20–50)	0.05 (0.05–0.1)	≤1.5	0.1 (0.05–0.15)	≤2.0	–	–	
H	Hardened Steel	VP15TF	50 (30–70)	0.05 (0.05–0.1)	≤1.5	0.1 (0.05–0.15)	≤2.0	–	–	

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