
































MV1000 SERIES




























RECOMMENDED CUTTING CONDITIONS

CHIPBREAKER SELECTION TABLE

WJX09

Material		Properties						
			Conditions	ap	Conditions	ap	Conditions	ap
P	Mild steel	≤180HB	 	≤1.0	 	≤1.5	 	≤1.5
	Carbon steel, Alloy steel	180–350HB	 	≤1.0	 	≤1.5	 	≤1.5
M	Stainless steel	—	 	≤1.0	 	≤1.0	—	—
K	Ductile cast iron	Tensile strength ≤450MPa	 	≤1.0	 	≤1.5	 	≤1.5
		Tensile strength ≤800MPa	 	≤1.0	 	≤1.0	 	≤1.0
1/1								

WJX14

Material		Properties						
			L		M		R	
			Conditions	ap	Conditions	ap	Conditions	ap
P	Mild steel	≤180HB	 	≤2.0	 	≤3.0	 	≤3.0
	Carbon steel, Alloy steel	180–350HB	 	≤2.0	 	≤3.0	 	≤3.0
M	Stainless steel	—	 	≤2.0	 	≤1.5	—	—
K	Ductile cast iron	Tensile strength ≤450MPa	 	≤2.0	 	≤3.0	—	—
		Tensile strength ≤800MPa	 	≤2.0	 	≤2.0	—	—
1/1								

MV1000 SERIES

RECOMMENDED CUTTING CONDITIONS

WJX09

CUTTING SPEED (DRY CUTTING)


Material	Properties	MV1020	MV1030
		Vc	Vc
P	Mild steel	230 (180 – 280)	160 (100 – 220)
	Carbon steel, Alloy steel	220 (170 – 270)	150 (80 – 220)
M	Stainless steel	—	160 (130 – 200)
		—	140 (80 – 200)
K	Ductile cast iron	210 (160 – 260)	160 (120 – 210)
		190 (140 – 240)	130 (90 – 170)

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WJX09

DEPTH OF CUT / FEED PER TOOTH

DRY CUTTING

Material	Properties		ap	DCX = 25, 28 (Z=2)	DCX = 25, 28 (Z=3)	DCX ≥ 32
				fz	fz	fz
P	Mild steel	≤180HB	M, R	≤0.5	1.3 (0.4 – 2.0)	1.3 (0.4 – 2.0)
				≤1.0	1.0 (0.3 – 1.3)	0.8 (0.3 – 1.0)
				≤1.5	0.6 (0.3 – 1.0)	—
	Carbon steel Alloy steel	180–350HB	L	≤0.5	1.2 (0.4 – 1.6)	1.2 (0.4 – 1.6)
				≤1.0	0.8 (0.3 – 1.2)	0.8 (0.3 – 1.0)
				≤1.5	0.5 (0.3 – 0.7)	—
M	Stainless steel	—	M, R	≤0.5	1.3 (0.4 – 1.7)	1.3 (0.4 – 1.7)
				≤1.0	0.8 (0.3 – 1.0)	0.7 (0.3 – 0.9)
			L	≤0.5	1.2 (0.3 – 1.5)	1.2 (0.3 – 1.5)
				≤1.0	0.7 (0.2 – 1.0)	0.7 (0.2 – 0.9)
			M	≤0.5	0.8 (0.3 – 1.0)	0.8 (0.3 – 1.0)
				≤1.0	1.0 (0.4 – 1.2)	1.0 (0.4 – 1.2)
K	Ductile cast iron	Tensile strength ≤450MPa	M, R	≤0.5	1.3 (0.4 – 1.7)	1.3 (0.4 – 1.7)
				≤1.0	0.8 (0.3 – 1.0)	0.7 (0.3 – 0.9)
				≤1.5	0.5 (0.3 – 0.7)	—
			L	≤0.5	1.0 (0.3 – 1.3)	1.0 (0.3 – 1.3)
				≤1.0	0.8 (0.2 – 1.0)	0.7 (0.2 – 0.9)
				≤1.5	0.5 (0.2 – 0.8)	—
		Tensile strength ≤800MPa	M, R	≤0.5	1.0 (0.2 – 1.5)	1.0 (0.2 – 1.5)
				≤1.0	0.8 (0.2 – 1.0)	0.6 (0.2 – 0.8)
			L	≤0.5	0.8 (0.3 – 1.2)	0.8 (0.3 – 1.2)
				≤1.0	0.5 (0.2 – 0.8)	0.5 (0.2 – 0.8)

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1. To discharge chips effectively, use an air blow when machining. When the air blow is less effective at discharging chips, we recommend wet cutting.
2. When wet cutting, tool life may become shorter than dry cutting. When carrying out wet cutting for the applications recommended with dry cutting, reduce the cutting speed by 25 %.
3. When large vibration occurs, reduce the cutting conditions.
4. For interrupted cutting, reduce the cutting speed and feed rate by 20 %.

MV1000 SERIES

RECOMMENDED CUTTING CONDITIONS

WJX14

CUTTING SPEED (DRY CUTTING)

	Material	Properties	MV1020	MV1030
			Vc	Vc
P	Mild steel	≤180HB	220 (170 – 270)	130 (80 – 180)
	Carbon steel, Alloy steel	180–350HB	200 (150 – 250)	120 (60 – 180)
M	Stainless steel	≤200HB	—	160 (130 – 200)
		>200HB	—	140 (100 – 200)
K	Ductile cast iron	Tensile strength ≤450MPa	200 (150 – 250)	150 (100 – 200)
		Tensile strength ≤800MPa	180 (130 – 230)	120 (80 – 160)

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