MV1000 SERIES

RECOMMENDED CUTTING CONDITIONS

CHIPBREAKER SELECTION TABLE

WJX09

Material			~	~					
	Material	Properties	L		М		R		
			Conditions	ар	Conditions	ар	Conditions	ар	
Б	Mild steel	≤180HB	• c	≤1.0	• €	≤1.5	C #	≤1.5	
Р	Carbon steel, Alloy steel	180-350HB	• ¢	≤1.0	• €	≤1.5	c #	≤1.5	
М	Stainless steel	_	• c	≤1.0	• c	≤1.0	_	_	
K	Ductile cast iron	Tensile strength ≤450MPa	• c	≤1.0	• €	≤1.5	€ #	≤1.5	
		Tensile strength ≤800MPa	• •	≤1.0	• €	≤1.0	€ #	≤1.0	
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WJX14

		Properties	~		\sim			
	Material		L		М		R	
			Conditions	ар	Conditions	ар	Conditions	ар
_	Mild steel	≤180HB	• €	≤2.0	• €	≤3.0	c #	≤3.0
P	Carbon steel, Alloy steel	180-350HB	• €	≤2.0	• €	≼3.0	c #	≼3.0
М	Stainless steel	_	• c	≤2.0	• •	≤1.5	_	_
K	Ductile cast iron	Tensile strength ≤450MPa	• €	≤2.0	• €	≼3.0	_	
		Tensile strength ≤800MPa	• €	≤2.0	• €	≤2.0	_	_
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MV1000 SERIES

RECOMMENDED CUTTING CONDITIONS

WJX09

CUTTING SPEED (DRY CUTTING)

Matarial	Para autina	MV1020	MV1030		
Material	Properties	Vc	Vc		
Mild steel	≤180HB	230 (180 – 280)	160 (100 – 220)		
Carbon steel, Alloy steel	180-350HB	220 (170 – 270)	150 (80 – 220)		
M Stainless steel	≤200HB	_	160 (130 – 200)		
Staintess steet	>200HB	_	140 (80 – 200)		
K Ductile cast iron	Tensile strength ≤450MPa	210 (160 – 260)	160 (120 – 210)		
Ductile cast if off	Tensile strength ≤800MPa	190 (140 – 240)	130 (90 – 170)		
	renate attength 4000m a	170 (140 - 240)	130 (70 - 170)		

WJX09

DEPTH OF CUT/FEED PER TOOTH

DRY CUTTING

Material	.		ap ·	DCX = 25, 28 (Z=2)	DCX = 25, 28 (Z=3)	DCX ≥ 32	
матегіаі	Properties			fz	fz	fz	
			≤0.5	1.3 (0.4 – 2.0)	1.3 (0.4 – 2.0)	1.5 (0.5 – 2.0)	
		M, R	≤1.0	1.0 (0.3 – 1.3)	0.8 (0.3 – 1.0)	1.2 (0.4 – 1.5)	
Mild steel	≤180HB		≤1.5	0.6 (0.3 – 1.0)	_	0.8 (0.4 – 1.2)	
			≤0.5	1.2 (0.4 – 1.6)	1.2 (0.4 – 1.6)	1.2 (0.4 – 1.6)	
		L	≤1.0	0.8 (0.3 – 1.2)	0.8 (0.3 – 1.0)	1.0 (0.4 – 2.5)	
			≤0.5	1.3 (0.4 – 1.7)	1.3 (0.4 – 1.7)	1.5 (0.4 – 2.0)	
		M, R	≤1.0	0.8 (0.3 – 1.0)	0.7 (0.3 – 0.9)	1.0 (0.3 – 1.3)	
Carbon steel Alloy steel	180-350HB		≤1.5	0.5 (0.3 – 0.7)	_	0.7 (0.3 – 1.0)	
Alloy Steet			<0.5	1.2 (0.3 – 1.5)	1.2 (0.3 – 1.5)	1.2 (0.3 – 1.5)	
		L	≤1.0	0.7 (0.2 – 1.0)	0.7 (0.2 – 0.9)	0.7 (0.2 – 1.0)	
			≤0.5	0.8 (0.3 – 1.0)	0.8 (0.3 – 1.0)	0.8 (0.3 – 1.0)	
Stainless steel		L	≤1.0	1.0 (0.4 – 1.2)	1.0 (0.4 – 1.2)	1.0 (0.4 – 1.2)	
Stainless steel	_		<0.5	0.6 (0.2 – 0.8)	0.6 (0.2 – 0.8)	0.6 (0.2 – 0.8)	
		М	≤1.0	0.8 (0.3 – 1.0)	0.8 (0.3 – 1.0)	0.8 (0.3 – 1.0)	
			≤0.5	1.3 (0.4 – 1.7)	1.3 (0.4 – 1.7)	1.5 (0.4 – 2.0)	
		M, R	≤1.0	0.8 (0.3 – 1.0)	0.7 (0.3 – 0.9)	1.0 (0.3 – 1.3)	
	Tensile strength ≤450MPa		≤1.5	0.5 (0.3 – 0.7)	_	0.7 (0.3 – 1.0)	
	\$400MPd		≤0.5	1.0 (0.3 – 1.3)	1.0 (0.3 – 1.3)	1.0 (0.3 – 1.3)	
Ductile cast iron		L	≤1.0	0.8 (0.2 – 1.0)	0.7 (0.2 – 0.9)	0.8 (0.2 – 1.2)	
			≤0.5	1.0 (0.2 – 1.5)	1.0 (0.2 – 1.5)	1.3 (0.3 – 1.7)	
	Tensile strength	M, R	≤1.0	0.8 (0.2 – 1.0)	0.6 (0.2 – 0.8)	1.0 (0.3 – 1.2)	
	<800MPa		≤0.5	0.8 (0.3 – 1.2)	0.8 (0.3 – 1.2)	0.8 (0.3 – 1.2)	
		L	≤1.0	0.5 (0.2 – 0.8)	0.5 (0.2 – 0.8)	0.5 (0.2 – 0.8)	

^{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)

Matarial	Personalisa	MV1020	MV1030 Vc			
Material	Properties	Vc				
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)			
Stamless steet	>200HB	-	140 (100 – 200)			
M Ductile cast iron	Tensile strength ≤450MPa	200 (150 – 250)	150 (100 – 200)			
Ductile cast iroil	Tensile strength ≤800MPa	180 (130 – 230)	120 (80 – 160)			
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