

RECOMMENDED CUTTING CONDITIONS

Workpiece Material	Cutting Mode	Breaker	Recom- mendation	Grade	Cutting Speed (m/min)	l/d ≤ 3 (Steel shank) l/d ≤ 6 (Carbide shank)		l/d = 4-5 (Steel shank) l/d = 7-8 (Carbide shank)		
						Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	Depth of Cut (mm)	
P Mild Steel ≤180HB Carbon Steel Alloy Steel 180-350HB	Finish	FP	①	NX2525	170 (120-220)	0.10 (0.05-0.15)	-0.5	0.10 (0.05-0.15)	-0.5	
			②	MP3025	150 (100-200)	0.20 (0.10-0.25)	-1.0	0.15 (0.05-0.20)	-1.0	
	Light	LP	①	NX2525	160 (110-210)	0.20 (0.10-0.25)	-1.0	0.15 (0.05-0.20)	-1.0	
			②	MP3025	140 (90-190)	0.25 (0.15-0.35)	-2.0	0.20 (0.15-0.25)	-1.5	
	Medium	MP	①	MP3025	140 (90-190)	0.25 (0.15-0.35)	-2.0	0.20 (0.15-0.25)	-1.5	
			②	NX2525	150 (100-200)	0.25 (0.15-0.35)	-2.0	0.20 (0.15-0.25)	-1.5	
	Finish	FP	①	MC6015	140 (90-190)	0.10 (0.05-0.15)	-0.5	0.10 (0.05-0.15)	-0.5	
			②	NX2525	130 (80-180)	0.10 (0.05-0.15)	-0.5	0.10 (0.05-0.15)	-0.5	
		Light	LP	①	MC6025	140 (90-190)	0.20 (0.10-0.25)	-1.0	0.15 (0.05-0.20)	-1.0
				②	MP3025	110 (60-160)	0.20 (0.10-0.25)	-1.0	0.15 (0.05-0.20)	-1.0
Medium		MP	①	MC6025	130 (80-180)	0.25 (0.15-0.35)	-2.0	0.20 (0.15-0.25)	-1.5	
			②	MP3025	100 (60-150)	0.25 (0.15-0.35)	-2.0	0.20 (0.15-0.25)	-1.5	
M Stainless Steel ≤200HB	Finish	FM	①	VP15TF	150 (110-190)	0.10 (0.05-0.15)	-0.5	0.10 (0.05-0.15)	-0.5	
			②	MC7025	125 (85-165)	0.20 (0.10-0.25)	-1.0	0.15 (0.05-0.20)	-1.0	
	Light	LM	①	VP15TF	130 (90-170)	0.20 (0.10-0.25)	-1.0	0.15 (0.05-0.20)	-1.0	
			②	MC7025	105 (70-135)	0.20 (0.15-0.25)	-2.0	0.20 (0.15-0.25)	-1.0	
	Medium	MM	①	VP15TF	120 (80-160)	0.20 (0.15-0.25)	-2.0	0.20 (0.15-0.25)	-1.0	
			②	MC7025	120 (80-160)	0.20 (0.15-0.25)	-2.0	0.20 (0.15-0.25)	-1.0	
K Gray Cast Iron Tensile Strength ≤350MPa	Finish	F, FS	①	HTi10	130 (90-160)	0.15 (0.10-0.20)	-0.5	0.15 (0.10-0.20)	-0.5	
			②	MC5015	90 (60-120)	0.20 (0.15-0.25)	-2.0	0.20 (0.15-0.25)	-1.5	
N Aluminium Alloy	Finish	F, FS Flat Top	①	HTi10	300 (200-400)	0.10 (0.05-0.15)	-0.5	0.10 (0.05-0.15)	-0.5	
			②	MD220	200 (150-250)	0.10 (0.05-0.15)	-2.0	0.10 (0.05-0.15)	-1.0	
H Hardened Steel 35-65HRC	Finish	Flat Top	①	MB8120	100 (80-200)	0.10 (0.05-0.15)	-0.15	0.10 (0.05-0.15)	-0.1	

When vibrations occur, reduce cutting speed by 30%.

The depth of cut needs to be less than the corner diameter when using the FSVJ type.

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

Note 2) Dimensions shown for insert corner RE 0.4.(Model of ☆ Mark is RE 0.8)

Note 3) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.