STANDARD CUTTING CONDITIONS

TPA/EPA

ISO	Workpiece materials	Hardness	Grades	Cutting speed: Vc (sfm)			Feed per tooth: fz (ipt)		
				T/EPA06	T/EPA10	T/EPA15	T/EPA06	T/EPA10	T/EPA15
P	Low carbon steels (1015, etc).	- 200	AH3135	330 - 720	330 - 820	330 - 820	0.002 - 0.006	0.003 - 0.008	0.003 - 0.01
P	High carbon steels (1045, etc.)	200 - 300	AH3135	330 - 560	330 - 660	330 - 750	0.002 - 0.005	0.003 - 0.006	0.003 - 0.008
P	Alloyed steels (4140, etc.)	200 - 300	AH3135	330 - 560	330 - 660	330 - 750	0.002 - 0.005	0.003 - 0.006	0.003 - 0.008
P	Tool steels (H13, etc.)	30 - 40 HRC	AH3135	330 - 390	330 - 500	330 - 600	0.002 - 0.005	0.003 - 0.006	0.003 - 0.008
M	Stainless steels (304, etc.)	-	AH3135	260 - 490	260 - 660	330 - 660	0.002 - 0.006	0.003 - 0.006	0.003 - 0.008
K	Gray cast irons (No.250B, etc.)	150 - 250	AH120	330 - 660	330 - 820	330 - 820	0.002 - 0.006	0.005 - 0.01	0.003 - 0.01
K	Ductile cast irons (65-45-12, etc.)	150 - 250	AH120	260 - 490	260 - 660	260 - 660	0.002 - 0.006	0.005 - 0.01	0.003 - 0.01
S	Titanium alloy (Ti-6Al-4V, etc.)	-	AH120	65 - 165	60 - 200	60 - 200	0.002 - 0.004	0.003 - 0.006	0.003 - 0.007
S	Heat-resistant alloy (Inconel 718, etc.)	-	AH120	65 - 115	60 - 130	60 - 130	0.001 - 0.003	0.003 - 0.005	0.003 - 0.006

· To remove excessive chip accumulation use an air blast.
· When cutting an interrupted surface or a casted skin, the feed per tooth (fz) should be reduced to the lower recommended value shown in the above table.
· Cutting conditions are limited by machine power, workpiece rigidity, and spindle output.
· When the cutting width, depth, or overhang length is large, set *Vc* and *fz* to the lower recommended values and check the machine power and vibration.
· When you use the NMJ chipbreaker, please set up the feed less than 0.006 ipt.