

RECOMMENDED CUTTING CONDITIONS

Work Material		Grade	Breaker	Cutting Speed vc (m/min)	Cutting Width ae (mm)	Depth of Cut ap (mm)	Feed per Tooth (mm/tooth)					
							Cutting Edge Diameter D1					
							φ20	φ25—φ28	φ32—φ35	φ40	φ50—φ125	
N	Aluminium Alloy (A6061, A7075)	Si<5%	TF15 LC15TF	GL	1000 (200—3000)	<0.25 D1	<5	<0.05	<0.25			
							<10	<0.05	<0.2			
							<14.5	<0.05	<0.15			
						<0.5 D1	<5	<0.05	<0.25			
							<10	—	<0.2			
							<14.5	—	<0.15			
						<0.75 D1	<5	<0.05	<0.25			
							<10	—	<0.2			
							<14.5	—	<0.15			
						D1	<5	<0.05	<0.25			
							<10	—	—			
							<14.5	—	—			
	Aluminium Alloy (A6061, A7075)	Si<5%	TF15 MP9120	GM	1000 (200—3000)	<0.25 D1	<5	<0.05	<0.35	<0.35	<0.4	<0.4
							<10	<0.05	<0.3	<0.3	<0.35	<0.35
							<14.5	<0.05	<0.25	<0.25	<0.3	<0.3
						<0.5 D1	<5	<0.05	<0.35	<0.35	<0.35	<0.4
							<10	—	<0.3	<0.3	<0.3	<0.35
							<14.5	—	<0.2	<0.25	<0.25	<0.3
						<0.75 D1	<5	<0.05	<0.3	<0.3	<0.3	<0.35
							<10	—	<0.25	<0.25	<0.25	<0.3
							<14.5	—	<0.2	<0.2	<0.2	<0.25
						D1	<5	<0.05	<0.25	<0.25	<0.3	<0.35
							<10	—	—	—	—	—
							<14.5	—	—	—	—	—
	Aluminium Alloy (AC4B) Aluminium Alloy (ADC12, A390)	5%≤Si≤10% Si>10%	MP9120	GM	200 (200—3000)	<0.25 D1	<5	<0.05	<0.35	<0.35	<0.4	<0.4
							<10	<0.05	<0.3	<0.3	<0.35	<0.35
							<14.5	<0.05	<0.25	<0.25	<0.3	<0.3
						<0.5 D1	<5	<0.05	<0.35	<0.35	<0.35	<0.4
							<10	—	<0.3	<0.3	<0.3	<0.35
							<14.5	—	<0.2	<0.25	<0.25	<0.3
						<0.75 D1	<5	<0.05	<0.3	<0.3	<0.3	<0.35
							<10	—	<0.25	<0.25	<0.25	<0.3
							<14.5	—	<0.2	<0.2	<0.2	<0.25
						D1	<5	<0.05	<0.25	<0.25	<0.3	<0.35
							<10	—	—	—	—	—
							<14.5	—	—	—	—	—
S	Titanium Alloy (Ti6Al4V)	—	MP9120	GM	40 (30—60)	<0.25 D1	<5	<0.05	<0.1			
							<10	<0.05	<0.1			
							<14.5	<0.05	<0.1			
						<0.5 D1	<5	<0.05	<0.08	<0.1	<0.1	<0.1
							<10	—	<0.08	<0.1	<0.1	<0.1
							<14.5	—	<0.08	<0.1	<0.1	<0.1
						<0.75 D1	<5	<0.05	<0.05	<0.08	<0.1	<0.1
							<10	—	<0.05	<0.08	<0.1	<0.1
							<14.5	—	<0.05	<0.08	<0.1	<0.1
						D1	<5	<0.05	<0.05	<0.05	<0.05	<0.05
							<10	—	—	—	—	—
							<14.5	—	—	—	—	—

(Note 1) The above cutting conditions are determined based on high workpiece and machine rigidity, where no vibration occurred. If vibrations occur make adjustments according to the machining conditions.

(Note 2) Note, vibrations may occur in the following conditions.

When using long tool overhang.

When pocket machining corner radii.

When the workpiece has poor clamping rigidity or when the machine rigidity or workpiece rigidity is low, vibrations can occur easily, if so, reduce cutting conditions such as width and depth of cut and feed per tooth.