

## RECOMMENDED CUTTING CONDITIONS

Work material	Aluminium alloy				Aluminium cast, Copper, Copper alloys			
	$\alpha \leq 15^\circ$		$\alpha > 15^\circ$		$\alpha \leq 15^\circ$		$\alpha > 15^\circ$	
	Revolution ( $\text{min}^{-1}$ )	Feed rate ( $\text{mm}/\text{min}$ )	Revolution ( $\text{min}^{-1}$ )	Feed rate ( $\text{mm}/\text{min}$ )	Revolution ( $\text{min}^{-1}$ )	Feed rate ( $\text{mm}/\text{min}$ )	Revolution ( $\text{min}^{-1}$ )	Feed rate ( $\text{mm}/\text{min}$ )
R 0.1	40000	350	40000	260	40000	280	40000	210
R 0.15	40000	480	40000	360	40000	380	40000	290
R 0.2	40000	600	40000	450	40000	480	40000	360
R 0.25	40000	800	40000	600	40000	640	40000	480
R 0.3	40000	1000	40000	750	40000	800	40000	600
R 0.4	40000	1500	40000	1100	40000	1200	40000	880
R 0.5	40000	2000	40000	1500	40000	1600	40000	1200
R 0.75	40000	2200	40000	1600	40000	1800	40000	1300
R 1	40000	2800	40000	2200	40000	2200	32000	1400
R 1.25	40000	3200	38000	2200	32000	2000	30000	1400
R 1.5	40000	4000	32000	2600	32000	2600	26000	1700
R 2	30000	4200	24000	2800	24000	2700	19000	1800
R 2.5	24000	4400	19000	2800	19000	2800	15000	1800
R 3	20000	4000	16000	2800	16000	2600	13000	1800
R 4	15000	3600	12000	2400	12000	2300	9600	1500
R 5	12000	3600	9500	2000	9600	2300	7600	1300
R 6	10000	3200	8000	2200	8000	2000	6400	1400
R 8	7500	2800	6000	1800	6000	1800	4800	1200
R10	6000	2500	4800	1600	4800	1600	3800	1000

  

Depth of cut
<p style="text-align: center;"> <math>\leq 0.2R</math> (<math>R &lt; 0.5</math>)  <math>\leq 0.4R</math> (<math>R \geq 0.5</math>)         </p> <p style="text-align: right;"><math>\leq 0.2R</math></p> <p style="text-align: right;">R:Radius</p>

- 1)  $\alpha$  is the inclination angle of the machined surface.
- 2) When cutting a very hard workpiece, reduce the feed rate.
- 3) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 4) If the rigidity of the machine or the work materials installation is very low, or chattering and noise are generated, reduce the revolution and feed rate proportionately.