

## RECOMMENDED CUTTING CONDITIONS

RE (inch)	Hardened steel(45—55HRC) AISI H13 etc.						Hardened steel (55—62HRC) AISI D2 etc.							
	$\alpha \leq 15^\circ$			$\alpha > 15^\circ$			Depth of cut ap (inch)	$\alpha \leq 15^\circ$			$\alpha > 15^\circ$			Depth of cut ap (inch)
	Revolution (min <sup>-1</sup> )	Table feed (mm/min) (IPM)		Revolution (min <sup>-1</sup> )	Table feed (mm/min) (IPM)			Revolution (min <sup>-1</sup> )	Table feed (mm/min) (IPM)		Revolution (min <sup>-1</sup> )	Table feed (mm/min) (IPM)		
<b>R .0156</b>	40000	6400	252	40000	2400	94.5	.0020	40000	4000	157	40000	1600	63	.0016
<b>R .0313</b>	40000	9600	378	40000	4000	157	.0039	40000	8000	315	30000	2400	94.5	.0031
<b>R .0469</b>	40000	10000	394	33000	4600	182	.0047	36000	7900	312	20000	2400	94.5	.0043
<b>R .0625</b>	38000	11000	433	25000	4000	157	.0051	30000	7200	283	15000	2100	82.7	.0047
<b>R .0938</b>	27000	9700	383	17000	3100	122	.0067	20000	5600	220	10000	1800	70.9	.0055
<b>R .1250</b>	20000	8000	315	13000	2600	102	.0098	15000	4500	177	7500	1500	59.1	.0079
<b>R .1563</b>	16000	6400	252	10000	2000	78.7	.0118	12000	3600	142	6000	1200	47.2	.0079
<b>R .1875</b>	13000	5200	205	8400	1700	66.9	.0197	10000	3000	118	5000	1000	39.4	.0079
<b>R .2500</b>	8500	3400	134	5700	1100	43.3	.0197	6500	2100	82.7	3400	680	26.8	.0118

$\leq 0.2RE$

RE (inch)	Hardened steel (62—70HRC) AISI W1, AISI M2 etc.						Depth of cut ap (inch)
	$\alpha \leq 15^\circ$			$\alpha > 15^\circ$			
	Revolution (min <sup>-1</sup> )	Table feed (mm/min) (IPM)		Revolution (min <sup>-1</sup> )	Table feed (mm/min) (IPM)		
<b>R .0156</b>	40000	2800	110	40000	1600	63	.0012
<b>R .0313</b>	30000	4200	165	20000	1200	47.2	.0024
<b>R .0469</b>	20000	3600	142	13000	900	35.4	.0031
<b>R .0625</b>	15000	3000	118	10000	800	31.5	.0035
<b>R .0938</b>	10000	2200	86.6	6300	630	24.8	.0039
<b>R .1250</b>	7500	1700	66.9	4800	580	22.7	.0043
<b>R .1563</b>	6000	1400	55.1	4000	480	18.9	.0043
<b>R .1875</b>	5000	1100	43.3	3200	450	17.6	.0047
<b>R .2500</b>	3400	750	29.4	2000	280	11	.0047

$\leq 0.2RE$

- 1)  $\alpha$  is the inclination of the machined surface.
- 2) If the depth of cut is smaller than this table, feed rate can be increased.
- 3) If the rigidity of the machine or the workpiece installation is very low, or chattering is generated, please reduce the revolution and the feed rate proportionately.

