

RECOMMENDED CUTTING CONDITIONS

Work material		Carbon steel, Cast iron, Alloy steel, Pre-hardened steel Cf53, GG25			Hardened steel (45–55HRC) X40CrMoV51		
R (mm)	Length of cut (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Depth of cut ap (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Depth of cut ap (mm)
R0.3	4	18000–32000	250–600	0.01	13000–24000	200–400	0.005
	6			0.007			0.004
R0.4	6	14000–24000	250–600	0.025	10000–18000	200–400	0.013
	8			0.02			0.01
	10			0.015			0.008
R0.5	8	11000–19000	300–800	0.025	8000–14000	200–500	0.013
	10			0.02			0.01
	12			0.018			0.009
	16			0.015			0.008
R0.6	8	9200–16000	300–800	0.035	6600–12000	200–500	0.018
	10			0.03			0.015
	12			0.027			0.013
	16			0.02			0.01
R0.75	8	7500–13000	300–800	0.05	5300–9500	200–500	0.025
	10			0.04			0.02
	12			0.035			0.018
	16			0.03			0.015
	20			0.02			0.01
R0.9	8	6200–11000	300–800	0.08	4400–8000	200–500	0.04
	10			0.07			0.035
	12			0.06			0.035
	16			0.05			0.03
	20			0.04			0.02
R1	10	5500–9500	300–800	0.08	4000–7200	200–500	0.045
	12			0.07			0.04
	16			0.05			0.03
	20			0.04			0.02
	25			0.03			0.015
	30			0.02			0.01

ap:Depth of Cut in the Axial Direction

- 1) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 2) Cutting conditions may be considerably different due to the overhang (milling depth), depth of cut, and machine tool. Please see the above table as a standard.