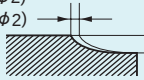
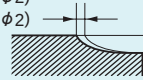


RECOMMENDED CUTTING CONDITIONS

Work material			Alloy steel, Tool steel, Pre-hardened steel X40CrMoV51		Hardened steel (45—55HRC) X40CrMoV51		Hardened steel (55—62HRC) X210Cr12	
Dia. (mm)	Taper angle one side	Neck length (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)
1.5	1°30'	6	36000	270— 810	24000	180— 540	15000	90— 270
	1°30'	10	28000	210— 630	19000	140— 420	11000	70— 210
2	1°30'	10	32000	540—1800	22000	360—1200	13000	180— 590
	1°30'	15	25000	420—1400	17000	280— 910	10000	140— 460
2.5	1°30'	12	26000	600—1900	18000	400—1300	11000	200— 640
	1°30'	20	20000	450— 140	13000	300— 960	8000	150— 480
3	1°30'	15	27000	810—2700	18000	540—1800	11000	270— 900
	1°30'	20	21000	630—2100	14000	420—1400	8000	210— 700
4	1°30'	20	23000	1080—3000	15000	720—3000	9000	360—3000
	1°30'	30	18000	840—1500	12000	560—1500	7000	280—1500
5	1°	40	10000	520—1400	7000	420— 840	5000	260— 600
	1°	60	7000	360— 840	5000	300— 500	4000	210— 400
6	1°	40	20000	1650—4500	13000	1100—3000	8000	550—1500
8	1°	53	15000	1950—4500	10000	1300—3000	6000	650—1500
10	1°	55	12000	1650—4500	8000	1100—3000	5000	550—1500
12	1°	70	10000	1400—4500	6500	900—3000	4000	450—1500
Depth of cut			$\leq 0.2R$ ($D \leq \phi 2$) $\leq 0.4R$ ($D > \phi 2$)  $\leq 0.1\text{mm}$ ($D \leq \phi 5$) $\leq 0.2\text{mm}$ ($D \leq \phi 5$) $\leq 0.5\text{mm}$ ($D \geq \phi 6$)			$\leq 0.1R$ ($D \leq \phi 2$) $\leq 0.2R$ ($D > \phi 2$)  $\leq 0.05\text{mm}$ ($D \leq \phi 1.5$) $\leq 0.1\text{mm}$ ($D \leq \phi 5$) $\leq 0.3\text{mm}$ ($D \geq \phi 6$)		

D: Dia.

- 1) The cutting conditions above are a guide only to machining with cutting edges with a corner radius. When machining with peripheral cutting edges, use the minimum feed rate as a guide.
- 2) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 3) For profile machining such as moulds, machining conditions may differ considerably depending on the workpiece geometry, machining methods and depth of cut. Reduce the feed rate especially when machining the corner sections of a workpiece.
- 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.