

RECOMMENDED CUTTING CONDITIONS

Shoulder milling

Work material	Structural steel, Cast iron, Carbon steel		Carbon steel, Alloy steel (20–30HRC)		Alloy steel, Tool steel, Pre-hardened steel (30–35HRC)		Austenitic stainless steel, Alloy steel, Tool steel (35–40HRC)	
	Ck45, GG25, Cf53		Ck55		X40CrMoV51, X210Cr12		X5CrNi1810, X5CrNiMo17-12-2	
Dia. (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)
10	1000	75	700	55	480	40	400	30
12	850	90	630	70	440	50	370	40
16	700	100	540	80	380	55	320	45
20	560	100	430	80	300	55	260	50
25	450	100	340	75	240	55	210	50
30	370	100	290	75	200	50	170	45
40	260	80	200	60	135	45	120	40
50	180	65	140	50	90	35	80	30

Depth of cut	

- 1) Supply cutting fluid sufficiently during cutting. For dry-cutting, decrease the revolution and feed rate proportionately by 20–50%.
- 2) When the diameter exceeds 30 and the metal removal is less than the quantity shown in the table, the revolution and feed rate may be increased proportionately by 10–40%.
- 3) 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.