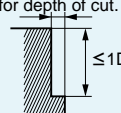
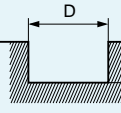


## RECOMMENDED CUTTING CONDITIONS

Work material	Carbon steel, Cast iron, Alloy steel, Pre-hardened steel			Hardened steel (45—55HRC)		
	Cf53, GG25			X40CrMoV51		
Dia. (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Depth of cut (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Depth of cut (mm)
0.1	40000	40	0.001	40000	40	0.001
0.2	40000	100	0.002	40000	100	0.002
0.3	40000	200	0.005	40000	200	0.005
0.4	40000	600	0.01	40000	600	0.01
0.5	40000	1000	0.015	40000	960	0.015
0.6	40000	1200	0.02	40000	1200	0.02
0.7	40000	1400	0.02	40000	1400	0.02
0.8	40000	1600	0.03	40000	1600	0.03
0.9	40000	1800	0.04	40000	1600	0.04
1	40000	2000	0.06	32000	1600	0.06
1.5	40000	3000	0.12	32000	1900	0.08
2	30000	3000	0.18	24000	1900	0.10
2.5	24000	2600	0.25	19000	1600	0.13
3	20000	2300	0.30	16000	1400	0.15
4	15000	2000	0.40	12000	1200	0.20
5	12000	1600	0.50	9000	900	0.25
6	10000	1400	0.60	7000	700	0.30
8	8000	1000	0.80	5600	550	0.40
10	6400	900	1.00	4500	500	0.50
12	5400	820	1.00	3800	450	0.50
16	2400	380	3.00	1200	100	0.80
20	1900	320	4.00	1000	80	1.00

Depth of cut	<p>≤ Please refer to the list above for depth of cut.</p> 		<p>≤ Please refer to the list above for depth of cut.</p> 		D: Dia.
	<p>≤ Please refer to the list above for depth of cut.</p>				

- 1) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 2) When slotting with end mills with  $\phi 3$  or larger, reduce the revolution to 50—70% and the feed rate to 40—60%.
- 3) When drilling, please set the feed rate at 1/3 or below the values above.
- 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.