

RECOMMENDED CUTTING CONDITIONS

DC (mm)	Carbon steel, Cast iron, Alloy steel (–30HRC)			Alloy steel, Tool steel, Pre-hardened steel			Austenitic stainless steel, Titanium alloy			Hardened steel (45–55HRC)		
	AISI 1050, AISI 35, AISI P20 etc.			AISI H13, AISI W1-10, AISI P21 etc.			AISI 304, AISI 306, Ti-6Al-4V etc.			AISI H13 etc.		
	Revolution (min ⁻¹)	Table feed		Revolution (min ⁻¹)	Table feed		Revolution (min ⁻¹)	Table feed		Revolution (min ⁻¹)	Table feed	
		(mm/min)	(IPM)		(mm/min)	(IPM)		(mm/min)	(IPM)		(mm/min)	(IPM)
1	11100	85	3.3	9500	65	2.6	8000	50	2.0	6400	35	1.4
1.5	7400	85	3.3	6400	90	3.5	5300	50	2.0	4200	35	1.4
2	5600	85	3.3	4800	90	3.5	4000	50	2.0	3200	35	1.4
2.5	4500	85	3.3	3800	90	3.5	3200	55	2.2	2500	35	1.4
3	3700	90	3.5	3400	90	3.5	2600	60	2.4	2100	35	1.4
4	3000	110	4.3	2700	90	3.5	2100	70	2.8	1700	50	2.0
5	2600	140	5.5	2300	110	4.3	1800	85	3.3	1500	55	2.2
6	2300	170	6.7	2000	140	5.5	1500	110	4.3	1300	70	2.8
8	1700	180	7.1	1500	140	5.5	1200	110	4.3	1000	70	2.8
10	1400	180	7.1	1300	140	5.5	950	110	4.3	800	70	2.8
12	1200	170	6.7	1100	140	5.5	800	110	4.3	670	70	2.8

Depth of cut	Carbon steel, Cast iron, Alloy steel (–30HRC)		Alloy steel, Tool steel, Pre-hardened steel		Austenitic stainless steel, Titanium alloy		Hardened steel (45–55HRC)	
	DC	Depth	DC	Depth	DC	Depth	DC	Depth
	DC	$\leq 0.05DC$ (MAX.0.5mm)	DC	$\leq 2.5DC$	DC	$\leq 0.02DC$	DC	$\leq 2DC$
	DC	$\leq 0.1DC$ (DC < $\phi 2$) $\leq 0.2DC$ (DC $\geq \phi 2$)	DC	$\leq 0.05DC$	DC	$\leq 0.05DC$	DC	$\leq 0.05DC$

- 1) When cutting austenitic stainless steels, the use of water-soluble cutting fluid is especially effective.
- 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.