

RECOMMENDED CUTTING CONDITIONS

Work material		Carbon steel, Cast iron, Alloy steel (–30HRC) AISI 1050, AISI 35, AISI P20 etc.				Alloy steel, Tool steel, Pre-hardened steel AISI H13, AISI W1-10, AISI P21 etc.			
DC (mm)	LU (mm)	Revolution (min ⁻¹)	Table feed		Depth of cut per pass (mm)	Revolution (min ⁻¹)	Table feed		Depth of cut per pass (mm)
			(mm/min)	(IPM)			(mm/min)	(IPM)	
0.3	0.8	40000	500–1000	19.7–39.4	0.01	30000	300–800	11.8–31.5	0.01
	1.5				0.007				0.007
0.4	1	40000	500–1000	19.7–39.4	0.015	30000	300–800	11.8–31.5	0.015
	2				0.01				0.01
0.5	1.3	40000	500–1000	19.7–39.4	0.02	30000	300–800	11.8–31.5	0.02
	2.5				0.013				0.013
0.6	1.5	33000	500–1000	19.7–39.4	0.03	25000	300–800	11.8–31.5	0.03
	3				0.018				0.018
0.7	1.8	29000	500–1000	19.7–39.4	0.04	22000	300–800	11.8–31.5	0.04
	3.5				0.025				0.025
0.8	2	25000	500–1000	19.7–39.4	0.06	20000	300–800	11.8–31.5	0.06
	4				0.03				0.03
0.9	2.3	22000	500–1000	19.7–39.4	0.08	18000	300–800	11.8–31.5	0.08
	4.5				0.05				0.05
1	2.5	20000	500–1000	19.7–39.4	0.1	16000	300–800	11.8–31.5	0.1
	5				0.07				0.07
1.1	2.8	18000	500–1000	19.7–39.4	0.12	14000	300–800	11.8–31.5	0.12
	5.5				0.08				0.08
1.2	3	16000	500–1000	19.7–39.4	0.12	13000	300–800	11.8–31.5	0.12
	6				0.08				0.08
1.3	3.3	15000	500–1000	19.7–39.4	0.12	12000	300–800	11.8–31.5	0.12
	6.5				0.08				0.08
1.4	3.5	14000	500–1000	19.7–39.4	0.12	11000	300–800	11.8–31.5	0.12
	7				0.08				0.08
1.5	3.8	13000	500–1000	19.7–39.4	0.15	10000	300–800	11.8–31.5	0.15
	7.5				0.1				0.1
1.6	4	12000	500–1000	19.7–39.4	0.15	10000	300–800	11.8–31.5	0.15
	8				0.1				0.1
1.7	4.3	12000	500–1000	19.7–39.4	0.17	9500	300–800	11.8–31.5	0.17
	8.5				0.12				0.12
1.8	4.5	11000	500–1000	19.7–39.4	0.17	9000	300–800	11.8–31.5	0.17
	9				0.12				0.12
1.9	4.8	10000	500–1000	19.7–39.4	0.17	9000	300–800	11.8–31.5	0.17
	9.5				0.12				0.12
2	5	10000	500–1000	19.7–39.4	0.2	9000	300–800	11.8–31.5	0.2
	10				0.15				0.15
2.1	5.3	9800	500–1000	19.7–39.4	0.2	9000	300–800	11.8–31.5	0.2
	10.5				0.15				0.15
2.2	5.5	9600	500–1000	19.7–39.4	0.2	9000	300–800	11.8–31.5	0.2
	11				0.15				0.15
2.3	5.8	9400	500–1000	19.7–39.4	0.2	8800	300–800	11.8–31.5	0.2
	11.5				0.15				0.15
2.4	6	9200	500–1000	19.7–39.4	0.25	8700	300–800	11.8–31.5	0.25
	12				0.2				0.2
2.5	6.3	9000	500–1000	19.7–39.4	0.25	8500	300–800	11.8–31.5	0.25
	12.5				0.2				0.2

1) If the depth of cut is smaller than this table, feed rate can be increased.

2) Cutting conditions may differ considerably due to the overhang, depth of cut, and machine tool conditions. Please use the above table as a start reference point.