

Speed & Feed Recommendations



51M, 51MCR, 51ML, 51MLC Metric	CUT			Vc (m/mm)		FEED (mm/flute)					
	Type	a _p x D1	a _e x D1			6	8	10	12	16	20
CARBON STEEL 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	Profile	≤ 1	≤ 0.1	219	rpm	11633	8725	6980	5816	4362	3490
				(176-263)	Fz	0,04800	0,08100	0,10100	0,12100	0,14200	0,15800
					Feed (mm/min)	3350	4240	4230	4223	3717	3308
	HSC	≤ 2	≤ 0.05	279	rpm	14784	11088	8870	7392	5544	4435
				(223-335)	Fz	0,06600	0,11300	0,14100	0,16900	0,19700	0,22000
					Feed (mm/min)	5854	7517	7504	7495	6553	5854
ALLOY STEEL 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	Profile	≤ 1	≤ 0.1	149	rpm	7917	5938	4750	3958	2969	2375
				(119-179)	Fz	0,03600	0,06100	0,07700	0,09200	0,10700	0,11900
					Feed (mm/min)	1710	2173	2195	2185	1906	1696
	HSC	≤ 2	≤ 0.05	189	rpm	10017	7513	6010	5009	3756	3005
				(151-227)	Fz	0,04900	0,08300	0,10400	0,12500	0,14600	0,16300
					Feed (mm/min)	2945	3741	3750	3756	3291	2939
TOOL STEEL A2, D2, H13, L2, M2, P20, S7, T15, W2	Profile	≤ 1	≤ 0.1	73	rpm	3878	2908	2327	1939	1454	1163
				(59-88)	Fz	0,02900	0,04900	0,06100	0,07300	0,08600	0,09600
					Feed (mm/min)	675	855	852	849	750	670
	HSC	≤ 2	≤ 0.05	93	rpm	4928	3696	2957	2464	1848	1478
				(74-112)	Fz	0,04000	0,06900	0,08600	0,10300	0,12000	0,13400
					Feed (mm/min)	1183	1530	1526	1523	1331	1189
STAINLESS STEEL (FREE MACHING) 303, 416, 420F, 430F, 440F	Profile	≤ 1	≤ 0.1	155	rpm	8240	6180	4944	4120	3090	2472
				(140-171)	Fz	0,03500	0,06000	0,07500	0,09000	0,10500	0,11700
					Feed (mm/min)	1730	2225	2225	2225	1947	1735
	HSC	≤ 2	≤ 0.05	198	rpm	10502	7877	6301	5251	3938	3151
				(178-218)	Fz	0,04800	0,08200	0,10200	0,12200	0,14300	0,15900
					Feed (mm/min)	3025	3875	3856	3844	3379	3006
STAINLESS STEEL (DIFFICULT) 304, 304L, 316, 316L	Profile	≤ 1	≤ 0.1	107	rpm	5655	4241	3393	2827	2121	1696
				(96-117)	Fz	0,02900	0,04900	0,06100	0,07300	0,08600	0,09600
					Feed (mm/min)	984	1247	1242	1238	1094	977
	HSC	≤ 2	≤ 0.05	137	rpm	7271	5453	4362	3635	2726	2181
				(123-151)	Fz	0,04000	0,06900	0,08600	0,10300	0,12000	0,13400
					Feed (mm/min)	1745	2258	2251	2247	1963	1754
STAINLESS STEEL (PH) 13-8 PH, 15-5 PH, 17-4 PH, Custom 450	Profile	≤ 1	≤ 0.1	99	rpm	5251	3938	3151	2626	1969	1575
				(89-109)	Fz	0,02900	0,04900	0,06100	0,07300	0,08600	0,09600
					Feed (mm/min)	914	1158	1153	1150	1016	907
	HSC	≤ 2	≤ 0.05	125	rpm	6624	4968	3975	3312	2484	1987
				(112-137)	Fz	0,04000	0,06900	0,08600	0,10300	0,12000	0,13400
					Feed (mm/min)	1590	2057	2051	2047	1789	1598