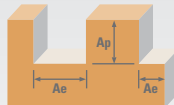


Series 1, 3, 5, 14, 15, 16, 17, 23, 24, 59 Fractional		Hardness BRINELL				Vc (SFM)	Diameter (D ₁) (inch)									
			Flutes	Ae x D ₁	Ap x D ₁		1/64	1/32	1/16	1/8	1/4	3/8	1/2	3/4	1	
P	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	≤ 175		Profile		460	RPM	112461	56230	28115	14058	7029	4686	3514	2343	1757
				(368-552)	Fz	0.00003	0.00006	0.00013	0.0003	0.0008	0.0015	0.0020	0.0024	0.0028		
					2	≤ 0.50	≤ 1.5	6.7	6.7	7.3	8.4	11.2	14.1	14.1	11.2	9.8
					3	≤ 0.25	≤ 1.5	10.1	10.1	11.0	12.7	16.9	21.1	21.1	16.9	14.8
			(268-402)	4	≤ 0.25	≤ 1.5	13.5	13.5	14.6	16.9	22.5	28.1	28.1	22.5	19.7	
				Slot	Fz	0.00003	0.00006	0.00013	0.0003	0.0008	0.0015	0.0020	0.0024	0.0028		
					2	1	≤ 1	4.9	4.9	5.3	6.1	8.2	10.2	10.2	8.2	7.2
					3	1	≤ 0.5	7.4	7.4	8.0	9.2	12.3	15.4	15.4	12.3	10.7
			4	1	≤ 0.4	9.8	9.8	10.6	12.3	16.4	20.5	20.5	16.4	14.3		
			P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 275		Profile		335	RPM	81901	40950	20475	10238	5119	3413
(268-402)	Fz	0.00002					0.00005	0.00009	0.0002	0.0006	0.0011	0.0015	0.0018	0.0021		
	2	≤ 0.50					≤ 1.5	3.3	4.1	3.7	4.1	6.1	7.5	7.7	6.1	5.4
	3	≤ 0.25					≤ 1.5	4.9	6.1	5.5	6.1	9.2	11.3	11.5	9.2	8.1
(196-294)	4	≤ 0.25				≤ 1.5	6.6	8.2	7.4	8.2	12.3	15.0	15.4	12.3	10.7	
	Slot	Fz				0.00002	0.00005	0.00009	0.0002	0.0006	0.0011	0.0015	0.0018	0.0021		
		2				1	≤ 1	2.4	3.0	2.7	3.0	4.5	5.5	5.6	4.5	3.9
		3				1	≤ 0.5	3.6	4.5	4.0	4.5	6.7	8.2	8.4	6.7	5.9
4	1	≤ 0.4				4.8	6.0	5.4	6.0	9.0	11.0	11.2	9.0	7.9		
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 250					Profile		315	RPM	77011	38506	19253	9626	4813	3209
			(252-378)	Fz	0.00002		0.00005	0.00009	0.0002	0.0006	0.0011	0.0015	0.0018	0.0021		
				2	≤ 0.50		≤ 1.5	3.1	3.9	3.5	3.9	5.8	7.1	7.2	5.8	5.1
				3	≤ 0.25		≤ 1.5	4.6	5.8	5.2	5.8	8.7	10.6	10.8	8.7	7.6
			(184-276)	4	≤ 0.25	≤ 1.5	6.2	7.7	6.9	7.7	11.6	14.1	14.4	11.6	10.1	
				Slot	Fz	0.00002	0.00005	0.00009	0.0002	0.0006	0.0011	0.0015	0.0018	0.0021		
					2	1	≤ 1	2.2	2.8	2.5	2.8	4.2	5.2	5.3	4.2	3.7
					3	1	≤ 0.5	3.4	4.2	3.8	4.2	6.3	7.7	7.9	6.3	5.5
			4	1	≤ 0.4	4.5	5.6	5.1	5.6	8.4	10.3	10.5	8.4	7.4		
			K	CAST IRONS Gray, Malleable, Ductile	≤ 220		Profile		335	RPM	81901	40950	20475	10238	5119	3413
(268-402)	Fz	0.00003					0.00006	0.00013	0.0003	0.0008	0.0015	0.0020	0.0024	0.0028		
	2	≤ 0.50					≤ 1.5	4.9	4.9	5.3	6.1	8.2	10.2	10.2	8.2	7.2
	3	≤ 0.25					≤ 1.5	7.4	7.4	8.0	9.2	12.3	15.4	15.4	12.3	10.7
(196-294)	4	≤ 0.25				≤ 1.5	9.8	9.8	10.6	12.3	16.4	20.5	20.5	16.4	14.3	
	Slot	Fz				0.00003	0.00006	0.00013	0.0003	0.0008	0.0015	0.0020	0.0024	0.0028		
		2				1	≤ 1	3.6	3.6	3.9	4.5	6.0	7.5	7.5	6.0	5.2
		3				1	≤ 0.5	5.4	5.4	5.8	6.7	9.0	11.2	11.2	9.0	7.9
4	1	≤ 0.4				7.2	7.2	7.8	9.0	12.0	15.0	15.0	12.0	10.5		
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F 440F	≤ 275					Profile		370	RPM	90458	45229	22614	11307	5654	3769
			(296-444)	Fz	0.00002		0.00005	0.00009	0.0002	0.0006	0.0011	0.0015	0.0018	0.0021		
				2	≤ 0.50		≤ 1.5	3.6	4.5	4.1	4.5	6.8	8.3	8.5	6.8	5.9
				3	≤ 0.25		≤ 1.5	5.4	6.8	6.1	6.8	10.2	12.4	12.7	10.2	8.9
			(216-324)	4	≤ 0.25	≤ 1.5	7.2	9.0	8.1	9.0	13.6	16.6	17.0	13.6	11.9	
				Slot	Fz	0.00002	0.00005	0.00009	0.0002	0.0006	0.0011	0.0015	0.0018	0.0021		
					2	1	≤ 1	2.6	3.3	3.0	3.3	5.0	6.1	6.2	5.0	4.3
					3	1	≤ 0.5	4.0	5.0	4.5	5.0	7.4	9.1	9.3	7.4	6.5
			4	1	≤ 0.4	5.3	6.6	5.9	6.6	9.9	12.1	12.4	9.9	8.7		
			M	STAINLESS STEELS (DIFFICULT) 304, 304L, 316, 316L, 17-4 PH, 15-5, 13-4, Custom 450	≤ 275		Profile		255	RPM	62342	31171	15586	7793	3896	2598
(204-306)	Fz	0.00002					0.00004	0.00008	0.0002	0.0005	0.0009	0.0012	0.0014	0.0017		
	2	≤ 0.50					≤ 1.5	2.5	2.5	2.5	2.6	3.9	4.7	4.7	3.6	3.3
	3	≤ 0.25					≤ 1.5	3.7	3.7	3.7	4.0	5.8	7.0	7.0	5.5	5.0
(148-222)	4	≤ 0.25				≤ 1.5	5.0	5.0	5.0	5.3	7.8	9.4	9.4	7.3	6.6	
	Slot	Fz				0.00002	0.00004	0.00008	0.0002	0.0005	0.0009	0.0012	0.0014	0.0017		
		2				1	≤ 1	1.8	1.8	1.8	1.9	2.8	3.4	3.4	2.6	2.4
		3				1	≤ 0.5	2.7	2.7	2.7	2.9	4.2	5.1	5.1	4.0	3.6
4	1	≤ 0.4				3.6	3.6	3.6	3.8	5.7	6.8	6.8	5.3	4.8		

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