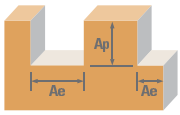
Series 45 Fractional	Hardness		 Ae x D_1	Ap x D_1	Vc (sfm)		Diameter (D_1) (inch) 1/4	3/8	1/2	5/8	3/4	1
N	**ALUMINUM ALLOYS** 2024, 5052, 5086, 6061, 6073, 7075	≤ 150 Bhn or ≤ 7 HRc	Slot	1	≤ 1	1600 (1280-1920)	RPM	24448	16299	12224	9779	8149	6112
							Fz	0.0025	0.0045	0.0060	0.0065	0.0070	0.0085
							Feed (ipm)	122	147	147	127	114	104
			Profile	≤ 0.5	≤ 1.5	2000 (1600-2400)	RPM	30560	20373	15280	12224	10187	7640
							Fz	0.0025	0.0045	0.0060	0.0065	0.0070	0.0085
							Feed (ipm)	153	183	183	159	143	130
			HSM	≤ 0.05	≤ 2	3300 (2640-3960)	RPM	50424	33616	25212	20170	16808	12606
							Fz	0.0055	0.0105	0.0140	0.0150	0.0165	0.0195
							Feed (ipm)	555	706	706	605	555	492
	ALUMINUM DIE CAST ALLOYS (HIGH SILICONE) A-390, A-392, B- 390	≤ 125 Bhn or ≤ 77 HRb	Slot	1	≤ 1	600 (480-720)	RPM	9168	6112	4584	3667	3056	2292
							Fz	0.0025	0.0045	0.0060	0.0065	0.0070	0.0085
							Feed (ipm)	46	55	55	48	43	39
			Profile	≤ 0.5	≤ 1.5	750 (600-900)	RPM	11460	7640	5730	4584	3820	2865
							Fz	0.0025	0.0045	0.0060	0.0065	0.0070	0.0085
							Feed (ipm)	57	69	69	60	53	49
			HSM	≤ 0.05	≤ 2	1240 (992-1488)	RPM	18947	12631	9474	7579	6316	4737
							Fz	0.0055	0.0105	0.0140	0.0150	0.0165	0.0195
							Feed (ipm)	208	265	265	227	208	185
	COPPER ALLOYS Aluminum Bronze Brass Naval Brass Red Brass	≤ 140 Bhn or ≤ 3 HRc	Slot	1	≤ 1	865 (692-1038)	RPM	13217	8811	6609	5287	4406	3304
							Fz	0.0020	0.0040	0.0050	0.0055	0.0060	0.0070
							Feed (ipm)	53	70	66	58	53	46
			Profile	≤ 0.5	≤ 1.5	1080 (864-1296)	RPM	16502	11002	8251	6601	5501	4126
							Fz	0.0020	0.0040	0.0050	0.0055	0.0060	0.0070
							Feed (ipm)	66	88	83	73	66	58
			HSM	≤ 0.05	≤ 2	1780 (1424-2136)	RPM	27198	18132	13599	10879	9066	6800
							Fz	0.0045	0.0085	0.0115	0.0125	0.0140	0.0160
							Feed (ipm)	245	308	313	272	254	218
	COPPER ALLOYS Beryllium Copper C110, Manganese Bronze, Tin Bronze	≤ 200 Bhn or ≤ 23 HRc	Slot	1	≤ 1	345 (276-414)	RPM	5272	3514	2636	2109	1757	1318
							Fz	0.0020	0.0040	0.0050	0.0055	0.0060	0.0070
							Feed (ipm)	21	28	26	23	21	18
			Profile	≤ 0.5	≤ 1.5	430 (344-516)	RPM	6570	4380	3285	2628	2190	1643
							Fz	0.0020	0.0040	0.0050	0.0055	0.0060	0.0070
							Feed (ipm)	26	35	33	29	26	23
			HSM	≤ 0.05	≤ 2	710 (568-852)	RPM	10849	7233	5424	4340	3616	2712
							Fz	0.0045	0.0085	0.0115	0.0125	0.0140	0.0160
							Feed (ipm)	98	123	125	108	101	87
	PLASTICS ABS, Polycarbonate, PVC, Polypropylene		Slot	1	≤ 1	1600 (1280-1920)	RPM	24448	16299	12224	9779	8149	6112
							Fz	0.0040	0.0075	0.0100	0.0110	0.0120	0.0140
							Feed (ipm)	196	244	244	215	196	171
			Profile	≤ 0.5	≤ 1.5	2000 (1600-2400)	RPM	30560	20373	15280	12224	10187	7640
							Fz	0.0040	0.0075	0.0100	0.0110	0.0120	0.0140
							Feed (ipm)	244	306	306	269	244	214
			HSM	≤ 0.05	≤ 2	3300 (2640-3960)	RPM	50424	33616	25212	20170	16808	12606
							Fz	0.0090	0.0170	0.0230	0.0250	0.0275	0.0320
							Feed (ipm)	908	1143	1160	1008	924	807

Bhn (Brinell) HRc (Rockwell C) HRb (Rockwell B) HSM (High Speed Machining)
rpm = Vc x 3.82 / D_1
ipm = Fz x 2 x rpm
reduce speed and feed for materials harder than listed
reduce cut depth and feed by 50% for long flute and long reach tools
reduce feed and Ae when finish milling (.02 x D_1 maximum)
refer to the KYOCERA SGS Tool Wizard® for complete technical information (www.kyocera-sgstool.com)