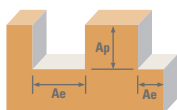


2 Flute: High Shear

4 Flute: High Shear

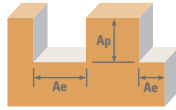


Series 52M, 54M Metric	Hardness	Flutes	Ae x DC		Ap x DC	Vc (m/min)	DC • mm											
							3	6	10	12	20	25						
ALUMINUM ALLOYS 2024, 5052, 5086, 6061, 6063, 7075	≤ 150 Bhn or ≤ 88 HRb	Profile		2	≤ 0.3	≤ 1.5	(332-497)	415	RPM	43947	21973	13184	10987	6592	5274			
								Fz	0.0166	0.043	0.091	0.110	0.147	0.160				
								Feed (mm/min)	1459	1890	2399	2417	1938	1688				
									2918	3779	4799	4834	3876	3375				
		Slot		2	1	≤ 1	(266-399)	332	RPM	35222	17611	10567	8806	5283	4227			
								Fz	0.0151	0.041	0.085	0.101	0.133	0.148				
								Feed (mm/min)	1064	1444	1796	1779	1405	1251				
									2127	2888	3593	3557	2811	2502				
		ALUMINUM DIE CAST ALLOYS (HIGH SILICON) A-390, A-392, B-390	≤ 125 Bhn or ≤ 77 HRb	Profile		2	≤ 0.3	≤ 1.5	(124-187)	155	RPM	16480	8240	4944	4120	2472	1978	
										Fz	0.0166	0.043	0.091	0.110	0.147	0.160		
										Feed (mm/min)	547	709	900	906	727	633		
											1094	1417	1800	1813	1454	1266		
	Slot				2	1	≤ 1	(100-150)	125	RPM	13249	6624	3975	3312	1987	1590		
									Fz	0.0151	0.041	0.085	0.101	0.133	0.148			
									Feed (mm/min)	400	543	676	669	529	471			
										800	1086	1351	1338	1057	941			
	COPPER ALLOYS Aluminum Bronze, Muntz Brass, Naval, Brass, Red Brass			≤ 140 Bhn or ≤ 3 HRc	Profile		2	≤ 0.3	≤ 1.5	(144-216)	180	RPM	19065	9533	5720	4766	2860	2288
											Fz	0.0094	0.024	0.053	0.062	0.083	0.093	
											Feed (mm/min)	358	458	606	591	475	426	
												717	915	1213	1182	949	851	
		Slot			2	1	≤ 1	(116-174)	145	RPM	15349	7675	4605	3837	2302	1842		
									Fz	0.0086	0.024	0.048	0.058	0.077	0.085			
									Feed (mm/min)	264	368	442	445	355	313			
										528	737	884	890	709	626			
COPPER ALLOYS Beryllium Copper, C110, Manganese Bronze, Tin Bronze		≤ 200 Bhn or ≤ 23 HRc	Profile			2	≤ 0.3	≤ 1.5	(57-86)	72	RPM	7594	3797	2278	1898	1139	911	
										Fz	0.0094	0.024	0.053	0.062	0.083	0.093		
										Feed (mm/min)	143	182	241	235	189	169		
											286	365	483	471	378	339		
	Slot			2	1	≤ 1	(46-69)	58	RPM	6140	3070	1842	1535	921	737			
								Fz	0.0086	0.024	0.048	0.058	0.077	0.085				
								Feed (mm/min)	106	147	177	178	142	125				
									211	295	354	356	284	250				

continued on next page

2 Flute: High Shear

4 Flute: High Shear



Series 52M, 54M Metric						DC • mm						
Hardness		Flutes	Ae x DC	Ap x DC	Vc (m/min)	3	6	10	12	20	25	
N	PLASTICS ABS, Polycarbonate, PVC, Polypropylene		Profile		488	RPM	51702	25851	15511	12926	7755	6204
					(390-585)	Fz	0.0264	0.072	0.149	0.178	0.237	0.250
			Feed (mm/min)	2730		3723	4622	4601	3676	3102		
				4		≤ 0.3	≤ 1.5	5460	7445	9244	9203	7352
			Slot		390	RPM	41362	20681	12409	10340	6204	4963
					(312-468)	Fz	0.0240	0.065	0.136	0.163	0.210	0.238
			Feed (mm/min)	1985		2689	3375	3371	2606	2363		
				4		1	≤ 0.25	3971	5377	6750	6742	5212
	PLASTICS Fiberglass, Glass Filled		Profile		219	RPM	23266	11633	6980	5816	3490	2792
					(176-263)	Fz	0.0197	0.053	0.109	0.132	0.173	0.190
			Feed (mm/min)	917		1233	1522	1536	1208	1061		
				4		≤ 0.3	≤ 1.5	1833	2466	3043	3071	2415
			Slot		175	RPM	18580	9290	5574	4645	2787	2230
					(140-210)	Fz	0.0180	0.048	0.101	0.120	0.160	0.175
			Feed (mm/min)	669		892	1126	1115	892	780		
				4		1	≤ 0.25	1338	1784	2252	2230	1784

Bhn (Brinell) HRc (Rockwell C) HRb (Rockwell B)

rpm = (Vc x 1000) / (DC x 3.14)

mm/min = Fz x number of flutes x rpm

reduce speed and feed for materials harder than listed

reduce feed and Ae when finish milling (.02 x DC maximum)

refer to the SGS Tool Wizard® for complete technical information (www.kyocera-sgtool.com)