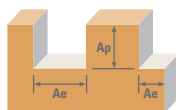


2 Flute: High Shear

4 Flute: High Shear



Series 52, 54 Fractional	Hardness	Flutes	Ae x DC		Ap x DC	Vc (sfm)	DC • in								
							1/8	1/4	3/8	1/2	3/4	1			
ALUMINUM ALLOYS 2024, 5052, 5086, 6061, 6063, 7075	≤ 150 Bhn or ≤ 88 HRb	 Profile				1360	RPM	41562	20781	13854	10390	6927	5195		
						(1088-1632)	Fz	0.00069	0.0018	0.0034	0.0046	0.0055	0.0064		
							Feed (ipm)	57.4	74.8	94.2	95.6	76.2	66.5		
			2 ≤ 0.3 ≤ 1.5					114.7	149.6	188.4	191.2	152.4	133.0		
		4 ≤ 0.3 ≤ 1.5													
		 Slot				1090	RPM	33310	16655	11103	8328	5552	4164		
						(872-1308)	Fz	0.00063	0.0017	0.0032	0.0042	0.0050	0.0059		
			2 1 ≤ 1				Feed (ipm)	42.0	56.6	71.1	70.0	55.5	49.1		
			4 1 ≤ 0.25				83.9	113.3	142.1	139.9	111.0	98.3			
		ALUMINUM DIE CAST ALLOYS (HIGH SILICON) A-390, A-392, B-390	≤ 125 Bhn or ≤ 77 HRb	 Profile				510	RPM	15586	7793	5195	3896	2598	1948
								(408-612)	Fz	0.00069	0.0018	0.0034	0.0046	0.0055	0.0064
					2 ≤ 0.3 ≤ 1.5				Feed (ipm)	21.5	28.1	35.3	35.8	28.6	24.9
4 ≤ 0.3 ≤ 1.5						43.0	56.1	70.7	71.7	57.1	49.9				
 Slot				410	RPM	12530	6265	4177	3132	2088	1566				
				(328-492)	Fz	0.00063	0.0017	0.0032	0.0042	0.0050	0.0059				
	2 1 ≤ 1				Feed (ipm)	15.8	21.3	26.7	26.3	20.9	18.5				
	4 1 ≤ 0.25				31.6	42.6	53.5	52.6	41.8	37.0					
COPPER ALLOYS Aluminum Bronze, Muntz Brass, Naval, Brass, Red Brass	≤ 140 Bhn or ≤ 3 HRc			 Profile				590	RPM	18030	9015	6010	4508	3005	2254
								(472-708)	Fz	0.00039	0.0010	0.0020	0.0026	0.0031	0.0037
					2 ≤ 0.3 ≤ 1.5				Feed (ipm)	14.1	18.0	24.0	23.4	18.6	16.7
					4 ≤ 0.3 ≤ 1.5				28.1	36.1	48.1	46.9	37.3	33.4	
		 Slot				475	RPM	14516	7258	4839	3629	2419	1815		
						(380-570)	Fz	0.00036	0.0010	0.0018	0.0024	0.0029	0.0034		
			2 1 ≤ 1				Feed (ipm)	10.5	14.5	17.4	17.4	14.0	12.3		
			4 1 ≤ 0.25				20.9	29.0	34.8	34.8	28.1	24.7			
		COPPER ALLOYS Beryllium Copper, C110, Manganese Bronze, Tin Bronze	≤ 200 Bhn or ≤ 23 HRc	 Profile				235	RPM	7182	3591	2394	1795	1197	898
								(188-282)	Fz	0.00039	0.0010	0.0020	0.0026	0.0031	0.0037
					2 ≤ 0.3 ≤ 1.5				Feed (ipm)	5.6	7.2	9.6	9.3	7.4	6.6
					4 ≤ 0.3 ≤ 1.5				11.2	14.4	19.2	18.7	14.8	13.3	
 Slot				190	RPM	5806	2903	1935	1452	968	726				
				(152-228)	Fz	0.00036	0.0010	0.0018	0.0024	0.0029	0.0034				
	2 1 ≤ 1				Feed (ipm)	4.2	5.8	7.0	7.0	5.6	4.9				
	4 1 ≤ 0.25				8.4	11.6	13.9	13.9	11.2	9.9					
PLASTICS ABS, Polycarbonate, PVC, Polypropylene				 Profile				1600	RPM	48896	24448	16299	12224	8149	6112
								(1280-1920)	Fz	0.00110	0.0030	0.0056	0.0074	0.0089	0.0100
					2 ≤ 0.3 ≤ 1.5				Feed (ipm)	107.6	146.7	182.5	180.9	145.1	122.2
					4 ≤ 0.3 ≤ 1.5				215.1	293.4	365.1	361.8	290.1	244.5	
		 Slot				1280	RPM	39117	19558	13039	9779	6519	4890		
						(1024-1536)	Fz	0.00100	0.0027	0.0051	0.0068	0.0082	0.0095		
			2 1 ≤ 1				Feed (ipm)	78.2	105.6	133.0	133.0	106.9	92.9		
			4 1 ≤ 0.25				156.5	211.2	266.0	266.0	213.8	185.8			
		PLASTICS Fiberglass, Glass Filled		 Profile				720	RPM	22003	11002	7334	5501	3667	2750
								(576-864)	Fz	0.00082	0.0022	0.0041	0.0055	0.0065	0.0076
					2 ≤ 0.3 ≤ 1.5				Feed (ipm)	36.1	48.4	60.1	60.5	47.7	41.8
					4 ≤ 0.3 ≤ 1.5				72.2	96.8	120.3	121.0	95.3	83.6	
 Slot				575	RPM	17572	8786	5857	4393	2929	2197				
				(460-690)	Fz	0.00075	0.0020	0.0037	0.0050	0.0060	0.0070				
	2 1 ≤ 1				Feed (ipm)	26.4	35.1	43.3	43.9	35.1	30.8				
	4 1 ≤ 0.25				52.7	70.3	86.7	87.9	70.3	61.5					

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

rpm = (Vc x 3.82) / DC

ipm = 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-sgstool.com)