

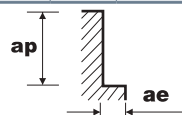
4 FLUTE CHAMFER PREP & CORNER RADIUS

CUTTING DATA

GMF52, GMF53, GMF56, GMF57, GMF54, GMF55, GMF58, GMF59, GMF60, GMF61, GMF62 & GMF63 Series Side Cutting

Speed & Feed Recommendations					Diameter (mm)											
Hardness (Brinell)	Work Materials	ap x D	ae x D		3	4	5	6	8	10	12	14	16	18	20	25
P < 300	CARBON STEEL 1.1191(C45) 1.0726(35 S 20) 1.0715(9 SMN 28) 1.0718(9 SMNPB 28)	1.5*	0.5	Vc	152 (122-182)					168 (135-201)						
				RPM	16128	12096	9677	8064	6048	5348	4456	3820	3342	2971	2674	2139
				Fz	0.005	0.008	0.011	0.016	0.027	0.038	0.047	0.049	0.053	0.059	0.065	0.064
				Feed	323	387	426	516	653	813	838	749	709	701	695	548
P > 300 P < 380	ALLOY STEEL 1.2330(35 CRMO 4) 1.6565(40NICRMO6) 1.7033(34CR4) 1.6523(21 NICRMO2)	1.5*	0.5	Vc	107 (86-128)					117 (94-140)						
				RPM	11353	8515	6812	5677	4257	3724	3104	2660	2328	2069	1862	1490
				Fz	0.005	0.008	0.011	0.016	0.027	0.038	0.047	0.049	0.053	0.059	0.065	0.064
				Feed	227	272	300	363	460	566	583	521	493	488	484	381
P < 380	TOOL STEEL 1.2363(X100 CRMOV 5 1) 1.2379(X155 CRVMO 12 1) 1.2344(X40 CRMOV 5 1) 1.3243(S 6-5-2-5)	1.5*	0.5	Vc	64 (52-76)					70 (56-84)						
				RPM	6791	5093	4074	3395	2546	2228	1857	1592	1393	1238	1114	891
				Fz	0.003	0.006	0.008	0.011	0.019	0.027	0.032	0.034	0.037	0.041	0.045	0.045
				Feed	81	122	130	149	194	241	238	216	206	203	201	160
K < 260	CAST IRON 0.6020(GG20) 0.8145(GTS-45-06) 0.7060(GGG-60)	1.5*	0.5	Vc	112 (90-134)					123 (99-147)						
				RPM	11884	8913	7130	5942	4456	3915	3263	2797	2447	2175	1958	1566
				Fz	0.006	0.01	0.014	0.02	0.034	0.048	0.058	0.061	0.065	0.073	0.081	0.079
				Feed	285	357	399	475	606	752	757	682	636	635	634	495
M	STAINLESS STEELS 300 1.4301(X5 CRNI 18 10) 1.4436(X3 CRNIMO 17 13 3) 1.4306(X2 CRNI 19 11) 1.4435(X2 CRNIMO 18 14 3)	1.5*	0.5	Vc	115 (92-138)											
				RPM	12202	9151	7321	6101	4576	3661	3050	2615	2288	2034	1830	1464
				Fz	0.005	0.008	0.013	0.018	0.028	0.048	0.056	0.06	0.063	0.07	0.077	0.078
				Feed	244	293	381	439	512	703	683	628	577	569	564	457
M	STAINLESS STEELS 400 1.4005(X12 CRS 13) 1.4104(X14 CRMOS 17)	1.5*	0.5	Vc	161 (129-193)											
				RPM	17083	12812	10250	8541	6406	5125	4271	3661	3203	2847	2562	2050
				Fz	0.004	0.006	0.009	0.013	0.022	0.034	0.04	0.043	0.045	0.05	0.055	0.055
				Feed	273	307	369	444	564	697	683	630	577	569	564	451
M	STAINLESS STEELS(PH) 1.4594(Z7 CNU 15.05)	1.5*	0.5	Vc	104 (84-124)											
				RPM	11035	8276	6621	5517	4138	3310	2759	2365	2069	1839	1655	1324
				Fz	0.005	0.008	0.013	0.018	0.028	0.048	0.055	0.059	0.062	0.069	0.077	0.078
				Feed	221	265	344	397	463	636	607	558	513	508	510	413
S	TITANIUM Ti6AL4V Ti5AL5V5MO Ti7AL4MO	1	0.35	Vc	81 (65-97)											
				RPM	8594	6446	5157	4297	3223	2578	2149	1842	1611	1432	1289	1031
				Fz	0.004	0.007	0.011	0.016	0.025	0.043	0.05	0.053	0.056	0.062	0.069	0.07
				Feed	138	180	227	275	322	443	430	390	361	355	356	289
S	HIGH TEMPERATURE ALLOY INCONEL HASTELLOY, RENE	1	0.25	Vc	31 (25-37)											
				RPM	3289	2467	1974	1645	1233	987	822	705	617	548	493	395
				Fz	0.005	0.007	0.012	0.018	0.031	0.047	0.055	0.061	0.064	0.069	0.077	0.079
				Feed	66	69	95	118	153	186	181	172	158	151	152	125

The diagram illustrates the cutting parameters a_p (axial depth of cut) and a_e (radial depth of cut) on a workpiece. a_p is the distance along the axis of the workpiece, and a_e is the distance perpendicular to the axis of the workpiece.



* Cutting depth 0.8 x D (Slotting), 1.2 x D (Side Cutting) should be applied:
for short length types GMF52, GMF53, GMF54, GMF55 series &
neck types GMF60, GMF61, GMF62, GMF63 series diameters over 8mm

RPM: revolutions per minute Feed: mm per minute Vc: surface speed (metres per minute) Fz: feed per tooth