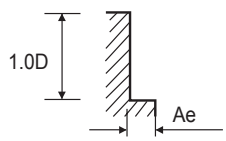
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF29 SERIES — 6FLUTE 45° HELIX - SIDE CUTTING (NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/4	1/4	5/16	5/16	3/8	3/8	1/2	1/2	5/8	5/8	3/4	3/4
					LOC	5/8	1-3/16	3/4	1-1/2	1	1-1/2	1-3/16	2	1-1/2	2-3/8	1-3/4	2-3/8
P	1-8	Non-alloy steel	0.1D	1.5D	SFM(Vc)	380	380	365	365	365	365	385	385	365	365	365	365
					IPT(fz)	.0024	.0020	.0031	.0027	.0039	.0039	.0039	.0033	.0039	.0034	.0040	.0034
					RPM	5775	5775	4440	4440	3705	3705	2950	2950	2225	2225	1850	1850
					IPM(FEED)	82	70	83	71	87	87	69	59	53	45	44	37
	9	Low alloy steel	0.05D	1.5D	SFM(Vc)	265	265	255	255	250	250	270	270	255	255	250	250
					IPT(fz)	.0023	.0020	.0031	.0026	.0039	.0039	.0038	.0032	.0039	.0033	.0039	.0033
					RPM	4035	4035	3110	3110	2560	2560	2080	2080	1565	1565	1280	1280
					IPM(FEED)	56	48	57	49	60	60	47	40	37	31	30	25
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	380	380	365	365	365	365	385	385	365	365	365	365
					IPT(fz)	.0024	.0020	.0031	.0027	.0039	.0039	.0039	.0033	.0039	.0034	.0040	.0034
					RPM	5775	5775	4440	4440	3705	3705	2950	2950	2225	2225	1850	1850
					IPM(FEED)	82	70	83	71	87	87	69	59	53	45	44	37
	11.1-11.2		0.05D	1.5D	SFM(Vc)	265	265	255	255	250	250	270	270	255	255	250	250
					IPT(fz)	.0023	.0020	.0031	.0026	.0039	.0039	.0038	.0032	.0039	.0033	.0039	.0033
					RPM	4035	4035	3110	3110	2560	2560	2080	2080	1565	1565	1280	1280
					IPM(FEED)	56	48	57	49	60	60	47	40	37	31	30	25
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM(Vc)	380	380	365	365	365	365	385	385	365	365	365	365
					IPT(fz)	.0024	.0020	.0031	.0027	.0039	.0039	.0039	.0033	.0039	.0034	.0040	.0034
					RPM	5775	5775	4440	4440	3705	3705	2950	2950	2225	2225	1850	1850
					IPM(FEED)	82	70	83	71	87	87	69	59	53	45	44	37
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	105	105	100	100	110	110	115	115	110	110	105	105
					IPT(fz)	.0009	.0008	.0012	.0010	.0014	.0014	.0014	.0012	.0013	.0011	.0015	.0013
					RPM	1640	1640	1230	1230	1105	1105	870	870	685	685	545	545
					IPM(FEED)	9	7	9	7	9	9	7	6	5	5	5	4
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	265	265	255	255	250	250	270	270	255	255	250	250
					IPT(fz)	.0023	.0020	.0031	.0026	.0039	.0039	.0038	.0032	.0039	.0033	.0039	.0033
					RPM	4035	4035	3110	3110	2560	2560	2080	2080	1565	1565	1280	1280
					IPM(FEED)	56	48	57	49	60	60	47	40	37	31	30	25
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	105	105	100	100	110	110	115	115	110	110	105	105
					IPT(fz)	.0009	.0008	.0012	.0010	.0014	.0014	.0014	.0012	.0013	.0011	.0015	.0013
					RPM	1640	1640	1230	1230	1105	1105	870	870	685	685	545	545
					IPM(FEED)	9	7	9	7	9	9	7	6	5	5	5	4

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF29 SERIES — 6FLUTE 45˚ HELIX - SIDE CUTTING (HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/4	1/4	5/16	5/16	3/8	3/8	1/2	1/2	5/8	5/8	3/4	3/4
					LOC	5/8	1-3/16	3/4	1-1/2	1	1-1/2	1-3/16	2	1-1/2	2-3/8	1-3/4	2-3/8
P	9	Non-alloy steel	0.05D	1.5D	SFM(Vc)	1140	1140	1090	1090	1080	1080	1145	1145	1090	1090	1090	1090
					IPT(fz)	.0024	.0020	.0032	.0027	.0039	.0039	.0039	.0034	.0039	.0034	.0040	.0034
					RPM	17455	17455	13335	13335	11005	11005	8735	8735	6670	6670	5555	5555
					IPM(FEED)	249	212	254	216	260	260	206	175	158	134	132	112
	11.1 -11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1140	1140	1090	1090	1080	1080	1145	1145	1090	1090	1090	1090
					IPT(fz)	.0024	.0020	.0032	.0027	.0039	.0039	.0039	.0034	.0039	.0034	.0040	.0034
					RPM	17455	17455	13335	13335	11005	11005	8735	8735	6670	6670	5555	5555
					IPM(FEED)	249	212	254	216	260	260	206	175	158	134	132	112
H	38.1- 38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	570	570	545	545	545	545	570	570	545	545	545	545
					IPT(fz)	.0024	.0020	.0032	.0027	.0040	.0040	.0039	.0034	.0039	.0033	.0038	.0032
					RPM	8735	8735	6670	6670	5555	5555	4365	4365	3340	3340	2785	2785
					IPM(FEED)	125	106	127	108	132	132	103	88	79	67	64	54
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1140	1140	1090	1090	1080	1080	1145	1145	1090	1090	1090	1090
					IPT(fz)	.0024	.0020	.0032	.0027	.0039	.0039	.0039	.0034	.0039	.0034	.0040	.0034
					RPM	17455	17455	13335	13335	11005	11005	8735	8735	6670	6670	5555	5555
					IPM(FEED)	249	212	254	216	260	260	206	175	158	134	132	112
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	570	570	545	545	545	545	570	570	545	545	545	545
					IPT(fz)	.0024	.0020	.0032	.0027	.0040	.0040	.0039	.0034	.0039	.0033	.0038	.0032
					RPM	8735	8735	6670	6670	5555	5555	4365	4365	3340	3340	2785	2785
					IPM(FEED)	125	106	127	108	132	132	103	88	79	67	64	54

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)