



# 4G MILL END MILLS

## RECOMMENDED CUTTING CONDITIONS

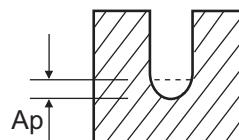
### GMF22 SERIES

### 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS														
				.008	.015	.015	.015	.015	.015	.020	.020	.020	.020	.020	.024	.024	.024	
				LBS	3/64	3/64	3/64	1/8	5/32	3/16	5/64	1/8	5/32	3/16	1/4	5/64	1/8	5/32
<b>P</b>	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	70	105	95	95	85	85	140	125	125	125	115	170	150	150	
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	.0003	.0003	.0003	.0006	.0005	.0005
			RPM	34100	26930	24240	24240	21540	21540	26970	24270	24270	24270	21570	26970	24270	24270	
			IPM(FEED)	12	12	10	10	8	8	21	17	17	17	13	30	24	24	
			Ap	.0003	.0009	.0006	.0004	.0004	.0004	.0013	.0007	.0007	.0004	.0004	.0015	.0009	.0009	
	9	Low alloy steel	SFM(Vc)	65	100	90	90	80	80	135	120	120	120	105	160	145	145	
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	
			RPM	32160	25430	22890	22890	20350	20350	25390	22850	22850	22850	20310	25390	22850	22850	
			IPM(FEED)	9	9	7	7	5	5	17	13	13	13	11	21	17	17	
			Ap	.0002	.0007	.0004	.0003	.0003	.0003	.0010	.0006	.0006	.0004	.0004	.0012	.0007	.0007	
	10	High alloyed steel, and tool steel	SFM(Vc)	70	105	95	95	85	85	140	125	125	125	115	170	150	150	
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	.0003	.0003	.0006	.0005	.0005	
			RPM	34100	26930	24240	24240	21540	21540	26970	24270	24270	24270	21570	26970	24270	24270	
			IPM(FEED)	12	12	10	10	8	8	21	17	17	17	13	30	24	24	
			Ap	.0003	.0009	.0006	.0004	.0004	.0004	.0013	.0007	.0007	.0004	.0004	.0015	.0009	.0009	
11.1-11.2		SFM(Vc)	65	100	90	90	80	80	135	120	120	120	105	160	145	145		
		IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004		
		RPM	32160	25430	22890	22890	20350	20350	25390	22850	22850	22850	20310	25390	22850	22850		
		IPM(FEED)	9	9	7	7	5	5	17	13	13	13	11	21	17	17		
		Ap	.0002	.0007	.0004	.0003	.0003	.0003	.0010	.0006	.0006	.0004	.0004	.0012	.0007	.0007		
<b>K</b>	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	70	105	95	95	85	85	140	125	125	125	115	170	150	150	
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	.0003	.0003	.0006	.0005	.0005	
			RPM	34100	26930	24240	24240	21540	21540	26970	24270	24270	24270	21570	26970	24270	24270	
			IPM(FEED)	12	12	10	10	8	8	21	17	17	17	13	30	24	24	
			Ap	.0003	.0009	.0006	.0004	.0004	.0004	.0013	.0007	.0007	.0004	.0004	.0015	.0009	.0009	
<b>H</b>	38.1-38.2	Hardened steel	SFM(Vc)	60	90	80	80	70	70	115	105	105	105	95	140	125	125	
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	
			RPM	28440	22440	20200	20200	17950	17950	22440	20200	20200	20200	17950	22440	20200	20200	
			IPM(FEED)	6	7	6	6	5	5	11	9	9	9	7	16	13	13	
			Ap	.0002	.0005	.0003	.0002	.0002	.0002	.0007	.0004	.0004	.0002	.0002	.0008	.0005	.0005	
	40	Chilled Cast Iron	SFM(Vc)	65	100	90	90	80	80	135	120	120	120	105	160	145	145	
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	
			RPM	32160	25430	22890	22890	20350	20350	25390	22850	22850	22850	20310	25390	22850	22850	
			IPM(FEED)	9	9	7	7	5	5	17	13	13	13	11	21	17	17	
			Ap	.0002	.0007	.0004	.0003	.0003	.0003	.0010	.0006	.0006	.0004	.0004	.0012	.0007	.0007	
	41	Hardened Cast Iron	SFM(Vc)	60	90	80	80	70	70	115	105	105	105	95	140	125	125	
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	
			RPM	28440	22440	20200	20200	17950	17950	22440	20200	20200	20200	17950	22440	20200	20200	
			IPM(FEED)	6	7	6	6	5	5	11	9	9	9	7	16	13	13	
			Ap	.0002	.0005	.0003	.0002	.0002	.0002	.0007	.0004	.0004	.0002	.0002	.0008	.0005	.0005	

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)

(Depth of Cut per one pass)



# YG 4G MILL END MILLS

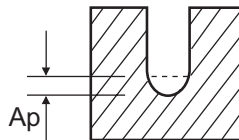
## RECOMMENDED CUTTING CONDITIONS

### GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS													
			.024	.024	.024	.024	1/32	1/32	1/32	1/32	1/32	1/32	1/32	3/64	3/64	3/64
			LBS	3/16	1/4	5/16	3/8	5/64	1/8	5/32	3/16	1/4	5/16	3/8	1/8	5/32
P	1-8	SFM(Vc)	150	135	135	100	225	225	225	205	205	205	180	270	270	270
		IPT(fz)	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0008	.0008	.0008
		RPM	24270	21570	21570	16180	27620	27620	27620	24850	24850	24850	22090	22070	22070	22070
		IPM(FEED)	24	19	19	13	31	31	31	25	25	25	20	37	37	37
		Ap	.0009	.0006	.0003	.0003	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0042	.0030	.0030
	9	SFM(Vc)	145	130	130	95	215	215	215	190	190	190	170	255	255	255
		IPT(fz)	.0004	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0007	.0007	.0007
		RPM	22850	20310	20310	15240	26000	26000	26000	23400	23400	23400	20800	20860	20860	20860
		IPM(FEED)	17	14	14	9	24	24	24	20	20	20	15	29	29	29
		Ap	.0007	.0004	.0002	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0033	.0023	.0023
	10	SFM(Vc)	150	135	135	100	225	225	225	205	205	205	180	270	270	270
		IPT(fz)	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0008	.0008	.0008
		RPM	24270	21570	21570	16180	27620	27620	27620	24850	24850	24850	22090	22070	22070	22070
		IPM(FEED)	24	19	19	13	31	31	31	25	25	25	20	37	37	37
		Ap	.0009	.0006	.0003	.0003	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0042	.0030	.0030
	11.1-11.2	SFM(Vc)	145	130	130	95	215	215	215	190	190	190	170	255	255	255
		IPT(fz)	.0004	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0007	.0007	.0007
		RPM	22850	20310	20310	15240	26000	26000	26000	23400	23400	23400	20800	20860	20860	20860
		IPM(FEED)	17	14	14	9	24	24	24	20	20	20	15	29	29	29
		Ap	.0007	.0004	.0002	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0033	.0023	.0023
K	15-20	SFM(Vc)	150	135	135	100	225	225	225	205	205	205	180	270	270	270
		IPT(fz)	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0008	.0008	.0008
		RPM	24270	21570	21570	16180	27620	27620	27620	24850	24850	24850	22090	22070	22070	22070
		IPM(FEED)	24	19	19	13	31	31	31	25	25	25	20	37	37	37
		Ap	.0009	.0006	.0003	.0003	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0042	.0030	.0030
H	38.1-38.2	SFM(Vc)	125	115	115	85	190	190	190	170	170	170	150	225	225	225
		IPT(fz)	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005
		RPM	20200	17950	17950	13460	22980	22980	22980	20680	20680	20680	18380	18340	18340	18340
		IPM(FEED)	13	10	10	7	18	18	18	14	14	14	11	19	19	19
		Ap	.0005	.0003	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0024	.0017	.0017
	40	SFM(Vc)	145	130	130	95	215	215	215	190	190	190	170	255	255	255
		IPT(fz)	.0004	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0007	.0007	.0007
		RPM	22850	20310	20310	15240	26000	26000	26000	23400	23400	23400	20800	20860	20860	20860
		IPM(FEED)	17	14	14	9	24	24	24	20	20	20	15	29	29	29
		Ap	.0007	.0004	.0002	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0033	.0023	.0023
	41	SFM(Vc)	125	115	115	85	190	190	190	170	170	170	150	225	225	225
		IPT(fz)	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005
		RPM	20200	17950	17950	13460	22980	22980	22980	20680	20680	20680	18380	18340	18340	18340
		IPM(FEED)	13	10	10	7	18	18	18	14	14	14	11	19	19	19
		Ap	.0005	.0003	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0024	.0017	.0017

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)

(Depth of Cut per one pass)



HSS

CBN END MILLS

i-Xmill END MILLS

i-SMART MODULAR END MILLS

X5070 END MILLS

4G MILL END MILLS

X-POWER PRO END MILLS

TitaNox-POWER END MILLS

JET-POWER END MILLS

V7 PLUS A END MILLS

V7 MILL INOX

ALU-POWER HPC END MILLS

ALU-POWER END MILLS

D-POWER GRAPHITE END MILLS

STANDARD CARBIDE

ONLY ONE COATED PM60 END MILLS

SINE-POWER

TANK-POWER END MILLS

STANDARD COBALT & HSS

TECHNICAL DATA



# 4G MILL END MILLS

## RECOMMENDED CUTTING CONDITIONS

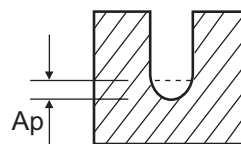
### GMF22 SERIES

### 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS														
				3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16	1/16	1/16	1/16	
				LBS	1/4	5/16	3/8	1/2	9/16	5/8	3/4	5/32	1/4	5/16	3/8	1/2	9/16	5/8
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	245	245	245	215	215	215	160	295	295	295	265	265	265	265	
			IPT(fz)	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	
			RPM	19870	19870	19870	17660	17660	17660	13240	18140	18140	18140	16330	16330	16330	16330	
			IPM(FEED)	30	30	30	24	24	24	16	34	34	34	27	27	27	27	
			Ap	.0017	.0017	.0017	.0011	.0011	.0011	.0006	.0006	.0056	.0039	.0039	.0022	.0022	.0014	.0014
			9	Low alloy steel	SFM(Vc)	230	230	230	205	205	205	155	280	280	280	250	250	250
	IPT(fz)	.0006			.0006	.0006	.0005	.0005	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	
	RPM	18780			18780	18780	16690	16690	16690	12520	17100	17100	17100	15390	15390	15390	15390	
	IPM(FEED)	23			23	23	18	18	18	12	24	24	24	19	19	19	19	
	Ap	.0013			.0013	.0013	.0008	.0008	.0008	.0005	.0005	.0044	.0031	.0031	.0017	.0017	.0011	.0011
	10	High alloyed steel, and tool steel			SFM(Vc)	245	245	245	215	215	215	160	295	295	295	265	265	265
			IPT(fz)	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	
RPM			19870	19870	19870	17660	17660	17660	13240	18140	18140	18140	16330	16330	16330	16330		
IPM(FEED)			30	30	30	24	24	24	16	34	34	34	27	27	27	27		
Ap			.0017	.0017	.0017	.0011	.0011	.0011	.0006	.0006	.0056	.0039	.0039	.0022	.0022	.0014	.0014	
11.1-11.2				SFM(Vc)	230	230	230	205	205	205	155	280	280	280	250	250	250	250
	IPT(fz)	.0006		.0006	.0006	.0005	.0005	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006		
	RPM	18780		18780	18780	16690	16690	16690	12520	17100	17100	17100	15390	15390	15390	15390		
	IPM(FEED)	23		23	23	18	18	18	12	24	24	24	19	19	19	19		
	Ap	.0013		.0013	.0013	.0008	.0008	.0008	.0005	.0005	.0044	.0031	.0031	.0017	.0017	.0011	.0011	
	K	15-20		Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	245	245	245	215	215	215	160	295	295	295	265	265	265
IPT(fz)			.0008		.0008	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	
RPM			19870		19870	19870	17660	17660	17660	13240	18140	18140	18140	16330	16330	16330	16330	
IPM(FEED)			30		30	30	24	24	24	16	34	34	34	27	27	27	27	
Ap			.0017		.0017	.0017	.0011	.0011	.0011	.0006	.0006	.0056	.0039	.0039	.0022	.0022	.0014	.0014
H			38.1-38.2		Hardened steel	SFM(Vc)	205	205	205	180	180	180	135	245	245	245	225	225
	IPT(fz)	.0005		.0005		.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005	
	RPM	16510		16510		16510	14670	14670	14670	11010	15120	15120	15120	13610	13610	13610	13610	
	IPM(FEED)	16		16		16	12	12	12	8	18	18	18	14	14	14	14	
	Ap	.0009		.0009		.0009	.0006	.0006	.0006	.0004	.0004	.0031	.0022	.0022	.0013	.0013	.0008	.0008
	40	Chilled Cast Iron		SFM(Vc)		230	230	230	205	205	205	155	280	280	280	250	250	250
			IPT(fz)	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	
			RPM	18780	18780	18780	16690	16690	16690	12520	17100	17100	17100	15390	15390	15390	15390	
			IPM(FEED)	23	23	23	18	18	18	12	24	24	24	19	19	19	19	
			Ap	.0013	.0013	.0013	.0008	.0008	.0008	.0005	.0005	.0044	.0031	.0031	.0017	.0017	.0011	.0011
			41	Hardened Cast Iron	SFM(Vc)	205	205	205	180	180	180	135	245	245	245	225	225	225
	IPT(fz)	.0005			.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005	
	RPM	16510			16510	16510	14670	14670	14670	11010	15120	15120	15120	13610	13610	13610	13610	
	IPM(FEED)	16			16	16	12	12	12	8	18	18	18	14	14	14	14	
	Ap	.0009			.0009	.0009	.0006	.0006	.0006	.0004	.0004	.0031	.0022	.0022	.0013	.0013	.0008	.0008

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)

(Depth of Cut per one pass)



# YG 4G MILL END MILLS

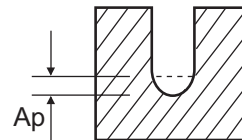
## RECOMMENDED CUTTING CONDITIONS

### GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS														
			1/16	5/64	5/64	5/64	5/64	5/64	5/64	5/64	5/64	3/32	3/32	3/32	3/32	1/8	1/8
			LBS	3/4	1/4	5/16	3/8	1/2	9/16	5/8	3/4	5/16	1/2	5/8	3/4	5/16	3/8
P	1-8	SFM(Vc)	235	295	295	295	265	265	265	265	265	315	285	285	285	335	335
		IPT(fz)	.0007	.0011	.0011	.0011	.0010	.0010	.0010	.0010	.0010	.0016	.0014	.0014	.0014	.0016	.0016
		RPM	14510	14510	14510	14510	13060	13060	13060	13060	13060	12910	11620	11620	11620	10300	10300
		IPM(FEED)	22	33	33	33	26	26	26	26	26	40	33	33	33	32	32
		Ap	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0028	.0018	.0059	.0034	.0034	.0034	.0113	.0113
	9	SFM(Vc)	225	280	280	280	250	250	250	250	300	270	270	270	320	320	
		IPT(fz)	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0012	.0010	.0010	.0010	.0012	.0012	
		RPM	13680	13710	13710	13710	12340	12340	12340	12340	12180	10960	10960	10960	9730	9730	
		IPM(FEED)	15	25	25	25	20	20	20	20	28	23	23	23	22	22	
		Ap	.0011	.0038	.0038	.0038	.0022	.0022	.0022	.0022	.0014	.0046	.0026	.0026	.0026	.0087	.0087
	10	SFM(Vc)	235	295	295	295	265	265	265	265	315	285	285	285	335	335	
		IPT(fz)	.0007	.0011	.0011	.0011	.0010	.0010	.0010	.0010	.0016	.0014	.0014	.0014	.0016	.0016	
		RPM	14510	14510	14510	14510	13060	13060	13060	13060	12910	11620	11620	11620	10300	10300	
		IPM(FEED)	22	33	33	33	26	26	26	26	40	33	33	33	32	32	
		Ap	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0028	.0018	.0059	.0034	.0034	.0034	.0113	.0113
	11.1-11.2	SFM(Vc)	225	280	280	280	250	250	250	250	300	270	270	270	320	320	
		IPT(fz)	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0012	.0010	.0010	.0010	.0012	.0012	
		RPM	13680	13710	13710	13710	12340	12340	12340	12340	12180	10960	10960	10960	9730	9730	
		IPM(FEED)	15	25	25	25	20	20	20	20	28	23	23	23	22	22	
		Ap	.0011	.0038	.0038	.0038	.0022	.0022	.0022	.0022	.0014	.0046	.0026	.0026	.0026	.0087	.0087
K	15-20	SFM(Vc)	235	295	295	295	265	265	265	265	315	285	285	285	335	335	
		IPT(fz)	.0007	.0011	.0011	.0011	.0010	.0010	.0010	.0010	.0016	.0014	.0014	.0014	.0016	.0016	
		RPM	14510	14510	14510	14510	13060	13060	13060	13060	12910	11620	11620	11620	10300	10300	
		IPM(FEED)	22	33	33	33	26	26	26	26	40	33	33	33	32	32	
		Ap	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0028	.0018	.0059	.0034	.0034	.0034	.0113	.0113
H	38.1-38.2	SFM(Vc)	200	245	245	245	225	225	225	225	265	240	240	240	205	205	
		IPT(fz)	.0005	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0010	.0009	.0009	.0009	.0013	.0013	
		RPM	12090	12090	12090	12090	10890	10890	10890	10890	10810	9730	9730	9730	6240	6240	
		IPM(FEED)	11	19	19	19	15	15	15	15	21	17	17	17	17	17	
		Ap	.0008	.0027	.0027	.0027	.0016	.0016	.0016	.0016	.0010	.0033	.0019	.0019	.0019	.0063	.0063
	40	SFM(Vc)	225	280	280	280	250	250	250	250	300	270	270	270	320	320	
		IPT(fz)	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0012	.0010	.0010	.0010	.0012	.0012	
		RPM	13680	13710	13710	13710	12340	12340	12340	12340	12180	10960	10960	10960	9730	9730	
		IPM(FEED)	15	25	25	25	20	20	20	20	28	23	23	23	22	22	
		Ap	.0011	.0038	.0038	.0038	.0022	.0022	.0022	.0022	.0014	.0046	.0026	.0026	.0026	.0087	.0087
	41	SFM(Vc)	200	245	245	245	225	225	225	225	265	240	240	240	205	205	
		IPT(fz)	.0005	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0010	.0009	.0009	.0009	.0013	.0013	
		RPM	12090	12090	12090	12090	10890	10890	10890	10890	10810	9730	9730	9730	6240	6240	
		IPM(FEED)	11	19	19	19	15	15	15	15	21	17	17	17	17	17	
		Ap	.0008	.0027	.0027	.0027	.0016	.0016	.0016	.0016	.0010	.0033	.0019	.0019	.0019	.0063	.0063

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)

(Depth of Cut per one pass)





# 4G MILL END MILLS

## RECOMMENDED CUTTING CONDITIONS

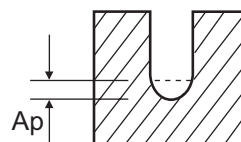
### GMF22 SERIES

### 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS													
				1/8	1/8	1/8	1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	3/16	13/64	
				LBS	1/2	9/16	5/8	11/16	3/4	1	3/8	1/2	5/8	11/16	3/4	1	1 3/16
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	335	335	335	305	305	305	330	330	330	330	330	295	295	330
			IPT(fz)	.0016	.0016	.0016	.0014	.0014	.0014	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0036
			RPM	10300	10300	10300	9270	9270	9270	6720	6720	6720	6720	6720	6050	6050	6200
			IPM(FEED)	32	32	32	26	26	26	43	43	43	43	43	35	35	44
			Ap	.0079	.0079	.0079	.0045	.0045	.0045	.0169	.0169	.0118	.0118	.0118	.0067	.0067	.0128
			SFM(Vc)	320	320	320	285	285	285	315	315	315	315	315	280	280	315
	9	Low alloy steel	IPT(fz)	.0012	.0012	.0012	.0010	.0010	.0010	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0029
			RPM	9730	9730	9730	8760	8760	8760	6380	6380	6380	6380	6380	5740	5740	5910
			IPM(FEED)	22	22	22	18	18	18	38	38	38	38	38	31	31	34
			Ap	.0061	.0061	.0061	.0035	.0035	.0035	.0131	.0131	.0092	.0092	.0092	.0052	.0052	.0100
			SFM(Vc)	335	335	335	305	305	305	330	330	330	330	330	295	295	330
			IPT(fz)	.0016	.0016	.0016	.0014	.0014	.0014	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0036
10	High alloyed steel, and tool steel	RPM	10300	10300	10300	9270	9270	9270	6720	6720	6720	6720	6720	6050	6050	6200	
		IPM(FEED)	32	32	32	26	26	26	43	43	43	43	43	35	35	44	
		Ap	.0079	.0079	.0079	.0045	.0045	.0045	.0169	.0169	.0118	.0118	.0118	.0067	.0067	.0128	
		SFM(Vc)	320	320	320	285	285	285	315	315	315	315	315	280	280	315	
		IPT(fz)	.0012	.0012	.0012	.0010	.0010	.0010	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0029	
		RPM	9730	9730	9730	8760	8760	8760	6380	6380	6380	6380	6380	5740	5740	5910	
11.1-11.2		IPM(FEED)	22	22	22	18	18	18	38	38	38	38	38	31	31	34	
		Ap	.0061	.0061	.0061	.0035	.0035	.0035	.0131	.0131	.0092	.0092	.0092	.0052	.0052	.0100	
		SFM(Vc)	335	335	335	305	305	305	330	330	330	330	330	295	295	330	
		IPT(fz)	.0016	.0016	.0016	.0014	.0014	.0014	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0036	
		RPM	10300	10300	10300	9270	9270	9270	6720	6720	6720	6720	6720	6050	6050	6200	
		IPM(FEED)	32	32	32	26	26	26	43	43	43	43	43	35	35	44	
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	Ap	.0079	.0079	.0079	.0045	.0045	.0045	.0169	.0169	.0118	.0118	.0118	.0067	.0067	.0128
			SFM(Vc)	205	205	205	185	185	185	275	275	275	275	275	250	250	280
			IPT(fz)	.0013	.0013	.0013	.0012	.0012	.0012	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0022
			RPM	6240	6240	6240	5610	5610	5610	5630	5630	5630	5630	5630	5060	5060	5230
			IPM(FEED)	17	17	17	14	14	14	25	25	25	25	25	21	21	23
			Ap	.0044	.0044	.0044	.0025	.0025	.0025	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0071
H	38.1-38.2	Hardened steel	SFM(Vc)	320	320	320	285	285	285	315	315	315	315	315	280	280	315
			IPT(fz)	.0012	.0012	.0012	.0010	.0010	.0010	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0029
			RPM	9730	9730	9730	8760	8760	8760	6380	6380	6380	6380	6380	5740	5740	5910
			IPM(FEED)	22	22	22	18	18	18	38	38	38	38	38	31	31	34
			Ap	.0061	.0061	.0061	.0035	.0035	.0035	.0131	.0131	.0092	.0092	.0092	.0052	.0052	.0100
			SFM(Vc)	205	205	205	185	185	185	275	275	275	275	275	250	250	280
	40	Chilled Cast Iron	IPT(fz)	.0013	.0013	.0013	.0012	.0012	.0012	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0022
			RPM	6240	6240	6240	5610	5610	5610	5630	5630	5630	5630	5630	5060	5060	5230
			IPM(FEED)	17	17	17	14	14	14	25	25	25	25	25	21	21	23
			Ap	.0044	.0044	.0044	.0025	.0025	.0025	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0071
			SFM(Vc)	205	205	205	185	185	185	275	275	275	275	275	250	250	280
			IPT(fz)	.0013	.0013	.0013	.0012	.0012	.0012	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0022
41	Hardened Cast Iron	RPM	6240	6240	6240	5610	5610	5610	5630	5630	5630	5630	5630	5060	5060	5230	
		IPM(FEED)	17	17	17	14	14	14	25	25	25	25	25	21	21	23	
		Ap	.0044	.0044	.0044	.0025	.0025	.0025	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0071	
		SFM(Vc)	205	205	205	185	185	185	275	275	275	275	275	250	250	280	
		IPT(fz)	.0013	.0013	.0013	.0012	.0012	.0012	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0022	
		RPM	6240	6240	6240	5610	5610	5610	5630	5630	5630	5630	5630	5060	5060	5230	

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)

(Depth of Cut per one pass)



# YG 4G MILL END MILLS

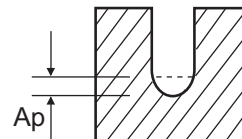
## RECOMMENDED CUTTING CONDITIONS

### GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS											
			13/64	13/64	13/64	13/64	1/4	1/4	1/4	5/16	3/8	3/8	1/2	1/2
			LBS	1 3/16	1 3/8	1 1/2	2	5/8	3/4	1 3/16	1	1 3/16	1 3/4	1 3/8
P	1-8	SFM(Vc)	295	295	295	295	330	330	330	330	330	330	325	325
		IPT(fz)	.0032	.0032	.0032	.0032	.0039	.0039	.0039	.0047	.0055	.0055	.0059	.0059
		RPM	5580	5580	5580	5580	5010	5010	5010	4030	3360	3360	2500	2500
		IPM(FEED)	36	36	36	36	39	39	39	38	37	37	30	30
		Ap	.0073	.0073	.0073	.0046	.0225	.0225	.0157	.0197	.0236	.0236	.0450	.0315
	9	SFM(Vc)	285	285	285	285	310	310	310	315	315	315	310	310
		IPT(fz)	.0026	.0026	.0026	.0026	.0032	.0032	.0032	.0039	.0044	.0044	.0047	.0047
		RPM	5320	5320	5320	5320	4720	4720	4720	3830	3200	3200	2380	2380
		IPM(FEED)	28	28	28	28	31	31	31	30	28	28	22	22
		Ap	.0057	.0057	.0057	.0035	.0175	.0175	.0122	.0153	.0184	.0184	.0350	.0245
	10	SFM(Vc)	295	295	295	295	330	330	330	330	330	330	325	325
		IPT(fz)	.0032	.0032	.0032	.0032	.0039	.0039	.0039	.0047	.0055	.0055	.0059	.0059
		RPM	5580	5580	5580	5580	5010	5010	5010	4030	3360	3360	2500	2500
		IPM(FEED)	36	36	36	36	39	39	39	38	37	37	30	30
		Ap	.0073	.0073	.0073	.0046	.0225	.0225	.0157	.0197	.0236	.0236	.0450	.0315
	11.1-11.2	SFM(Vc)	285	285	285	285	310	310	310	315	315	315	310	310
		IPT(fz)	.0026	.0026	.0026	.0026	.0032	.0032	.0032	.0039	.0044	.0044	.0047	.0047
		RPM	5320	5320	5320	5320	4720	4720	4720	3830	3200	3200	2380	2380
		IPM(FEED)	28	28	28	28	31	31	31	30	28	28	22	22
		Ap	.0057	.0057	.0057	.0035	.0175	.0175	.0122	.0153	.0184	.0184	.0350	.0245
K	15-20	SFM(Vc)	295	295	295	295	330	330	330	330	330	330	325	325
		IPT(fz)	.0032	.0032	.0032	.0032	.0039	.0039	.0039	.0047	.0055	.0055	.0059	.0059
		RPM	5580	5580	5580	5580	5010	5010	5010	4030	3360	3360	2500	2500
		IPM(FEED)	36	36	36	36	39	39	39	38	37	37	30	30
		Ap	.0073	.0073	.0073	.0046	.0225	.0225	.0157	.0197	.0236	.0236	.0450	.0315
H	38.1-38.2	SFM(Vc)	250	250	250	250	270	270	270	270	270	270	270	270
		IPT(fz)	.0020	.0020	.0020	.0020	.0025	.0025	.0025	.0030	.0030	.0030	.0032	.0032
		RPM	4710	4710	4710	4710	4160	4160	4160	3330	2760	2760	2060	2060
		IPM(FEED)	19	19	19	19	21	21	21	20	17	17	13	13
		Ap	.0041	.0041	.0041	.0025	.0125	.0125	.0087	.0109	.0131	.0131	.0250	.0175
	40	SFM(Vc)	285	285	285	285	310	310	310	315	315	315	310	310
		IPT(fz)	.0026	.0026	.0026	.0026	.0032	.0032	.0032	.0039	.0044	.0044	.0047	.0047
		RPM	5320	5320	5320	5320	4720	4720	4720	3830	3200	3200	2380	2380
		IPM(FEED)	28	28	28	28	31	31	31	30	28	28	22	22
		Ap	.0057	.0057	.0057	.0035	.0175	.0175	.0122	.0153	.0184	.0184	.0350	.0245
	41	SFM(Vc)	250	250	250	250	270	270	270	270	270	270	270	270
		IPT(fz)	.0020	.0020	.0020	.0020	.0025	.0025	.0025	.0030	.0030	.0030	.0032	.0032
		RPM	4710	4710	4710	4710	4160	4160	4160	3330	2760	2760	2060	2060
		IPM(FEED)	19	19	19	19	21	21	21	20	17	17	13	13
		Ap	.0041	.0041	.0041	.0025	.0125	.0125	.0087	.0109	.0131	.0131	.0250	.0175

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)

(Depth of Cut per one pass)





# 4G MILL END MILLS

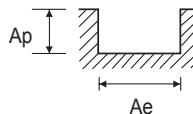
## RECOMMENDED CUTTING CONDITIONS

### GMF23 SERIES

### 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)															
						.004	.008	.012	.015	.020	.024	.028	.031	.035	.040	.047	1/16	5/64	3/32		
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240	265		
					IPT(fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004	
					RPM	41300	41300	38400	40900	35400	31500	27600	25400	23800	21200	18100	14200	11700	10800		
	9	Low alloy steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155	170		
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004		
					RPM	24800	24800	23000	24600	21300	18900	16500	15200	14300	12700	10900	8500	7600	6900		
	10	High alloyed steel, and tool steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240	265		
					IPT(fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004		
					RPM	41300	41300	38400	40900	35400	31500	27600	25400	23800	21200	18100	14200	11700	10800		
	11.1-11.2	High alloyed steel, and tool steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155	170		
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004		
					RPM	24800	24800	23000	24600	21300	18900	16500	15200	14300	12700	10900	8500	7600	6900		
M	14.1	Stainless steel	1.0D	0.05D (Up to Ø1/32 : 0.15D)	SFM(Vc)	20	45	60	80	95	100	100	105	110	110	110	115	130	140		
					IPT(fz)	.00004	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004	
					RPM	20670	20670	19190	20470	17720	15750	13780	12700	11900	10580	9050	7090	6350	5730		
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240	265		
					IPT(fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004	
					RPM	41300	41300	38400	40900	35400	31500	27600	25400	23800	21200	18100	14200	11700	10800		
H	38.1-38.2	Hardened steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	15	35	50	65	75	80	80	80	85	90	90	95	105	110		
					IPT(fz)	.00003	.00003	.00003	.00003	.00004	.00004	.00005	.00005	.0001	.0001	.0001	.0001	.0001	.0002	.0002	
					RPM	16540	16540	15350	16380	14170	12600	11020	10160	9520	8460	7240	5670	5080	4410		
H	40	Chilled Cast Iron	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	140	155	170			
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004		
					RPM	24800	24800	23000	24600	21300	18900	16500	15200	14300	12700	10900	8500	7600	6900		
H	41	Hardened Cast Iron	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	15	35	50	65	75	80	80	80	85	90	90	95	105	110		
					IPT(fz)	.00003	.00003	.00003	.00003	.00004	.00004	.00005	.00005	.0001	.0001	.0001	.0001	.0001	.0002	.0002	
					RPM	16540	16540	15350	16380	14170	12600	11020	10160	9520	8460	7240	5670	5080	4410		

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)



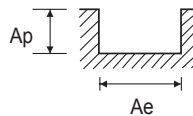
# YG 4G MILL END MILLS

## RECOMMENDED CUTTING CONDITIONS

### GMF23 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)																		
					1/8	9/64	3/16	13/64	1/4	17/64	9/32	5/16	11/32	23/64	3/8	13/32	7/16	1/2	9/16	5/8	3/4		
P	1-8	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	275	300	320	325	345	350	355	345	350	350	335	340	345	340	355	360	355		
				IPT(fz)	.0005	.0007	.0010	.0011	.0013	.0014	.0016	.0019	.0019	.0020	.0021	.0021	.0021	.0022	.0021	.0021	.0021	.0021	
				RPM	8400	8100	6500	6100	5300	5000	4800	4200	3900	3700	3400	3200	3000	2600	2400	2200	1800		
				IPM(FEED)	9	11	13	13	14	14	15	16	15	15	14	13	12	11	10	9	7		
	9	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	175	185	195	195	210	210	215	205	205	205	205	215	205	210	220	230	215		
				IPT(fz)	.0005	.0007	.0010	.0011	.0014	.0015	.0015	.0017	.0017	.0016	.0017	.0016	.0017	.0017	.0017	.0016	.0016	.0016	
				RPM	5300	5000	4000	3700	3200	3000	2900	2500	2300	2200	2100	2000	1800	1600	1500	1400	1100		
				IPM(FEED)	6	7	8	8	9	9	9	8	8	7	7	6	6	5	5	5	4		
	10	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	275	300	320	325	345	350	355	345	350	350	335	340	345	340	355	360	355		
				IPT(fz)	.0005	.0007	.0010	.0011	.0013	.0014	.0016	.0019	.0019	.0020	.0021	.0021	.0021	.0022	.0021	.0021	.0021	.0021	
				RPM	8400	8100	6500	6100	5300	5000	4800	4200	3900	3700	3400	3200	3000	2600	2400	2200	1800		
				IPM(FEED)	9	11	13	13	14	14	15	16	15	15	14	13	12	11	10	9	7		
	11.1-11.2	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	175	185	195	195	210	210	215	205	205	205	205	215	205	210	220	230	215		
				IPT(fz)	.0005	.0007	.0010	.0011	.0014	.0015	.0015	.0017	.0017	.0016	.0017	.0016	.0017	.0017	.0017	.0016	.0016	.0016	
				RPM	5300	5000	4000	3700	3200	3000	2900	2500	2300	2200	2100	2000	1800	1600	1500	1400	1100		
				IPM(FEED)	6	7	8	8	9	9	9	8	8	7	7	6	6	5	5	5	4		
M	14.1	1.0D	0.05D (Up to Ø1/32 : 0.15D)	SFM(Vc)	145	155	165	165	175	180	180	175	175	175	175	170	170	175	175	175			
				IPT(fz)	.0006	.0007	.0009	.0011	.0014	.0014	.0015	.0017	.0018	.0019	.0020	.0020	.0020	.0021	.0021	.0021	.0021	.0020	
				RPM	4370	4160	3330	3060	2680	2560	2420	2120	1940	1860	1760	1630	1500	1290	1190	1070	880		
				IPM(FEED)	5	6	6	7	7	7	7	7	7	7	7	6	6	5	5	5	4		
K	15-20	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	275	300	320	325	345	350	355	345	350	350	335	340	345	340	355	360	355		
				IPT(fz)	.0005	.0007	.0010	.0011	.0013	.0014	.0016	.0019	.0019	.0020	.0021	.0021	.0021	.0022	.0021	.0021	.0021	.0021	
				RPM	8400	8100	6500	6100	5300	5000	4800	4200	3900	3700	3400	3200	3000	2600	2400	2200	1800		
				IPM(FEED)	9	11	13	13	14	14	15	16	15	15	14	13	12	11	10	9	7		
H	38.1-38.2	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	105	115	120	120	125	130	135	140	140	140	140	140	145	145	150	150	140		
				IPT(fz)	.0003	.0003	.0004	.0004	.0005	.0008	.0008	.0009	.0010	.0010	.0010	.0011	.0008	.0009	.0010	.0011	.0007		
				RPM	3170	3090	2490	2250	1890	1850	1800	1690	1560	1500	1430	1330	1250	1100	1010	910	710		
				IPM(FEED)	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	1		
	40	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	175	185	195	195	210	210	215	205	205	205	205	215	205	210	220	230	215		
				IPT(fz)	.0005	.0007	.0010	.0011	.0014	.0015	.0015	.0017	.0017	.0016	.0017	.0016	.0017	.0017	.0017	.0016	.0016	.0016	
				RPM	5300	5000	4000	3700	3200	3000	2900	2500	2300	2200	2100	2000	1800	1600	1500	1400	1100		
				IPM(FEED)	6	7	8	8	9	9	9	8	8	7	7	6	6	5	5	5	4		
	41	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	105	115	120	120	125	130	135	140	140	140	140	140	145	145	150	150	140		
				IPT(fz)	.0003	.0003	.0004	.0004	.0005	.0008	.0008	.0009	.0010	.0010	.0010	.0011	.0008	.0009	.0010	.0011	.0007		
				RPM	3170	3090	2490	2250	1890	1850	1800	1690	1560	1500	1430	1330	1250	1100	1010	910	710		
				IPM(FEED)	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	1		

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)



HSS

CBN END MILLS

i-Xmill END MILLS

i-SMART MODULAR END MILLS

X5070 END MILLS

4G MILL END MILLS

X-POWER PRO END MILLS

TitaNox-POWER END MILLS

JET-POWER END MILLS

V7 PLUS A END MILLS

V7 MILL INOX

ALU-POWER HPC END MILLS

ALU-POWER END MILLS

D-POWER GRAPHITE END MILLS

STANDARD CARBIDE

ONLY ONE COATED PM60 END MILLS

SINE-POWER

TANK-POWER END MILLS

STANDARD COBALT & HSS

TECHNICAL DATA



# 4G MILL END MILLS

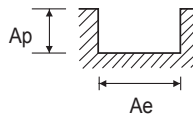
## RECOMMENDED CUTTING CONDITIONS

### GMF24 SERIES

### 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) / LOC														
						3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16	1/16	1/16	5/64	5/64	5/64		
						LOC	1/8	5/32	1/4	5/16	3/8	1/4	5/16	3/8	1/2	5/8	5/16	3/8	1/2	
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	150	150	150	165	165	145	145	145	190	190	170		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	13710	13710	12340	12340	12340	10000	10000	9000	9000	9000	9210	9210	8290		
					IPM(FEED)	3	3	3	2	2	3	3	2	2	2	3	3	3		
	9	Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	135	120	120	120	130	130	120	120	120	150	150	135		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002		
					RPM	10970	10970	9870	9870	9870	8000	8000	7200	7200	7200	7370	7370	6640		
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2	3	3	2		
	10	High alloyed steel, and tool steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	150	150	150	165	165	145	145	145	190	190	170		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002		
					RPM	13710	13710	12340	12340	12340	10000	10000	9000	9000	9000	9210	9210	8290		
					IPM(FEED)	3	3	3	2	2	3	3	2	2	2	3	3	3		
11.1-11.2	High alloyed steel, and tool steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	135	120	120	120	130	130	120	120	120	150	150	135			
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002			
				RPM	10970	10970	9870	9870	9870	8000	8000	7200	7200	7200	7370	7370	6640			
				IPM(FEED)	3	3	2	2	2	2	2	2	2	2	3	3	2			
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	150	150	150	165	165	145	145	145	190	190	170		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002		
					RPM	13710	13710	12340	12340	12340	10000	10000	9000	9000	9000	9210	9210	8290		
					IPM(FEED)	3	3	3	2	2	3	3	2	2	2	3	3	3		
H	38.1-38.2	Hardened steel	1.0D	0.05D	SFM(Vc)	85	85	75	75	75	80	80	75	75	75	95	95	85		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001		
					RPM	6860	6860	6170	6170	6170	5000	5000	4500	4500	4500	4610	4610	4150		
					IPM(FEED)	1.2	1.2	1.0	1.0	0.8	1.0	1.0	0.8	0.8	0.8	1.4	1.4	1.2		
	40	Chilled Cast Iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	135	120	120	120	130	130	120	120	120	150	150	135		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002		
					RPM	10970	10970	9870	9870	9870	8000	8000	7200	7200	7200	7370	7370	6640		
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2	3	3	2		
	41	Hardened Cast Iron	1.0D	0.05D	SFM(Vc)	85	85	75	75	75	80	80	75	75	75	95	95	85		
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001		
					RPM	6860	6860	6170	6170	6170	5000	5000	4500	4500	4500	4610	4610	4150		
					IPM(FEED)	1.2	1.2	1.0	1.0	0.8	1.0	1.0	0.8	0.8	0.8	1.4	1.4	1.2		

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)



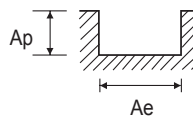
# YG 4G MILL END MILLS

## RECOMMENDED CUTTING CONDITIONS

### GMF24 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) / LOC													
						5/64	3/32	1/8	1/8	1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	13/64	
						LOC	5/8	5/8	3/8	1/2	5/8	3/4	1	1/2	5/8	3/4	1	13/16	3/4
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	190	185	185	185	165	165	180	180	160	160	220		
					IPT(fz)	.0001	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007	
					RPM	8290	7640	5670	5670	5670	5100	5100	3630	3630	3270	3270	4130		
					IPM(FEED)	2	3	4	4	4	3	3	3	3	3	3	6		
	9	Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	150	150	150	150	135	135	140	140	140	130	130	175	
					IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007	
					RPM	6640	6150	4600	4600	4600	4140	4140	2890	2890	2890	2600	2600	3270	
					IPM(FEED)	2	3	3	3	3	2	2	3	3	3	3	2	5	
	10	High alloyed steel, and tool steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	190	185	185	185	165	165	180	180	160	160	220		
					IPT(fz)	.0001	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007	
					RPM	8290	7640	5670	5670	5670	5100	5100	3630	3630	3270	3270	4130		
					IPM(FEED)	2	3	4	4	4	3	3	3	3	3	3	6		
11.1-11.2	High alloyed steel, and tool steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	150	150	150	150	135	135	140	140	140	130	130	175		
				IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007		
				RPM	6640	6150	4600	4600	4600	4140	4140	2890	2890	2890	2600	2600	3270		
				IPM(FEED)	2	3	3	3	3	2	2	3	3	3	3	2	5		
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	190	185	185	185	165	165	180	180	180	160	160	
					IPT(fz)	.0002	.0001	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0004
					RPM	8290	8290	7640	5670	5670	5670	5100	5100	3630	3630	3630	3270	3270	
					IPM(FEED)	3	2	3	4	4	4	3	3	3	3	3	3	3	
H	38.1-38.2	Hardened steel	1.0D	0.05D	SFM(Vc)	85	85	95	95	95	95	85	85	90	90	90	80	80	
					IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004
					RPM	4150	4150	3820	2830	2830	2830	2550	2550	1820	1820	1820	1640	1640	
					IPM(FEED)	1.2	1.0	1.4	1.4	1.4	1.4	1.2	1.0	1.4	1.4	1.4	1.2	1.2	
	40	Chilled Cast Iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	150	150	150	150	135	135	140	140	140	130	130	175	
					IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007	
					RPM	6640	6150	4600	4600	4600	4140	4140	2890	2890	2890	2600	2600	3270	
					IPM(FEED)	2	3	3	3	3	2	2	3	3	3	3	2	5	
	41	Hardened Cast Iron	1.0D	0.05D	SFM(Vc)	85	95	95	95	95	85	85	90	90	90	80	80	115	
					IPT(fz)	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0005	
					RPM	4150	3820	2830	2830	2830	2550	2550	1820	1820	1820	1640	1640	2140	
					IPM(FEED)	1.0	1.4	1.4	1.4	1.4	1.2	1.0	1.4	1.4	1.4	1.4	1.2	2.0	

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)



HSS

CBN  
END MILLS

i-Xmill  
END MILLS

i-SMART  
MODULAR  
END MILLS

X5070  
END MILLS

4G MILL  
END MILLS

X-POWER  
PRO  
END MILLS

TitaNox-  
POWER  
END MILLS

JET-POWER  
END MILLS

V7 PLUS A  
END MILLS

V7 MILL  
INOX

ALU-POWER  
HPC  
END MILLS

ALU-  
POWER  
END MILLS

D-POWER  
GRAPHITE  
END MILLS

STANDARD  
CARBIDE

ONLY ONE  
COATED PM60  
END MILLS

SINE-  
POWER

TANK-  
POWER  
END MILLS

STANDARD  
COBALT &  
HSS

TECHNICAL  
DATA



# 4G MILL END MILLS

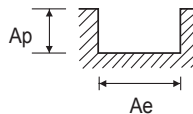
## RECOMMENDED CUTTING CONDITIONS

### GMF24 SERIES

### 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø) / LOC																			
					13/64		13/64		13/64		1/4		1/4		1/4		1/4		5/16		5/16		5/16	
					LOC	1	1 3/16	1 1/2	5/8	3/4	1	1 3/16	1 3/8	1 1/2	1 3/4	1	1 3/16	1 3/8	1 1/2	1 3/4	2			
P	1-8	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	220	200	200	220	220	220	220	200	200	200	240	240	240	240	215	215				
				IPT(fz)	.0007	.0006	.0006	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010				
				RPM	4130	3720	3720	3390	3390	3390	3390	3050	3050	3050	2930	2930	2930	2930	2630	2630				
				IPM(FEED)	6	5	5	6	6	6	5	5	4	4	8	8	8	7	6	5				
	9	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	175	155	155	180	180	180	180	160	160	160	190	190	190	190	170	170				
				IPT(fz)	.0007	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010				
				RPM	3270	2940	2940	2720	2720	2720	2720	2450	2450	2450	2320	2320	2320	2320	2080	2080				
				IPM(FEED)	5	4	4	5	5	5	5	4	4	4	6	6	6	5	5	4				
	10	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	220	200	200	220	220	220	220	200	200	200	240	240	240	240	215	215				
				IPT(fz)	.0007	.0006	.0006	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010				
				RPM	4130	3720	3720	3390	3390	3390	3390	3050	3050	3050	2930	2930	2930	2930	2630	2630				
				IPM(FEED)	6	5	5	6	6	6	5	5	4	4	8	8	8	7	6	5				
11.1-11.2	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	175	155	155	180	180	180	180	160	160	160	190	190	190	190	170	170					
			IPT(fz)	.0007	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010					
			RPM	3270	2940	2940	2720	2720	2720	2720	2450	2450	2450	2320	2320	2320	2320	2080	2080					
			IPM(FEED)	5	4	4	5	5	5	5	4	4	4	6	6	6	5	5	4					
K	15-20	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	220	200	200	220	220	220	220	200	200	200	240	240	240	240	215	215				
				IPT(fz)	.0007	.0006	.0006	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010				
				RPM	4130	3720	3720	3390	3390	3390	3390	3050	3050	3050	2930	2930	2930	2930	2630	2630				
				IPM(FEED)	6	5	5	6	6	6	5	5	4	4	8	8	8	7	6	5				
H	38.1-38.2	1.0D	0.05D	SFM(Vc)	115	105	105	115	115	115	115	105	105	105	125	125	125	125	115	115				
				IPT(fz)	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0009	.0009	.0009	.0008	.0008	.0007				
				RPM	2140	1930	1930	1760	1760	1760	1760	1580	1580	1580	1530	1530	1530	1530	1380	1380				
				IPM(FEED)	2.0	1.6	1.6	2.4	2.4	2.4	2.2	2.0	1.6	1.6	2.8	2.8	2.8	2.4	2.2	2.0				
	40	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	175	155	155	180	180	180	180	160	160	160	190	190	190	190	170	170				
				IPT(fz)	.0007	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010				
				RPM	3270	2940	2940	2720	2720	2720	2720	2450	2450	2450	2320	2320	2320	2320	2080	2080				
				IPM(FEED)	5	4	4	5	5	5	5	4	4	4	6	6	6	5	5	4				
	41	1.0D	0.05D	SFM(Vc)	115	105	105	115	115	115	115	105	105	105	125	125	125	125	115	115				
				IPT(fz)	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0009	.0009	.0009	.0008	.0008	.0007				
				RPM	2140	1930	1930	1760	1760	1760	1760	1580	1580	1580	1530	1530	1530	1530	1380	1380				
				IPM(FEED)	2.0	1.6	1.6	2.4	2.4	2.4	2.2	2.0	1.6	1.6	2.8	2.8	2.8	2.4	2.2	2.0				

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)



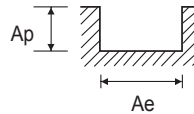
# YG 4G MILL END MILLS

## RECOMMENDED CUTTING CONDITIONS

### GMF24 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø) / LOC															
					3/8	3/8	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	1/2	1/2	5/8	3/4	3/4	
					LOC 1 3/16	1 3/8	1 1/2	1 3/4	2	2 3/8	1 3/8	1 1/2	1 3/4	2	2 1/8	2 3/8	1 1/2	3 1/2	4 1/4	
P	1-8	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	265	265	265	265	240	240	235	235	235	235	235	235	285	265	240	
				IPT(fz)	.0015	.0015	.0015	.0013	.0013	.0011	.0015	.0015	.0015	.0013	.0013	.0013	.0016	.0013	.0012	
				RPM	2700	2700	2700	2700	2430	2430	1790	1790	1790	1790	1790	1790	1730	1340	1210	
				IPM(FEED)	8	8	8	7	6	6	5	5	5	5	5	5	6	3	3	
	9	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	215	215	215	215	195	195	195	195	195	195	195	195	215	205	185	
				IPT(fz)	.0015	.0015	.0015	.0013	.0012	.0011	.0016	.0016	.0016	.0013	.0013	.0013	.0016	.0011	.0011	
				RPM	2200	2200	2200	2200	1980	1980	1490	1490	1490	1490	1490	1490	1300	1050	940	
				IPM(FEED)	7	7	7	6	5	4	5	5	5	4	4	4	4	2	2	
	10	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	265	265	265	265	240	240	235	235	235	235	235	235	285	265	240	
				IPT(fz)	.0015	.0015	.0015	.0013	.0013	.0011	.0015	.0015	.0015	.0013	.0013	.0013	.0016	.0013	.0012	
				RPM	2700	2700	2700	2700	2430	2430	1790	1790	1790	1790	1790	1790	1730	1340	1210	
				IPM(FEED)	8	8	8	7	6	6	5	5	5	5	5	5	6	3	3	
	11.1-11.2	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	215	215	215	215	195	195	195	195	195	195	195	195	215	205	185	
				IPT(fz)	.0015	.0015	.0015	.0013	.0012	.0011	.0016	.0016	.0016	.0013	.0013	.0013	.0016	.0011	.0011	
				RPM	2200	2200	2200	2200	1980	1980	1490	1490	1490	1490	1490	1490	1300	1050	940	
				IPM(FEED)	7	7	7	6	5	4	5	5	5	4	4	4	4	2	2	
K	15-20	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	265	265	265	265	240	240	235	235	235	235	235	285	265	240		
				IPT(fz)	.0015	.0015	.0015	.0013	.0013	.0011	.0015	.0015	.0015	.0013	.0013	.0013	.0016	.0013	.0012	
				RPM	2700	2700	2700	2700	2430	2430	1790	1790	1790	1790	1790	1790	1730	1340	1210	
				IPM(FEED)	8	8	8	7	6	6	5	5	5	5	5	5	6	3	3	
H	38.1-38.2	1.0D	0.05D	SFM(Vc)	130	130	130	130	120	120	120	120	120	120	120	135	130	120		
				IPT(fz)	.0011	.0011	.0011	.0010	.0010	.0008	.0011	.0011	.0011	.0009	.0009	.0009	.0012	.0009	.0008	
				RPM	1330	1330	1330	1330	1200	1200	900	900	900	900	900	900	810	660	600	
				IPM(FEED)	3.0	3.0	3.0	2.6	2.4	2.0	2.0	2.0	2.0	1.6	1.6	1.6	2.0	1.2	1.0	
	40	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	215	215	215	215	195	195	195	195	195	195	195	215	205	185		
				IPT(fz)	.0015	.0015	.0015	.0013	.0012	.0011	.0016	.0016	.0016	.0013	.0013	.0013	.0016	.0011	.0011	
				RPM	2200	2200	2200	2200	1980	1980	1490	1490	1490	1490	1490	1490	1300	1050	940	
				IPM(FEED)	7	7	7	6	5	4	5	5	5	4	4	4	4	2	2	
	41	1.0D	0.05D	SFM(Vc)	130	130	130	130	120	120	120	120	120	120	120	135	130	120		
				IPT(fz)	.0011	.0011	.0011	.0010	.0010	.0008	.0011	.0011	.0011	.0009	.0009	.0009	.0012	.0009	.0008	
				RPM	1330	1330	1330	1330	1200	1200	900	900	900	900	900	900	810	660	600	
				IPM(FEED)	3.0	3.0	3.0	2.6	2.4	2.0	2.0	2.0	2.0	1.6	1.6	1.6	2.0	1.2	1.0	

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 RPM = Revolutions Per Minute  
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 Ap : Inch (Axial Depth of Cut)  
 Ae : Inch (Radial Depth of Cut)



HSS

CBN END MILLS

i-Xmill END MILLS

i-SMART MODULAR END MILLS

X5070 END MILLS

4G MILL END MILLS

X-POWER PRO END MILLS

TitaNox-POWER END MILLS

JET-POWER END MILLS

V7 PLUS A END MILLS

V7 MILL INOX

ALU-POWER HPC END MILLS

ALU-POWER END MILLS

D-POWER GRAPHITE END MILLS

STANDARD CARBIDE

ONLY ONE COATED PM60 END MILLS

SINE-POWER

TANK-POWER END MILLS

STANDARD COBALT & HSS

TECHNICAL DATA