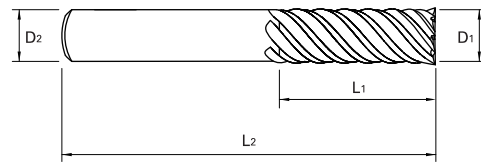
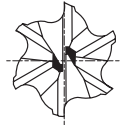


CARBIDE, 6 FLUTE LONG & EXTRA LONG

- ▶ The unique geometry of the variable pitch reduces chatter for high speed and trochoidal milling
- ▶ Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40



NEW

GMG12 / PLAIN SHANK
GMG13 / FLAT SHANK

GMG14 / PLAIN SHANK
GMG15 / FLAT SHANK



P.21

MILL DIA. TOLERANCE (mm)	SHANK DIA. TOLERANCE
0~-0.03	h6

Y7 Plus
SOLID CARBIDE END MILLS

LONG

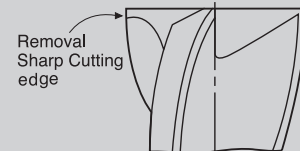
Unit : mm

EDP No.		MILL DIAMETER	SHANK DIAMETER	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
GMG12060	GMG13060	6.0	6	13	57
GMG12080	GMG13080	8.0	8	19	63
GMG12100	GMG13100	10.0	10	22	72
GMG12120	GMG13120	12.0	12	26	83
GMG12160	GMG13160	16.0	16	32	92
GMG12200	GMG13200	20.0	20	38	104
GMG12250	GMG13250	25.0	25	44	104

EXTRA LONG

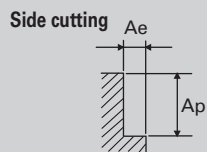
Unit : mm

EDP No.		MILL DIAMETER	SHANK DIAMETER	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
GMG14060	GMG15060	6.0	6	24	75
GMG14080	GMG15080	8.0	8	32	75
GMG14100	GMG15100	10.0	10	40	100
GMG14120	GMG15120	12.0	12	48	120
GMG14160	GMG15160	16.0	16	64	140
GMG14200	GMG15200	20.0	20	80	150
GMG14250	GMG15250	25.0	25	100	170











CUTTING CONDITION

GMG12, GMG13, GMG14, GMG15, GMG16, GMG17, GMG18, GMG19 SERIES



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth


SOLID CARBIDE END MILLS

SPEED AND FEED RECOMMENDATIONS					Diameter (mm)							
Hardness (BRINELL)	Work Materials	Type of cut	Ap x D1	Ae x D1	Parameters	6	8	10	12	16	20	25
P < 300	CARBON STEEL 1.1191(C45) 1.0726(35 S 20) 1.0715(9 SMN 28) 1.0718(9 SMNPB 28)	Side Cutting 	2 (*)	0.05	Vc	300 (240-360)						
					RPM	15915	11937	9549	7958	5968	4775	3820
					Fz	0.068	0.116	0.144	0.173	0.202	0.225	0.232
					FEED	6494	8308	8251	8260	7234	6446	5317
P > 300 P < 380	ALLOY STEEL 1.2330(35 CRMO 4) 1.6565(40NICRMO6) 1.7033(34CR4) 1.6523(21 NICRMO2)	Side Cutting 	2 (*)	0.05	Vc	203 (162-244)						
					RPM	10769	8077	6462	5385	4039	3231	2585
					Fz	0.050	0.085	0.106	0.128	0.149	0.167	0.174
					FEED	3231	4119	4110	4135	3610	3237	2698
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)	Side Cutting 	2 (*)	0.05	Vc	100 (80-120)						
					RPM	5305	3979	3183	2653	1989	1592	1273
					Fz	0.041	0.071	0.088	0.105	0.123	0.137	0.144
					FEED	1305	1695	1681	1671	1468	1308	1100
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)	Side Cutting 	2 (*)	0.05	Vc	147 (118-176)						
					RPM	7799	5849	4679	3899	2924	2340	1872
					Fz	0.041	0.071	0.088	0.105	0.123	0.137	0.143
					FEED	1918	2492	2471	2457	2158	1923	1606
M	STAINLESS STEELS 400 1.4005(X12 CRS 13) 1.4104(X14 CRMOS 17)	Side Cutting 	2 (*)	0.05	Vc	213 (170-256)						
					RPM	11300	8475	6780	5650	4238	3390	2712
					Fz	0.049	0.084	0.104	0.125	0.146	0.162	0.168
					FEED	3322	4271	4231	4238	3712	3295	2734
M	STAINLESS STEELS(PH) 1.4594(Z7 CNU 15.05)	Side Cutting 	2 (*)	0.05	Vc	134 (107-161)						
					RPM	7109	5332	4265	3554	2666	2133	1706
					Fz	0.041	0.071	0.088	0.105	0.123	0.137	0.142
					FEED	1749	2271	2252	2239	1967	1753	1454
S	TITANIUM Ti6AL4V Ti5AL5V5MO Ti7AL4MO	Side Cutting 	2 (*)	0.05	Vc	213 (170-256)						
					RPM	6154	4615	3692	3077	2308	1846	1477
					Fz	0.033	0.055	0.070	0.083	0.097	0.113	0.117
					FEED	1218	1523	1551	1532	1343	1252	1037
S	HIGH TEMPERATURE ALLOY INCONEL HASTELLOY, RENE	Side Cutting 	2 (*)	0.05	Vc	134 (107-161)						
					RPM	1751	1313	1050	875	657	525	420
					Fz	0.033	0.055	0.070	0.082	0.097	0.112	0.115
					FEED	347	433	441	431	382	353	290

* () : If product's Length of Cut(L.O.C) is below 2D, it must be applied L.O.C x 90%