



PLAIN SHANK

**GMG14** SERIES

FLAT SHANK

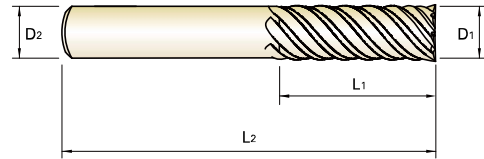
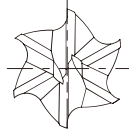
**GMG15** SERIES

**CARBIDE, 6 FLUTE EXTRA LONG LENGTH**

- VOLLHARTMETALL, 6 SCHNEIDEN, EXTRA LANG
- CARBURE, 6 DENTS, SÉRIE EXTRA-LONGUE
- MD, 6 TAGLIENTI SERIE EXTRA LUNGA

- ▶ The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
- ▶ Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRC40

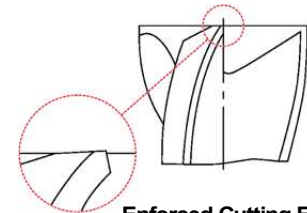
- ▶ Durch die einzigartige Geometrie und die ungleiche Teilung der Schneiden, eignet sich Fräser Bestens für hohe Bearbeitungsgeschwindigkeiten und trochiodales Fräsen.
- ▶ Exzellente Leistung in Edelstählen, Baustählen, Guss und Stählen unter 40HRC



Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	D1	D2	L1	L2
<b>GMG14060</b>	<b>GMG15060</b>	6.0	6	24	75
<b>GMG14080</b>	<b>GMG15080</b>	8.0	8	32	75
<b>GMG14100</b>	<b>GMG15100</b>	10.0	10	40	100
<b>GMG14120</b>	<b>GMG15120</b>	12.0	12	48	120
<b>GMG14160</b>	<b>GMG15160</b>	16.0	16	64	140
<b>GMG14200</b>	<b>GMG15200</b>	20.0	20	80	150
<b>GMG14250</b>	<b>GMG15250</b>	25.0	25	100	170

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5 * Shank Dia. ≥ Ø12 : h6



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M				K					
	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc	13	25	28	32	30	29	32	38	15	35	15	23	10	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
ISO	N									S							H				
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)		Non Metallic Materials		Heat Resistant Super Alloys							Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				



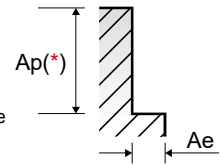
**RECOMMENDED CUTTING CONDITIONS**  
**EMPFOHLENE SCHNEIDPARAMETER**

**GMG16 GMG17** **GMG18 GMG19** **GMG12 GMG13** **GMG14 GMG15**

**6 FLUTE - SIDE CUTTING**

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

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)							
						6.0	8.0	10.0	12.0	16.0	20.0	25.0	
P	1-4	Non-alloy steel	0.05D	2.0D	Vc	300	300	300	300	300	300	300	
					fz	0.068	0.116	0.144	0.173	0.202	0.225	0.232	
					RPM	15915	11937	9549	7958	5968	4775	3820	
	5	Low alloy steel	0.05D	2.0D	Vc	203	203	203	203	203	203	203	
					fz	0.05	0.085	0.106	0.128	0.149	0.167	0.174	
					RPM	10769	8077	6462	5385	4039	3231	2585	
	6-7	Low alloy steel	0.05D	2.0D	Vc	300	300	300	300	300	300	300	
					fz	0.068	0.116	0.144	0.173	0.202	0.225	0.232	
					RPM	15915	11937	9549	7958	5968	4775	3820	
	8-9	Low alloy steel	0.05D	2.0D	Vc	203	203	203	203	203	203	203	
					fz	0.05	0.085	0.106	0.128	0.149	0.167	0.174	
					RPM	10769	8077	6462	5385	4039	3231	2585	
10-11.1	High alloyed steel, and tool steel	0.05D	2.0D	Vc	100	100	100	100	100	100	100		
				fz	0.041	0.071	0.088	0.105	0.123	0.137	0.144		
				RPM	5305	3979	3183	2653	1989	1592	1273		
M	12-13	Stainless steel	0.05D	2.0D	Vc	213	213	213	213	213	213	213	
					fz	0.049	0.084	0.104	0.125	0.146	0.162	0.168	
					RPM	11300	8475	6780	5650	4238	3390	2712	
	14.1	Stainless steel	0.05D	2.0D	Vc	147	147	147	147	147	147	147	
					fz	0.041	0.071	0.088	0.105	0.123	0.137	0.143	
					RPM	7799	5849	4679	3899	2924	2340	1872	
	14.2	Stainless steel	0.05D	2.0D	Vc	134	134	134	134	134	134	134	
					fz	0.041	0.071	0.088	0.105	0.123	0.137	0.142	
					RPM	7109	5332	4265	3554	2666	2133	1706	
	S	31-35	Heat Resistant Super Alloys	0.05D	2.0D	Vc	33	33	33	33	33	33	33
						fz	0.033	0.055	0.07	0.082	0.097	0.112	0.115
						RPM	1751	1313	1050	875	657	525	420
36-37		Titanium Alloys	0.05D	2.0D	Vc	116	116	116	116	116	116	116	
					fz	0.033	0.055	0.07	0.083	0.097	0.113	0.117	
					RPM	6154	4615	3692	3077	2308	1846	1477	



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