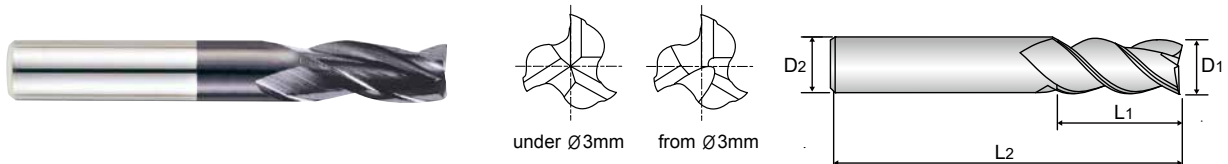


CARBIDE, 3 FLUTE 38° HELIX SHORT LENGTH

● **VOLLHARTMETALL, 3 SCHNEIDEN 38° RECHTSSPIRALE KURZ**
● **Fraise carbure, 3 dents, hélice 38°, courte**
● **3 TAGLIENTI, ELICA 38°, SERIE CORTA**

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials.
- ▶ Possesses the advantage of 2 flute and 4 flute end mill.
- ▶ Superior workpiece finishes.

- ▶ Zur Bearbeitung: Werkzeugstählen, Legierten Stählen, Stahlguß und gehärteten Stählen.
- ▶ Besitzt die Vorteile von 2 und 4 Schneiden Fräsern
- ▶ Bessere Werkstückoberflächen



Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
GM895010	1.0	3	2.5	38
GM895015	1.5	4	5	50
GM895025	2.5	3	7	38
GM895030	3.0	3	10	38
GM895901	3.0	6	10	50
GM895040	4.0	4	12	50
GM895903	4.0	6	12	50
GM895050	5.0	5	14	50
GM895904	5.0	6	14	57
GM895060	6.0	6	16	57
GM895080	8.0	8	20	63
GM895100	10.0	10	22	72
GM895120	12.0	12	25	73
GM895160	16.0	16	32	82

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : Excellent ○ : Good

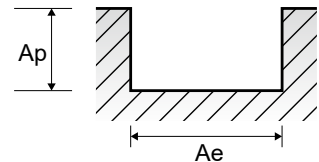
ISO Material Description	P											M				K					
	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	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 Material Description	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																		○		◎	○

GM895 SERIES 3 FLUTE - SLOTTING

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

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	
P	1-4	Non-alloy steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	80	90	105	110	115	115	115	115	120	
					fz	0.005	0.007	0.012	0.015	0.019	0.027	0.031	0.03	0.03	
	RPM		12732	9549	8356	7003	6101	4576	3661	3050	2387				
	FEED		191	201	301	315	348	371	340	275	215				
	5	Non-alloy steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	50	60	65	65	70	70	70	70	75	
					fz	0.005	0.008	0.011	0.015	0.020	0.024	0.023	0.023	0.024	
	RPM		7958	6366	5173	4138	3714	2785	2228	1857	1492				
	FEED		119	153	171	186	223	201	154	128	107				
	6-7	Low alloy steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	80	90	105	110	115	115	115	115	120	
					fz	0.005	0.007	0.012	0.015	0.019	0.027	0.031	0.03	0.03	
RPM	12732		9549	8356	7003	6101	4576	3661	3050	2387					
FEED	191		201	301	315	348	371	340	275	215					
8-9	Low alloy steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	50	60	65	65	70	70	70	70	75		
				fz	0.005	0.008	0.011	0.015	0.020	0.024	0.023	0.023	0.024		
RPM		7958	6366	5173	4138	3714	2785	2228	1857	1492					
FEED		119	153	171	186	223	201	154	128	107					
10	High alloyed steel, and tool steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	80	90	105	110	115	115	115	115	120		
				fz	0.005	0.007	0.012	0.015	0.019	0.027	0.031	0.03	0.03		
RPM		12732	9549	8356	7003	6101	4576	3661	3050	2387					
FEED		191	201	301	315	348	371	340	275	215					
11.1 - 11.2	High alloyed steel, and tool steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	50	60	65	65	70	70	70	70	75		
				fz	0.005	0.008	0.011	0.015	0.020	0.024	0.023	0.023	0.024		
RPM		7958	6366	5173	4138	3714	2785	2228	1857	1492					
FEED		119	153	171	186	223	201	154	128	107					
M	14.1	Stainless steel	1.0D	D≤3:0.2D D>3:0.5D	Vc	45	50	55	55	60	60	60	55	60	
fz	0.004	0.008	0.011	0.015	0.019	0.025	0.029	0.029	0.031						
RPM	7162	5305	4377	3501	3183	2387	1910	1459	1194						
FEED	86	127	144	158	181	179	166	127	111						
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	D≤3:0.2D D>3:0.5D	Vc	80	90	105	110	115	115	115	115	120	
fz	0.005	0.007	0.012	0.015	0.019	0.027	0.031	0.03	0.03						
RPM	12732	9549	8356	7003	6101	4576	3661	3050	2387						
FEED	191	201	301	315	348	371	340	275	215						
H	38.1 - 38.2	Hardened steel	1.0D	0.05D	Vc	35	35	40	40	40	45	45	50	50	
					fz	0.002	0.004	0.004	0.007	0.008	0.013	0.013	0.014	0.013	
D-POWER GRAPHITE END MILLS	40	Chilled Cast Iron	1.0D	D≤3:0.2D D>3:0.5D	Vc	50	60	65	65	70	70	70	70	75	
					fz	0.005	0.008	0.011	0.015	0.020	0.024	0.023	0.023	0.024	
D-POWER CFRP END MILLS	41	Hardened Cast Iron	1.0D	0.05D	Vc	35	35	40	40	40	45	45	50	50	
					fz	0.002	0.004	0.004	0.007	0.008	0.013	0.013	0.014	0.013	
ROUTERS					RPM	5570	3714	3183	2546	2122	1790	1432	1326	995	
					FEED	33	45	38	53	51	70	56	56	39	

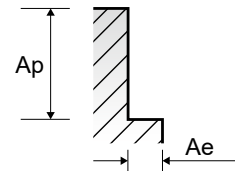
▶ NEXT PAGE



GM895 SERIES
3 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)									
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	
P	1-4	Non-alloy steel	0.05D	1.0D	Vc	80	90	105	110	115	115	115	115	120	
					fz	0.006	0.009	0.019	0.024	0.03	0.042	0.047	0.048	0.047	
					RPM	12732	9549	8356	7003	6101	4576	3661	3050	2387	
	FEED		229	258	476	504	549	577	516	439	337				
	5		Low alloy steel	0.05D	1.0D	Vc	50	60	65	65	70	70	70	70	75
						fz	0.006	0.009	0.019	0.024	0.031	0.039	0.039	0.038	0.037
		RPM				7958	6366	5173	4138	3714	2785	2228	1857	1492	
	FEED	143		172	295	298	345	326	261	212	166				
	6-7	High alloyed steel, and tool steel		0.05D	1.0D	Vc	80	90	105	110	115	115	115	115	120
						fz	0.006	0.009	0.019	0.024	0.03	0.042	0.047	0.048	0.047
			RPM			12732	9549	8356	7003	6101	4576	3661	3050	2387	
	FEED		229	258	476	504	549	577	516	439	337				
8-9	Stainless steel		0.05D	1.0D	Vc	50	60	65	65	70	70	70	70	75	
					fz	0.006	0.009	0.019	0.024	0.031	0.039	0.039	0.038	0.037	
		RPM			7958	6366	5173	4138	3714	2785	2228	1857	1492		
FEED		143	172	295	298	345	326	261	212	166					
10		Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.0D	Vc	80	90	105	110	115	115	115	115	120	
					fz	0.006	0.009	0.019	0.024	0.03	0.042	0.047	0.048	0.047	
	RPM				12732	9549	8356	7003	6101	4576	3661	3050	2387		
FEED	229		258	476	504	549	577	516	439	337					
11.1 11.2	Hardened steel		0.05D	1.0D	Vc	50	60	65	65	70	70	70	70	75	
					fz	0.006	0.009	0.019	0.024	0.031	0.039	0.039	0.038	0.037	
		RPM			7958	6366	5173	4138	3714	2785	2228	1857	1492		
FEED		143	172	295	298	345	326	261	212	166					
M		Chilled Cast Iron	0.05D	1.0D	Vc	45	50	55	55	60	60	60	55	60	
					fz	0.006	0.009	0.018	0.024	0.029	0.042	0.046	0.044	0.047	
	RPM				7162	5305	4377	3501	3183	2387	1910	1459	1194		
FEED	129		143	236	252	277	301	264	193	168					
K	Hardened Cast Iron		0.05D	1.0D	Vc	80	90	105	110	115	115	115	115	120	
					fz	0.006	0.009	0.019	0.024	0.03	0.042	0.047	0.048	0.047	
		RPM			12732	9549	8356	7003	6101	4576	3661	3050	2387		
FEED		229	258	476	504	549	577	516	439	337					
H		38.1 - 38.2	Hardened Cast Iron	0.05D	1.0D	Vc	35	35	40	40	40	45	45	50	50
						fz	0.002	0.004	0.005	0.008	0.010	0.016	0.017	0.017	0.017
	RPM					5570	3714	3183	2546	2122	1790	1432	1326	995	
	FEED	33		45	48	61	64	86	73	68	51				
	40	Hardened Cast Iron		0.05D	1.0D	Vc	50	60	65	65	70	70	70	70	75
						fz	0.006	0.009	0.019	0.024	0.031	0.039	0.039	0.038	0.037
			RPM			7958	6366	5173	4138	3714	2785	2228	1857	1492	
	FEED		143	172	295	298	345	326	261	212	166				
	41		Hardened Cast Iron	0.05D	1.0D	Vc	35	35	40	40	40	45	45	50	50
						fz	0.002	0.004	0.005	0.008	0.010	0.016	0.017	0.017	0.017
		RPM				5570	3714	3183	2546	2122	1790	1432	1326	995	
	FEED	33		45	48	61	64	86	73	68	51				



SELECTION GUIDE



SERIES	GM876	GM813	GM886	GM902
FLUTE	2	2	2	2
HELIX ANGLE	30°	30°	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	R0.5	R0.5	R0.25	R0.5
SIZE MAX	R8.0	R10.0	R3.0	R4.0
PAGE	350	351	352	354

SOLID CARBIDE
X-POWER PRO
END MILLS

for Pre-Hardened Steels up to HRC55,
 Mold & Die, Dry & Wet Cutting

SHORT LENGTH	LONG LENGTH	RIB PROCESSING	TAPER NECK
Y-Coating	Y-Coating	Y-Coating	Y-Coating



Please visit
globalyg1.com/mat
 for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P 372

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRC	GM876	GM813	GM886	GM902	
P	1	Non-alloy steel	About 0.15% C Annealed	125		○	○	○	○	
	2		About 0.45% C Annealed	190	13	○	○	○	○	
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○	○	
	4		About 0.75% C Annealed	270	28	◎	◎	◎	○	
	5		About 0.75% C Quenched & Tempered	300	32	◎	◎	◎	○	
	6	Low alloy steel	Annealed	180	10	○	○	○	○	
	7		Quenched & Tempered	275	29	◎	◎	◎	○	
	8		Quenched & Tempered	300	32	◎	◎	◎	◎	
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	
	10		High alloyed steel, and tool steel	Annealed	200	15	○	○	○	○
	11			Quenched & Tempered	325	35	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15					
	13		Martensitic Quenched & Tempered	240	23					
	14		Austenitic	180	10					
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○		
	16		Pearlitic (Martensitic)	260	26	○	○	○		
	17	Nodular cast iron	Ferritic	160	3	○	○	○		
	18		Pearlitic	250	25	○	○	○		
	19		Ferritic	130		○	○	○		
20	Malleable cast iron	Pearlitic	230	21	○	○	○			
N	21	Aluminum-wrought alloy	Not Curable	60						
	22		Curable Hardened	100						
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75						
	24		≤ 12% Si, Curable Hardened	90						
	25		> 12% Si, Not Curable	130						
	26		Cutting Alloys, PB>1%	110						
	27	Copper and Copper Alloys	CuZn, CuSnZn (Brass)	90						
	28		CuSn, lead-free copper and electrolytic copper	100						
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15					
	32		Cured	280	30					
	33		Annealed	250	25					
	34		Ni or Co Based Cured	350	38					
	35		Cast	320	34					
	36	Titanium Alloys	Pure Titanium	400 Rm						
	37		Alpha + Beta Alloys Hardened	1050 Rm						
H	38	Hardened steel	Hardened	550	55	○	○	○	○	
	39		Hardened	630	60	○	○	○	○	
	40	Chilled Cast Iron	Cast	400	42	◎	◎	◎	◎	
	41	Hardened Cast Iron	Hardened	550	55	○	○	○	○	

GM815	GM818	GM8A1	GM839	GM819	GM810	GM883	GM895	GM811	GM817	GM812	GM834	GM814
4	2	2	4	4	2	2	3	4	4	6&8	6	3&4
30°	30°	30°	30°	30°	30°	30°	38°	30°	30°	45°	45°	20°
BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	ROUGHING
R1.0	D4.0	D1.0	D2.0	D3.0	D0.4	D0.4	D1.0	D2.0	D2.0	D6.0	D6.0	D6.0
R8.0	D12.0	D6.0	D12.0	D20.0	D20.0	D6.0	D16.0	D25.0	D20.0	D20.0	D25.0	D20.0
355	356	357	359	360	361	363	366	367	368	369	370	371
LONG LENGTH	LONG LENGTH	RIB PROCESSING	STUB LENGTH	LONG LENGTH	SHORT LENGTH	RIB PROCESSING	SHORT LENGTH	SHORT LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	LONG LENGTH
Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating



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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 END MILLS

ALU-POWER HPC END MILLS

ALU-POWER END MILLS

D-POWER GRAPHITE END MILLS

D-POWER CFRP END MILLS

ROUTERS

CRX S END MILLS

K-2 END MILLS

ONLY ONE COATED PM60 END MILLS

TANK-POWER END MILLS

GENERAL HSS END MILLS

MILLING CUTTERS

TECHNICAL DATA