4G MILL END MILLS

X-SPEED ROUGHER

PLAIN SHANK **G9D77 SERIES**

FLAT SHANK **G9D69 SERIES**

CARBIDE, 4&5 FLUTE MULTIPLE HELIX LONG REACH CORNER RADIUS

VOLLHARTMETALL, 4&5 SCHNEIDEN MEHRSPIRAL Fräser GROßE REICHWEITE ECKENRADIUS

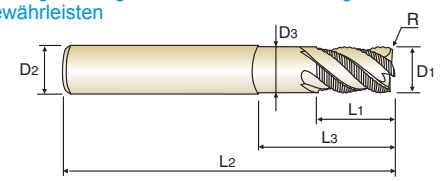
Fraise carbure, 4&5 dents, torique longue portée, hélice multiple

MD, 4 & 5 TAGLIENTI, TORICA, SCARICATA, SERIE LUNGS

- Unique flute design for excellent chip evacuation and vibration reduction.
- Optimal roughing tooth profile to reduce cutting forces.
- Special tool geometry for high feed rate and heavy cutting.
- Strong end tooth design for plunge and pocket milling.
- Custom engineered coating to allow long tool life and excellent chip evacuation.

- einzigartige Nutengeometrie für hervorragenden Spänetransport und Vibrationsreduzierung
- neuartiges Schruppprofil zur reduzierung der Schnittkräfte
- Spezielle Werkzeuggeometrie für Hochvorschub- und Schwerzerspanung geeignet
- speziell entwickelte Schneidengeometrie für Tauch- und Taschenfräsen
- YG-1 eigene Beschichtung um lange lebensdauer und sehr guten Spänetransport zu gewährleisten





CARBIDE | 4&5 | 44°~45° | PLAIN | FLAT | X Coating

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Recommended ToolHolder

	Flat Shank	Plain Shank
◎	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
◎	-	POWER MILLING CHUCK
○	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	No. of Flute
PLAIN	FLAT	R	D_1	D_2	L_1	L_3	L_2	D_3	
G9D77060	G9D69060	R0.5	**6.0**	6	9	18	57	5.50	4
G9D77080	G9D69080	R0.5	**8.0**	8	12	24	63	7.50	4
G9D77100	G9D69100	R0.5	**10.0**	10	15	30	72	9.50	4
G9D77120	G9D69120	R0.5	**12.0**	12	18	36	83	11.50	4
G9D77160	G9D69160	R1.0	**16.0**	16	24	48	100	15.50	5
G9D77200	G9D69200	R1.0	**20.0**	20	30	60	110	19.20	5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.05	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	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	N										S							H			
Material Description	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						○	○	○													