X-POWER PRO END MILLS

PLAIN SHANK **GM814 SERIES**

CARBIDE, 3&4 FLUTE 20° HELIX LONG LENGTH ROUGHING - FINE

VOLLHARTMETALL, 3&4 SCHNEIDEN 20° RECHTSSPIRALE LANG SCHRUPPFRÄSER - FEIN

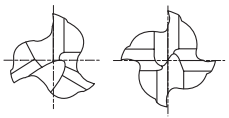
Fraise carbure, 3&4-dents ébauche, hélice 20°, pas fin, longue

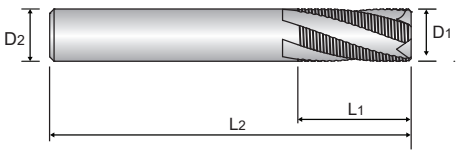
3 - 4 TAGLIENTI, BOMBATO FINE PER SGROSSATURA, ELICA 20° SERIE LUNGA

- Designed to machine tool steels, alloy steels, mold steels and other hardened materials.
- High velocity milling of hardened steels.
- For dry and wet milling.
- Fast chip ejection.

- Zur Bearbeitung von Werkzeugstählen, Legierten Stählen, Stahlguß und gehärteten Stählen.
- Hochgeschwindigkeitsfräsen von gehärteten Stählen.
- Für Trocken - und Nassfräsen.
- Schnelle Spanabfuhr.







CARBIDE | HR | 3&4 | 20° | PLAIN | C x 45° | Y Coating

p.C434

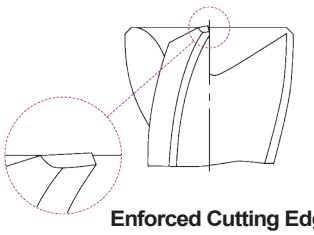
Recommended ToolHolder: Plain Shank — HYDRAULIC CHUCK, SHRINK FIT HOLDER, POWER MILLING CHUCK, ER COLLET CHUCK, SK SLIM CHUCK

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute	Chamfer
GM814060	6.0	6	16	57	3	0.38
GM814080	8.0	8	16	63	3	0.38
GM814100	10.0	10	22	72	4	0.60
GM814120	12.0	12	26	83	4	0.60
GM814160	16.0	16	32	92	4	0.60
GM814200	20.0	20	38	104	4	0.60

Tolerances according to DIN 7160 & 7161

Tolerance range in µm / Nominal-Diameter in mm	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / - 40	0 / - 48	0 / - 58	0 / - 70	0 / - 84
h5	0 / - 4	0 / - 5	0 / - 6	0 / - 8	0 / - 9



Enforced Cutting Edge

◎ : 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																		○		◎	○