

YU-XP19 INCH / METRIC



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X-POWER **PRO**

PERFORMANCE UPGRADE
Y-COATED SOLID CARBIDE END MILLS
for Pre-Hardened Steels up to HRC55
for Mold & Die
for Dry & Wet Cutting





X-POWER ^{PRO}

Performance Upgrade

- Achieved from several tests to apply the most optimal technology
- New coating, raw material, honing technology

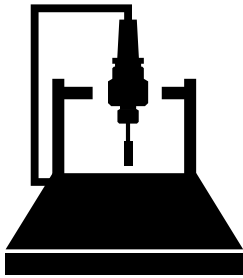
Work Material

- Pre-Hardened Steels up to HRc 55, and Cast Iron



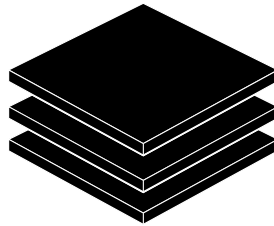
For Mold & Die Industries

- Plastic injection, die casting, military parts, automotive parts, electronic parts, etc.



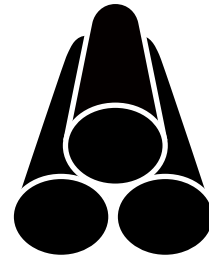
Honing

Advanced honing technology system made from YG-1



Coating

The optimal coating applied, chosen by several tests of different coating technologies



Raw Material

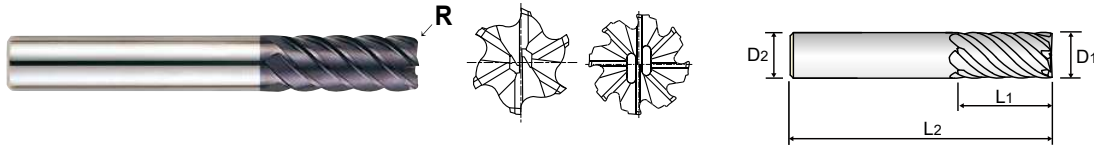
Made from high performance raw material with better quality



Y-COATED SOLID CARBIDE END MILLS 6&8 FLUTE 45° HELIX LONG LENGTH

GM668 PLAIN SHANK

- ▶ Designed to machine high hardened materials.
- ▶ High speed cutting and finish milling with high feed rate.
- ▶ Superior workpiece finishes.
- ▶ Superior wear resistant.
- ▶ Suitable for dry milling.
- ▶ Corner Protection against chipping.



Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

INCH

Unit : inch

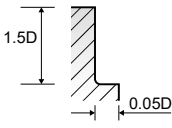
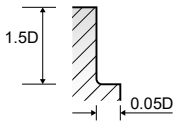
EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2
GM668016	R.02	1/4	1/4	1/2	2-1/4	6
GM668020	R.02	5/16	5/16	3/4	2-1/2	6
GM668024	R.02	3/8	3/8	7/8	2-7/8	6
GM668032	R.02	1/2	1/2	1	3-1/4	6
GM668040	R.03	5/8	5/8	1-1/4	3-5/8	6
GM668048	R.03	3/4	3/4	1-1/2	4-1/8	8
GM668901	R.03	3/8	3/8	7/8	2-7/8	6
GM668902	R.03	1/2	1/2	1	3-1/4	6
GM668904	R.06	3/4	3/4	1-1/2	4-1/8	8

P					H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Titanium	Inconel
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
○	◎	◎	◎	○			○					

◎ : Excellent ○ : Good

**GM668** Y-COATED SOLID CARBIDE END MILLS
6&8 FLUTE 45° HELIX LONG LENGTH CORNER RADIUS - **SIDE CUTTING**RPM = rev./min.
FEED = inch/min.

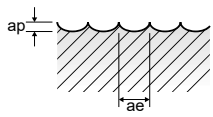
MATERIAL	P			
	CARBON STEELS ALLOY STEELS CAST IRON		ALLOY STEELS TOOL STEELS	
HARDNESS	~ HRC50		HRC50 ~ HRC55	
STRENGTH	~ 1750N/mm ²		1750 ~ 2080N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED
1/4	17140	244.8	8570	122.4
5/16	12850	244.8	6430	122.4
3/8	10200	239.7	5100	122.4
1/2	8570	204.0	4280	102.0
5/8	6430	153.0	3210	76.5
3/4	5100	122.4	2550	59.2

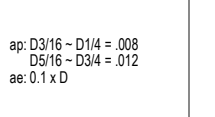
GM209 Y-COATED SOLID CARBIDE END MILLS
2 FLUTE LONG LENGTH BALL NOSERPM = rev./min.
FEED = inch/min.**NORMAL SPEED****HIGH SPEED**

MATERIAL	P						P			
	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~ HRC30		HRC30 ~ HRC40		HRC45 ~ HRC55		~ HRC45		HRC45 ~ HRC55	
STRENGTH	~ 1000N/mm ²		1000 ~ 1250N/mm ²		1500N/mm ² ~		~ 1500N/mm ²		1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R1/64 × 1/32	17340	10.8	13990	8.6	6380	3.9	27500	28.2	27500	17.3
R1/32 × 1/16	17340	15.2	13350	11.7	5850	5.2	25300	30.3	25300	18.6
R3/64 × 3/32	15840	32.5	11770	21.2	5150	6.5	23100	38.1	20900	21.2
R1/16 × 1/8	14410	29.4	11000	19.9	4970	6.5	23100	43.3	18700	22.6
R3/32 × 3/16	10050	35.5	8030	25.1	4050	7.8	23100	78.0	13200	26.0
R1/8 × 1/4	8560	36.3	6930	27.3	3480	8.3	23100	100.0	11550	27.3
R5/32 × 5/16	5790	41.3	4860	28.6	2310	8.3	17340	123.0	8670	32.0
R3/16 × 3/8	5080	44.1	4160	30.8	1960	8.3	15030	132.0	6930	36.3
R1/4 × 1/2	4160	38.9	3230	28.6	1500	8.3	11550	113.9	5790	36.3
R5/16 × 5/8	3010	39.8	2550	28.6	1280	8.3	9020	113.9	4160	30.8
R3/8 × 3/4	2310	36.3	2090	27.5	920	8.3	6930	108.9	3230	22.9

ap: D3/16 ~ D1/4 = .008
D5/16 ~ D3/4 = .012
ae: 0.05 x D



ap: D3/16 ~ D1/4 = .008
D5/16 ~ D3/4 = .012
ae: 0.1 x D



ap: D3/16 ~ D1/4 = .008
D5/16 ~ D3/4 = .012
ae: 0.05 x D

