

**YU-TP18**

BEST VALUE IN THE WORLD OF CUTTING TOOLS



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**Note** The new address above has currently been updated since Korean new postal standard was valid from 2014.  
Be noticed that the physical Headquarter location is NOT changed.



Tool specifications are subject to change without prior notice.

YG1YUTP18mdd002



**TitaNox Power**

Y-COATED SOLID CARBIDE END MILLS

High Speed Machining for Exotic Materials:  
Titanium and Stainless Steels

**NEW  
SERIES**

- 5 FLUTE SHARP EDGE
- 5 FLUTE SHARP EDGE & CORNER RADIUS WITH NECK

**NEW  
SIZE**

- 4 FLUTE CORNER RADIUS
- 5 FLUTE CORNER RADIUS

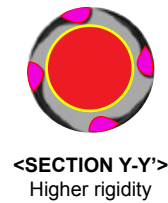
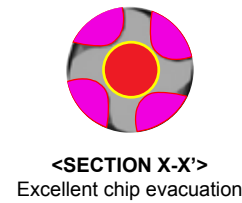
## Y-COATED SOLID CARBIDE END MILLS - TitaNox Power

### “High Speed Machining for Exotic Materials: Titanium & Stainless Steels”

- Excellent tools for Aerospace, Energy and Power Generation.
- Roughing, semi-finishing, and finishing on difficult to machine materials, Stainless Steels and Carbon Steels.
- Using YG-1's advanced coating technology to achieve superior performance, excellent wear resistance and excellent edge stability.

“TitaNox offers a high performance metal removal rate with superior chatter-free machining in both semi-finishing and finishing”

#### 1 Y-Coated Solid Carbide 4 Flute, Double Core End Mills



- Double core geometry reduces tool deflection and improves dimensional stability.
- Optimized edge preparation protects from chipping problems in high speed machining.
- Variable pitch flute design brings out perfect performance in slotting operations

#### 2 Y-Coated Solid Carbide 5 Flute, Multiple Helix End Mills

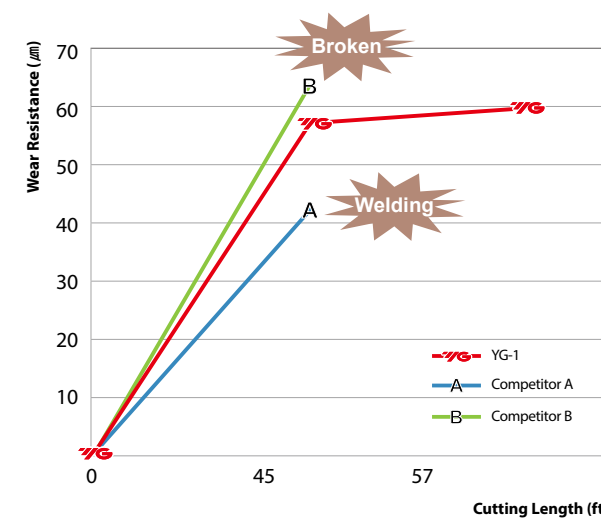


- Multiple Helix geometry delivers silent cutting and reduces chattering.
- Optimized edge preparation for better tool life and heavy cutting.

## CASE STUDY

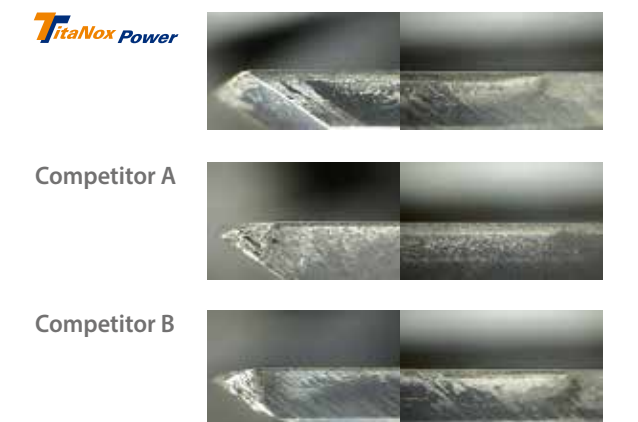
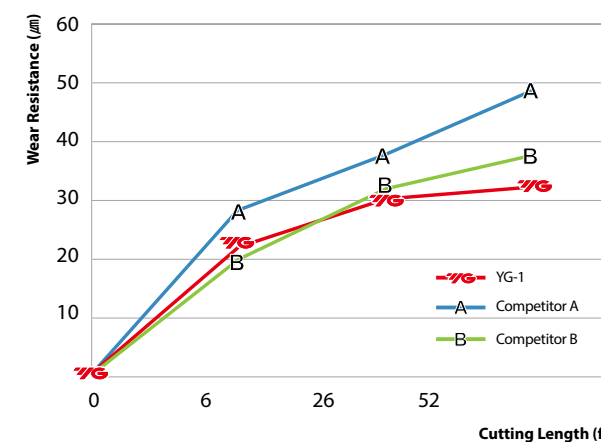
### ► Y-Coated Solid Carbide 4 Flute, Double Core End Mills

Cutting Conditions			
Milling Method	Slotting	Feed	10 inch/min.
Work Material	- DIN : Ti6Al4V (Titanium) - WR : 3.7165.1	Cutting Depth	.470" (Axial Depth)
		Coolant	Wet Cut
Size	Ø12(R1) x Ø12 x 26 x 80	Overhang	1.41"
RPM	1591 rev./min.	Machine	Machining Center














### ► Y-Coated Solid Carbide 5 Flute, Multiple Helix End Mills

Cutting Conditions			
Milling Method	Down & Side Cutting	Feed	15.669 inch/min.
Work Material	- DIN : Ti6Al4V (Titanium) - WR : 3.7165.1	Axial Depth	.710"
		Radial Depth	.141"
Size	Ø12 x Ø12 x 26 x 83	Coolant	Wet Cut
RPM	1591 rev./min.	Machine	Machining Center



## SELECTION GUIDE

ITEM	MODEL	DESCRIPTION	SIZE		PAGE	
			Min.	Max.		
<b>INCH</b>						
UGMG42		4 FLUTE CORNER RADIUS with DOUBLE CORE	◆	D1/4"	D1"	06
UGMG32		5 FLUTE	◆	D1/8"	D1"	10
UGMH12		5 FLUTE SHARP EDGE	◆	D1/8"	D1-1/4"	11
UGMG34		5 FLUTE CORNER RADIUS	◆	D1/8"	D1-1/4"	13
UGMH06		5 FLUTE SHARP EDGE with EXTENDED NECK	◆	D1/8"	D1"	20
UGMH07		5 FLUTE CORNER RADIUS with EXTENDED NECK	◆	D1/8"	D1"	21
◆ U.S.A. Stock						
<b>METRIC</b>						
GMG40		4 FLUTE CORNER RADIUS with DOUBLE CORE, EXTENDED NECK	◇	D6.0	D25.0	25
GMG24		5 FLUTE SHORT LENGTH	◇	D6.0	D25.0	27
GMG26		5 FLUTE LONG LENGTH	◇	D6.0	D25.0	28
GMG28		5 FLUTE SHORT LENGTH CORNER RADIUS	◇	D6.0	D25.0	29
GMG30		5 FLUTE LONG LENGTH CORNER RADIUS	◇	D6.0	D25.0	30
◇ Call for Availability						
RECOMMENDED CUTTING CONDITIONS					32	

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎
○	○	○		◎			◎

### GUIDE LINE TO ICONS

**The tool is made of Micro grain carbide.**

**MG**  
**HM**

**Type of Shank**

**PLAIN**

**No. of Flute**

**4** **5**


**Chamfer Angle**

**C x 45°**

**Helix Angle**

**43°/45°** **43°/44°/45°**

**Cutting condition of tool (see page 32)**

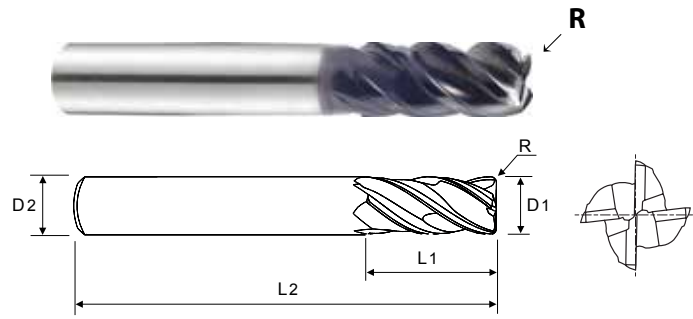




## Y-COATED SOLID CARBIDE END MILLS 4 FLUTE CORNER RADIUS with DOUBLE CORE

**NEW SIZE**

**UGMG42 SERIES**



- ▶ Double Core E/M has a Unique Flute Design for excellent chip evacuation and higher rigidity
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



\* **NEW SIZE** 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R	D1	D2	L1	L2
UGMG42016	R.015	1/4	1/4	9/16	2-1/2
UGMG42901	R.030		1/4	9/16	2-1/2
UGMG42902	R.060		1/4	9/16	2-1/2
* UGMG42924	R.030		1/4	3/4	2-1/2
* UGMG42925	R.060		1/4	3/4	2-1/2
* UGMG42S926	R.030		1/4	1	3
* UGMG42S927	R.060		1/4	1	3
* UGMG42K998	R.030		3/8	1/2	2-1/2
* UGMG42K999	R.060		3/8	1/2	2-1/2
* UGMG42K801	R.090		3/8	1/2	2-1/2
* UGMG42931	R.010	3/8	3/8	13/16	2-1/2
* UGMG42905	R.030		3/8	13/16	2-1/2
* UGMG42906	R.060		3/8	13/16	2-1/2
* UGMG42907	R.090		3/8	13/16	2-1/2
* UGMG42928	R.030		3/8	7/8	2-1/2
* UGMG42929	R.060		3/8	7/8	2-1/2
* UGMG42930	R.090		3/8	7/8	2-1/2
* UGMG42932	R.010		3/8	1	3
* UGMG42933	R.030		3/8	1	3
* UGMG42934	R.060		3/8	1	3
* UGMG42935	R.090	3/8	1	3	
* UGMG42S936	R.010	1/2	3/8	1-1/4	3
* UGMG42S937	R.030		3/8	1-1/4	3
* UGMG42S938	R.060		3/8	1-1/4	3
* UGMG42S939	R.090		3/8	1-1/4	3
* UGMG42940	R.010		1/2	1	3
UGMG42908	R.030		1/2	1	3
UGMG42909	R.060		1/2	1	3
UGMG42910	R.090		1/2	1	3

▶ Other shank types are available on your request.

▶ NEXT PAGE

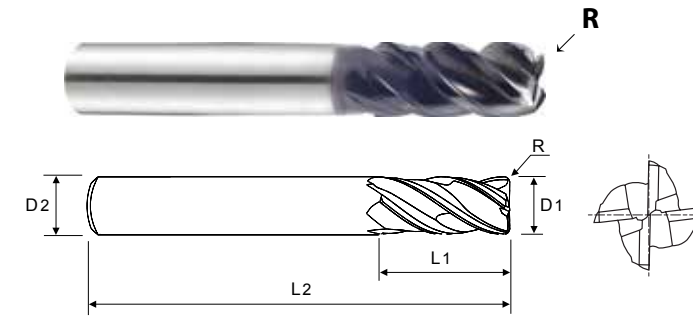
◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎

## Y-COATED SOLID CARBIDE END MILLS 4 FLUTE CORNER RADIUS with DOUBLE CORE

**NEW SIZE**

**UGMG42 SERIES**



- ▶ Double Core E/M has a Unique Flute Design for excellent chip evacuation and higher rigidity
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



\* **NEW SIZE** 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R	D1	D2	L1	L2
UGMG42911	R.125	1/2	1/2	1	3
UGMG42912	R.030		1/2	1-1/4	3-1/2
* UGMG42941	R.060		1/2	1-1/4	3-1/2
* UGMG42942	R.090		1/2	1-1/4	3-1/2
* UGMG42943	R.125		1/2	1-1/4	3-1/2
* UGMG42S944	R.030		1/2	1-5/8	4
* UGMG42S945	R.060		1/2	1-5/8	4
* UGMG42S946	R.090		1/2	1-5/8	4
* UGMG42S947	R.125		1/2	1-5/8	4
UGMG42040	R.030		5/8	5/8	1-1/4
UGMG42913	R.060	5/8		1-1/4	3-1/2
UGMG42914	R.090	5/8		1-1/4	3-1/2
UGMG42915	R.125	5/8		1-1/4	3-1/2
* UGMG42948	R.030	5/8		1-5/8	4
* UGMG42949	R.060	5/8		1-5/8	4
* UGMG42950	R.090	5/8		1-5/8	4
* UGMG42951	R.125	5/8		1-5/8	4
* UGMG42S952	R.030	5/8		2	4
* UGMG42S953	R.060	5/8		2	4
* UGMG42S954	R.090	5/8	2	4	
* UGMG42S955	R.125	5/8	2	4	
* UGMG42S956	R.030	5/8	3-1/4	6	
* UGMG42S957	R.060	5/8	3-1/4	6	
* UGMG42S958	R.090	5/8	3-1/4	6	
* UGMG42S959	R.125	5/8	3-1/4	6	
UGMG42048	R.030	3/4	3/4	1-1/2	4
UGMG42916	R.060		3/4	1-1/2	4
UGMG42917	R.090		3/4	1-1/2	4
UGMG42918	R.125		3/4	1-1/2	4

▶ Other shank types are available on your request.

▶ NEXT PAGE

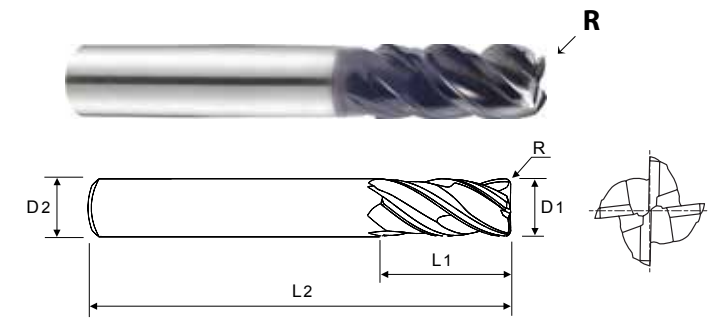
◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎



# Y-COATED SOLID CARBIDE END MILLS

## 4 FLUTE CORNER RADIUS with DOUBLE CORE NEW SIZE UGMG42 SERIES



- ▶ Double Core E/M has a Unique Flute Design for excellent chip evacuation and higher rigidity
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~.0012	h6



\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
	R				
UGMG42919	R.190	3/4	3/4	1-1/2	4
UGMG42960	R.250		3/4	1-1/2	4
UGMG42961	R.030		3/4	1-7/8	4
UGMG42962	R.060		3/4	1-7/8	4
UGMG42963	R.090		3/4	1-7/8	4
UGMG42964	R.125		3/4	1-7/8	4
UGMG42965	R.190		3/4	1-7/8	4
UGMG42966	R.250		3/4	1-7/8	4
UGMG42967	R.030		3/4	2-1/4	5
UGMG42968	R.060		3/4	2-1/4	5
UGMG42969	R.090		3/4	2-1/4	5
UGMG42970	R.125		3/4	2-1/4	5
UGMG42971	R.190		3/4	2-1/4	5
UGMG42972	R.250		3/4	2-1/4	5
UGMG42S973	R.030		3/4	3-1/4	6
UGMG42S974	R.060		3/4	3-1/4	6
UGMG42S975	R.090		3/4	3-1/4	6
UGMG42S976	R.125		3/4	3-1/4	6
UGMG42S977	R.190		3/4	3-1/4	6
UGMG42S978	R.250		3/4	3-1/4	6
UGMG42064	R.030	1	1	2	5
UGMG42920	R.060		1	2	5
UGMG42921	R.090		1	2	5
UGMG42922	R.125		1	2	5
UGMG42923	R.190		1	2	5
UGMG42979	R.250		1	2	5
UGMG42980	R.030		1	2-5/8	5
UGMG42981	R.060		1	2-5/8	5
UGMG42982	R.090		1	2-5/8	5

▶ Other shank types are available on your request.

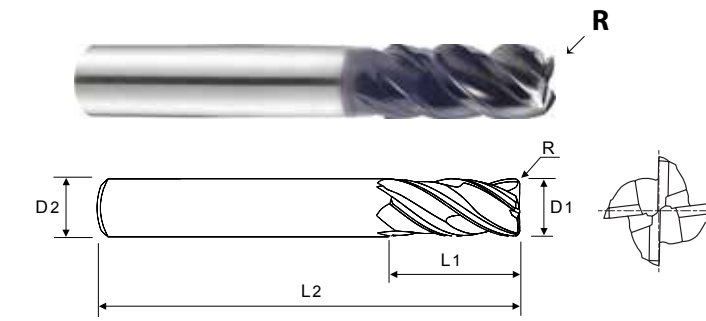
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

# Y-COATED SOLID CARBIDE END MILLS

## 4 FLUTE CORNER RADIUS with DOUBLE CORE NEW SIZE UGMG42 SERIES



- ▶ Double Core E/M has a Unique Flute Design for excellent chip evacuation and higher rigidity
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~.0012	h6



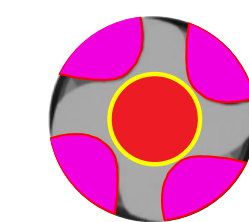
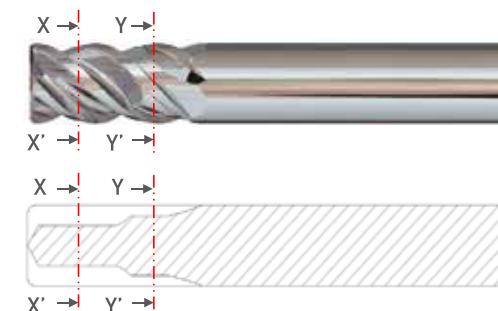
\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

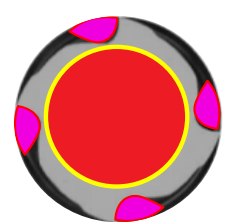
EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
	R				
UGMG42983	R.125	1	1	2-5/8	5
UGMG42984	R.190		1	2-5/8	5
UGMG42985	R.250		1	2-5/8	5
UGMG42986	R.030		1	3	6
UGMG42987	R.060		1	3	6
UGMG42988	R.090		1	3	6
UGMG42989	R.125		1	3	6
UGMG42990	R.190		1	3	6
UGMG42991	R.250		1	3	6
UGMG42S992	R.030		1	4-1/4	7
UGMG42S993	R.060		1	4-1/4	7
UGMG42S994	R.090		1	4-1/4	7
UGMG42S995	R.125		1	4-1/4	7
UGMG42S996	R.190		1	4-1/4	7
UGMG42S997	R.250		1	4-1/4	7

▶ Other shank types are available on your request.

### ◆ 2 STEP CORE(DOUBLE CORE)



<SECTION X-X'>  
Excellent chip evacuation



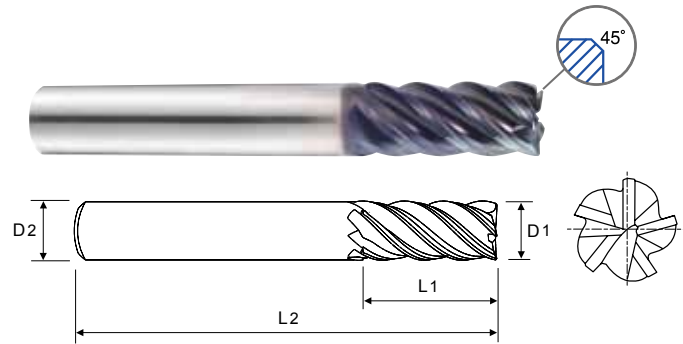
<SECTION Y-Y'>  
Higher rigidity

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE

## UGMG32 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

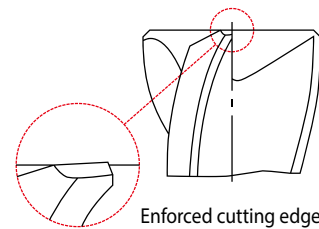
Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Unit : inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Chamfer Size
	D1	D2	L1	L2	
UGMG32008	1/8	1/8	1/4	1-1/2	.004
UGMG32901		1/8	3/8	1-1/2	.004
UGMG32012	3/16	3/16	5/16	2	.006
UGMG32902		3/16	9/16	2	.006
UGMG32016	1/4	1/4	3/8	2	.007
UGMG32903		1/4	3/4	2-1/2	.007
UGMG32020	5/16	5/16	7/16	2	.007
UGMG32904		5/16	13/16	2-1/2	.007
UGMG32024	3/8	3/8	1/2	2-1/2	.011
UGMG32905		3/8	1	3	.011
UGMG32032	1/2	1/2	5/8	2-1/2	.013
UGMG32906		1/2	1	3	.013
UGMG32907	1/2	1-1/4	3-1/2	.013	
UGMG32040	5/8	5/8	3/4	3	.015
UGMG32908		5/8	1-1/4	3-1/2	.015
UGMG32048	3/4	3/4	1	3-1/2	.019
UGMG32909		3/4	1-1/2	4	.019
UGMG32064	1	1	1-1/8	4	.019
UGMG32910		1	1-1/2	4	.019
UGMG32911		1	2	5	.019

▶ Other shank types are available on your request.

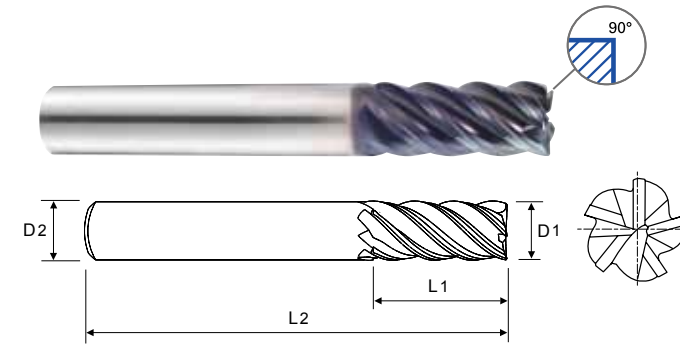


◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRc30~40	HRc40~45	◎			◎
○	○	○					

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE SHARP EDGE

## NEW SERIES UGMH12 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



45° Helix, LoC>3D

Unit : inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
UGMH12008	1/8	1/8	1/4	1-1/2
UGMH12901		1/8	3/8	1-1/2
UGMH12S902		1/8	1/2	2-1/2
UGMH12S903	1/8	3/4	2-1/2	
UGMH12012	3/16	3/16	5/16	2
UGMH12904		3/16	9/16	2
UGMH12S905		3/16	3/4	2-1/2
UGMH12016	1/4	1/4	3/8	2
UGMH12906		1/4	1/2	2-1/2
UGMH12907		1/4	3/4	2-1/2
UGMH12S908	1/4	1	3	
UGMH12S909	1/4	1-1/4	3	
UGMH12020	5/16	5/16	7/16	2
UGMH12910		5/16	13/16	2-1/2
UGMH12S911		5/16	1	3
UGMH12024	3/8	3/8	1/2	2-1/2
UGMH12912		3/8	1	3
UGMH12S913		3/8	1-1/4	3
UGMH12S914	3/8	1-1/2	4	
UGMH12032	1/2	1/2	5/8	2-1/2
UGMH12915		1/2	1	3
UGMH12916		1/2	1-1/4	3-1/2
UGMH12S917	1/2	1-5/8	4	
UGMH12S918	1/2	2	4	
UGMH12040	5/8	5/8	3/4	3
UGMH12919		5/8	1-1/4	3-1/2
UGMH12920		5/8	1-5/8	4

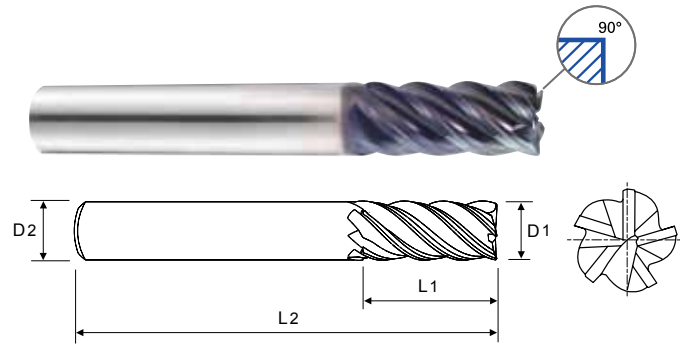
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRc30~40	HRc40~45	◎			◎
○	○	○					

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE SHARP EDGE

**NEW SERIES** UGMH12 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



45° Helix, LoC>3D

**MADE IN USA**

Unit : inch

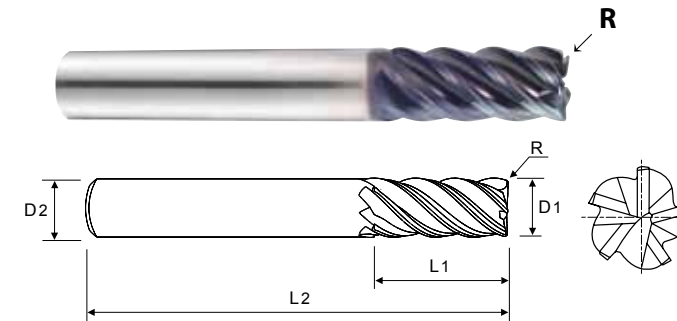
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
UGMH12S921	5/8	5/8	2-1/8	4-1/2
UGMH12S922		5/8	2-1/2	5
UGMH12048	3/4	3/4	1	3-1/2
UGMH12923		3/4	1-1/2	4
UGMH12924		3/4	1-7/8	5
UGMH12925		3/4	2-1/4	5
UGMH12S926		3/4	2-3/4	5
UGMH12S927		3/4	3-1/4	6
UGMH12064		1	1	1-1/8
UGMH12928	1		1-1/2	4
UGMH12929	1		2	5
UGMH12930	1		2-5/8	5
UGMH12S931	1		3-1/4	6
UGMH12S932	1		4-1/4	7
UGMH12116	1-1/4		1-1/4	1-1/2
UGMH12933		1-1/4	2	4-1/2
UGMH12934		1-1/4	2-5/8	5-1/2
UGMH12935		1-1/4	3-1/4	6
UGMH12S936		1-1/4	4-1/2	7

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



45° Helix, LoC>3D

**MADE IN USA**

Unit : inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	
	R	D1	D2	L1	L2	
UGMG34008	R.015	1/8	1/8	1/4	1-1/2	
* UGMG34950	R.030		1/8	1/4	1-1/2	
* UGMG34901	R.015		1/8	3/8	1-1/2	
* UGMG34951	R.030		1/8	3/8	1-1/2	
* UGMG34S952	R.015		1/8	1/2	2-1/2	
* UGMG34S953	R.030		1/8	1/2	2-1/2	
* UGMG34S954	R.015		1/8	3/4	2-1/2	
* UGMG34S955	R.030		1/8	3/4	2-1/2	
* UGMG34012	R.015		3/16	3/16	5/16	2
* UGMG34956	R.030			3/16	5/16	2
* UGMG34902	R.015	3/16		9/16	2	
* UGMG34957	R.030	3/16		9/16	2	
* UGMG34S958	R.015	3/16		3/4	2-1/2	
* UGMG34S959	R.030	3/16		3/4	2-1/2	
* UGMG34960	R.015	1/4		1/4	3/8	2
* UGMG34016	R.030			1/4	3/8	2
* UGMG34961	R.060			1/4	3/8	2
* UGMG34962	R.015			1/4	1/2	2-1/2
* UGMG34963	R.030		1/4	1/2	2-1/2	
* UGMG34964	R.060		1/4	1/2	2-1/2	
* UGMG34903	R.015		1/4	3/4	2-1/2	
* UGMG34904	R.030		1/4	3/4	2-1/2	
* UGMG34905	R.060		1/4	3/4	2-1/2	
* UGMG34S965	R.015		1/4	1	3	
* UGMG34S966	R.030	1/4	1	3		
* UGMG34S967	R.060	1/4	1	3		
* UGMG34S968	R.015	1/4	1-1/4	3		
* UGMG34S969	R.030	1/4	1-1/4	3		
* UGMG34S970	R.060	1/4	1-1/4	3		

▶ Other shank types are available on your request.

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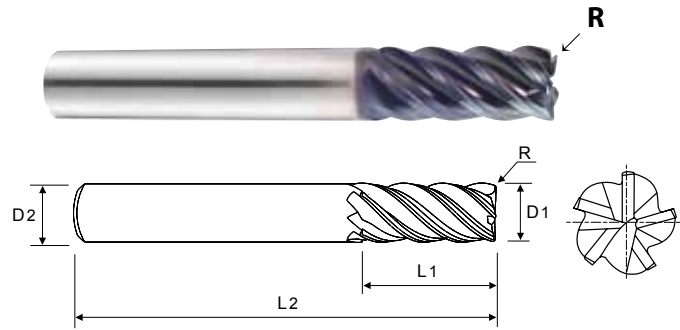
◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎



# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R	D1	D2	L1	L2
* UGMG34971	R.015	5/16	5/16	7/16	2
UGMG34020	R.030		5/16	7/16	2
* UGMG34972	R.060		5/16	7/16	2
UGMG34906	R.015		5/16	13/16	2-1/2
UGMG34907	R.030		5/16	13/16	2-1/2
UGMG34908	R.060		5/16	13/16	2-1/2
* UGMG34S973	R.015	5/16	5/16	1	3
* UGMG34S974	R.030		5/16	1	3
* UGMG34S975	R.060		5/16	1	3
* UGMG34976	R.015	3/8	3/8	1/2	2-1/2
UGMG34024	R.030		3/8	1/2	2-1/2
UGMG34909	R.060		3/8	1/2	2-1/2
* UGMG34977	R.090		3/8	1/2	2-1/2
UGMG34910	R.015		3/8	1	3
UGMG34911	R.030		3/8	1	3
UGMG34912	R.060		3/8	1	3
* UGMG34978	R.090		3/8	1	3
* UGMG34S979	R.015		3/8	1-1/4	3
* UGMG34S980	R.030		3/8	1-1/4	3
* UGMG34S981	R.060		3/8	1-1/4	3
* UGMG34S982	R.090		3/8	1-1/4	3
* UGMG34S983	R.015	3/8	1-1/2	4	
* UGMG34S984	R.030	3/8	1-1/2	4	
* UGMG34S985	R.060	3/8	1-1/2	4	
* UGMG34S986	R.090	3/8	1-1/2	4	
UGMG34032	R.015	1/2	1/2	5/8	2-1/2
UGMG34913	R.030		1/2	5/8	2-1/2
UGMG34914	R.060		1/2	5/8	2-1/2
* UGMG34987	R.090		1/2	5/8	2-1/2

▶ Other shank types are available on your request.

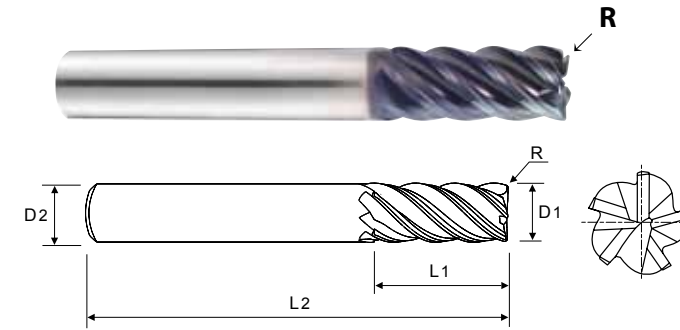
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R	D1	D2	L1	L2
* UGMG34988	R.125	1/2	1/2	5/8	2-1/2
UGMG34915	R.015		1/2	1	3
UGMG34916	R.030		1/2	1	3
UGMG34917	R.060		1/2	1	3
UGMG34918	R.090		1/2	1	3
UGMG34919	R.125		1/2	1	3
* UGMG34920	R.015		1/2	1-1/4	3-1/2
UGMG34921	R.030		1/2	1-1/4	3-1/2
UGMG34922	R.060		1/2	1-1/4	3-1/2
UGMG34923	R.090		1/2	1-1/4	3-1/2
UGMG34924	R.125		1/2	1-1/4	3-1/2
* UGMG34S989	R.015		1/2	1-5/8	4
* UGMG34S990	R.030	1/2	1-5/8	4	
* UGMG34S991	R.060	1/2	1-5/8	4	
* UGMG34S992	R.090	1/2	1-5/8	4	
* UGMG34S993	R.125	1/2	1-5/8	4	
* UGMG34S994	R.015	1/2	2	4	
* UGMG34S995	R.030	1/2	2	4	
* UGMG34S996	R.060	1/2	2	4	
* UGMG34S997	R.090	1/2	2	4	
* UGMG34S998	R.125	1/2	2	4	
UGMG34040	R.030	5/8	5/8	3/4	3
UGMG34925	R.060		5/8	3/4	3
* UGMG34999	R.090		5/8	3/4	3
* UGMG34801	R.125		5/8	3/4	3
UGMG34926	R.015		5/8	1-1/4	3-1/2
UGMG34927	R.030		5/8	1-1/4	3-1/2
UGMG34928	R.060		5/8	1-1/4	3-1/2
* UGMG34929	R.090		5/8	1-1/4	3-1/2

▶ Other shank types are available on your request.

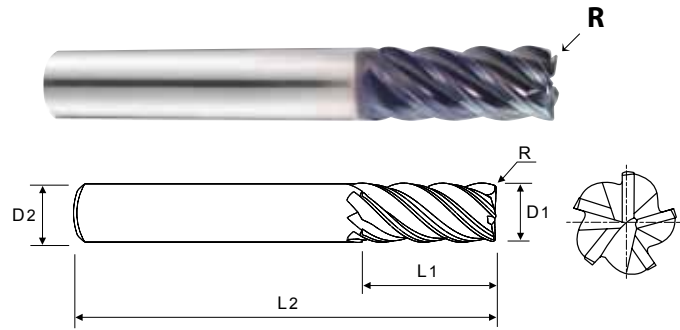
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
	R				
UGMG34930	R.125	5/8	5/8	1-1/4	3-1/2
UGMG34802	R.030		5/8	1-5/8	4
UGMG34803	R.060		5/8	1-5/8	4
UGMG34804	R.090		5/8	1-5/8	4
UGMG34805	R.125		5/8	1-5/8	4
UGMG34S806	R.030		5/8	2-1/8	4-1/2
UGMG34S807	R.060		5/8	2-1/8	4-1/2
UGMG34S808	R.090		5/8	2-1/8	4-1/2
UGMG34S809	R.125		5/8	2-1/8	4-1/2
UGMG34S810	R.030		5/8	2-1/2	5
UGMG34S811	R.060		5/8	2-1/2	5
UGMG34S812	R.090		5/8	2-1/2	5
UGMG34S813	R.125	5/8	2-1/2	5	
UGMG34048	R.030	3/4	3/4	1	3-1/2
UGMG34931	R.060		3/4	1	3-1/2
UGMG34932	R.090		3/4	1	3-1/2
UGMG34814	R.125		3/4	1	3-1/2
UGMG34815	R.190		3/4	1	3-1/2
UGMG34816	R.250		3/4	1	3-1/2
UGMG34933	R.015		3/4	1-1/2	4
UGMG34934	R.030		3/4	1-1/2	4
UGMG34935	R.060		3/4	1-1/2	4
UGMG34936	R.090		3/4	1-1/2	4
UGMG34937	R.125		3/4	1-1/2	4
UGMG34938	R.190		3/4	1-1/2	4
UGMG34817	R.250	3/4	1-1/2	4	
UGMG34818	R.030	3/4	1-7/8	5	
UGMG34819	R.060	3/4	1-7/8	5	
UGMG34820	R.090	3/4	1-7/8	5	

▶ Other shank types are available on your request.

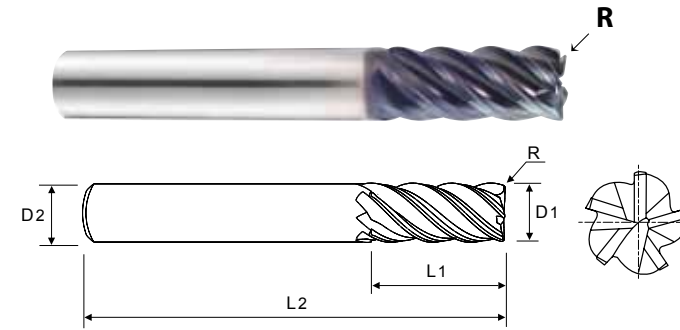
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎
○	○	○					

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
	R				
UGMG34821	R.125	3/4	3/4	1-7/8	5
UGMG34822	R.190		3/4	1-7/8	5
UGMG34823	R.250		3/4	1-7/8	5
UGMG34824	R.030		3/4	2-1/4	5
UGMG34825	R.060		3/4	2-1/4	5
UGMG34826	R.090		3/4	2-1/4	5
UGMG34827	R.125		3/4	2-1/4	5
UGMG34828	R.190		3/4	2-1/4	5
UGMG34829	R.250		3/4	2-1/4	5
UGMG34S830	R.030		3/4	2-3/4	5
UGMG34S831	R.060		3/4	2-3/4	5
UGMG34S832	R.090		3/4	2-3/4	5
UGMG34S833	R.125	3/4	2-3/4	5	
UGMG34S834	R.190	3/4	2-3/4	5	
UGMG34S835	R.250	3/4	2-3/4	5	
UGMG34S836	R.030	3/4	3-1/4	6	
UGMG34S837	R.060	3/4	3-1/4	6	
UGMG34S838	R.090	3/4	3-1/4	6	
UGMG34S839	R.125	3/4	3-1/4	6	
UGMG34S840	R.190	3/4	3-1/4	6	
UGMG34S841	R.250	3/4	3-1/4	6	
UGMG34064	R.030	1	1	1-1/8	4
UGMG34939	R.060		1	1-1/8	4
UGMG34940	R.090		1	1-1/8	4
UGMG34842	R.125		1	1-1/8	4
UGMG34843	R.190		1	1-1/8	4
UGMG34844	R.250		1	1-1/8	4
UGMG34941	R.015		1	1-1/2	4
UGMG34942	R.030		1	1-1/2	4

▶ Other shank types are available on your request.

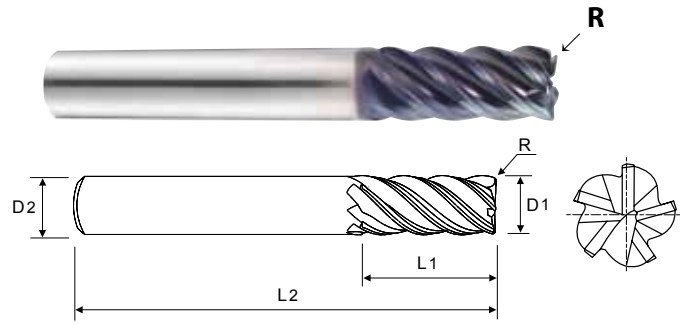
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎
○	○	○					

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
	R				
UGMG34943	R.060	1	1	1-1/2	4
UGMG34944	R.090		1	1-1/2	4
UGMG34945	R.125		1	1-1/2	4
UGMG34946	R.190		1	1-1/2	4
* UGMG34845	R.250		1	1-1/2	4
* UGMG34947	R.030		1	2	5
UGMG34948	R.060		1	2	5
UGMG34949	R.090		1	2	5
* UGMG34846	R.125		1	2	5
* UGMG34847	R.190		1	2	5
* UGMG34848	R.250		1	2	5
* UGMG34849	R.030		1	2-5/8	5
* UGMG34850	R.060		1	2-5/8	5
* UGMG34851	R.090		1	2-5/8	5
* UGMG34852	R.125		1	2-5/8	5
* UGMG34853	R.190		1	2-5/8	5
* UGMG34854	R.250		1	2-5/8	5
* UGMG34S855	R.030		1	3-1/4	6
* UGMG34S856	R.060		1	3-1/4	6
* UGMG34S857	R.090		1	3-1/4	6
* UGMG34S858	R.125		1	3-1/4	6
* UGMG34S859	R.190		1	3-1/4	6
* UGMG34S860	R.250		1	3-1/4	6
* UGMG34S861	R.030		1	4-1/4	7
* UGMG34S862	R.060		1	4-1/4	7
* UGMG34S863	R.090		1	4-1/4	7
* UGMG34S864	R.125		1	4-1/4	7
* UGMG34S865	R.190		1	4-1/4	7
* UGMG34S866	R.250		1	4-1/4	7

▶ Other shank types are available on your request.

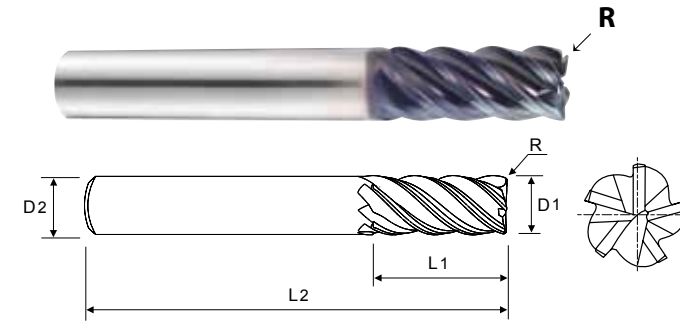
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎

# Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS

**NEW SIZE** UGMG34 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining
- ▶ Special flute geometry and multiple helix eliminate vibrations

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

\* NEW SIZE 45° Helix, LoC>3D

Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
	R				
* UGMG34116	R.060	1-1/4	1-1/4	1-1/2	4-1/2
* UGMG34867	R.090		1-1/4	1-1/2	4-1/2
* UGMG34868	R.125		1-1/4	1-1/2	4-1/2
* UGMG34869	R.190		1-1/4	1-1/2	4-1/2
* UGMG34870	R.250		1-1/4	1-1/2	4-1/2
* UGMG34871	R.060		1-1/4	2	4-1/2
* UGMG34872	R.090		1-1/4	2	4-1/2
* UGMG34873	R.125		1-1/4	2	4-1/2
* UGMG34874	R.190		1-1/4	2	4-1/2
* UGMG34875	R.250		1-1/4	2	4-1/2
* UGMG34876	R.060		1-1/4	2-5/8	5-1/2
* UGMG34877	R.090		1-1/4	2-5/8	5-1/2
* UGMG34878	R.125		1-1/4	2-5/8	5-1/2
* UGMG34879	R.190		1-1/4	2-5/8	5-1/2
* UGMG34880	R.250		1-1/4	2-5/8	5-1/2
* UGMG34881	R.060		1-1/4	3-1/4	6
* UGMG34882	R.090		1-1/4	3-1/4	6
* UGMG34883	R.125		1-1/4	3-1/4	6
* UGMG34884	R.190		1-1/4	3-1/4	6
* UGMG34885	R.250		1-1/4	3-1/4	6
* UGMG34S886	R.060		1-1/4	4-1/2	7
* UGMG34S887	R.090		1-1/4	4-1/2	7
* UGMG34S888	R.125		1-1/4	4-1/2	7
* UGMG34S889	R.190		1-1/4	4-1/2	7
* UGMG34S890	R.250		1-1/4	4-1/2	7

▶ Other shank types are available on your request.

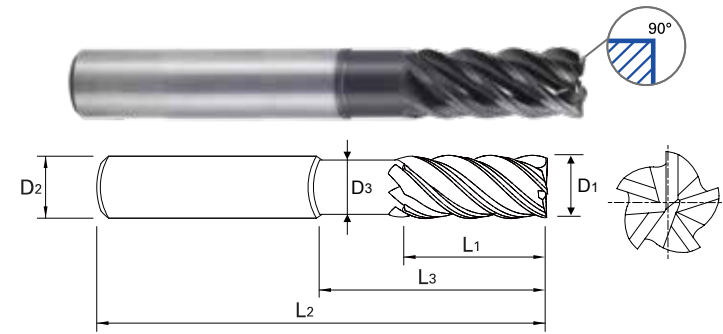
◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎



## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE SHARP EDGE with EXTENDED NECK

**NEW SERIES** UGMH06 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

Unit : inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
UGMH06008	1/8	1/8	5/32	3/8	3	.113
UGMH06901		1/8	5/32	1/2	3	.113
UGMH06902		1/8	5/32	5/8	3	.113
UGMH06012	3/16	3/16	7/32	1/2	3	.176
UGMH06903		3/16	7/32	3/4	3	.176
UGMH06904		3/16	7/32	1	3	.176
UGMH06016	1/4	1/4	3/8	3/4	4	.230
UGMH06905		1/4	3/8	1-1/8	4	.230
UGMH06906		1/4	3/8	2-1/8	4	.230
UGMH06024	3/8	3/8	1/2	1-1/8	4	.344
UGMH06907		3/8	1/2	2-1/8	4	.344
UGMH06908		3/8	1/2	3-1/8	6	.344
UGMH06909	1/2	3/8	1/2	4-1/8	6	.344
UGMH06032		1/2	5/8	1-1/2	4	.461
UGMH06910		1/2	5/8	2-1/4	4	.461
UGMH06911	5/8	1/2	5/8	3-3/8	6	.461
UGMH06912		1/2	5/8	4-1/8	6	.461
UGMH06040		5/8	3/4	1-5/8	4	.586
UGMH06913	3/4	5/8	3/4	2-3/8	6	.586
UGMH06914		5/8	3/4	3-3/8	6	.586
UGMH06915		5/8	3/4	4-1/8	6	.586
UGMH06048	1	3/4	1-1/8	2	4	.711
UGMH06916		3/4	1-1/8	2-5/8	5	.711
UGMH06917		3/4	1-1/8	3-1/4	6	.711
UGMH06918	1	3/4	1-1/8	4-1/4	7	.711
UGMH06064		1	1-1/4	2-1/4	4	.961
UGMH06919		1	1-1/4	2-5/8	5	.961
UGMH06920	1	1	1-1/4	3-1/4	6	.961
UGMH06921		1	1-1/4	4-1/4	7	.961
UGMH06922		1	1-1/4	5-1/4	8	.961

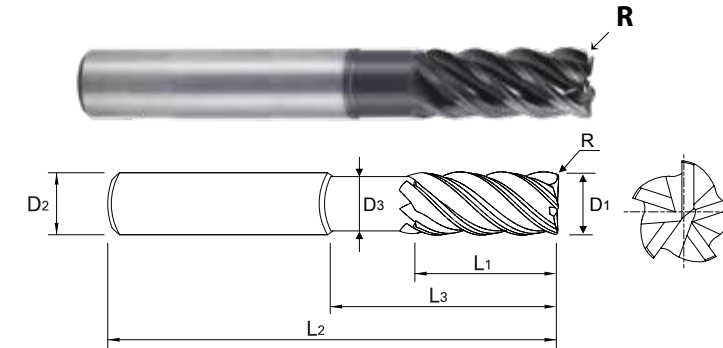
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS with EXTENDED NECK

**NEW SERIES** UGMH07 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



**MADE IN USA**

Unit : inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
UGMH07008	R.030	1/8	1/8	5/32	3/8	3	.113
UGMH07901	R.030		1/8	5/32	1/2	3	.113
UGMH07902	R.030		1/8	5/32	5/8	3	.113
UGMH07012	R.030	3/16	3/16	7/32	1/2	3	.176
UGMH07903	R.030		3/16	7/32	3/4	3	.176
UGMH07904	R.030		3/16	7/32	1	3	.176
UGMH07016	R.030	1/4	1/4	3/8	3/4	4	.230
UGMH07905	R.060		1/4	3/8	3/4	4	.230
UGMH07906	R.030		1/4	3/8	1-1/8	4	.230
UGMH07907	R.060	1/4	1/4	3/8	1-1/8	4	.230
UGMH07908	R.030		1/4	3/8	2-1/8	4	.230
UGMH07909	R.060		1/4	3/8	2-1/8	4	.230
UGMH07024	R.030	3/8	3/8	1/2	1-1/8	4	.344
UGMH07910	R.060		3/8	1/2	1-1/8	4	.344
UGMH07911	R.090		3/8	1/2	1-1/8	4	.344
UGMH07912	R.030	3/8	3/8	1/2	2-1/8	4	.344
UGMH07913	R.060		3/8	1/2	2-1/8	4	.344
UGMH07914	R.090		3/8	1/2	2-1/8	4	.344
UGMH07915	R.030	3/8	3/8	1/2	3-1/8	6	.344
UGMH07916	R.060		3/8	1/2	3-1/8	6	.344
UGMH07917	R.090		3/8	1/2	3-1/8	6	.344
UGMH07918	R.030	3/8	3/8	1/2	4-1/8	6	.344
UGMH07919	R.060		3/8	1/2	4-1/8	6	.344
UGMH07920	R.090		3/8	1/2	4-1/8	6	.344
UGMH07032	R.030	1/2	1/2	5/8	1-1/2	4	.461
UGMH07921	R.060		1/2	5/8	1-1/2	4	.461
UGMH07922	R.090		1/2	5/8	1-1/2	4	.461
UGMH07923	R.125	1/2	1/2	5/8	1-1/2	4	.461
UGMH07924	R.030		1/2	5/8	2-1/4	4	.461

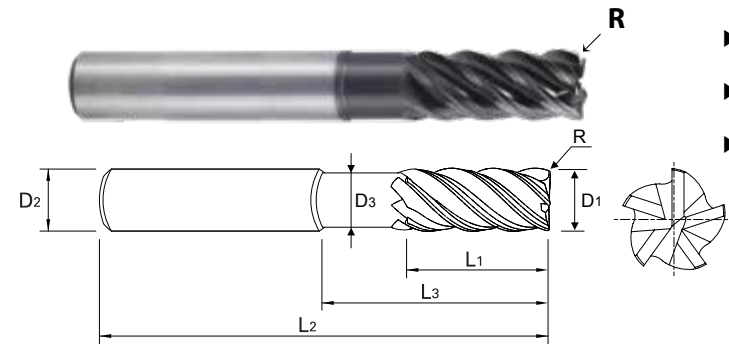
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS with EXTENDED NECK

**NEW SERIES** UGMH07 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	
	R							
UGMH07925	R.060	1/2	1/2	5/8	2-1/4	4	.461	
UGMH07926	R.090		1/2	5/8	2-1/4	4	.461	
UGMH07927	R.125		1/2	5/8	2-1/4	4	.461	
UGMH07928	R.030		1/2	5/8	3-3/8	6	.461	
UGMH07929	R.060		1/2	5/8	3-3/8	6	.461	
UGMH07930	R.090		1/2	5/8	3-3/8	6	.461	
UGMH07931	R.125		1/2	5/8	3-3/8	6	.461	
UGMH07932	R.030		1/2	5/8	4-1/8	6	.461	
UGMH07933	R.060		1/2	5/8	4-1/8	6	.461	
UGMH07934	R.090		1/2	5/8	4-1/8	6	.461	
UGMH07935	R.125		1/2	5/8	4-1/8	6	.461	
UGMH07040	R.030		5/8	5/8	3/4	1-5/8	4	.586
UGMH07936	R.060			5/8	3/4	1-5/8	4	.586
UGMH07937	R.090			5/8	3/4	1-5/8	4	.586
UGMH07938	R.125	5/8		3/4	1-5/8	4	.586	
UGMH07939	R.030	5/8		3/4	2-3/8	6	.586	
UGMH07940	R.060	5/8		3/4	2-3/8	6	.586	
UGMH07941	R.090	5/8		3/4	2-3/8	6	.586	
UGMH07942	R.125	5/8		3/4	2-3/8	6	.586	
UGMH07943	R.030	5/8		3/4	3-3/8	6	.586	
UGMH07944	R.060	5/8		3/4	3-3/8	6	.586	
UGMH07945	R.090	5/8		3/4	3-3/8	6	.586	
UGMH07946	R.125	5/8		3/4	3-3/8	6	.586	
UGMH07947	R.030	5/8		3/4	4-1/8	6	.586	
UGMH07948	R.060	5/8		3/4	4-1/8	6	.586	
UGMH07949	R.090	5/8	3/4	4-1/8	6	.586		
UGMH07950	R.125	5/8	3/4	4-1/8	6	.586		
UGMH07048	R.030	3/4	3/4	1-1/8	2	4	.711	
UGMH07951	R.060		3/4	1-1/8	2	4	.711	

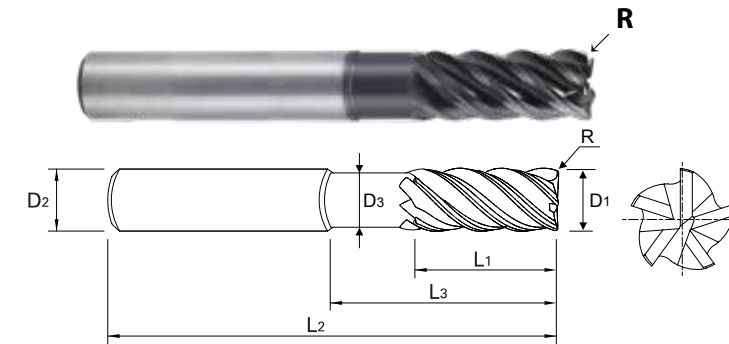
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎
○	○	○					

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS with EXTENDED NECK

**NEW SERIES** UGMH07 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Unit : inch

EDP No.	Corner Radius	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
	R						
UGMH07952	R.090	3/4	3/4	1-1/8	2	4	.711
UGMH07953	R.125		3/4	1-1/8	2	4	.711
UGMH07954	R.190		3/4	1-1/8	2	4	.711
UGMH07955	R.250		3/4	1-1/8	2	4	.711
UGMH07956	R.030		3/4	1-1/8	2-5/8	5	.711
UGMH07957	R.060		3/4	1-1/8	2-5/8	5	.711
UGMH07958	R.090		3/4	1-1/8	2-5/8	5	.711
UGMH07959	R.125		3/4	1-1/8	2-5/8	5	.711
UGMH07960	R.190		3/4	1-1/8	2-5/8	5	.711
UGMH07961	R.250		3/4	1-1/8	2-5/8	5	.711
UGMH07962	R.030		3/4	1-1/8	3-1/4	6	.711
UGMH07963	R.060		3/4	1-1/8	3-1/4	6	.711
UGMH07964	R.090		3/4	1-1/8	3-1/4	6	.711
UGMH07965	R.125		3/4	1-1/8	3-1/4	6	.711
UGMH07966	R.190	3/4	1-1/8	3-1/4	6	.711	
UGMH07967	R.250	3/4	1-1/8	3-1/4	6	.711	
UGMH07968	R.030	3/4	1-1/8	4-1/4	7	.711	
UGMH07969	R.060	3/4	1-1/8	4-1/4	7	.711	
UGMH07970	R.090	3/4	1-1/8	4-1/4	7	.711	
UGMH07971	R.125	3/4	1-1/8	4-1/4	7	.711	
UGMH07972	R.190	3/4	1-1/8	4-1/4	7	.711	
UGMH07973	R.250	3/4	1-1/8	4-1/4	7	.711	
UGMH07064	R.030	1	1	1-1/4	2-1/4	4	.961
UGMH07974	R.060		1	1-1/4	2-1/4	4	.961
UGMH07975	R.090		1	1-1/4	2-1/4	4	.961
UGMH07976	R.125		1	1-1/4	2-1/4	4	.961
UGMH07977	R.190		1	1-1/4	2-1/4	4	.961
UGMH07978	R.250		1	1-1/4	2-1/4	4	.961
UGMH07979	R.030	1	1-1/4	2-5/8	5	.961	

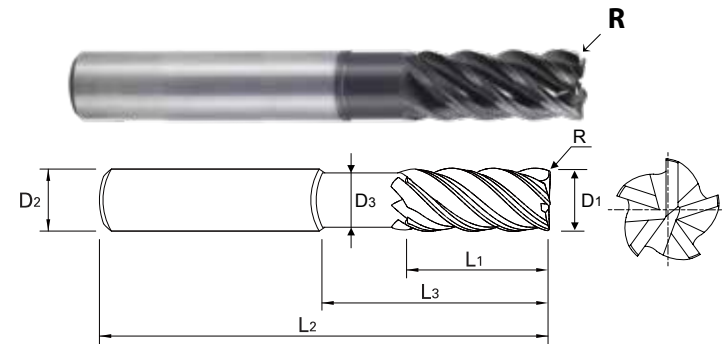
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45	◎			◎
○	○	○					

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE CORNER RADIUS with EXTENDED NECK

**NEW SERIES** UGMH07 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Unit : inch

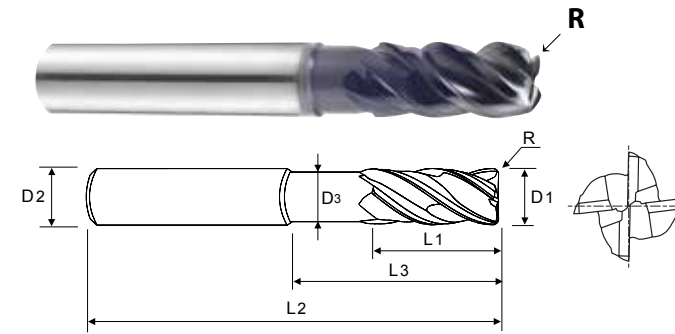
EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
UGMH07981	R.090	1	1-1/4	2-5/8	5	.961	
UGMH07982	R.125	1	1-1/4	2-5/8	5	.961	
UGMH07983	R.190	1	1-1/4	2-5/8	5	.961	
UGMH07984	R.250	1	1-1/4	2-5/8	5	.961	
UGMH07985	R.030	1	1-1/4	3-1/4	6	.961	
UGMH07986	R.060	1	1-1/4	3-1/4	6	.961	
UGMH07987	R.090	1	1-1/4	3-1/4	6	.961	
UGMH07988	R.125	1	1-1/4	3-1/4	6	.961	
UGMH07989	R.190	1	1-1/4	3-1/4	6	.961	
UGMH07990	R.250	1	1-1/4	3-1/4	6	.961	
UGMH07991	R.030	1	1-1/4	4-1/4	7	.961	
UGMH07992	R.060	1	1-1/4	4-1/4	7	.961	
UGMH07993	R.090	1	1-1/4	4-1/4	7	.961	
UGMH07994	R.125	1	1-1/4	4-1/4	7	.961	
UGMH07995	R.190	1	1-1/4	4-1/4	7	.961	
UGMH07996	R.250	1	1-1/4	4-1/4	7	.961	
UGMH07997	R.030	1	1-1/4	5-1/4	8	.961	
UGMH07998	R.060	1	1-1/4	5-1/4	8	.961	
UGMH07999	R.090	1	1-1/4	5-1/4	8	.961	
UGMH07801	R.125	1	1-1/4	5-1/4	8	.961	
UGMH07802	R.190	1	1-1/4	5-1/4	8	.961	
UGMH07803	R.250	1	1-1/4	5-1/4	8	.961	

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRc30~40	HRc40~45	◎			◎
○	○	○					

## Y-COATED SOLID CARBIDE END MILLS 4 FLUTE CORNER RADIUS with DOUBLE CORE, EXTENDED NECK

GMG40 SERIES



- ▶ Double Core E/M has a Unique Flute Design for excellent chip evacuation and higher rigidity
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



◊ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1		Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
		METRIC	INCH					
GMG40060	R0.5	6.0	.2362	6	13	20	57	5.5
GMG40901	R1.0			6	13	20	57	5.5
GMG40080	R0.5	8.0	.3150	8	19	25	63	7.5
GMG40902	R1.0			8	19	25	63	7.5
GMG40903	R1.5			8	19	25	63	7.5
GMG40904	R2.0			8	19	25	63	7.5
GMG40100	R0.5	10.0	.3937	10	22	30	72	9.2
GMG40905	R1.0			10	22	30	72	9.2
GMG40906	R1.5			10	22	30	72	9.2
GMG40907	R2.0			10	22	30	72	9.2
GMG40120	R0.5	12.0	.4724	12	26	35	83	11
GMG40908	R1.0			12	26	35	83	11
GMG40909	R1.5			12	26	35	83	11
GMG40910	R2.0			12	26	35	83	11
GMG40911	R3.0	12	26	35	83	11		
GMG40140	R1.0	14.0	.5512	14	26	35	83	13
GMG40912	R2.0			14	26	35	83	13
GMG40160	R1.0	16.0	.6299	16	35	43	92	15
GMG40913	R1.5			16	35	43	92	15
GMG40914	R2.0			16	35	43	92	15
GMG40915	R3.0			16	35	43	92	15
GMG40916	R4.0	16	35	43	92	15		
GMG40200	R1.0	20.0	.7874	20	44	56	110	19
GMG40917	R1.5			20	44	56	110	19
GMG40918	R2.0			20	44	56	110	19
GMG40919	R3.0			20	44	56	110	19
GMG40920	R3.5			20	44	56	110	19
GMG40921	R4.0			20	44	56	110	19

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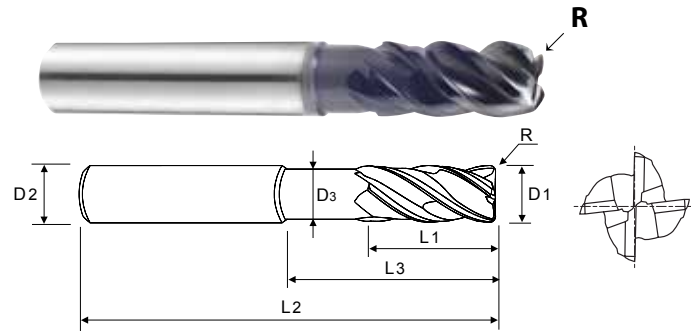
◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRc30~40	HRc40~45	◎			◎
○	○	○					



## Y-COATED SOLID CARBIDE END MILLS 4 FLUTE CORNER RADIUS with DOUBLE CORE, EXTENDED NECK

**GMG40 SERIES**



- ▶ Double Core E/M has a Unique Flute Design for excellent chip evacuation and higher rigidity
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

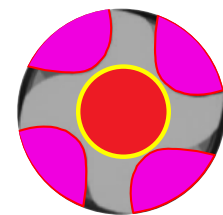
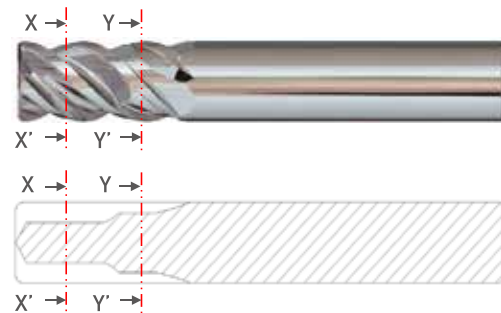


◆ Call for Availability

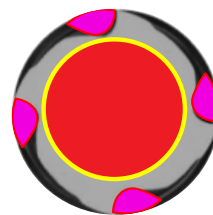
Unit : mm

EDP No.	Corner Radius R	Mill Diameter		Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
		METRIC D1	INCH .9843					
<b>GMG40250</b>	R1.0	25.0	.9843	25	55	70	130	24
<b>GMG40922</b>	R1.5			25	55	70	130	24
<b>GMG40923</b>	R2.0			25	55	70	130	24
<b>GMG40924</b>	R3.0			25	55	70	130	24
<b>GMG40925</b>	R4.0			25	55	70	130	24

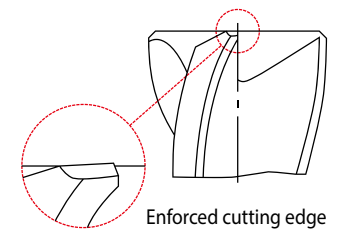
### ◆ 2 STEP CORE(DOUBLE CORE)



<SECTION X-X'>  
Excellent chip evacuation



<SECTION Y-Y'>  
Higher rigidity



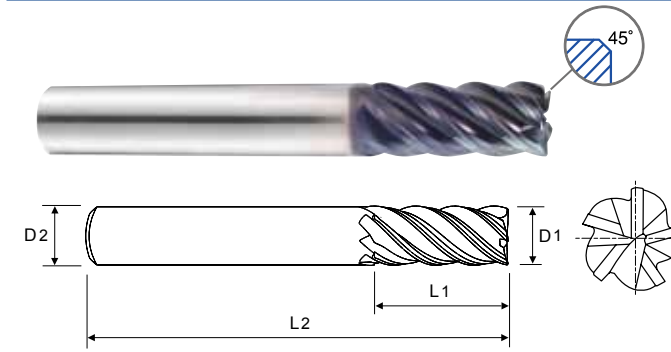
Enforced cutting edge

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE SHORT LENGTH

**GMG24 SERIES**



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



◆ Call for Availability

Unit : mm

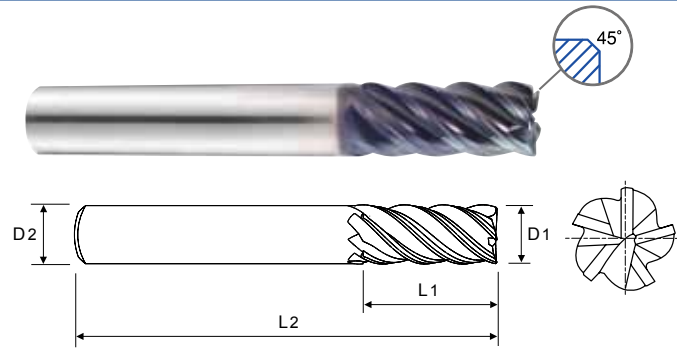
EDP No.	Mill Diameter		Shank Diameter D2	Length of Cut L1	Overall Length L2	Chamfer Size
	METRIC D1	INCH				
<b>GMG24060</b>	6.0	.2362	6	10	54	0.2
<b>GMG24080</b>	8.0	.3150	8	12	58	0.2
<b>GMG24100</b>	10.0	.3937	10	14	66	0.3
<b>GMG24120</b>	12.0	.4724	12	16	73	0.35
<b>GMG24160</b>	16.0	.6299	16	22	82	0.4
<b>GMG24200</b>	20.0	.7874	20	26	92	0.5
<b>GMG24250</b>	25.0	.9843	25	29	100	0.5

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRC30~40	HRC40~45				
○	○	○		◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE LONG LENGTH

### GMG26 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

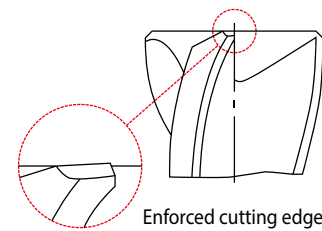
Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter		Shank Diameter D2	Length of Cut L1	Overall Length L2	Chamfer Size
	METRIC	INCH				
	D1					
<b>GMG26060</b>	6.0	.2362	6	13	57	0.2
<b>GMG26080</b>	8.0	.3150	8	19	63	0.2
<b>GMG26100</b>	10.0	.3937	10	22	72	0.3
<b>GMG26120</b>	12.0	.4724	12	26	83	0.35
<b>GMG26160</b>	16.0	.6299	16	36	92	0.4
<b>GMG26200</b>	20.0	.7874	20	44	104	0.5
<b>GMG26250</b>	25.0	.9843	25	54	121	0.5

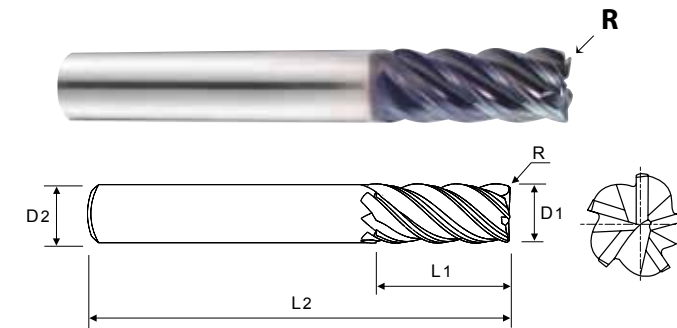


◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels ~HB225	Alloy Steels HB225~352	Prehardened Steels HRC30~40	Hardened Steels HRC40~45	Stainless Steels	Cast Iron	Aluminum	Titanium
○	○	○		◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE SHORT LENGTH CORNER RADIUS

### GMG28 SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



◇ Call for Availability

Unit : mm

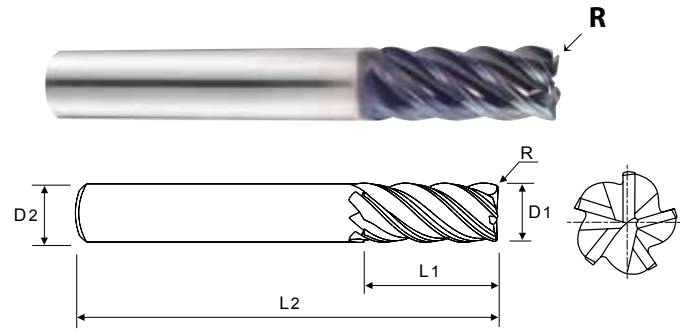
EDP No.	Corner Radius R	Mill Diameter		Shank Diameter D2	Length of Cut L1	Overall Length L2
		METRIC	INCH			
		D1				
<b>GMG28060</b>	R0.5	6.0	.2362	6	10	54
<b>GMG28080</b>	R0.5	8.0	.3150	8	12	58
<b>GMG28100</b>	R0.5	10.0	.3937	10	14	66
<b>GMG28120</b>	R0.5	12.0	.4724	12	16	73
<b>GMG28160</b>	R1.0	16.0	.6299	16	22	82
<b>GMG28200</b>	R1.0	20.0	.7874	20	26	92
<b>GMG28250</b>	R1.0	25.0	.9843	25	29	100

◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels ~HB225	Alloy Steels HB225~352	Prehardened Steels HRC30~40	Hardened Steels HRC40~45	Stainless Steels	Cast Iron	Aluminum	Titanium
○	○	○		◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE LONG LENGTH CORNER RADIUS

**GMG30** SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter		Shank Diameter D2	Length of Cut L1	Overall Length L2
		METRIC D1	INCH			
GMG30060	R0.3	6.0	.2362	6	13	57
GMG30901	R0.5			6	13	57
GMG30902	R1.0			6	13	57
GMG30080	R0.5	8.0	.3150	8	19	63
GMG30903	R1.0			8	19	63
GMG30904	R1.5			8	19	63
GMG30905	R2.0			8	19	63
GMG30100	R0.5			10	22	72
GMG30906	R1.0	10.0	.3937	10	22	72
GMG30907	R1.5			10	22	72
GMG30908	R2.0			10	22	72
GMG30120	R0.5			12	26	83
GMG30909	R1.0	12.0	.4724	12	26	83
GMG30910	R1.5			12	26	83
GMG30911	R2.0			12	26	83
GMG30912	R2.5			12	26	83
GMG30913	R3.0			12	26	83
GMG30160	R1.0			16.0	.6299	16
GMG30914	R1.5	16	36			92
GMG30915	R2.0	16	36			92
GMG30916	R2.5	16	36			92
GMG30917	R3.0	16	36			92
GMG30918	R4.0	16	36			92

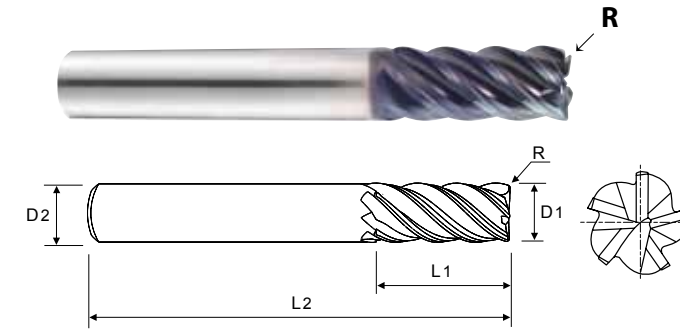
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◎ : Excellent ○ : Good

P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRc30~40	HRc40~45	◎			◎

## Y-COATED SOLID CARBIDE END MILLS 5 FLUTE LONG LENGTH CORNER RADIUS

**GMG30** SERIES



- ▶ Excellent performance results and long tool life when machining Titanium and other tough materials
- ▶ Equipped with rigid flute design, making this tool the tool of choice in heavy profile milling and high speed milling
- ▶ Corner radius and chamfered corners enhance performance and protect corners in heavy machining

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter		Shank Diameter D2	Length of Cut L1	Overall Length L2
		METRIC D1	INCH			
GMG30200	R1.0	20.0	.7874	20	44	104
GMG30919	R1.5			20	44	104
GMG30920	R2.0			20	44	104
GMG30921	R2.5			20	44	104
GMG30922	R3.0			20	44	104
GMG30923	R4.0			20	44	104
GMG30924	R5.0			20	44	104
GMG30250	R1.0	25.0	.9843	25	54	121
GMG30925	R1.5			25	54	121
GMG30926	R2.0			25	54	121
GMG30927	R2.5			25	54	121
GMG30928	R3.0			25	54	121
GMG30929	R4.0			25	54	121
GMG30930	R5.0	25	54	121		

◎ : Excellent ○ : Good

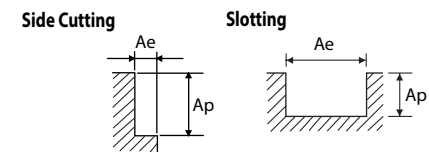
P				M	K	N	S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Titanium
~HB225	HB225~352	HRc30~40	HRc40~45	◎			◎



#### UGMG42 SERIES

RPM = rev./min. Feed = inch/min.  
SFM = ft/min. Fz = inch/tooth

ISO Hardness (Brinell)	Work Materials	Speed and Feed Recommendations					Diameter (inch)						
		Type of cut	Ap x D1	Ae x D1	Vc (SFM)	Parameters	1/4	5/16	3/8	1/2	5/8	3/4	1
P < 300	CARBON STEELS 10**, 11**, 12**, 12L**, 15**	Side Cutting 	1 *(0.7)	0.4	525 (420-630)	RPM	8021	6417	5347	4010	3208	2674	2005
						Fz	.0011	.0014	.0017	.0021	.0025	.0030	.0033
						Feed(IPM)	34.11	35.37	35.37	33.47	31.83	32.42	26.53
		Slotting 	1 *(0.7)	1	410 (328-492)	RPM	6266	5013	4178	3133	2507	2089	1567
						Fz	.0010	.0013	.0017	.0019	.0025	.0028	.0033
						Feed(IPM)	24.67	26.84	27.63	24.18	24.87	23.03	20.72
P < 300 P < 380	ALLOY STEELS 41**, 43**, 51**, 86**	Side Cutting 	1 *(0.7)	0.4	492 (394-591)	RPM	7520	6016	5013	3760	3008	2507	1880
						Fz	.0010	.0014	.0017	.0019	.0025	.0028	.0033
						Feed(IPM)	29.61	33.16	33.16	29.01	29.84	27.63	24.87
		Slotting 	1 *(0.7)	1	394 (315-472)	RPM	6016	4813	4010	3008	2406	2005	1504
						Fz	.0010	.0013	.0017	.0019	.0025	.0028	.0030
						Feed(IPM)	23.68	25.77	26.53	23.21	23.87	22.11	18.24
P < 380	TOOL STEELS A2, D2, H13, P20, T15	Side Cutting 	1 *(0.7)	0.4	492 (394-591)	RPM	7520	6016	5013	3760	3008	2507	1880
						Fz	.0011	.0014	.0018	.0021	.0026	.0030	.0033
						Feed(IPM)	31.97	33.16	36.32	31.38	31.74	30.39	24.87
		Slotting 	1 *(0.7)	1	394 (315-472)	RPM	6016	4813	4010	3008	2406	2005	1504
						Fz	.0011	.0014	.0017	.0021	.0025	.0030	.0033
						Feed(IPM)	25.58	26.53	26.53	25.11	23.87	24.32	19.89
K < 260	CAST IRON Gray, Malleable, Ductile	Side Cutting 	1 *(0.7)	0.4	574 (459-689)	RPM	8773	7018	5849	4386	3509	2924	2193
						Fz	.0008	.0011	.0014	.0017	.0021	.0024	.0028
						Feed(IPM)	29.01	30.95	32.24	29.01	29.29	27.63	24.18
		Slotting 	1 *(0.7)	1	459 (367-551)	RPM	7018	5615	4679	3509	2807	2339	1755
						Fz	.0008	.0011	.0014	.0017	.0021	.0024	.0026
						Feed(IPM)	23.21	24.76	25.79	23.21	23.43	22.11	18.51
M	STAINLESS STEELS 300 304, 316, 304L, 316L, SUS316	Side Cutting 	1 *(0.7)	0.4	344 (276-413)	RPM	5264	4211	3509	2632	2106	1755	1316
						Fz	.0010	.0013	.0016	.0019	.0024	.0028	.0032
						Feed(IPM)	20.47	22.68	23.10	19.69	20.47	19.69	16.73
		Slotting 	1 *(0.7)	1	279 (223-335)	RPM	4261	3409	2841	2131	1704	1420	1065
						Fz	.0010	.0013	.0016	.0019	.0024	.0028	.0032
						Feed(IPM)	16.57	18.36	18.70	15.94	16.57	15.94	13.55



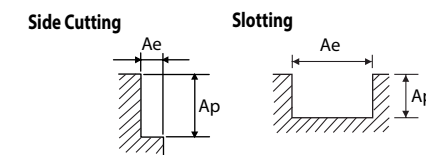
**Note**

\* Maximum recommended depth shown  
 \* Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D1 or less  
 \* Feed to be reduced by approximately 50% if L.O.C.(Length Of Cut) is over 3D  
 \* Reduce speed and feed recommendations for materials harder than listed  
 \* Above recommendations are based on ideal conditions.  
 Adjust parameters accordingly for smaller taper machining centers or less rigid conditions

#### UGMG42 SERIES

RPM = rev./min. Feed = inch/min.  
SFM = ft/min. Fz = inch/tooth

ISO Hardness (Brinell)	Work Materials	Speed and Feed Recommendations					Diameter (inch)						
		Type of cut	Ap x D1	Ae x D1	Vc (SFM)	Parameters	1/4	5/16	3/8	1/2	5/8	3/4	1
M	STAINLESS STEELS 400 416, 420F, 430F, 440F	Side Cutting 	1 *(0.7)	0.4	509 (407-610)	RPM	7770	6216	5180	3885	3108	2590	1943
						Fz	.0013	.0018	.0022	.0026	.0034	.0037	.0045
						Feed(IPM)	41.85	44.64	46.50	40.69	41.85	38.75	34.87
		Slotting 	1 *(0.7)	1	410 (328-492)	RPM	6266	5013	4178	3133	2507	2089	1567
						Fz	.0013	.0018	.0022	.0026	.0032	.0037	.0041
						Feed(IPM)	33.75	36.00	37.50	32.81	31.87	31.25	25.78
M	STAINLESS STEELS(PH) 17-4PH, 15-5PH, 13-8PH	Side Cutting 	0.6	0.4	144 (115-173)	RPM	2206	1765	1471	1103	882	735	551
						Fz	.0006	.0008	.0010	.0013	.0016	.0018	.0021
						Feed(IPM)	5.61	5.81	6.16	5.61	5.54	5.28	4.54
		Slotting 	0.5	1	118 (94-142)	RPM	1805	1444	1203	902	722	602	451
						Fz	.0006	.0008	.0010	.0013	.0016	.0018	.0021
						Feed(IPM)	4.59	4.75	5.04	4.59	4.54	4.32	3.71
S	TITANIUM Ti6Al4V Ti5Al5V5Mo Ti7Al4Mo	Side Cutting 	1 *(0.7)	0.4	230 (184-276)	RPM	3509	2807	2339	1755	1404	1170	877
						Fz	.0013	.0019	.0022	.0026	.0034	.0037	.0045
						Feed(IPM)	18.90	21.00	21.00	18.37	18.90	17.50	15.75
		Slotting 	1 *(0.7)	1	180 (144-217)	RPM	2757	2206	1838	1379	1103	919	689
						Fz	.0013	.0018	.0022	.0026	.0034	.0037	.0041
						Feed(IPM)	14.85	15.84	16.50	14.44	14.85	13.75	11.34

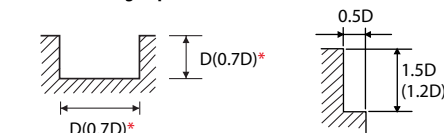


**Note**

\* Maximum recommended depth shown  
 \* Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D1 or less  
 \* Feed to be reduced by approximately 50% if L.O.C.(Length Of Cut) is over 3D  
 \* Reduce speed and feed recommendations for materials harder than listed  
 \* Above recommendations are based on ideal conditions.  
 Adjust parameters accordingly for smaller taper machining centers or less rigid conditions

\*(0.7D) : UGMG42K998, UGMG42K999, UGMGK801  
 0.7D cutting depth for slotting and side cutting applications due to short double core length

**Axial cutting depth**

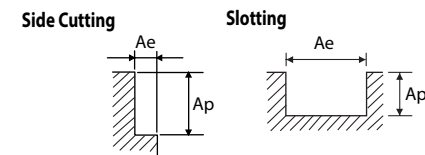




#### GMG40 SERIES

RPM = rev./min. Feed = inch/min.  
SFM = ft/min. Fz = inch/tooth

ISO Hardness (Brinell)	Work Materials	Speed and Feed Recommendations					Diameter (mm)							
		Type of cut	Ap x D1	Ae x D1	Vc (SFM)	Parameters	6	8	10	12	14	16	20	25
M	STAINLESS STEELS 400 416, 420F, 430F, 440F	Side Cutting 	1	0.4	509 (407-610)	RPM	8223	6167	4934	4112	3524	3084	2467	1974
						Fz	.0013	.0018	.0022	.0026	.0030	.0034	.0037	.0045
						Feed(IPM)	44.29	44.29	44.29	43.06	42.18	41.52	36.91	35.43
		Slotting 	1	1	410 (328-492)	RPM	6631	4974	3979	3316	2842	2487	1989	1592
						Fz	.0013	.0018	.0022	.0026	.0029	.0032	.0037	.0041
						Feed(IPM)	35.72	35.72	35.72	34.72	33.12	31.62	29.76	26.19
M	STAINLESS STEELS(PH) 17-4PH, 15-5PH, 13-8PH	Side Cutting 	0.6	0.4	144 (115-173)	RPM	2334	1751	1401	1167	1000	875	700	560
						Fz	.0006	.0008	.0010	.0013	.0014	.0016	.0018	.0021
						Feed(IPM)	5.94	5.76	5.87	5.94	5.67	5.50	5.03	4.61
		Slotting 	0.5	1	118 (94-142)	RPM	1910	1432	1146	955	819	716	573	458
						Fz	.0006	.0008	.0010	.0013	.0014	.0016	.0018	.0021
						Feed(IPM)	4.86	4.71	4.80	4.86	4.64	4.50	4.11	3.77
S	TITANIUM Ti6Al4V Ti5Al5V5Mo Ti7Al4Mo	Side Cutting 	1	0.4	230 (184-276)	RPM	3714	2785	2228	1857	1592	1393	1114	891
						Fz	.0013	.0019	.0022	.0026	.0030	.0034	.0037	.0045
						Feed(IPM)	20.00	20.83	20.00	19.45	19.05	18.75	16.67	16.00
		Slotting 	1	1	180 (144-217)	RPM	2918	2188	1751	1459	1251	1094	875	700
						Fz	.0013	.0018	.0022	.0026	.0030	.0034	.0037	.0041
						Feed(IPM)	15.71	15.71	15.71	15.28	14.97	14.73	13.10	11.52



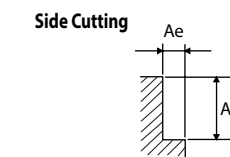
**Note**

- \* Maximum recommended depth shown
- \* Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D1 or less
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#### GMG24, GMG26, GMG28, GMG30 SERIES

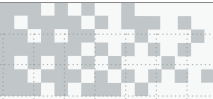
RPM = rev./min. Feed = inch/min.  
SFM = ft/min. Fz = inch/tooth

ISO Hardness (Brinell)	Work Materials	Speed and Feed Recommendations					Diameter (inch)									
		Type of cut	Ap x D1	Ae x D1	Vc (SFM)	Parameters	6	8	10	12	14	16	18	20	25	
P < 300	CARBON STEELS 10**, 11**, 12**, 12L**, 15**	Side Cutting 	1.5	0.3	472 (378-567)	RPM	7639	5730	4584	3820	3274	2865	2546	2292	1833	
						Fz	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	
						Feed(IPM)	51.13	42.86	45.11	47.37	44.47	42.86	41.61	40.15	36.45	
P < 300 P < 380	ALLOY STEELS 41**, 43**, 51**, 86**	Side Cutting 	1.5	0.3	331 (265-398)	RPM	5358	4019	3215	2679	2296	2009	1786	1607	1286	
						Fz	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	
						Feed(IPM)	35.86	30.06	31.64	33.23	31.19	30.06	29.18	28.16	25.57	
P < 380	TOOL STEELS A2, D2, H13, P20, T15	Side Cutting 	1.5	0.3	197 (157-236)	RPM	3183	2387	1910	1592	1364	1194	1061	955	764	
						Fz	.0009	.0011	.0014	.0017	.0019	.0021	.0023	.0024	.0028	
						Feed(IPM)	15.04	12.69	13.16	13.79	13.16	12.69	12.11	11.65	10.68	
K < 260	CAST IRON Gray, Malleable, Ductile	Side Cutting 	1.5	0.3	348 (278-417)	RPM	5623	4218	3374	2812	2410	2109	1874	1687	1350	
						Fz	.0017	.0019	.0025	.0031	.0034	.0038	.0041	.0044	.0050	
						Feed(IPM)	47.60	39.85	41.84	43.73	41.27	39.85	38.01	36.86	33.48	
M	STAINLESS STEELS 300 304, 316, 304L, 316L, SUS316	Side Cutting 	1.5	0.3	269 (215-323)	RPM	4350	3263	2610	2175	1864	1631	1450	1305	1044	
						Fz	.0012	.0013	.0015	.0025	.0026	.0027	.0028	.0030	.0035	
						Feed(IPM)	25.69	20.55	19.52	26.97	23.86	22.16	19.98	19.52	18.09	
M	STAINLESS STEELS 400 416, 420F, 430F, 440F	Side Cutting 	1.5	0.3	384 (307-461)	RPM	6207	4655	3724	3104	2660	2328	2069	1862	1490	
						Fz	.0009	.0010	.0012	.0018	.0020	.0021	.0022	.0024	.0028	
						Feed(IPM)	29.32	22.91	21.99	28.10	26.71	24.74	23.22	22.36	20.82	
M	STAINLESS STEELS(PH) 17-4PH, 15-5PH, 13-8PH	Side Cutting 	1.5	0.3	194 (155-232)	RPM	3130	2348	1878	1565	1341	1174	1043	939	751	
						Fz	.0012	.0013	.0015	.0025	.0026	.0027	.0028	.0030	.0035	
						Feed(IPM)	18.48	14.79	14.05	19.41	17.16	15.94	14.38	14.05	13.01	
S	TITANIUM Ti6Al4V Ti5Al5V5Mo Ti7Al4Mo	Side Cutting 	1.5	0.3	226 (181-272)	RPM	3661	2745	2196	1830	1569	1373	1220	1098	879	
						Fz	.0011	.0011	.0013	.0022	.0023	.0024	.0025	.0027	.0031	
						Feed(IPM)	19.46	15.67	14.70	20.54	18.22	16.75	15.13	14.92	13.66	



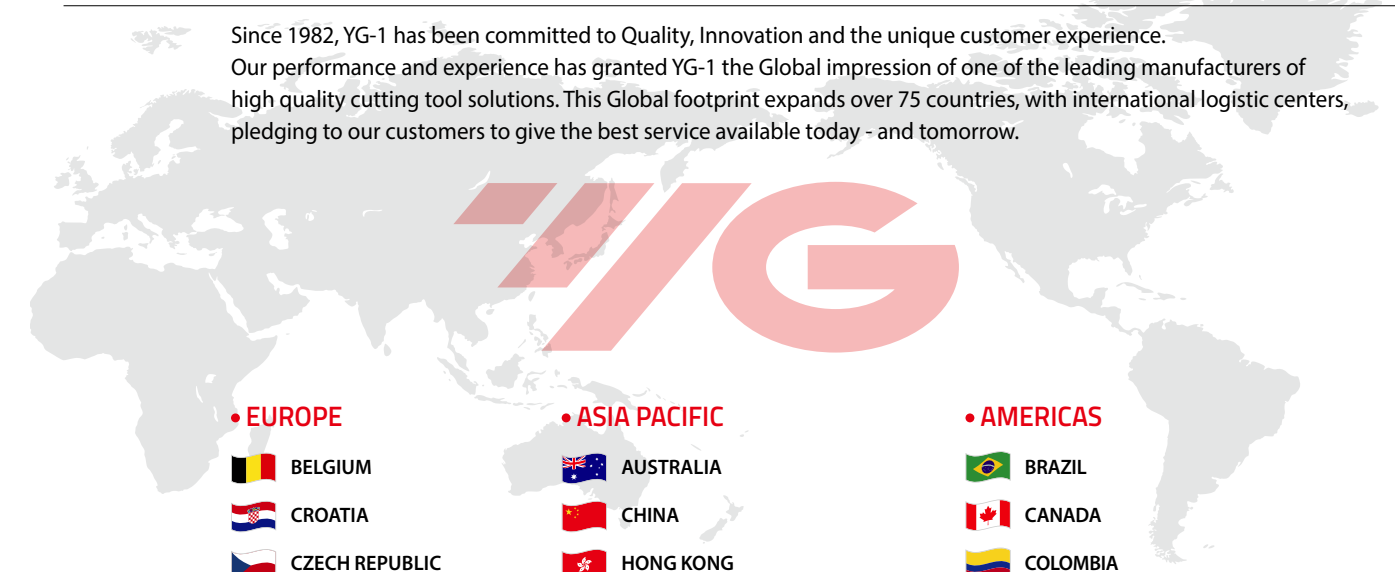
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