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YG1YAXP190531001



YG
X-POWER PRO

PERFORMANCE UPGRADE 升级性能
Y-COATED Y-涂层
SOLID CARBIDE END MILLS 整体 硬质合金 铣刀
for Pre-Hardened Steels up to HRc55 用于预硬钢(~HRc55)
for Mold & Die 用于模具
for Dry & Wet Cutting 用于干&湿切削

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

P K

For Mold & Die Industries

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

升级性能

- 通过多测试,实现最优化技术
- 新的涂层,材质,钝化处理

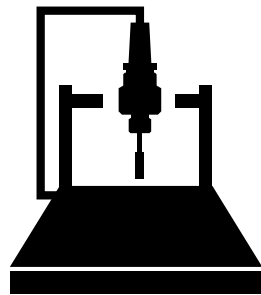
加工材料

- 预硬钢(~HRC 55), 铸铁

P K

用于模具产业

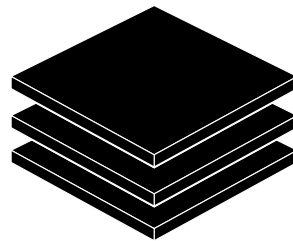
- 注塑, 压铸, 军用部件, 汽车部件, 电子部件等



Honing 钝化处理

Advanced honing technology system made from YG-1

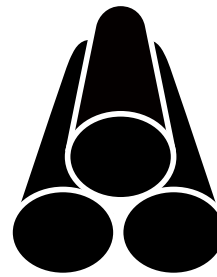
YG-1独特的最佳钝化处理技术



Coating 涂层

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

经过多涂层, 多测试的最佳涂层技术



Raw Material 材质

Made from high performance raw material with better quality

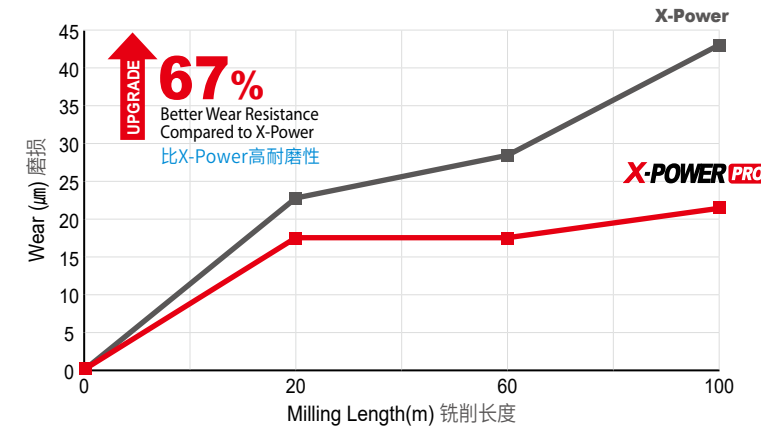
高性能材质实现卓越品质



CASE STUDY 案例分析

2 FLUTE SQUARE END MILLS

2刃 平头 铣刀



X-POWER^{PRO}

Milling length (铣削长度) : 100m



X-Power

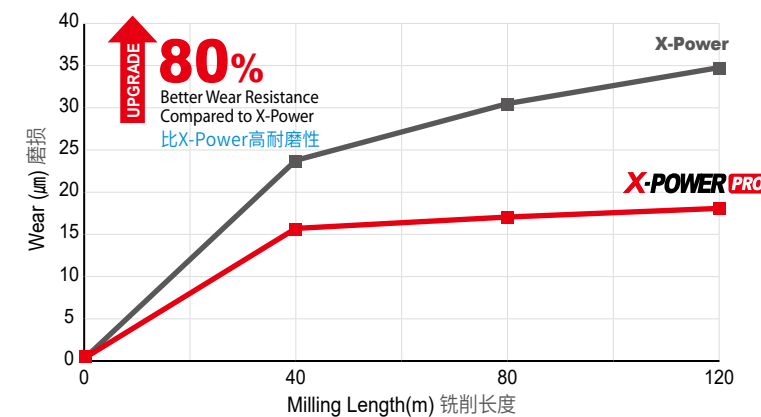
Milling length (铣削长度) : 100m



Tool 刀具	X-POWER ^{PRO}	X-Power
Milling Length(m) 铣削长度	100	
Size 尺寸	Ø10.0 x Ø10.0 x 22 x 70	
Material 加工材料	KP4M(HRC35)/DIN 1.2311, ANSI P20+Ni	
Vc(m/min) 切速	63	
Feed(mm/min) 进给	300	
Milling Depth(mm) 铣削深度	Ap : 10, Ae : 0.5	
Coolant 冷却	Oil Mist 喷雾	
Milling Method 铣削方式	Down & Side Cutting 坡走&侧铣削	

2 FLUTE BALL END MILLS

2刃 球头 铣刀



X-POWER^{PRO}

Milling length (铣削长度) : 120m



X-Power

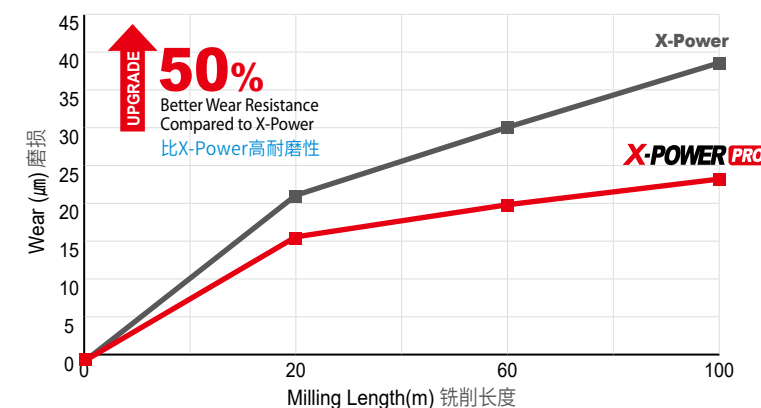
Milling length (铣削长度) : 120m



Tool 刀具	X-POWER ^{PRO}	X-Power
Milling Length(m) 铣削长度	120	
Size 尺寸	Ø6.0 x Ø6.0 x 12 x 90	
Material 加工材料	KP4M(HRC35)/DIN 1.2311, ANSI P20+Ni	
Vc(m/min) 切速	130	
Feed(mm/min) 进给	830	
Milling Depth(mm) 铣削深度	Ap : 0.2, Ae : 1.2	
Coolant 冷却	Oil Mist 喷雾	
Milling Method 铣削方式	Profile Cutting 方形铣削	

4 FLUTE CORNER RADIUS END MILLS

4刃 圆鼻 铣刀



X-POWER^{PRO}

Milling length (铣削长度) : 100m



X-Power

Milling length (铣削长度) : 100m



Tool 刀具	X-POWER ^{PRO}	X-Power
Milling Length(m) 铣削长度	100	
Size 尺寸	Ø10.0(R0.5) x Ø10.0 x 30 x 90	
Material 加工材料	KP4M(HRC35)/DIN 1.2311, ANSI P20+Ni	
Vc(m/min) 切速	52	
Feed(mm/min) 进给	180	
Milling Depth(mm) 铣削深度	Ap : 25, Ae : 0.5	
Coolant 冷却	Oil Mist 喷雾	
Milling Method 铣削方式	Down & Side Cutting 坡走&侧铣削	

选择指南

SELECTION GUIDE

ITEM 系列	MODEL 模型	DESCRIPTION 规格	SIZE 尺寸		PAGE 页数
			MIN 最小	MAX 最大	
GMH31		CARBIDE, 2 FLUTE SHORT LENGTH BALL NOSE 硬质合金, 2刃 短刃 球头	R0.1	R10.0	6
GMH32		CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING 硬质合金, 2刃 颈部加长 球头	R0.2	R3.0	7
GMH37		CARBIDE, 2 FLUTE LONG LENGTH CORNER RADIUS 硬质合金, 2刃 加长 圆鼻	D3.0	D12.0	9
GMH38		CARBIDE, 4 FLUTE LONG LENGTH CORNER RADIUS 硬质合金, 4刃 加长 圆鼻	D3.0	D12.0	10
GMH33		CARBIDE, 2 FLUTE SHORT LENGTH 硬质合金, 2刃 短刃	D1.0	D20.0	11
GMH34		CARBIDE, 2 FLUTE for RIB PROCESSING 硬质合金, 2刃 颈部加长	D0.4	D4.0	12
GMH35		CARBIDE, 4 FLUTE SHORT LENGTH 硬质合金, 4刃 短刃	D1.0	D20.0	14
GMH36		CARBIDE, 4 FLUTE LONG LENGTH 硬质合金, 4刃 加长	D2.0	D20.0	15
GMH39		CARBIDE, 6 FLUTE 45° HELIX SHORT LENGTH 硬质合金, 6刃 45°螺旋角 短刃	D6.0	D16.0	16
GM814		CARBIDE, 3&4 FLUTE 20° HELIX LONG LENGTH ROUGHING - FINE 硬质合金, 3&4刃 20°螺旋角 加长 粗加工用	D6.0	D20.0	17
RECOMMENDED CUTTING CONDITIONS 推荐加工参数					18

◎ : Excellent (优秀) ○ : Good (良好)

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRC30~40	HRc40~45	HRc45~55	HRc55~70							
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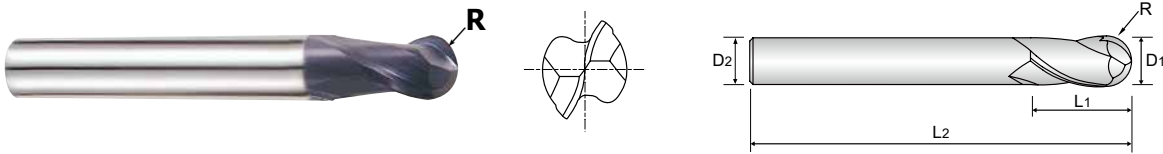
Y-COATED SOLID CARBIDE END MILLS
2 FLUTE SHORT LENGTH BALL NOSE

Y-涂层整体硬质合金铣刀 2刃 短刃 球头

GMH31 PLAIN SHANK

- ▶ Economic type with short overall length
- ▶ Radius tolerance $\pm 0.02\text{mm}$ & short length of cut

- ▶ 短全长的经济型系列
- ▶ 球头R角精度 $\pm 0.02\text{mm}$
- ▶ 短刃长



Unit(单位) : mm					
EDP No.	Radius of Ball Nose 圆弧角 R(± 0.02)	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Overall Length 全长 L2
GMH31002	R0.1	0.2	4	0.4	50
GMH31003	R0.15	0.3	4	0.6	50
GMH31004	R0.2	0.4	4	0.8	50
GMH31005	R0.25	0.5	4	1	50
GMH31006	R0.3	0.6	4	1.2	50
GMH31008	R0.4	0.8	4	1.6	50
GMH31010	R0.5	1.0	4	2	50
GMH31015	R0.75	1.5	4	4	50
GMH31020	R1.0	2.0	4	5	50
GMH31030	R1.5	3.0	4	6	50
GMH31901	R1.5	3.0	6	6	50
GMH31040	R2.0	4.0	4	8	50
GMH31902	R2.0	4.0	6	8	50
GMH31060	R3.0	6.0	6	12	50
GMH31080	R4.0	8.0	8	14	60
GMH31100	R5.0	10.0	10	20	75
GMH31120	R6.0	12.0	12	24	75
GMH31160	R8.0	16.0	16	32	100
GMH31200	R10.0	20.0	20	40	100

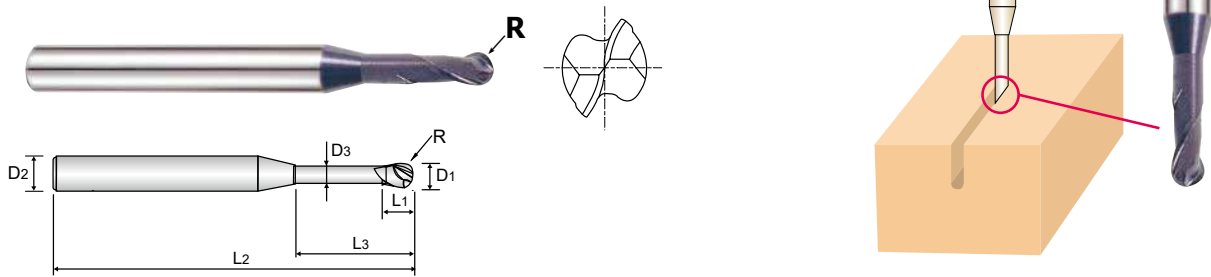
Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
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Y-COATED SOLID CARBIDE END MILLS
2 FLUTE BALL NOSE for RIB PROCESSING

Y-涂层整体硬质合金铣刀 2刃 颈部加长 球头

GMH32 PLAIN SHANK



Unit(单位) : mm							
EDP No.	Radius of Ball Nose 圆弧角 R(± 0.01)	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Length Below Shank 颈长 L3	Overall Length 全长 L2	Neck Diameter 颈部直径 D3
GMH32004	R0.2	0.4	4	0.3	2	45	0.37
GMH32901	R0.2	0.4	4	0.3	3	45	0.37
GMH32902	R0.2	0.4	4	0.3	4	45	0.37
GMH32005	R0.25	0.5	4	0.4	2	45	0.45
GMH32903	R0.25	0.5	4	0.4	3	45	0.45
GMH32904	R0.25	0.5	4	0.4	4	45	0.45
GMH32006	R0.3	0.6	4	0.5	2	45	0.55
GMH32905	R0.3	0.6	4	0.5	3	45	0.55
GMH32906	R0.3	0.6	4	0.5	4	45	0.55
GMH32907	R0.3	0.6	4	0.5	6	45	0.55
GMH32008	R0.4	0.8	4	0.6	4	45	0.75
GMH32908	R0.4	0.8	4	0.6	6	45	0.75
GMH32010	R0.5	1.0	4	0.8	4	45	0.95
GMH32909	R0.5	1.0	4	0.8	6	45	0.95
GMH32910	R0.5	1.0	4	0.8	8	45	0.95
GMH32911	R0.5	1.0	4	0.8	10	45	0.95
GMH32912	R0.5	1.0	4	0.8	12	45	0.95
GMH32913	R0.5	1.0	4	0.8	16	50	0.95
GMH32015	R0.75	1.5	4	1.2	6	45	1.45
GMH32914	R0.75	1.5	4	1.2	8	45	1.45
GMH32915	R0.75	1.5	4	1.2	10	45	1.45
GMH32916	R0.75	1.5	4	1.2	12	45	1.45
GMH32917	R0.75	1.5	4	1.2	16	50	1.45

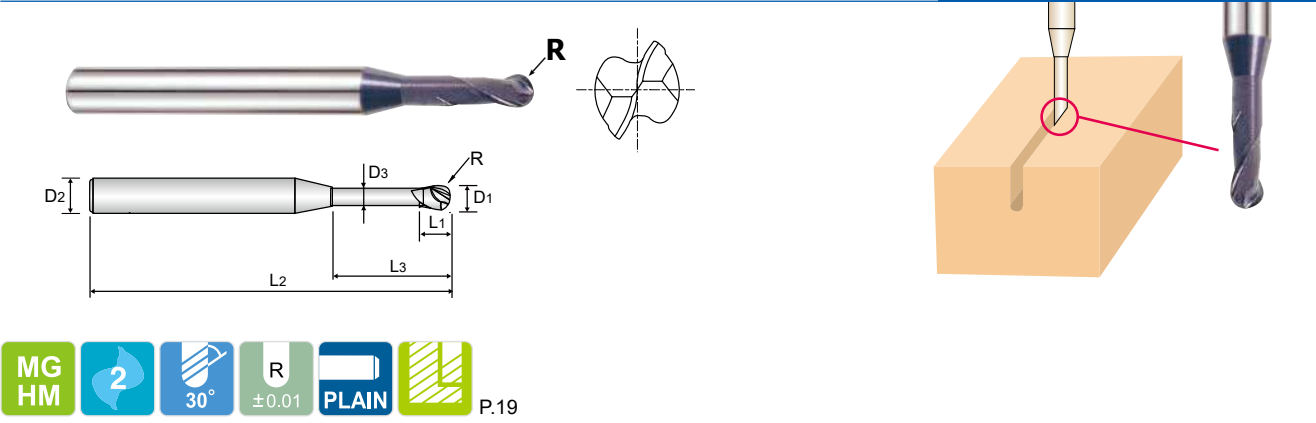
Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.02	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
○	◎	◎	◎	○			○					

Y-COATED SOLID CARBIDE END MILLS
2 FLUTE BALL NOSE for RIB PROCESSING

Y-涂层整体硬质合金铣刀 2刃 颈部加长 球头

GMH32 PLAIN SHANK



Unit(单位) : mm							
EDP No.	Radius of Ball Nose 圆弧角 R(±0.01)	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Length Below Shank 颈长 L3	Overall Length 全长 L2	Neck Diameter 颈部直径 D3
GMH32020	R1.0	2.0	4	1.6	6	45	1.95
GMH32918	R1.0	2.0	4	1.6	8	45	1.95
GMH32919	R1.0	2.0	4	1.6	10	45	1.95
GMH32920	R1.0	2.0	4	1.6	12	50	1.95
GMH32921	R1.0	2.0	4	1.6	16	50	1.95
GMH32922	R1.0	2.0	4	1.6	20	55	1.95
GMH32923	R1.0	2.0	4	1.6	26	70	1.95
GMH32924	R1.0	2.0	4	1.6	30	70	1.95
GMH32030	R1.5	3.0	6	2.4	10	50	2.85
GMH32925	R1.5	3.0	6	2.4	12	50	2.85
GMH32926	R1.5	3.0	6	2.4	16	55	2.85
GMH32927	R1.5	3.0	6	2.4	20	60	2.85
GMH32928	R1.5	3.0	6	2.4	26	70	2.85
GMH32040	R2.0	4.0	6	3.2	16	60	3.85
GMH32929	R2.0	4.0	6	3.2	20	65	3.85
GMH32930	R2.0	4.0	6	3.2	26	70	3.85
GMH32060	R3.0	6.0	6	4.8	20	80	5.85
GMH32931	R3.0	6.0	6	4.8	30	90	5.85
GMH32932	R3.0	6.0	6	4.8	40	100	5.85

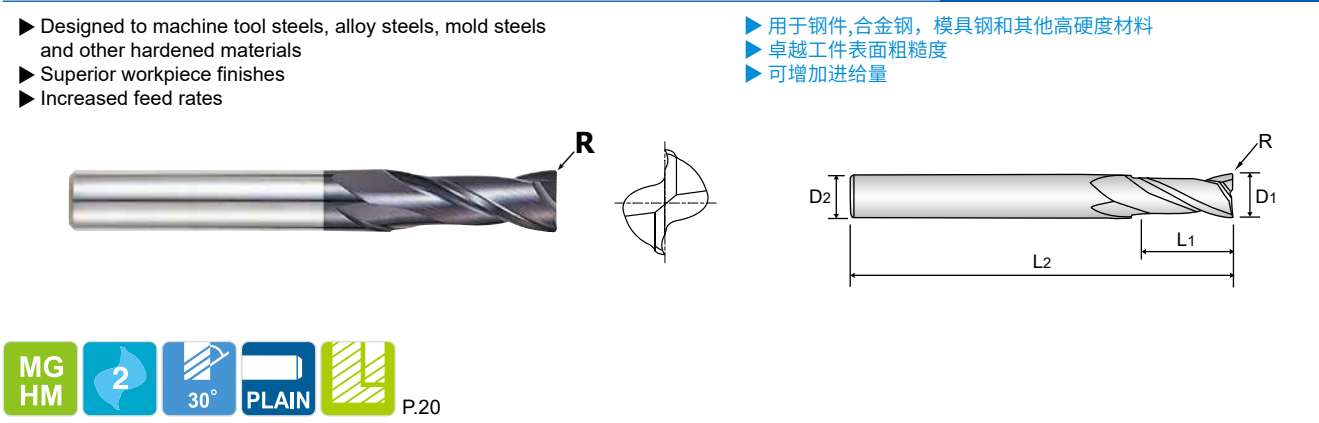
Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.02	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
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Y-COATED SOLID CARBIDE END MILLS
2 FLUTE LONG LENGTH CORNER RADIUS

Y-涂层整体硬质合金铣刀 2刃 加长 圆鼻

GMH37 PLAIN SHANK



Unit(单位) : mm					
EDP No.	Corner Radius 圆弧角 R	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Overall Length 全长 L2
GMH37030	R0.5	3.0	6	10	70
GMH37040	R0.5	4.0	6	12	70
GMH37050	R0.5	5.0	6	15	80
GMH37060	R0.5	6.0	6	15	90
GMH37901	R1.0	6.0	6	15	90
GMH37080	R0.5	8.0	8	20	100
GMH37902	R1.0	8.0	8	20	100
GMH37100	R0.5	10.0	10	25	100
GMH37903	R1.0	10.0	10	25	100
GMH37120	R1.0	12.0	12	30	110

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
○	◎	◎	◎	○			○					

Y-COATED SOLID CARBIDE END MILLS

4 FLUTE LONG LENGTH CORNER RADIUS

Y-涂层整体硬质合金铣刀 4刃 加长 圆鼻

GMH38 PLAIN SHANK

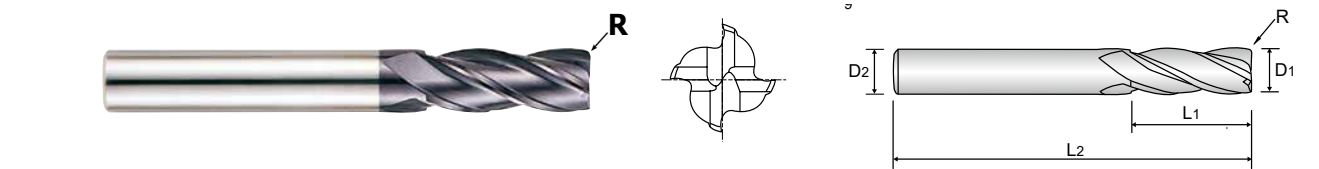
- Designed to machine tool steels, alloy steels, mold steels and other hardened materials

► 4 flute allows for better workpiece finishes

► Increased production
- 用于钢件,合金钢, 模具钢和其他高硬度材料

► 4刃设计实现卓越工件表面粗糙度

► 提高生产率



Unit(单位) : mm					
EDP No.	Corner Radius 圆弧角	Mill Diameter 直径	Shank Diameter 柄径	Length of Cut 刃长	Overall Length 全长
	R	D1	D2	L1	L2
GMH38030	R0.2	3.0	6	10	70
GMH38901	R0.5	3.0	6	10	70
GMH38040	R0.3	4.0	6	12	70
GMH38902	R0.5	4.0	6	12	70
GMH38050	R0.5	5.0	6	15	80
GMH38060	R0.2	6.0	6	15	90
GMH38903	R0.5	6.0	6	15	90
GMH38904	R1.0	6.0	6	15	90
GMH38080	R0.5	8.0	8	20	100
GMH38905	R1.0	8.0	8	20	100
GMH38906	R2.0	8.0	8	20	100
GMH38100	R0.5	10.0	10	25	100
GMH38907	R1.0	10.0	10	25	100
GMH38908	R2.0	10.0	10	25	100
GMH38120	R0.5	12.0	12	30	110
GMH38909	R1.0	12.0	12	30	110
GMH38910	R2.0	12.0	12	30	110

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
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Y-COATED SOLID CARBIDE END MILLS

2 FLUTE SHORT LENGTH

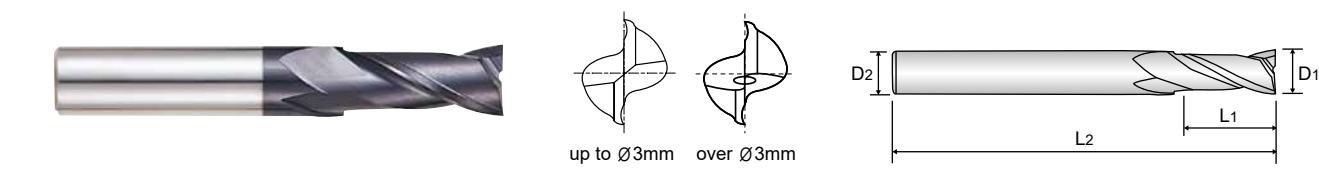
Y-涂层整体硬质合金铣刀 2刃 短刃

GMH33 PLAIN SHANK

- High precision milling in medical, optical, electronics and aerospace industries

► Excellent performance on hardened steel
- 医疗, 光学, 电子和航空产业上的高精密切削

► 高硬钢上卓越性能



Unit(单位) : mm				
EDP No.	Mill Diameter 直径	Shank Diameter 柄径	Length of Cut 刃长	Overall Length 全长
	D1	D2	L1	L2
GMH33010	1.0	4	3	50
GMH33015	1.5	4	4	50
GMH33020	2.0	4	6	50
GMH33025	2.5	4	8	50
GMH33030	3.0	4	8	50
GMH33901	3.0	6	8	50
GMH33040	4.0	4	11	50
GMH33902	4.0	6	11	50
GMH33050	5.0	6	13	50
GMH33060	6.0	6	16	50
GMH33080	8.0	8	20	60
GMH33100	10.0	10	25	75
GMH33120	12.0	12	32	75
GMH33160	16.0	16	40	100
GMH33200	20.0	20	45	100

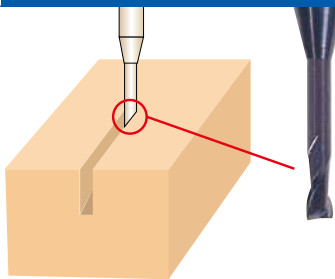
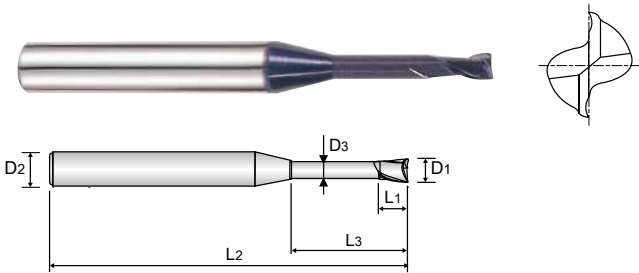
Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
○	◎	◎	◎	○		○	○					

Y-COATED SOLID CARBIDE END MILLS
2 FLUTE for RIB PROCESSING

Y-涂层整体硬质合金铣刀 2刃 颈部加长

GMH34 PLAIN SHANK



P.22

Unit(单位) : mm						
EDP No.	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Length Below Shank 颈长 L3	Overall Length 全长 L2	Neck Diameter 颈部直径 D3
GMH34004	0.4	4	0.6	2	45	0.37
GMH34005	0.5	4	0.7	2	45	0.45
GMH34901	0.5	4	0.7	4	45	0.45
GMH34006	0.6	4	0.9	2	45	0.55
GMH34007	0.7	4	1	2	45	0.65
GMH34008	0.8	4	1.2	4	45	0.75
GMH34902	0.8	4	1.2	6	45	0.75
GMH34010	1.0	4	1.5	4	45	0.95
GMH34903	1.0	4	1.5	6	45	0.95
GMH34904	1.0	4	1.5	8	45	0.95
GMH34905	1.0	4	1.5	10	45	0.95
GMH34906	1.0	4	1.5	12	45	0.95
GMH34907	1.0	4	1.5	16	50	0.95
GMH34012	1.2	4	1.8	4	45	1.15
GMH34908	1.2	4	1.8	6	45	1.15
GMH34015	1.5	4	2.3	6	45	1.45
GMH34909	1.5	4	2.3	8	45	1.45
GMH34910	1.5	4	2.3	10	45	1.45
GMH34911	1.5	4	2.3	12	45	1.45
GMH34912	1.5	4	2.3	16	50	1.45
GMH34913	1.5	4	2.3	20	55	1.45

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.015	h5

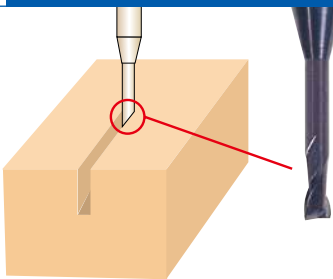
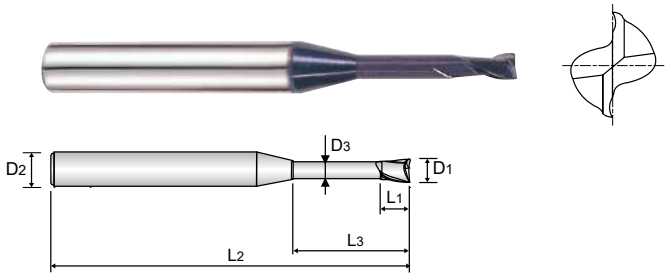
▶ NEXT PAGE 下页

P				H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢	High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRC30~40	HRc40~45 HRc45~55	HRc55~70							
○	◎	◎	◎	○		○					

Y-COATED SOLID CARBIDE END MILLS
2 FLUTE for RIB PROCESSING

Y-涂层整体硬质合金铣刀 2刃 颈部加长

GMH34 PLAIN SHANK



P.22

Unit(单位) : mm						
EDP No.	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Length Below Shank 颈长 L3	Overall Length 全长 L2	Neck Diameter 颈部直径 D3
GMH34020	2.0	4	3	6	45	1.95
GMH34914	2.0	4	3	8	45	1.95
GMH34915	2.0	4	3	10	45	1.95
GMH34916	2.0	4	3	12	45	1.95
GMH34917	2.0	4	3	14	50	1.95
GMH34918	2.0	4	3	16	50	1.95
GMH34919	2.0	4	3	20	55	1.95
GMH34920	2.0	4	3	26	60	1.95
GMH34921	2.0	4	3	30	70	1.95
GMH34030	3.0	6	4.5	12	50	2.85
GMH34922	3.0	6	4.5	16	55	2.85
GMH34923	3.0	6	4.5	26	70	2.85
GMH34040	4.0	6	6	16	60	3.85
GMH34924	4.0	6	6	26	70	3.85

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.015	h5

P				H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢	High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRC30~40	HRc40~45 HRc45~55	HRc55~70							
○	◎	◎	◎	○		○					

Y-COATED SOLID CARBIDE END MILLS
4 FLUTE SHORT LENGTH

Y-涂层整体硬质合金铣刀 4刃 短刃

GMH35 PLAIN SHANK

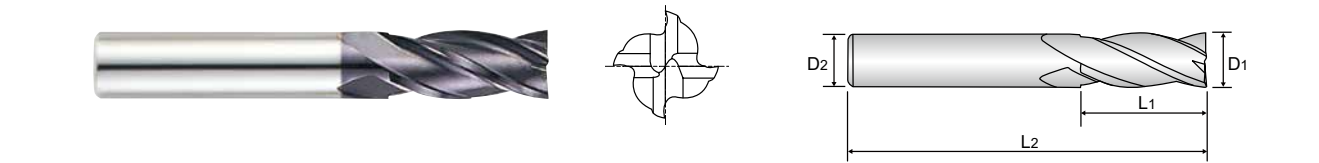
- Designed to machine tool steels, alloy steels, mold steels and other hardened materials

► 4 flute allows for better workpiece finishes

► Increased production
- 用于钢件,合金钢, 模具钢和其他高硬度材料

► 4刃设计实现卓越工件表面粗糙度

► 提高生产率



Unit(单位) : mm				
EDP No.	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Overall Length 全长 L2
GMH35010	1.0	4	3	50
GMH35015	1.5	4	4	50
GMH35020	2.0	4	6	50
GMH35025	2.5	4	8	50
GMH35030	3.0	4	8	50
GMH35901	3.0	6	8	50
GMH35040	4.0	4	11	50
GMH35902	4.0	6	11	50
GMH35050	5.0	6	13	50
GMH35060	6.0	6	16	50
GMH35080	8.0	8	20	60
GMH35100	10.0	10	25	75
GMH35120	12.0	12	32	75
GMH35160	16.0	16	40	100
GMH35200	20.0	20	45	100

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5

Y-COATED SOLID CARBIDE END MILLS
4 FLUTE LONG LENGTH

Y-涂层整体硬质合金铣刀 4刃 加长

GMH36 PLAIN SHANK

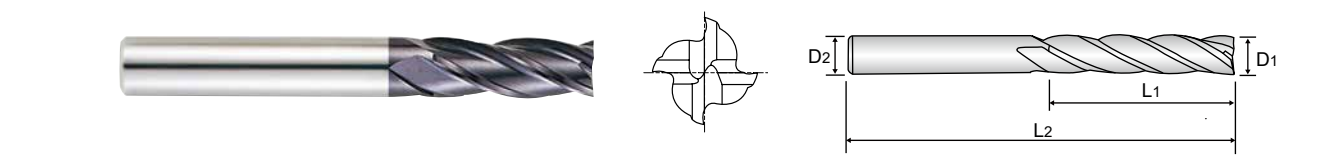
- Designed to machine tool steels, alloy steels, mold steels and other hardened materials

► 4 flute allows for better workpiece finishes

► Increased production
- 用于钢件,合金钢, 模具钢和其他高硬度材料

► 4刃设计实现卓越工件表面粗糙度

► 提高生产率



Unit(单位) : mm				
EDP No.	Mill Diameter 直径 D1	Shank Diameter 柄径 D2	Length of Cut 刃长 L1	Overall Length 全长 L2
GMH36020	2.0	4	10	50
GMH36030	3.0	4	15	60
GMH36901	3.0	6	15	60
GMH36040	4.0	4	20	60
GMH36902	4.0	6	20	60
GMH36050	5.0	6	25	75
GMH36060	6.0	6	30	75
GMH36080	8.0	8	35	100
GMH36100	10.0	10	45	100
GMH36120	12.0	12	45	100
GMH36160	16.0	16	70	150
GMH36200	20.0	20	75	150

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
○	◎	◎	◎	○		○	○					

P					H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢		High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
○	◎	◎	◎	○			○					

Y-COATED SOLID CARBIDE END MILLS

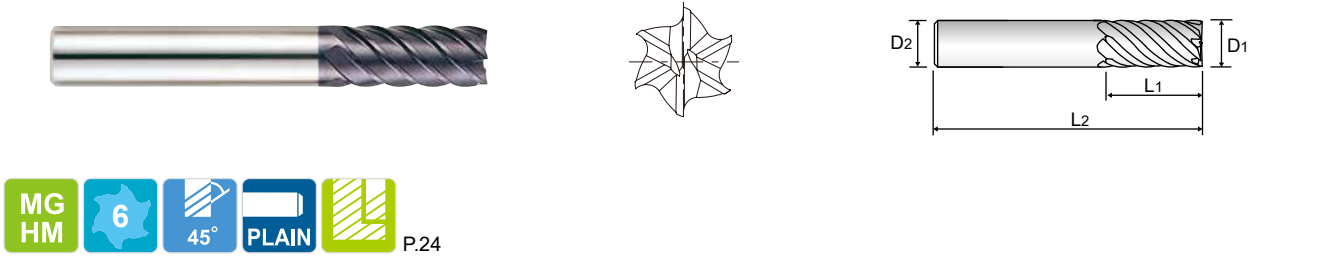
6 FLUTE 45° HELIX SHORT LENGTH

Y-涂层整体硬质合金铣刀 6刃 45°螺旋角 短刃

GMH39 PLAIN SHANK

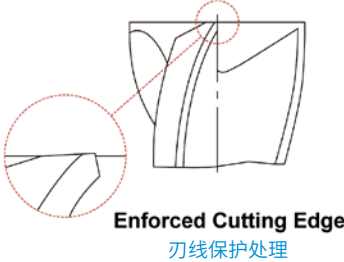
- Designed to machine hardened materials
- High speed cutting and finish milling with high feed rates
- Superior workpiece finishes
- Superior wear resistant
- Suitable for dry and wet milling

- 用于加工高硬度材料
- 高速加工和精铣削
- 卓越工件表面粗糙度
- 卓越耐磨性
- 可用于干切削和湿切削



EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	直径	柄径	刃长	全长
	D1	D2	L1	L2
GMH39060	6.0	6	16	50
GMH39080	8.0	8	19	60
GMH39100	10.0	10	22	75
GMH39120	12.0	12	26	75
GMH39160	16.0	16	32	100

Mill Dia. Tolerance(mm) 直径精度(mm)	Shank Dia. Tolerance 柄径精度
0 ~ -0.03	h5



P				H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢	High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45 HRc45~55	HRc55~70							
○	◎	◎	◎	○		○					

Y-COATED SOLID CARBIDE END MILLS

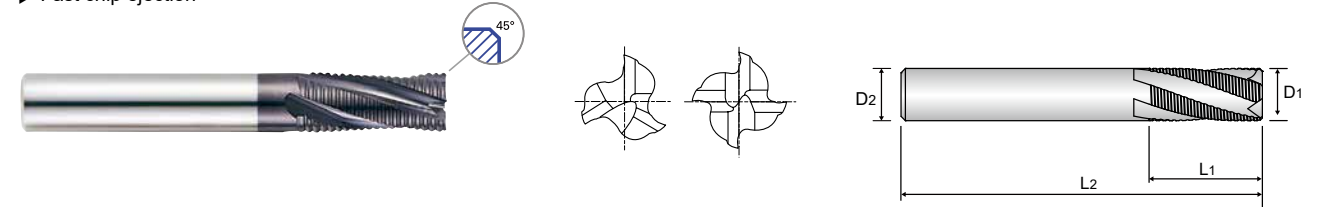
3&4 20° HELIX LONG LENGTH ROUGHING - FINE

Y-涂层整体硬质合金铣刀 3&4刃 20°螺旋角 加长 粗加工用

GM814 PLAIN SHANK

- 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

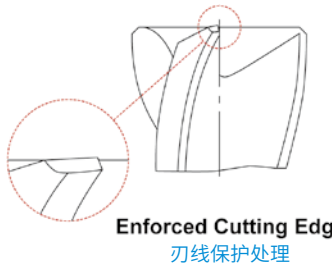
- 用于工具钢，合金钢，模具钢和其他高硬度材料
- 高硬钢上高进给铣削
- 可用于干切削和湿切削
- 快速排屑



EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute 刃数	Chamfer 导向
	直径	柄径	刃长	全长		
	D1	D2	L1	L2		
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	0.6
GM814120	12.0	12	26	83	4	0.6
GM814160	16.0	16	32	92	4	0.6
GM814200	20.0	20	38	104	4	0.6

Tolerances according to DIN 7160 & 7161
精度依照 DIN 7160&7161

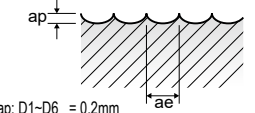
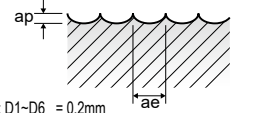
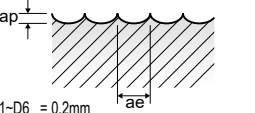
	Tolerance range in μm / 精度范围		
	Nominal-Diameter in mm / 标称直径		
	over 6 to 10 6~10	over 10 to 18 10~18	over 18 to 30 18~30
h10	0 - 58	0 - 70	0 - 84
h5	0 - 6	0 - 8	0 - 9



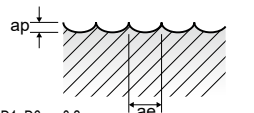
P				H	M	K	N			S	
Carbon Steels 碳钢	Alloy Steels 合金钢	Prehardened Steels 预硬钢	Hardened Steels 硬化钢	High Hardened Steels 高硬钢	Stainless Steels 不锈钢	Cast Iron 铸铁	Copper 铜	Graphite 石墨	Aluminum 铝	Titanium 钛	Inconel 因科镍合金
~HB225	HB225~325	HRc30~40	HRc40~45 HRc45~55	HRc55~70							
○	◎	◎	◎	○	○	○					

GMH31 2 FLUTE SHORT LENGTH BALL NOSE
2刃 短刃 球头

NORMAL SPEED 普通速度

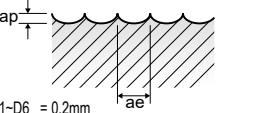
MATERIAL 材料	P												K			
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热金钢				HARDENED STEELS 硬化钢				CAST IRON 铸铁			
HARDNESS 硬度	~HRc30				HRc30~HRc45				HRc45~HRc55							
STRENGTH 强度	~1000N/mm²				1000 ~ 1500N/mm²				1500 ~ 2000N/mm²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
R0.5 × 1.0	17650	280	55	0.008	14250	225	45	0.008	6500	100	20	0.008	17490	280	55	0.008
R0.75 × 1.5	17650	390	85	0.011	13600	300	65	0.011	5960	135	30	0.011	17490	390	80	0.011
R1.0 × 2.0	16130	840	100	0.026	11980	550	75	0.023	5240	170	35	0.016	15980	835	100	0.026
R1.5 × 3.0	14670	760	140	0.026	11200	515	105	0.023	5060	170	50	0.017	14540	755	135	0.026
R2.0 × 4.0	11760	830	150	0.035	9410	595	120	0.032	4700	200	60	0.021	11660	820	145	0.035
R3.0 × 6.0	9510	1140	180	0.060	7730	930	145	0.060	3560	215	65	0.030	9420	1130	180	0.060
R4.0 × 8.0	8020	1445	200	0.090	6460	1030	160	0.080	2770	245	70	0.044	7950	1430	200	0.090
R5.0 × 10.0	7130	1715	225	0.120	5700	1140	180	0.100	2280	250	70	0.055	7070	1700	220	0.120
R6.0 × 12.0	6540	1960	245	0.150	5200	1245	195	0.120	1960	275	75	0.070	6480	1945	245	0.150
R8.0 × 16.0	5340	1925	270	0.180	4230	1185	215	0.140	1510	275	75	0.091	5290	1910	265	0.181
R10.0 × 20.0	4640	1860	290	0.200	3650	1165	230	0.160	1240	280	80	0.113	4600	1845	290	0.201
  																

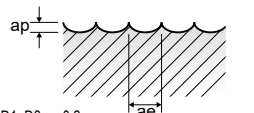
HIGH SPEED 高速度

MATERIAL 材料	P								K			
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				HARDENED STEELS 硬化钢				CAST IRON 铸铁			
HARDNESS 硬度	~HRc45				HRc45~HRc55							
STRENGTH 强度	~1500N/mm²				1500N/mm² ~ 2000N/mm²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
R0.5 × 1.0	28000	1455	90	0.026	28000	895	90	0.016	28000	1455	90	0.026
R0.75 × 1.5	25760	1570	120	0.030	25760	965	120	0.019	25760	1570	120	0.030
R1.0 × 2.0	23520	1660	150	0.035	23520	1055	150	0.022	23520	1660	150	0.035
R1.5 × 3.0	23520	2240	220	0.048	19040	1165	180	0.031	23520	2240	220	0.048
R2.0 × 4.0	23520	3295	295	0.070	15300	1300	190	0.042	23520	3295	295	0.070
R3.0 × 6.0	23520	4480	445	0.095	11760	1400	220	0.060	23520	4480	445	0.095
R4.0 × 8.0	18700	4480	470	0.120	9360	1400	235	0.075	18700	4480	470	0.120
R5.0 × 10.0	15680	4370	495	0.139	7840	1345	245	0.086	15680	4370	495	0.139
R6.0 × 12.0	13660	4370	515	0.160	6830	1300	255	0.095	13660	4370	515	0.160
R8.0 × 16.0	10700	3865	540	0.181	5340	1120	270	0.105	10700	3865	540	0.181
R10.0 × 20.0	8920	3560	560	0.200	4460	1030	280	0.115	8920	3560	560	0.200
												

GMH32 2 FLUTE BALL NOSE for RIB PROCESSING
2刃 颈部加长 球头

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

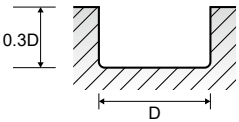
MATERIAL 材料	P										K				
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢					ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热金钢					CAST IRON 铸铁				
HARDNESS 硬度	~HRc30					HRc30~HRc45									
STRENGTH 强度	~1000N/mm²					1000 ~ 1500N/mm²									
DIAMETER 直径	RPM	FEED	ap (mm)	Vc	Fz	RPM	FEED	ap (mm)	Vc	Fz	RPM	FEED	ap (mm)	Vc	Fz
R0.2 × 0.4	32550~42000	185~515	0.019~0.035	41~53	0.003~0.006	23630~29930	90~285	0.019~0.036	30~38	0.002~0.005					
R0.25 × 0.5	32550~42000	185~515	0.023~0.045	49~63	0.003~0.006	23630~29930	90~285	0.023~0.045	35~45	0.002~0.005					
R0.3 × 0.6	32550~42000	235~660	0.027~0.054	58~75	0.004~0.008	23630~29930	115~370	0.027~0.054	42~54	0.002~0.006					
R0.4 × 0.8	32550~42000	235~660	0.036~0.072	78~101	0.004~0.008	23630~29930	115~370	0.036~0.072	57~72	0.002~0.006					
R0.5 × 1.0	30450~38330	265~735	0.045~0.090	91~115	0.004~0.010	21530~27300	130~410	0.045~0.090	64~82	0.003~0.008					
R0.75 × 1.5	19950~25200	265~820	0.070~0.135	90~113	0.007~0.016	14180~18380	130~410	0.070~0.135	64~82	0.005~0.011					
R1.0 × 2.0	16280~19950	265~820	0.090~0.180	97~119	0.008~0.021	11550~14180	130~410	0.090~0.180	69~85	0.006~0.014					
R1.5 × 3.0	11030~13650	265~820	0.135~0.270	99~123	0.012~0.030	7350~9450	130~410	0.135~0.270	66~85	0.009~0.022					
R2.0 × 4.0	8930~11550	265~820	0.180~0.360	107~138	0.015~0.035	6090~8190	130~410	0.180~0.360	73~98	0.011~0.025					
R3.0 × 6.0	5990~7670	265~820	0.270~0.540	107~138	0.022~0.053	4100~5460	130~410	0.270~0.540	74~98	0.016~0.038					
															

MATERIAL 材料	P					K				
	HARDENED STEELS 硬化钢					CAST IRON 铸铁				
HARDNESS 硬度	HRc45~HRc55									
STRENGTH 强度	1500 ~ 2000N/mm²									
DIAMETER 直径	RPM	FEED	ap (mm)	Vc	Fz	RPM	FEED	ap (mm)	Vc	Fz
R0.2 × 0.4	15020~18900	90~185	0.005~0.009	19~24	0.003~0.005	32550~42000	185~515	0.019~0.035	41~53	0.003~0.006
R0.25 × 0.5	15020~18900	90~185	0.005~0.009	22~28	0.003~0.005	32550~42000	185~515	0.023~0.045	49~63	0.003~0.006
R0.3 × 0.6	15020~18900	115~235	0.005~0.011	27~34	0.004~0.006	32550~42000	235~660	0.027~0.054	58~75	0.004~0.008
R0.4 × 0.8	15020~18900	115~235	0.007~0.014	36~45	0.004~0.006	32550~42000	235~660	0.036~0.072	78~101	0.004~0.008
R0.5 × 1.0	13650~17120	130~265	0.009~0.018	41~51	0.005~0.008	30450~38330	265~735	0.045~0.090	91~115	0.004~0.010
R0.75 × 1.5	9140~11240	130~265	0.014~0.028	41~50	0.007~0.012	19950~25200	265~820	0.070~0.135	90~113	0.007~0.016
R1.0 × 2.0	7250~9030	130~265	0.018~0.035	43~54	0.009~0.015	16280~19950	265~820	0.090~0.180	97~119	0.008~0.021
R1.5 × 3.0	4830~5990	130~265	0.028~0.055	43~54	0.014~0.022	11030~13650	265~820	0.135~0.270	99~123	0.012~0.030
R2.0 × 4.0	4100~5150	130~265	0.035~0.070	49~62	0.016~0.026	8930~11550	265~820	0.180~0.360	107~138	0.015~0.035
R3.0 × 6.0	2730~3470	130~265	0.053~0.105	49~62	0.024~0.038	5990~7670	265~820	0.270~0.540	107~138	0.022~0.053
										

GMH37 2 FLUTE LONG LENGTH CORNER RADIUS - SLOTTING
2刃 加长 圆鼻 - 槽铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P												K			
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢				CAST IRON 铸铁			
HARDNESS 硬度	~HRC30				HRC30~HRC45				HRC45~HRC55							
STRENGTH 强度	~1000N/mm²				1000 ~ 1500N/mm²				1500 ~ 2000N/mm²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	7955	160	75	0.010	4775	80	45	0.008	3180	30	30	0.005	7430	165	70	0.011
4.0	5900	185	75	0.016	3750	95	45	0.013	2370	30	30	0.006	5900	185	75	0.016
5.0	5040	230	80	0.023	3190	110	50	0.017	2090	35	35	0.008	5040	230	80	0.023
6.0	4350	275	80	0.032	2770	140	50	0.025	1800	35	35	0.010	4350	275	80	0.032
8.0	3300	295	85	0.045	2090	140	55	0.033	1390	35	35	0.013	3300	295	85	0.045
10.0	2770	295	85	0.053	1800	140	55	0.039	1110	35	35	0.016	2770	295	85	0.053
12.0	2270	230	85	0.051	1530	125	60	0.041	920	35	35	0.019	2270	230	85	0.051

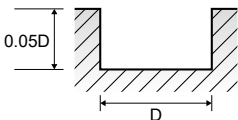
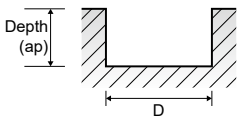


GMH33 2 FLUTE SHORT LENGTH - SLOTTING
2刃 短刃 - 槽铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P															
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢							
HARDNESS 硬度	~HRC30				HRC30~HRC45				HRC45~HRC55							
STRENGTH 强度	~1000N/mm²				1000 ~ 1500N/mm²				1500 ~ 2000N/mm²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
1.0	-	-	-	-	22000	175	70	0.004	16500	85	50	0.003				
1.5	-	-	-	-	13200	165	60	0.006	9900	75	45	0.004				
2.0	10360	215	65	0.010	6780	135	45	0.010	4510	40	30	0.004				
3.0	8010	235	75	0.015	4980	155	45	0.016	3010	45	30	0.007				
4.0	6780	335	85	0.025	4140	200	50	0.024	2630	45	35	0.009				
5.0	5660	360	90	0.032	3380	215	55	0.032	2080	55	35	0.013				
6.0	4980	390	95	0.039	3010	245	55	0.041	1790	60	35	0.017				
8.0	3760	425	95	0.057	2260	225	55	0.050	1510	85	40	0.028				
10.0	2910	370	90	0.064	1790	180	55	0.050	1220	65	40	0.027				
12.0	2460	315	95	0.064	1510	145	55	0.048	1040	60	40	0.029				
16.0	1970	245	100	0.062	1220	125	60	0.051	810	45	40	0.028				
20.0	1510	190	95	0.063	950	90	60	0.047	620	35	40	0.028				

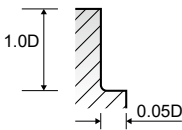
ap : Up to Ø1.5 : 0.15 X D
Ø2 ~ Ø3 : 0.2 X D
Over Ø3 : 0.5 x D
ae : D



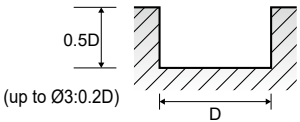
GMH38 4 FLUTE LONG LENGTH CORNER RADIUS - SIDE CUTTING
4刃 加长 圆鼻 - 侧铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P												K			
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢				CAST IRON 铸铁			
HARDNESS 硬度	~HRC30				HRC30~HRC45				HRC45~HRC55							
STRENGTH 强度	~1000N/mm²				1000 ~ 1500N/mm²				1500 ~ 2000N/mm²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	11770	425	110	0.009	7340	265	70	0.009	4430	75	40	0.004	11770	425	110	0.009
4.0	9980	755	125	0.019	6090	460	75	0.019	3880	75	50	0.005	9980	755	125	0.019
5.0	8280	825	130	0.025	5090	510	80	0.025	3180	90	50	0.007	8275	825	130	0.025
6.0	7340	870	140	0.030	4430	540	85	0.030	2640	105	50	0.010	7340	870	140	0.030
8.0	5540	935	140	0.042	3320	500	85	0.038	2220	145	55	0.016	5540	935	140	0.042
10.0	4300	805	135	0.047	2640	395	85	0.037	1790	120	55	0.017	4300	805	135	0.047
12.0	3620	690	135	0.048	2220	330	85	0.037	1530	105	60	0.017	3620	690	135	0.048



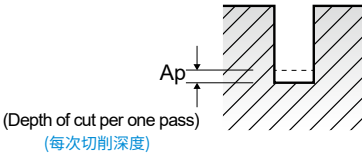
MATERIAL 材料	M				K			
	STAINLESS STEELS 不锈钢				CAST IRON 铸铁			
HARDNESS 硬度								
STRENGTH 强度								
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
1.0	-	-	-	-	-	-	-	-
1.5	-	-	-	-	-	-	-	-
2.0	5660	100	35	0.009	10360	215	65	0.010
3.0	4140	135	40	0.016	8010	235	75	0.015
4.0	3470	170	45	0.024	6780	335	85	0.025
5.0	2830	180	45	0.032	5660	360	90	0.032
6.0	2540	200	50	0.039	4980	390	95	0.039
8.0	1880	200	45	0.053	3760	425	95	0.057
10.0	1510	180	45	0.060	2910	370	90	0.064
12.0	1220	145	45	0.059	2460	315	95	0.064
16.0	950	125	50	0.066	1970	245	100	0.062
20.0	750	90	45	0.060	1510	190	95	0.063



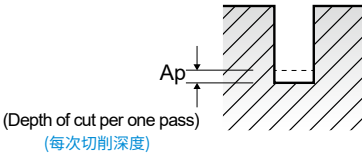
GMH34 2 FLUTE for RIB PROCESSING - SLOTTING
2刃 颈部加长 - 槽铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P									
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢					ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				
HARDNESS 硬度	~HRc30					HRc30~HRc45				
STRENGTH 强度	~1000N/mm²					1000 ~ 1500N/mm²				
DIAMETER 直径	RPM	FEED	ap (mm)	Vc	Fz	RPM	FEED	ap (mm)	Vc	Fz
0.4	32550~42000	210~460	0.007~0.018	39~50	0.003~0.006	23630~29400	90~355	0.007~0.018	28~35	0.002~0.006
0.5	32550~42000	210~460	0.009~0.022	49~63	0.003~0.006	23630~29400	90~355	0.009~0.022	35~44	0.002~0.006
0.6	32550~42000	265~600	0.011~0.026	58~75	0.004~0.007	23630~29400	115~450	0.011~0.026	42~53	0.002~0.008
0.7	32550~42000	265~600	0.012~0.031	68~88	0.004~0.007	23630~29400	115~450	0.012~0.031	49~62	0.002~0.008
0.8	28350~36750	295~660	0.014~0.035	68~88	0.005~0.009	20480~25730	125~505	0.014~0.035	49~62	0.003~0.010
1.0	23630~29400	295~850	0.045~0.090	71~88	0.006~0.014	16490~21000	200~630	0.045~0.090	49~63	0.006~0.015
1.2	19430~23630	295~945	0.055~0.100	70~85	0.008~0.020	13650~17330	200~630	0.055~0.100	49~62	0.007~0.018
1.5	15230~19430	295~945	0.070~0.135	68~87	0.010~0.024	11030~14180	200~630	0.070~0.135	49~64	0.009~0.022
2.0	12600~15230	295~945	0.090~0.180	75~91	0.012~0.031	8720~11030	200~630	0.090~0.180	52~66	0.011~0.029
3.0	8400~10500	295~945	0.135~0.270	75~94	0.018~0.045	5780~7350	200~630	0.135~0.270	52~66	0.017~0.043
4.0	6300~7880	295~945	0.180~0.360	75~94	0.023~0.060	4310~5570	200~630	0.180~0.360	52~67	0.023~0.057



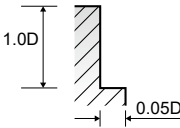
MATERIAL 材料	P					K				
	HARDENED STEELS 硬化钢					CAST IRON 铸铁				
HARDNESS 硬度	HRc45~HRc55									
STRENGTH 强度	1500 ~ 2000N/mm²									
DIAMETER 直径	RPM	FEED	ap (mm)	Vc	Fz	RPM	FEED	ap (mm)	Vc	Fz
0.4	15020~17850	30~95	0.004~0.008	18~21	0.001~0.003	32550~42000	210~460	0.007~0.018	39~50	0.003~0.006
0.5	15020~17850	30~95	0.004~0.009	22~27	0.001~0.003	32550~42000	210~460	0.009~0.022	49~63	0.003~0.006
0.6	15020~17850	40~115	0.005~0.011	27~32	0.001~0.003	32550~42000	265~600	0.011~0.026	58~75	0.004~0.007
0.7	15020~17850	40~115	0.006~0.013	31~37	0.001~0.003	32550~42000	265~600	0.012~0.031	68~88	0.004~0.007
0.8	13130~15540	45~130	0.007~0.015	31~37	0.002~0.004	28350~36750	295~660	0.014~0.035	68~88	0.005~0.009
1.0	10500~13130	70~135	0.009~0.018	31~39	0.003~0.005	23630~29400	295~850	0.045~0.090	71~88	0.006~0.014
1.2	8720~11030	70~135	0.010~0.022	31~40	0.004~0.006	19430~23630	295~945	0.055~0.100	70~85	0.008~0.020
1.5	7040~8610	70~135	0.014~0.028	32~39	0.005~0.008	15230~19430	295~945	0.070~0.135	68~87	0.010~0.024
2.0	5570~6930	70~135	0.018~0.035	33~41	0.006~0.010	12600~15230	295~945	0.090~0.180	75~91	0.012~0.031
3.0	3680~4620	70~135	0.028~0.055	33~41	0.009~0.015	8400~10500	295~945	0.135~0.270	75~94	0.018~0.045
4.0	2730~3470	70~135	0.036~0.072	33~41	0.013~0.020	6300~7880	295~945	0.180~0.360	75~94	0.023~0.060



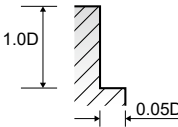
GMH35 4 FLUTE SHORT LENGTH - SIDE CUTTING
4刃 短刃 - 侧铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P											
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢			
HARDNESS 硬度	~HRc30				HRc30~HRc45				HRc45~HRc55			
STRENGTH 强度	~1000N/mm²				1000 ~ 1500N/mm²				1500 ~ 2000N/mm²			
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
1.0	22280	240	70	0.003	15920	160	50	0.003	9550	55	30	0.002
1.5	15950	280	75	0.004	10610	175	50	0.004	6370	55	30	0.002
2.0	12950	315	80	0.006	8470	190	55	0.006	5640	55	35	0.002
2.5	11500	330	90	0.007	7200	205	55	0.007	4500	60	35	0.003
3.0	9990	360	95	0.009	6230	225	60	0.009	3760	65	35	0.004
4.0	8470	640	105	0.019	5170	390	65	0.019	3290	65	40	0.005
5.0	7060	670	110	0.024	4230	405	65	0.024	2600	80	40	0.008
6.0	6230	740	115	0.030	3760	460	70	0.031	2240	90	40	0.010
8.0	4700	795	120	0.042	2820	425	70	0.038	1880	125	45	0.017
10.0	3650	685	115	0.047	2240	335	70	0.037	1520	100	50	0.016
12.0	3070	580	115	0.047	1880	280	70	0.037	1300	90	50	0.017
16.0	2460	460	125	0.047	1520	225	75	0.037	1010	65	50	0.016
20.0	1880	360	120	0.048	1190	180	75	0.038	760	45	50	0.015



MATERIAL 材料	M				K			
	STAINLESS STEELS 不锈钢				CAST IRON 铸铁			
HARDNESS 硬度								
STRENGTH 强度								
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
1.0	12740	130	40	0.003	22290	270	70	0.003
1.5	8485	140	40	0.004	15920	295	75	0.005
2.0	7060	155	45	0.005	12950	315	80	0.006
2.5	6120	170	45	0.007	11470	340	90	0.007
3.0	5170	190	50	0.009	9990	360	95	0.009
4.0	4350	315	55	0.018	8470	640	105	0.019
5.0	3540	335	55	0.024	7060	670	110	0.024
6.0	3180	370	60	0.029	6230	740	115	0.030
8.0	2350	390	60	0.041	4700	795	120	0.042
10.0	1880	335	60	0.045	3650	685	115	0.047
12.0	1520	270	55	0.044	3070	580	115	0.047
16.0	1230	225	60	0.046	2460	460	125	0.047
20.0	940	170	60	0.045	1880	360	120	0.048



GMH36 4 FLUTE LONG LENGTH - SIDE CUTTING
4刃 加长 - 侧铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P												K			
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢				CAST IRON 铸铁			
HARDNESS 硬度	~HRC30				HRC30~HRC45				HRC45~HRC55							
STRENGTH 强度	~1000N/mm ²				1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
2.0	9880	225	60	0.006	5640	90	35	0.004	3530	50	20	0.004	9880	225	60	0.006
3.0	6910	260	65	0.009	4000	110	40	0.007	2460	60	25	0.006	6910	260	65	0.009
4.0	5600	315	70	0.014	3180	130	40	0.010	2000	65	25	0.008	5600	315	70	0.014
5.0	4780	405	75	0.021	2710	155	45	0.014	1770	80	30	0.011	4780	405	75	0.021
6.0	4120	480	80	0.029	2350	200	45	0.021	1530	100	30	0.016	4120	480	80	0.029
8.0	3140	515	80	0.041	1770	200	45	0.028	1180	100	30	0.021	3140	515	80	0.041
10.0	2630	515	85	0.049	1530	200	50	0.033	940	100	30	0.027	2630	515	85	0.049
12.0	2150	405	80	0.047	1300	180	50	0.035	780	80	30	0.026	2150	405	80	0.047
16.0	1810	360	90	0.050	1000	140	50	0.035	630	65	30	0.026	1810	360	90	0.050
20.0	1320	260	85	0.049	760	100	50	0.033	470	50	30	0.027	1320	260	85	0.049
2.5D 0.05D 2.0D 0.02D 2.5D 0.05D																

GM814 3&4 20° HELIX LONG LENGTH ROUGHING - SIDE CUTTING
3&4 20 螺旋角 加长 粗加工用 - 侧铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

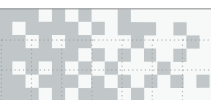
MATERIAL 材料	P															
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢							
HARDNESS 硬度	~HRC30				HRC30~HRC45				HRC45~HRC55							
STRENGTH 强度	~1000N/mm ²				1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
6.0	16380	2435	310	0.050	13020	880	245	0.023	3570	275	65	0.026				
8.0	12180	2435	305	0.067	9660	880	245	0.030	2520	250	65	0.033				
10.0	9660	2435	305	0.063	7980	880	250	0.028	2100	305	65	0.036				
12.0	8400	2520	315	0.075	6300	840	240	0.033	1760	275	65	0.039				
16.0	6300	2520	315	0.100	5040	800	255	0.040	1260	170	65	0.034				
20.0	5040	2270	315	0.113	3780	590	240	0.039	1050	160	65	0.038				
1.5D 0.3D 1.0D 0.05D																

GMH39 6 FLUTE 45° HELIX LONG LENGTH - SIDE CUTTING
6刃 45 螺旋角 加长 - 侧铣削

R P M = 转速 (rev./min.) Vc = 切削速度 (m/min.)
FEED = 进给 (mm/min.) Fz = 每齿进给 (mm/tooth)

MATERIAL 材料	P												K			
	NON-ALLOYED STEELS 非合金钢 ALLOY STEELS 合金钢				ALLOY STEELS 合金钢 HEAT RESISTANT STEELS 耐热钢				HARDENED STEELS 硬化钢				CAST IRON 铸铁			
HARDNESS 硬度	~HRC30				HRC30~HRC45				HRC45~HRC55							
STRENGTH 强度	~1000N/mm ²				1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²							
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
6.0	2270	480	45	0.035	1700	355	30	0.035	1420	255	25	0.030	2270	480	45	0.035
8.0	1700	460	45	0.045	1280	335	30	0.044	1070	245	25	0.038	1700	460	45	0.045
10.0	1360	450	45	0.055	1020	305	30	0.050	860	235	25	0.046	1360	450	45	0.055
12.0	1130	410	45	0.060	860	275	30	0.053	700	215	25	0.051	1130	410	45	0.060
16.0	860	335	45	0.065	640	235	30	0.061	540	175	25	0.054	860	335	45	0.065
1.5D 0.01D 1.5D 0.05D 1.5D 0.01D																

MATERIAL 材料	M				K			
	STAINLESS STEELS 不锈钢				CAST IRON 铸铁			
HARDNESS 硬度								
STRENGTH 强度								
DIAMETER 直径	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
6.0	8820	600	165	0.023	16380	2435	310	0.050
8.0	6620	600	165	0.030	12180	2435	305	0.067
10.0	5360	600	170	0.028	9660	2435	305	0.063
12.0	4410	600	165	0.034	8400	2520	315	0.075
16.0	3470	535	175	0.039	6300	2520	315	0.100
20.0	2520	380	160	0.038	5040	2270	315	0.113
1.5D 0.3D								



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