



奥凯沃硬质合金工具有限公司  
AoKai Wo Carbide Tool Co.Ltd

硬质合金立铣刀  
Carbide end milling cutter



品质提升永无止境  
Quality improvement, never ending

## 铝合金专用铣刀 Aluminum



◆ 螺旋角採用45°設計 Helix angle 45°

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
GMA2060	6	18	6	50
GMA2080	8	24	8	60
GMA2100	10	30	10	75

## GMA 3000 铝合金专用3刃铣刀

For Aluminum Alloy 3 Flutes End Mill

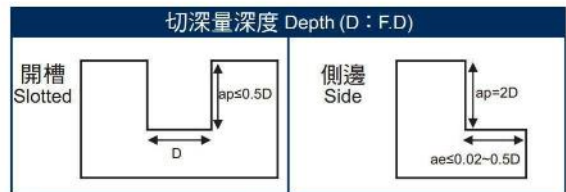


◆ 螺旋角採用45°設計 Helix angle 45°

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
GMA3010	1	3	4	50
GMA3015	1.5	4.5	4	50
GMA3020	2	6	4	50
GMA3025	2.5	7.5	4	50
GMA3030	3	9	4	50
GMA3030H	3	9	4	100
GMA3040	4	12	4	50
GMA3040H	4	12	4	100
GMA3040D6	4	12	6	50
GMA3050	5	15	6	50
GMA3050H	5	15	6	100
GMA3060	6	18	6	50
GMA3060H	6	18	6	100
GMA3080	8	24	8	60
GMA3080H	8	24	8	100
GMA3080M	8	24	8	150
GMA3100	10	30	10	75
GMA3100M	10	30	10	150
GMA3120	12	36	12	75
GMA3120H	12	36	12	100
GMA3120M	12	36	12	150
GMA3160	16	48	16	100
GMA3200	20	50	20	100

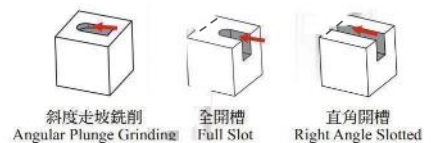
## GMA 2000 铝合金专用2刃铣刀

For Aluminum Alloy 2 Flutes End Mill



切削參數 The Cutting Data For GMA 2000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)	
		開槽 Slotted	側邊 Side
6	10500	900	1400
8	8000	1000	1600
10	6400	1100	1700



適用材質 鋁  
Material: Aluminum

切削參數 The Cutting Data For GMA 3000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)	
		開槽 Slotted	側邊 Side
4	15500	800	1200
6	10500	900	1400
8	8000	1000	1600
10	6400	1100	1700
12	5400	950	1500
16	3900	950	1500
20	3200	900	1300

# 铝合金专用铣刀 Aluminum

## HMA 3000 铝合金专用3刃铣刀

For Aluminum Alloy 3 Flutes End Mill

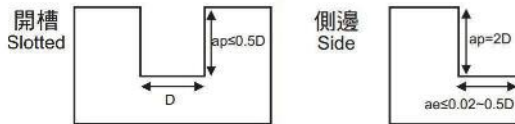


◆ 螺旋角採用55°設計 Helix angle 55°

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
HMA3010	1	3	4	50
HMA3015	1.5	4.5	4	50
HMA3020	2	6	4	50
HMA3025	2.5	7.5	4	50
HMA3030	3	9	4	50
HMA3040	4	12	4	50
HMA3050	5	15	6	50
HMA3060	6	18	6	50
HMA3070	7	21	8	60
HMA3080	8	24	8	60
HMA3090	9	27	10	75
HMA3100	10	30	10	75
HMA3110	11	33	12	75
HMA3120	12	36	12	75
HMA3160	16	48	16	100
HMA3200	20	60	20	100



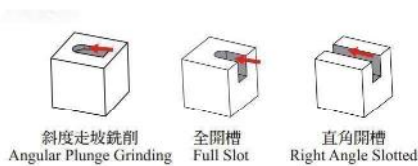
切深量深度 Depth ( R 半径Radius )



切削參數 The Cutting Data For HMA 3000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	15500	800	1200
6	10500	900	1400
8	8000	1000	1600
10	6400	1100	1700
12	5400	950	1500
16	3900	950	1500
20	3200	900	1300



適用材質 鋁  
Material : Aluminum

# 铝合金专用铣刀 Aluminum

## MU2-GMA 3000

### 铝合金专用3刃圆沟2离隙立铣刀

For Aluminum Alloy 3 Flutes Rounded Land Double Edge End Mill

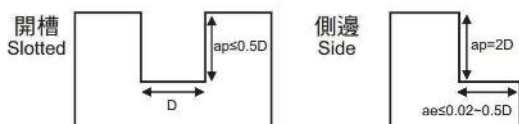


- ◆ 刀口採雙離隙研磨，提昇切削能力，減少因阻抗而產生的震動  
The edge with double edge grinding and enhance the cutting efficiency also improving the processing vibration.
- ◆ 刀口拋光處理，排屑流暢，有更良好的加工面粗糙度  
The edge with polishing treatment, Chip remove smoothly, update the surface processing effect.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MU2-GMA3040	4	12	4	50
MU2-GMA3040D6	4	12	6	50
MU2-GMA3050	5	15	6	50
MU2-GMA3060	6	18	6	50
MU2-GMA3080	8	24	8	60
MU2-GMA3080E1	8	24	8	75
MU2-GMA3080H	8	24	8	100
MU2-GMA3080M	8	24	8	150
MU2-GMA3100	10	30	10	75
MU2-GMA3100M	10	30	10	150
MU2-GMA3120	12	36	12	75
MU2-GMA3120H	12	36	12	100
MU2-GMA3120M	12	36	12	150
MU2-GMA3160	16	48	16	100
MU2-GMA3200	20	60	20	100



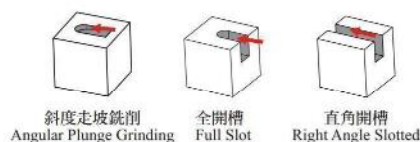
切深量深度 Depth (R 半径Radius)



切削參數 The Cutting Data For MU2-GMA 3000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	15500	800	1200
6	10500	900	1400
8	8000	1000	1600
10	6400	1100	1700
12	5400	950	1500
16	3900	950	1500
20	3200	900	1300



適用材質 铝  
Material: Aluminum

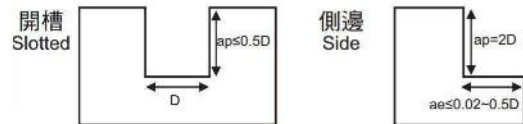
# MU3-JMA 3000

3 Flute round land and 3 Relief aluminum type



- ◆ 刃口採 3 離隙研磨，提升切削性能，有更良好的加工表面  
The cutting edge is triple embossed for improved cutting performance while also providing a superior machined surface.
- ◆ 圓溝全拋光處理，有效抑制加工產生熱能  
The fully polished round table surface effectively reduces the heat generated by the machining, smoothly removes the chips.
- ◆ 使斷屑穩定、排屑順暢，延長加工時間壽命  
And the stable chip breaking increases the service life of the tool.

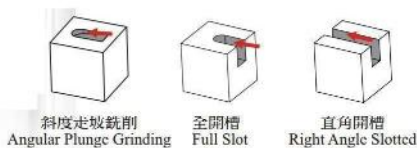
產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MU3-JMA3040	4	12	4	50
MU3-JMA3050	5	15	6	50
MU3-JMA3060	6	18	6	50
MU3-JMA3060E1	6	18	6	75
MU3-JMA3080	8	24	8	60
MU3-JMA3080E1	8	24	8	75
MU3-JMA3100	10	30	10	75
MU3-JMA3100H	10	30	10	100
MU3-JMA3120	12	36	12	75
MU3-JMA3160	16	48	16	100
MU3-JMA3200	20	60	20	100



### 切削參數 The Cutting Data For MU3-JMA 3000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	15500	800	1200
6	10500	900	1400
8	8000	1000	1600
10	6400	1100	1700
12	5400	950	1500
16	3900	950	1500
20	3200	900	1300



適用材質 铝  
Material : Aluminum

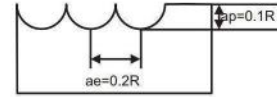
# S-EMB 2000 微小径硬质合金2刃球头立铣刀

## Micor Diameter Carbide 2 Flutes Ball Nose End Mill



切深量深度 Depth ( R 半径Radius )

- ◆ 可加工小型精密模具  
It can process small precision molds.



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
S-EMB2003	0.3	0.15	0.6	4	50
S-EMB2004	0.4	0.20	0.8	4	50
S-EMB2005	0.5	0.25	1	4	50
S-EMB2006	0.6	0.30	1.2	4	50
S-EMB2007	0.7	0.35	1.4	4	50
S-EMB2008	0.8	0.40	1.6	4	50
S-EMB2009	0.9	0.45	1.8	4	50

### 切削參數 The Cutting Data For S-EMB 2000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
4	6400	235

適用材質 鋼、不銹鋼、鑄鐵  
Material : Steel 、 Stainless steel 、 Iro cast



# EMB 2000L2 長頸型2刃硬质合金球头立铣刀

## Long Neck Short Flute 2 Flutes Ball Nose End Mill

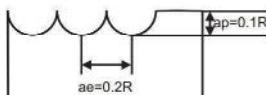


- ◆ 螺旋角採用35°設計  
Helix angle 35°
- ◆ 適用於高段差模具或曲面仿型加工  
Suitable for high-step molds or workpiece surface profiling
- ◆ 尺寸穩定、精度高  
with stable dimensions and high precision.



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	有效長 L1 Effective Length	柄徑 D Shank Dia	全長 L O.A.L
EMB2060L220	6	3	6	20	6	50
EMB2060L235HD8	6	3	6	35	8	100
EMB2060L240MD8	6	3	6	40	8	150

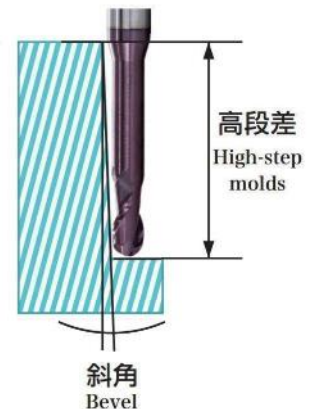
切深量深度 Depth ( R 半径Radius )



### 切削參數 The Cutting Data For EMB 2000L2 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
6	4300	245
8	3200	275

適用材質 鋼、不銹鋼、鑄鐵  
Material : Steel 、 Stainless steel 、 Iro cast



# 球头立铣刀 Ball Nose

## EMB 2000 2刃硬质合金球头立铣刀

2 Flutes Carbide Ball nose END MILL



- ◆ 採用全新進口棒材，加工工件硬度HRC55度以下  
Using the latest import carbide rod, it can process on hardness up to 55HRC.
- ◆ 採用國際公差標準h5，公差範圍控制在  $\mu$  級精度  
International tolerance standard h5, tolerance range control at  $\mu$  level accuracy.
- ◆ 採用圓形刃帶，大幅提高了耐震性和耐崩損性  
Using round flute improve the shock resistance and resistance to collapse.
- ◆ 通過減少切削阻力，實現了高速高進給加工  
By reducing cutting resistance to achieve high speed and feeding processing.



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMB2010	1	0.5	2	4	50
EMB2015	1.5	0.75	3	4	50
EMB2015D6	1.5	0.75	3	6	50
EMB2020	2	1	4	4	50
EMB2020D6	2	1	4	6	50
EMB2025	2.5	1.25	5	4	50
EMB2025D6	2.5	1.25	5	6	50
EMB2030	3	1.5	6	4	50
EMB2030D6	3	1.5	6	6	50
EMB2032	3.2	1.6	6.4	4	50
EMB2035	3.5	1.75	7	4	50
EMB2035D6	3.5	1.75	7	6	50
EMB2035E1	3.5	1.75	7	4	75
EMB2035E1D6	3.5	1.75	7	6	75
EMB2040	4	2	8	4	50
EMB2040D6	4	2	8	6	50
EMB2040E1	4	2	8	4	75
EMB2040E1D6	4	2	8	6	75
EMB2040H	4	2	8	4	100
EMB2040HD6	4	2	8	6	100
EMB2042	4.2	2.1	8.4	6	50
EMB2049	4.9	2.45	9.8	6	50
EMB2050	5	2.5	10	6	50
EMB2050E1	5	2.5	10	6	75
EMB2050H	5	2.5	10	6	100
EMB2060	6	3	12	6	50



# 球头立铣刀 Ball Nose

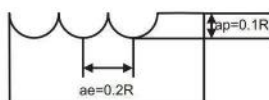
## EMB 2000 2刃硬质合金球头立铣刀 2 Flutes Carbide Ball Nose End Mill



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMB2060E1	6	3	12	6	75
EMB2060H	6	3	12	6	100
EMB2060M	6	3	12	6	150
EMB2065	6.5	3.25	13	8	60
EMB2069	6.9	3.45	13.8	8	60
EMB2080	8	4	16	8	60
EMB2080E1	8	4	16	8	75
EMB2080H	8	4	16	8	100
EMB2080M	8	4	16	8	150
EMB2080R	8	4	16	8	200
EMB2100	10	5	20	10	75
EMB2100H	10	5	20	10	100
EMB2100M	10	5	20	10	150
EMB2100R	10	5	20	10	200
EMB2120	12	6	24	12	75
EMB2120H	12	6	24	12	100
EMB2120M	12	6	24	12	150
EMB2120R	12	6	24	12	200
EMB2160	16	8	32	16	100
EMB2160M	16	8	32	16	150
EMB2160R	16	8	32	16	200
EMB2200	20	10	40	20	100
EMB2200M	20	10	40	20	150
EMB2200R	20	10	40	20	200



切深量深度 Depth (R 半径Radius)



仿形銑削  
Profile Milling



曲面銑削  
Surface Milling



R 溝槽  
R Slot

### 切削參數 The Cutting Data For EMB 2000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
4	6400	235
6	4300	245
8	3200	275
10	2600	275
12	2200	255
16	1600	230
20	1300	205

適用材質 鋼、不銹鋼、鑄鐵

Material : Steel 、 Stainless steel 、 Iro cast

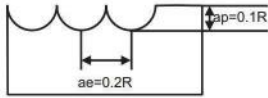


# 球头立铣刀 Ball Nose

## EMB 4000 4刃硬质合金球头立铣刀 4 Flutes Carbide Ball Nose End Mill



切深量深度 Depth (R 半径Radius)



### 切削参数 The Cutting Data For EMB 4000 Series

直径 (mm)	转速 (min)	进给速度 Vf (mm/min)
4	6400	235
6	4300	245
8	3200	275
10	2600	275
12	2200	255
16	1600	230
20	1300	205



- ◆ 採用全新進口棒材，加工工件硬度HRC55度以下  
Using the latest import carbide rod, it can process on hardness up to 55HRC.
- ◆ 採用國際公差標準h5，公差範圍控制在  $\mu$  級精度  
International tolerance standard h5, tolerance range control at  $\mu$  level accuracy.
- ◆ 採用圓形刃帶，大幅提高了耐震性和耐崩損性  
Using round flute improve the shock resistance and resistance to collapse.
- ◆ 通過減少切削阻力，實現了高速高進給加工  
By reducing cutting resistance to achieve high speed and feeding processing.

產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMB4010	1	0.5	2	4	50
EMB4015	1.5	0.75	3	4	50
EMB4020	2	1	4	4	50
EMB4030	3	1.5	6	4	50
EMB4035	3.5	1.75	7	4	50
EMB4040	4	2	8	4	50
EMB4050	5	2.5	10	6	50
EMB4060	6	3	12	6	50
EMB4060E1	6	3	12	6	75
EMB4060H	6	3	12	6	100
EMB4080	8	4	16	8	60
EMB4080E1	8	4	16	8	75
EMB4080H	8	4	16	8	100
EMB4100	10	5	20	10	75
EMB4100H	10	5	20	10	100
EMB4100M	10	5	20	10	150
EMB4120	12	6	24	12	75
EMB4120H	12	6	24	12	100
EMB4120M	12	6	24	12	150
EMB4160	16	8	32	16	100
EMB4160M	16	8	32	16	150
EMB4200	20	10	40	20	100



仿形銑削  
Profile Milling



曲面銑削  
Surface Milling



R 溝槽  
R Slot

適用材質 鋼、不銹鋼、鑄鐵

Material : Steel、Stainless steel、Iro cast

# 倒角刀 Chamfer

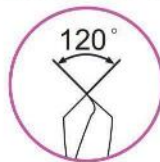
## DR-DMC 2000 2刃定位钻 2 Flutes Positioning Drill



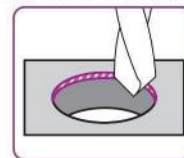
- ◆ 螺旋角採用30°設計  
Helix angle 30°
- ◆ NC銑床專用定位鑽、倒角刀具  
For NC milling machine position drill countersink.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
DR-DMC2030	3	8	3	50
DR-DMC2040	4	12	4	50
DR-DMC2050	5	20	5	50
DR-DMC2060	6	20	6	60
DR-DMC2080	8	25	8	60
DR-DMC2100	10	25	10	75
DR-DMC2120	12	30	12	75
DR-DMC2160	16	35	16	100
DR-DMC2200	20	40	20	100

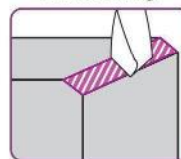
DR系列夾角120°  
DR Series 120° angle



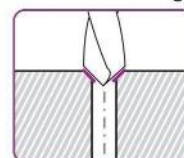
圓孔倒角加工  
Large hole chamfering



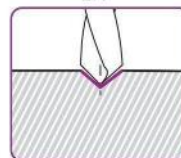
倒角加工  
Chamfering



孔倒角加工  
Hole Chamfering



定心加工  
Positioning processing



## DC-DMC 2000 2刃定位鑽

2 Flutes Positioning Drill



- ◆ 螺旋角採用30°設計  
Helix angle 30°
- ◆ NC銑床專用定位鑽、倒角刀具  
For NC milling machine position drill countersink.

DC系列夾角90°  
DC Series 90° angle



產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
DC-DMC2030	3	8	3	50
DC-DMC2040	4	12	4	50
DC-DMC2040E1	4	12	4	75
DC-DMC2050	5	20	5	50
DC-DMC2060	6	20	6	60
DC-DMC2080	8	25	8	60
DC-DMC2100	10	25	10	75
DC-DMC2120	12	30	12	75
DC-DMC2160	16	35	16	100
DC-DMC2200	20	40	20	100

適用材質 鋼、不銹鋼、鑄鐵  
Material: Steel、Stainless steel、Iro cast



倒角加工  
Chamfer  
Processing



定位加工  
Position  
Processing



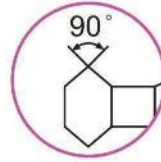
圓孔倒角  
Chamfer Of  
Rounding Hole

切削參數 The Cutting Data For DR-DMC 2000 Series  
DC-DMC 2000

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
3	7400	300
4	5500	220
5	4400	180
6	3700	150
8	2800	120
10	2300	90
12	1900	80
16	1400	60
20	1100	45

# 倒角刀 Chamfer

## CC-AMC V型鳩尾槽銑刀 V-Type Chamfer Cutter



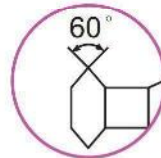
CCR系列夾角90°  
CC Series 90° angle

- ◆ 特殊倒角加工刀具，雙刃鳩尾設計  
Special chamfering tool, double-edged and tailed design.
- ◆ 可滿足各種角度的倒角需求，有效減少加工時間及刀架成本  
It can meet various angle chamfering requirements, effectively reducing machining time and tools costs.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	頸長 L2 Length Of Neck	頸徑 Nd Neck Dia	柄徑 D Shank Dia	全長 L O.A.L	刃數 INO
CC-AMC4060L1028	6	2.8	7	2.8	6	60	4
CC-AMC6080L1038	8	3.8	9	3.8	8	60	6
CC-AMC6100L1048	10	4.8	11	4.8	10	75	6
CC-AMC6120L1058	12	5.8	13	5.8	12	75	6



## CR-AMC V型鳩尾槽銑刀 V-Type Chamfer Cutter



CR系列夾角60°  
CR Series 60° angle

- ◆ 特殊倒角加工刀具，雙刃鳩尾設計  
Special chamfering tool, double-edged and tailed design.
- ◆ 可滿足各種角度的倒角需求，有效減少加工時間及刀架成本  
It can meet various angle chamfering requirements, effectively reducing machining time and tools costs.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	頸長 L2 Length Of Neck	頸徑 Nd Neck Dia	柄徑 D Shank Dia	全長 L O.A.L	刃數 INO
CR-AMC4060L1018	6	1.8	6	2.7	6	60	4
CR-AMC6080L1024	8	2.4	8	3.6	8	60	6
CR-AMC6100L1031	10	3.1	10	4.5	10	75	6
CR-AMC6120L1037	12	3.7	12	5.4	12	75	6



倒角加工  
Chamfer  
Processing



定位加工  
Position  
Processing



圓孔倒角  
Chamfer Of  
Rounding Hole



側面倒角  
Side  
Chamfering



背面倒角  
Back  
Chamfering

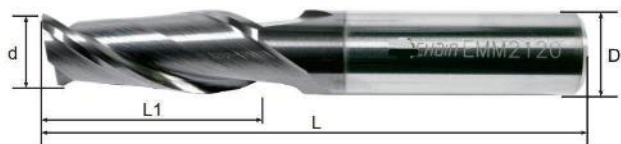


側面V槽  
Side V Groove  
Processing

適用材質 鋼、不銹鋼、鑄鐵  
Material: Steel, Stainless steel, Iron cast

# 平刀 Square

## EMM 2000 2刃硬质合金立铣刀 2 Flutes Carbide End Mill

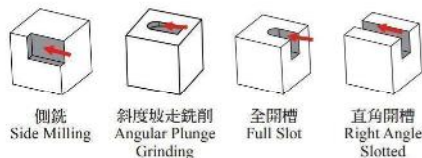


◆ 可側銑、可插槽  
Can be side milling and slot

The newest carbide end mills, unique blade structure design.

◆ 降低加工震動，提升刀具使用壽命，加強排屑效率  
Reduce the vibration generated during processing, Improve tool life, enhance the effect of remove chip

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM2010	1	2.5	4	50
EMM2011L1033	1.1	3.3	4	50
EMM2011L1033	1.1	3.3	4	50
EMM2012L1036	1.2	3.6	4	50
EMM2013L1039	1.3	3.9	4	50
EMM2014L1042	1.4	4.2	4	50
EMM2015	1.5	3.75	4	50
EMM2015L1045	1.5	4.5	4	50
EMM2016L1048	1.6	4.8	4	50
EMM2017L1051	1.7	5.1	4	50
EMM2018L1054	1.8	5.4	4	50
EMM2019L1057	1.9	5.7	4	50
EMM2020	2	5	4	50
EMM2020D6	2	5	6	50
EMM2020L106	2	6	4	50
EMM2021L1063	2.1	6.3	4	50
EMM2022L1066	2.2	6.6	4	50
EMM2023L1069	2.3	6.9	4	50
EMM2024L1072	2.4	7.2	4	50
EMM2025	2.5	6.25	4	50
EMM2025D6	2.5	12.5	6	50
EMM2030	3	7.5	4	50
EMM2030D6	3	7.5	6	50
EMM2035	3.5	8.75	4	50
EMM2035D6	3.5	8.75	6	50
EMM2036	3.6	9	4	50
EMM2038	3.8	9.5	4	50
EMM2040	4	10	4	50
EMM2040D6	4	10	6	50
EMM2040E1	4	10	4	75
EMM2045	4.5	11.25	6	50
EMM2047	4.7	11.75	6	50
EMM2050	5	12.5	6	50



适用材质 钢、不锈钢、铸铁  
Material : Steel、Stainless steel、Iro cast

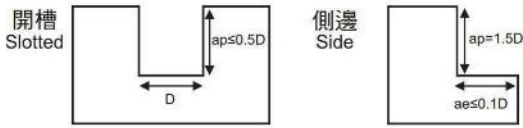


產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM2050E1	5	12.5	6	75
EMM2050H	5	12.5	6	100
EMM2055	5.5	13.75	6	50
EMM2057	5.7	14.25	6	50
EMM2060	6	15	6	50
EMM2060E1	6	15	6	75
EMM2060H	6	15	6	100
EMM2064	6.4	16	8	60
EMM2068	6.8	17	8	60
EMM2070	7	17.5	8	60
EMM2071	7.1	17.75	8	60
EMM2073	7.3	18.25	8	60

# 平刀 Square

## EMM 2000 2刃硬质合金立铣刀 2 Flutes Carbide End Mill

切深量深度 Depth (D F.D)



切削參數 The Cutting Data For EMM 2000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	4800	135	475
6	3100	120	325
8	2300	120	375
10	1900	120	375
12	1600	120	275
16	1200	135	200
20	950	135	165

適用材質：鋼、不鏽鋼、鑄鐵

Material : Steel 、 Stainless steel 、 Iro cast



產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM2075	7.5	18.75	8	60
EMM2080	8	20	8	60
EMM2080E1	8	20	8	75
EMM2080H	8	20	8	100
EMM2080M	8	20	8	150
EMM2080T030	8	20	8	60
EMM2090	9	22.5	10	75
EMM2100	10	25	10	75
EMM2100H	10	25	10	100
EMM2100L130	10	13	10	75
EMM2100M	10	25	10	150
EMM2120	12	30	12	75
EMM2120H	12	30	12	100
EMM2120M	12	30	12	150
EMM2140	14	35	16	100
EMM2160	16	48	16	100
EMM2160M	16	48	16	150
EMM2160R	16	48	16	200
EMM2200	20	50	20	100
EMM2200M	20	50	20	150
EMM2200R	20	50	20	200

## EMM 3000 3刃硬质合金立铣刀 3 Flutes Carbide End Mill

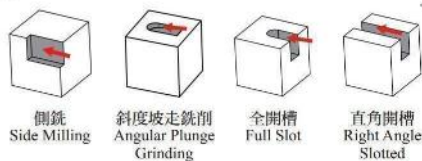


產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM3050	5	12.5	6	50
EMM3055L1165	5.5	16.5	6	50
EMM3060	6	15	6	50
EMM3080	8	20	8	60
EMM3100	10	25	10	75

切削參數 The Cutting Data For EMM 3000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
5	3800	230	650
5.5	3500	230	650
6	3100	240	650
8	2300	240	750
10	1900	240	750

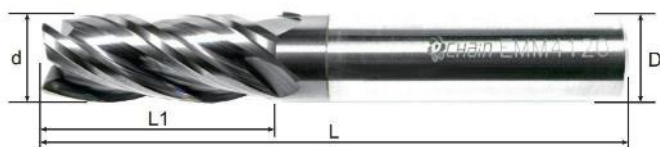


适用材质 鋼、不銹鋼、鑄鐵

Material : Steel 、 Stainless steel 、 Iro cast

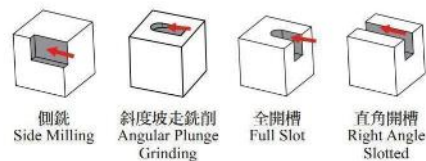
# 平刀 Square

## EMM 4000 4刃硬质合金立铣刀 4 Flutes Carbide End Mill



- ◆ 全新鎢鋼刀，獨特刀體結構設計  
The newest carbide end mills, unique blade structure design.
- ◆ 降低加工震動，提升刀具使用壽命，加強排屑效率  
Reduce the vibration generated during processing, Improve tool life, enhance the effect of remove chip
- ◆ 可側銑、可插槽  
Can be side milling and slot

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM4010	1	2.5	4	50
EMM4010D6	1	2.5	6	50
EMM4015	1.5	3.75	4	50
EMM4015D6	1.5	3.75	6	50
EMM4020	2	5	4	50
EMM4020D6	2	5	6	50
EMM4025	2.5	6.25	4	50
EMM4030	3	7.5	4	50
EMM4030E1	3	7.5	4	75
EMM4030D6	3	7.5	6	50
EMM4030L109D6	3	9	6	50
EMM4035	3.5	8.75	4	50
EMM4035D6	3.5	8.75	6	50
EMM4040	4	10	4	50
EMM4040D6	4	10	6	50
EMM4040E1	4	10	4	75
EMM4040H	4	10	4	100
EMM4045	4.5	11.25	6	50
EMM4050	5	12.5	6	50
EMM4050E1	5	12.5	6	75
EMM4050H	5	12.5	6	100
EMM4055	5.5	13.75	6	50
EMM4060	6	15	6	50
EMM4060E1	6	15	6	75
EMM4060H	6	15	6	100
EMM4070	7	17.5	8	60
EMM4080	8	20	8	60
EMM4080E1	8	20	8	75
EMM4080H	8	20	8	100
EMM4080M	8	20	8	150
EMM4100	10	25	10	75

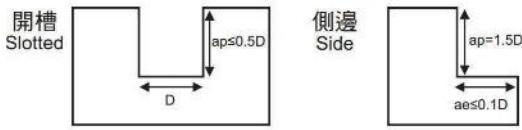


适用材质 钢、不锈钢、铸铁  
Material : Steel、Stainless steel、Iro cast

# 平刀 Square

## EMM 4000 4刃硬质合金立铣刀 4 Flutes Carbide End Mill

切深量深度 Depth ( R 半径Radius )



切削參數 The Cutting Data For EMM 4000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	4800	270	950
6	3100	240	650
8	2300	240	750
10	1900	240	750
12	1600	240	550
16	1200	270	400
20	950	270	320

適用材質 鋼、不銹鋼、鑄鐵  
Material : Steel 、 Stainless steel 、 Iro cast

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM4100H	10	25	10	100
EMM4100L130	10	30	10	75
EMM4100L140H	10	40	10	100
EMM4100M	10	25	10	150
EMM4120	12	30	12	75
EMM4120H	12	30	12	100
EMM4120L136	12	36	12	75
EMM4120M	12	30	12	150
EMM4130L139	13	39	16	100
EMM4140	14	35	16	100
EMM4140L142	14	42	16	100
EMM4160	16	48	16	100
EMM4160M	16	48	16	150
EMM4160R	16	48	16	200
EMM4200	20	50	20	100
EMM4200M	20	50	20	150
EMM4200R	20	50	20	200



## EMM 2000T00 2刃斜度硬质合金立铣刀 2 Flutes Tapered Carbided End Mill



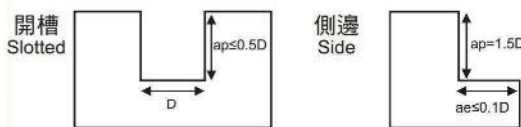
產品型號 Model No	刃斜角 α° Taper Angle	直徑 d Diameter	粗端徑 d1 Processing diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
EMM 2025T030	3°	2.5	3.34	8	4	50
EMM 2040T030	3°	4.0	5.57	15	6	50
EMM 2060T030	3°	6.0	7.89	18	8	60
EMM 2080T030	3°	8.0	10.62	25	12	75
EMM 2100T030	3°	10.0	13.67	35	16	100

切削參數 The Cutting Data For EMM 2000T00 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	4800	135	475
6	3100	120	325
8	2300	120	375
10	1900	120	375
12	1600	120	275
16	1200	120	275

切深量深度 Depth ( R 半径Radius )



適用材質 鋼、不銹鋼、鑄鐵  
Material : Steel 、 Stainless steel 、 Iro cast

# 平刀 Square

## GMM 4000 4刃硬质合金立铣刀

4 Flutes Carbide End Mill



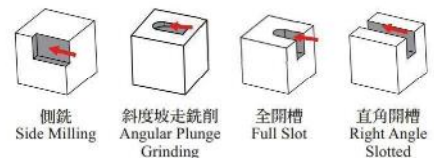
- ◆ 降低加工震動，提升刀具使用壽命，加強排屑效率

Reduce the vibration generated during processing, Improve tool life, enhance the effect of remove chip

- ◆ 可側銑、可插槽

Can be side milling and slot

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
GMM4010	1	2.5	4	50
GMM4010L103	1	3	4	50
GMM4015	1.5	3.75	4	50
GMM4015L104	1.5	4	4	50
GMM4020	2	5	4	50
GMM4020L106	2	6	4	50
GMM4025	2.5	6.25	4	50
GMM4025L107	2.5	7	4	50
GMM4025L1075	2.5	7.5	4	50
GMM4030	3	7.5	4	50
GMM4030L112D6	3	12	6	50
GMM4030L18	3	8	4	50
GMM4035	3.5	8.75	4	50
GMM4040	4	10	4	50
GMM4040L112	4	12	4	50
GMM4045	4.5	11.25	6	50
GMM4050	5	12.5	6	50
GMM4050L115	5	15	6	50
GMM4055	5.5	13.75	6	50
GMM4060	6	15	6	50
GMM4065	6.5	16.25	8	60
GMM4070	7	17.5	8	60
GMM4075	7.5	18.75	8	60
GMM4080	8	20	8	60
GMM4085	8.5	21.25	10	75
GMM4090	9	22.5	10	75
GMM4095	9.5	23.75	10	75
GMM4100	10	25	10	75
GMM4105	10.5	26.25	12	75
GMM4110	11	27.5	12	75





# 平刀 Square

## GMM 4000 4刃硬质合金立铣刀

4 Flutes Carbide End Mill

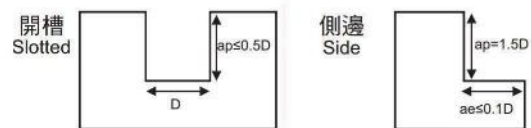


- ◆ 全新钨钢刀，独特刀体结构设计  
The newest carbide end mills, unique blade structure design.
- ◆ 降低加工震动，提升刀具使用寿命，加强排屑效率  
Reduce the vibration generated during processing, Improve tool life, enhance the effect of remove chip
- ◆ 可侧铣、可插槽  
Can be side milling and slot



产品型号 Model No	直径 d Diameter	刃长 L1 Flute Length	柄径 D Shank Dia	全长 L O.A.L
GMM4115	11.5	28.75	12	75
GMM4120	12	30	12	100
GMM4130	13	32.5	16	100
GMM4140	14	35	16	100
GMM4150	15	37.5	16	100
GMM4160	16	48	16	100
GMM4170	17	42.5	20	100
GMM4180	18	45	20	100
GMM4190	19	47.5	20	100
GMM4200	20	50	20	100
GMM4220	22	55	25	100
GMM4250	25	62.5	25	100

### 切深量深度 Depth (R 半径Radius)



### 切削参数 The Cutting Data For GMM 4000 Series

进给速度 Vf (mm/min)

直径 (mm)	转速 (min)	开槽 Slotted	侧边 Side
4	4800	270	950
6	3100	240	650
8	2300	240	750
10	1900	240	750
12	1600	240	550
16	1200	270	400
20	950	270	320
25	800	230	320

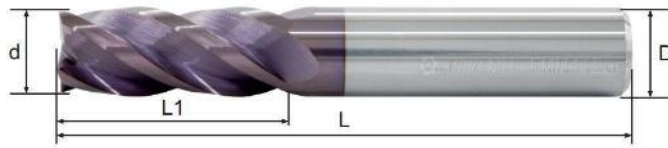
适用材质 钢、不锈钢、铸铁

Material : Steel 、 Stainless steel 、 Iro cast

# 圆沟立铣刀 Rounded Land End Mill

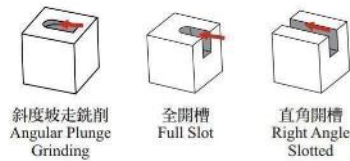
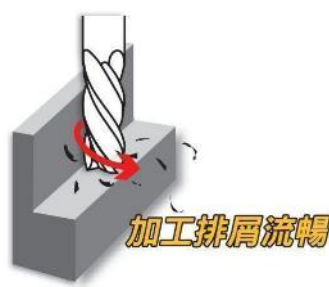
## MU-EMM 4000 4刃圆沟硬质合金立铣刀

4 Flutes Rounded Land Carbide End Mill

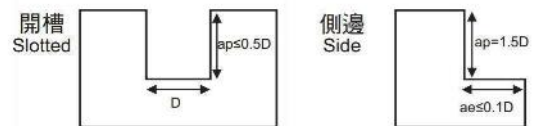


- ◆ 特殊U型圆沟刃设计，适用于高速粗精铣削  
Special design of U type round land and it can process on high speed roughing, finishing cutting.
- ◆ 採用螺旋角35°  
Helix angle 45°
- ◆ 刃口強度提升，提升加工切削排屑流暢，增加穩定度  
Enhance hardness of edge, enhance chip removal effect and increase the stability.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
U-EMM4030	3	7.5	4	50
MU-EMM4030L109D6	3	9	6	50
MU-EMM4030D6	3	7.5	6	50
MU-EMM4040	4	10	4	50
MU-EMM4040D6	4	10	6	50
MU-EMM4040L112	4	12	4	50
MU-EMM4040L112D6	4	12	6	50
MU-EMM4050	5	12.5	6	50
MU-EMM4050L115	5	15	6	50
MU-EMM4060	6	15	6	50
MU-EMM4060L118	6	18	6	50
MU-EMM4060E1	6	15	6	75
MU-EMM4070	7	17.5	8	60
MU-EMM4070L121	7	21	8	60
MU-EMM4080	8	20	8	60
MU-EMM4080L124	8	24	8	60
MU-EMM4090	9	22.5	10	75
MU-EMM4090L127	9	27	10	75
MU-EMM4100	10	25	10	75
MU-EMM4100L130	10	30	10	75
MU-EMM4120	12	30	12	75
MU-EMM4120L136	12	36	12	75
MU-EMM4140	14	35	16	100
MU-EMM4160	16	40	16	100
MU-EMM4160L160M	16	60	16	150
MU-EMM4200	20	50	20	100



适用材质 钢、不锈钢、铸铁



切削參數 The Cutting Data For MU-EMM 4000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)	
		開槽 Slotted	側邊 Side
4	4800	270	950
6	3100	240	650
8	2300	240	750
10	1900	240	750
12	1600	240	550
16	1200	270	400
20	950	270	320

特殊U型圆沟刃槽刀,排屑畅通  
Special U-shaped circular groove knife, smooth chip removal



适用材质 钢、不锈钢、铸铁  
Material: Alloy steel, Stainless steel, Iron cast

# 圆沟立铣刀 Rounded Land End Mill

## MU-GMM 4000 4刃圆沟硬质合金立铣刀

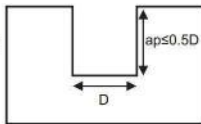
4 Flutes Rounded Land Carbide End Mill



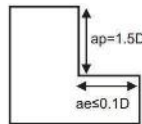
- ◆ 採用圓形刃帶，大幅提高了耐震性和耐崩損性  
Using round flute improve the shock resistance and resistance to collapse.
- ◆ 通過減少切削阻力，實現了高速高進給加工  
By reducing cutting resistance to achieve high speed and feeding processing.

切深量深度 Depth (R 半径Radius)

開槽  
Slotted



側邊  
Side



產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MU-GMM4020	2	5	4	50
MU-GMM4030	3	7.5	4	50
MU-GMM4030L109	3	9	4	50
MU-GMM4030D6	3	7.5	6	50
MU-GMM4031L1093	3.1	9.3	4	50
MU-GMM4032L1096	3.2	9.6	4	50
MU-GMM4033L1099	3.3	9.9	4	50
MU-GMM4034L1102	3.4	10.2	4	50
MU-GMM4035L1105	3.5	10.5	4	50
MU-GMM4036L1108	3.6	10.8	4	50
MU-GMM4037L1111	3.7	11.1	4	50
MU-GMM4038L1114	3.8	11.4	4	50
MU-GMM4039L1117	3.9	11.7	4	50
MU-GMM4040	4	10	4	50
MU-GMM4040D6	4	10	6	50
MU-GMM4040L112	4	12	4	50
MU-GMM4040L112D6	4	12	6	50
MU-GMM4041L1123	4.1	12.3	6	50
MU-GMM4042L1126	4.2	12.6	6	50
MU-GMM4043L1129	4.3	12.9	6	50
MU-GMM4044L1132	4.4	13.2	6	50
MU-GMM4045L1135	4.5	13.5	6	50
MU-GMM4046L1138	4.6	13.8	6	50
MU-GMM4047L1141	4.7	14.1	6	50
MU-GMM4048L1144	4.8	14.4	6	50
MU-GMM4049L1147	4.9	14.7	6	50
MU-GMM4050	5	12.5	6	50
MU-GMM4050L115	5	15	6	50

切削參數 The Cutting Data For MU-GMM 4000 Series  
進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	4800	270	950
6	3100	240	650
8	2300	240	750
10	1900	240	750
12	1600	240	550
16	1200	270	400
20	950	270	320

# 圆沟立铣刀 Rounded Land End Mill

# MU-GMM 4000 4刃圆沟硬质合金立铣刀

4 Flutes Rounded Land Carbide End Mill

产品型号 Model No 直径 d Diameter 刃长 L1 Flute Length 柄径 D Shank Dia 全长 L O.A.L

产品型号 Model No	直径 d Diameter	刃长 L1 Flute Length	柄径 D Shank Dia	全长 L O.A.L
MU-GMM4050L120H	5	20	6	100
MU-GMM4051L1153	5.1	15.3	6	50
MU-GMM4052L1156	5.2	15.6	6	50
MU-GMM4053L1159	5.3	15.9	6	50
MU-GMM4054L1162	5.4	16.2	6	50
MU-GMM4055	5.5	13.75	6	50
MU-GMM4055L1165	5.5	16.5	6	50
MU-GMM4056L1168	5.6	16.8	6	50
MU-GMM4057L1171	5.7	17.1	6	50
MU-GMM4058L1174	5.8	17.4	6	50
MU-GMM4059L1177	5.9	17.7	6	50
MU-GMM4060	6	15	6	50
MU-GMM4060L118	6	18	6	50
MU-GMM4060E1	6	15	6	75
MU-GMM4061L1183	6.1	18.3	8	60
MU-GMM4062L1186	6.2	18.6	8	60
MU-GMM4063L1189	6.3	18.9	8	60
MU-GMM4064L1191	6.4	19.1	8	60
MU-GMM4064L1192	6.4	19.2	8	60
MU-GMM4065	6.5	16.25	8	60
MU-GMM4065L1195	6.5	19.5	8	60
MU-GMM4066L1198	6.6	19.8	8	60
MU-GMM4067L1201	6.7	20.1	8	60
MU-GMM4068L1204	6.8	20.4	8	60
MU-GMM4069L1207	6.9	20.7	8	60
MU-GMM4070	7	17.5	8	60
MU-GMM4070L121	7	21.0	8	60
MU-GMM4071L1213	7.1	21.3	8	60
MU-GMM4072L1216	7.2	21.6	8	60
MU-GMM4073L1219	7.3	21.9	8	60
MU-GMM4074L1222	7.4	22.2	8	60
MU-GMM4075	7.5	18.75	8	60
MU-GMM4075L1225	7.5	22.5	8	60
MU-GMM4076L1228	7.6	22.8	8	60
MU-GMM4077L1231	7.7	23.1	8	60
MU-GMM4078L1234	7.8	23.4	8	60
MU-GMM4079L1237	7.9	23.7	8	60
MU-GMM4080	8	20	8	60
MU-GMM4080E1	8	20	8	75
MU-GMM4080H	8	20	8	100
MU-GMM4080M	8	20	8	150



斜度坡走銼削  
Angular Plunge  
Grinding



全開槽  
Full Slot



直角開槽  
Right Angle  
Slotted

适用材质 钢、不锈钢、铸铁

Material : Alloy steel 、 Stainless steel 、 Iro cast

产品型号 Model No 直径 d Diameter 刃长 L1 Flute Length 柄径 D Shank Dia 全长 L O.A.L

产品型号 Model No	直径 d Diameter	刃长 L1 Flute Length	柄径 D Shank Dia	全长 L O.A.L
MU-GMM4080L124	8	24	8	60
MU-GMM4081L1243	8.1	24.3	10	75
MU-GMM4082L1246	8.2	24.6	10	75
MU-GMM4083L1249	8.3	24.9	10	75
MU-GMM4084L1252	8.4	25.2	10	75
MU-GMM4085L1255	8.5	25.5	10	75
MU-GMM4086L1258	8.6	25.8	10	75
MU-GMM4087L1261	8.7	26.1	10	75
MU-GMM4088L1264	8.8	26.4	10	75
MU-GMM4089L1267	8.9	26.7	10	75
MU-GMM4090	9	22.5	10	75
MU-GMM4090L127	9	27	10	75
MU-GMM4091L1273	9.1	27.3	10	75
MU-GMM4092L1276	9.2	27.6	10	75
MU-GMM4093L1279	9.3	27.9	10	75
MU-GMM4094L130	9.4	30	10	75
MU-GMM4094L1282	9.4	28.2	10	75
MU-GMM4095L1285	9.5	28.5	10	75
MU-GMM4096L1288	9.6	28.8	10	75
MU-GMM4097L1291	9.7	29.1	10	75
MU-GMM4098L1294	9.8	29.4	10	75
MU-GMM4099L1297	9.9	29.7	10	75
MU-GMM4100	10	25	10	75
MU-GMM4100H	10	25	10	100
MU-GMM4100L130	10	30	10	75
MU-GMM4100L130H	10	30	10	100
MU-GMM4110	11	27.5	12	75
MU-GMM4120	12	30	12	75
MU-GMM4120L136	12	36	12	75
MU-GMM4120H	12	30	12	100
MU-GMM4120L155H	12	55	12	100
MU-GMM4140	14	35	16	100
MU-GMM4160	16	48	16	100
MU-GMM4160M	16	48	16	150
MU-GMM4200	20	50	20	100

# MUH-GMM4000不等分4刃硬质合金立铣刀

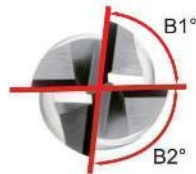
MUH-GMM4000 4 Flutes Unequal Division Carbide End Mill



- ◆ 螺旋角採用45°設計  
Helix angle 45°
- ◆ 透過刀刃的分割比例，有效控制削屑排出頻率  
By blades split evenly ratio, it can control chip removal with excellent effect.
- ◆ 加強抑制加工中的細微振動，增加加工表面光滑度  
Strengthen the suppression of fine vibration when carbide end mill processing, Improve the processing smoothly of the surface.
- ◆ 特殊U型圓溝刃設計，適用於高速粗精銑削  
Special design of round land U type, suit to process on high speed roughing and finishing.



不等分割  
Unequal division  
 $B1^\circ \neq B2^\circ$



產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MUH-GMM4040	4	10	4	50
MUH-GMM4060	6	15	6	50
MUH-GMM4070	7	17.5	8	60
MUH-GMM4080	8	20	8	60
MUH-GMM4080L124	8	24	8	60
MUH-GMM4100	10	25	10	75
MUH-GMM4100L130	10	30	10	75
MUH-GMM4100H	10	25	10	100
MUH-GMM4120	12	30	12	75
MUH-GMM4120L136	12	36	12	75
MUH-GMM4160	16	48	16	100
MUH-GMM4200	20	50	20	100



斜度坡走銑削  
Angular Plunge  
Grinding



全開槽  
Full Slot

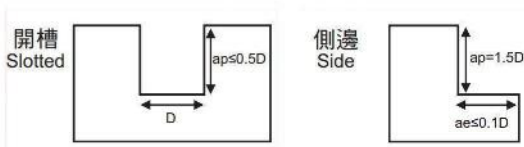


直角開槽  
Right Angle  
Slotted

適用材質 鋼、不銹鋼、鑄鐵

Material : Alloy steel 、 Stainless steel 、 Iro cast

切深量深度 Depth ( R 半徑Radius )



切削參數 The Cutting Data For MUH-GMM 4000 Series

進給速度 Vf (mm/min)

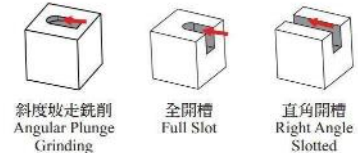
直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	6000	420	1100
6	4000	420	800
8	2900	420	950
10	2400	420	750
12	1900	420	500
16	1500	420	480
20	1200	420	400

# MUH-IMM4000 不等分4 刃硬质合金立铣刀

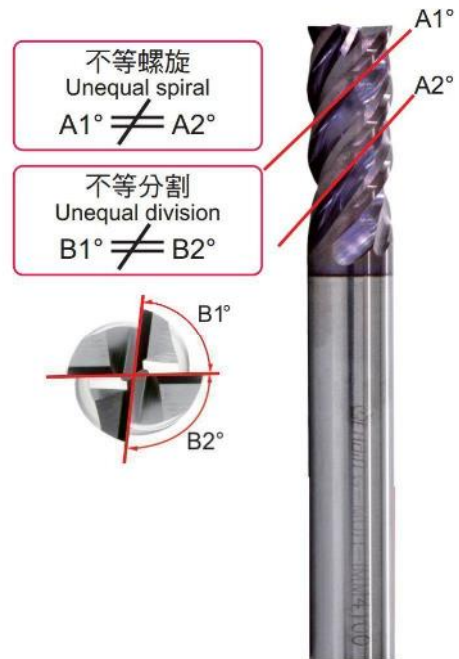
## MUH-IMM4000 4Flutes Unequal Division Carbide End Mill



- ◆ 不等角分割利於高速進給加工抗震性  
Unequal division is beneficial to enhance seismic performance of high speed feed.
- ◆ 不等螺旋角利於高速加工抗崩裂性  
Unequal helix angle prevents tipping of high speed processing.
- ◆ 刀刃採用分割角及螺旋角不相等  
The flute edge with unequal spiral and unequal division.
- ◆ 改變每刀進給量，使每刀的銑削波形不再相同  
Changing the processing feed so that milling waveform isn't same anymore.
- ◆ 可有效降低或避免刀具進行側銑時的切削震動紋路  
It can reduce or avoid the cutting vibration pattern effectively when the tool is processing on side milling.
- ◆ 有利於獲得高質量的加工表面和提高刀具壽命  
Conducive to high quality machining surfaces and improved tool life.

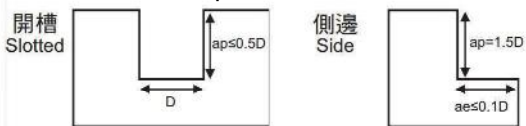


產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MUH-IMM4040L112D6	4	12	6	50
MUH-IMM4060	6	15	6	50
MUH-IMM4060L118	6	18	6	50
MUH-IMM4070L121	7	21	8	60
MUH-IMM4080	8	20	8	60
MUH-IMM4080L124	8	24	8	60
MUH-IMM4100	10	25	10	75
MUH-IMM4100L130	10	30	10	75
MUH-IMM4120	12	30	12	75
MUH-IMM4120L136	12	36	12	75
MUH-IMM4120L145H	12	45	12	100
MUH-IMM4120L155H	12	55	12	100
MUH-IMM4140	14	35	16	100
MUH-IMM4150	15	37.5	16	100
MUH-IMM4160	16	48	16	100
MUH-IMM4200	20	50	20	100



### 切削參數 The Cutting Data For MUH-IMM 4000 Series 進給速度 Vf (mm/min)

切深量深度 Depth (R 半徑Radius)



適用材質 鋼、不銹鋼、鑄鐵

Material : Alloy steel 、 Stainless steel 、 Iro cast

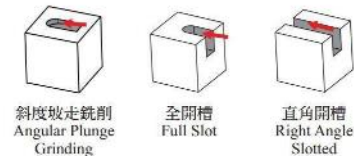
直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
6	4000	420	800
8	2900	420	950
10	2400	420	750
12	1900	420	500
16	1500	420	480
20	1200	420	400

# MUH-IPM4000 不等分4刃螺旋硬质合金立铣刀

MUH-IPM4000 Unequal 4 flute spiral carbide end mill

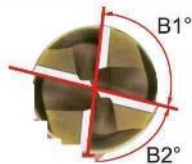


- ◆ 合金鋼及碳鋼專用特殊塗層  
Special coating for alloy steel and carbon steel.
- ◆ 不等角分割利於高速進給加工抗震性  
Unequal division is beneficial to enhance seismic performance of high speed feed.
- ◆ 不等螺旋角利於高速加工抗崩裂性  
Unequal helix angle prevents tipping of high speed processing.
- ◆ 刀刃採用分割角及螺旋角不相等  
The flute edge with unequal spiral and unequal division.
- ◆ 改變每刃進給量，使每刃的銑削波形不再相同  
Changing the processing feed so that milling waveform isn't same anymore.
- ◆ 可有效降低或避免刀具進行側銑時的切削震動紋路  
It can reduce or avoid the cutting vibration pattern effectively when the tool is processing on side milling.
- ◆ 有利於獲得高質量的加工表面和提高刀具壽命  
Conducive to high quality machining surfaces and improved tool life.



不等螺旋  
Unequal spiral  
 $A1^\circ \neq A2^\circ$

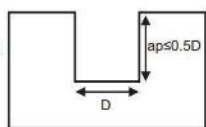
不等分割  
Unequal division  
 $B1^\circ \neq B2^\circ$



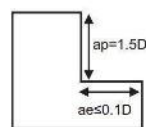
產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MUH-IPM4040	4	10	4	50
MUH-IPM4060	6	15	6	50
MUH-IPM4060L118	6	18	6	50
MUH-IPM4080	8	20	8	60
MUH-IPM4080L124	8	24	8	60
MUH-IPM4090	9	22.5	10	75
MUH-IPM4100	10	25	10	75
MUH-IPM4100L130	10	30	10	75
MUH-IPM4120	12	30	12	75
MUH-IPM4120L136	12	36	12	75
MUH-IPM4160	16	48	16	100
MUH-IPM4160L155	16	55	16	100
MUH-IPM4200	20	50	20	100
MUH-IPM4200L160M	20	60	20	150
MUH-IPM4200L170M	20	70	20	150
MUH-IPM4200L180M	20	80	20	150

切深量深度 Depth (R 半径Radius)

開槽  
Slotted



側邊  
Side



適用材質 合金鋼、碳鋼  
Material: Alloy steel、Carbon steel

切削參數 The Cutting Data For MUH-IPM 4000 Series 進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
4	6000	480	720
6	4000	350	640
8	2900	350	580
10	2400	300	580
12	1900	300	580
16	1500	300	480
20	1200	300	400

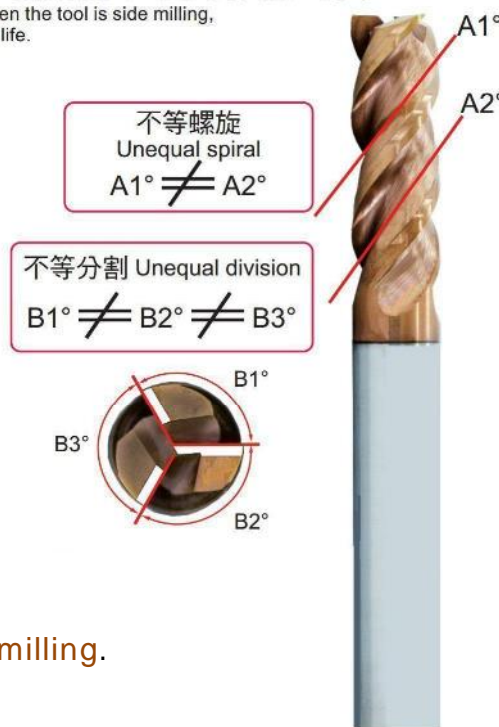
# MUH-IPM 3000L1 不等分割不等分螺旋3刃抗震铣刀

## 3 Flutes Unequal Spiral & Unequal Division Seismic Performance Carbide End Mill



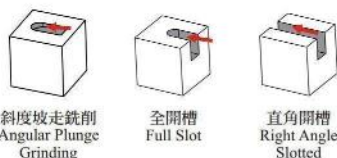
- ◆ 合金鋼、碳鋼專用特殊塗層  
Special coating for alloy steel and carbon steel.
- ◆ 不等角分割利於高速進給加工抗震性  
Unequal division facilitates high-speed feed machining shock resistance.
- ◆ 不等螺旋角利於高速加工抗崩裂性  
Unequal helix angle facilitates high speed machining resistance to chipping.
- ◆ 特殊U型溝槽設計，刀刃採用分割角及螺旋角不相等  
Special U-shaped groove design, the cutting edge adopts the division angle and the spiral angle are not equal.
- ◆ 改變每刃進給量，使每刃的銑削波形不再相同  
Change the feed per edge so that the milling waveform for each edge is no longer the same.
- ◆ 可有效抗震獲得高質量的加工表面，插銑加工時排屑優良並延長刀具加工壽命  
It can effectively reduce or avoid the cutting vibration pattern when the tool is side milling, conducive to high quality machining surfaces and improved tool life.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MUH-IPM3040L112	4	12	4	50
MUH-IPM3040L112D6	4	12	6	50
MUH-IPM3050L115	5	15	6	50
MUH-IPM3060L118	6	18	6	50
MUH-IPM3080L124	8	24	8	60
MUH-IPM3100L130	10	30	10	75
MUH-IPM3120L136	12	36	12	75
MUH-IPM3160L148	16	48	16	100



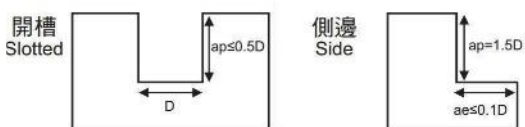
### 加大容屑槽銑削加工特排屑更暢通

Which is good for chip removal during plunge milling.



### 切削參數 The Cutting Data For MUH-IPM 3000L1 Series

切深量深度 Depth (R 半径 Radius)



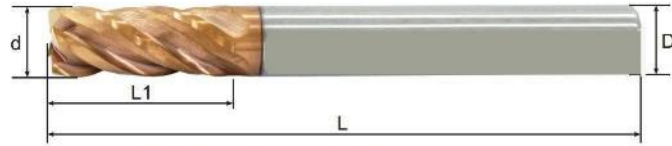
適用材質 合金鋼、碳鋼  
Material: Alloy steel, Carbon steel

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)	
		開槽 Slotted	側邊 Side
4	6000	360	540
6	4000	360	480
8	2900	300	480
10	2400	300	480
12	1900	280	400
16	1500	230	400
20	1200	230	400

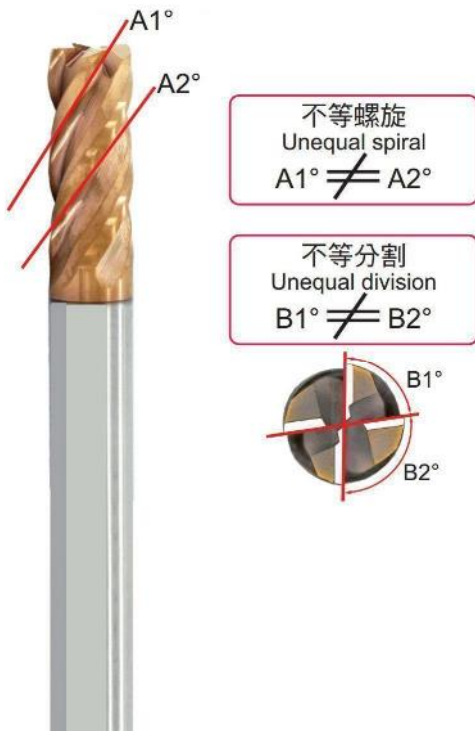


# MUH-FPM 400圓沟不等分螺旋4刃立铣刀

Round Land Unequal Spiral & Unequal Division 4 Flutes Carbide End Mill

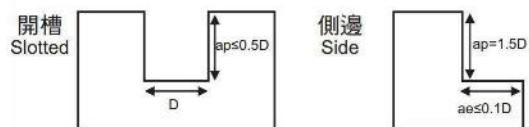


- ◆ 合金鋼及碳鋼專用特殊塗層  
Special coating for alloy steel and carbon steel.
- ◆ 螺旋角採用35°/38°設計  
Helix angle 35°/38°
- ◆ 不等角分割利於高速進給加工抗震性  
Unequal division to improve seismic resistance of high-speed feed machining.
- ◆ 不等螺旋角利於高速加工抗崩裂性  
Unequal helix angle to improve high speed processing resistance to chipping.
- ◆ 刀刃採用分割角及螺旋角不相等，改變每刃進給量，使每刃的銑削波形不再相同  
Cutting edge inconsistent with the helix angle, the feed amount per blade is changed so that the milling waveform of each edge is no longer the same.
- ◆ 可有效降低或避免刀具進行側銑時的切削震動紋路，有利於獲得高質量的加工表面和提高刀具壽命  
It can effectively reduce and avoid the vibration mode generated during the side milling process, conducive to high quality machining surfaces and improved tool life



產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
MUH-FPM4060	6	15	6	50
MUH-FPM4080	8	20	8	60
MUH-FPM4100	10	25	10	75
MUH-FPM4120	12	30	12	75
MUH-FPM4160	16	40	16	100
MUH-FPM4200	20	50	20	100

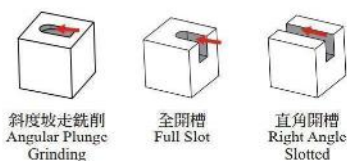
切深量深度 Depth (R 半径Radius)



切削參數 The Cutting Data For MUH-FPM 4000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
6	4000	420	800
8	2900	420	950
10	2400	420	750
12	1900	420	500
16	1500	420	480
20	1200	420	400



適用材質 合金鋼、碳鋼

Material : Alloy steel 、 Carbon steel

# FM-CMM 4000 4刃硬质合金精加工粗铣刀

## 4 Flutes Carbide Fine Pitch & Finshing Roughing End Mill



- ◆ 粗鋸齒狀設計 Waveform sawtooth design.
- ◆ 高耐磨塗層，可減少磨損 Wear-resistant coating reduce wear.
- ◆ 極細微粒碳化鎢鋼刀身，採用含鈷量為12% Tungsten carbide rod, 12% cobalt content.
- ◆ 採用螺旋角25°，排屑穩定，流暢 Helix angle 25° with ideal chip flow.
- ◆ 適合粗糙表面粗加工，效果極佳 Processing on roughing with remarkable effect.

產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
FM-CMM4060	6	15	6	50
FM-CMM4080	8	20	8	60
FM-CMM4100	10	25	10	75
FM-CMM4120	12	30	12	75
FM-CMM4120L136	12	36	12	75
FM-CMM4160	16	48	16	100

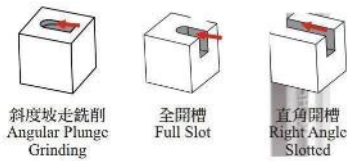


# RM-CMM 4000 4刃硬质合金精加工粗铣刀

## 4 Flutes Carbide Fine Pitch & Finshing Roughing End Mill



產品型號 Model No	直徑 d Diameter	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
RM-CMM4050	5	12.5	6	50
RM-CMM4060	6	15	6	50
RM-CMM4080	8	20	8	60
RM-CMM4100	10	25	10	75
RM-CMM4120	12	30	12	75
RM-CMM4120L136	12	36	12	75
RM-CMM4160	16	48	16	100



适用材质 钢、不锈钢、铸铁

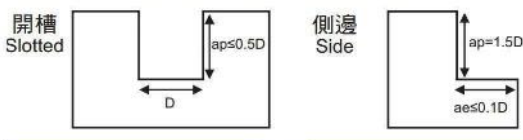
Material : Steel 、Stainless steel 、Iro cast

切削參數 The Cutting Data For FM-CMM 4000 Series RM-CMM 4000 Series

進給速度 Vf (mm/min)

直徑 (mm)	轉速 (min)	開槽 Slotted	側邊 Side
6	3100	120	325
8	2300	120	375
10	1900	120	375
12	1600	120	275
16	1200	135	200

切深量深度 Depth (R 半徑Radius)



# DMR 2000 圓鼻2刃硬質合金立銑刀

## 2 Flutes Corner Radius Carbide End Mill



- ◆ 採用全新進口棒材，加工工件硬度HRC55度以下  
Using the latest import carbide rod, it can process on hardness up to 55HRC.
- ◆ 採用國際公差標準h5，公差範圍控制在 $\mu$ 級精度  
International tolerance standard h5, tolerance range control at  $\mu$  level accuracy.
- ◆ 採用圓形刃帶，大幅提高了耐震性和耐崩損性  
Using round flute improve the shock resistance and resistance to collapse.
- ◆ 通過減少切削阻力，實現了高速高進給加工  
By reducing cutting resistance to achieve high speed and feeding processing.



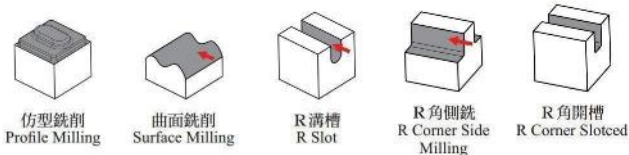
產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
DMR2010R02	1	0.2	2.5	4	50
DMR2015R02	1.5	0.2	3.75	4	50
DMR2020R02	2	0.2	5	4	50
DMR2020R05	2	0.5	5	4	50
DMR2025R02	2.5	0.2	6.25	4	50
DMR2030R02	3	0.2	7.5	4	50
DMR2030R02E1	3	0.2	7.5	4	75
DMR2030R05	3	0.5	7.5	4	50
DMR2030R05E1	3	0.5	7.5	4	75
DMR2030R10	3	1	7.5	4	50
DMR2030R10E1	3	1	7.5	4	75
DMR2040R02	4	0.2	10	4	50
DMR2040R02E1	4	0.2	10	4	75
DMR2040R02H	4	0.2	10	4	100
DMR2040R05	4	0.5	10	4	50
DMR2040R05E1	4	0.5	10	4	75
DMR2040R05H	4	0.5	10	4	100
DMR2040R10	4	1	10	4	50
DMR2040R10E1	4	1	10	4	75
DMR2040R10H	4	1	10	4	100
DMR2060R02	6	0.2	15	6	50
DMR2060R02E1	6	0.2	15	6	75
DMR2060R02H	6	0.2	15	6	100
DMR2060R05	6	0.5	15	6	50
DMR2060R05E1	6	0.5	15	6	75
DMR2060R05H	6	0.5	15	6	100
DMR2060R10	6	1	15	6	50

# DMR 2000 圆鼻2刃硬质合金立铣刀

2 Flutes Corner Radius Carbide End Mill



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
DMR2060R10E1	6	1	15	6	75
DMR2060R10H	6	1	15	6	100
DMR2080R05	8	0.5	20	8	60
DMR2080R05E1	8	0.5	20	8	75
DMR2080R05H	8	0.5	20	8	100
DMR2080R10	8	1	20	8	60
DMR2080R10E1	8	1	20	8	75
DMR2080R10H	8	1	20	8	100
DMR2100R05	10	0.5	25	10	75
DMR2100R05H	10	0.5	25	10	100
DMR2100R10	10	1	25	10	75
DMR2100R10H	10	1	25	10	100
DMR2120R05	12	0.5	30	12	75
DMR2120R05H	12	0.5	30	12	100
DMR2120R10	12	1	30	12	75
DMR2120R10H	12	1	30	12	100



适用材质 钢、不锈钢、铸铁

Material : Steel 、Stainless steel 、Iron cast

切削參數 The Cutting Data For DMR 2000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
4	6400	260
6	4300	280
8	3200	285
10	2600	270
12	2200	270

# DMR 4000 圓鼻4刃硬質合金 立銑刀

## 4 Flutes Corner Radius Carbide End Mill



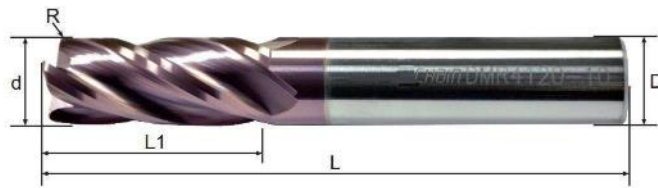
- ◆ 採用全新進口棒材，加工工件硬度HRC55度以下  
Using the latest import carbide rod, it can process on hardness up to 55HRC.
- ◆ 採用國際公差標準h5，公差範圍控制在  $\mu$  級精度  
International tolerance standard h5, tolerance range control at  $\mu$  level accuracy.
- ◆ 採用圓形刃帶，大幅提高了耐震性和耐崩損性  
Using round flute improve the shock resistance and resistance to collapse.
- ◆ 通過減少切削阻力，實現了高速高進給加工  
By reducing cutting resistance to achieve high speed and feeding processing.



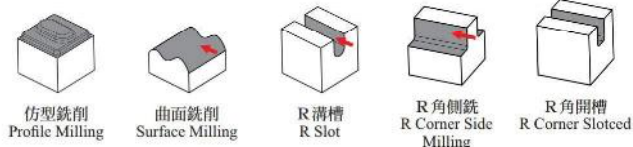
產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
DMR4010R02	1	0.2	2.5	4	50
DMR4010R02L103	1	0.2	3	4	50
DMR4015R02	1.5	0.2	3.75	4	50
DMR4015R02L104	1.5	0.2	4	4	50
DMR4020R02	2	0.2	5	4	50
DMR4020R02L106	2	0.2	6	4	50
DMR4020R05	2	0.5	5	4	50
DMR4020R05L106	2	0.5	6	4	50
DMR4025R02	2.5	0.2	6.25	4	50
DMR4030R02	3	0.2	7.5	4	50
DMR4030R02L106	3	0.2	6	4	50
DMR4030R02L108	3	0.2	8	4	50
DMR4030R02E1	3	0.2	7.5	4	75
DMR4030R05	3	0.5	7.5	4	50
DMR4030R05E1	3	0.5	7.5	4	75
DMR4030R05L108	3	0.5	8	4	50
DMR4030R10	3	1	7.5	4	50
DMR4030R10E1	3	1	8	4	75
DMR4030R10D6	3	1	7.5	6	50
DMR4040R02	4	0.2	7.5	4	50
DMR4040R02E1	4	0.2	10	4	75
DMR4040R02H	4	0.2	10	4	100
DMR4040R05	4	0.5	10	4	50
DMR4040R05E1	4	0.5	10	4	75
DMR4040R05H	4	0.5	10	4	100
DMR4040R10	4	1	10	4	50
DMR4040R10E1	4	1	10	4	75

# DMR 4000 圆鼻4刃硬质合金立铣刀

4 Flutes Corner Radius Carbide End Mill



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
DMR4040R10H	4	1	10	4	100
DMR4040R15	4	1.5	10	4	50
DMR4050R05	5	0.5	12.5	6	50
DMR4060R02	6	0.2	15	6	50
DMR4060R02E1	6	0.2	15	6	75
DMR4060R02H	6	0.2	15	6	100
DMR4060R05	6	0.5	15	6	50
DMR4060R05E1	6	0.5	15	6	75
DMR4060R05H	6	0.5	15	6	100
DMR4060R10	6	1	15	6	50
DMR4060R10E1	6	1	15	6	75
DMR4060R10H	6	1	15	6	100
DMR4060R20	6	2	15	6	50
DMR4080R05	8	0.5	20	8	60
DMR4080R05E1	8	0.5	20	8	75
DMR4080R05H	8	0.5	20	8	100
DMR4080R10	8	1	20	8	60
DMR4080R10E1	8	1	20	8	75
DMR4080R10H	8	1	20	8	100
DMR4080R15	8	1.5	20	8	60
DMR4100R05	10	0.5	25	10	75
DMR4100R05H	10	0.5	25	10	100
DMR4100R10	10	1	25	10	75
DMR4100R10H	10	1	25	10	100
DMR4100R15	10	1.5	25	10	75
DMR4100R20	10	2	25	10	75
DMR4120R05	12	0.5	30	12	75
DMR4120R05H	12	0.5	30	12	100
DMR4120R10	12	1	30	12	75
DMR4120R10H	12	1	30	12	100
DMR4120R15	12	1.5	30	12	75
DMR4120R20	12	2	30	12	75



## 切削參數 The Cutting Data For DMR 4000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
4	6400	520
6	4300	560
8	3200	570
10	2600	540
12	2200	540

適用材質 鋼、不銹鋼、鑄鐵

Material : Steel 、 Stainless steel 、 Iron cast

# PH-FMR 4000不等分切割不等分螺旋非圆清圆鼻 4刃硬质合金立铣刀

4 Flutes Unequal Division Unequal Helix Non-Round Land Design Corner Radius End Mill



- ◆ 可有效抑制加工所產生的震動  
The design of unequal flute division end mill can improve vibration generated during processing.
- ◆ 減少刀具因震動的崩損  
It also reduce the damage of vibration.
- ◆ 更有優良的加工表面  
The PH-FMR series corner radius end mills make the material with excellent surface.
- ◆ 提升刀具使用時間壽命  
Enhance the end mills life.

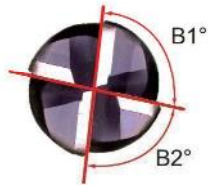


特殊設計 Special design

可保護圓鼻刀刀尖 It can protect the top of Radius tip

不等螺旋  
Unequal spiral  
 $A1^\circ \neq A2^\circ$

不等分割  
Unequal division  
 $B1^\circ \neq B2^\circ$



產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
PH-FMR4040R05	4	0.5	10	4	50
PH-FMR4040R10	4	1	10	4	50
PH-FMR4060R05	6	0.5	15	6	50
PH-FMR4060R10	6	1	15	6	50
PH-FMR4080R05	8	0.5	20	8	60
PH-FMR4080R10	8	1	20	8	60
PH-FMR4100R05	10	0.5	25	10	75
PH-FMR4100R10	10	1	25	10	75
PH-FPR4100R10L130	10	1	30	10	75
PH-FMR4120R05	12	0.5	30	12	75
PH-FMR4120R10	12	1	30	12	75

切削參數 The Cutting Data For PH-FMR 4000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
4	6400	520
6	4300	560
8	3200	570
10	2600	540
12	2200	540
16	1600	510
18	1400	410
20	1300	370



適用材質 鋼、不銹鋼、鑄鐵

Material : Steel 、 Stainless steel 、 Iron cast

# PH-FPR 4000不等分切割不等分螺旋非圆清圆鼻 4刃硬质合金立铣刀

4 Flutes Unequal Division Unequal Helix Non-Round Land Design  
Corner Radius End Mill



- ◆ 合金鋼及碳鋼專用特殊塗層  
For the particular coating with Alloy steel and Carbon steel.
- ◆ 不等刃分割、不等螺旋圓鼻銑刀，可有效抑制加工所產生的震動  
It can avoid the cutting vibration pattern effectively and reduce crumbling on workpiece due to vibration.
- ◆ 減少刀具因震動的崩損，更有優良的加工表面，提升刀具使用時間壽命  
There is high quality machining surfaces and enhance tool life.

特殊设计  
Spchldstgm  
可保护圆鼻刀刀尖  
It can protect the top of Radius

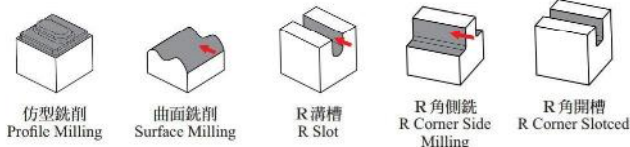


產品型號 Model No	直徑 d Diameter	半徑 R Radius(1/2d)	刃長 L1 Flute Length	柄徑 D Shank Dia	全長 L O.A.L
PH-FPR4040R05	4	0.5	10	4	50
PH-FPR4040R10	4	1	10	4	50
PH-FPR4060R05	6	0.5	15	6	50
PH-FPR4060R10	6	1	15	6	50
PH-FPR4080R05	8	0.5	20	8	60
PH-FPR4080R10	8	1	20	8	60
PH-FPR4100R05	10	0.5	25	10	75
PH-FPR4100R10	10	1	25	10	75
PH-FPR4100R10L130	10	1	30	10	75
PH-FPR4120R30L136	12	3	36	12	75
PH-FPR4120R05	12	0.5	30	12	75
PH-FPR4120R10	12	1	30	12	75

## 切削參數 The Cutting Data For PH-FPR 4000 Series

直徑 (mm)	轉速 (min)	進給速度 Vf (mm/min)
4	6400	520
6	4300	560
8	3200	570
10	2600	540
12	2200	540

適用材質 鋼、不銹鋼、鑄鐵  
Material : Steel、Stainless steel、Iron cast







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