



广东优能特五金科技有限公司
Guangdong UNT Cutting Tools Co., Ltd.

铝合金专用铣刀

EME series Solid Carbide End Mill For Aluminum



For Aluminum, Aluminum Die Cast, Non-ferrous Alloy and Plastics

加工铝，铝压铸件，有色金属和塑料专用刀

www.unt-tools.com

INTRODUCTION

公司简介

广东优能特五金科技有限公司

优能特是一家CNC铣削刀具的大型制造商。

优能特在中国东莞拥有一个9,000平方米的工业园区，进口了35台澳大利亚ANCA数控磨床，5台Walter数控磨床、55个工程师和35个销售员。

我们建立了ISO9001质量控制体系，使用优质稳定的德国硬质合金棒，SWISS SOERLIKON新涂层技术以提高抗氧化性和热硬度。我们进口德国ZOLLER数字测量仪器等精密测试设备，以确保稳定的尺寸精度和优良的表面质量。

我们已经成为知名品牌工具的OEM合作伙伴15年，我们的仓库1500 SQM拥有数百万库存，可在24小时内发货给立铣刀。

优能特切削刀具已分布在欧洲，亚洲，北美和许多其他城市，热销产品包括高性能硬质合金立铣刀EMC /X5070系列，HRC55硬质合金立铣刀，EMF金刚石涂层刀具，螺纹和丝锥，冷却液钻头，超微型立铣刀，用于不锈钢的EMD等，以及各种定制尺寸的CNC铣削工具。

我们拥有提供全方位服务的设计和工程人员，以及Markets销售人员，可以根据您的特定规格构建自定义工具的多层次结构。

我们的目标是帮助每个客户获得最大的利益，建立世界一流的优质切削刀具品牌。

选择好的工具，选择“优能特”精密工具！

Guangdong UNT Cutting Tools Co., Ltd.

UNT' is a big manufacturer of CNC Milling tools.

UNT' owned an industrial park 9,000 SQM in Dongguan China, imported Australian ANCA CNC grinding machines 35 sets, Walter CNC Cutter Grinders 5 sets, and 55 engineer design teams and 30 salesmen.

We established an ISO9001 quality control system, use high-quality and stable German Carbide Rods, SWISS OERLIKON new coating technologies, to improve the oxidation resistance and hot hardness. We import Germany ZOLLER Digital Measuring Instruments, such as precision testing equipment, to ensure stable dimensional accuracy and fine surface quality.

We have been an OEM Partner for Well-known brand tools for 15 years, Our warehouse 1500 SQM with millions of in-stock, ready to shipping end mills in 24 hours.

UNT Cutting tools have been distributed in Europe, Asia, North America, and many other cities, Hot sales products include High-performance Carbide end mills EMC/X5070 series, HRC55 Carbide end mills, EMF Diamond Coated Tools, Thread & tap, Coolant drills, Super-micro end mills, EMD for Stainless steels, etc, and all kinds of custom-sized CNC Milling tools.

We have a full-service design and engineering staff, and Markets sales to build a multilevel of variations of custom tools to your specific specifications.

Our aim is to help every customer achieve maximum benefits, to build a world-class quality cutting tool brand.

Choose the good Tools, Choose "UNT" Precision Tools.



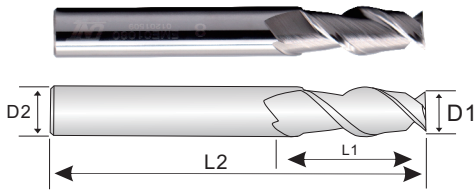
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EME铝合金专用二刃平底铣刀 **Square 2 Flute for aluminum and non-ferrous materials**

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 具有出色的工件表面光洁度，高效的排屑率和更长的刀具寿命。
- ★ 可以根据客户需要提供高质量的具有TiN, TiCN和TiAlN涂层的铝用刀。
- ★ 适合中心加工、插削加工。

- Designed to machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- Excellent surface finishes, superior chips ejection and Longer tool life .
- High-quality Aluminum Milling Cutters, TiN, TiCN & TiAlN Coating is available on your need.
- Center & Slotting Cutting



加工材料 Material Description												
碳钢	合金钢	预硬钢	硬化钢		高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
-HB225	-HB225-325	-HRc30-40	HRc40-45	HRc45-55	HRc55-70	○		○	○		○	

◎ 非常适合 ○ 适合

EME01 普长型 SERIES

Unit:mm

优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME01005	0.5	4	1	50	2
EME01006	0.6	4	1.2	50	2
EME01008	0.8	4	1.6	50	2
EME01010	1.0	4	3	50	2
EME01015	1.5	4	4	50	2
EME01020	2.0	4	6	50	2
EME01025	2.5	4	6	50	2
EME01030	3.0	4	8	50	2
EME01040	4.0	4	11	50	2
EME01050	5.0	6	13	50	2
EME01060	6.0	6	16	50	2
EME01070	7.0	8	20	60	2
EME01080	8.0	8	20	60	2
EME01090	9.0	10	25	75	2
EME01100	10.0	10	25	75	2
EME01120	12.0	12	30	75	2
EME01140	14.0	14	40	100	2
EME01160	16.0	16	40	100	2
EME01200	20.0	20	40	100	2

以上产品未列明细的非标规格尺寸或产品参数，可根据客户需求定制制作。
Non-standard size or product parameters not listed above, can be customized according to customer needs.

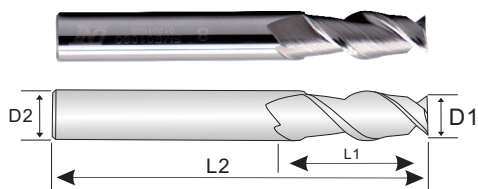
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME铝合金专用二刃加长平底铣刀

Carbide, 2 Flute Aluminum Cutter, 45° Helix, Long Length

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 具有出色的工件表面光洁度，高效的排屑率和更长的刀具寿命。
- ★ 可以根据客户提供高质量的具有TiN, TiCN和TiAlN涂层的铝用刀。
- ★ 适合中心加工、插削加工。

- Designed to machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- Excellent surface finishes, superior chips ejection and Longer tool life .
- High-quality Aluminum Milling Cutters, TiN, TiCN & TiAlN Coating is available on your need.
- Center & Slotting Cutting



加工材料 Material Description												
碳钢	合金钢	预硬钢	硬化钢		高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钴钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
-HB225	-HB225-325	-HRc30-40	HRc40-45	HRc45-55	HRc55-70							
○						●			○			○

● 非常适合 ○ 适合

EME02 加长型 SERIES

Unit:mm

优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME02010075	1.0	4	5	75	2
EME02015075	1.5	4	6	75	2
EME02020075	2.0	4	8	75	2
EME02025075	2.5	4	8	75	2
EME02030075	3.0	4	10	75	2
EME02040075	4.0	4	12	75	2
EME02050075	5.0	6	16	75	2
EME02060075	6.0	6	25	75	2
EME02060100	6.0	6	30	100	2
EME02080100	8.0	8	35	100	2
EME02100100	10.0	10	40	100	2
EME02120100	12.0	12	45	100	2
EME02160150	16.0	16	70	100	2

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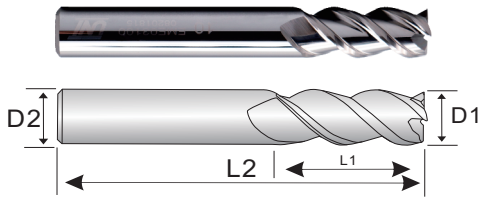
Non-standard size or product parameters not listed above, can be customized according to customer needs.

MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME铝合金专用三刃平底铣刀 **Square 3 Flute for aluminum and non-ferrous materials**

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 3刃中心设计-所有3刃旋转都将到达中心。
- ★ 具有高进给，高转速，高切屑去除率（重切削）的特点，性能卓越
- ★ 适合中心加工、插削加工。

- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- 3 Flute design "To the center" - all 3 flutes come to the center.
- Excellent performance with high feed, high RPM, high chip removal (heavy cutting).
- Center & Slotting Cutting.



加工材料 Material Description												
碳钢	合金钢	预硬钢	硬化钢		高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钴钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
-HB225	-HB225-325	-HRc30-40	HRc40-45	HRc45-55	HRc55-70							
○						●			○			○

● 非常适合 ○ 适合

EME03 普长型
SERIES

Unit:mm

优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME03010	1.0	4	3	50	3
EME03015	1.5	4	4	50	3
EME03020	2.0	4	6	50	3
EME03025	2.5	4	6	50	3
EME030303	3.0	3	8	50	3
EME03030	3.0	4	8	50	3
EME03040	4.0	4	11	50	3
EME030505	5.0	5	13	50	3
EME03050	5.0	6	13	50	3
EME03060	6.0	6	16	50	3
EME03070	7.0	8	20	60	3
EME03080	8.0	8	20	60	3
EME03090	9.0	10	25	75	3
EME03100	10.0	10	25	75	3
EME03120	12.0	12	30	75	3
EME03140	14.0	14	40	100	3
EME03160	16.0	16	40	100	3
EME03200	20.0	20	40	100	3

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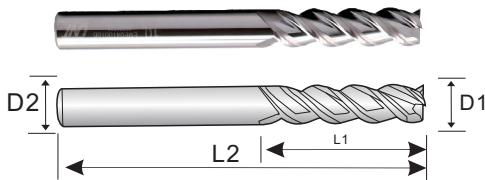
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME铝合金专用三刃加长平底铣刀

Carbide, 3 Flute Aluminum Cutter, 45° Helix, Long Length

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 3刃中心设计-所有3刃旋转都将到达中心。
- ★ 具有高进给, 高转速, 高切屑去除率(重切削)的特点, 性能卓越
- ★ 适合中心加工、插削加工。

- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- 3 Flute design "To the center" - all 3 flutes come to the center.
- Excellent performance with high feed, high RPM, high chip removal (heavy cutting).
- Center & Slotting Cutting.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardened steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
→HB225	→HB225-325	→HRC30-40	HRC40-45	HRC45-55							

⊙ 非常合适 ○ 合适

EME04 加长型 SERIES

Unit:mm

优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME04010075	1.0	4	5	75	3
EME04015075	1.5	4	6	75	3
EME04020075	2.0	4	8	75	3
EME04025075	2.5	4	8	75	3
EME04030075	3.0	4	10	75	3
EME04040075	4.0	4	12	75	3
EME04040100	4.0	4	12	100	3
EME04050075	5.0	6	16	75	3
EME04050100	5.0	6	16	100	3
EME04060075	6.0	6	25	75	3
EME04060100	6.0	6	30	100	3
EME04080075	8.0	8	25	75	3
EME04080100	8.0	8	35	100	3
EME04100100	10.0	10	40	100	3
EME04120100	12.0	12	45	100	3
EME04160150	16.0	16	70	150	3

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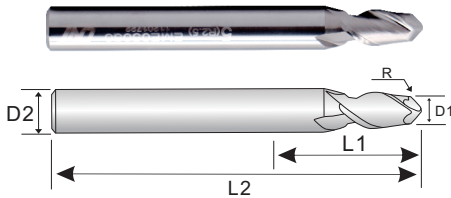
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MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME铝合金专用二刃球头铣刀 **2 Flute Ball nose for aluminum and non-ferrous materials**

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 具有出色的工件表面光洁度，高效的排屑率。
- ★ 适合轮廓加工、插削加工、倒角加工。

- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- Excellent surface finishes, superior chips ejection.
- Profile, Slot, Chamfer Cutting.



加工材料 Material Description												
碳钢	合金钢	预硬钢	硬化钢		高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钴合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
○	○	○	HRc40-45	HRc45-55	HRc55-70	○	○	○	○	○	○	○

◎ 非常适合 ○ 适合

EME05 普长型 SERIES

Unit:mm

优能特订货代码	刃径	半径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Radius of Ball R	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME05010	1.0	R0.5	4	2	50	2
EME05015	1.5	R0.75	4	3	50	2
EME05020	2.0	R1.0	4	4	50	2
EME05025	2.5	R1.25	4	5	50	2
EME05030	3.0	R1.5	4	6	50	2
EME05030	3.0	R1.5	3	6	50	2
EME05040	4.0	R2.0	4	8	50	2
EME05050	5.0	R2.5	6	10	50	2
EME05060	6.0	R3.0	6	12	50	2
EME05080	8.0	R4.0	8	16	60	2
EME05100	10.0	R5.0	10	20	75	2
EME05120	12.0	R6.0	12	24	75	2
EME05160	16.0	R8.0	16	32	100	2

EME铝用金专用二刃加长球头铣刀 **Carbide, 2 Flute Ball nose for Aluminum Cutter, 45° Helix, Long Length**

EME06 加长型 SERIES

Unit:mm

优能特 订货代码	刃径	半径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Radius of Ball R	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME06010075	1.0	R0.5	4	2	75	2
EME06015075	1.5	R0.75	4	3	75	2
EME06020075	2.0	R1.0	4	4	75	2
EME06025075	2.5	R1.25	4	5	75	2
EME06030075	3.0	R1.5	4	6	75	2
EME06040075	4.0	R2.0	4	8	75	2
EME06040100	4.0	R2.0	4	8	100	2
EME06050100	5.0	R2.5	6	10	100	2
EME06060100	6.0	R3.0	6	12	100	2
EME0606075	6.0	R3.0	6	12	75	2
EME06080100	8.0	R4.0	8	16	100	2
EME0608075	8.0	R4.0	8	16	75	2
EME06100100	10.0	R5.0	10	20	100	2
EME06120100	12.0	R6.0	12	24	100	2
EME06160150	16.0	R8.0	16	32	150	2

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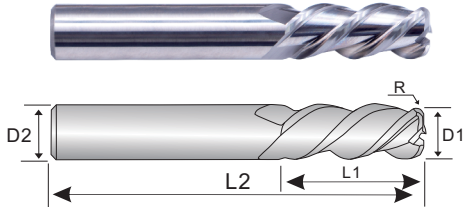
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME铝合金专用三刃圆角铣刀

Carbide, 3 Flutes/3 Alu Power Milling Cutter

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 3刃中心设计-所有3刃旋转都将到达中心。
- ★ 具有高进给, 高转速, 高切屑去除率(重切削)的特点, 性能卓越。
- ★ 适合轮廓加工、插削加工、倒角加工。

- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- 3 Flute design "To the center"- all 3 flutes come to the center, good surface finishes.
- Excellent performance with high feed, high RPM, high chip removal (heavy cutting).
- Profile, Slot, Chamfer Cutting.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardness steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
-HB225	+HB225-325	-HRC30-40	HRC40-45 HRC45-55	HRC55-70							
○					●			○			○

● 非常合适 ○ 适合

EME07 圆鼻刀 SERIES

Unit:mm

优能特订货代码	刃径	R角	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Corner radius R	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME070101	1	R0.1	4	3	50	3
EME070102	1	R0.2	4	3	50	3
EME070201	2	R0.1	4	6	50	3
EME070202	2	R0.2	4	6	50	3
EME070203	2	R0.3	4	6	50	3
EME070301	3	R0.1	4	8	50	3
EME070302	3	R0.2	4	8	50	3
EME070303	3	R0.3	4	8	50	3
EME070305	3	R0.5	4	8	50	3
EME070401	4	R0.1	4	11	50	3
EME070402	4	R0.2	4	11	50	3
EME070403	4	R0.3	4	11	50	3
EME070405	4	R0.5	4	11	50	3
EME070505	5	R0.5	6	13	50	3
EME070510	5	R1.0	6	13	50	3
EME070603	6	R0.3	6	16	50	3
EME070605	6	R0.5	6	16	50	3
EME070610	6	R1.0	6	16	50	3
EME070803	8	R0.3	8	20	60	3
EME070805	8	R0.5	8	20	60	3
EME070810	8	R1.0	8	20	60	3
EME071005	10	R0.5	10	25	75	3
EME071010	10	R1.0	10	25	75	3
EME071205	12	R0.5	12	30	75	3
EME071210	12	R1.0	12	30	75	3

以上产品未列明细的非标规格尺寸或产品参数, 可根据客户需求订制制作。
Non-standard size or product parameters not listed above, can be customized according to customer needs.

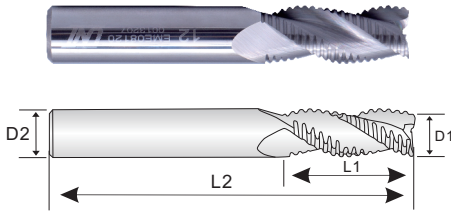
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME 铝合金专用三刃粗皮铣刀

Carbide, 3 Flutes/3 Alu Power Rougher Tools

- ★ 设计用于加工铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 3刃粗加工齿形设计，以减少切削阻力。
- ★ 特殊的刀具几何形状可实现高进给率和重切削。
- ★ 适用于粗加工。

- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- 3 Flute Roughing tooth profile to reduce cutting forces.
- Special tool geometry for high feed rate and heavy cutting.
- Rougher Cutting.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
	+HB225	+HB225-325	HRc30-40	HRc40-45	HRc45-55	HRc55-70					
○					●		○	●		○	

● 非常适合 ○ 适合

EME08 粗皮刀 SERIES

Unit:mm

优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME0805050	5.0	6	13	50	3
EME0806050	6.0	6	16	50	3
EME0808060	8.0	8	20	60	3
EME0810075	10.0	10	25	75	3
EME0812075	12.0	12	30	75	3
EME0814100	14.0	14	40	100	3
EME0816100	16.0	16	40	100	3
EME0820100	20.0	20	40	100	3

以上产品未列明细的非标规格尺寸或产品参数，可根据客户需求订制制作。
Non-standard size or product parameters not listed above, can be customized according to customer needs.

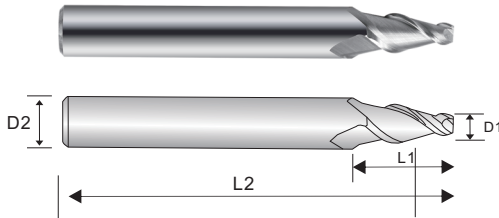
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME 2刃锥度平底铣刀

Carbide, 2 Flute Square End Mills with TAPER NECK

- ★ 设计用于深沟轮廓加工、槽切削、凹槽加工。
- ★ 适用于加工机械铝合金/铜合金/石墨/树脂和非铁材料。
- ★ 颈部锥度为0.5°~15°。
- ★ 硬质合金锥度2刃平底铣刀，适用于数控机床，2D / 3D雕刻机。

- Designed for deep cavity profiling, deep slotting and pocketing.
- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- Taper Neck Angle from 0.5°~15°.
- 2 flute Tapered Carbide Carving bits suit For CNC, Engraving Carving 2D/3D machine.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	~HB225-325	~HRC30-40	HRC40-45	HRC45-55	HRc55-70						
○					●		○	●		○	

● 非常适合 ○ 适合

EME10 平底刀 SERIES

Unit:mm

优能特订货代码	先端刃径	锥度	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Taper Angle(°)	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME1000025	3.0	0.5	4	10	50	2F
EME1000026	3.0	1	4	10	50	2F
EME1000027	3.0	1.5	4	10	50	2F
EME1000028	3.0	2	4	10	50	2F
EME1000029	3.0	3	6	10	50	2F
EME1000030	3.0	5	6	10	50	2F
EME1000031	3.0	7	8	12	60	2F
EME1000032	3.0	10	8	12	60	2F
EME1000033	4.0	0.5	6	15	50	2F
EME1000034	4.0	1	6	15	50	2F
EME1000035	4.0	1.5	6	15	50	2F
EME1000036	4.0	2	6	15	50	2F
EME1000037	4.0	3	6	15	50	2F
EME1000038	4.0	5	8	15	60	2F
EME1000041	5.0	0.5	6	20	50	2F
EME1000042	5.0	1	6	20	50	2F
EME1000043	5.0	1.5	6	20	50	2F
EME1000044	5.0	2	8	20	60	2F
EME1000045	5.0	3	8	20	60	2F
EME1000046	5.0	6	10	20	75	2F
EME1000048	5.0	10	12	20	75	2F
EME1000050	2.0	3	4	6	50	2F
EME1000051	2.0	7	6	6	50	2F
EME1000052	2.0	5	6	6	75	2F
EME1000053	2.0	10	8	6	60	2F
EME1000054	3.0	3	8	10	75	2F
EME1000055	3.0	7	10	10	75	2F

以上产品未列明细的非标规格尺寸或产品参数，可根据客户需求定制制作。

Non-standard size or product parameters not listed above, can be customized according to customer needs.

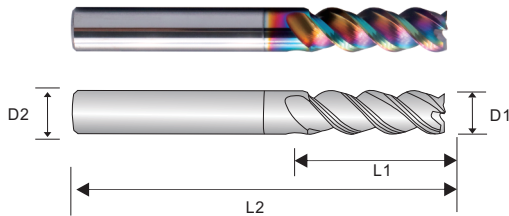
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME铝用高速加工平底铣刀

DLC coated 3 Flute High speed Cutter for Aluminum

- ★ 适用于加工机械铝合金/铜合金/石墨和非铁材料中具有高性能。
- ★ 特殊的“U”型排屑槽设计，既具有刚度和锋利度，又具有高耐磨性和良好的光洁度。
- ★ 具有高进给，高转速，高排屑率的特点，适用于重型切削。
- ★ 适合与粗加工和深槽加工。

- High performance in machine Aluminum Alloy / Copper Alloy / Graphite / Resin and non-Ferrous Material.
- "U"-shaped chip flute that achieves both rigidity and sharpness, high durability and good surface finish..
- Excellent performance with high feed, high RPM, high chip removal (heavy cutting)
- Roughing & Slotting Cutting



加工材料 Material Description												
碳钢	合金钢	预硬钢	硬化钢		高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍基合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
○	~HB225 ~HB225-325	~HRC30-40	HRC40-45	HRC45-55	HRC55-70	○		○	○		○	

◎ 非常适合 ○ 适合

EME11 平底刀 SERIES

Unit:mm

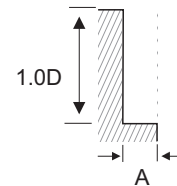
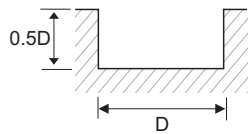
优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EME1100001	3.0	4	9	50	3
EME1100002	3.0	6	9	50	3
EME1100003	3.0	4	9	75	3
EME1100004	3.0	6	9	75	3
EME1100005	3.0	4	12	100	3
EME1100006	3.0	6	12	100	3
EME1100007	4.0	4	12	50	3
EME1100008	4.0	6	12	50	3
EME1100009	4.0	4	12	75	3
EME1100010	4.0	6	12	75	3
EME1100011	4.0	4	16	100	3
EME1100012	4.0	6	16	100	3
EME1100013	4.0	6	15	50	3
EME1100014	5.0	6	15	75	3
EME1100015	5.0	6	20	100	3
EME1100016	6.0	6	18	50	3
EME1100017	6.0	6	18	75	3
EME1100018	6.0	6	24	100	3
EME1100019	8.0	8	24	60	3
EME1100020	8.0	8	24	75	3
EME1100021	8.0	8	32	100	3
EME1100022	10.0	10	30	75	3
EME1100023	10.0	10	30	100	3
EME1100024	10.0	10	40	150	3
EME1100025	12.0	12	36	75	3
EME1100026	12.0	12	36	100	3
EME1100027	12.0	12	48	150	3
EME1100028	14.0	14	42	100	3
EME1100029	16.0	16	48	100	3
EME1100030	16.0	16	64	150	3
EME1100031	20.0	20	50	100	3
EME1100032	20.0	20	65	150	3

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MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EME03/04 SERIES

材质	合金钢, 铸铁		铝合金	
MATERIAL	ALLOY STEEL CAST IRON		ALUMINUM	
HARDNESS	~HB 230			
DIAMETER	RPM	FEED	RPM	FEED
1	15180	455	15180	760
1.5	11840	475	11835	710
2	10170	510	10170	710
2.5	9510	570	9510	760
3	9000	630	9000	810
4	9000	810	9000	990
5	9000	900	9000	1170
6	9000	1080	9000	1350
7	7965	1120	7965	1355
8	7200	1260	7200	1620
9	7200	1395	7200	1510
10	7200	1530	7200	1890
12	7200	1890	7200	2340
14	5400	1620	5400	1980
16	5400	1710	5400	2160
18	3600	1260	3600	1620
20	3600	1440	3600	1710



A: $\varnothing 3 \sim \varnothing 10 = 0.25 \times D$
 $\varnothing 12 \sim \varnothing 20 = 0.5 \times D$

RPM=rev./min (转速/分钟)
 FEED=mm/min.(进给量)
 D= DIAMETER(刃部直径)

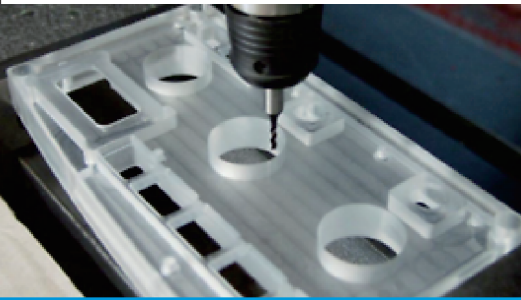
EME05/06 SERIES

材质	铝		铝合金		铝合金	
MATERIAL	ALUMINUM 1070		Aluminum alloy 2014/4032/5052/6061/7075		Aluminum alloy Ac85	
RADIUS	RPM(mm ³)	FEEDmm/min	RPM(mm ³)	FEEDmm/min	RPM(mm ³)	FEEDmm/min
R0.5	50000	2300	37000	2000	50000	1400
R0.75	50000	3000	28000	2000	50000	1800
R1	44000	4000	18500	2000	44000	2500
R1.5	28000	4000	11500	2000	28000	2500
R2	22000	4000	8800	2000	220000	2500
R3	16000	4000	6400	2000	16000	2500
R4	12000	4000	4800	2000	12000	2500
R5	10000	4000	4000	2000	10000	2500
R6	8000	4000	3200	2000	8000	2500



GuangDong UNT Cutting Tools Co.,Ltd
广东优能特五金科技有限公司

EMS Series Solid carbide end mill for plastic
EMS塑胶专用铣刀



Designed to Acrylic, PVC, resin, plastic, Aluminum, Copper, Bronze, Brass, Wood, chipboard, GRP/CRP composite board, melamine board

设计于亚克力, PVC, 树脂, 塑料, 铝, 铜, 青铜, 黄铜, 木材, 刨花板, GRP / CRP复合板, 三聚氰胺板



目录 CONTENTS

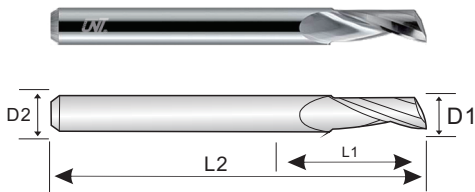
类别 CATEGORY	型号 ITEM	外形 MODEL	描述 DESCRIPTION	页码 PAGE
EMS	EMS01		单刃钨钢塑胶刀 Single Flute End Mill For Plastic Acrylic Glass	1
	EMS02		2刃钨钢塑胶刀 Carbide End Mill For Plastic Acrylic, Double Flute	2
	EMS03		左旋单刃钨钢塑胶刀 Single Left hand Spiral, Right Hand Cutting	3
	EMS05		单刃深沟钨钢塑胶刀 Single Flute End Mill, Long Neck	4

EMS 单刃钨钢塑胶刀

Single Flute End Mill For Plastic Acrylic Glass

- 设计用于亚克力, PVC, 树脂, 塑料, 铝, 铜, 青铜, 黄铜, 木材, 刨花板, GRP / CRP复合板, 三聚氰胺板。

- Designed to Acrylic, PVC, resin, plastic, Aluminum, Copper, Bronze, Brass, Wood, chipboard, GRP/CRP composite board, melamine board.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	~HB225-325	~HRC30-40	HRC40-45	HRC45-55	HRC55-70						

● 非常适合 ○ 适合

EMS01 SERIES

Unit:mm

优能特订货代码	涂层	刃径	柄径	刃长	全长
UNT EDP NO.	TAC Coated	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2
EMS.01.005	EMS.01.005D	0.5	4.0	2	50
EMS.01.008	EMS.01.008D	0.8	4.0	3	50
EMS.01.010	EMS.01.010D	1.0	4.0	3	50
EMS.01.012	EMS.01.012D	1.2	4.0	3	75
EMS.01.015	EMS.01.015D	1.5	4.0	4	50
EMS.01.020	EMS.01.020D	2.0	4.0	6	50
EMS.01.025	EMS.01.025D	2.5	4.0	6	50
EMS.01.030	EMS.01.030D	3.0	4.0	8	50
EMS.01.040	EMS.01.040D	4.0	4.0	11	50
EMS.01.050	EMS.01.050D	5.0	6.0	13	50
EMS.01.060	EMS.01.060D	6.0	6.0	16	50
EMS.01.080	EMS.01.080D	8.0	8.0	20	60
EMS.01.100	EMS.01.100D	10.0	10.0	25	75
EMS.01.120	EMS.01.120D	12.0	12.0	30	75
EMS.01.3003	EMS.01.3003D	0.3	3.0	2	38
EMS.01.3004	EMS.01.3004D	0.4	3.0	2	38
EMS.01.3005	EMS.01.3005D	0.5	3.0	2	38
EMS.01.3008	EMS.01.3008D	0.8	3.0	3	38
EMS.01.3010	EMS.01.3010D	1.0	3.0	3	38
EMS.01.3012	EMS.01.3012D	1.2	3.0	4	38
EMS.01.3015	EMS.01.3015D	1.5	3.0	4	38
EMS.01.3020	EMS.01.3020D	2.0	3.0	6	38

1/8' Shank

优能特订货代码	刃径	柄径	刃长	全长	刃数
UNT EDP NO.	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2	Flutes
EMS.01.3106D	0.6	3.175	3	38	Single Flute
EMS.01.3108D	0.8	3.175	3	38	Single Flute
EMS.01.3110D	1.0	3.175	3	38	Single Flute
EMS.01.3112D	1.2	3.175	4	38	Single Flute
EMS.01.3115D	1.5	3.175	4	38	Single Flute
EMS.01.3120D	2.0	3.175	8	38	Single Flute
EMS.01.31201D	2.0	3.175	11.5	40	Single Flute
EMS.01.3124D	2.4	3.175	8	38	Single Flute
EMS.01.3130D	3.0	3.175	9	38	Single Flute
EMS.01.31301D	3.0	3.175	11.5	40	Single Flute

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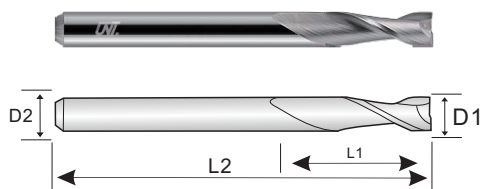
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EMS 2刃钨钢塑胶刀

Carbide End Mill For Plastic Acrylic, Double Flute

- 设计用于亚克力, PVC, 树脂, 塑料, 铝, 铜, 青铜, 黄铜, 木材, 刨花板, GRP / CRP复合板, 三聚氰胺板。

- Designed to Acrylic, PVC, resin, plastic, Aluminum, Copper, Bronze, Brass, Wood, chipboard, GRP/CRP composite board, melamine board.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钛合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	~HB225-325	~HRC30-40	HRC40-45	HRC45-55	HRC55-70	○		○		○	○

◎ 非常适合 ○ 适合

EMS02 SERIES

Unit:mm

优能特订货代码	涂层	刃径	柄径	刃长	全长
UNT EDP NO.	TAC Coated	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2
EMS.02.030	EMS.02.030D	3.0	4	8	50
EMS.02.040	EMS.02.040D	4.0	4	11	50
EMS.02.050	EMS.02.050D	5.0	6	13	50
EMS.02.060	EMS.02.060D	6.0	6	16	60
EMS.02.080	EMS.02.080D	8.0	8	20	60
EMS.02.100	EMS.02.100D	10.0	10	25	75
EMS.02.120	EMS.02.120D	12.0	12	30	75
EMS.02.3003	EMS.02.3003D	0.3	3	0.9	38
EMS.02.3004	EMS.02.3004D	0.4	3	2.5	38
EMS.02.3005	EMS.02.3005D	0.5	3	2.5	38
EMS.02.3008	EMS.02.3008D	0.8	3	4	38
EMS.02.3010	EMS.02.3010D	1.0	3	5	38
EMS.02.3012	EMS.02.3012D	1.2	3	5	38
EMS.02.3015	EMS.02.3015D	1.5	3	5	38
EMS.02.30151	EMS.02.30151D	1.5	3	10	38
EMS.02.3020	EMS.02.3020D	2.0	3	4	38
EMS.02.30209	EMS.02.30209D	2.0	3	9	38
EMS.02.3024	EMS.02.3024D	2.4	3	8	40
EMS.02.3030	EMS.02.3030D	3.0	3	10	40
EMS.02.30301	EMS.02.30301D	3.0	3	12	40

1/8" Shank

优能特订货代码	涂层	刃径	柄径	刃长	全长
UNT EDP NO.	AlTin Coated	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2
EMS.02.3105	EMS.02.3105D	0.5	3.175	3.0	38
EMS.02.3106	EMS.02.3106D	0.6	3.175	3.0	38
EMS.02.3108	EMS.02.3108D	0.8	3.175	5.0	38
EMS.02.3110	EMS.02.3110D	1.0	3.175	4.0	38
EMS.02.3112	EMS.02.3112D	1.2	3.175	5.0	38
EMS.02.3115	EMS.02.3115D	1.5	3.175	6.0	38
EMS.02.3120	EMS.02.3120D	2.0	3.175	4.0	38
EMS.02.31208	EMS.02.31208D	2.0	3.175	8.0	38
EMS.02.3124	EMS.02.3124D	2.4	3.175	5.0	38
EMS.02.31248	EMS.02.31248D	2.4	3.175	8.0	38
EMS.02.3130	EMS.02.3130D	3.0	3.175	6.0	38
EMS.02.31301	EMS.02.31301D	3.0	3.175	10.0	38

以上产品未列明细的非标规格尺寸或产品参数, 可根据客户需求订制作。

Non-standard size or product parameters not listed above, can be customized according to customer needs.

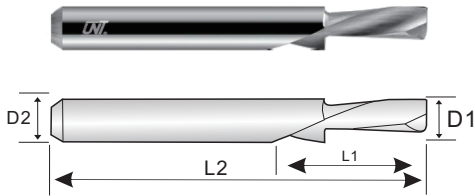
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EMS 单刃钨钢塑胶刀

Single Flute End Mill For Plastic Acrylic Glass

- 设计用于亚克力, PVC, 树脂, 塑料, 铝, 铜, 青铜, 黄铜, 木材, 刨花板, GRP / CRP复合板, 三聚氰胺板。

- Designed to Acrylic, PVC, resin, plastic, Aluminum, Copper, Bronze, Brass, Wood, chipboard, GRP/CRP composite board, melamine board.



加工材料 Material Description											
碳钢	合金钢	预硬钢	硬化钢	高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钨合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	~HB225-325	~HRC30-40	HRC40-45	HRC45-55	HRC55-70	○		○		○	○

◎ 非常适合 ○ 适合

EMS03 SERIES

Unit:mm

优能特订货代码	涂层	刃径	柄径	刃长	全长
UNT EDP NO.	TAC Coated	Mill Dia D1	Shank Dia D2	Flute length L1	O. A. L. L2
EMS.03.005	EMS.03.005D	0.5	4	2.0	50
EMS.03.008	EMS.03.008D	0.8	4	3.0	50
EMS.03.010	EMS.03.010D	1.0	4	3.0	50
EMS.03.012	EMS.03.012D	1.2	4	4.0	50
EMS.03.015	EMS.03.015D	1.5	4	4.0	50
EMS.03.020	EMS.03.020D	2.0	4	6.0	50
EMS.03.3005	EMS.03.3005D	0.5	3	2.0	38
EMS.03.3008	EMS.03.3008D	0.8	3	3.0	38
EMS.03.3010	EMS.03.3010D	1.0	3	3.0	38
EMS.03.3012	EMS.03.3012D	1.2	3	4.0	38
EMS.03.3015	EMS.03.3015D	1.5	3	4.0	38
EMS.03.3020	EMS.03.3020D	2.0	3	6.0	38
EMS.03.6015	EMS.03.6015D	1.5	6	7.0	50
EMS.03.6020	EMS.03.6020D	2.0	6	7.0	50
EMS.03.6030	EMS.03.6030D	3.0	6	8.0	50
EMS.03.6040	EMS.03.6040D	4.0	6	10.0	50
EMS.03.6050	EMS.03.6050D	5.0	6	12.0	50
EMS.03.6060	EMS.03.6060D	6.0	6	14.0	50
EMS.03.60601	EMS.03.60601D	6.0	6	20.0	60

以上产品未列明细的非标规格尺寸或产品参数, 可根据客户需求订制制作。
Non-standard size or product parameters not listed above, can be customized according to customer needs.

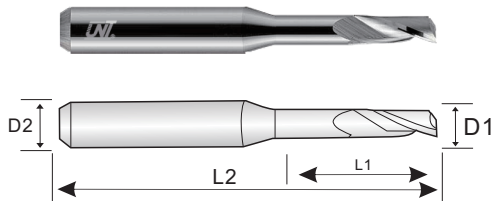
MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6

EMS 单刃深沟钨钢塑胶刀

Single Flute End Mill, Long Neck

- 设计用于亚克力, PVC, 树脂, 塑料, 铝, 铜, 青铜, 黄铜, 木材, 刨花板, GRP / CRP复合板, 三聚氰胺板。

- Designed to Acrylic, PVC, resin, plastic, Aluminum, Copper, Bronze, Brass, Wood, chipboard, GRP/CRP composite board, melamine board.



加工材料 Material Description												
碳钢	合金钢	预硬钢	硬化钢		高硬钢	铜	石墨	铸铁	铝	不锈钢	钛	镍钨合金
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	~HB225-325	~HRC30-40	HRc40-45	HRc45-55	HRc55-70	○			○		○	○

◎ 非常适合 ○ 适合

EMS05 SERIES

Unit:mm

优能特订货代码	涂层	刃径	柄径	有效长	刃长	全长
UNT EDP NO.	TAC Coated	Mill Dia D1	Shank Dia D2	Effective Length L3	Flute length L1	O. A. L. L2
EMS.05.1004	EMS.05.1004D	1.0	6.0	7.0	4	50
EMS.05.1507	EMS.05.1507D	1.5	6.0	11.0	7	50
EMS.05.2004	EMS.05.2004D	2.0	6.0	12.0	4	50
EMS.05.2007	EMS.05.2007D	2.0	6.0	14.0	7	50
EMS.05.3004	EMS.05.3004D	3.0	6.0	14.0	4	50
EMS.05.3008	EMS.05.3008D	3.0	6.0	14.0	8	50
EMS.05.30041	EMS.05.30041D	3.0	6.0	17.0	4	50
EMS.05.30081	EMS.05.30081D	3.0	6.0	17.0	8	50
EMS.05.30042	EMS.05.30042D	3.0	6.0	21.0	4	50
EMS.05.30082	EMS.05.30082D	3.0	6.0	21.0	8	50
EMS.05.4005	EMS.05.4005D	4.0	6.0	18.0	5	50
EMS.05.4010	EMS.05.4010D	4.0	6.0	18.0	10	50
EMS.05.40051	EMS.05.40051D	4.0	6.0	21.0	5	50
EMS.05.40101	EMS.05.40101D	4.0	6.0	21.0	10	50
EMS.05.5005	EMS.05.5005D	5.0	6.0	22.0	5	50
EMS.05.5012	EMS.05.5012D	5.0	6.0	22.0	12	50
EMS.05.6005	EMS.05.6005D	6.0	6.0	24.0	5	60
EMS.05.6014	EMS.05.6014D	6.0	6.0	24.0	14	50
EMS.05.60051	EMS.05.60051D	6.0	6.0	30.0	5	60
EMS.05.60141	EMS.05.60141D	6.0	6.0	30.0	14	60

以上产品未列明细的非标规格尺寸或产品参数, 可根据客户需求订制作。

Non-standard size or product parameters not listed above, can be customized according to customer needs.

MILL DIA. TOLERANCE (mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 -0.020	H6



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