

## 公司简介



浙江方大合金科技有限公司，作为中国五金行业龙头企业方大控股有限公司的控股子公司，成立于2012年，是一家致力于生产适用于多个行业用硬质合金产品，集设计，开发，生产销售于一体的生产企业。特别是硬质合金电锤钻头，木工刀具，锯齿片，开孔器，矿山用钎片，球齿，棒材，板材，旋转锉，非标等复杂产品，在国内外享有盛誉。产品远销欧美，中东，东南亚，非洲等国家和地区，深受广大客户的欢迎和信赖。

依托母公司积聚的实力，我司装备了整套生产高档硬质合金所必需的生产，研发，检测设备。检测设备齐全，检验方法科学，管理先进。同时本公司技术力量雄厚，拥有一批经验丰富的生产技术骨干，还聘请了行业内经验丰富的粉料，模具，压制，烧结等高级工程师和教授级高工，他们在各自的领域都有着几十年的技术生产管理经验，为我司生产，研发高质量以及稳定质量的硬质合金产品打下了坚实的基础。目前公司已拥有五项专利，具有年产600吨各种类型的硬质合金制品的能力。

公司本着“以客户为中心，为用户提供全方位服务”为原则，提供各种以客户要求为中心设计生产的产品。同时，根据我司所具备的开发经验，为客户打造相关领域的产品。

# **C**ompany Overview



Fangda Cemented Carbide Technology Co., Ltd(FDCC), a wholly owned subsidiary of Fangda Holding Co., Ltd-leading company in the field of hardware in china was set up in 2001.It specializes in manufacturing, designing, R&D, producing and selling tungsten carbide products. Its tungsten carbide tips for wood-cutting tools, saw tips, tips for hollow saw, tips for hammer drill bit , tips for coal mining tools, buttons for DTH button bit, rods, strips, rotary bur heads, irregular & - complicated products, ect enjoy a good reputation in china. The products are sold to countries and areas in Europe and America, Middle East, Eastern-South Asia, Africa, etc and are warmly welcomed and trusted by the customers.

Aiming at customers' needs and provide perfect service for customers as its policy. FDCC offers the service to manufacture different kinds of tungsten carbide products according to the customers' requirements. Also, with its rich experience, the company also serves to design and manufacture specialized products for customers. FDCC warmly welcome customers domestically and abroad.

# 旋转锉的切削速度 (近似值)

## Speed (approximate values) for Cerin rotary burs

材料 Material	整体硬质合金 VC m/min	Cer-T镀层 VC m/min	刀齿类型 Cutter Type	
<400N/mm <sup>2</sup> <750N/mm <sup>2</sup>	800-1000 600-800	800-1000 800-1000	刀齿1 Type1	
Titanlegierungen	max=2000u/min.			
<400N/mm <sup>2</sup> <850N/mm <sup>2</sup>	650-800 500-650	650-1000 600-800	刀齿2 Type2	
Titanlegierungen	max=2000u/min.			
<705N/mm <sup>2</sup> <1125N/mm <sup>2</sup> <46HRC	500-650 400-500 200-450	600-800 400-600 300-500	刀齿3 Type3	
Titanlegierungen	max=2000u/min.			
<850N/mm <sup>2</sup> <1125N/mm <sup>2</sup> <46HRC <418HB	450-650 350-500 250-350 200-350	500-750 400-600 250-500 300-450	刀齿4 Type4	
Titanlegierungen	max=2000u/min.			
<1125N/mm <sup>2</sup> <1450N/mm <sup>2</sup> <2050N/mm <sup>2</sup> <66HRC	350-600 250-300 150-250 150-300	400-600 250-400 150-300 200-400	刀齿5 Type5	
Titanlegierungen	max=2000u/min.			
<705N/mm <sup>2</sup> <1125N/mm <sup>2</sup> <46HRC	500-650 300-500 200-450	600-800 400-600 300-500	刀齿6 Type6	
Titanlegierungen	max=2000u/min.			

\*注意钛和钛合金的最大值 max.n=2000U/min) \*Attention! Titanium and Titanium alloys max. n=2000 rpm

### 切削速度-转速

### Cutting speed - Revolution speed

计算公式: 切削速度Vc(m/min) - 每分钟转速 n(u/min)

Formula: cutting speed Vc (m/min) - Revolution per minute n (U/min)

$$V_c(m/min) = \frac{\Phi D_1 (mm) \times 3.14 \times n/min}{1000}$$

$$n(U/min) = \frac{V_c (m/min) \times 1,000}{\Phi D_c (mm) \times 3.14}$$

V <sub>c</sub> m/min	Dc mm									
	2,35	3,00	4,00	5,00	6,00	8,00	10,00	12,00	16,00	20,00
转速n(U/min) / Revolution(rpm)										
100	13,550	10,616	7,962	6,369	5,308	3,981	3,185	2,654	1,990	1,592
150	20,325	15,924	11,943	9,554	7,962	5,971	4,777	3,981	2,986	2,389
200	27,100	21,231	15,924	12,739	10,616	7,962	6,369	5,308	3,981	3,185
250	33,875	26,539	19,904	15,924	13,270	9,952	7,962	6,635	4,976	3,981
300	40,650	31,847	23,885	19,108	15,924	11,943	9,554	7,962	5,971	4,777
350	47,425	37,155	27,866	22,293	18,577	13,933	11,146	9,289	6,967	5,573
400	54,201	42,463	31,847	25,478	21,231	15,924	12,739	10,616	7,962	6,369
500	67,751	53,079	39,809	31,847	26,539	19,904	15,924	13,270	9,952	7,962
600	81,301	63,694	47,771	38,217	31,847	23,885	19,108	15,924	11,943	9,554
700	94,851	74,310	55,732	44,586	37,155	27,866	22,293	18,577	13,933	11,146
800	108,401	84,926	63,694	50,955	42,463	31,847	25,478	21,231	15,924	12,739
900	121,951	95,541	71,656	57,325	47,771	35,828	28,662	23,885	17,914	14,331
1,000	135,501	106,157	79,618	63,694	53,079	39,809	31,847	26,539	19,904	15,924

\*注意钛和钛合金的最大值 max.n=2000U/min) \*Attention! Titanium and Titanium alloys max. n=2000 rpm

## 旋转锉的刀齿类型

### Cutter type of cerin rotary burs

#### 刀齿类型1-铝用齿纹

##### Cutter type 1 - Aluminum



尤其适用于铝、镁、塑料和硬质橡胶的加工，刀齿效率较好，材料切削去除率更佳。这种齿形的特点有利于快速清除切屑，防止其阻塞刀具。

Particularly suitable for working on aluminum, magnesium, plastic, and hard rubber. Gives high cutter efficiency, with good removal of material. The specific features of this type of cut facilitate rapid removal of chips preventing these from clogging the tool.

#### 刀齿类型2-铝用齿纹

##### Cutter type 2 - Coarse

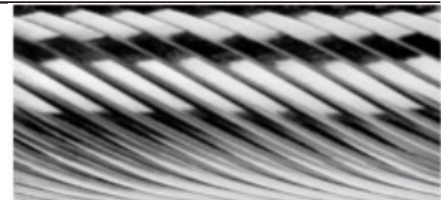


这种齿形介于1和3之间，建议软性材料、青铜、黄铜、锡、锌、纯铜和其他易于加工的材料用此类齿形，而对于切削较长的材料，使用此类齿纹刀具宜同时采用断屑齿纹。

This type of cut is intermediate between cutter type 1 and cutter type 3 and, it is recommended for soft materials, bronze, brass, tin, zinc, copper and other easily removable materials. For long chipping material this cut should be used with chip breaker.

#### 刀齿类型3-中齿纹/标准齿纹

##### Cutter type 3 - Medium

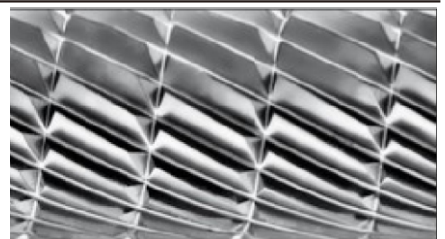


标准齿纹适用于钢材(包括回火钢)、铸钢、焊缝和几乎所有的金属材料的加工。这种齿形的加工表面质量极佳，同时加工效率也较好。

Standard cut-Suitable for steel(including tempered)cast steel, weld seams, and in general, almost all metallic materials. Together with optimum efficiency, it gives a good surface finish.

#### 刀齿类型4-断屑齿纹

##### Cutter type 4 - Chip breaker



单齿锉上都可以采用断屑齿纹。推荐在加工切屑较长的材料时使用。根据需要只要稍加少许费用，1、2、3和5类齿纹的旋转锉上均可采用断屑齿纹结构。

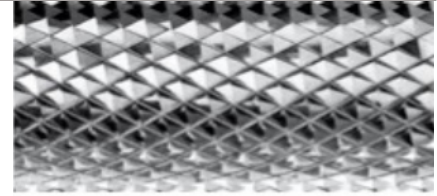
This can be executed on all single cut file cutters. It is recommended for working of materials which produce long chips. Upon request, Cerin rotary burs with cut type 1-2-3 and 5 can be supplied with chip breaker.

## 旋转锉的刀齿类型

### Cutter type of cerin rotary burs

#### 刀齿类型4-菱形齿纹

##### Cutter type 4 - Diamond

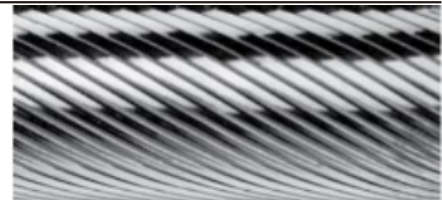


对于高合金钢、不锈钢、镁合金、灰铸铁和CrNi钢的加工建议采用这种齿形。相比标准齿纹，其特殊的几何形状更有利于材料的切削。对于操作人员而言。这种齿形在加工过程中可以避免切屑被粉碎，从而防止由此可能出现的不利现象。

Recommended for high alloy steel, stainless steel, magnesium alloys, grey cast iron and CrNi steels. It's particular geometry allows considerable material penetration with a removal capacity greater than the standard cut. It avoids the formation of true proper chips pulverising the removed material and thus avoiding the associated disadvantage for the operator during working.

#### 刀齿类型5-密齿纹

##### Cutter type 5 - Fine

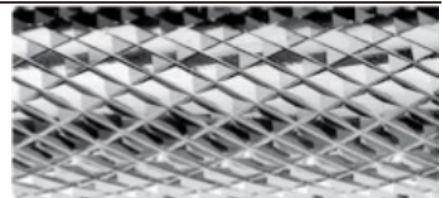


密齿纹，尤其适用于66HRC以下的回火钢以及材料面层质量有较高要求的情况。

Fine cut-Particularly suitable for tempered steel up to 66 HRC and for obtaining high surface finish.

#### 刀齿类型6-双齿纹

##### Cutter type 6 - Double cut

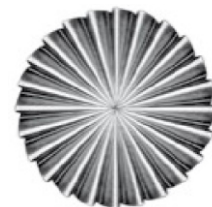


这种通用齿形几乎使用于各种金属材料，包括回火钢和耐腐属性材料。加工过程中的震动更小，刀具也更易控制，切削效率与面层效果均较好。

Universal cut suitable for working on almost metallic materials, including tempered steels and corrosion resistant material. Reduces vibration and gives a better control of the cutter during working. Considerable removal capacity with good surface finish.

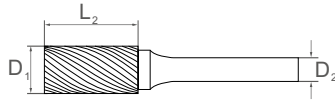
#### 端齿纹

##### Frontal teeth



根据需要，30和39旋转锉可以附带地面切削齿纹。如果刀具前方的材料也需要加工，则可以采用这种齿形结构。

30 and 39 can be supplied with end cut upon request. Used if frontal material has to be removed.



英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SA-42	3/32	7/16	1/8
SA-42L2	3/32	7/16	1/8
SA-42L3	3/32	7/16	1/8
SA-11	1/8	1/2	1/4
SA-43	1/8	9/16	1/8
SA-43L2	1/8	9/16	1/8
SA-43L3	1/8	9/16	1/8
SA-12	1/8	5/8	1/4
SA-52	5/32	1/2	1/8
SA-13	5/32	5/8	1/4
SA-81	3/16	5/8	3/16
SA-53	3/16	1/2	1/8
SA-14	3/16	5/8	1/4
SA-51	1/4	1/2	1/8
SA-1	1/4	5/8	1/4
SA-1L	1/4	1	1/4
SA-1L6	1/4	1/2	1/4
SA-1NF	1/4	3/4	1/4
SA-2	5/16	3/4	1/4

英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SA-3	3/8	3/4	1/4
SA-3L	3/8	1	1/4
SA-3L6	3/8	3/4	1/4
SA-3NF	3/8	3/4	1/4
SA-3X	3/8	1-1/2	1/4
SA-4	7/16	1	1/4
SA-5	1/2	1	1/4
SA-5L6	1/2	1	1/4
SA-5NF	1/2	1	1/4
SA-6	5/8	1	1/4
SA-6NF	5/8	1	1/4
SA-15	3/4	1/2	1/4
SA-16	3/4	3/4	1/4
SA-7	3/4	1	1/4
SA-7NF	3/4	1	1/4
SA-7NF3/8	3/4	1	3/8
SA-8	7/8	1	1/4
SA-9	1	1	1/4

### 刀柄尺寸Shank Dimension

- \* Φ1/8"
- \* 标准型/Standard
- \* 可选用/Optional Φ3/8"
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
A0413M03	4.0	12.7	3	51
A0416M06	4.0	16.0	6	61
A0513M03	5.0	12.7	3	51
A0516M06	5.0	16.0	6	61
A0613M03	6.3	12.7	3	51
A0616M06	6.0	16.0	6	61
A0818M06	8.0	18.0	6	63
SA-2M	7.9	19.0	6	64
A0820M06	8.0	20.0	6	65
SA-3M	9.5	19.0	6	64

公制(metric)

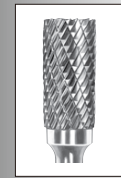
Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
A1020M06	10.0	20	6	65
SA-4M	11.1	25	6	70
A1225M06	12.0	25	6	70
SA-5M	12.7	25	6	70
A1425M06	14.0	25	6	70
A1625M06	16.0	25	6	70
A1825M06	18.0	25	6	70
SA-7M	19.0	25	6	70
A2025M06	20.0	25	6	70
SA-9M	25.0	25	6	70

### 刀柄尺寸Shank Dimension

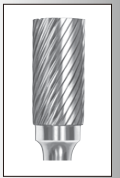
- \* Φ3.00mm
- \* 标准型/Standard
- \* 可选用/Optional Φ8.0mm
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

## 圆柱型 Cylindrical Shape

### 槽型Flute

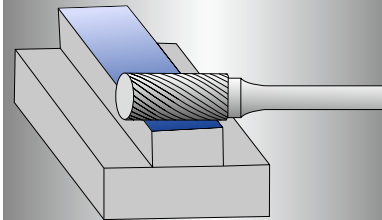


双槽  
Double Flute

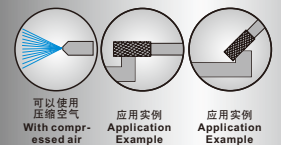
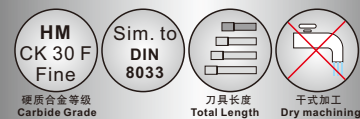


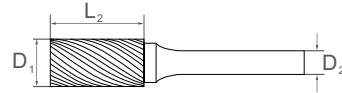
单槽  
Single Flute

## Application 应用



去毛刺  
Deburring





**圆柱型底部带切割**  
**Cylindrical Shape**  
**End Cut**

**槽型Flute**

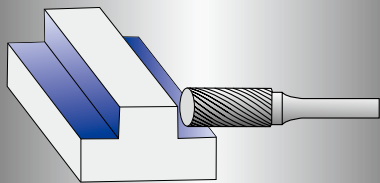


双槽  
Double Flute



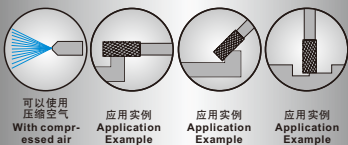
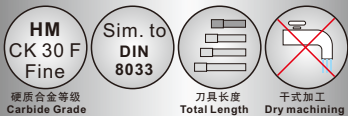
单槽  
Single Flute

**Application**  
**应用**



内部轮廓的工作，  
外围设备和端面铣削

Interior contour work,  
peripheral and face  
milling



英制(inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SB-42	3/32	7/16	1/8
SB-42L2	3/32	7/16	1/8
SB-42L3	3/32	7/16	1/8
SB-ECO	1/8	-	1/8
SB-11	1/8	1/2	1/4
SB-12	1/8	5/8	1/4
SB-43	1/8	9/16	1/8
SB-43L2	1/8	9/16	1/8
SB-43L3	1/8	9/16	1/8
SB-13	5/32	5/8	1/4
SB-14	3/16	5/8	1/4
SB-51	1/4	3/16	1/8
SB-1	1/4	5/8	1/4
SB-1L	1/4	1	1/4
SB-1NF	1/4	3/4	1/4
SB-2	5/16	3/4	1/4

英制(inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SB-3	3/8	3/4	1/4
SB-3L	3/8	1	1/4
SB-3NF	3/8	3/4	1/4
SB-3X	3/8	1-1/2	1/4
SB-4	7/16	1	1/4
SB-5	1/2	1	1/4
SB-5NF	1/2	1	1/4
SB-6	5/8	1	1/4
SB-6NF	5/8	1	1/4
SB-15	3/4	1/2	1/4
SB-16	3/4	3/4	1/4
SB-7	3/4	1	1/4
SB-7NF	3/4	1	1/4
SB-7NF3/8	3/4	1	3/8
SB-8	7/8	1	1/4
SB-9	1	1	1/4

**刀柄尺寸Shank Dimension**

- \*  $\Phi 1/8"$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 3/8"$
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

公制(metric)

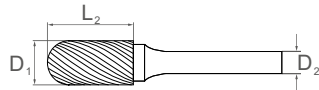
Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
B0416M06	4.0	16.0	6	61
B0516M06	5.0	16.0	6	61
B06005M03	6.3	4.8	3	51
B0616M06	6.0	16.0	6	61
B0818M06	8.0	18.0	6	63
SB-2M	7.9	19.0	6	64
B0820M06	8.0	20.0	6	65
SB-3M	9.5	19.0	6	64
B1020M06	10.0	20.0	6	65

公制(metric)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
SB-4M	11.1	25	6	70
B1225M06	12.0	25	6	70
SB-5M	12.7	25	6	70
B1425M06	14.0	25	6	70
B1625M06	16.0	25	6	70
B1825M06	18.0	25	6	70
SB-7M	19.0	25	6	70
B2025M06	20.0	25	6	70
SB-9M	25.0	25	6	70

**刀柄尺寸Shank Dimension**

- \*  $\Phi 3.00\text{mm}$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 8.0\text{mm}$
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm



英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SC - 41	3/32	7/16	1/8
SC - 11	1/8	1/2	1/4
SC - 42	1/8	9/16	1/8
SC - 42L2	1/8	9/16	1/8
SC - 42L3	1/8	9/16	1/8
SC - 12	1/8	5/8	1/4
SC - 52	5/32	1/2	1/8
SC - 13	5/32	5/8	1/4
SC - 81	3/16	5/8	3/16
SC - 53	3/16	1/2	1/8
SC - 14	3/16	5/8	1/4
SC - 51	1/4	1/2	1/8
SC - 1	1/4	5/8	1/4
SC - 1L	1/4	1	1/4
SC - 1L6	1/4	1/2	1/4
SC - 1NF	1/4	3/4	1/4
SC - 2	5/16	3/4	1/4

英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SC-3	3/8	3/4	1/4
SC-3L	3/8	1	1/4
SC-3L6	3/8	3/4	1/4
SC-3NF	3/8	3/4	1/4
SC-3X	3/8	1-1/2	1/4
SC-4	7/16	1	1/4
SC-5	1/2	1	1/4
SC-5L6	1/2	1	1/4
SC-5NF	1/2	1	1/4
SC-6	5/8	1	1/4
SC-6NF	5/8	1	1/4
SC-15	3/4	1/2	1/4
SC-16	3/4	3/4	1/4
SC-7	3/4	1	1/4
SC-7NF	3/4	1	1/4
SC-7NF3/8	3/4	1	3/8
SC-9	1	1	1/4

### 刀柄尺寸Shank Dimension

- \*  $\Phi 1/8"$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 3/8"$
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
C0413M03	4.0	12.7	3	51
C0416M06	4.0	16.0	6	61
C0513M03	5.0	12.7	3	81
C0516M06	5.0	16.0	6	61
C0613M03	6.3	12.7	3	51
C0616M06	6.0	16.0	6	61
C0618M06	6.0	18.0	6	63
C0818M06	8.0	18.0	6	63
SC-2M	7.9	19.0	6	64

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
C0820M06	8.0	20	6	65
SC-3M	9.5	19	6	64
C1020M06	10.0	20	6	65
SC-4M	11.1	25	6	70
C1225M06	12.0	25	6	70
SC-5M	12.7	25	6	70
C1625M06	16.0	25	6	70
SC-7M	19.0	25	6	70
SC-9M	25.0	25	6	70

### 刀柄尺寸Shank Dimension

- \*  $\Phi 3.00\text{mm}$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 8.0\text{mm}$
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

## 圆柱型球头 Ball Nose Cylinder

### 槽型Flute

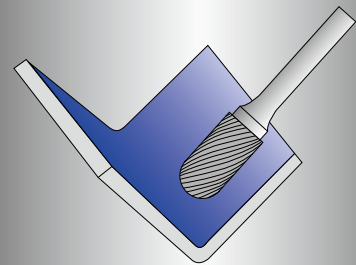


双槽  
Double Flute

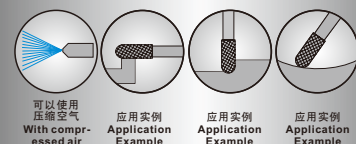
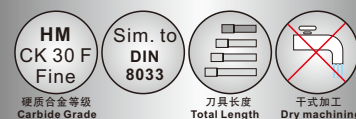


单槽  
Single Flute

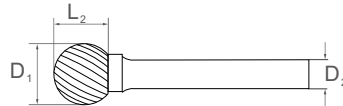
## Application 应用



轮廓加工、去毛刺  
Contouring, Deburring

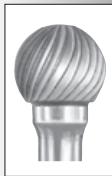






**球形  
Ball Shape**

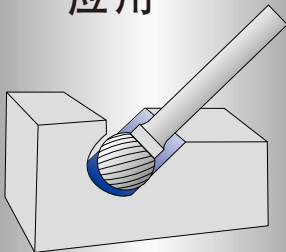
**槽型Flute**



双槽  
Double Flute

单槽  
Single Flute

**Application  
应用**



成型、钻孔去毛刺、铣削为堆焊做准备  
Contouring, bore deburring, milling in preparation of build-up welding

英制(inch)

英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SD-41	3/32	3/32	1/8
SD-11	1/8	3/32	1/4
SD-42	1/8	1/8	1/8
SD-42 L2	1/8	1/8	1/8
SD-42L3	1/8	1/8	1/8
SD-52	5/32	5/32	1/8
SD-14	3/16	1/8	1/4
SD-53	3/16	5/32	1/8
SD-1	1/4	7/32	1/4
SD-1L6	1/4	7/32	1/4
SD-1NF	1/4	7/32	1/4
SD-51	1/4	7/32	1/8
SD-2	5/16	1/4	1/4

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SD-3	3/8	5/16	1/4
SD-3L6	3/8	5/16	1/4
SD-3NF	3/8	5/16	1/4
SD-4	7/16	3/8	1/4
SD-5	1/2	7/16	1/4
SD-5L6	1/2	7/16	1/4
SD-5NF	1/2	7/16	1/4
SD-6	5/8	9/16	1/4
SD-6NF	5/8	9/16	1/4
SD-7	3/4	11/16	1/4
SD-7NF	3/4	11/16	1/4
SD-7NF3/8	3/4	11/16	3/8
SD-9	1	15/16	1/4

**刀柄尺寸Shank Dimension**

\*  $\Phi 1/8"$

\* 标准型/Standard

\* 可选用/Optional  $\Phi 3/8"$

\* 刀柄长度/Shank length 4"

\* 刀柄长度/Shank length 6"

公制(metric)

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
D0403M03	4.0	3.4	3	41
D0504M03	5.0	4.0	3	42
D0605M03	6.3	5.0	3	43
D0605M06	6.0	5.0	6	50
D0807M06	8.0	7.0	6	52
SD-3M	9.5	8.0	6	63

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
D1009M06	10.0	9.0	6	54
D1211M06	12.0	10.8	6	55
SD-5M	12.7	11.0	6	56
D1614M06	16.0	14.0	6	59
SD-7M	19.0	16.0	6	62
SD-9M	25.0	21.0	6	66

**刀柄尺寸Shank Dimension**

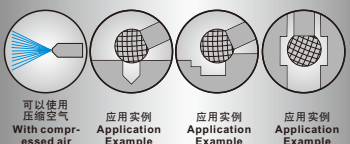
\*  $\Phi 3.00\text{mm}$

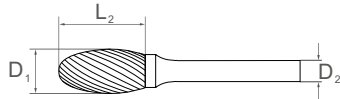
\* 标准型/Standard

\* 可选用/Optional  $\Phi 8.0\text{mm}$

\* 刀柄长度/Shank length 100mm

\* 刀柄长度/Shank length 150mm





英制(inch)

英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SE-41	1/8	7/32	1/8
SE-41L2	1/8	7/32	1/8
SE-41L3	1/8	7/32	1/8
SE-53	3/16	9/32	1/8
SE-11	3/16	5/16	1/4
SE-1	1/4	3/8	1/4
SE-1L6	1/4	3/8	1/4
SE-51	1/4	3/8	1/8
SE-3	3/8	5/8	1/4
SE-3L6	3/8	5/8	1/4

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SE-3NF	3/8	5/8	1/4
SE-5	1/2	7/8	1/4
SE-5L6	1/2	7/8	1/4
SE-5NF	1/2	7/8	1/4
SE-6	5/8	1	1/4
SE-6NF	5/8	1	1/4
SE-7	3/4	1	1/4
SE-7NF	3/4	1	1/4
SE-7NF3/8	3/4	1	3/8

### 刀柄尺寸Shank Dimension

- \*  $\Phi 1/8"$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 3/8"$
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

公制(metric)

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
E0406M03	4.0	6.0	3	44
E0507M03	5.0	7.0	3	45
SE-51M	6.3	9.5	3	48
E0610M06	6.0	10.0	6	55
E0813M06	8.0	13.0	6	58
SE-3M	9.5	16.0	6	61

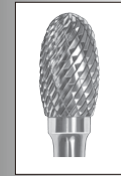
Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
E1016M06	10.0	16	6	61
E1220M06	12.0	20	6	65
SE-5M	12.7	22	6	67
E1625M06	16.0	25	6	70
SE-7M	19.0	25	6	70

### 刀柄尺寸Shank Dimension

- \*  $\Phi 3.00\text{mm}$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 8.0\text{mm}$
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

## 椭圆形 Oval Shape

## 槽型Flute

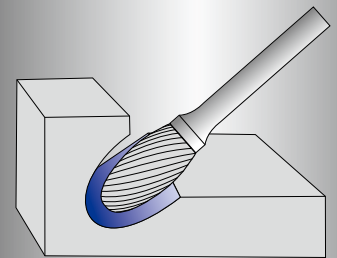


双槽  
Double Flute

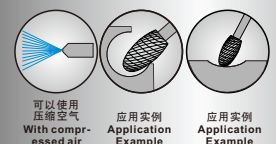
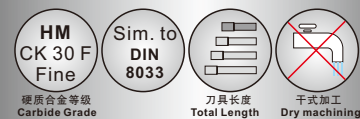


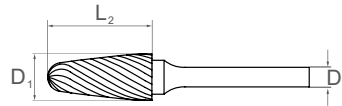
单槽  
Single Flute

## Application 应用



轮廓加工  
Contouring





**弧形圆头  
Tree Shape**

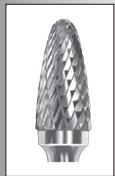
英制(inch)

英制(inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SF-41	1/8	1/4	1/8
SF-11	1/8	1/2	1/4
SF-42	1/8	1/2	1/8
SF-42L2	1/8	1/2	1/8
SF-42L3	1/8	1/2	1/8
SF-53	3/16	1/2	1/8
SF-51	1/4	1/2	1/8
SF-1	1/4	3/4	1/4
SF-1L6	1/4	1/2	1/4
SF-1NF	1/4	3/4	1/4
SF-3	3/8	3/4	1/4
SF-3L6	3/8	3/4	1/4
SF-3NF	3/8	3/4	1/4

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SF-4	7/16	1	1/4
SF-13	1/2	3/4	1/4
SF-5	1/2	1	1/4
SF-5L6	1/2	1	1/4
SF-5NF	1/2	1	1/4
SF-6	5/8	1	1/4
SF-6NF	5/8	1	1/4
SF-7	3/4	1	1/4
SF-14	3/4	1-1/4	1/4
SF-14NF	3/4	1-1/4	1/4
SF-14NF3/8	3/4	1-1/4	3/8
SF-15	3/4	1-1/2	1/4

**槽型Flute**



双槽

单槽

Double Flute

Single Flute

**刀柄尺寸Shank Dimension**

\*  $\Phi 1/8"$

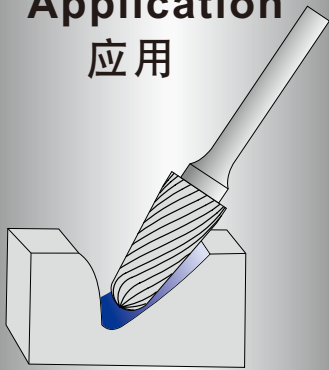
\* 标准型/Standard

\* 可选用/Optional  $\Phi 3/8"$

\* 刀柄长度/Shank length 4"

\* 刀柄长度/Shank length 6"

**Application  
应用**



内部轮廓的工作，  
外围设备和端面铣削  
Interior contour work,  
peripheral and face  
milling

公制(metric)

公制(metric)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
F0413M03	4.0	12.7	3	51
F0513M03	5.0	12.7	3	51
F0613M03	6.3	12.7	3	51
F0616M06	6.0	16.0	6	61
F0618M06	6.0	18.0	6	63
F0818M06	8.0	18.0	6	63
F0820M06	8.0	20.0	6	65
SF-3M	9.5	19.0	6	64
F1020M06	10.0	20.0	6	65

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
SF-13M	12.7	19	6	64
SF-4M	11.0	25	6	70
F1225M06	12.0	25	6	70
SF-5M	12.7	25	6	70
F1625M06	16.0	25	6	70
SF-7M	19.0	25	6	70
SF-14M	19.0	32	6	77
SF-15M	19.0	38	6	83

**刀柄尺寸Shank Dimension**

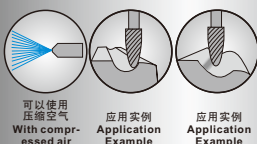
\*  $\Phi 3.00\text{mm}$

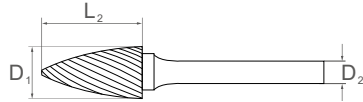
\* 标准型/Standard

\* 可选用/Optional  $\Phi 8.0\text{mm}$

\* 刀柄长度/Shank length 100mm

\* 刀柄长度/Shank length 150mm





英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SG-41	1/8	1/4	1/8
SG-42	1/8	5/16	1/8
SG-43	1/8	3/8	1/8
SG-44	1/8	1/2	1/8
SG-44L2	1/8	1/2	1/8
SG-44L3	1/8	1/2	1/8
SG-53	3/16	1/2	1/8
SG-1	1/4	5/8	1/4
SG-1L6	1/4	1/2	1/4

英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2
SG-2	5/16	3/4	1/4
SG-3	3/8	3/4	1/4
SG-3L6	3/8	3/4	1/4
SG-13	1/2	3/4	1/4
SG-5	1/2	1	1/4
SG-5L6	1/2	1	1/4
SG-6	5/8	1	1/4
SG-7	3/4	1	1/4
SG-15	3/4	1-1/2	1/4

### 刀柄尺寸Shank Dimension

- \*  $\Phi 1/8"$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 3/8"$
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
G0413M03	4.0	12.7	3	51
G0513M03	5.0	12.7	3	51
G0613M03	6.3	12.7	3	51
G0616M06	6.0	16.0	6	61
G0618M06	6.0	18.0	6	63
G0818M06	8.0	18.0	6	63
SG-2M	7.9	19.0	6	64
G0820M06	8.0	20.0	6	65

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
SG-3M	9.5	19	6	64
G1020M06	10.0	20	6	65
SG-13M	12.7	20	6	65
G1225M06	12.0	25	6	70
SG-5M	12.7	25	6	70
G1625M06	16.0	25	6	70
SG-7M	19.0	25	6	70
SG-15M	19.0	38	6	83

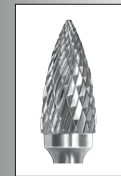
### 刀柄尺寸Shank Dimension

- \*  $\Phi 3.00\text{mm}$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 8.0\text{mm}$
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

## 弧形尖头

### Pointed Tree Shape

## 槽型Flute



双槽  
Double Flute



单槽  
Single Flute

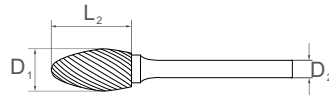
## Application 应用



加工狭窄的轮廓，加工锐角

Work on narrow contours, milling of acute-angled surfaces

硬合金等级 Carbide Grade		刀具长度 Total Length	干式加工 Dry machining
可以使用 压缩空气 With compr- essed air	应用实例 Application Example	应用实例 Application Example	应用实例 Application Example



英制 (inch)

英制 (inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SH-41	1/8	1/4	1/8
SH-41L2	1/8	1/4	1/8
SH-41L3	1/8	1/4	1/8
SH-53	3/16	3/8	1/8
SH-1	1/4	5/8	1/4
SH-2	5/16	3/4	1/4

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SH-2L6	5/16	3/4	1/4
SH-5	1/2	1-1/4	1/4
SH-5L6	1/2	1-1/4	1/4
SH-6	5/8	1-7/16	1/4
SH-7	3/4	1-5/8	1/4

刀柄尺寸 Shank Dimension

\*  $\Phi 1/8"$

\* 标准型/Standard

\* 可选用/Optional  $\Phi 3/8"$

\* 刀柄长度/Shank length 4"

\* 刀柄长度/Shank length 6"

火焰形

Flame Shape

槽型 Flute



双槽

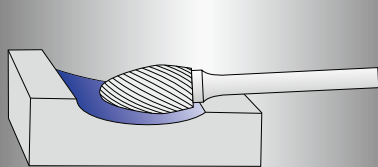
Double Flute



单槽

Single Flute

Application  
应用



加工狭窄的轮廓

Work on narrow contours

公制 (metric)

公制 (metric)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
H0408M03	4.0	8.0	3	46
H0510M03	5.0	9.5	3	47
H0618M03	6.0	18.0	3	56
H0618M06	6.0	18.0	6	63
H0820M06	8.0	20.0	6	65
SH-2M	7.9	19.0	6	64

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
H1025M06	10.0	25	6	70
H1232M06	12.0	32	6	77
SH-5M	12.7	32	6	77
H1636M06	16.0	36	6	81
SH-7M	19.0	41	6	86

刀柄尺寸 Shank Dimension

\*  $\Phi 3.00\text{mm}$

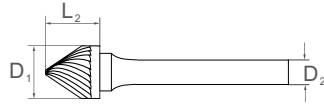
\* 标准型/Standard

\* 可选用/Optional  $\Phi 8.0\text{mm}$

\* 刀柄长度/Shank length 100mm

\* 刀柄长度/Shank length 150mm





英制(inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SJ-42	1/8	3/32	1/8
SJ-1	1/4	3/16	1/4
SJ-3	3/8	5/16	1/4
SJ-5	1/2	7/16	1/4

英制(inch)

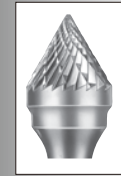
Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SJ-6	5/8	9/16	1/4
SJ-7	3/4	11/16	1/4
SJ-9	1	15/16	1/4

### 刀柄尺寸Shank Dimension

- \*  $\Phi 1/8"$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 3/8"$
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

60°圆锥形  
60° Countersink

### 槽型Flute



双槽  
Double Flute



单槽  
Single Flute

公制(metric)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
J0604M03	6.0	4	3	44
J0604M06	6.0	4	6	51
J0806M06	8.0	6	6	53
SJ-3M	9.5	8	6	55

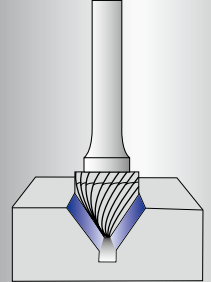
公制(metric)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
SJ-5M	12.7	11.0	6	59
SJ-6M	16.0	14.5	6	62
SJ-7M	19.0	17.5	6	66
SJ-9M	25.0	24.5	6	69

### 刀柄尺寸Shank Dimension

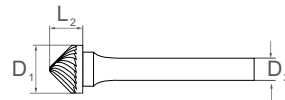
- \*  $\Phi 3.00\text{mm}$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 8.0\text{mm}$
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

### Application 应用



加工锐角领域；扩孔；  
在规定的角度坡口/倒角  
Machining of acute-angled  
areas, counter-sinking,  
beveling/chamfering at  
defined angles

 HM CK 30 F Fine 硬质合金等级 Carbide Grade	 Sim. to DIN 8033	 刀具长度 Total Length	 干式加工 Dry machining
 可以使用 压缩空气 With compr- essed air	 应用实例 Application Example	 应用实例 Application Example	



90°圆锥形  
90° Countersink

英制(inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SK-42	1/8	1/16	1/8
SK-1	1/4	1/8	1/4
SK-3	3/8	3/16	1/4

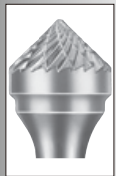
英制(inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter
	D1	L2	D2
SK-5	1/2	1/4	1/4
SK-6	5/8	5/8	1/4
SK-7	3/4	3/8	1/4

刀柄尺寸Shank Dimension

- \*  $\Phi 1/8"$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 3/8"$
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

槽型Flute



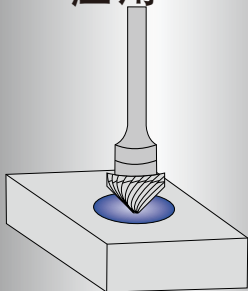
双槽

单槽

Double Flute

Single Flute

Application  
应用



加工锐角领域；扩孔；  
在规定的角度坡口/倒角  
Machining of acute-angled  
areas, counter-sinking,  
beveling/chamfering at  
defined angles

公制(metric)

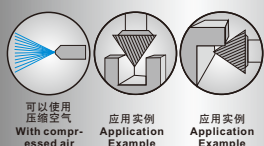
Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
K0603M03	6.0	3.0	3	43
K0603M06	6.0	3.0	6	50
K0804M06	8.0	4.0	6	51
SK-3M	9.5	4.7	6	52

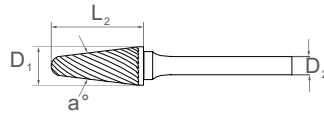
公制(metric)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
SK-5M	12.7	6.3	6	54
SK-6M	16.0	8.0	6	57
SK-7M	19.0	9.5	6	58
SK-9M	15.0	12.7	6	60

刀柄尺寸Shank Dimension

- \*  $\Phi 3.00\text{mm}$
- \* 标准型/Standard
- \* 可选用/Optional  $\Phi 8.0\text{mm}$
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm





英制 (inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Cutter Angle a°
SL-41	1/8	3/8	1/8	8°
SL-42	1/8	1/2	1/8	8°
SL-42L2	1/8	1/2	1/8	8°
SL-42L3	1/8	1/2	1/8	8°
SL-53	3/16	1/2	1/8	14°
SL-1	1/4	5/8	1/4	14°
SL-1L6	1/4	5/8	1/4	14°
SL-2	5/16	7/8	1/4	14°
SL-3	3/8	1-1/16	1/4	14°
SL-3L6	3/8	1-1/16	1/4	14°
SL-3NF	3/8	1-1/16	1/4	14°

英制 (inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Cutter Angle a°
SL-4	1/2	1-1/8	1/4	14°
SL-4L6	1/2	1-1/8	1/4	14°
SL-4NF	1/2	1-1/8	1/4	14°
SL-5	5/8	1-3/16	1/4	14°
SL-5NF	5/8	1-3/16	1/4	14°
SL-6	5/8	1-5/16	1/4	14°
SL-6NF	5/8	1-5/16	1/4	14°
SL-7	3/4	1-1/2	1/4	14°
SL-7NF	3/4	1-1/2	1/4	14°
SL-7NF3/8	3/4	1-1/2	3/8	14°

刀柄尺寸 Shank Dimension

- \* Φ1/8"
- \* 标准型/Standard
- \* 可选用/Optional Φ3/8"
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

公制 (metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
L0413D03	4.0	13.0	3	51
L0513M03	5.0	12.7	3	51
L0616M06	6.0	16.0	6	61
L0619D06	6.0	19.0	6	64
L0822M06	8.0	22.0	6	67
SL-3M	9.5	27.0	6	75

公制 (metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
L1025D06	10.0	25	6	70
L1228M06	12.0	28	6	76
L1633M06	16.0	33	6	78
L1636M06	16.0	36	6	81
SL-7M	19.0	38	6	85

刀柄尺寸 Shank Dimension

- \* Φ3.00mm
- \* 标准型/Standard
- \* 可选用/Optional Φ8.0mm
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

## 圆锥圆顶

### Ball Nose Cone

## 槽型Flute



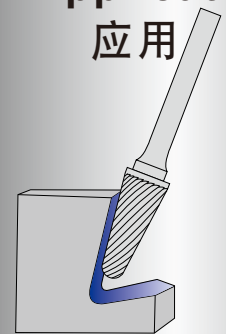
双槽  
Double Flute



单槽  
Single Flute

## Application

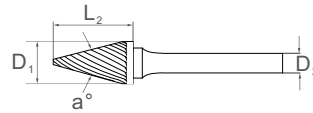
### 应用



加工狭窄的轮廓；表面加工  
Work on narrow contours and surfaces, surface machining

硬质合金等级 Carbide Grade	Sim. to DIN 8033	刀具长度 Total Length	干式加工 Dry machining
可以使用 压缩空气 With compr- essed air	应用实例 Application Example	应用实例 Application Example	





**锥形尖头**  
Cone Shape

英制 (inch)

英制 (inch)

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Cutter Angle
	D1	L2	D2	a°
SM-41	1/8	11/32	1/8	12°
SM-42	1/8	7/16	1/8	14°
SM-42L2	1/8	7/16	1/8	14°
SM-42L3	1/8	7/16	1/8	14°
SM-43	3/16	5/8	1/8	7°
SM-53	1/4	1/2	1/8	14°
SM-1	1/4	1/2	1/4	22°

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Cutter Angle
	D1	L2	D2	a°
SM-51	1/4	1/2	1/8	22°
SM-2	1/4	3/4	1/4	14°
SM-3	1/4	1	1/4	10°
SM-4	3/8	5/8	1/4	28°
SM-5	1/2	7/8	1/4	28°
SM-6	5/8	1	1/4	31°

**槽型Flute**



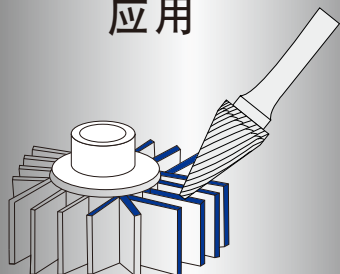
双槽  
Double Flute

单槽  
Single Flute

**刀柄尺寸Shank Dimension**

- \* Φ1/8"
- \* 标准型/Standard
- \* 可选用/Optional Φ3/8"
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

**Application**  
应用



加工狭窄的轮廓；表面加工  
Work on narrow contours and surfaces, surface machining

公制 (metric)

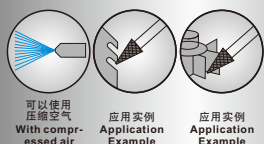
公制 (metric)

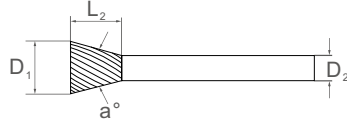
Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
M0411D03	4.0	11.0	3	46
M0513M03	5.0	12.7	3	51
M0613M03	6.3	12.7	6	51
M0613M06	6.0	12.7	6	58
M0619M06	6.0	19.0	6	64
M0625M06	6.0	25.0	6	70

Tool No.	Cutter Diameter	Cutter Length	Shank Diameter	Total Length
	D1	L2	D2	L1
M0818D06	8.0	18.0	6	63
SM-4M	9.5	16.0	6	65
M1020D06	10.0	16.0	6	65
M1225D06	12.0	22.0	6	70
SM-5M	12.7	22.0	6	70
M1625M06	16.0	25.0	6	70

**刀柄尺寸Shank Dimension**

- \* Φ3.00mm
- \* 标准型/Standard
- \* 可选用/Optional Φ8.0mm
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm





英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Cutter Angle a°
SN-41	3/32	1/8	1/8	10°
SN-61	3/32	1/8	3/32	10°
SN-42	1/8	3/16	1/8	10°
SN-81	3/16	1/4	3/16	10°
SN-53	3/16	1/4	1/8	10°
SN-51	1/4	1/4	1/8	10°

英制(inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Cutter Angle a°
SN-1	1/4	5/16	1/4	10°
SN-2	3/8	3/8	1/4	13°
SN-4	1/2	1/2	1/4	28°
SN-6	5/8	3/4	1/4	18°
SN-7	3/4	5/8	1/4	30°

刀柄尺寸Shank Dimension

- \* Φ1/8"
- \* 标准型/Standard
- \* 可选用/Optional Φ3/8"
- \* 刀柄长度/Shank length 4"
- \* 刀柄长度/Shank length 6"

## 倒锥形 Inverted Cone

## 槽型Flute



双槽  
Double Flute



单槽  
Single Flute

公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
N0506M03	5.0	6.0	3	44
SN-51M	6.0	6.0	3	44
N0608M06	6.3	8.0	6	53
SN-2M	9.5	9.5	6	53

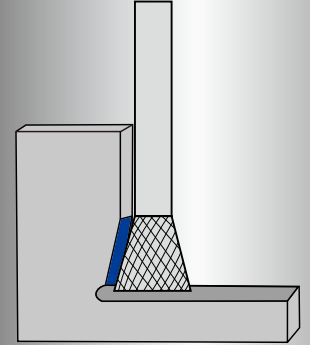
公制(metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
SN-4M	12.7	12.7	6	57
N1619M06	16.0	19.0	6	64
N1916M06	19.0	16.0	6	61

刀柄尺寸Shank Dimension

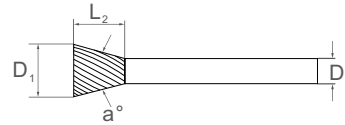
- \* Φ3.00mm
- \* 标准型/Standard
- \* 可选用/Optional Φ8.0mm
- \* 刀柄长度/Shank length 100mm
- \* 刀柄长度/Shank length 150mm

## Application 应用



加工难以触及的后缘部位  
Edge machining from the rear in hard to reach areas

 HM CK 30 F Fine 硬合金等级 Carbide Grade	 Sim. to DIN 8033	 刀具长度 Total Length	 干式加工 Dry machining
 可以使用 压缩空气 With compr- essed air	 应用实例 Application Example	 应用实例 Application Example	



**倒锥形带底纹**  
**Inverted Cone**  
**with end cut**

英制 (inch)

英制 (inch)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Cutter Angle a°
SN-41E	3/32	1/8	1/8	10°
SN-61E	3/32	1/8	3/32	10°
SN-42E	1/8	3/16	1/8	10°
SN-81E	3/16	1/4	3/16	10°
SN-53E	3/16	1/4	1/8	10°
SN-51E	1/4	1/4	1/8	10°

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Cutter Angle a°
SN-1E	1/4	5/16	1/4	10°
SN-2E	3/8	3/8	1/4	13°
SN-4E	1/2	1/2	1/4	28°
SN-6E	5/8	3/4	1/4	18°
SN-7E	3/4	5/8	1/4	30°

**槽型Flute**



双槽

单槽

Double Flute

Single Flute

**刀柄尺寸Shank Dimension**

\* Φ1/8"

\* 标准型/Standard

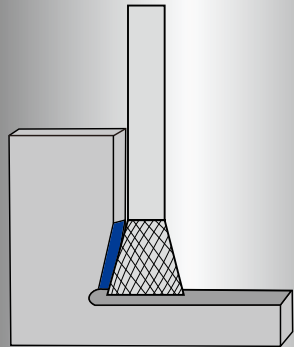
\* 可选用/Optional Φ3/8"

\* 刀柄长度/Shank length 4"

\* 刀柄长度/Shank length 6"

**Application**

**应用**



加工难以触及的后缘部位  
Edge machining from the rear in hard to reach areas

公制 (metric)

公制 (metric)

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
N0506M03	5.0	6.0	3	44
SN-51M	6.0	6.0	3	44
N0608M06	6.3	8.0	6	53
SN-2M	9.5	9.5	6	53

Tool No.	Cutter Diameter D1	Cutter Length L2	Shank Diameter D2	Total Length L1
SN-4M	12.7	12.7	6	57
N1619M06	16.0	19.0	6	64
N1916M06	19.0	16.0	6	61

**刀柄尺寸Shank Dimension**

\* Φ3.00mm

\* 标准型/Standard

\* 可选用/Optional Φ8.0mm

\* 刀柄长度/Shank length 100mm

\* 刀柄长度/Shank length 150mm

